

Supplementary Information

**2018-2028 Long Term Plan  
Council Meeting**

30 January 2018

**Business Cases templates**

**Unfunded Proposal templates**

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# 2018-2028 Long Term Plan

Council Meeting - Business Cases and Unfunded Proposals

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# **Business Cases**

Community and Services

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# Environmental Education for Sustainability

<b>GOA:</b>	Community and Services
<b>Activity Name:</b>	Community Partnerships
<b>Function</b>	Environmental education for sustainability
<b>Service</b>	Engage schools, youth and community in environmental action
<b>Financial Budget Code:</b>	P1231

## 1.1 Review and approval

Prepared by:	Cathy Kopeke, Team Leader Education	26 October 2017
Reviewed by:	Nicola Chrisp, Manager Communications and Engagement	Date
Signed off by:	Neville Williams, Director Community and Services	Date

## 1.2 Related documents

Document Title	Author	Document Reference
Education Strategy - draft	Cathy Kopeke	11699729
Core Education Review – Advancing Maori Medium Education	Core Education	11054570
Enviroschools review	Wendy Boyce	9161286
Report to Council – Enviroschools review	Ruiairi Kelly	8971707
National Strategy Environmental Education for Sustainability	Ministry for Environment	11700326

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

The Enviroschools programme is a proven, highly effective way to engage children to take action on environmental issues, to become problem solvers and sustainable thinkers and to create opportunities for community action. Waikato Regional Council currently supports 130 schools in the Waikato, with our role to coordinate and facilitate the programme for our schools. Many other schools also work with regional council through other education activities.

## 2.1 The current state

- There are currently 125 Enviroschools in the Waikato region. Only two of these are mixed medium. While the Enviroschools programme was successfully designed to be effective at incorporating Māori perspectives into schools, it is recognised that the programme, based on western science, does not naturally fit in Te Ao Māori and mātauranga Māori.
- While the Enviroschools programme has areas of strength in primary and intermediate schools, there is poor uptake across the youth and secondary school sector. Less than a quarter of secondary schools in the Waikato are Enviroschools. Without secondary and tertiary engagement, we lose the ability to create lifelong learners and nurture career development that will support the achievement of our strategic direction.
- Existing resources do not meet the current demand for Enviroschools, let alone cater for future demand. Funding has not increased for Enviroschools in six years, despite growing demand. WRC contribution to contracting allocation is at capacity with no scope for current contractors to work with non Enviroschools. In addition, we currently have a role in mentoring and delivering workshops with kindergartens, however we don't have enough capacity to work with them.
- We currently do not have the required capacity to deliver and connect with programmes of work across the council and in the wider community.

## 2.2 Objectives

To foster a generation that takes action on environmental issues in their community, drives sustainable change through business and enterprise, and become experienced leaders and innovators.

To maximise the opportunities for our schools, businesses and communities to work together with the council and other organisations to achieve our regional goals.

To connect the council's core work programmes with communities, building community-driven effort and enabling citizen science that supports national and regional priorities.

To create a regional picture of projects by using innovative platforms to connect like-minded community groups and tell the story of the council's work in the region.

To ensure our students, schools and communities have equitable support and resources for environmental education for sustainability through our programmes and work.

To increase our regional capacity for sustainable education activities and innovation.

## 2.3 The proposal

1. Whaowhia to kete mātauranga: to advance environmental education for sustainability for Māori medium schools throughout the Waikato.
2. Increase the uptake of environmental youth, including secondary schools.
3. Address increased demand from existing programmes.
4. Identifying and developing innovative funding and partnership opportunities. Building community connection and capacity.



### **2.3.1 Whaowhia te kete mātauranga: Advancing Māori medium education**

A need has been identified to address the gap within the Enviroschools programme and increase environmental education for sustainability in Māori medium schools. Te Aho Tū Roa – a programme delivered through Toimata – has addressed this gap with a programme that is designed to bridge environmental and community education. A review was undertaken by CORE Education to address the challenges and the potential of supporting a Māori medium environmental education programme. It was identified that there is further opportunity to work with local iwi/Māori to grow involvement through pilot projects and seed funding. We propose to:

- establish a kaitiakitanga fund that kōhanga, kura and Māori communities can apply to for environmental education initiatives
- establish a community-based position to mobilise kaitiakitanga projects in kōhanga and kura, and support the application of the kaitiakitanga fund
- ensure co-funded and well supported community-based initiatives for the next three years, and support the delivery of Te Aho Tū Roa where appropriate to the needs of the students.

### **2.3.2 Increased uptake across youth (including secondary schools)**

We need to increase our capacity so we can build a programme that is easily accessible to secondary schools, is flexible to different needs and suitable for schools that are not cross curricular. Youth education extends beyond secondary school provision and we need to work with tertiary institutions and regional businesses to develop opportunities that connect leadership, innovation and enterprise for youth (to 24 years). We propose to work with communities and stakeholders to:

- implement a youth innovation programme to drive sustainable regional solutions
- develop a sustainable business leadership programme that provides youth with real opportunities to drive sustainable change in the workplace
- undertake a review of secondary school Enviroschools delivery and activate a programme that will increase uptake
- establish a 0.5 role that focuses on driving secondary school uptake of Enviroschools and facilitates secondary/youth opportunities as outlined above.

### **2.3.3 Address increased demand on current programme**

We are currently just managing to deliver to all our current schools, and are not in a position to grow the current programme. In discussions, we have confirmed the desire with 12 TAs to increase funding to grow. We propose to increase our current capacity to:

- increase the number of Enviroschools in the region, with matched funding from TAs
- meet the existing demand for Enviroschools across kindergarten, primary and intermediate schools
- meet the existing demand by enabling more ability to strengthen relationships with all our schools and increase interactions with lead teachers requiring support.

The Education team are applying LEAN methodology to the environmental education processes, to streamline service delivery and ensure the programme is adding maximum value for money. However, an increase of investment in our facilitator network is recommended.

### **2.3.4 Building community connection – identifying and developing innovative funding and partnership opportunities**

We cannot be successful on our own. Developing strong partnerships is key to achieving a shared vision for the region. This was the basis of how the Enviroschools model was developed by WRC,

Hamilton City Council and the then Enviroschools Foundation 20 years ago. It has been recognised as a very successful model. Enviroschools connects and inspires communities that may not otherwise have the opportunity to get involved in environmental action. This focus area looks to develop successful and sustainable opportunities for schools and community, using the existing facilitator network to provide support extending beyond the Enviroschools programme. Partnership opportunities exist across the education strategy initiatives. Strengthening our relationships with key stakeholders and aligning priorities is critical to achieving positive regional outcomes. Waikato Regional Council can take a regional perspective, bringing schools, businesses and community groups together and facilitating discussion around common issues and opportunities.

## 2.4 Financial summary

### 2.4.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	\$168	\$356	\$356	\$356	\$356	\$356

#### 2.4.1.1 Funding source

This funding is requested through the Long Term Plan. Other funding sources will include territorial authorities, educational and community organisations, and local business.

1. \$96,000 – 1 FTE to increase Māori medium education. (To begin halfway through 18/19 year)
2. \$20,000 funding for building our regional programme of events and activities for secondary schools and youth sector. Every \$1000 spent on youth projects will generate \$2000 funding from local businesses, education institutes, grants and community partners, generating a regional investment of \$60,000 in cash and at least \$100,000 in work and services in kind.
3. \$60,000 to build community engagement in environmental education activities: \$40,000 will be used to increase the capacity of current Enviroschools facilitators to work more closely with internal and external stakeholders; \$20,000 will be used to resource schools activities, community projects, events and engagement activities. This focus area is to build on the work council does within our communities. It is estimated that every dollar will generate at least four times the value of work in kind from schools, volunteers and community groups. This will give the education team opportunity to extend our work with schools and communities beyond the Enviroschools programme.
4. \$40,000 is requested to increase the current capacity of the Enviroschools programme: \$30,000 will generate a further \$30,000 from our TAs and increase our regional schools to 160, with a focus on increasing secondary schools; \$10,000 will enable us to build our work with the kindy associations and provide leadership and development training for our lead teachers.
5. \$40,000 – 0.5 FTE to increase capacity in secondary schools (year 2).
6. \$100,000 (year 2) to provide seed funding for projects, train teachers, youth and community leaders and contract local community facilitators. This funding will be matched by funding, services and work in kind from iwi partners, iwi education organisations, grants and local businesses; \$200,000 regional investment in total will allow the programme to grow to be an equitable size to the Enviroschools programme.

### 2.4.1.2 Funding partnerships

Our TAs all contribute \$1000 per school to our Enviroschools programme. Increasing capacity in this area will lead to the opportunity to explore further funding opportunities and partnerships with TAs, educational organisations and local businesses.

## 2.5 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No*
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

\*Although work in the area could lead to the potential of data collection through Citizen Science projects this is currently not known or intended. The education team will work with the social science team looking at what the concept of Citizen Science could mean for WRC and what our role would be. Currently the role of the Education team in this area is seen as linking community groups into existing WRC environmental science projects and other existing projects, and supporting and enabling a local pilot project/s with our schools communities.

### 2.5.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
Permanent		1	1.5	1.5	1.5	1.5	1.5
Fixed Term							
Contract		0.5	0.5	0.5	0.5	0.5	0.5

## 3 The case for change (strategic case)

### 3.1 Proposal for change

The Enviroschools programme is a framework that achieves numerous council resource management and public service objectives, such as building resilient, efficient and sustainable communities and protecting and enhancing environmental assets. The council provides Enviroschools to over 130 Waikato schools in partnership with territorial authorities with the vision of developing a generation of innovative and motivated young people who instinctively think and act sustainably.

Currently the Enviroschools programme can only deliver part of this vision. Enviroschools does not meet the needs of our te reo schools and iwi communities. Without a programme that delivers effectively in secondary schools and to college/school leavers, we are not fulfilling the opportunity to foster environmental and sustainable responsibility, youth action and leadership in our businesses and communities. Without investment to strengthen Enviroschools' reach to the wider communities, we will miss our key opportunity to maximise the work Enviroschools does with other council activities and build strong, resilient, connected communities. There are clear gaps that we could address to deliver a programme that meets the needs across all our communities and youth sector:

- While the Enviroschools programme was designed to be and is effective at incorporating Māori perspectives into schools, it is recognised that the programme based in western science does not naturally fit in Te Ao Māori and mātauranga Māori.
- While the Enviroschools programme has areas of strength in primary and intermediate schools, there is poor uptake across the youth and secondary school sector.
- Existing resources do not meet the current demand for Enviroschools, let alone cater for future demand. Funding has not increased for Enviroschools in six years, despite growing demand. WRC's contribution to contracting allocation is at capacity with no scope for current contractors to work with non Enviroschools. In addition, we currently have a role in mentoring and delivering workshops with kindergartens, however we have no capacity to work with them.
- We currently do not have the required capacity to deliver and connect with programmes of work across council and in the wider community.

This proposal is to increase the reach and opportunity for Enviroschools in the Waikato for our youth, te reo and wider communities to build a healthy environment and vibrant communities; to become leaders for fostering youth and community action to build sustainable, connected and resilient communities in the Waikato. The aim is to:

1. Extend the Enviroschools programme into Māori schools. Additional funding is requested towards employing a facilitator to trial and grow Te Aho Tū Roa and or school/college initiated sustainable school based projects.
2. Increase the uptake of the Enviroschools programme into secondary schools. Deliver a young leaders programme in tertiary education and for school leavers.
3. Increase the level of community engagement and create and strengthen linkages to other parts of council. Collate and understand information on a regional level by linking into technology such as My Waikato. Better support community driven opportunities by working internally and externally.
4. Increase funds to deliver the current demand for more primary schools to join the programme and build our relationships and support for kindergarten programmes.

## 3.2 The rational for this proposal

A review of the Enviroschools programme presented to the council in August 2016 identified the need to increase our reach to deliver an environmental education programme in te reo medium schools and secondary schools. The council requested further work connecting existing council projects and investigating our role in citizen science. We currently require additional funding to address the increased demand for Enviroschools in primary and secondary schools. Schools are a strong centre for our communities. These programmes strongly link both our young people and our current communities to our key responsibilities of protecting our water, soil, air and diversity and fostering vibrant and sustainable communities for our region.

We are requesting that work begin immediately in year one of the LTP.

## 3.3 What will success look like? (high level benefits)

Environmental education is strongly represented across all our school sectors in the Waikato, with a strong proportion of our secondary schools involved.

1. Incorporation and integration of an environmental education programme in the Māori medium schools. Our te reo schools are making use of the benefits from well-established national programmes such as Te Aho Tū Roa, and establishing school centric community-based programmes suited to their own needs.

2. More young people are taking leadership in Enviroschools and environment-related initiatives: Participation in the schools and youth programmes we foster is leading to increased involvement in local environmental issues, sustainable leadership and innovation in the Waikato.
3. More effective ways of working and an increase in community partnerships: We are connecting schools and communities region wide to protect our environment, collate information and take informed strategic action together. We build the right regional financial partnerships with local businesses, education institutions and appropriate community organisations to strengthen our regional opportunities to lead by innovation, create sustainable leadership opportunities, and encourage community led action and citizenship. We are partnered with relevant stakeholders to provide a platform and use effective technology to collate data and engage participants.
4. We address the gap between demand for service and service delivery.

This work meets our strategic direction to support and empower our communities to take action on agreed outcomes. The short term benefits of this work will maximise and widen the opportunities from the strengths of the current Enviroschools programme to foster opportunities for our students and teachers to think and act sustainably; build their skills and knowledge to solve local and global environmental problems; and connect with the school and wider community. It will build more opportunities to connect our current work such as Healthy Rivers, biodiversity and biosecurity with our schools and local communities. In the long term, this work will strongly contribute to engaging our communities in contributing to council's environmental and also local business enterprise objectives. It will help achieve the vision of having strong, resilient communities engaged in action to drive sustainable solutions and enterprise for our region.

The expected outcomes are:

- Our current Enviroschools programme is strengthened to increase the number of secondary schools, and meet the current demands of primary schools wanting to join the programme.
- We have a programme that enables Māori medium schools and education institutions to engage in new and more environmental education activities, that link to our shared regional environmental needs, through their own needs and perspectives.
- We will have several strong key long-term funding partnerships that build regional capacity for ongoing education initiatives aimed at youth to drive sustainable action, leadership and innovation that contribute to achieving a number of the council's key environmental aims.

Our success indicators are:

- We have increased the current number of Enviroschools by 25 per cent in a three-year period.
- We have increased the number of non Enviroschools that are engaged and working with and connecting to our work and other community projects over the next three years.
- We have fostered and co-funded regional projects working towards sustainable action and outcomes that:
  - engage our regional te reo schools in environmental education activities
  - link youth and secondary schools with local businesses to drive sustainable leadership, innovation and business-focused youth sustainable leadership programmes
  - drive key principles of co-design, community-driven behaviour change initiatives and community led action
  - enable the youth sector to build and link with community in citizen science projects and environmental action research.
- We are not working alone. Our work is co-funded and we are building long-term funding partnerships that drive long-term sustainable projects. We link our education institutions,

communities, TAs and regional council work together to effectively drive regional environmental aims.

### 3.4 Consequences of not proceeding

1. The current Enviroschools model is delivered in English medium and it does not meet the needs of our te reo schools. The gap will continue to exist unless addressed. We know the western perceptions of environmental sustainability and Māori are different. Without investing in a programme that addresses this we cannot attempt to bridge that divide and ensure all our communities are empowered to take action towards our regional goals.
2. We lose the opportunity to build youth action and leadership to drive a sustainable future for our communities and work to achieve our regional goals.
3. Without appropriate linking of our services across council and externally, we are missing a vital opportunity to support our communities to become strong, resilient and connected, and shape a sustainable future in the Waikato.
4. We are unable to grow our services to meet the need and demand within our existing budgets, and the extra demand on our services will remain unaddressed. If we don't invest in this area soon, in this period, we will have to consider need to reduce the number of Enviroschools we work with.

### 3.5 Alignment

Long Term Outcome	How will this change improve delivery?
Communities are empowered and supported to take action on agreed outcomes.	The new Education Team will play a key role in driving opportunities for community-led action, to build communities, and create empowered resilient communities of citizens who are invested in the future of our region and work together to achieve common goals.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority</i>		
<i>Communities are more empowered and supported to achieve their aims by us providing information, skills, funding or materials, or by working in partnership with a community group.</i>	Strongly contributes	We will be improving the quantity, quality and equity of what we are able to provide for our communities and youth sector in relation to environmental education for sustainability. We will build cofounded partnerships that use current technology to engage our communities and provide skills and resources to drive sustainable action with education institutions, local businesses and communities in the Waikato.
<i>Enduring, effective and valued partnerships with Māori.</i>	Strongly contributes	We address the gap in our environmental education service, and as we expand our work with youth and communities we ensure we are empowering Māori youth.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Waikato Regional Council has funding agreements with each territorial authority in the Waikato. We administer and deliver the programme for the region. The TAs fund the delivery of the programme in their local authority.	Strong	We will have the capacity be able to work more effectively with our local TAs to connect our shared aims with our current work and proposed work.

## 4 Option evaluation (economic case)

This section outlines the objectives being sought, compares the options evaluated, and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The options include:

- Status quo: Continue to struggle to meet existing Enviroschools demand, providing a compromised level of service and failing to meet the needs of secondary school/youth and Maori medium schools.
- Option 1: Focus on investing in secondary school and youth, advancing Maori medium education and meeting existing Enviroschools demand.

### 4.1 Specific objectives

1. Provide environmental education for sustainability programmes with Māori medium schools.
2. Increase the uptake of the Enviroschools programmes into secondary schools. Deliver a young leaders programme in tertiary education and to school leavers.
3. Increase the level of community engagement through our environmental education for sustainability programmes.
4. Increase the capacity of our current programme to meet service demand, and maximise the opportunities of the Enviroschools programme to work with other areas of council business to increase our community partnerships and outcomes.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1, identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet.*

Objective	Status Quo	Option 1
1. Provide environmental education for sustainability programmes with Māori medium schools.	Does not meet	Meets
2. Increase the uptake of the Enviroschools programmes into secondary schools. Deliver a young leaders programme in tertiary education/school leavers.	Does not meet	Meets
3. Increase the level of community engagement through our environmental education for sustainability programmes.	Does not meet	Meets

Objective	Status Quo	Option 1
4. Increase the capacity of our current programme to meet service demand, and maximise the opportunities of the Enviroschools programme to work with other areas of council business to increase our community partnerships and outcomes.	Does not meet	Meets

#### 4.2.2 Financial comparison of options

	Benefits (\$)	Revenue	Capex	Opex	Labour
Status Quo	0	0	0	0	0
Option 1 – Year 1				120	48
Year 2				220	136

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is option 1 for the following reasons:

- There are clear gaps in our current programme.
- Funding for this programme has not increased in six years.
- All areas need to be addressed to meet our strategic direction and community needs.

## 5 Financial analysis and procurement (financial and commercial case)

Description	Amount	Timing	Funding Source	Comments
Labour	1272	From 2018-Future	LTP	
Opex	2100	From 2018-Future	LTP	
Capex				
Revenue				
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future years
Capital						
Operational	168	356	356	356	356	356
Revenue						

#### 5.1.1 Funding partnerships

University of Waikato (and Waikato Link) and WINTEC already partner with the education team on projects in behaviour change, innovation and waste minimisation. They are both keen and obvious partners to work with on different projects.

If successful in our LTP funding request, we will have the capacity and matched funding to actively widen our support from other education institutions.



Our requested specialist te reo medium facilitator position will have a KRA (key result area) to build relationships and partnerships with our potential funders in the Māori community and education organisations.

In partnership with our key education stakeholders, we will be seeking third-party funding from business and community organisations for specific services and projects.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option, the following assumptions have been made:

- The indication of support from our territorial authorities to increase our current programme will result in an increased funding agreement.

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES

- Contracted community education facilitators

## 6 Implementation and achievability (management case)

### 6.1.1 Scope/deliverables

In scope are activities that:

- contribute to achieving the councils regional environmental goals
- empower youth to engage in regional issues and foster citizenship for the future of the Waikato's environment
- actively engage Māori youth to engage in environmental education from their own views and values and therefore led from themselves, their schools and their communities
- connect communities to work together, with ourselves and other regional partners
- help to build communities to be less vulnerable and more resilient to natural hazards, the effects of climate change
- prepare our youth to lead the future in creating local sustainable enterprise
- meet the objectives of the WRC's Education Strategy
- align with the national strategy for environmental education for sustainability.

Out of scope are activities that

- do not include education, behaviour change or lifelong learning activities
- do not engage youth, up to age 24
- do not relate to either environmental science, sustainability, environmental health and wellbeing or protecting the environment
- do not directly positively impact or complement the strategic direction of the regional council
- only include one organisation and no community partnerships.

### 6.1.2 Key milestones

Milestone	Completion Date
Māori Medium Education for Sustainability Programmes	
1 FTE Māori Medium Education Stakeholder Facilitator has been hired	July 2018

Milestone	Completion Date
Regional stakeholder and engagement plan is established	Sept 2019
Invited for expression of interest and selected successful applicants for both short term and long term pilot programmes	Sept/Nov 2019
Established implementation plan with Toi Mata to support Te Aho Tū Roa in the Waikato	Dec 2018
Recruited community based facilitators and action researchers to support and implement our first programmes	Jan 2018
Initial key Māori education programme funding partners are established	June 2019
Established increased kaitiakitanga fund for projects (with funding partners)	Aug 2019
First round expressions for kaitiakitanga fund and successful projects notified	Sept/ Nov 2019
Robust funding programme established for regional long term programme support such as Tu Aho Tu Roa	Dec 2019
Recruited community based facilitator positions to support and implement programmes	Jan 2019
Evaluation of implementation of pilot programmes and incorporate into future planning and strategy	Sept 2019
Partners funding projects has increased to achieve matched funding target	Aug 2020
Second round expressions for kaitiakitanga fund and successful projects notified	Sept/ Nov 2020
Recruited community based facilitator positions to support and implement second round programmes	June 2020
Evaluated the outcomes and impacts of our first long term pilot programmes	2020
Apply learnings to increase success and build maturity in the programme	2021
<b>Secondary Schools Education for Sustainability Programmes</b>	
Hire 0.5 secondary schools and youth programme facilitator	July 2018
Work with Toi Mata on Regional Secondary EnviroSchools Strategy	August 2018
Promote EnviroSchools programme to secondary schools	Sept 2018
Set up three additional secondary EnviroSchools in the region	Jan –June 2019
Evaluate secondary programme	Dec 2020
Funding partners for youth led business and innovation programmes in the Waikato have been established	June 2019
Design youth led programmes with key stakeholders	Dec 2019
Implement trials of youth led programmes with key stakeholders	Dec 2020
Evaluate youth led programme trials	March 2021
<b>Community Engagement</b>	
Appoint an EnviroSchools facilitator with community engagement specialism	July 2018
Agreed on key project focuses and project design with internal stakeholders and partners.	Sept 2018
Stakeholder and community engagement plan is established	Oct 2018
First project is launched to engage the schools with communities in student led action project	Jan 2019
Evaluation of first project/s completed	March 2020
Report/action research paper published	May 2020
<b>Increase Number Current EnviroSchools</b>	
Increase capacity for EnviroSchools contracts	June 2018
Engage with schools wishing to join	July 2018
Promote programme if there are now regions without schools waiting, where TAs are wishing to increase	July 2019

### 6.1.3 Stakeholder engagement

*This piece of work is requested in order to increase our stakeholder and community engagement. There is an almost unbound list of potential of stakeholders. Part of the work is to strategically identify who these stakeholders are.*

Stakeholder	Interest	Method of Engagement
Māori education stakeholders	High	Partner (working)
Wintec	High	Partner (working)

Stakeholder	Interest	Method of Engagement
Waikato University	High	Partner(working)
Toi Mata	High	Partner (working)
Iwi	High	Partner (working and funding)
Local business	High	Partner (Funding)
Schools and kura	High	Engage
Grass roots community organisations		Engage

## 6.1.4 Business change/organisational impact

### 6.1.4.1 Level of impact to participate in the change process/initiative

Business Area	Impact	Impact	How will you manage the impact?
Catchment Management	Low	We will work together to connect activities such as tree planting, beach care, biosecurity, waterways, sustainable agriculture and biodiversity activities. Although much work is needed in this area it is identified as low impact as we will be supporting some of their delivery needs.	Our internal relationships need to improve for us to work better together. We will mutually identify 2-3 key team relationships to build over the next 3 years.
Social Science Team		This team already keep us informed and work with us. Our need to do this will increase.	The relationship is that the social science team develops strategy and frameworks for community led projects, and our team supports the implementation.
Customer Team	Medium	The customer promise tools will help keep us informed of new education requests coming into council. Managing our stakeholders effectively through Iris will be key to success. Set up and an effective process for this is required.	This relationship is agreed within our own section.
Digital Team	Low	Work to develop My Waikato engagement platform.	This relationship is agreed within our own section.

### 6.1.4.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Catchment Management Team	Low	Opportunities for a wider spectrum of community engagement and potential enhanced outcomes, and delivery for the community. Better promotion of work that council is doing.	Our facilitators will have on-the-ground knowledge of community activities which they will share in regular forums with our key internal stakeholders.
Social Science Team	Low	The social science team will help shape the future of the success of the Education Team based on keeping us informed of research and current trends, and continuing to help us deliver our strategic direction.	We will meet regularly to ensure our practice is sound, by being properly evaluated and taking into account current research and trends.

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Customer Team	Low	Supporting our maintenance and continuous improvement of use.	This is part of our work within our section
Digital Team	Low	We continue our work.	BAU

### 6.1.5 Ongoing operational management

The resulting deliverables will remain within the Education Team and the positions building this required work.

There is no change required to existing business structures, roles and responsibilities through the specific areas in the specific requests in this LTP proposal.

We have identified the skill requirement to carry out this work in the positions and contracts requested through the LTP process.

### 6.1.6 Assumptions, constraints and dependencies

- We will increase funding from our TAs.
- We will secure more funding from regional stakeholders.

### 6.1.7 Risks

*There are no known likely risks.*

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. The status quo and one option has been described. It has been requested that priorities are then presented, rather than further options.

### 1.1 Status quo

#### 1.1.1 Option overview

We continue to deliver the Enviroschools programme regionally in 130 schools. The programme is well established and strong, with our schools progressing on their journey to embed sustainability into school life, their curriculum and the local community. Our contracted Enviroschools facilitators are able to deliver minimum commitment of the programme to these schools. We will struggle to meet the needs to provide development for lead teachers and work with kindy associations. We are not always able to give these secondary school the level of support they need. As the current programme works better with a cross curricular focus, it will not meet the needs of most secondary schools. The Enviroschools programme does not fit easily with Māori medium schools. Te Aho Tū Roa is a programme that has been developed to meet this gap, and it is running well in Northland. We will not, however, have the capacity or funding to support the delivery of this programme in our region, or explore and offer alternatives.

#### 1.1.2 Pros and Cons

Pros	Cons
We have a solid and effective programme.	We cannot grow this, meaning schools are unable to join our programme in a timely manner
We have eight secondary schools in our programme.	Most secondary schools do not have the capacity to deliver a cross curricular programme. We don't have the capacity to extend and adapt what we do to meet the needs of secondary schools.
Nine Enviroschools are either a mixed Māori language in education school or a school with some students in mixed Māori language in education.	Our programme does not meet the needs of the 18 Māori medium school within the region We don't have the capacity to extend and adapt what we do to meet that.
The programme encourages community engagement, building connected communities with sustainable action.	Many schools do not have the capacity to build strong community partners for their Enviroschools programme, and may not be aware of many potential opportunities.
Many schools engage with regional council on educational activities, such as tree planting, Project Echo and Beach Care.	Internally we lack the capacity to work effectively together on these projects. We therefore miss many opportunities to strengthen our relationships and programmes with schools, and do not have the right foundation to drive innovation or flex our work to meet community needs.
Many schools engage with a spectrum of other sustainable projects outside of Enviroschools, such as Extreme Zero Waste.	Regionally we do not have joined-up thinking or programmes to achieve common aims.
Much of our work in schools delivers good practice and high quality programmes.	We do not have oversight to share and drive that good practice across all areas of our work within schools.

### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
\$130,000	Our TAs currently invest \$130,000 for us to deliver the Enviroschools programme.	Yearly. We deliver the Enviroschools programme across the region.
\$960,000	It was calculated in the last National Review of Enviroschools that for every dollar invested into the Enviroschools programme, \$6 is generated in funding and work in kind.	Yearly. Our communities build capacity for community sustainability outcomes

Qualitative benefits	Description
Community action	Our Enviroschools are schools working with community groups to foster sustainable action.
Student led action	Our students become problem solvers and understand the importance of protecting our environment from an early age.
Long term commitment achieves sustainable results	Enviroschools is proven to be much more effective in embedding sustainable change that is lasting than short term programmes.
Engaging in council activity	Our schools become involved in activities such as tree planting, fencing, pest control, waste minimisation and sustainable agriculture.

Disadvantages/Dis-benefits	Description of the potential impact
We cannot meet the needs of secondary and youth	Without the investment into secondary and youth we are not able to support a life-long learning journey that takes leadership in sustainable action right from the early years into our businesses and workplaces. Our communities are not actively engaged citizens working to achieve sustainable business solutions.
We cannot address the needs of our Māori medium schools	Our iwi communities do not reach their own potential to foster leadership and innovation to achieve their own and shared regional environmental (and economic) aims and goals.
We are missing opportunities to work together on cross council activities	Our communities do not have full access to our organisation's strong skills and knowledge in science, sustainable agriculture and the environment. We do not lead our communities in working towards our own regional goals. We are not working as one collective as an organisation.
We are unable to support our schools to foster stronger community connections and funding opportunities	Schools who do not join Enviroschools do not have plenty of other well promoted opportunities to be involved in other council education activities.
We cannot grow our current programme	Schools wanting to join Enviroschools usually need to wait for another school to leave.

### 1.1.4 Delivery of Long Term Outcomes

Long term outcome	How will this option improve delivery of this outcome?
Communities are empowered and supported to take action on agreed outcomes.	We can partly meet this objective with the schools we currently work on – 130 schools are supported to take action to embed sustainability in their school life and curriculum. Schools are involved in council education programmes and other community projects through the Enviroschools programme and other school engagement activities.

### 1.1.5 High level financial overview

Benefits (\$)	Revenue	Capex	Opex	Labour
			2100	1272

### 1.1.6 Risk profile

Risk	Impact	Likelihood	Comments/mitigation
We cannot support our Māori communities. Māori youth will not benefit from the same opportunities offered in regular state schools. We are not building our work in communities with our co-governance partners.	High	Imminent	We need to increase our funding to support this work.
Our current programme will not meet demand. We will lose quality and cannot grow in what we deliver.	Medium	High	We are working to increase efficiency in our programme but an injection of funding is needed to meet current demand.
We cannot deliver our education work effectively in our communities and meet our strategic direction for this area	Medium	High	We need to increase our funding to support this work.
We cannot increase our work with secondary and youth. We cannot achieve the programmes long term goals	Low-immediately High – long term impacts	High	We need to increase our capacity and funding to support this work.

## 1.2 Option 1

### 1.2.1 Option overview

We increase the delivery of the Enviroschools programme across our region. The programme is well established and strong with our schools progressing on their journey to embed sustainability into school life, their curriculum and the local community.

Our contracted Enviroschools facilitators are able to deliver an exciting and innovative programme that teams schools up with other regional partners. Our lead teachers are well supported and understand the mechanism of creating organisational change in their schools. We are sharing and gaining skills and programme development with our kindy associations.

We increase the number of secondary schools. We have a youth leadership programme, and have in the first three years successfully trialled two interchangeable flexible models for secondary schools that 1) allows extra-curricular student led change, develops a platform for student advocacy and offers student leadership programmes with local businesses, and 2) builds sustainability across schools' curriculum areas, builds and offers resources and frameworks for schools to achieve this and trains lead teachers to lead organisational change.

We deliver and continue to build regional youth led science and innovation programmes in our region with key educational partners and local businesses.

We establish a community-based position to mobilise kaitiakitanga projects in kōhanga and kura, and support the application of the kaitiakitanga fund. A kaitiakitanga fund for kōhanga, kura and

Māori communities can be applied to for environmental education initiatives. Over the next three years, Te Aho Tū Roa and other new schools and marae based community initiatives are supported and established in our region.

We build strong regional partnerships. Each of the four areas we are building work together. For example, the work we are doing with our communities, our sustainable business partnerships, citizen science projects and innovation initiatives all offer opportunities for our secondary, youth and te reo sectors.

### 1.2.2 Pros and cons

Pros	Cons
We have a solid and effective programme that is growing and thriving	Enviroschools is a big long term commitment that currently not all schools are willing to take. We will be limited to how big the Enviroschools programme can grow.
We have increased secondary schools in our programme	We will be limited to the number of schools we can grow to.
We have more te reo mixed medium schools involved with Te Aho Tū Roa and other environmental education actions and activities. Our funding and support will help build persistence and resilience.	This programme will not be one size fits all. We will need to understand the need of our communities and ensure this is community led. Not every programme will be guaranteed to succeed.
Our regional facilitators are experts on community led action and build strong networks to support schools' communities to work together on sustainable action, with a focus on our regional aims.	We will only be able to do this with teams that have the desire and capacity to work with us. We will need to build excellence in our own work and advocate our strengths to the organisation.
Our regional facilitators and coordinators will use online tools (current and new, such as My Waikato) to build a more comprehensive regional picture of the work in schools and community organisations.	There are currently several different platforms that can achieve this and they are not compatible with each other. We will need strong internal collaboration to get this right.
The Education Team will have more capacity to build good practice and offer opportunities for skills sharing, both internally and externally	We are dependent on the desire of WRC teams to work with us.

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description
Minimum additional leveraged funding of \$1000 per additional school from Territorial Authorities	Additional leveraged funding into environmental education.
There is the potential for the investment of this work to increase the capacity of work in this area by six times. This is based on the model that for every \$1 invested into the Enviroschools programme, \$6 is generated in funding and work in kind.	



<b>Qualitative benefits</b>	<b>Description</b>
Increased community action	We see a substantial increase in the quality and quantity of Enviroschools working with community groups to foster sustainable action.
Increased student led action	Students have a wider range of opportunities to engage in sustainable change-making and leadership. The most significant increases are with our students in Māori language schools, secondary and youth.
Long term commitment achieves sustainable results	Enviroschools is proven to be much more effective in embedding sustainable change that is lasting than short term programmes.
Increased schools and communities engaged in council activities	Our communities have full access to our organisation's strong skills and knowledge in science, sustainable agriculture and the environment. We are leaders in supporting our communities to take action to achieve our regional goals. We have more capacity to work together as an organisation.
Secondary and youth are supported to become sustainable leaders	Our programmes and partnerships foster lifelong learning that takes leadership in sustainable action right from the early years into our businesses and workplaces. Our local workplaces and business are engaged in working to achieve sustainable business solutions. This increases and grows as our young leaders reach the workplace.
Contribute to fostering leadership and innovation with our iwi communities	Our youth programmes with iwi communities increase opportunities for leadership and innovation to achieve their regional environmental (and economic) aims and goals.
We engage more schools across the region	We can support more schools who want to join the Enviroschools programmes and we have more opportunity to engage with schools who choose not to be an Enviroschool.

#### 1.2.4 Delivery of long term outcomes

<b>Long term outcome</b>	<b>How will this option improve delivery of this outcome?</b>
Communities are empowered and supported to take action on agreed outcomes.	Both long term and immediate benefits of investing in the area will be a strong contribution to achieving this outcome with schools, youth, communities, local business and workplaces.
The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state.	There will be immediate benefits from community action and long term benefits from the injection of the youth involved in these programmes reaching our workforce and becoming our entrepreneurs.
Economic growth ensures natural capital and ecosystem services are maintained.	This work will in part drive sustainable business solutions for our region.
Communities are less vulnerable and more resilient to natural hazards, the effects of climate change and changes to society and the economy.	Connecting our communities to solve our regional problems increases resilience and builds strong communities who can act together in emergencies.
People and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.	Part of this work will increase opportunities for youth to enter the work force. The work will also focus on connecting our communities through school and tertiary – connecting communities to education projects, and education projects to community initiatives.

### 1.2.5 High level financial overview

Benefits (\$)	Revenue	Capex	Opex	Labour
			2,100,000	1,272,000

### 1.2.6 Assumptions, constraints and dependencies

- That every dollar spent on the Enviroschools returns \$6 in in-kind support and funding.
- That for each additional school in their region, Territorial Authorities will contribute a minimum \$1000 per year.

### 1.2.7 Risk Profile

*There were no risks identified with going ahead with this work.*

# Stock Truck Effluent

<b>GOA:</b>	Community and Services
<b>Activity Name:</b>	Community Partnerships
<b>Function</b>	Stock Truck Effluent
<b>Service</b>	Education
<b>Financial Budget Code:</b>	T3011

## 1.1 Review and approval

Prepared By:	Rachel Algar, Stock Truck Effluent Programme	25 October 2017
Reviewed By:	Cathy Kopeke, Team Leader Education	
Signed off By:	Nicola Chrisp, Manager Communications & Engagement	

## 1.2 Related documents

Document Title	Author	Document Reference
Waikato Stock Truck Effluent Disposal Facilities Detailed Business Case	AECOM	11185717
The Waikato Regional Stock Truck Effluent Strategy 2010-2016	WRC	<a href="https://www.waikatoregion.govt.nz/council/policy-and-plans/transport-policy/stock-truck-effluent-strategy/">https://www.waikatoregion.govt.nz/council/policy-and-plans/transport-policy/stock-truck-effluent-strategy/</a>

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	4/10/17	Cathy Kopeke	

## 2 Executive summary

The impacts of the inappropriate dumping of stock effluent from trucks has significant road safety, environmental, amenity and health issues.

There have been some efforts to reduce stock effluent discharge from trucks through the development of truck holding tanks through a voluntary Stock Crate Code for Transportation of Livestock in 2004 and ongoing educational initiatives. These measure have helped with addressing the problem.

However, the lack of stock truck effluent disposal facilities on-route remains the top issue for all stakeholders, and is also highlighted by local authorities and politicians through consultation and investigations.

WRC, in collaboration with regional partners and stakeholders developed The Waikato Regional Stock Truck Effluent Strategy 2010-2016 outlining the issues from stock truck effluent, either accidentally or deliberately being discharged onto the road. The strategy identified a number of policies and actions.

The main policy relates to the identification of a network of stock truck effluent (STE) disposal facilities to be implemented around the Waikato region to minimise the incidence of effluent spills. During the life of the strategy, two new STE disposal facilities have been built (Morrinsville sale yards and Te Kuiti sale yards along with the delivery of a number of education programmes.

A significant step towards the goal of establishing more disposal facilities occurred in late 2016, with the NZ Transport Agency (NZTA) approving the development of a NZTA Detailed Business Case (DBC) to investigate a network of stock truck effluent disposal sites in the region. The subsequent DBC draws on the strategic direction of the stock truck effluent strategy and identifies ten new stock truck effluent sites around the region, assisted by the advice from livestock truck drivers and local authorities in a series of mapping workshops held around the region.

Existing WRC funding (through targeted rates) has been identified for the WRC share for construction of the first 3 to 4 high priority stock truck effluent disposal sites, as identified in the NZTA Detailed Business Case.

This Business case to the LTP is seeking funding to construct the remaining sites identified in the NZTA DBC. In addition, funding is also sought for new education initiatives to support and promote the new stock truck effluent disposal facilities.

Investing in more stock truck effluent disposal facilities and supporting education initiatives will reduce the effluent spillage on Waikato roads, improving safety, reducing environmental damage into waterways, reducing health issues and loss of amenity.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	160	160	160	160	160	0
<b>Operational</b>	30	60	90	120	150	150

#### 2.1.1.1 Funding source

As at 1 July 2017, WRC currently had \$391,667 held in a dedicated stock truck effluent reserve fund which has been collected since 2012 from the targeted rate. These funds will provide the WRC local share to begin construction on the first tranche of sites (3 to 4). Funding for annual maintenance and operation accounts is drawn from the same funds. Currently there are three local authorities drawing from the fund for maintenance and operations of existing sites (Matamata-Piako, Waitomo and South Waikato District Councils).

This Business case to the LTP is seeking funding to construct the remaining sites identified in the NZTA DBC. In addition, funding is also sought for the ongoing maintenance and responsible waste treatment and disposal. Funding for the continued management and development of the project is allocated in the current funds collected from targeted rates; including contracted services for the pre-implementation stage, investigation into the most cost effective disposal and treatment options and more education initiatives to support and promote the new stock truck effluent disposal facilities.

#### 2.1.1.2 Funding partnerships

The NZTA Transport Agency is the key partner in this project. Under the current NZTA funding policy, NZTA will pay 100% of the roading costs allocated with the proposed new stock truck effluent facilities. Costs for constructing the facility costs will be funded approximately 50% by WRC with the remaining

50% funded by NZTA. The actual cost share between WRC and NZTA will depend on the Financial Assistance Rate (FAR) of the local authority in which the facility is located.

A multi-party funding agreement (currently draft copy available) between the NZ Transport Agency and the WRC is being finalised to identify the roles and responsibility moving forward for the duration of the project estimated to be completed by 2020.

In addition, the local authorities as road controlling authorities for local roads have a key role in maintaining the facilities. While WRC would take on the responsibility of paying their 50% share of the maintenance, the local authorities also have a role to play.

A Funding Agreement for Maintenance and Operations is established between WRC and the local authorities for a disposal facility, outlining the responsibilities and who pays for what. WRC currently has three such agreements. Responsibilities for the local authority include:

- Ensuring that the \$15K capped funding is not overspent, and any excess expenditure to be met by the local authority;
- Organising a waste contractor to remove the stored effluent at a disposal facility;
- Ensuring the waste effluent is disposed of within the rules of the RNA (Section 15);
- All administration of the agreement – including billing WRC
- Regular maintenance of the site such as removal of rubbish, hosing down the site, mowing grass surrounds
- Inspection of the site operations (needed if effluent is being pumped directly to the town's municipal waste system (eg; Te Kuiti Sale Yards, Waitomo District Council)

## 2.2 Corporate support service implications

Consideration	Yes/No	Discussed with Activity Lead?
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No	John Crane - Yes / No
Does the work include the procurement, or capture, of new data sets?	No	Gill Lawrence - Yes/No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes	Gill Lawrence - No
Does the work require analysis or modelling of spatial data?	No	Gill Lawrence - Yes/No
Does the work require the establishment of new depots or offices?	No	Trevor Martin – Yes/No
Does the work require the use of additional fleet vehicles?	No	Trevor Martin – Yes/No
Does the work require additional resources (FTE or contract)?	Yes	If yes, complete section 2.2.1

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
Permanent Stock Truck Effluent		0.3 FTE	0.3 FTE	0.3 FTE	0.3 FTE	0.3 FTE	

Programme Manager?							
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### 3 The case for change (Strategic Case)

- Proposal for change. This Business case to the LTP is seeking funding to construct more stock effluent disposal facilities across the Waikato Region, as well as a number of new education and stakeholder related initiatives.
- Stock truck effluent discharging on roads began decades ago when moving stock shifted from droving (walking stock) along roads to being transported on stock trucks as we know it today. Stock is typically moved from one farm to another, to sale yards or meat processing plants. However, the impacts of the inappropriate dumping of stock effluent from trucks has significant road safety, environmental, amenity and health issues.
- There have been some efforts to reduce stock effluent discharge from trucks through the development of truck holding tanks through a voluntary Stock Crate Code for Transportation of Livestock in 2004. This measure has helped but still becomes a problem when the effluent tanks become full.
- The lack of stock truck effluent disposal facilities remains the top issue for all stakeholders, and is also highlighted by local authorities and politicians. Consultation and investigations have revealed that the current facilities are facing increased pressure by truck operators and there is a need for more disposal sites across the Waikato. The consequence of this problem is also evident in effluent spillage complaints from the public and local authorities to the Waikato Regional Council (WRC). This problem will be further exacerbated as the dairy industry in the Waikato has increased to around 1.7 million head of cattle and 4,500 farms. A further 6,500 farms in the region are made up of beef, sheep, deer and goats. It is expected that the dairy industry will further increase as former forestry land becomes available and Government policy aims to increase primary industry exports.
- To address this issue, the Waikato Regional Council developed the Stock Truck Effluent Strategy (2010-2016) with stakeholders agreeing that the issues and actions remain current today. In addition, the NZTA Waikato Stock Truck Effluent Disposal Facilities detailed business case (DBC) details the 10 priority stock truck effluent disposal sites for implementation to 2020. The DBC was approved by the Regional Transport Committee at its October 2017 Council meeting. The meeting supported proceeding with the project using the existing WRC funding (collected from targeted rates) for the local share to construct the first 3 to 4 high priority sites by December 2018. It also supported proceeding with the remaining sites (approximately 6–7), pending funding approval through the WRC 2018-28 Long Term Plan process.
- Following NZTA funding decision support to proceed, the project will move into the pre-implementation phase and then construction of the first 3-4 high priority sites expected to be completed by 2018. Following this, the medium priority sites (2 sites) are targeted for construction by 2019 and the low priority sites (4 sites) would target construction at the end of the 2019/2020 period. NZTA will project manage the pre-implementation and construction phases of the project with support as a partner in this project from WRC. A multi-party funding agreement is being developed (currently draft copy available) between the NZ Transport Agency and WRC to identify roles and responsibilities moving forward.
- In addition, there is a significant need for supporting education, stakeholder engagement and further investigations into the most environmentally appropriate disposal and treatment options

for the stock truck effluent. There are also a number of key actions that the WRC and their associated partners need to take to deliver on the Stock Truck Effluent Strategy (still current).

The need for more stock truck effluent disposal sites and ongoing education has been long standing and there is significant impetus now for this to happen.

### 3.1 What will success look like (high level benefits)

We have an increased number of stock truck effluent sites on our roads to deal with the effluent created in transit. The sites are fit for purpose for truck routes, driver access and disposal and well maintained. The waste is treated in a sustainable method avoiding waste to landfill. Effluent is no longer polluting our roads and ending up in our waterways.

The long-term success of investing in the initiatives identified in this business case will significantly contribute to the Regional Stock Truck Effluent Strategy of ‘working toward zero discharge of stock effluent from trucks onto Waikato roads by 2020’. Progress towards this goal will be monitored through stock truck effluent indicators and trend analysis (e.g. public complaints). The WRC will prepare a baseline pre and post monitoring programme in conjunction with this project.

#### Benefits

There will be significant benefits from investing in new stock truck effluent disposal facilities and the supporting education initiatives (as identified in the Regional Stock Truck Effluent Strategy). These include:

- Improved safety for all drivers, including vulnerable road users such as motorcyclists
- Reduced environmental damage resulting from effluent seeping into waterways
- Reduced health issues for roading contractors and vulnerable road users and
- Reduced instances of loss of amenity due to effluent spills in urban areas.

In addition, the project has other benefits including:

- Reducing the number of complaints to WRC relating to stock truck effluent disposal on the roads
- We believe the Waikato Region is leading the way with best practice stock truck effluent management. This is a flagship project example that other regions and countries will follow in improving stock truck effluent management. Currently there is interest in other regions in New Zealand and Australia as to how we manage stock truck effluent.

#### Key performance measures

As part of pre and post monitoring for the project, we will extract baseline data and targets for the following key performance measures:

- A reduction in the incidences of stock truck effluent polluting waterways
- A reduction in public complaints relating to inappropriate discharge from stock trucks

### 3.2 Consequences of not proceeding

It has been only early in 2017 that has seen positive steps forward in the Stock Truck Effluent Programme. Until now WRC has struggled to gain traction to progress building a larger network of stock truck effluent disposal facilities in the Waikato.

Stock truck drivers currently rely on nine disposal facilities located at some sale yards, some meat processors and one in-transit facility. It could be argued that nine facilities should be adequate. However trucks are limited at meat processors and sale yards in that the disposal facilities can only be used if the truck is visiting these premises. This leaves a shortfall of facilities that can be accessed 24/7.

We know that trucks discharge the effluent from the trucks either deliberately or the holding tanks overflow onto the roads especially travelling up hills or on roundabouts. WRC maintains a complaints database mainly from public complaints, or from road territorial authority maintenance teams.

The discharged effluent presents road safety hazards, health and environmental issues and supports the notion that more disposal facilities are needed to avoid these issues.

Significant consultation has been completed to date on the project. Key partners, stakeholders and politicians believe it is long overdue for the need for additional stock truck effluent disposal facilities across the Waikato. Following the recent completion of the NZTA Detailed Business Case, we have a strong partnership and willingness from the NZ Transport Agency to proceed to the pre-implementation phase of this project for the first 3-4 high priority sites. If we don't invest now, we will lose significant momentum and stakeholders may lose interest in future support for this project and therefore we feel the timing is right to act now.

### 3.3 Alignment

Long Term Outcome	How will this change improve delivery?
It is safe to swim and take kai from all fresh water	Nitrogen from livestock manure ending up in our waterways will be significantly decreased.
Our diverse communities feel like a valued part of the Waikato and take pride in the region	Our communities will have a better and safer environment both on our roads and in our waterways. We will reduce the number of incidents and complaints.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Regional Stock Truck Effluent Strategy	Strong	This work will fulfil the strategic plans in our region to reduce stock truck effluent on our roads.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option.

The options are:

1. Option one – continue as Status Quo
2. Option two – Proceed with proposal

### 4.1 Specific objectives

Objective	Status Quo	Option1
1. Improved safety for all drivers	<i>Meets in part</i>	<i>Meets</i>
2. Reduced environmental damage	<i>Meets in part</i>	<i>Meets</i>



3. Reduced health issues	<i>Meets in part</i>	<i>Meets</i>
4. Reduced instances of loss of amenity	<i>Meets in part</i>	<i>Meets</i>

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet.*

Objective	Status Quo	Option1
5. Improved safety for all drivers	<i>Meets in part</i>	<i>Meets</i>
6. Reduced environmental damage	<i>Meets in part</i>	<i>Meets</i>
7. Reduced health issues	<i>Meets in part</i>	<i>Meets</i>
8. Reduced instances of loss of amenity	<i>Meets in part</i>	<i>Meets</i>

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo			0	0	0
Option 1			800	870	247

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is **Option 2 (Proceed with full Project)**.

The lack of stock truck effluent sites has been a long-standing problem that has been raised by politicians, local authorities, the livestock industry, the NZ Transport Agency and the community. Investing in the construction of the ten proposed effluent disposal facility sites and supporting education initiatives across the Waikato Region will have significant benefits in terms of improved safety, reduced environmental and health issues and improved amenity.

This project will be completed in partnership with the NZ Transport Agency. A multi-party funding agreement will determine the roles and responsibilities for funding this project.

Waikato Regional Council already have \$392 collected from targeted rates to begin this project. NZTA have 2 million dollars already allocated their current budget for this project, which can be spent as soon as the detailed business case is signed off, which is due to be done by February 2018. Our funding creates a significant investment into solving this regional problem.

	NZTA	WRC
Total Expected Funding	\$14,239,093	\$758,574

### Financial analysis and procurement (Financial & Commercial Case)

Description	Amount \$/K	Timing	Funding Source	Comments
Labour	247	2018	Targeted Rates	
Opex	870	From 2018, increase in 2021 and continues	Targeted & General Rates	
Capex * WRC Contribution	800	2018-2021	Targeted General Rates	\$392K of this amount has already been collected from targeted rates
Revenue				

Description	Amount \$/K	Timing	Funding Source	Comments
Contingency	15% - 20%		Targeted Rates	The contingency costs of between 15% and 20% <sup>1</sup> have been applied for construction has been factored through the DBC and is included in the capital costs.
Other Contingency			Targeted Rates	The \$80k noted in 2021 is a contingency cost for potential land costs that are yet unconfirmed.

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	240	240	240	80		
<b>Operational</b>						
<b>Revenue</b>						
<b>Current Reserves<sup>2</sup></b>	192	60	140			

The table below outlines the estimated costs from the detailed business case for the 10 sites. WRC's expected funding is for 50% of the construction of facilities and NZTA are paying 100% of the roading costs as well as the other 50% of funding.

#### Cost Estimates

Site	Roading		Facilities	
	Expected	95th percentile	Expected	95th percentile
Site 1 – SH29 / SH24 Kaimai	\$ 549,119	\$ 640,285	\$ 169,747	\$ 197,546
Site 2 – Ohinewai	\$ 1,239,851	\$ 1,445,537	\$ 139,538	\$ 162,216
Site 3 – SH1 / SH5 Roundabout, Taupo	\$ 1,190,179	\$ 1,386,086	\$ 136,775	\$ 158,671
Site 4 – Whatawhata	\$ 1,198,343	\$ 1,397,687	\$ 130,413	\$ 151,291
Site 5 – Piarere truck layby ( <i>Optional Site</i> )	\$392,130	\$456,806	\$107,197	\$124,556
Site 6 – Te Rere Road, Lichfield	\$ 1,042,867	\$ 1,216,990	\$ 128,288	\$ 149,166
Site 7 – Otorohanga	\$ 150,779	\$ 176,066	\$ 101,292	\$ 117,707
Site 8 – Z Stop, Turangi	\$ 602,935	\$ 704,141	\$ 153,872	\$ 179,931
Site 9N – SH2 Mangatawhiri to Paeroa	\$ 3,148,502	\$ 3,672,160	\$ 174,963	\$ 204,541
Site 9S – SH2 Mangatawhiri to Paeroa	\$ 3,171,900	\$ 3,699,882	\$ 141,663	\$ 164,341

<sup>1</sup> Contingencies ranged between 15% and 20% have been applied, depending on each of the sites. No further costs have been allowed for I&R, although allowance has been made for professional fees and client managed costs during D&PD (Pre-implementation) and professional fees and client managed costs during MSQA (Implementation). The Physical works have been estimated separately for each site.

<sup>2</sup> Note: Current reserves are spread over years to have the least impact on rates.

Site	Roading		Facilities	
Name	Expected	95th percentile	Expected	95th percentile
Site 10 – SH3 / SH4 Intersection Eight Mile Junction	\$ 793,914	\$ 926,302	\$ 133,400	\$ 155,095
<b>Total</b>	<b>\$13,480,519</b>	<b>\$15,721,942</b>	<b>\$1,517,148</b>	<b>\$1,765,061</b>

### 4.3.1 Assumptions

For the new stock truck effluent facilities the following assumptions have been made:

- Funding is dependent on NZ Transport Agency funding for 100% funding for the roading costs allocated with each of the facilities and 50% share of the facility costs.
- The funding partnership will be between the NZ Transport Agency and WRC.
- According to the PPFM, the district councils can apply for funding subsidy to operate in-transit stock effluent disposal facilities for construction and maintenance, however in this case that would require the TAs to apply for the funding through NZTA and then reallocate it back to them. It is currently proposed that the NZ Transport Agency manage the funds directly.
- It is assumed that WRC will not own this asset.

### 4.3.2 Additional commentary

For the 10 identified new stock truck effluent sites, a contingency between 15% and 20% was applied depending on site assessment. No costs have been allowed for future I&R, although allowance has been made for professional fees and client managed fees during the pre-implementation and implementation phase of the project.

### 4.3.3 Procurement strategy

The primary activities undertaken under the stock truck effluent project includes the pre-implementation, construction and monitoring of the proposed 10 stock truck effluent sites across the Waikato (in partnership with the NZ Transport Agency). In addition there will be ongoing education initiatives to promote and support key messages around the management of stock truck effluent.

We envisage there will be the need for the following skills:

- Stock Truck Effluent Disposal Facility costs<sup>3</sup>
- Expert consultancy advice within the field of stock effluent collection and treatment
- Consultation and engagement (with iwi, key stakeholders)
- Maintenance agreements
- Education materials
- Monitoring programme (research and monitoring key performance measures)

<sup>3</sup> Note: Note: WRC have committed to funding 3-4 priority sites during 2018. The remaining sites require funding confirmation through the LTP Process.

## 5 Implementation and achievability (Management Case)

### 5.1.1 Implementation structure

#### Project Delivery Approach

The stock truck effluent project will be delivered in project phases to 2020. The project delivery activities and key tasks are outlined in section 5.1.3.

Building new stock truck effluent disposal facilities requires separate partnership agreements” 1) with NZTA and 2) with affected local authorities.

1. Multi Party Funding Agreement (MPFA), currently under development. This agreement outlines the necessary responsibilities required by NZTA and WRC to build up to 10 stock truck effluent disposal facilities, including funding allocations which is outlined in the NZTA Funding and Investment Manual. For example: NZTA and WRC pay 50/50 for the construction of the facility, where NZTA pay 100% for all roading costs. There is also split payment for maintenance and operations between NZTA and WRC. The MPFA is a one-off and will remain until all the facilities have been built.
2. Maintenance and Operations Agreement: A new agreement is drawn up for each new disposal facility with the affected local authority. If more than one facility is built in a local authority then a separate agreement will be drawn up. These agreements are permanent where WRC pays each local authority annually, and will continue for the life of the disposal facility. The annual WRC rate-take was developed in 2012 and designed to collect enough funds to cover the construction (50% - a one-off cost) and maintenance for 10 disposal sites on an ongoing basis. WRC currently has 3 existing operation and maintenance agreements with 3 local authorities and will development more of these for the new stock effluent facilities constructed as part of this project.

### 5.1.2 Scope/deliverables

Figure 1 shows the phases from planning to delivery of the project. The key activities/deliverables are outlined in the table below. During each of the project phases, project plans will be completed.

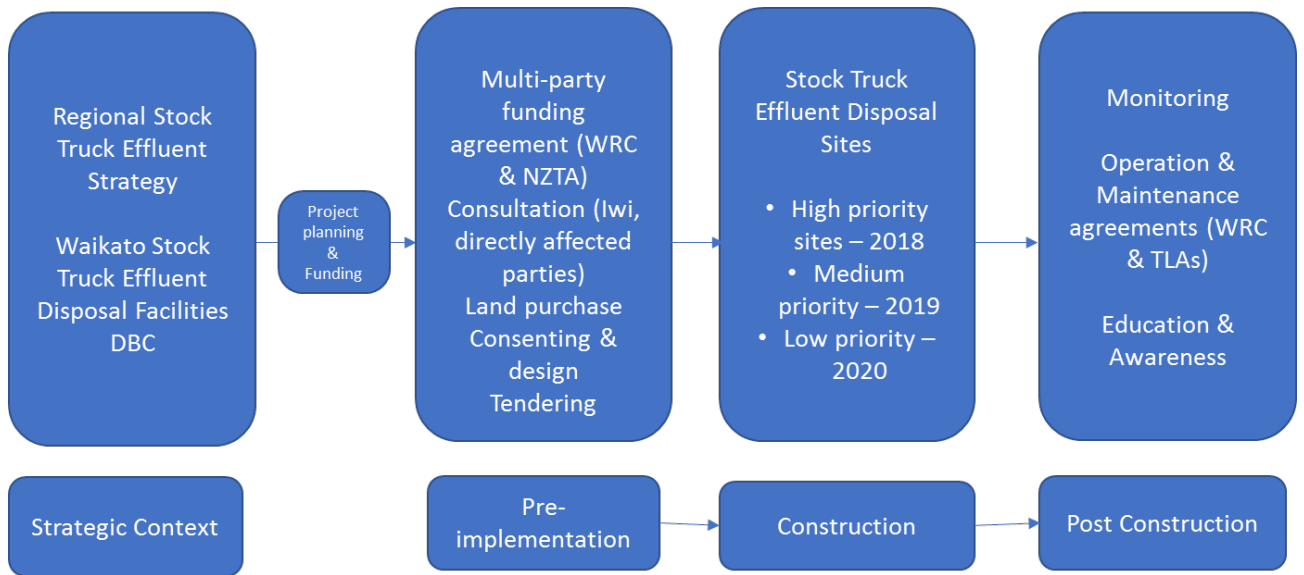


Figure 1: Planning and delivery phases of the Stock Truck Effluent Project

<b>Key Activities/Deliverables</b>
<p><u>New stock truck effluent disposal sites</u>                      Work with the NZ Transport Agency to implement the new stock truck effluent disposal sites (as outlined in the DBC). Specifically:</p> <ul style="list-style-type: none"> <li>- Multi-party funding agreement between NZTA &amp; WRC</li> <li>- Completion of pre-implementation phase (iwi consultation, land purchase, consenting, preparation of tender documentation)</li> <li>- Maintenance agreements between TLAs</li> <li>- Construction of the first 2-4 high priority sites by December 2018</li> <li>- Construction of the remaining sites (pending approval through the WRC Long Term Plan Process)</li> </ul>
<p><u>Effluent collection and treatment</u>                      Identify and implement the most appropriate method for the stock effluent collection and treatment:</p> <ul style="list-style-type: none"> <li>- Preparation of ROI for most appropriate treatment method for stock effluent collected</li> <li>- Identify and engage services for preferred company/contractor (best fit for achieving environmental sustainability)</li> <li>- Prepare contract</li> <li>- Engage company</li> <li>- Monitor contract</li> </ul>
<p><u>Education initiatives</u>                      Continue to work with stakeholders to promote key education messages. Specifically:</p> <ul style="list-style-type: none"> <li>- Motorhome companies – education around no human waste in stock truck effluent sites (including signage)</li> <li>- Farmers - educate, encourage, promote and monitor stock being held off green feed for a minimum of four hours prior to transit.</li> <li>- Education and promotion to truck operators of new stock truck effluent sites</li> <li>- Work towards all meat processing plants and sale yards providing appropriate facilities for stock truck effluent disposal and truck wash down. Encourage the use of these facilities by truck operators.</li> <li>- Ensure all livestock carriers have effluent holding tanks in their trucks.</li> </ul>

<b>Key Activities/Deliverables</b>
<ul style="list-style-type: none"> <li>- Encourage farmers to receive and dispose of effluent from stock delivered to their property, although not favoured by many farmers for biosecurity and environmental reasons.</li> </ul>
<p><u>Stakeholder Engagement</u></p> <p>Continue to work with key stakeholders across the Waikato region on key messages. Specifically:</p> <ul style="list-style-type: none"> <li>- Stock Truck Effluent Working Group</li> <li>- Iwi</li> <li>- Stakeholders</li> </ul>
<p><u>Monitoring</u></p> <ul style="list-style-type: none"> <li>- Monitoring at sites – pre and post construction</li> <li>- Recording of complaints – annual mapping exercise</li> </ul>

### **5.1.3 Key milestones**

*The Gantt chart below outlines the key tasks and timeframes for the activities.*



### 5.1.4 Stakeholder engagement

There are a number of organisations that have been actively involved providing guidance in this work through the preparation of the Stock Truck Effluent Strategy and Waikato Stock Truck Effluent Disposal Facilities Detailed Business Case – this information has informed this business case (see Table 1 below for the list of stakeholders).

The key partner in this project is the NZ Transport Agency with both a responsibility for state highway network (of which many of the proposed new stock truck effluent facilities will be located) and funding of the new facilities.

**Table 1 Partners and Stakeholders**

Stakeholders	Interest	Method of Engagement
New Zealand Transport Agency	Management and operation of the State Highway Network. Safety responsibilities, funding for the development and maintenance of facilities.	Partner
Dairy NZ	Dairy NZ represent farmers' interests and provide education and research to improve farming practices.	Engage
District Councils	Road controlling authorities. District councils have the following roles and responsibilities: <ul style="list-style-type: none"> <li>work with stakeholders involved with the handling and transportation of stock,</li> <li>can apply for funding subsidy to operate in-transit stock effluent disposal facilities,</li> <li>identify suitable in-transit sites,</li> <li>issue land use consents,</li> <li>consider the effect of road design on the ability of stock cartage vehicles to contain stock effluent when building and repairing roads</li> <li>development of in-transit sites on the state highway network with the NZTA, and</li> <li>provide funding assistance for construction and maintenance in accordance with the PPFM with the NZTA.</li> </ul>	Engage, Partner
Farmers	The farmer, or farmer's agent, is ultimately responsible for ensuring that stock is adequately prepared for transportation by standing the stock off green feed for a period of 4-12 hours prior to transporting. The code of practice (Section A1.2), states that farmers should take responsibility for the receiving of, and disposal of, effluent collected on trucks from stock being delivered onto their property.	Engage
Federated Farmers	Federated Farmers of NZ (Inc) have been involved in providing advocacy and advice to farmers to help eliminate and reduce stock truck effluent. Federated Farmers are a member of the National Stock Effluent Working Group and a member of the Regional Working Group. As part of their responsibility under the code of practice, the Regional Working Group actively advocates to farmers to stand stock off green feed for a period of 4-12 hours prior to transportation.	Engage
Livestock Carriers	Livestock carriers are responsible for collecting and containing effluent from stock on all trucks and trailers. This is mostly achieved with holding tanks fitted to the trucks to collect effluent to ensure that spillage is minimised.	Engage
Meat Processors	Meat processors have a responsibility to communicate with their clients on requirements for stock effluent management, including	Engage



Stakeholders	Interest	Method of Engagement
	standing stock off green feed, transporting stock and receiving stock.	
National Road Carriers	The National Road Carriers provides advocacy, representation and business support for the road transport industry. The NRC lobbies local and central government on issues that affect the transport industry and provides representation on the Road Transport Forum.	Engage
Road Transport Forum New Zealand	The Road Transport Forum New Zealand is the authoritative voice of the road transport industry in New Zealand, created to responsibly promote and advance the interest of the commercial road freight industry.	Engage
NZ Police	Safety and crime prevention responsibilities.	Engage
Stock Agents	Stock agents, including meat processing company agents and stock purchasers, are responsible for communicating with clients (farmers) the requirements for standing stock, transporting stock and receiving stock.	Engage
Waste Removal Contractors	Waste removal contractors will be required to empty effluent storage tanks at disposal facilities which do not have on-site processing facilities. Waste Removal Contractors should be engaged during the design phase to ensure that proposed facilities can be easily serviced.	Engage
Sale Yard Operators	Sale yards should have, and make available, facilities to receive and appropriately dispose of stock effluent from stock being delivered to their premises. In conjunction with stock agents, sale yard operators should ensure that arrangements are finalised well in advance and that their clients are notified, directly or via the transport operator, so that their clients are able to stand their stock for the appropriate period before transportation.	Engage
Tangata Whenua	Local iwi have an interest in proximity to watercourses and waterbodies, iwi management plans and WRC Plan Change One. The fundamental basis for the project should support iwi aspirations around minimising contaminants entering the environment.	Engage (Maori Engagement Framework)

### 5.1.5 Ongoing operational management

Once a disposal facility is near operation, WRC will develop a maintenance and operations funding agreement with the affected Territorial Authority, where WRC will pay up to \$15K per annum for each disposal facility. The TA will bill WRC for the maintenance and operations as per an agreed payment schedule. This system is currently in place for three existing disposal facilities in the Waikato Region.

Current arrangements include a waste contractor who removes the effluent from the disposal facility site and takes it away to be disposed of by way of a municipal trade waste facility, spread to farm land (per arrangement with the farmer), or stored in treatment ponds. WRC are investigating a more sustainable treatment programme for the effluent. WRC commissioned a consultant to research treatment options mid 2017, (see Doc #11063118). One of the treatment options is vermicomposting (worm farming). A Vermicast company MyNOKE conducted a 6 month trial using a stock effluent and paper pulp mix. The result was successful giving WRC confidence to do further investigations into this form of treatment, which would see a complete cycle as opposed to sending the stock effluent to a municipal trade waste facility which is very expensive and does not have an end product. This treatment method will also require funding, and as the number of new stock truck effluent disposal facilities increase, so too with the cost of maintenance and operations.

### 5.1.6 Assumptions, constraints and dependencies

This project is highly dependent on the NZ Transport Agency as a key partners own internal funding and planning processes to deliver on the intended outcomes.

### 5.1.7 Risks

Risk	Impact	Likelihood	Comments/mitigation
<p><b>Funding:</b></p> <p>There is a threat that funds may not be available to deliver the intended facilities. There has also been a change in funding approval processes within NZTA.</p> <p>The cause of the threat is project funding needs to be agreed across NZTA and WRC with separate funding approval processes, may not be available for construction or staging. The consequence of the threat is project delays and increased costs.</p>	Will result in project not being able to meet objectives.	High/Medium	<p>NZTA and WRC are key partners and have been fully committed to this project through the funding of the NZTA Detailed Business Case for Stock Truck Effluent.</p> <p>The multi-party funding agreement will outline roles and responsibilities between NZTA and WRC.</p>
<p><b>National Political Change:</b></p> <p>There is a threat that the new government may re-prioritise future funding for transport related projects. The consequence of this is a disruption to the project in time and cost.</p>	Will result in project not being able to meet objectives.	Medium	This project has seen has having significant health, safety and environmental benefits. The project will need an element of flexibility in timing and staging if funding priorities change.
<p><b>Iwi Consultation:</b></p> <p>There is a risk that iwi oppose the project(s). The cause of the risk is that the identified effects of the facilities cannot be accepted by iwi or mitigated. The consequence of the threat is the project is unable to proceed.</p>	Will result in project not being able to meet objectives.	High/Medium	Engagement with Iwi is already underway with the 3-4 high priority sites. Continue to work with WRC Iwi team and Maori Engagement Framework.
<p><b>Stakeholder Consultation:</b></p> <p>There is a threat that the stakeholders may have a different set of priorities and there is a lack of agreement of the priority, need or location of the facilities.</p> <p>The consequence of the threat is we are unable to implement the recommended solution. The consequence of the threat is that the Business Case is challenged and funding is not made available for the project.</p>	Will result in project not being able to meet objectives.	Medium	<p>Continue to consult with key stakeholders including TLAs.</p> <p>The RAG and Regional Stock Truck Effluent working group has provided an effective avenue for consulting on the stock truck effluent project.</p>

<b>Risk</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Comments/mitigation</b>
<p><b>Land Purchase:</b></p> <p>There is a threat that land may not be available. The cause of the threat is landowners may not want to sell land. The consequence of the threat is that the sites cannot be implemented.</p>	Will result in project not being able to meet objectives.	High/Medium	Consultation with landowners in the pre-implementation phases of the project.
<p><b>Consents:</b></p> <p>There is a threat of complications with approval of consents. The cause of the threat is unacceptable effects of the facilities. The consequence of the threat is extra design / redesign, or finding new sites, leading to extra time and cost.</p>	Will result in project not being able to meet objectives.	High/High	Robust site selection, identification of environmental and social responsibility issues, and consultation.
<p><b>Mitigation Effects:</b></p> <p>There is a threat that mitigation of effects is more difficult than anticipated. The cause of the threat is the directly affected stakeholders are overly demanding in the mitigation of the visual and odour effects of the project(s). The consequence of the threat is additional mitigation and cost for the project</p>	Will result in project not being able to meet objectives.	High/High	Consultation with landowners in the pre-implementation phases of the project.
<p><b>Education strategies do not reach the target audience:</b></p> <p>There is a threat that farmers, truck operators, motorhome owners etc do not receive key messages regarding stock truck effluent problems.</p>	Will result in project not being able to meet objectives.	Medium	Work with key stakeholders to identify and promote the best avenues for promoting best practice stock truck effluent education.
<p><b>Stock Truck Effluent Collection and Treatment:</b></p> <p>There is a threat that the services for collection and treatment to achieve environmentally sustainable outcomes is expensive and proves difficult to implement. The consequence of this project is that there may be additional costs to the project or a chosen option that doesn't meet the project objectives.</p>	Will result in project not being able to meet objectives.	High/Medium	Preparation of an ROI to the market for the most appropriate treatment method.

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# **Business Cases**

## **Flood Protection and Control Works**

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# Lower Waikato / Waipa / West Coast Operations Team additional staff

<b>GOA:</b>	Flood Protection and Control Works
<b>Activity Name:</b>	Flood Protection, River Management and Land Drainage
<b>Function</b>	Operations activities
<b>Service</b>	Labour
<b>Financial Budget Code:</b>	Various within the Lower Waikato Zone and Drainage budgets

## 1.1 Review and approval

Prepared By:	Guy Russell, Operations Team Leader, Lower Waikato / Waipa / West Coast, ICM	Date 18/10/17
Reviewed By:	Matthew Davis, Manager, Lower Waikato / Waipa / West Coast, ICM	Date
Signed off By:	Clare Crickett, Director ICM	Date

## 1.2 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

This business case is to support the addition of four new roles within the Lower Waikato/Waipā/West Coast (LWWWC) Operations Team, with three of the roles conversion of contracted labour (direct cost) to labour. Direct cost has been reduced in the LTP correspondingly. If the three positions are not approved, then the direct cost must be reinstated to the budgets, together with the equivalent of 1 FTE, an increase required to match increases in expectations for operational delivery.

The volume of work required to be completed by the LWWWC Operations Team has increased over recent years due to changes in the measures within the Long Term Plan (LTP), changes in health and safety legislation, the need to demonstrate compliance, requests from the drainage advisory subcommittees, and issues and upgrades of drainage districts that have transferred to Waikato Regional Council. Resourcing exercises on the annual task lists over the last three years have demonstrated that additional resources are required and to date those resources have been obtained through contract labour to the extent that the contractors are the equivalent of permanent staff. Finding, training, managing and retaining competent contract labour has been difficult, time consuming and costly for management and supervising staff and reduces the time they are able to spend on their core business of providing a service.

The new roles are:

- 1 Field Operator based in the Tuakau Depot
- 1 Leading Hand based at Gordonton in the Gordonton #1 Team

1 Leading Hand based at Gordonton in the Gordonton #2 Team

1 Business Support Officer (BSO) to assist the existing business support staff in completing the full range of tasks required to support the Operations Teams based at Gordonton and Tuakau,

The three field roles are to replace the existing contract labour that has been in place over the last two years and will also provide more on the ground resources for peak load activities such as spraying and flood response. The roles are cost neutral as the equivalent value of contracted services has been removed from the direct costs within the LTP associated with the allocated hours for these roles. These roles also allow the LWWWC Operations teams to be of the same make up as the Waihou Piako Operations teams

The additional BSO role is required to support the existing administration role based at Gordonton to complete the significant range and number of tasks that has been allocated to this role (see document #11113482) and results in the business support at Gordonton being on the same scale (i.e. two business support staff) as that being provided to the Waihou Piako Operations Team. This includes support for health and safety documentation and Vault entry at Gordonton.

The measures of success will be the completion of the required number of maintenance tasks, the assets maintained in operational readiness, the support for those activities to happen on time, tasks and actions recorded correctly, work undertaken safely and in compliance with legislation and in accordance with Audit NZ requirements.

## Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	198,000	198,000	198,000	198,000	198,000	198,000

#### 2.1.1.1 Funding source

These roles will be funded by flood protection, river management and land drainage targeted rates. The flood protection and river management rates are within the Lower Waikato zone and the land drainage rates are from Waikato Central, Franklin Waikato and Aka Aka Otaua targeted rates.

The three field roles will essentially replace existing contract labour and have a value of \$153,000. These roles will be self-funded by a corresponding reduction in the Contracted Services values within the direct cost budget areas where the labour hours have been allocated. The reduction in Contracted Services values has been included within the LTP budgets, so that if these roles are not approved the corresponding values will need to be put back into the direct cost values within the LTP budgets.

The new BSO role is not proposed to be funded from existing contracted services but rather will require additional funding of \$45,000. The hours for this role have been included in the 2018-28 LTP and spread across the relevant flood protection, river management and drainage budgets where the support is required.

#### Funding partnerships

There are no funding partnership involved; these roles are all targeted rate funded.



## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	N
Does the work include the procurement, or capture, of new data sets?	N
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	N
Does the work require analysis or modelling of spatial data?	N
Does the work require the establishment of new depots or offices?	N
Does the work require the use of additional fleet vehicles?	N
Does the work require additional resources (FTE or contract)?	Y

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	17	21	21	21	21	21	21
<b>Fixed Term</b>	2	1	1	0	0	0	0
<b>Contract</b>	3	0	0	0	0	0	0

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

To change the current use of contract labour associated with the ICM LWWWC Operations Team to be permanent staff.

To add a BSO to the LWWWC Operations Team to ensure all of the required administration tasks are able to be completed. The provision of two administration staff in this operations team provides consistency with the administration support provided to the Waihou Piako Operations Team of one BSS and one BSO.

Additional field staff will enable the scheduled work tasks to be completed and increase the ability to be flexible and allow additional labour to be allocated into seasonal work areas at peak demand times. Much of the Operations Team's activities is responding to seasonal work activities and changes. The volume of work in one particular activity can vary considerably between years due to the difference between seasons. Such activities include:

- Spraying
- Machine cleaning
- Pump and floodgate operational checks
- Flood response

Examples of this are:

- If a particular spring creates more vegetation growth than normal, then labour is available to supplement an increased spray programme.

- If a winter has more flood events than normal then labour is available to respond to those events and fill the rosters.

In support of this the Drainage Advisory Subcommittees have recommended that more effort is put into the spray programmes to be able to target the weed growth at the right time of the year. WRC engages spray contractors for a consistent rate of work throughout the spray season, and there are insufficient appropriately qualified spray contractors available that can be called on at short notice during the peak growth time of year to increase the spray effort. At these times all other industries that also want sprayers have them committed for larger volumes of work than WRC can provide during the peak periods.

## 3.2 What will success look like (high level benefits)

WRC will be compliant with employment regulations in that it will stop employing contractors on a (near) full time basis to undertake the roles that could be readily undertaken by staff.

The LTP measure of completing 80% of the scheduled maintenance tasks can be achieved

Administration tasks required to support the Operations Team's activities are all completed to allow compliance with regulations and Audit NZ.

## 3.3 Consequences of not proceeding

The current management of the implementation of work programmes would continue and WRC would continue to engage contract labour on an equivalent full time basis. WRC would likely not be compliant with employment legislation.

The LTP measure of completing 80% of maintenance tasks may not be able to be achieved and/or there would be difficulty in demonstrating to Audit NZ that the tasks have been completed and recorder adequately.

The levels of service for flood protection and drainage may not be able to be achieved.

Administration tasks would not be completed which may prevent activities being undertaken as planned or may result in activities being undertaken with poor compliance, without compliance or insufficiently documented to demonstrate compliance.

## 3.4 Alignment

Priority: Increase communities understanding of risks and resilience to change.

Long Term Outcome	How will this change improve delivery?
Vibrant communities	Help ensure our flood protection and drainage assets are maintained in operational readiness

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority: Increase communities understanding of risks and resilience to change</i>		
We more actively reduce long-term risks to communities from storm damage and weather-related natural hazards; and long-term risks of sea level rise to settlements and infrastructure.	Strongly contributes	Staff directly support work programmes that actively reduced long term risks to communities from storms and hazards.

Legislation	Alignment	How will this change improve delivery?
Employment	Explicit	Ensure contractors are not undertaking tasks year on year that should be completed by staff.
Soil Conservation and River Control Act	Strong	Ensuring that WRC's assets are maintained in operational readiness

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
LoS Flood protection	Strong	It will help ensure that the flood risks to communities and infrastructure are reduced
LoS Land Drainage	Strong	Ensure that the WRC drainage network is maintained to the agreed level of service

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

Options include:

1. Status Quo: The current resource levels within the LWWWC Operations Team is insufficient to undertake all of the required maintenance and administration tasks that are implemented by the Operations Team within the Lower Waikato and Drainage programmes
2. Option 1: Conversion of contracted labour to three field staff and addition of one new BSO.

### 4.1 Specific objectives

1. To change the current use of effectively permanent contract labour into WRC staff.
2. To increase the business support for the LWWWC Operations Team to allow the work programmes to be completed in compliance with legislation and to Audit NZ's requirements.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet*. Add further columns, or remove, as required.

Objective	Status Quo	Option1
1. Provide additional field staff	<i>Does not meet</i>	<i>Meets</i>
2. Provide more business support	<i>Does not meet</i>	<i>Meets</i>

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo	No change				
Option 1				Additional \$45k	

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is option 1 for the following reasons:

- Allows for work tasks to be completed in a compliant manner.
- Allows for Operations Team to be adequately supported at a consistent level.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	+\$198,000	2018	Targeted rates	3 of the 4 staff are cost neutral
Opex	-\$153,000	2018	Targeted rates	Funded by a reduction in Contracted Services from relevant budgets
Capex				
Revenue				
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	\$45,000 net	\$45,000 net	\$45,000 net	\$45,000 net	\$45,000 net	\$45,000 net
<b>Revenue</b>						

#### 5.1.1 Funding partnerships

No Funding partnerships

#### 5.1.2 Assumptions

No significant assumptions have been identified.

#### 5.1.3 Additional commentary

Additional field labour will not require additional vehicles as they will utilise the current two vehicles allocated to each of the three operational teams.

#### 5.1.4 Procurement strategy

Will any procurement activities be required? NO

## 6 Implementation and achievability (Management Case)

### 6.1.1 Scope/deliverables

This business case is requesting funding for operational roles (three roles cost neutral and one role requires additional funding).

In Scope

- Additional roles will deliver the ICM LWWWC Operations Team's work programmes

Out of Scope

- Additional work currently not being provided

### 6.1.2 Ongoing operational management

This proposal adds roles to the current ICM LWWWC Operations Team, supporting and expanding the ability for internal teams to deliver BAU. All proposed roles can be accommodated within current teams and existing management currently provided.

### 6.1.3 Assumptions, constraints and dependencies

- Additional administration support will use one of the existing hot desks available at the Gordonton Depot.

### 6.1.4 Risks

No significant risks have been identified.

# Appendices

## 1 Appendix One: Evaluation of options

### 1.1 Status quo

#### 1.1.1 Option overview

The current resource levels within the LWWWC Operations Team is insufficient to undertake all of the required maintenance and administration tasks that are implemented by the Operations Team within the Lower Waikato and Drainage programmes. The 2015-25 LTP includes a measure that 80% of the scheduled maintenance tasks will be completed.

To overcome the shortfall in resourcing and ensure that the LTP measure can be met, contract labour has been engaged for the field work over the last two years and that continues in the current year. The administration shortfall is being addressed in the short term by a 6 month contract role that finishes in February 2018 and is using existing Contracted Services funding from several budgets to fund the work. The engagement, training and management of competent contract labour and temporary administration support is difficult, time consuming and costly.

The long term engagement of contract labour to undertake tasks that could be undertaken by staff is likely in breach of regulations.

The two options considered are:

- to continue with the status quo, or
- to engage additional field staff to undertake the tasks that existing contractors are undertaking and (part of Option 1)
- to engage additional BSO support to help complete the administration tasks as the current role is not able to complete all of the tasks due to the size and complexity of the task list associated with the role (part of Option 1).

#### STATUS QUO

#### 1.1.2 Pro's and Con's

Field Staff and no additional BSO staff member.

Pro's	Con's
<ul style="list-style-type: none"> <li>• Less staff to manage</li> </ul>	<ul style="list-style-type: none"> <li>• Full time engagement of contractors breaches employment regulations</li> <li>• The raw cost of contract labour has a higher cost than if the resource was staff</li> <li>• The management effort is greater with contractors due to the procurement processes involved and dealing with the labour through a contractor instead of directly</li> <li>• The resources available often do not have the competencies required and require training</li> <li>• The turnover of contracted labour can be high and management is diverted from BAU tasks to additional time to place and train contracted labour.</li> </ul>

Administration support;

Pro's	Con's
<ul style="list-style-type: none"> <li>Less staff to manage</li> </ul>	<ul style="list-style-type: none"> <li>Administration tasks are not completed</li> <li>Operational tasks may not be able to be completed as vehicles, plant and equipment may not be ready or available to use</li> <li>Operations may be completed without meeting compliance requirements</li> <li>Existing competent staff may become stressed and leave</li> <li>Using temporary staff would still have to come from existing budgets</li> </ul>

### 1.1.3 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Potential to not deliver on set levels of service and KPIs, including supporting documentation.	Medium	Medium	Additional contract support was brought in over the last several years to enable that LOS/KPI met and documentation in place to meet Audit NZ and other requirements.
Employment regulations not met	High	High	Employing contractors year on year equates to de facto internal permanent employees that should be filled by permanent FTEs.

## 1.2 Option 1

### 1.2.1 Option overview

Conversion of contracted labour to three field staff and addition of one new BSO.

### 1.2.2 Pro's and Con's

Field staff

Pro's	Con's
<ul style="list-style-type: none"> <li>Ability to deliver BAU operations and maintenance activities with internal staff.</li> <li>Internal staff enable more flexibility to respond to weather and other conditions for labour deployment.</li> <li>Less time dedicated by management to recruitment and training of contracted staff.</li> <li>More cost effective (as recruitment and training of contracted staff represent lost productivity and hidden costs).</li> <li>Similar structure and resourcing across Lower Waikato and Waihou-Piako. .</li> <li>Reduce the potential for fluctuations in cost of contractor work / price premiums during high demand seasonal times when prices are inflated.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in permanent FTEs.</li> </ul>

Administration support;

Pro's	Con's
<ul style="list-style-type: none"> <li>Completion of all administrative requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in permanent FTEs.</li> </ul>

Pro's	Con's
<ul style="list-style-type: none"> <li>• Ability to enter health and safety and maintenance activities/completed tasks etc. in timely basis.</li> <li>• Ensure documentation/evidence of compliance and Audit NZ requirements met.</li> <li>• Similar structure and resourcing across Lower Waikato and Waihou-Piako.</li> </ul>	

### 1.2.3 Assumptions, constraints and dependencies

- Following approval and budget availability of the new FTEs, it is anticipated that to recruit the three operations field staff would take four months to recruit and place all three positions, while the BSO position would take 2-months to recruit and place.



# Additional Asset Management Roles

<b>GOA:</b>	Integrated Catchment Management
<b>Activity Name:</b>	Flood Protection and Control Works
<b>Function</b>	ICM Asset Management
<b>Service</b>	Operational Improvement Activities
<b>Financial Budget Code:</b>	Operation delivery to meet asset management continuous improvement and BAU requirements

## 1.1 Review and approval

Prepared By:	Lisa Drysdale – Asset Management Team Leader	Date
Reviewed By:	Greg Ryan – Manager BATS	Date
Signed off By:	Clare Crickett, Director ICM	Date

## 1.2 Related documents

Document Title	Author	Document Reference
Asset Management 101	Aecom	3679599
KPMG Audit Risk committee internal audit update December 2016	KPMG	9635180
Asset Management Review - Flood Protection October 2017	KPMG	11267195
2014 Asset Management Status Review and Improvement Programme	Aecom	3486595
2017 Asset Management Status Review and Improvement Programme	Aecom	11113314
WRC Infrastructure Assets Accounting Policy and Guideline		11193984
Waikato Urban Flood Assets Audit	Tonkin & Taylor	11279030
Regional Asset Management Plan - DRAFT	Lisa Drysdale & Aecom	11074070

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
	25/10/2017	Lisa Drysdale	Addition of Detail

## 2 Executive summary

This business case seeks support for the addition of 2 new roles within the ICM Asset Management team, and the increasing of the regional Asset Management budget.

Audits of our asset management activities in 2014 and again in 2017 show we have managed to complete approximately ¼ of the agreed ICM asset management improvement plan.

Both the 2017 AECOM and KPMG asset management audits show we do not have the capability and capacity within ICM to be able to bridge the gaps we have in Asset Management Practices, nor do we

have the capacity to complete both BAU work and AM Improvement work to get more efficient and effective in our practices. Rectifying this delivery gap will enable the council to demonstrate that it meets legislative requirements, which has been highlighted as a key lesson of the independent review into Rangitaiki River Scheme.

The continuous improvement budget is currently funded task by task out of the operational zone budgets, so if an extreme weather event (like last summer) occurs, funds are not available for systemic improvements which would help support efficiencies in dealing with events in the future.

Also requests from the operations teams for better tools and processes to plan and schedule maintenance and capital renewals have led to some modifications to the Asset Information system (Conquest) and the use of contracting firms to develop these processes. However, this work has not had the funding or scope to implement the actual functionality and systemic changes in business process to get the modification in behaviours required.

To move to a proactive culture where maintenance works are planned over a longer period, with a scheduling tool that tracks progress, where current and forecasted budget expenditure has greater asset management oversight, requires three things: Two additional roles, a functional work planning tool, and a regional budget to fund improvement of asset management practises.

The new roles are:

1. Reliability Engineer
2. Operations Work Planner/Scheduler

While not common within local government in New Zealand, these roles have existed in the private sector globally for nearly 50 years, and public sector in Australia for the last 20 years.

Operational funding is requested to provide better visibility and a dedicated fund to improve the Asset Management practices of the WRC, and vet and scope renewals projects for better annual plan and long term planning.

Capital funding to either enable Maintenance Task workflow planning, scheduling, and tying into the procurement management processes is not part of this business case, but instead is included as part of the corporate system upgrade project scope.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	575	600	650	550	500	350

#### 2.1.1.1 Funding source

The operational component is proposed to be funded from a centralised regionalised Asset Management budget, and applied to a prioritised improvement programme, that is measurable and achievable.

A breakdown of estimated funding required below:

Area	Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>A Asset Management Improvement</b>												
1	Renewal vetting and scoping	opex	200	200	150	150	150	150	150	150	150	150
2	RAMP maturity improvements	opex	200	200	200	200	200	100	100	100	100	100

Area	Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3 Operations maturity improvements	opex	150	150	150	50	50					
4 CMMS operating costs	opex		25	25	25	25	25	25	25	25	25
<b>B Asset Management System enhancements and implementation</b>											
5 Information management	opex	25	50	50	50						
<b>C Staff</b>											
6 Reliability engineering	opex	100	100	100	100	100	100	100	100	100	100
7 Maintenance planner	opex			100	100	100	100	100	100	100	100
<b>Total OPEX</b>	opex	<b>675</b>	<b>725</b>	<b>775</b>	<b>675</b>	<b>625</b>	<b>475</b>	<b>475</b>	<b>475</b>	<b>475</b>	<b>475</b>
<b>Total CAPEX</b>	capex	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 2.1.1.2 Funding partnerships

There have been no viable funding partnerships identified.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	8	1	2	2	2	2	2
<b>Fixed Term</b>							
<b>Contract</b>							

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

This business case seeks support for the addition of 2 new roles within the ICM Asset Management team, and the increasing of the regional Asset Management budget.

Audits of our asset management activities in 2014 and again in 2017 show we have managed to complete approximately ¼ of the agreed ICM asset management improvement plan.

Both the 2017 AECOM and KPMG asset management audits show we do not have the capacity within ICM to be able to bridge the gaps we have in Asset Management Practices, nor do we have the capacity to complete both BAU work and AM Improvement work to get more efficient and effective in our

practices. Rectifying this delivery gap will enable the council to demonstrate that it meets legislative requirements, which has been highlighted as a key lesson of the independent review into Rangitaiki River Scheme.

## 3.2 What will success look like (high level benefits)

We would see visible completion of Asset Management Continuous Improvement actions. The Reliability Engineer role and centralised funding would allow this traction to be realised. There would be an increased level of understanding between operations and Technical Services on what the issues are, what is causing them, and what the best long term fix is. There would be trust that audit actions have resources focussed on their completion.

The operations planning & scheduling role would mean operations staff, zone managers, and business and technical services can have visibility of the progress of planning any task, and understand how it is being prioritised. We would have visibility of forecasted spend, and could modify workloads to manage budgets, and reduce surprises.

## 3.3 Consequences of not proceeding

Asset management practices will continue to incrementally improve due to the hard work and passion of the staff with ICM. However in 3 years' time the Aecom 2020 audit shows the Asset management continuous improvement plan continues to not be completed, and the WRC asset management practices move from sitting in the top quartile to the lower half of local government organisations.

The Lower Waikato and Waihou-Piako zones will continue to fund some of the work out of their operating and capital budgets, but due to a lack of reserves in the areas less will be done than in prior years, causing work practices to become more reactive.

Contractors continue to be used to support some of these actions, with a lower value/benefit ratio than is possible.

Environmental, budget control, and health and safety targets continue to be missed, with compliance being achieved in one at the detriment of the others (as is currently the case).

Levels of Service offered by flood protection and drainage schemes will be at greater risk, and failures more likely, thereby reducing customer satisfaction.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Flood protection and control assets maintained, repaired, and renewed	Central oversight of improvement efforts. Analysis of major issues facing scheme and visibility of capital, technical, and operations actions underway to systematically remove issues.
Proactive monitoring and maintenance of priority rivers and streams	Dedicated resource, with the tools to effectively plan and schedule work for the operations team leads and work supervisors. Allowing better oversight of resource requirements, and forecasting.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
Healthy Environment		

<b>Strategic Direction / Corporate Plan Priorities</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Land use is appropriate to its long term sustainability	Partially contributes	Technical team would have funding to ensure land licence information is captured, mapped on GIS maps, and flood areas included in district plans, and agreements with licensees modified to reflect more sustainable practices. Reliability Engineer ensures changes WRC in strategies and tactics are applied to infrastructure assets maintenance and renewals plans, while operations planner / scheduler ensures they are prioritised and cost is understood.
<b>Strong Economy</b>		
Economic growth ensures natural capital and ecosystems services are maintained	Partially contributes	Central budget and continuous improvement plan have actions to develop how the Fish friendly pumps, at the moment operations, technical, and asset management team staff are trying to fit this work around their BAU tasks. The Reliability engineer would be the person tasked with consulting with stakeholders and delivering this project.
<b>Vibrant Communities</b>		
Communities are less vulnerable and more resilient to natural hazards, the effects of climate change, and the changes to the social and the economy	Partially contributes	Developing in-house knowledge of assets maintenance requirements, condition, and renewals management allows a better response and deeper systemic thinking of long term strategies to support and educate the community and district councils.
We more actively reduce long term risk to communities from storm damage and weather related natural hazards: and long term risks of sea level rise to settlements and infrastructure	Strongly contributes	Most bank erosion and flood events happen during storm events. All focus is on managing the event, but as soon as the event is over priorities change, so systemic issues and asset fixes are not well planned, and therefore additional funding is frequently required, putting pressure on other planned work to ensure Levels of Service are met. Better focus on solutions and planning of maintenance and renewals works by a person not working on immediate concerns will allow more efficient resource use.

<b>Legislation</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Land Drainage Act 1906	Strongly Contributes	Ensures the delivery of services that contribute to Council meeting its statutory function under this legislation.
Resource Management (Energy and Climate Change) amendment Act 2004	Partially Contributes	Ensures the delivery of services consider requirements stated under this legislation.

<b>Other (NPS, SLA, explicit LoS arrangement, best practice etc)</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
IIMM	Strongly Aligns	Move towards implementing the best practices recommended for our asset types and complexity
Regional Assets Mgmt Plan (RAMP)	Strongly aligns	Enable the Lower Waikato Zone and Waihou-Piako zone achieve their work programmes and levels of service
Zone Plans	Strongly aligns	Enable continued achievement of our levels of services

## 4 Option evaluation (Economic Case)

### Background

The Integrated Catchment Management Directorate has a responsibility to overview, manage and maintain the flood protection and drainage schemes. Having the ability to assess the condition of the stop banks, flood gates and drainage systems then analyse what is causing failures, and plan and schedule minor and major repairs is a large part of that role.

With the increased awareness of environmental and health and safety requirements, staff who originally would diagnose and plan works have had to prioritise how they spend their time to have additional visible rigor around these tasks. This has led to more time spent on administrative and compliance activities, and less on asset management activities.

The Waikato Regional Council is in the unique position that it does not outsource 100% of its maintenance and renewals works to contractors, as do the Greater Wellington Regional Council, instead being more aligned to Watercare in Auckland, or how the Sydney, Melbourne, and Tasmanian regions manage their assets.

Currently this work is partially being covered by operations staff, asset management staff, technical team staff and contractors, funded from specific zone budgets.

The work is not being managed in a consistent cohesive manner across the zones, leading to inefficiencies and frustration from all parties, and attempts to find “local” workarounds to get through workloads. The use of contractors leads to a lack of institutionalised knowledge, and increased pressure on budgets, as there is then less money to spend on fixing the issues the contractors are investigating and project managing.

### Options Analysis

#### 1: Staffing

4 alternate options were considered to provide the necessary resources to support the Continuous Improvement and “business as usual” actions.

Status quo: Continuing to hiring contractors (quote for 50% of Continuous improvement tasks recommended 3 part time contractors) at additional costs.

- 1- Hiring 2 staff to support problem solving and planning future works, requiring an increase in FTEs, but being the cheapest option.
- 2- Retasking existing staff, which would lead to other compliance based tasks being delegated to external labour.
- 3- Not doing continuous improvement tasks, with the continued gradual decline in practices & contributes towards to an increasing funding gap.

To move to a proactive culture where maintenance works are planned over a longer period, with a scheduling tool that tracks progress, where current and forecasted budget expenditure has greater asset management oversight, two additional roles are needed:

1. Reliability Engineer
2. Operations Work Planner/Scheduler

These roles have existed in the private sector globally for nearly 50 years, and public sector in Australia for the last 20 years.

The reliability engineer role typically returns between 5 times to 10 times its overhead cost to a business, through diagnosing the root causes of issues, and then working with operations, technical, and management to implement sustainable solutions and ensure those issues do not occur again.

The work planner / scheduler aims to create repeatable work plans, so cost, parts, and man hours required are understood before a task is approved and undertaken, thus allowing better budget control and understanding of when and where additional resources are required.

Aligned with the Asset Management Improvement Plan, I would recommend 1 Reliability Engineer could support all zones next financial year. And in the 2nd financial year an Operations Work Planner/Scheduler to support the Lower Waikato & Waihou/Piako zones

## 2: Continuous Improvement Funding

Currently the Lower Waikato and Waihou-Piako zones fund a majority of the asset management improvement work directly out of their operating budgets on a case by case system. There is no centralised fund to pay for the systemic and strategic improvements recommended by NZ Audit, and Aecom to improve WRC asset management practices and effectiveness in management of the flood protection and drainage assets.

This situation has helped lead to only ¼ of agreed actions in 2014 being completed by 2017, and the audits in 2017 from KPMG and Aecom insisting they must be done to move the WRC forwards.

3 options are available:

Status Quo: Do nothing, continue current funding out of zone budgets, ensuring systemic and strategic work is unlikely to proceed, and ongoing poor audit results. .

- 1- Additional funding to implement the wider AMP improvement components that appear in the RAMP, including incorporation of the Operations maturity review improvements, adoption and roll out of AM system or add-ins that provides operations/maintenance scheduling, and the roles/functions identified.
- 2- Remove funding from zone operations budget to form centralised fund to complete work listed in option 2.

We like option 2, as the operational budgets are already shown to be unable to fund routine tasks, let alone continuous improvement tasks.

## **4.1 Specific objectives**

1. Operation delivery to meet asset management requirements
2. Delivery of continuous improvement actions from audits.

## 4.3 Summary comparison

### 4.3.1 Non-financial comparison of options

Objective	Status Quo	Option1	Option 2	Option 3
<b>Staffing</b>				
1. Operation delivery to meet asset management requirements	Meets in part	Meets in part	Meets in part	Meets in part
2. Delivery of continuous improvement actions from audits.	Meets in part	Meets	Does not meet	Does not meet
<b>Systems and Tools</b>				
1.				
2.				
<b>Continuous Improvement Funding</b>				
1. Operation delivery to meet asset management requirements	Meets in part	Meets	Does not meet	n/a
2. Delivery of continuous improvement actions from audits.	Meets in part	Meets	Meets in part	n/a

### 4.3.2 Financial comparison of options (year 1)

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
<b>Status Quo:</b> <b>Staffing:</b> Continuing to hiring contractors <b>Continuous improvement:</b> Do nothing, continue current funding out of zone budgets	NA	0	0	75,000 + 450,000 re-prioritised from zone budgets	8
<b>Option 1:</b> <b>Staffing:</b> Hire 2 staff <b>Continuous improvement:</b> Additional designated funding to implement the wider AMP improvement components	NA	0	0	675,000	9

## 4.4 Preferred option

Based on the options assessment, the preferred way forward is

- Staffing: option 1
- Continuous improvement funding: Option 1

For the following reasons:

- Most cost effective measure to deliver the continuous improvement work
- Allows visible oversight of works, and cohesive demonstration of value of work
- Enables the building of knowledge and sustainable change of behaviours within ICM
- Enables the meeting of audit actions



## 6 Financial analysis and procurement (Financial & Commercial Case)

Area	Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>A Asset Management Improvement</b>												
1	Renewal vetting and scoping	opex	200	200	150	150	100	100	50	50	50	50
2	RAMP maturity improvements	opex	200	200	200	200	200	100	100	100	100	100
3	Operations maturity improvements	opex	150	150	150	50	50					
<b>B Asset Management System enhancements and implementation</b>												
5	Information management	opex	25	50	50	50						
<b>C Staff</b>												
6	Reliability engineering	opex	100	100	100	100	100	100	100	100	100	100
7	Maintenance planner	opex			100	100	100	100	100	100	100	100
<b>Total OPEX</b>		opex	<b>675</b>	<b>700</b>	<b>750</b>	<b>650</b>	<b>600</b>	<b>400</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>
<b>Total CAPEX</b>		capex	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 6.1.1 Funding partnerships

No funding partnerships have been identified.

### 6.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- That the labour costs identified are sufficient to “meet the market” and secure suitable individuals.
- That the capital cost identified is sufficient for a CMMS system that is yet to be confirmed.
- That the improvements required are limited to those identified in the 2017 KPMG Asset Management Audit (i.e. any new areas for improvement identified by subsequent audits may require further consideration).
- That a maintenance work planning and scheduling tool will be funded from IS operational budget for the 2 years until the corporate software system is available for use.
- The corporate software system upgrade will occur, incorporating the conquest system and subscribed maintenance work planning and scheduling system
- That any standardised work plans and schedules developed in the subscribed system will be directly transferrable into the corporate system, requiring minimal rework.

## 7 Implementation and achievability (Management Case)

### 7.1.1 Implementation structure

#### Delivery Approach –Operational

This business case is requesting funding for an operational role, as well as accompanying operational budgets.

The proposal represents a permanent lift in operational capacity and capability address the areas for improvement identified by the 2017 Asset Management Audit completed by KPMG. Individual projects may be necessary to implement parts of this proposal, and these will be addressed as required.

## **7.1.2 Scope/deliverables**

### In Scope

- Addressing the areas for improvement identified in the Asset Management Improvement Plan (as guided by the 2014 and 2017 Asset Management Audits).
- Building capability within ICM to focus on analysis systemic issues from the data and information currently collected, capturing the intrinsic knowledge of the long term staff, and coordinating development of long term sustainable asset management solutions.

### Out of Scope

- The recommendations of any subsequent audits, which may require further consideration.

## **7.1.3 Assumptions, constraints and dependencies**

### **7.1.3.1 Assumptions**

- The proposal is sufficient to address the recommendations from the 2017 Asset Management Audit completed by KPMG.
- The proposal is sufficient to address the recommendations from the 2017 Asset Management Audit completed by AECOM.
- The proposal is based on what is needed to move from a reactionary work, to a more risk driven improvements, so assumes senior management will support the culture change this work is aiming to deliver.
- The proposal assumes good management of the new roles, to ensure they too do not get pulled into reactionary work.

### **7.1.3.2 Constraints**

- An extreme weather event causing focus to move to crisis management, and ICM staff being solely focused on responding and recovery efforts, so improvement actions have no focus.
- Ability to find suitably skilled individuals who wish to work for WRC.
- Understanding in Asset Management principles

### **7.1.3.3 Dependencies**

- To meet the 5 high risk areas identified by the KPMG audit requires peoples thinking, work methodologies, and the implementation of the new CMMS system to occur in a specific order. If the decision is made to only partially fund this business request, it will severely impede the ability of ICM to make a sustainable change.
- The identified from the Edgumbe Flood debrief presentation, it highlights the risk WRC currently has around traceability of works that have been completed including all maintenance, inspections, and capital works. They were key evidence for the case, and we currently capture them as a paper record, adding weight to our need for a proper scheduling and reporting tool as currently WRC would struggle with this in an investigation. Every task that we do on an asset should be logged and easy to pull apart not only for this risk but for long term asset planning, analysis on performance, asset life and maintenance but also for budget setting and knowledge of if what we are doing is working and lessons learned from previous works. But if we get the system, without the person to help manage it, it will not get used appropriately.

### 7.1.4 Risks

Risk	Impact	Likelihood	Comments/mitigation
Operational and Image: potential for non-performance from asset base	Moderate	Rare	Great granularity of information, minimises the likelihood of this risk
Operational: Loss of institutional knowledge as staff retire	Moderate	Rare	Roles in place to turn transform information from intrinsic to extrinsic
Operational: Degradation of asset information due to lack of resources	Moderate	Unlikely	Able to manage the backlog of information due to dedicated resources

## Appendices

### 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

#### 1.1 Status quo

##### 1.1.1 Option overview

Currently multiple systems are used to record asset management information, such as Excel, Conquest and other corporate systems. Information gathering and asset management is zone-specific and ad hoc and only capturing urgent work. Only meeting 25% of continuous improvement plan.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>The information is being collected</li> <li>Staff have ownership of their own documents</li> <li>Some of the information is easy to access</li> <li>Can report graphically on current condition and defects of the assets</li> </ul>	<ul style="list-style-type: none"> <li>No dedicated oversight</li> <li>Cannot forecast future expenditure requirements</li> <li>This makes maintenance and renewals planning a large undertaking</li> <li>Do not have visibility of progress of mandatory tasks and when scheduled to be completed</li> <li>Lack of visibility of connection between spares and procurement management and zone budget management</li> <li>Reliant on staff knowledge to obtain relevant information</li> </ul>

##### 1.1.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Flood protection and control assets maintained, repaired, and renewed	Zone-specific oversight of improvement efforts. Ad-hoc analysis of major issues facing scheme and visibility of capital, technical, and operations actions to remove issues.
Proactive monitoring and maintenance of priority rivers and streams	Works supervisors attempt to plan and schedule work while also managing environmental and health and safety compliance and team management. Oversight of resource requirements, and forecasting is sub-optimal.

### 1.1.4 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
N/A	N/A	N/A	75,000 + 450,000 re-prioritised from zone budgets	8

### 1.1.5 Assumptions, constraints and dependencies

- Same staff attempt to do both proactive and reactive work
- Conflict between project work and technical investigations
- De-centralisation is causal factor of only completing 25% of continuous improvement plans in the past three years

### 1.1.6 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Operational and Image: potential for non-performance from asset base	Moderate	Rare	As seen in 2016 Audit NZ report, not tracking well mandatory maintenance completion
Operational: Loss of institutional knowledge as staff retire	Moderate	Unlikely	Staff age profile and turnover in key staff
Operational: Degradation of asset information due to lack of resources	Moderate	Moderate	10-15 years of asset information not recorded on LIM reports as land transfers not completed

## 1.2 Option 1

### 1.2.1 Option overview

This business case seeks support for the addition of 2 new roles within the ICM Asset Management team, and the increasing of the regional Asset Management budget.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Dedicated oversight</li> <li>• Can forecast future expenditure requirements</li> <li>• Reduces scale of maintenance and renewals planning effort</li> <li>• Have visibility of progress of mandatory tasks and when scheduled to be completed</li> <li>• Visibility of connection between spares and procurement management and zone budget management</li> <li>• Not reliant on staff knowledge to obtain relevant information</li> </ul>	<ul style="list-style-type: none"> <li>• Additional cost and headcount</li> <li>• Two new roles not well understood within local government sector</li> <li>• Lower staff ownership of their planned actions</li> </ul>

### 1.2.3 Anticipated Benefits

Qualitative benefits	Description
Operational delivery to meet asset requirements	Centralised planning of mandatory maintenance and renewal tasks. Central resource to work on systemic asset issues and coordinate delivery of sustainable solutions.

Delivery of continuous improvement actions from audits	Funding to work on this centrally and strategically to move from reactionary to risk-based approach. Compliance can be cost-prohibitive but a risk-based approach can help ensure efforts are focused on areas with highest impact.
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Disadvantages/Dis-benefits	Description of the potential impact
Removing ownership of issues from operations team	Assumption that all problems would be solved and unachievable expectations about what the new roles can deliver.
Do not disestablish any contract roles engaged from zone budgets	Duplication of effort and higher costs.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Flood protection and control assets maintained, repaired, and renewed	Central oversight of improvement efforts. Analysis of major issues facing scheme and visibility of capital, technical, and operations actions underway to systematically remove issues.
Proactive monitoring and maintenance of priority rivers and streams	Dedicated resource, with the tools to effectively plan and schedule work for the operations team leads and work supervisors. Allowing better oversight of resource requirements, and forecasting.

### 1.2.5 High level financial overview

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Operational	675	700	750	650	600	450
Revenue						

### 1.2.6 Assumptions, constraints and dependencies

#### Assumptions

- That the labour costs identified are sufficient to “meet the market” and secure suitable individuals.
- That the improvements required are limited to those identified in the 2017 KPMG Asset Management Audit (i.e. any new areas for improvement identified by subsequent audits may require further consideration).The proposal is sufficient to address the recommendations from the 2017 Asset Management Audit completed by KPMG.
- The proposal is sufficient to address the recommendations from the 2017 Asset Management Audit completed by AECOM.
- The proposal is based on what is needed to move from a reactionary work, to a more risk driven improvements, so assumes senior management will support the culture change this work is aiming to deliver.
- The proposal assumes good management of the new roles, to ensure they too do not get pulled into reactionary work.

#### Constraints

- An extreme weather event causing focus to move to crisis management, and ICM staff being solely focused on responding and recovery efforts, so improvement actions have no focus.
- Ability to find suitably skilled individuals who wish to work for WRC.
- Understanding in Asset Management principles
- Time required for IS/IT to review and procure a maintenance workflow planning and scheduling service.

#### Dependencies

- To meet the 5 high risk areas identified by the KPMG audit requires peoples thinking, work methodologies, and the implementation of the new CMMS system to occur in a specific order. If the decision is made to only partially fund this business request, it will severely impede the ability of ICM to make a sustainable change.
- The identified from the Edgumbe Flood debrief presentation, it highlights the risk WRC currently has around traceability of works that have been completed including all maintenance, inspections, and capital works. They were key evidence for the case, and we currently capture them as a paper record, adding weight to our need for a proper scheduling and reporting tool as currently WRC would struggle with this in an investigation. Every task that we do on an asset should be logged and easy to pull apart not only for this risk but for long term asset planning, analysis on performance, asset life and maintenance but also for budget setting and knowledge of if what we are doing is working and lessons learned from previous works. But if we get the system, without the person to help manage it, it will not get used appropriately.

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Operational and Image: potential for non-performance from asset base	Moderate	Rare	Great granularity of information, minimises the likelihood of this risk
Operational: Loss of institutional knowledge as staff retire	Moderate	Rare	Roles in place to turn transform information from intrinsic to extrinsic
Operational: Degradation of asset information due to lack of resources	Moderate	Unlikely	Able to manage the backlog of information due to dedicated resources
Asset Management Plan and Policy Alignment misalignment meaning community outcomes not achieved.	Moderate	Highly Likely	From KPMG Report: AM policy requires that an integrated catchment approach is taken to the lifecycle management of the assets, this is currently not possible to verify, and asset investment and activities not effectively realised.
Changes in Demand Management altering requirements for the schemes, but not budgeted for or managed.	Serious	Possible	From KPMG Report: WRC may wish to consider demand for flood mitigation services from the perspective of the sensitive receptors along the flood zone. There is a risk that changes in demand may not be apparent other than when the capacity of the schemes is exceeded, and some damage or loss is incurred.
Levels of Service and Performance Reporting do not convey whole AM situation, and limit understanding of effectiveness of management activities.	Moderate	Possible	From KPMG Report: We recommend establishing closer LoSlinks to Strategic Direction Community Outcome statements, in particular economic, community resilience to natural hazards, environmental, and lwi co-management themes
Asset Data, Condition Assessments, and Risk	Moderate	Likely	From KPMG Report: As reported in the RAMP, None of the five asset categories have achieved the target level of completeness as yet, and three of the five categories have not achieved the level of confidence sought

<b>Risk</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Comments/mitigation</b>
Quality Assurance and Continuous Improvement inadequate focus to review and met recommendations on how WRC better manages and responds to significant flood events.	Serious	Unlikely	From KPMG Report: Review the level of resources and management systems to close out improvement actions

# Tamahere Barge Replacement

<b>GOA:</b>	Integrated Catchment Management
<b>Activity Name:</b>	Flood Protection and River Works
<b>Function</b>	Works Delivery Programme and Works Programming and Funding Support
<b>Service</b>	Operation delivery to meet asset management requirements Removal of major blockages and obstructions Control of significant erosion of river and stream banks
<b>Financial Budget Code:</b>	AM1567

## 1.1 Review and approval

Prepared By:	Rob Dragten and Sarah Lealand	18 Oct 2017
Reviewed By:	Sarah Lealand	26 Oct 2017
Reviewed By:	Guy Russell	27 Oct 2017
Signed off By:		

## 1.2 Related documents

Document Title	Author	Document Reference
Replacing the Tamahere Barge Options Analysis	Rob Dragten – Dragten Consulting	<a href="#">#11271009</a>
Summary of 2018 LTP business case financials	Janine Becker	<a href="#">#11279668</a>
Whole Life Costs	James Gavin	<a href="#">#11257111</a>

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

Waikato Regional Council has the legislative responsibility to prevent river bank erosion, and protect properties from flood damage in the Waikato Region. As part of implementing these responsibilities over the last 50 years, the Council (and its predecessors) has owned and operated a barge (the “Tamahere 94”).

The “Tamahere 94” has been used as a work platform from which river management and flood channel maintenance work is undertaken within the Lower Waikato and Waipa River channels. Despite regular maintenance and periodic upgrading, Tamahere 94 has now reached the end of her working life, and is no longer able to meet the requirements of survey inspections.

Having access to a barge is essential to enable the main Waikato River channel and its assets to be maintained so that river levels meet the levels of service set out within the Lower Waikato Zone Plan and the Regional Assets Management Plan.



The Council commissioned an option analysis to compare the estimated lifetime cost of the Council purchasing a new barge with the estimated cost of hiring a barge from the open market. Four different purchase option scenarios were compared with one hire option scenario. The purchase options included:

1. A self-propelled steel barge
2. A steel dumb barge manoeuvred by a Council owned support vessel
3. An aluminium dumb barge manoeuvred by a Council owned support vessel
4. An aluminium dumb barge manoeuvred by a support vessel provided by the contractor undertaking the river maintenance work.

The hire option included the cost of renting the barge for a two month period of river works each year, and the cost of mobilising the barge onto the river, and away from the river each year.

Overall, the estimated lifetime cost of all four “purchase” options were very similar. The estimated costs of the “purchase” options were considerably less than the estimated cumulative costs of hiring over the same thirty year period.

This business case seeks approval to fund the capital costs associated with purchasing a new barge and support vessel, and seeks an increase in the operational budget to operate the new vessels. The increase in operational cost is associated with depreciation of a new asset, loss of investment revenue, insurance and an increased work programme during the initial three years (given the catch-up required as the barge has not been operational since 2016). The existing budget is sufficient to fund the expected Council staff labour.

## Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	1,590,0000		0	0	0	0
<b>Operational</b>		228,000	228,000	228,000	208,000	208,000

#### 2.1.1.1 Funding source

##### Capital

The capital component is proposed to be funded from asset renewal funding (\$300k) and the remainder from the main channel reserve.

Breakdown of total estimated capital funding required:

Item	Estimated total costs
Construct new aluminium barge	\$1,090,000
Construct new support vessel to manoeuvre barge	\$185,000
Procurement costs	\$50,000
Contingency costs (@20%)	\$265,000
<b>Total cost</b>	<b>\$1,590,000</b>
Existing capital budget	\$600,000
Capital Budget Shortfall	\$990,000

## Operational

The operational costs will continue to be funded from the existing Lower Waikato Main Channel budget. Council staff labour hours are not expected to increase, but additional direct cost budget will be required. The existing main channel budget already allows for \$80k of contracted services.

Breakdown of the estimated operational expenditure required per annum.

Item	Estimated total operating costs per annum
Deliver river maintenance contract	\$100,000*
Depreciation on Assets	44,167
Loss of investment revenue	47,600
Maintenance of new vessels, survey and regulatory costs	22,000
Insurance	14,854
<b>Total expenditure required</b>	<b>228,701</b>
Existing direct costs already funded	80,000
<b>Operational shortfall needing funding</b>	<b>148,701</b>

\*note \$100k p.a initially (to deliver river maintenance contract) to fund 3 years of catch up works required from barge being inoperative since 2016, then \$80k p.a. going forward.

### 2.1.2 Funding partnerships

There have been no viable funding partnerships identified. Historically there has been revenue associated with hiring the barge out to other parties. These parties have included Hamilton City Council, Waikato District Council, and infrastructure contractors. The revenue is variable depending on the needs of the third parties. In the five years between 2011/12 and 2015/16, revenue ranged between \$0k pa, and \$30k p.a. A reasonable average revenue expectation is estimated at approximately \$12k.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

The barge work programme can be delivered with existing labour resources to supervise the works and oversee the contract. An allowance has been made for \$50k of contracted services to fund a project manager to oversee the procurement process.

## **3 The case for change (Strategic Case)**

### **3.1 Proposal for change**

This business case seeks funding for an increase to the capital and operational budgets to fund the cost of delivering a long standing programme of work to remove obstructions from the Waikato and Waipa River channel that contribute to bank instability and erosion. The work programme also delivers the installation of channel training structures and erosion protection works in areas where access is not possible from the river bank.

Managing the stability of the Waikato and Waipa River channel contributes to a number of Council priorities. Preventing bank erosion, building channel training structures, and maintaining new channel training structures all reduce sediment inputs to the river channel, which contributes to the achievement of the Councils water quality improvement objectives. Bank erosion and channel migration has the potential to impact on private and public infrastructure, with potential to cause disruptions to service, and loss of asset investment. The river works undertaken from the barge contribute to protecting the community from natural hazards and risks.

### **3.2 What will success look like (high level benefits)**

The ongoing delivery of the Councils river management and flood control functions in the Lower Waikato and Waipa Rivers depend on the Council being able undertake the river works that the Council has been delivering for the last 50 years. That work can only be done from the river, and requires a floating work platform to work from. A cost benefit analysis has demonstrated that in the long term, it is less expensive for the community to fund Council to own a barge than it is to hire a barge from the open market which needs to be transported to and from the river each year.

The replacement of the Councils existing barge will enable river works to be undertaken each year, which contribute to reducing the risk of significant impacts of bank erosion and channel migration on regional infrastructure, both private and public.

### **3.3 Consequences of not proceeding**

A key deliverable within the Waikato Zone is the need to manage and maintain the Waikato River channel. This includes asset management requirements; removal of major blockages and obstructions; and control of significant erosion of river and stream banks. The delivery of these is a level of service requirement outlined in the Lower Waikato Zone Plan and Regional Asset Management Plan.

Due to the scale of the Waikato River channel and the locality of the assets within the channel, they cannot be maintained from the land and access to a barge is required to enable the work to be completed. The consequence of not completing the work is that the river channel will deteriorate, sediment will accumulate, erosion will increase and both river low flow and flood levels will increase.

### 3.4 Alignment

<b>Our Strategic Direction 2016-2019</b>	<b>How will this change improve delivery?</b>
The full range of ecosystem types, including land water and coastal and marine ecosystems is in a healthy and functional state.	Bank erosion contributes to sedimentation of waterways. The barge work programme will deliver some benefits to reducing sediment loss, although these benefits are relatively minor in scale.
Communities are less vulnerable and more resilient to natural hazards, the effect of climate change and changes to society and the economy.	Proactive management of obstructions and debris in the river will reduce the chance of bank erosion happening during flood events, which may become more common as a result of climate change. Also, channel training structures help to remediate existing erosion, and prevent erosion from increasing.

<b>Strategic Direction / Corporate Plan Priorities</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Increase communities understanding of risk and resilience to change		
We more actively reduce long term risks to communities from storm damage and weather-related natural hazards: and long term risks of sea level rise to settlements and infrastructure.	Strongly contributes	Most bank erosion and flood events happen during storm events. Channel obstructions and debris affect flows, which can cause bank erosion and localised flooding. Channel training structures prevent erosion from worsening during storm events. These works can only be undertaken from a floating work platform on the river.

<b>Legislation</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Soil and River Controls Act	Strongly contributes	Ensures the delivery of services that contribute to Council meeting its statutory function under this legislation.

<b>Other (NPS, SLA, explicit LoS arrangement, best practice etc)</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Lower Waikato Zone Plan	Strongly aligns	Enable continued maintenance of the channel to achieve our levels of services
Regional Assets Mgmt Plan (RAMP)	Strongly aligns	Enable the Lower Waikato Zone and assist the Central Waikato and Waipa Zones achieve their work programmes and levels of service
Maintain river levels (Level of Service)	Strongly Contributes	Enable the river works to be undertaken and therefore river levels to be maintained

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. Refer to Appendix One for a detailed description of the options evaluated. Further, a full options analysis has been undertaken (pre business case), see document - [#11271009](#)

### Background

The Council has owned a barge on the Waikato River for the past 50 years. The barge has been used as a work platform from which to undertake river maintenance and channel stabilisation works. While the Council has owned the barge, the actual delivery of the works from the barge has been contracted to a third party. The physical state of the Council's barge has deteriorated to the point that it is no longer able to obtain a maritime survey. It is not cost effective to repair the existing barge, and it needs to be replaced.

The Council is empowered by the Soil Conservation and Rivers Control Act to prevent river bank erosion and protect properties from flood damage. The work necessary to meet this obligation includes removing debris and obstructions to the flow of the River, and installing and maintaining channel training and erosion control structures. In the majority of cases, these works cannot be completed from the river bank, and need to be undertaken from a work platform located in the river.

### Option analysis

Three primary options were considered to provide the necessary work platform in the River.

- Option 1: to lease or rent a barge from a third party for the limited period each year when the river levels are high enough to complete the works (generally between June and September).
- Option 2: for the Council to purchase a replacement barge to the Tamahere, which the Council would own. In both cases, the operational activities undertaken from the barge would continue to be contracted out.
- Option 3: that the provision of the barge work platform and the operational works would be amalgamated into one contract, however on analysis this option was effectively option 1, with a contract for service delivery as well, and there did not appear to be any financial advantages to the amalgamation.

A fourth option was considered in this business case, which is to do nothing, and no longer carry out the river maintenance work. This is not considered to be a viable option, as levels of service will not be met.

Within option 2, a series of sub options were considered, which included whether to power the barge or purchase a specific vessel to push/tow/move the barge up and down the river, and whether the barge should be constructed out of steel or aluminium.

## 4.1 Specific objectives

1. Operation delivery to meet asset management requirements
2. Removal of major blockages and obstructions
3. Control of significant erosion of river and stream banks

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1	Option 2
1. Operation delivery to meet asset management requirements	Does not meet	Meets	Meets
2. Removal of major blockages and obstructions	Does not meet	Meets	Meets
3. Control of significant erosion of river and stream banks	Does not meet	Meets	Meets

## 4.2.2 Financial comparison of options

Historically, annual direct cost expenditure for the operation of the Tamahere 94 barge has typically ranged between \$71k and \$118k per year, with an average of \$96k. This estimate including both direct costs of the barge contractor, R&M costs, and other costs, but excludes the labour costs of Council staff to supervise the barge contractor, and manage the barge operations. This expenditure was funded from the Waikato River Main Channel budget. Depreciation finished on the barge several years ago due to it being fully written down.

It is intended that the same level of service will be provided from the new barge as what was provided from the old barge, which includes up to around 40 days per year of river works activities, including Council contract supervision and management. It is expected the provision of this river management work can be completed within the historical budget. However, providing a new barge and support vessel to replace the Tamahere will require additional budget to fund:

1. The cost of hiring and mobilising a barge to the river each year (option 1), or
2. Depreciation, loss of investment revenue, and some additional operating costs associated with purchasing, maintaining and managing a new barge and support vessel (option 2).

The cost of undertaking the operational river works are similar between option 1 and option 2, although option 1 works out to be a little more expensive (around \$20k). The key differences between the two options are the capital and operational costs associated with owning a barge (and support vessel) compared with the cost of hiring another parties barge and, given there are no other suitable barges on the river, the cost of transporting the barge to and from the river each year.

Collectively, the cost of hireage and transport of barge in option 1 were estimated at being approximately \$50k per year more than the cumulative costs of owning the barge and the support vessel. Over the at least 30 year life of the barge this amounts to around \$1.5M, and if the new barge ends up lasting as long as the current barge, the cost advantage of owning extends out by another \$4.3M (on the assumption that depreciation and loss of investment revenue costs are no longer incurred after 30 years, when the new assets have been fully written down).

For this reason, option 2 for the Council to own its own barge and support vessel is the least cost option in the long term to provide the work platform from which to undertake the river works. This option will require additional funding over and above the historical \$80k expenditure to fund the depreciation and loss of interest revenue costs associated with the capital expenditure of the new barge and support vessel, and the additional operational costs associated with the operation of the new vessels.

The additional costs are offset to a small extent by some revenue that is earned periodically when the barge is rented out to third parties.

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo		0	0	(80,000)	(20,000)
Option 1		0	0	255,000	
Option 2		13,000	1,590,000	208,000	

## 4.3 Preferred option

Based on the options assessment by Dragten Consulting, the preferred way forward is option 2 (purchase a new barge and a dedicated support vessel) for the following reasons:

- Not undertaking the works was not an option, as it would result in the river channel deteriorating, sediment accumulating, erosion increasing and increases in both river low flow and flood levels.

- The option analysis indicated that over the thirty year life of the barge, the estimated cost for the Council to own its own barge was less than the cost to hire a barge for the period each year when the river works can be done. The primary factor that made the hireage option uneconomic was the very high cost of transporting such a large barge (around 60-80 tonnes) to and from the river each year (estimated to be in excess of 100k per annum). The lease/rent option was estimated as being approximately \$50k more expensive each year, or \$1.5M more expensive over the 30 year life of the barge.
- Each of the options explored for the Council owning the barge were very similar in cost over 30 years, but the option of building a non-powered (dumb) barge and a support vessel to move the barge around gave the Council significantly more flexibility in terms of having an additional workboat available for Council activities for the remainder of the year. The option of building the barge out of aluminium or steel were very similar in total cost, but the aluminium barge was likely to require less maintenance over time.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour				Funded from existing labour
Opex	228,000	Y2 onwards	Targeted rate	Additional of \$148k over existing reducing to \$128K in year 5
Capex	1,325,000	Y1	\$300k from asset renewal funding, balance main channel reserve.	
Revenue	12,000	Y2 onwards	Direct Charges	
Contingency	265,000	Y1	Same as capital	

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	1,590,000	0	0	0	0	0
<b>Operational</b>		228,000	228,000	228,000	208,000	208,000
<b>Revenue</b>		12,000	12,000	12,000	12,000	12,000

A whole life cost of the barge has also been completed, see attachment 1.

### 5.1.1 Funding partnerships

No funding partnerships have been identified. There are small revenue earning opportunities associated with owning the barge.

### 5.1.2 Assumptions

A number of assumptions have been made to support the financial analysis.

1. It has been assumed that Council will continue to contract the operational river maintenance work out to a third party, and that the Council will be able to procure a contractor to provide the services for a cost similar to that of the previous contractor.
2. Depreciation and loss of interest revenue costs have been based on an assumed working life for the barge of 30 years, which is a typical life of this sort of vessel in the maritime sector.

However, it is noted that the Council has owned the Tamahere for nearly 50 years, and it was second hand when purchased, so it is likely the barge life will be greater than 30 years.

3. Option costings have been estimated on the assumption that river maintenance requires a similar sized vessel to Tamahere. It is proposed that a replacement vessel be slightly shorter than Tamahere (to fit within a more permissive regulatory regime) and slightly wider than the Tamahere (to aid the stability assessment). All dimensions will be subject to final approval of the design for the replacement vessel.
4. A new support vessel to move the barge has been included in the cost, on the advice that there is no existing vessel within the Councils fleet that is suitable, certified, and available to manoeuvre the barge up and down the river.

### 5.1.3 Procurement strategy

The Council has little or no experience in procuring a large barge such as is proposed by this business case. A budget allowance has been made to provide for a project manager with experience in procuring large maritime vessels to oversee the procurement process, and ensure that the vessel is successfully commissioned with all required regulatory approvals.

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

**Delivery Approach –Project** – procure a new barge and support vessel

### 6.1.2 Scope/deliverables

In Scope

- Finalising the build scope internally, specifically confirming whether a new support vessel is definitely needed, or whether this need can be accommodated using one of the existing Council vessels.
- Commission an appropriate person to design the barge and support vessel.
- Commission the approval of the designs from an appropriately certified maritime design approver.
- Tender for the construction of the barge and support vessel
- Procure the services of an appropriately qualified Maritime NZ approved surveyor to oversee the build.
- Mobilisation of the barge to the Meremere mooring site.
- Commissioning Gain survey from Maritime NZ approved surveyor
- Arrange for the disposal of the existing Tamahere 94
- Ensure appropriate haul out facilities exist for future out-of-water surveys of the barge.
- Procure the services of a contractor to deliver the river management works from the barge.

Out of Scope

- The ongoing operation of the barge post commissioning

### 6.1.3 Key milestones

Milestone	Completion Date
Funding approved	June 2018
Establishment of Project Mgr	July 2018



Milestone	Completion Date
Engage designer	September 2018
Completion of design	October 2018
Tender of works	November 2018
Letting of contract	December 2018
Construction	January – June 2019
Operations work able to commence	July 2019

### 6.1.4 Stakeholder engagement

Engagement was undertaken with key external stakeholders during the option analysis phase of this project. Full details of the comments from stakeholders can be reviewed in the report prepared by Dragten Consulting.

In summary, all three stakeholders consulted valued the presence of the Councils barge on the River, and valued having the option of being able to hire the barge occasionally for specific infrastructure projects. Waikato Tainui felt there was a community value of have the barge in Council ownership rather than a more commercial arrangement for access.

None of the stakeholders had sufficient need for the barge to want to share funding the barge, but did plan to make use of the barge periodically.

Stakeholder	Interest	Method of Engagement
Waikato Tainui	Medium	Inform
Waikato District Council	Medium	Inform
Hamilton City Council	Medium	Inform

### 6.1.5 Business change/organisational impact

A business change is not planned in that what is proposed will simply allow continuation of business as usual with existing services.

The existing budget is sufficient to cover the operational river maintenance activities, however, additional funding is required to cover the capital costs associated with the new vessels (such as depreciation and loss of interest revenue costs), and the operational costs associated with the new vessels.

#### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
ICM	Low	This proposal will require a project manager	A project manager has been allowed for in the costings
ICM	Low	This proposal will require no addition to existing staff levels or hours	n/a
ICM	Low	This proposal will require oversight by the LW Steering Group	Will be incorporated within existing process so additional support will be minor
ICM	Low	This proposal will require input from the operations team with review of design proposals and implementing updates to operational documentation	Operational documentation already exists, therefore can be utilised as a starting point. Specialist input can be sought if required.

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Main Channel Maintenance	low	Low, continuation of existing work programme	Continue to manage the work programme.
	Low	H&S liability from ownership of the barge	Operational Plan (with H&S component) is already in place for the existing barge and this will be updated to reflect any changes with the new barge  Contractor will utilise the Operational Plan to develop their specific H&S Plan and are legally liable for this (confirmed by Shaun Plant – Legal Services Lead).  The barge will be designed and built to meet Maritime NZ requirements and will be maintained under WRC's safe ship management system.

### 6.1.6 Ongoing operational management

The ongoing delivery of the river maintenance works will take place by a contractor. The work of manoeuvring the barge using a support vessel is a fairly specialised role, and is expected to require a particular maritime qualification. It is unlikely that any existing Council staff member has the required experience and qualification to undertake this role currently, though it is an option for a staff member to undertake the necessary training.

Undertaking the river maintenance work is a fairly specialised role, and there may be a limited range of contractors who have the necessary skills and experience in excavator operations who also have the maritime vessel operation experience.

It is proposed to tender the delivery of the river maintenance contract on the open market to achieve a wide range of tender bids and experience.

### 6.1.7 Assumptions, constraints and dependencies

#### Assumptions

- a) That the Council continue to have responsibility to undertake the river management works
- b) That the Councils level of service will remain the same
- c) That an appropriate contractor can be contracted for a similar cost as previous contract expenditure

#### Constraints

- a) Complying with the Maritime Transport Act 1994

#### Dependencies

- a) The Council will need to adjust its maritime transport operation safety system and maritime transport operation plan to address and resolve these risks.

The key risks associated with procuring the barge and support vessel are financial, related to cost overruns for the delivery of the project. These can be mitigated to an extent by engaging a project manager with experience in procuring maritime assets to manage the procurement process.

The operational delivery of the river maintenance activities is by its nature an activity with inherent health and safety risks. The most significant health and safety risk could be loss of life, and is therefore expected to have a catastrophic consequence rating, although mitigations are in place to reduce the likelihood to rare, thereby enabling a medium risk rating. The Council will need to adjust its maritime transport operation safety system and maritime transport operation plan to address and resolve these risks.

<b>Risk</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Comments/mitigation</b>
Procurement costing more than expected	Minor	Unlikely	<p>Mitigate with good project management and cost control, engage experienced project manager with maritime asset procurement experience.</p> <p>Will be overseen by the LW Steering Committee.</p> <p>A contingency of 20% has been allowed for in the funding sought.</p>
H&S incident – fatality such as that from drowning or crushing (contractor or staff)	Catastrophic	Rare	<p>The barge will be designed and built to meet Maritime NZ requirements and will be maintained under WRC’s safe ship management system.</p> <p>Operational Plan (which covers H&amp;S) is already in place for the existing barge and this will be updated to reflect any changes with the new barge</p> <p>Contactors will utilise the Operational Plan to develop their specific H&amp;S Plan and are legally liable for this (confirmed by Shaun Plant – Legal Services Lead).</p>
Compliance with Maritime NZ Rules	Moderate	Rare	<p>The barge will be designed and built to meet Maritime NZ requirements and will be maintained under WRC’s safe ship management system.</p> <p>WRC will operate and be maintained in accordance with Maritime NZ Requirements, with this to be incorporated into the operational plan.</p>

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. A full options analysis report has been undertaken. Refer to the full options analysis for further detail - [#11271009](#) and a whole life cost of the barge has also been completed, see attachment 1.

### 1.1 Status quo

#### 1.1.1 Option overview

Existing barge is derelict, and not fit for service. No river maintenance works occurring currently and under status quo this would continue.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Short term savings from not undertaking work</li> </ul>	<ul style="list-style-type: none"> <li>The consequence of not completing the work is that the river channel will deteriorate, sediment will accumulate, erosion will increase and both river low flow and flood levels will increase.</li> </ul>

#### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Financial expenditure is not incurred in the short term (3 years)	In the short term there would be minimal financial expenditure associated with the river channel	Immediate

Qualitative benefits	Description
Staff resources refocussed	Staff resources can be refocussed onto other priority works

Disadvantages/Dis-benefits	Description of the potential impact
Loss of reputation	Failure to deliver on levels of service
Liability	Potential to be held liable for property or infrastructure damage that arises from erosion or flooding events that could have been prevented by river management works
Environmental impact	Increased erosion and sedimentation within the river channel

#### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome – Strategic Direction 2016-2019	How will this option improve delivery of this outcome?
The full range of ecosystem types, including land water and coastal and marine ecosystems is in a healthy and functional state.	Will not deliver on remediating bank erosion and sedimentation.

Long Term Outcome – Strategic Direction 2016-2019	How will this option improve delivery of this outcome?
Communities are less vulnerable and more resilient to natural hazards, the effect of climate change and changes to society and the economy.	Will not deliver on managing low flow and flood levels within the channel, leading to increased durations and levels of flooding.

### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
	(12,000)	(1,590,000)	(80,000)	(20,000)

### 1.1.6 Assumptions, constraints and dependencies

- Through undertaking no work the river will deteriorate and the channel will infill with sediment, there will be unmanaged erosion of the riverbank and river levels will rise.

#### Assumptions

- a) That a barge is required to access the river channel for maintenance works

#### Constraints

- b) The existing barge is not operational

#### Dependencies

- b) n/a

### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Loss of reputation	Moderate	Moderate	Inevitable that eventually a situation will arise where Council will be criticised for not doing the maintenance work. The impact will depend on the severity of the impact of not doing the maintenance, could be blamed for considerable property damage or infrastructure damage (roading network most likely).
Liability	Moderate	Moderate	Potential claims lodged with Council for property or infrastructure damage.

## 1.2 Option 1

### 1.2.1 Option overview

Hire a barge to undertake the river maintenance contract.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• No capital costs</li> <li>• No responsibility for survey or regulatory compliance of the vessels</li> <li>• Some reduction of H&amp;S liability related to the vessel itself</li> </ul>	<ul style="list-style-type: none"> <li>• No certainty of long term availability</li> <li>• Dependent on the availability of a barge – may not be available when required</li> <li>• More expensive than all of the barge ownership options (estimated \$50k per year).</li> </ul>

Pro's	Con's
	<ul style="list-style-type: none"> <li>• Transportation of the barge (given its size of 24m) is a significant and costly operation</li> <li>• The barge will not be available on the river for other uses, unless there activity is undertaken at the same period in which it is hired and in use</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
There is no identified cost advantage		n/a

Qualitative benefits	Description
Legislative	Would meet the councils functions under the Soil and River Controls Act

Disadvantages/Dis-benefits	Description of the potential impact
Availability	Dependent on the availability – may not be available when required

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome – Strategic Direction 2016-2019	How will this option improve delivery of this outcome?
The full range of ecosystem types, including land water and coastal and marine ecosystems is in a healthy and functional state.	Bank erosion contributes to sedimentation of waterways. The barge work programme will deliver some benefits to reducing sediment loss, although these benefits are relatively minor in scale.
Communities are less vulnerable and more resilient to natural hazards, the effect of climate change and changes to society and the economy.	Proactive management of obstructions and debris in the river will reduce the chance of bank erosion happening during flood events, which may become more common as a result of climate change. Also, channel training structures help to remediate existing erosion, and prevent erosion from increasing.

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
	12,000	0	255,000	

### 1.2.6 Assumptions, constraints and dependencies

#### Assumptions

- b) That the Council continue to have responsibility to undertake the river management works
- c) That the Councils level of service will remain the same
- d) That an appropriate contractor can be contracted for a similar cost as previous contract expenditure

#### Constraints

- c) Complying with the Maritime Transport Act 1994

#### Dependencies

- c) The Council will need to adjust its maritime transport operation safety system and maritime transport operation plan to address and resolve these risks.
- d) The continued use of a mooring on the Waikato River, which is consented

## 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Non-compliance with legislation resulting in possible reputational damage, judicial reviews of council decisions, appointment of commissioners, Ombudsman enquires, or legal action.	Medium	Low	The design and operation of the barge will be undertaken in accordance with the Maritime Transport Act
Ineffective planning processes impact on the Council's ability to deliver on projects outlined in the LTP.	Medium	Low	The current condition of the barge has resulted in river maintenance works not being undertaken for 2 years. Availability of a barge will ensure that the LTP level of services commitments will be met
Inadequate management of operational processes may lead to misinformed or inappropriate decision making or overspend (includes funding of third parties).	Medium	Low	The operation of the barge has been able to be undertaken within the operational budget and this will continue. An operational plan exists for undertaking river works utilising the barge.

## Option 2

### 1.2.8 Option overview

Buy a barge and a support vessel to make available to contractor undertaking river maintenance contract.

### 1.2.9 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Total control over long term availability</li> <li>Support vessel available as a work boat</li> <li>Less expensive overall than hiring</li> </ul>	<ul style="list-style-type: none"> <li>Significant capital investment up front</li> <li>Increase in operating expenditure required.</li> </ul>

### 1.2.10 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
There is a cost advantage for owning the barge vs hiring a barge		Estimated benefit (vs hiring) is \$50k per annum

Qualitative benefits	Description
Legislative	Would meet the councils legislative functions

Disadvantages/Dis-benefits	Description of the potential impact
H&S Liability	Would have some additional liability relating to the vessel (being safe for operation), however given the vessel would be designed and maintained to the Maritime Transport Act this isn't anticipated to be an issue. The contractor undertaking the works is still responsible for H&S of the operations.

### 1.2.11 Delivery of Long Term Outcomes

Long Term Outcome – Strategic Direction 2016-2019	How will this option improve delivery of this outcome?
The full range of ecosystem types, including land water and coastal and marine ecosystems is in a healthy and functional state.	Bank erosion contributes to sedimentation of waterways. The barge work programme will deliver some benefits to reducing sediment loss, although these benefits are relatively minor in scale.
Communities are less vulnerable and more resilient to natural hazards, the effect of climate change and changes to society and the economy.	Proactive management of obstructions and debris in the river will reduce the chance of bank erosion happening during flood events, which may become more common as a result of climate change. Also, channel training structures help to remediate existing erosion, and prevent erosion from increasing.

### 1.2.12 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
	12,000	1,590,000	228,000	

### 1.2.13 Assumptions, constraints and dependencies

#### Assumptions

- e) That the Council continue to have responsibility to undertake the river management works
- a) That the Councils level of service will remain the same
- b) That an appropriate contractor can be contracted for a similar cost as previous contract expenditure

#### Constraints

- d) Complying with the Maritime Transport Act 1994

#### Dependencies

- e) The Council will need to adjust its maritime transport operation safety system and maritime transport operation plan to address and resolve these risks.
- f) The continued use of a mooring on the Waikato River, which is consented

### 1.2.14 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Non-compliance with legislation resulting in possible reputational damage, judicial reviews of council decisions, appointment of commissioners, Ombudsman enquires, or legal action.	Medium	Low	The design and operation of the barge will be undertaken in accordance with the Maritime Transport Act
Ineffective planning processes impact on the Council's ability to deliver on projects outlined in the LTP.	Medium	Low	The current condition of the barge has resulted in river maintenance works not being undertaken for 2 years. Availability of a barge will ensure that the LTP level of services commitments will be met
Inadequate management of operational processes may lead to misinformed or inappropriate decision making or overspend (includes funding of third parties).	Medium	Low	The operation of the barge has been able to be undertaken within the operational budget and this will continue. An operational plan exists for undertaking river works utilising the barge.



Attachment 1 – Whole Life Costs

Barge life (industry norm)	30 years																				
	Option 1	Option 2	Option 3	Option 4	Option 5																
	Own steel barge, self powered, persons on board during voyage, contract operation to 3rd party																				
	Own steel barge, dumb barge, no persons on board during voyage, own a tug vessel to move, contract operation to 3rd Party																				
	Own aluminium barge, dumb barge, no persons on board during voyage, Council owns a tug vessel, contract operation to 3rd party																				
	Own aluminium barge, dumb barge, no persons on board during voyage, contract operation to 3rd party, 3rd party provides tug vessel.																				
	Contract service to a third party, 3rd party provides barge																				
Own the Barge cost	Whole of life costs Option 1	Whole of life costs Option 2	Whole of life costs Option 3	Whole of life costs Option 4	Whole of Life cost Option 5	p.a. costs Option 1	p.a. costs Option 2	p.a. costs Option 3	p.a. costs Option 4	p.a. costs Option 5	Notes Option 1	Notes Option 2	Notes Option 3	Notes Option 4	Notes Option 5						
Barge purchase price	\$ 1,000,000	\$ 800,000	\$ 1,000,000	\$ 1,000,000	\$ -								Initial estimates ranged from \$1.0M to \$1.5M								
Design approval	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ -																
Construction under survey	\$ 20,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -																
Commissioning costs	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -						Assume requires load line assessment, stability assessment, crane certification etc	Assume requires load line assessment, stability assessment, crane certification etc	Assume requires load line assessment, stability assessment, crane certification etc	Assume requires load line assessment, stability assessment, crane certification etc							
Re - painting costs	\$ 225,000	\$ 225,000	\$ -	\$ -	\$ -	\$ 7,500	\$ 7,500	\$ -	\$ -	\$ -	Assumes \$15k every two years for touch ups	Assumes \$15k every two years for touch ups	no repainting required	no repainting required							
Repairs and maintenance	\$ 450,000	\$ 225,000	\$ 225,000	\$ 225,000	\$ -	\$ 15,000	\$ 7,500	\$ 7,500	\$ 7,500	\$ -	Assume 5 k every 2 years service cost on thruster, plus 100k replacement of thruster every 20 years, plus 15k every 2 years for metal work.	Assume \$15k R&M every 2 years	Assume \$15k R&M every 2 years	Assume \$15k R&M every 2 years							
Regulatory Costs	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	\$ 500	\$ 500	\$ 500	\$ 500	\$ -		Assume \$500 per year for MNZ levies	Assume \$500 per year for MNZ levies	Assume \$500 per year for MNZ levies							
Barge Survey costs	\$ 450,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ -	\$ 15,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ -	Assume \$20k to pull out of river, and jack up on blocks, assumes \$10k survey costs, \$30 k per survey, worst case every 2 years	30k every 5 years	30k every 5 years	30k every 5 years							
Insurance @2.5% of book value (see next tab)	\$ 387,500	\$ 310,000	\$ 387,500	\$ 387,500	\$ -	\$ 12,916.67	\$ 10,333.33	\$ 12,916.67	\$ 12,916.67	\$ -											
Support vessel Purchase	\$ -	\$ 185,000	\$ 150,000	\$ -	\$ -								What is the life of this support vessel? Assume 30 years Dearer because 2 motors required	1 motor only							
Support vessel design approval	\$ -	\$ 10,000	\$ 10,000	\$ -	\$ -																
Support vessel Construction under survey	\$ -	\$ 5,000	\$ 5,000	\$ -	\$ -																
Commissioning costs	\$ -	\$ 20,000	\$ 20,000	\$ -	\$ -																
Support vessel maintenance costs	\$ -	\$ 330,000	\$ 195,000	\$ -	\$ -		\$ 11,000	\$ 6,500	\$ -	\$ -		Repower every 10 years @\$70k (2*250-300 HP motors), new trailer every 10 years (\$10k), engine servicing \$2k per year, safety equipment renewal \$1k per year - total \$100k per 10 years maritime levy 100 p.a.	Repower every 10 years @\$35k (250-300 HP motor), new trailer every 10 years (\$10k), engine servicing \$1k per year, safety equipment renewal \$1k per year - total \$65k per 10 years maritime levy 100 p.a.								
Support vessel regulatory costs	\$ -	\$ 3,000	\$ 3,000	\$ -	\$ -		\$ 100	\$ 100	\$ -	\$ -											
Support vessel survey costs	\$ -	\$ 42,000	\$ 42,000	\$ -	\$ -		\$ 1,400	\$ 1,400	\$ -	\$ -		Survey costs 3.5k every 2.5 years = \$14k per 10 years, or 1.4k per year	Survey costs 3.5 k every 2.5 years								
Support vessel insurance	\$ -	\$ 71,688	\$ 58,125	\$ -	\$ -	\$ -	\$ 2,389.58	\$ 1,937.50	\$ -	\$ -											
Hire a barge annually																					
Transport of barge to and from river ( each year)	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000					\$ 100,000					Estimates range \$80-130k to transport barge to river, and take away again at end of each season						
Barge Hireage 2 months p.a.	\$ -	\$ -	\$ -	\$ -	\$ 1,800,000					\$ 60,000					Estimates range from \$15 - \$30k per month to have barge present in the river, irrespective of how much it is used						
Operations cost																					
Operation cost (staff, digger, support vessel)	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 3,000,000	\$ 3,000,000	\$ 80,000	\$ 80,000	\$ 80,000	\$ 100,000	\$ 100,000	Assumes 10 hours per day for excavator +operator@\$160 p/h, plus chainsaw operator 20% of time, assume averages \$2000 per day of use, and 40 days per year rounds to \$80k pa	Assumes 10 hours per day for excavator +operator@\$160 p/h, plus \$300 per day push vessel costs, plus chainsaw operator 20% of time, assume averages \$2000 per day of use, and 40 days per year rounds to \$80k pa	Assumes 10 hours per day for excavator +operator@\$160 p/h, plus \$600 per day for support/push vessel, plus chainsaw operator 20% of time, assume averages \$2500 per day of use, and 40 days per year = \$96k pa	Assumes 10 hours per day for excavator +operator@\$160 p/h, plus \$600 per day for support/push vessel, plus chainsaw operator 20% of time, assume averages \$2500 per day of use, and 40 days per year = \$96k pa	estimate provided was \$4000 per day including push vessel and barge hireage. Take off \$15k/40 days is \$750 per day, and \$600 per day for push vessel, ops cost say \$2500 pd, or 100k for 40 days.						
Council Staff Labour cost to support operations	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	Assumes similar operations labour input to current	Assumes similar operations labour input to current	Assumes similar operations labour input to current	Assumes similar operations labour input to current	Assumes similar operations labour input to current						
Materials?	\$ -	\$ -	\$ -	\$ -	\$ -																
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36,667	\$ 37,000	\$ 42,500	\$ 36,333	\$ -											
Loss of interest revenue	\$ 1,155,000	\$ 1,165,500	\$ 1,338,750	\$ 1,144,500	\$ -	\$ 38,500	\$ 38,850	\$ 44,625	\$ 38,150	\$ -											
<b>totals</b>	\$ 6,632,500	\$ 6,527,188	\$ 6,569,375	\$ 6,492,000	\$ 8,250,000	\$ 221,083	\$ 217,573	\$ 218,979	\$ 216,400	\$ 275,000											
<b>per annum cost (total/life of barge)</b>	\$ 221,083	\$ 217,573	\$ 218,979	\$ 216,400	\$ 275,000																

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# **Business Cases**

## Integrated Catchment Management

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# 2018-28 LTP Catchment Planning and Management - Business Case Alternative Option

This document provides an overview of an alternative option to that presented in the main Catchment Planning and Management business case (DM 10428098). This alternative version was prepared on request of WRC Executive Leadership Team and should be read in conjunction with the full business case.

Below are tables which detail the changes proposed both in terms of planning and catchment activities by Zone. A fully updated financial table is also included, this compares financial information of Option 1 (preferred option) as presented in the business case and the revised option.

In summary the revised option has involved rescheduling and amendments to enable the proposal to meet a capped 5% increase over current baseline for this activity, for years 1-3 of the LTP. In order to meet and not exceed this level, a number of the proposed CMO roles and their associated direct costs have been deferred a year. See tables below for full details of the changes (orange rows) and potential implications.

Catchment Planning					
Area	Business case proposal	Rationale	5% Change proposed	Implication	Funds required
Zone Plan reviews - All Zones	Phased resource for each Zone to complete Zone Plan reviews.  \$50,000 per Zone every 6 years.	Zone plans outline councils shared vision and commitments made with iwi, community and other agencies. They are owned by the respective Catchment Committee, contain service level commitments and require monitoring and reporting. Full plan reviews required every 6 years, additional funding scheduled per Zone.	– Coromandel Zone Plan review funding moved from Year 3 to Year 4.	– This amendment was seen as medium-low risk as Coromandel Zone Plan is currently undergoing its lite review. – The Coromandel Zone intends to undertake a full review once Hauraki Treaty Settlement is embedded.	\$50,000/zone every 6 years.
FTE- Harbour and Catchment Advisor (HCA)	1 FTE Planner.	Planning assistance to deliver catchment planning and prioritisation for the region with initial focus on West Coast Zone.	No Change	As per business case	\$93,000/year from year 1.
Catchment prioritisation and planning- Planning support to Waihou Piako Zone	Contracted service  \$80,000 in year 2 and year 3.	Planning support to Waihou/Piako Zone in 19/20 and 20/21 to advance catchment prioritisation/sub catchment plans (SCP) as outlined in the Zone Plan. This is stop gap until the HCA role can switch focus from West Coast to Waihou/Piako.	– Funding reduced in year 2 from \$80,000 to \$40,000. – Some additional funding added to Planning in year 1 (\$30,000) through removal of the CMO role in Year 1.	– The change will mean catchment planning in this zone will occur at a slower rate as overall funding is reduced and spread over the first 3 years.	\$30,000 year 1 \$40,000 year 2 \$80,000 year 3.
Contracted service- Coromandel	Contracted service	Preparation of Coromandel and Whitianga harbour and catchment management plans (HCMP) as per	Funding halved from \$100,000 year 1 and 2	– Only 1 HCMP will be delivered by end 2019	\$100,000 year 1.

and Whitianga HCMP	\$100,000 in years 1 and 2.	strategic direction. One plan can be delivered in the strategic direction timeframe not both under existing budget. To do both additional funding of \$200,000 over two years required.	to, \$100,000 Year 1 only.	– The second Plan will then commence in 2020 using existing HCMP budget.	
Lake Waikare Whangamari no CMP	Direct costs  \$200,000 in years 3, 4 and 5.	Preparation of future phase of CMP to complement deliverables of HRWO PC1 and interface with Hauraki Treaty Settlement outcomes.	– Slight reduction in proposed funding in year 2, was \$200,000 now \$150,000.	– This reduction may impact ability to plan and deliver actions including: supporting Plan Change 1 direction to complete a CMP for this catchment, meet stakeholder expectations to prioritise and focus effort in the catchment and actions related to the Hauraki Treaty Settlement in this catchment.	\$150,000 year 3 \$200,000 years 4 and 5.

Catchment Management						
Zone	Business proposal	case	Rationale	5% Change	Implication	Costs
Coromandel Zone	CMA works and services direct cost increase.  \$45,000/year.		Increase to CMA works and services budget to ensure gains made through mangrove consents are maintained (restoration and seedling management) and coastal enhancement projects identified through HCMP's can be implemented.	No change.	As per business case.	\$45,000/yr.

Waihou/Pia ko Zone	1 FTE and related direct costs – Role \$73,000 – Direct costs: \$110,000/year – Vehicle \$45,000	1 FTE catchment management officer (CMO) to assist team in meeting catchment management demand for works and services, as endorsed by the catchment committee. It includes associated resourcing in terms of catchment new works and maintenance	FTE deferred, now commences in year 2 not year 1. Some of the direct costs associated with that role redistributed in year 1 (\$30,000 for catchment planning, \$30,000 CNW, \$10,000 CM) No vehicle for CMO, if required in future will have to rely on existing fleet allocation.	<ul style="list-style-type: none"> <li>– Opportunity to engage with landowners lost, opportunity lost to deliver on multiple benefits WQ, biodiversity etc</li> <li>– Pressure on existing staff (combination in this zone of lack of catchment planning/prioritization and landowner demand).</li> <li>– This lack of resource may essentially mean a step backwards in terms of delivery given current over subscription to CNW programmes.</li> <li>– It may mean landowners are unable to receive the support they anticipate and others are less prepared for changes likely to be required under forthcoming Plan Change.</li> </ul>	Role \$73,000 Direct costs: \$110,000/year
Upper Waikato	Catchment new works (CNW)- Direct cost increase  \$56,000/year WRA commitment 2017	Increase to catchment new works (CNW) budget in line with landowner uptake for works in priority catchments. This will be specifically supporting the joint TARIT, WRA and WRC soil conservation/cultural project in the Whirinaki catchment.	No Change.	Refer business case.	\$56,000/year
Waipa Zone	Partial FTE Role partial funded in years 2-4 as part of WRA commitment	Funding in year 19/20 and 20/21 for partial FTE (CMO) to deliver Waipa CMP and current WRA projects (co funding mix proposed, rate funding only required in years 2 and 3).	Change to funding proposed to correct inaccuracy in business case. Role is part funded by WRA	– This is part of an existing commitment WRA funded (2017) project.	\$21,813 year 2 \$32,719 year 3 \$43,625 year



			for years 2-4 inclusive, then will be wholly rate funded from Yr5 onwards.	– Change proposed ensures we can meet that commitment and fund the role in the long term.	4 \$67,000 years 5-10.
West Coast Zone	<p>Create coastal environment enhancement budget.</p> <p>Direct costs: \$35,000 year 1 \$50,000 year 2 onwards.</p>	<p>Harbour catchment planning is required for the three priority West Coast harbours as defined in objective 2(b) of the Zone Plan. High demand within the zone for CNW funding assistance from landowners, requires additional resource in order to deliver on coastal restoration activities within the coastal environment.</p> <p>A dedicated coastal enhancement budget will ensure that core catchment management work can continue across the zone, while also directing dedicated resourcing into ecological and/or cultural enhancement works within the coastal environment.</p>	No Change.	Refer business case.	Direct costs: \$35,000 year 1 \$50,000 year 2 onwards.
	<p>Catchment new works - direct costs increase.</p> <p>Direct costs \$50,000.</p>	<p>Demand from landowners within the West Coast Zone is exceeding expectations and the ensuing budget required is significantly higher than that currently allocated (CNW). To keep pace with this demand, and maintain momentum, additional resources are required.</p> <p>Harbour catchment planning is also due to commence for the three priority west coast harbours and</p>	No Change.	Refer business case.	Direct costs \$50,000.

		resourcing is needed to enable this to be delivered over subsequent years. This will also ensure any co-management requirements resulting from the upcoming harbour treaty settlement(s) can be incorporated and delivered upon.			
Central Waikato Zone	2 FTE and related direct costs.  2x FTE (CMO) \$73,000 each Direct costs vary with roles from \$120,00-\$320,000.	Two additional FTE (CMO) to support/implement an expanded catchment management programme in response to: increasing demand from landowners in priority catchments, need to deliver on zone plan priorities, adoption of the Waikato Waipa River Restoration Strategy and advice from the Waikato River Authority that Strategy priorities will be supported in the future.	No Change.	Refer business case.	2x FTE \$73,000 each Direct costs vary with roles from \$120,00-\$320,000.
Lower Waikato Zone	3 FTE and related direct costs.  3x FTE (CMO) \$73,000 each  Direct costs vary with roles from \$161,000-483,000  Vehicles \$115,000	Additional 3 FTE (CMO) to assist delivery of catchment management programme, in accordance with the Lower Waikato Zone Plan. Implementation of Lake Waikare Whangamarino Catchment Management Plan, and WRRRS. Increased catchment new works and catchment maintenance budgets associated with additional CMO resource.  The intention is to use this quantum to leverage co funding from WRA	All proposed FTE deferred a year, the first role now commences in year 2 not year 1. Associated direct costs and vehicles also deferred a year.	<ul style="list-style-type: none"> <li>– Impacts on delivery of Waikato and Waipa River Restoration Strategy as outlined in the draft Zone Plan and support in principle by the Catchment Committee.</li> <li>– Impacts on ability to support the Waikare CMP.</li> <li>– Lost opportunity to leverage additional funds via WRA and others such as MPI and MFE programmes.</li> <li>– Opportunity to engage with landowners lost, opportunity lost</li> </ul>	3x FTE \$73,000 each.  Direct costs vary with roles from \$161,000-483,000.  Vehicles \$115,000.

		and others as has been successfully done in the Waipa.		to deliver on multiple benefits WQ, biodiversity etc – Inability to meet demand from iwi and community for catchment management support. – This lack of resource essentially means a step backwards in terms of delivery given current over subscription to CNW programmes.	
	Lake Waikare Whangamarino Wetland CMP Implementation. \$50,000 year 1 and 2.	Resource required to prepare interim action plan and continue stakeholder engagement related to the Lake Waikare Whangamarino Wetland CMP.	No Change.	Refer business case.	\$50,000 year 1 and 2.
	Collaborating with others.  Covers existing commitments: \$175,000 year 1 \$225,000 year 2  \$225,000 remaining (not yet allocated to projects) years for future collaborative projects.	Funding to meet existing collaborative projects (e.g. Joint WRA/Waikato District Lakes Accord project for Identifying interventions to protect the Whangamarino Wetland and Waikato Rivercare MOU) and some future projects we may support but not lead.  Waikato Rivercare \$60,000 of \$80k/year commitment under existing MOU.  Existing WRA co funded project with Waikato Lakes Accord looking	Reduction in funding in Year 3, was \$225,000 now \$171,449.	This funding is fully allocated to current commitments in year 1 and 2 meaning there will be no scope to support collaborative projects led by others until year 3.	\$175,000 year 1 \$225,000 year 2 \$171,449 year 3 \$225,000 years 4-10.

		<p>at interventions for Whangamarino (\$115k year 1 and \$165k year2).</p> <p>From year 3 funding is then available for future collaborative projects.</p>			
Biodiversity on Scheme Land	<p>Biodiversity on Scheme Land- direct cost increase.</p> <p>\$22,980 year 1 and 2 \$38,230 from year 3 onwards.</p>	<p>Increase implementation budget for enhancement works on scheme land.</p> <p>Ability to continue to demonstrate leadership at new sites on WRC owned land.</p> <p>This will assist delivery of consent required mitigation/compensation enhancement works associated with maintenance of flood schemes.</p> <p>It may be utilised to trial and implement alternative management options for scheme land and to partner with others in enhancement projects.</p>	<p>Slight increase (~\$7000) to this budget in year 1 and 2.</p>	<p>Some improved ability to deliver enhancement works on scheme land.</p>	<p>\$30,000 year 1 and 2 \$38,230 from year 3 onwards.</p>
CMO Unit Lead	<p>1 FTE West Coast - Central Waikato Zone Unit Lead.</p>	<p>A unit lead position to oversee the West Coast and Central Waikato based CMO team. This is required to ensure appropriate staff-manager reports are maintained.</p>	<p>Role deferred a year, now commences in year 3.</p>	<p>This is a flow on effect of the deferral of the Lower Waikato CMO roles.</p>	<p>1 x FTE \$93,000.</p>
Asset Management	<p>1 FTE</p>	<p>Additional role (1FTE) to assist information gathering and reporting for additional CMO roles. It shall also assist CEO KPI in collating information on council's</p>	<p>No Change not in this business case.</p>		<p>—</p>

		wider catchment management activities.			
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Area/Zone	Role/task	Description	Yr1 2018/19	5% Option	Yr2 19/20	5% Option	Yr3 20/21	5% Option	yr4 21/22	5% Option	yr5 22/23	5% option	yr6 23/24	yr7 24/25	yr8 25/26	yr9 26/27	Yr10 27/28	Total	
Coromandel	Complete HCMP	Complete the final 2 HCMP (Mercury Bay/Whitianga and Manaia Coromandel) as per strategic direction. Contracted service.	100000	100000	100000		\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	
	Increase CMA works and Services budget	Increase budget to maintain mangrove seedling removal and restoration sites.	\$45,000	\$45,000	\$45,000	\$45,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$570,000
	Zone Plan	Zone Plan review							\$50,000	\$50,000								\$50,000	
Waihou Piako	Kick start catchment planning	Introduce funding to support preparation of CMP	\$0	\$30,000	\$80,000	\$40,000	\$80,000	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
	CMO	Role	<del>\$73,000</del>		\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$657,000
	CNW	Catchment new works associated with role	<del>\$100,000</del>	\$30,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$930,000
	CM	Catchment maintenance associated with role	<del>\$10,000</del>	\$5,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$95,000
	Zone Plan	Zone Plan review											\$50,000					\$50,000	
	Capex	Utility vehicle for CMO	\$45,000																
Waipa	CMO	Partially funded CMO role			\$29,168	\$21,813	<del>\$54,168</del>	\$32,719	<del>\$54,168</del>	\$43,625	<del>\$54,168</del>	\$67,000	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$435,997
	Zone Plan	Zone Plan review											\$50,000					\$50,000	
West Coast	Create CMA works and service budget	Create budget to assist funding of coastal enhancement works, as per Coromandel Zone budget.	\$35,000	\$35,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$485,000
	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$500,000
	Zone Plan	Zone Plan review							\$50,000	\$50,000								\$50,000	\$100,000
Upper Waikato/Taupo	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$560,000
	Zone Plan	Funding to assist Zone Plan review					\$50,000	\$50,000									\$50,000	\$100,000	
Central Waikato	CMO	CMO roles scheduled yrs 2 and 4			\$73,000	\$73,000	\$73,000	\$73,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$1,168,000
	CNW	Catchment new works associated with role	50000	50000	\$110,000	\$107,852	\$210,000	\$210,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$2,467,852
	CM	Catchment maintenance associated with role			\$10,000	\$10,000	\$10,000	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$160,000
	Zone Plan	Zone Plan review											\$50,000					\$50,000	
	Capex	CMO Utility vehicle			\$45,000													\$45,000	

<b>Lower Waikato</b>	CMO	CMO roles scheduled yrs 1,2 and 4	<del>\$73,000</del>		<del>\$146,000</del>	\$73,000	\$146,000	\$146,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$1,752,000
	CNW	Catchment new works associated with role	<del>\$149,000</del>		<del>\$298,000</del>	\$100,000	\$298,000	\$260,602	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$3,489,602
	CM	Catchment maintenance associated with role	<del>\$12,000</del>		<del>\$24,000</del>	\$12,000	\$24,000	\$24,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$288,000
	Zone Plan	Zone Plan review											\$50,000					\$50,000
	Capex	CMO Utility vehicle	<del>\$70,000</del>			\$70,000			\$45,000	\$45,000								\$115,000
	CNW	New Projects budget																
	Waikare Whangamarino CMP	Implementation and planning of waikare Whangamarino CMP	\$50,000	\$50,000	\$50,000	\$50,000	\$200,000	\$150,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$650,000
	Collaborating with others	Funding to meet existing (e.g WRA) and some future collaborative project commitments led by other parties	\$175,000	\$175,000	\$225,000	\$225,000	<del>\$225,000</del>	\$171,449	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$2,146,449
<b>Biodiversity of scheme land</b>	Direct costs	On ground works to implement the On Scheme Land Biodiversity programme of works - Note some offset in labour costs reduction.	<del>\$22,980</del>	\$30,000	<del>\$22,980</del>	\$30,335	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$366,175
<b>Catchment Management Team</b>	Harbour and Catchment Advisor (HCA)	Additional catchment planning resource. Initial focus on West Coast Zone.	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$930,000
<b>Catchment Management Team</b>	West Coast - Central Unit Lead	Oversee CMO unit			<del>\$93,000</del>	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$744,000
<b>Total by Year</b>			Yr 1		Yr2		Yr3	Yr3										Yr1-10
			\$1,208,980	\$749,000	\$1,783,148	\$1,290,000	\$1,993,398	\$1,831,000	\$2,415,398	\$2,404,855	\$2,270,398	\$2,283,230	\$2,270,398	\$2,070,398	\$2,070,398	\$2,070,398	\$2,170,398	\$19,255,075

## Appendix 1 Supporting information: Catchment Committee Meeting Minutes

Zone	Zone Meeting minute reference	Relevant meeting minutes
Coromandel	7 November 2017 Page 6	<p>Integrated Catchment Management Principal Advisor (G Ryan) provided an update on the 2018-2028 Long Term Plan.</p> <p>During questions, answers and related discussion the Committee raised or noted the following matters:</p> <ul style="list-style-type: none"> <li>- Once the Whitianga and Coromandel Harbour Catchment Management Plans are complete, how quickly will these plans be implemented in order to make a difference? It was noted that this needs to be a discussion as part of the Long Term Planning process to determine what people are prepared to pay.</li> <li>- A question was raised around implementation of the Harbour and Catchment Management Plans, specifically what can be achieved within existing budgets. In response staff advised that the current budgets have allowed for the work that has been reported on through the Catchment Committee for the last 3-4 years. Members were reminded that earlier this year they were presented with a report regarding the use of reserves to speed up some priority works. Staff noted that there is a lot of demand for river management works and as such, they are constantly prioritising and reprioritising work programmes within existing budgets. The 3-year exercise through the Long Term Plan using the \$300,000 of reserves and the focus catchment funding will provide a good indication of how fast work can be done.</li> <li>- Members were of the view that ratepayers want to see actions and these actions should be easily identified in the Long Term Plan and when the work will be undertaken. Ratepayers need assurance of where their money is going to be spent in the Long Term Plan.</li> </ul> <p>J Sanford moved/J Davis seconded</p>



17 August 2017 Page 4	CLSc17/36	<p><b><u>RECOMMENDED</u></b>  <b>THAT the Coromandel/Manaia Harbour and Catchment Management Plan be progressed in parallel to the Whitianga/Mercury Bay plan in 2018 (subject to obtaining further Long Term Plan funding), or otherwise started between January and June 2019 (if Long Term Plan Funding is not obtained).</b></p> <hr/> <p>Doc # 10843452 <span style="float: right;">Page 4</span></p> <hr style="border: 1px solid gray;"/> <p><u>Coromandel Catchment Committee Minutes – 17 August 2017</u> <span style="float: right;">5</span></p> <p style="text-align: right;"><b>The motion was put and carried (CLSc17/36)</b></p>
15 May 2017 Page 8	CLSc17/19	<p><b><u>RESOLVED</u></b></p> <ol style="list-style-type: none"> <li>1. <b>THAT the report 'Outline of the Implementation of the Harbour and Catchment Plans' (Doc # 10162836, 8 May 2017) be received</b></li> <li>2. <b>THAT the Coromandel Catchment Committee support the current approach and priorities identified for Harbour and Catchment Management work programme.</b></li> <li>3. <b>THAT the Coromandel Catchment Committee support the Coromandel Zone in seeking additional funding to develop the two new Harbour and Catchment Management Plans as per the Strategic Direction through the Long Term Plan.</b></li> </ol> <p style="text-align: right;"><b>The motion was put and carried (CLSc17/19).</b></p>

<p>Central Waikato</p>	<p>29 November 2017 Page 7</p>	<p><b><u>Waikato Regional Council 2018-2028 Long Term Plan Update</u></b> (Agenda Item 9) Doc # 11253202 and 11211242</p> <p>During questions, answers and related discussion the Committee noted the following points:</p> <ul style="list-style-type: none"> <li>• There were significant issues in relation to urban growth and its impact on streams, with proposals to address those issues outlined in the report.</li> <li>• There was a disparity between demand and available funding.</li> </ul> <p>Cr McGuire moved/Cr Quayle seconded.</p> <div style="border: 1px dashed black; padding: 5px; margin: 10px 0;"> <p>CWCC17/42      <b>THAT the report "Waikato Regional Council 2018-2028 Long Term Plan Update" (Doc # 11253202 dated 13 November 2017) be received.</b></p> <p style="text-align: right;">The motion was put and carried (CWCC17/42)</p> </div> <p>M Moana-Tuwhangai moved/Cr McGuire seconded.</p> <div style="border: 1px dashed black; padding: 5px; margin: 10px 0;"> <p>CWCC17/43      <b><u>RECOMMENDED</u></b> <b>THAT the Central Waikato Catchment Committee supports exploring options to fund mitigation measures required as a result of the impacts of urban growth within the Central Waikato Zone.</b></p> <p style="text-align: right;">The motion was put and carried (CWCC17/43)</p> </div> <p>P Davies moved/B Hicks seconded.</p> <div style="margin: 10px 0;"> <p>CWCC17/44      <b><u>RECOMMENDED</u></b> THAT the Central Waikato Catchment Committee supports the 2018-2018 Long Term Plan catchment planning and management business cases for:</p> <ol style="list-style-type: none"> <li>1. Catchment Management Officer increase by 2 FTE (1 each in years 2 and 4)</li> <li>2. Catchment new works increase by \$300,000 over four years</li> <li>3. Catchment maintenance increase by 10,000 per new FTE</li> <li>4. Zone Plan review \$50,000 every 5 years.</li> </ol> <p style="text-align: right;">The motion was put and carried (CWCC17/44)</p> </div>
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Lower Waikato	18 May 2017 Page 6	<p><b><u>Waikato Regional Council Long Term Plan and Level of Service Review Update – May 2017</u></b> Agenda Item 8 (Doc # 10388227)</p> <p>Principal Advisor (Greg Ryan) provided an overview of the process to develop the Waikato Regional Council 2018-2028 Long Term Plan (LTP), sought feedback on the known issues impacting on activities which require a response from this LTP, and alerted the Committee to other issues that may require attention in the future.</p> <p>During questions, answers and related discussion the Committee raised or noted the following matters:</p> <ul style="list-style-type: none"> <li>- Members were of the view that there needs to be greater emphasis on the environmental performance outcomes that Council delivers on as part of its services.</li> </ul> <p>K Holmes moved/M Lumsden seconded</p>
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# Catchment Planning and Management

<b>GOA:</b>	Integrated Catchment Management
<b>Activity Name:</b>	Catchment Planning and Management
<b>Function</b>	Planning and Management
<b>Service</b>	Preparation of catchment management and zone plans Implementation of catchment management activities Collaborative catchment enhancement activities
<b>Financial Budget Code:</b>	Multiple across Zones and Business and Technical Services

## 1.1 Review and approval

Prepared By:	Michelle Lewis/Senior Catchment Planner	Date 19/10/17
Reviewed By:	Julie Beaufill/Senior Advisor Special Projects	Date 18/10/17
Signed off By:	Clare Crickett, Director ICM	Date

## 1.2 Related documents

Document Title	Author	Document Reference
2018-28 LTP. Level of service review. Catchment Planning and Management	Michelle Lewis, Julie Beaufill	10324548
2018-28 LTP catchment planning and management budget by Zone	Michelle Lewis	11099117

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

The catchment planning and management group of activities covers zone and catchment planning, catchment management works (implementation of physical works) including collaborative projects and the maintenance of past catchment protection works. These functions are a key method for the delivery of council's environmental protection/enhancement and sustainable land management activities and directly contributes to meeting council's strategic direction.

The key objectives of this proposal are to:

1. Enhance catchment planning capability regionally, in all Zones
2. Better meet the demands and expectations of local, regional and national planning directives on a priority basis
3. Deliver or increase catchment management activities/works in priority areas

4. Improve our ability to work collaboratively/partner on enhancement projects, including delivery of the Waikato Waipa Rivers Restoration Strategy (WWRRS)

The catchment planning activity will ensure Zones are supported in catchment prioritisation and planning. In particular it will deliver the final two harbour and catchment plans for the Coromandel Zone, and the Lower Waikato and West Coast Zones will be better equipped to deliver their catchment management activities, directed by sub catchment prioritisation and planning. Overall, this activity promotes community involvement in plan preparation and serves to assist community understanding of issues at place

The catchment management activities enable an increase in the support, advice and incentive funding to landowners, iwi and other organisations around improving land and water use practices and the protection and enhancement of biodiversity. Overall council will be better placed to work in partnership with iwi, landowners, community and agencies such as the Waikato River Authority in order to achieve step change for our environment, communities and economy.

This business case strongly links with the WRC Fresh Water Strategy directives around riparian planning prioritisation and follows from the previous 2015-25 business case which provided the framework for the current catchment planning and management work programme. That case had a particular focus on catchment prioritisation work and with that work successfully delivered this proposal moves the programme to the next level of catchment planning and implementation works at place. It is a proven successful approach, as demonstrated by the Waipa and Coromandel based catchment plans, the buy in and interest from landowners and the accelerated rate of work being undertaken.

The proposal builds capacity and funding within the catchment management programme to meet Council strategic direction and drivers such as Vision and Strategy for the Waikato River through implementation of the Waikato River Waipa River Restoration Strategy and Sea Change. This proposal makes available additional resources to meet iwi, stakeholder and landowner/community expectations around delivery of enhancement works.

Catchment planning and management activities are methods which support delivery of the current and likely future Regional Plans including Healthy Rivers Wai Ora (HRWO) by providing catchment protection and enhancement works to complement regulatory bottom lines. This function will also help coordinate the large body of physical restoration work required including that which sits outside of HRWO i.e. Biodiversity protection and enhancement. Importantly it will assist communities prepare for future plan changes beyond what will be required in Healthy Rivers Wai Ora noting that this first stage of HRWO is only expected to deliver 10 percent of the required change over ten years.

In addition this programme of works will provide the delivery mechanism for various other Council workstreams, both science (soils, water quality, biodiversity, coastal), policy (RPS implementation) and community services (through engagement, collaboration with external parties in preparation of CMP's).

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	205	45	n/a	45	n/a	n/a
<b>Operational</b>	1053	1738	1943	2320	2270	varies

#### 2.1.1.1 Funding source

Zone based targeted rate funding:

Zone planning function, catchment management roles and associated implementation budgets including Coromandel CMA works and services budget and the proposed West Coast coastal enhancement budget.

General rate funding:

Harbour and Catchment Advisor role funded by general rate in alignment with the current harbour catchment advisor role (Coromandel).

#### 2.1.1.2 Funding partnerships

We will be seeking joint funding from a number of agencies including those listed below. Many of these funders require matching co funding, the increases proposed in this business case will enable council to leverage additional funding enabling an increase in the outcomes achieved, an acceleration of work and ultimately a reduction in the cost to the Waikato Region's ratepayers.

Council has been very successful historically in leveraging funding from these agencies and in delivering on the work programme commitments. Recently successful examples of co funded projects are outlined below.

Funding Agency	Funding - typical level	Duration (Years)
Waikato River Authority (WRA),	Council has been successful in receiving funding ranging from ~\$10,000 to \$1.5mil (Waipa Catchment Project 2017)	Ranges from 1 to multiple years. Council has had funding for up to 3 yrs. (2014 – 2017 phase of the Waipa Catchment Plan)
Department of Conservation	DOC has co-funded a catchment management/biodiversity role with council to specifically focus on environmental projects within the West Coast Harbour catchments.	Funding is for 3 years ending in June 2019.
Ministry of Primary Industries (Hill Country erosion and Afforestation grant scheme)	Council has a dollar for dollar co-funding agreement with MPI from the Hill Country Erosion Fund totalling 1.26mil (\$630k contribution from each party). This funding focuses on the implementation of soil conservation works in erosion prone hill country catchments. Staff also assist landowners with applications to MPI for AGS funding to	Funding is staggered over 4 years, ending in June 2019.

Funding Agency	Funding - typical level	Duration (Years)
	change land use from grass to afforestation.	
Ministry for the Environment (Freshwater Improvement fund)	Council was successful in securing \$900k of funding for water quality and habitat enhancement of Lake Whangape and also assisted the Puniu Rivercare Group in securing \$741k to improve water quality, restore indigenous fish habitat and terrestrial biodiversity.	Project duration of 5 years for both of these projects.
QEII and Nga Whenua Rahui	QEII provide funding for projects with council/landowners to protect special natural and cultural features on their properties. Funding provided ranges from \$10,000 to \$30,000. Nga Whenua Rahui is a major funding provider for environmental projects on Maori owned land. Funding contributed on single projects to date has been between \$300,00 to \$350,000.	Funding from both agencies ranges from 1 to multiple years.
Waikato Catchment Ecological Enhancement Trust (WCEET)	Council has received funding for enhancing the sustainable management of ecological resources in the Upper Taupo and Waikato River catchments. Funding is usually in the range of \$10,000 to \$20,000.	Funding ranges from 1 year to multiple years.

## 2.2 Corporate support service implications

Consideration	Yes/No	Discussed with Activity Lead?
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No	John Crane - Yes / No
Does the work include the procurement, or capture, of new data sets?	No	Gill Lawrence - Yes/No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes	Gill Lawrence - Yes/No
Does the work require analysis or modelling of spatial data?	Yes	Gill Lawrence - Yes/No
Does the work require the establishment of new depots or offices?	No	Trevor Martin – Yes/No
Does the work require the use of additional fleet vehicles?	Yes	Trevor Martin – Yes/No
Does the work require additional resources (FTE or contract)?	Yes	If yes, complete section 2.2.1

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
Permanent	24 FTE <sup>1</sup>	3 FTE	4 FTE		2 FTE		
Fixed Term							
Contract		\$100,000 CS	\$100,000 CS				

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

Community demand for catchment management activities exceeds our ability to deliver in many Zones, with current approach being on an ad hoc or first comes first served basis, particularly in the absence of catchment prioritisation and planning to direct works. This issue is highlighted in the recently reviewed zone plans. In addition opportunities for working in partnership and co funding projects with iwi and other agencies are increasing (e.g. WWRRS) and there is considerable expectation that WRC will significantly contribute to/lead delivery of enhancement projects.

#### Catchment Planning:

The proposal is to enhance council's catchment planning function to ensure internal and external opportunities for collaboration are maximised. It will support the increasing demands and expectations on council of other organisations, central government policies and our own regional planning drivers such as Healthy Rivers and Sea Change. Catchment planning provides a mechanism to coordinate various work streams to ensure optimised implementation of actions at place and delivery on multiple council objectives. This requires additional investment as set out below, which will support existing delivery mechanisms:

1	Zone Plan reviews - All Zones	Zone plans outline councils shared vision and commitments made with iwi, community and other agencies. They are owned by the respective Catchment Committee, contain service level commitments and require monitoring and reporting. Full plan reviews required every 6 years, additional funding scheduled per Zone.
2	FTE- Harbour and Catchment Advisor (HCA)	Planning assistance to deliver catchment planning and prioritisation for the region with initial focus on West Coast Zone.
3	Catchment prioritisation and planning- Planning support to Waihou Piako Zone	Planning support to Waihou/Piako Zone in 19/20 and 20/21 to advance catchment prioritisation/sub catchment plans (SCP) as outlined in the Zone Plan. This is stop gap until the HCA role can switch focus from West Coast to Waihou/Piako.
5	Contracted service- Coromandel and Whitianga HCMP	Preparation of Coromandel and Whitianga harbour and catchment management plans (HCMP) as per strategic direction. One plan can be delivered in the strategic direction

<sup>1</sup> This includes CMO, catchment planner, zone manager and catchment team leader roles



		timeframe not both under existing budget. To do both additional funding of \$200,000 over two years required.
6	Lake Waikare Whangamarino CMP	Preparation of future phase of CMP to meet deliverables of HRWO PC1 and interface with Hauraki Treaty Settlement outcomes.

This proposal provides:

- Utilisation and enhancement of a proven and successful catchment planning approach to achieve multiple outcomes (e.g. Coromandel and Waipa plans)
- Cost efficiencies in a coordinated rather than ad hoc approach
- Opportunity for roles to support each other, flexibility to move with changing priorities
- Roles will support and mentor staff in catchment planning, both supporting zone managers and increasing catchment management officer (CMO) capability to prepare and deliver sub catchment plans (SCP)
- Ensures Zones have sufficient budget to undertake Zone Plan reviews and meet commitments
- A coordinated approach to catchment planning, enhancing the regulatory bottoms lines defined by with Healthy Rivers Wai Ora (HRWO)
- A means of improving our engagement and joint initiatives with other agencies, community and iwi.

#### Catchment Management:

This proposal will ensure we have the required resource to keep pace with co-funding opportunities, to maximise on restorative actions at place. It includes a combination of staff and funding resource in the catchment management programme of works.

Zone	Change sought	Rationale
Coromandel Zone	CMA works and services- direct cost increase	Increase to CMA works and services budget to ensure gains made through mangrove consents are maintained (restoration and seedling management) and coastal enhancement projects identified through HCMP's can be implemented.
Waihou/Piako Zone	1 FTE and related direct costs	1 FTE catchment management officer (CMO) to assist team in meeting catchment management demand for works and services, as endorsed by the catchment committee. It includes associated resourcing in terms of catchment new works and maintenance
Upper Waikato	Catchment new works (CNW)- Direct cost increase	Increase to catchment new works (CNW) budget in line with landowner uptake for works in priority catchments. This will be specifically supporting the joint TARIT, WRA and WRC soil conservation/cultural project in the Whirinaki catchment.
Waipa Zone	Partial FTE	Funding in year 19/20 and 20/21 for partial FTE (CMO) to deliver Waipa CMP and current WRA projects (co funding mix proposed, rate funding only required in years 2 and 3).
West Coast Zone	Create coastal environment	Harbour catchment planning is required for the three priority West Coast harbours as defined in objective 2(b) of the Zone Plan. High

Zone	Change sought	Rationale
	enhancement budget- direct costs	demand within the zone for CNW funding assistance from landowners, requires additional resource in order to deliver on coastal restoration activities within the coastal environment.  A dedicated coastal enhancement budget will ensure that core catchment management work can continue across the zone, while also directing dedicated resourcing into ecological and/or cultural enhancement works within the coastal environment.
	Catchment new works- direct costs increase	Demand from landowners within the West Coast Zone is exceeding expectations and the ensuing budget required is significantly higher than that currently allocated (CNW). To keep pace with this demand, and maintain momentum, additional resources are required. Harbour catchment planning is also due to commence for the three priority west coast harbours and resourcing is needed to enable this to be delivered over subsequent years. This will also ensure any co-management requirements resulting from the upcoming harbour treaty settlement(s) can be incorporated and delivered upon.
Central Waikato Zone	2 FTE and related direct costs	Two additional FTE (CMO) to support/implement an expanded catchment management programme in response to: increasing demand from landowners in priority catchments, need to deliver on zone plan priorities, adoption of the Waikato Waipa River Restoration Strategy and advice from the Waikato River Authority that Strategy priorities will be supported in the future.
Lower Waikato Zone	3 FTE and related direct costs	Additional 3 FTE (CMO) to assist delivery of catchment management programme, in accordance with the Lower Waikato Zone Plan. Implementation of Lake Waikare Whangamarino Catchment Management Plan, and WWRRS.  Increased catchment new works and catchment maintenance budgets associated with additional CMO resource.
	Lake Waikare Whangamarino Wetland CMP Implementation	Resource required to prepare interim action plan and continue stakeholder engagement related to the Lake Waikare Whangamarino Wetland CMP.
	Collaborating with others	Funding to meet existing collaborative projects (e.g. Joint WRA/Waikato District Lakes Accord project for Identifying interventions to protect

Zone	Change sought	Rationale
		the Whangamarino Wetland) and some future projects we may support but not lead.
Biodiversity on Scheme Land	Biodiversity on Scheme Land- direct cost increase	Increase implementation budget for enhancement works on scheme land. This will assist delivery of consent required mitigation/compensation enhancement works associated with maintenance of flood schemes. It may be utilised to trial and implement alternative management options for scheme land and to partner with others in enhancement projects.
CMO Unit Lead	1 FTE West Coast Central Waikato Zone Unit Lead	A unit lead position to oversee the West Coast and Central Waikato based CMO team. This is required to ensure appropriate staff-manager reports are maintained.
Asset Management	1 FTE	Additional role (1FTE) to assist information gathering and reporting for additional CMO roles. It shall also assist CEO KPI in collating information on council's wider catchment management activities.

**This proposal provides:**

- Increased demand for services from landowners
- Updated Zone Plan objectives following recent reviews (as supported by Catchment Committees)
- Opportunities for collaborative arrangements with others, in particular with WRA following adoption of the WWRRS
- Need to provide asset management services and staff oversight to support the recent increases in CMO's across several zones but particularly the Waipa Zone
- Increasing expectations around progress with harbour and catchment planning
- Community expectations as to meeting biodiversity outcomes
- Assistance in addressing the gap in resourcing for implementation actions focused on the west coast harbours
- Resourcing to ensure investment made and gains achieved through Coromandel mangrove removal consents are maintained.

Please refer to Appendix 2 to see full resource and cost schedule associated with this proposal.

## 3.2 What will success look like (high level benefits)

**Catchment Planning:**

A coordinated programme of prioritised catchment planning works across the region led by staff with the appropriate skills to enable development of catchment plans/priorities at place (within Zones). We are delivering on commitments made with iwi, stakeholders and community through Zone Plans. ICM are equipped to deliver on science, policy, iwi and community led catchment management priorities. Opportunities to collaborate with others and seek external funding to enhance catchment management programmes.

**Catchment Management:**

Catchment management team is able to meet landowner/manager demand and/or drive catchment management works in priority catchments. Actions are coordinated and result in demonstrable improvements to receiving environments. We are able to deliver on commitments already made with respect to delivery of the WWRRS and proactively partner with others in future enhancement projects. We will be better placed to lead and deliver biodiversity enhancement projects, including a particular focus on increasing biodiversity values on scheme land.

**Measures:**

**The following table summarises the proposed LTP level of service measures for this GOA:**

<b>Annual performance measure</b>	<b>Target</b>
Percentage of sampled catchment scheme works maintained in effective condition to the standards set out in zone plans	70%
Catchment new works undertaken in priority catchments across all zones	80%
Harbour management plans are completed for Whitianga and Coromandel	By June 2019
Zone plans are reviewed as per schedule	Varies by zone. Full review every 6 years.

### **3.3 Consequences of not proceeding**

**Catchment planning:**

- We will not be able to deliver on a number of strategic direction priorities e.g. implementation of the Vision & Strategy for the Waikato River, Waikato Fresh Water Strategy, delivery of Whitianga and Coromandel HCMP in required timeframes.
- Ongoing ad hoc response to catchment issues due to limited resources and lack of overarching framework and direction that catchment plans provide.
- Lost opportunity to engage and inability to support and meet demand from communities in our work.
- Weakens our ability to deliver/support co-management agreements with iwi.
- Lost opportunity in terms of better coordinating internal and external resources, and optimising delivery on the ground.

**Catchment Management:**

- Missed opportunity to maximise on delivery of works and inability to keep pace and deliver catchment works with landowners.
- Lost opportunity to leverage funds and partner with others and hence reduce rate burden
- Will reduce delivery on a number of wider council objectives- e.g. Biodiversity enhancement and protection, implementation of Waikato Freshwater Strategy and the WWRRS.
- Catchment management activities' use of external funding to maximise delivery of projects in priority catchments.
- Without adequate resourcing we may not be able to deliver commitments on joint funding projects.
- Further decline in biodiversity values, particularly those associated with scheme land
- Inability to implement harbour/coastal specific actions on the west coast and Coromandel.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy environment	<ul style="list-style-type: none"> <li>• The catchment planning and management function plans, prioritises and coordinates on the ground actions to improve water quality/protect waterways (D2).</li> <li>• Catchment management function delivers on the ground actions to improve water quality/protect waterways (D2).</li> <li>• Planning products collate data/research and summarise in a comprehensible way (A1/A2).</li> <li>• SCP provide direct opportunity for landowners, agencies, iwi to work together in improving land and water use practices (D7)</li> <li>• .Catchment planning and management activities deliver co management/governance requirements (e.g. Vision &amp; Strategy) but also indicative approach in other areas i.e. west coast harbours (B2)</li> <li>• Plans provide opportunity for coordinated/integrated approach to pest management and biodiversity enhancement projects at place (C5).</li> <li>• Catchment planning and management is a direct deliverable of Sea Change (F1).</li> <li>• Delivers HCMP for Whitianga and Coromandel (F7).</li> <li>• Enhances delivery of HRWO (B2/C4).</li> </ul>
Vibrant communities	<ul style="list-style-type: none"> <li>• Provides for community engagement in catchment planning and management and partnerships with other agencies, stakeholders and iwi (B1/A3).</li> </ul>

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
Forge and strengthen partnerships to achieve positive outcomes for the region		
Existing partnerships are strengthened and new partnerships are forged with iwi Maori, community and business organisations to achieve step change for our environment, economy and communities.	Strongly contributes	Provides staff and resource to partner with others more effectively Enables delivery of co funded projects
The vision and strategy for the Waikato river is advanced by delivering on the Healthy River Wai Ora plan change and catchment services.	Strongly contributes	Catchment management activities are critical to delivery of the Vision and Strategy for the Waikato River. This proposal will increase ability to deliver on the WWRRS and builds on the regulatory bottom line provided by HRWO.
Enhance the values of the regions coasts and marine area		
We play an active role in implementing Sea Change	Strongly contributes	Enable preparation and delivery of harbour and catchment plans, protection, enhancement and restoration of coastal habitats, riparian planting and wetland creation.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
Harbour Management Plans for Whitianga and Coromandel are completed	Achieves	The proposal provides resource required to complete both HCMPs as outlined in the Strategic Direction
Manage freshwater more effectively to maximise regional benefit		
We are delivering on Healthy Rivers Wai Ora plan change	Strongly contributes	Catchment management activities are complementary to and build on that provided by HRWO.
We continue to work closely with landowners and other organisations to improve land use and water use practices.	Strongly contributes	Increased CMO resource will enable us to keep pace with landowner demand for advice and support regarding land/water management practices.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Zone Plans	Explicit	Recently reviewed zone plans require catchment prioritisation and planning as a preferred approach. Zone plans require increased resource for catchment management delivery given the benefits derived.
Harbour and Catchment Management Plans	Explicit	Various existing CMPs (Coromandel (x4), Waipa, Waikare Whangamarino) require implementation, this change provides for delivery of those plans.
Waikato Regional Policy Statement	Explicit	Enables council to give effect to a number of RPS policies including 8.3, 8.4, 4.1, 4.3, 14.1, and 11.3.
Waikato Freshwater Strategy	Strongly contributes	Catchment planning and management assists in achieving actions 2.3.4.3- riparian planning prioritisation and may in some areas assist in identifying water storage areas (2.3.4.4) though catchment plans where appropriate.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option.

**Refer to Appendix 2 for a detailed description of the options evaluated.**

Options include:

- Status quo: This reflects the current situation and resourcing. This includes 24 FTE and costs \$73,824,090 over 10 years.
- Options 1: This option builds on the current baseline to provide targeted resource in response to Zone demands. It includes an increase of 9 FTE in CMO, HCA and Unit Lead roles. Priorities include, harbour and catchment planning for West Coast Zone and delivery of WWRRS across Waikato Catchment. This is the preferred option and has an increased cost of \$20,018,312 over current baseline.
- Option 2: Is a refined version of option 1, it includes 5 additional FTE in CMO and HCA roles. This option is a scaled back version of Option 1, with reduced resourcing and delayed timing

for delivery of WWRRS. This option has an increased cost of \$15,304,312 over current baseline.

## 4.1 Specific objectives

1. Enhance catchment planning capability regionally, in all Zones
2. Better meet the demands and expectations of local, regional and national planning directives on a priority basis
3. Deliver or increase catchment management activities/works in priority areas
4. Improve our ability to work collaboratively/ partner on enhancement projects, including delivery of the WWRRS, and maximise our investment

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

Objective	Option1	Option 2	Status quo
1. Enhance catchment planning capability regionally, in all Zones	Meets	Meets	Does not meet
2. Better meet the demands and expectations of local, regional and national planning directives on a priority basis	Meets	Meets in part	Does not meet
3. Deliver or increase catchment management activities/works in priority areas	Meets	Meets in part	Does not meet
4. Improve our ability to work collaboratively/ partner on enhancement projects, including delivery of the WWRRS, and maximise our investment	Meets	Meets in part	Does not meet

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue <sup>2</sup>	Capex	Opex	Labour
Status Quo <sup>3</sup>	N/A	N/A	N/A	\$53,800,390	\$20,023,700
Option 1	N/A	N/A	\$205,000	\$13,992,800	\$6,025,512
Option 2	N/A	N/A	\$115,000	\$11,137,800	\$4,166,512

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- Enables delivery of current collaborative enhancement projects
- More likely to meet iwi and stakeholder expectations with regards to future delivery of the WWRRS
- Provides catchment planning resource to all Zones over time
- Catchment plans will identify and direct works/resource to priority areas
- Advanced delivery of catchment management activities in priority areas

<sup>2</sup> Resourcing for status quo already includes co funding revenue (e.g Hill Country Erosion project, WRA).

<sup>3</sup> Status quo includes CNW, CM, catchment oversight and information and advice and harbour and catchment planning related budgets (based on 2017/18 budget extrapolated over 10 years)

- Provide resource and/or funding to collaborate with others on projects and maximise co-funding opportunities
- Increasing operations staff (CMO) means funding is directed at enhancement actions at place, working directly with landowners/managers
- The approach is proven to be successful
- Timing/scheduling reduces reputational risk, enabling catchment based activities

## 5 Financial analysis and procurement (Financial & Commercial Case)

Please refer to Appendix 2 to view full cost/ resource scheduling

Description	Amount	Timing	Funding Source	Comments
Labour	\$6,025,512	2018-28	General and targeted rates	Total labour costs for CMO, Unit lead and HCA roles
Opex/direct costs	\$13,992,800	2018-28	General and targeted rates	Operational costs associated with works delivery
Capex	\$205,000	2018-28	General and targeted rates	3x CMO utility vehicle and 1 LUV
Revenue	Co-funding			Though exact figures not confirmed at present we will seek funding from others (e.g WRA and others) to increase operational outputs.
Contingency				N/A

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital	155	45	n/a	45	n/a	n/a
Operational	1053	1738	1793	2320	2270	varies
Revenue	n/a	n/a	n/a	n/a	n/a	n/a

### 5.1.1 Funding partnerships

We will be seeking joint funding from Waikato River Authority (WRA), central government (e.g Department of Conservation and Ministry of the Environment funds) and others (e.g WCEET, Nga Whenua Rahui) for components of this work.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- Applications for joint funding bids are to be successful
- Current resourcing/budgets are maintained
- Current and anticipated demand remains the same
- Current resources are not enabling council to meet policies and desired direction with regards to reducing soil erosion and contaminants to waterways. The Waipa Catchment Plan (and other catchment plans and zone plans) utilise funding partnerships to provide enhanced incentives in areas identified as highest risk/opportunity for remediation. This will require a greater level of



funding from WRC in order to leverage external funding. It is assumed that external funders/partners will continue to look favourably on WRC projects and that WRA and industry will significantly engage in implementation of catchment plans and incentivising of works.

### 5.1.3 Procurement strategy

Will any procurement activities be required? NO

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

The delivery approach is via current operational structure. The proposal is about enhancing current resources to maximise outputs. This approach (planning and delivery) has proven to be successful. New CMO roles are phased in accordance with expected demand. Given increased roles a unit lead role will be required to oversee CMOs in the Central Waikato and West Coast Zones. It is proposed the HCA role will sit within the catchment management team, reporting to Team leader Tane Desmond.

### 6.1.2 Scope/deliverables

In Scope

- Delivery of catchment prioritisation works and plans as appropriate across zones. This work will be phased in order to meet existing priorities but specifically includes:
  - Scheduled resource to support full zone plan reviews required every 6 years.
  - Additional resource to deliver both the Coromandel and Whitianga HCMP in the timeframe indicated by the Strategic Direction.
  - Regionally based HCA role, with an initial focus of the West Coast Zone, preparing sub catchment plans. It is envisaged by year 3 this resource will be available to assist other zones with catchment planning.
  - Additional planning resource for Waihou Piako Zone to undertake/implement prioritisation and catchment planning.
  - Additional planning resource for Upper Waikato Zone to undertake Zone Plan review
  
- Enhanced delivery of catchment management works and habitat enhancement activities. This is undertaken largely through enhanced BAU, additional CMO resource to implement catchment plans and collaborative projects. This specifically includes:
  - Phased additional CMO resource to Lower Waikato Zone x3, Waihou Piako Zone x1, Waipa (partial) x1, Central Waikato x2 and Unit lead x1 to oversee roles.
  - It includes the direct costs associated with new CMO roles which fund catchment works, this is through increased catchment new works and catchment maintenance budgets.
  - Capital costs for CMO vehicles (utes and LUV).
  - Increased CMA work and services budget in the Coromandel. This is to maintain gains associated with mangrove resource consents, including ongoing seedling maintenance of consented clearance sites at Tairua, Whangamata and Wharekawa (as required) and coastal habitat restoration works.
  - Establish a Coastal Enhancement Work budget for West Coast Zone, this will be specifically to fund enhancement works (e.g. fencing, planting, habitat restoration, pest control etc.) aimed at improving the ecological and/or cultural values in the coastal/harbour environment.

- Funding associated with action planning for the Lake Waikare Whangamarino Wetland CMP.
- Increased direct costs associated with delivery of biodiversity enhancement works on scheme land.

#### Out of Scope

- Programmes of work related to land drainage and flood control schemes
- Capital works
- River management programme (now covered under separate GOA)

### 6.1.3 Key milestones

Milestone	Completion Date
Coromandel and Whitianga HCMP's delivered within timeframes indicated by the Strategic Direction	End 2019
Waikare Whangamarino CMP action planning	End 2020
Sub catchment plans in place for priority sub catchments of Raglan, Aotea and Kawhia Harbours	End 2020
Delivery of current WRA co funded project: Waipa catchment erosion and sediment reduction projects(2017-19)	End 2019
Delivery of current WRA co funded project: Upper Matahuru Catchment Management Programme	End 2020
Delivery of current WRA co funded project: Whirinaki Valley Integrated Management Project	End 2019

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Iwi	As co-management partners they have expectations around support and involvement in delivery of works and catchment planning processes. Council also has a number of joint projects underway with Iwi undertaking planning, research and restoration.	Monitor, Inform, Engage, Partner
WRA	Delivery of the restoration activities related to achieving the vision and strategy for the Waikato River. With the WWRRS nearing adoption there is an expectation that council will align with the WRA to advance the delivery of this work programme. This include leading/implementing and supporting others to undertake this work. The WRA is a significant funding partners to WRC. To date over 2 million dollars has been committed to WRC lead projects – this has accelerated our work programmes and reduced the cost to the Waikato ratepayer This includes the delivery of the Waipa Catchment Plan	Engage, Partner

Stakeholder	Interest	Method of Engagement
	and ~12 other restoration orientated projects.	
Industry	Dairy NZ, Fonterra, Beef and Lamb will be critical partners in gaining farmer support for sub catchment and farm environment plans.	Monitor, Inform, Engage
DOC/Fish & Game	Expectations from DOC and Fish & Game regarding completion of and implementation of the Waikare Whangamarino CMP. Support for catchment planning and management services council provide. Co funders on collaborative projects (e.g Whangape FIF Project).	Monitor, Inform, Engage, Partner
Landowner/community interest groups	Involvement in both catchment planning and delivery of works, be it on their own properties or as part of wider catchment projects.	Inform, Engage
Central Government other (MPI, MfE, DOC)	We often partner with central government on projects or directly apply for funding.	Monitor, Inform, Engage, Partner
QEII and Nga Whenua Rahui	Potential funding providers.	Monitor, Inform, Engage, Partner

### 6.1.5 Business change/organisational impact

#### HCA role:

The inclusion of the HCA role will have regional and cross-organisational impact. It will provide support to zone managers and catchment management staff in prioritising and planning catchment management activities. There is currently a gap in this space across the region, it builds on the successful model adopted in the Coromandel and Waipa Zones. The role will work with current planning roles (Catchment Planner and Coromandel based HCA) and the catchment planning role/resource created through HRWO, to ensure a consistent approach to catchment planning is adopted across the region. It is envisaged this role will report to the Team Leader Catchment Management. In addition this role will provide the delivery mechanism for various SAS and CAS workstreams, both science (soils, water quality, biodiversity, coastal), policy (RPS implementation) and community services (through engagement, collaboration with external parties in preparation of CMP's).

#### CMO roles:

The creation of additional CMO roles will provide relief to staff in areas already at capacity with respect to work load demand from landowners and enable other areas to grow their catchment management capacity. This is the coalface delivery of works for various work streams both in ICM and SAS/CAS as indicated above.

The roles will form part of the current catchment management teams, reporting to Team Leaders for Coromandel Hauraki and West Coast, Central and Lower Waikato Zones.

#### West Coast Central Waikato Unit Lead:

This role is introduced in year 2 to provide oversight for additional CMO roles. It will ensure reporting lines and number of direct reports are well managed, setting up focussed catchment management

teams across the Waikato, Waipa and West Coast catchments. This role will report to Team leader Catchment Management.

Respective team leaders are aware and supportive of the inclusion of additional roles to their teams.

#### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS- Science	M	Science staff expertise required to develop catchment plans and in refining prioritisation	Early communication with staff regarding planning processes
Communications	M	Communications products required to deliver catchment plans and activities (open days, newsletters etc)	Early communication with staff regarding planning processes
Natural heritage /Biosecurity	M	Expertise required in development of catchment plans. Dependant on Biodiversity business case/roles for delivery.	Early communication with staff regarding planning processes
Asset Management	M	Additional catchment staff require support from Asset Management team, in recording and reporting on catchment management activities	Additional Asset Management role signalled to support RMO and CMO's.

#### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS Policy	M	The activity compliments/delivers HRWO Delivers RPS policies and methods	Positive impact
Biodiversity/Natural Heritage	H	This activity will significantly assist in delivery of priority biodiversity protection and enhancement across the region.	Positive impact

#### 6.1.6 Ongoing operational management

This proposal builds on roles and teams in the current ICM operating structure, supporting and expanding BAU. As indicated above, in terms of management, roles can be accommodated within current teams with addition of the West Coast Central Waikato Unit lead role. It is likely these new roles will be filled through external recruitment process. Contracted service and additional budgets proposed can be managed through existing roles and process/reporting lines.

The roles themselves will require support from other sections of council. This includes:

- Asset/data management support (Conquest reporting, data capture) provided for in request for additional role to support River Management Officers and CMO's covered in the river management business case.
- Communications team support- particularly for the HCA role in supporting catchment planning outputs
- GIS support- both HCA and CMO roles require support in terms of data capture, mapping etc
- Science support- preparation of CMP's requires provision of science information (soils, water quality, coastal, biodiversity, biosecurity info and advice)
- Physical support/hardware- roles will require access to 4WD vehicles, desk/office space, computers, phone etc

### 6.1.7 Assumptions, constraints and dependencies

- Current vehicle use and allocation remains the same
- Sufficient office space is available for new permanent staff
- This proposal is envisaged to deliver on current known project commitments and expected rate of increase required to deliver future WWRRA co funded projects
- Dependant on staff in other directorates/areas continuing to support and placing high value on this programme of works
- There is risk that the current structure may not be able to fully accommodate the growing catchment planning resource and that it may be prudent in time to investigate options to create a dedicated catchment planning team.

### 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
Unable to fill roles due to shortage in people with required skillset	2	2	As a back stop utilise contracted service until we can fill roles Approach University of Waikato (perhaps other training providers) to include training for catchment management and planning in courses to encourage career pathways into this area
Space to accommodate new roles in Hamilton and current Paeroa office	3	4	Options in place to relocate Hamilton and Paeroa staff
Current unknowns wrt Waikato River Restoration Strategy requirements	2	2	There remains uncertainty around expectations for rate of change and the role council is to fulfil
Catchment Planning team may benefit from dedicated leadership	2	2	It may be beneficial to investigate how the wider catchment planning resource, including proposed and current roles work together

## Appendices

### 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

#### 1.1 Status quo

##### 1.1.1 Option overview

- The previous LTP funding enabled prioritisation work across the region to form basis for directing future funding to maximise benefits
- Implementation of works in priority catchments (e.g. Waipa, Coromandel)
- Catchment planning occurring in some zones, in varying degrees but not all zones
- The demand for catchment management services exceeds ability to deliver across zones

##### 1.1.2 Pro's and Con's

*Describe the pro's and con's associated with the current state*

Pro's	Con's
<ul style="list-style-type: none"> <li>• A good foundation has been built in terms of catchment prioritisation through to implementation</li> <li>• Current programme has set foundation to build on and implement in other areas/zones</li> <li>• Proven and tested approach</li> </ul>	<ul style="list-style-type: none"> <li>• Unable to resource catchment planning across Zones (identified deliverable of Zone Plans)</li> <li>• Unable to keep up with demand from landowners</li> <li>• Unable to meet or maximise co-funding opportunities</li> </ul>

##### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Priority catchments identified and planning undertaken (HCMP, SCP)	Coromandel and Waipa can continue their catchment planning programmes but will not be implemented in other zones.	Waipa Plan 6 HCMP in Coromandel
Catchment new works	Likely catchment new works outputs would continue at a reduced rate than present due to increased costs to implement works.	Reduced output than present
Catchment maintenance works- % of sampled scheme works maintained in effective condition	Current catchment maintenance programmes likely to be met	87.8% currently, likely to remain static
Number of collaborative enhancement projects undertaken	Under the status quo we can implement our current co-funded project commitments but limited ability to increase that commitment	Lost opportunity over time to partner with others in fast tracking restoration initiatives

Qualitative benefits	Description
Iwi and community are engaged with their waterways	We are working towards engaging local communities and iwi in planning in some areas (Coromandel/Waipā). Some resource available to encourage community/iwi participation in coastal, stream, wetland and riparian enhancement projects but this is limited due to lack of resource in some areas (e.g Lower Waikato Zone).
Required remediation is affordable for landowners in highest risk areas	There is a high level of uptake in catchment management services in priority areas.

Disadvantages/Dis-benefits	Description of the potential impact
Focus on priority areas may mean difficult decisions need to be made with regards to discontinue/ not fund new works in other areas	Reduced buy in from community, iwi, stakeholders in unfunded areas.

#### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy environment	The catchment management activities are the delivery mechanism of much of councils work. Promoting sustainable land use, improving water quality, enhancing ecosystems and the services they provide, improving soil quality and enhancing biodiversity values. This will continue under the status quo but to a limited extent and unlikely to meet iwi, community and stakeholder expectations.
Vibrant communities	Catchment planning and management activities provide opportunity for communities to have a say and contribute to improving environmental health. This will continue in Coromandel/Waipā but will not extend to other areas.

#### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
			\$53,800,390	\$20,023,700

#### 1.1.6 Assumptions, constraints and dependencies

- Assumptions: That HRWO will provide an effective regulatory approach to sustainable land management and that not all improvements to water quality, biodiversity, land and soils are expected to be achieved through catchment management plans
- Assumption: Current resourcing continues as a baseline
- Assumption: Current budget as detailed above is sum of CNW, CM and harbour and catchment planning, catchment oversight and information and advice budgets across all Zones as relevant.

### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Reputational- not meeting expectations of stakeholders, iwi, landowners	4	3	Under the current regime we will not be able to meet expectations of our partners in delivering catchment works or large scale joint projects.
Failure to meet/align with Strategic Direction, RPS , existing catchment and zone plans requirements	3	3	These documents all signal working in a considered, integrated manner, our current resourcing does not fully enable this.
Regulatory approach- uncertainly about timing, how HRWO will look post appeals	4	3	Though there maybe changes to the regulatory approach, non-regulatory methods such as SCP and direct catchment works with landowners are likely to remain.
Work pressure on existing staff	3	2	Staff in some areas are already under pressure with demands of the role, without clear prioritisation it makes it difficult to explain to landowners/managers reasons why/why we cannot support their works.

## 1.2 Option 1

### 1.2.1 Option overview

Option 1 is the preferred option. It provides the necessary resources to meet our immediate commitments in terms of collaborative enhancement projects (particularly in the Waikato Catchment) whilst enabling us to build the catchment planning and management team over time and in a manner likely to meet future expectations.

It builds on the gains made through the previous business case in which high level catchment prioritisation was a key deliverable. We are now in a position to use that information, alongside local knowledge and drivers to prepare and deliver catchment plans. This increased resourcing will enable catchment planning to be delivered across all Zones over time. Increased catchment management staff and related budgets will enable those plans to be implemented in collaboration with landowners, other agencies and iwi.

The proposed creation of the coastal enhancement work budget for West Coast mirrors that in place in Coromandel, specifically aimed at enhancement of areas of ecological and cultural significance in the coastal environment. An increase in the Coromandel CMA works and services budget to maintain gains made through mangrove consents (i.e. seedling removal and coastal enhancement projects) and to implement HCMP.



### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Provides catchment planning resource to all Zones over time</li> <li>• Catchment plans will identify and direct works/resource to priority areas</li> <li>• Increasing operational resource (CMO and associated delivery budgets) at a rate likely to meet/keep pace with expectations of iwi, other agencies and landowners in the Waikato catchment</li> <li>• Provides additional resources to key budgets for use in collaborative enhancements works.</li> <li>• Maximises our ability to leverage co-funding opportunities</li> <li>• Overall approach is proven and successful.</li> </ul>	<ul style="list-style-type: none"> <li>• There are still some unknowns with respects to ability to secure external funding for some projects</li> <li>• Additional roles may place pressure on reporting lines and physical location availability (office space)</li> <li>• Costs may not be acceptable</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Priority catchments identified and planning undertaken (HCMP, SCP)	Prioritisation and planning will occur in all zones over time	West Coast prioritisation and SCP underway Waihou Piako Prioritisation underway Completion of Waikare Whangamarino CMP Completion of all Coromandel Zone HCMP
Catchment new works	Catchment new works outputs will increase in line with demand in priority areas	Increased outputs over LTP period in all Zones
Catchment maintenance works- % of sampled scheme works maintained in effective condition	Current catchment maintenance programmes likely to be met	87.8% currently, likely to remain static
Number of collaborative enhancement projects undertaken	This option will enable significant resource to be attributed to collaborative projects- maximising enhancement outputs and/or fast-tracking delivery of works	Enables us to better meet expectations and value add to projects

<b>Qualitative benefits</b>	<b>Description</b>
Iwi and community are engaged with their waterways	We are better placed to engage local communities and iwi in planning in all zones. Greater resource available to encourage/support community/iwi participation in coastal, stream, wetland and riparian enhancement projects. Informed and educated regarding water quality issues and are active in catchment enhancement initiatives
Reputation/commitment to working in Partnership/collaboration	We are walking the talk, committed to delivering our strategic direction, in particular maximising opportunities to work collaboratively and co-fund projects. Resourcing is more likely to meet expectations of iwi and stakeholders.
Affordability	Required remediation is affordable, particularly for landowners in the highest risk areas

<b>Disadvantages/Dis-benefits</b>	<b>Description of the potential impact</b>
Prioritised approach may not meet expectations of all	With resource/efforts aimed at priority areas, landowners, groups, agencies outside of these areas may not be satisfied
Costs	Increased costs required to meet existing commitments and likely future obligations may not be palatable

#### 1.2.4 Delivery of Long Term Outcomes

<b>Long Term Outcome</b>	<b>How will this option improve delivery of this outcome?</b>
Healthy environment	<p>The catchment management activities are the delivery mechanism of much of councils work. Promoting sustainable land use, improving water quality, enhancing ecosystems and the services they provide, improving soil quality and enhancing biodiversity values.</p> <p>This proposal increases ability to implement catchment management activities. It also enhances our catchment planning leading to better collation and reporting on activities. Enabling us to better demonstrate how these works lead to a healthier environment.</p>
Vibrant communities	<p>Catchment planning and management activities provide opportunity for communities to have a say and contribute to improving environmental health.</p> <p>Through this proposal catchment planning will provide direct community involvement in plan preparation in many areas. This enables communities to understand issues at place and develop remediation priorities collectively.</p> <p>Increased CMO means more staff on the ground interacting and supporting landowners, community groups and iwi.</p>

#### 1.2.5 High level financial overview

<b>Benefits (\$'s)</b>	<b>Revenue</b>	<b>Capex</b>	<b>Opex/Direct Costs</b>	<b>Labour</b>
		\$205,000	\$13,992,800	\$6,025,512

Please refer to Appendix 2 for full scheduling and breakdown of costs.

## 1.2.6 Assumptions, constraints and dependencies

- Current resourcing remains in place i.e. this case is additional and builds on current resource levels
- Where indicated roles are dependent on co-funding arrangements with others (Waipa)
- HRWO business case is adopted and implemented, so environmental bottom lines are established with catchment services building on that baseline
- Support from Technical Services, Integrated Catchment Services and other directorates are required. New CMO roles require support from Asset Management and Unit lead roles (2 new FTE proposed). Other Directorate staff support catchment prioritisation and planning (soils, water, coastal, GIS, communications etc).

## 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Council may not give effect to RPS policies 8.3, 8.4, 4.1, 4.3, 14.1, 11.3 within specified timeframes.	4	3	We must lead by example-If we cannot demonstrate progress with RPS requirements, how can we expect others to give effect to the RPS.
If not adopted we may reduce our ability to complete and/or extend timeframes to deliver strategic direction priorities.	3	3	Catchment management activities are the delivery mechanism for numerous strategic direction priorities.
Uncertainty with regards to WWRRS project funding	3	3	At this time we can only forecast potential resourcing for collaborative projects there remains uncertainty around what projects might gain funding.
Loss of reputation and stakeholder/partner and iwi goodwill. Stakeholders and iwi expect this work will be undertaken, and are co-funding projects.	4	3	Scheduling of delivery (roles and resource) anticipates required pace at which collaborative enhancement projects might occur.
Provisions of HRWO plan change are changed or delayed and hence complementary catchment planning and management activities (FEP and SCP) are not undertaken as currently outlined.	4	3	Catchment works and planning will carry on regardless, however at reduced rate in Waikato catchment if HRWO (SCP) implementation funding does not occur.

## 1.3 Option 2

### 1.3.1 Option overview

Option 2 contains the core requirements across zones presented in Option 1, with less resource attributed in the short- medium term delivery of the WWRRS. This is a conservative option which may not deliver on iwi, stakeholder and community expectations.

### 1.3.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Provides catchment planning resource to all Zones over time</li> <li>• Catchment plans will identify and direct works/resource to priority areas</li> <li>• Enable catchment management activities to keep pace with demand in some priority areas</li> <li>• Provide some resource and/or funding to collaborate with other on projects and participate/lead in co-funding opportunities</li> <li>• Increasing operations staff (CMO) means funding is directed at enhancement actions at place, working directly with landowners/managers</li> <li>• Approach is successful.</li> </ul>	<ul style="list-style-type: none"> <li>• Phasing of catchment management resource may mean delays for some Zones</li> <li>• For the Waikato Catchment the level of resourcing may not meet expectations in respects to funding of projects outlined in the Waikato River Restoration Strategy</li> <li>• Zones may not be able to meet levels of service indicated in zone plans due to delays to implementing catchment planning and management activities</li> <li>• Phased resourcing may place pressure on current staff</li> <li>• Loss of opportunity in terms of collaborating with others or ability to add value through co-funding projects.</li> </ul>

### 1.3.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Priority catchments identified and planning undertaken (HCMP, SCP)	Prioritisation and planning will occur in all zones over time	West Coast SCP underway Waihou Piako Prioritisation underway Completion of Waikare Whangamarino CMP
Catchment new works	Likely catchment new works outputs will increase in line with demand in priority areas	Increased outputs over LTP period in all Zones
Catchment maintenance works- % of sampled scheme works maintained in effective condition	Current catchment maintenance programmes likely to be met	87.8% currently, likely to remain static
Number of collaborative enhancement projects undertaken	This option will enable some resource to be attributed to collaborative projects- increasing enhancement outputs and/or fast-tracking delivery of works	Enables us to add value to certain projects/areas

Qualitative benefits	Description
Iwi and community are engaged with their waterways	We are better placed to engage local communities and iwi in planning in all zones. Greater resource available to support community/iwi participation in coastal, stream, wetland and riparian enhancement projects. Informed and educated regarding water quality issues and are active in catchment enhancement initiatives
Reputation/commitment to working in Partnership/collaboration	We are walking the talk, committed to delivering our strategic direction, in particular enhancing opportunities to work collaboratively and co-fund projects. Resourcing is more likely to meet expectations of iwi and stakeholders.
Affordability	Required remediation is affordable, particularly for landowners in the highest risk areas

Disadvantages/Dis-benefits	Description of the potential impact
Prioritised approach may not meet expectations of all	With resource/efforts aimed at priority areas, landowners, groups, agencies outside of these areas may not be satisfied

### 1.3.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy environment	The catchment management activities are the delivery mechanism of much of councils work. Promoting sustainable land use, improving water quality, enhancing ecosystems and the services they provide, improving soil quality and enhancing biodiversity values. This proposal increases ability to implement catchment management activities. It also enhances our catchment planning leading to better collation and reporting on activities. Enabling us to better demonstrate how these works lead to a healthier environment.
Vibrant communities	Catchment planning and management activities provide opportunity for communities to participate and contribute to improving environmental health. Through this proposal catchment planning will provide direct community involvement in plan preparation in many areas. This enables communities to understand issues at place and develop remediation priorities collectively. Increased CMO means more staff on the ground interacting and supporting landowners, community groups and iwi.

### 1.3.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex/Direct Costs	Labour
		\$115,000	\$11,137,800	\$4,166,512

### 1.3.6 Assumptions, constraints and dependencies

- Current resourcing remains in place i.e. this case is additional and builds of current resource levels
- Where indicated roles are dependent on co-funding arrangements with others (Waipa)

- HRWO business case is adopted and implemented
- Support from Technical Services, Integrated Catchment Services and other directorates are required. New CMO roles require support from Asset Management (new FTE proposed). Other Directorate staff support catchment prioritisation and planning (soils, water, coastal, GIS, communications etc).

### 1.3.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Council may not give effect to RPS policies 8.3, 8.4, 4.1, 4.3, 14.1, 11.3 within specified timeframes.	4	3	We must lead by example-If we cannot demonstrate progress with RPS requirements, how can we expect others to give effect to the RPS.
Council may not meet strategic direction regarding completion of Coromandel and Whitianga HCMP	2	3	Without additional funding we cannot deliver both plans as per strategic direction.
May reduce ability to complete, and extend timeframes to deliver strategic direction priorities.	3	3	Catchment management activities are the delivery mechanism for numerous strategic direction priorities.
Loss of reputation and stakeholder/partner and iwi goodwill. Stakeholders and iwi expect this work will be undertaken, and are co-funding projects.	4	3	Scheduling of delivery in the Waikato Catchment may not meet iwi and stakeholder expectations under this option.
There is risk partners and other groups we work with consider the pace of works are too slow.	3	3	We will be clear in our messaging around need to balance delivery with affordability.
Provisions of HRWO plan change are changed or delayed and hence complimentary catchment planning and management activities (FEP and SCP) are not undertaken as currently outlined.	4	3	Catchment works and planning will carry on regardless, however at reduced rate in Waikato catchment if HRWO implementation funding does not occur.

## Appendix 2

Financial tables from document 11099117

### Option 1

Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Coromandel	Complete HCMP	Complete the final 2 HCMP (Mercury Bay/Whitianga and Manaia Coromandel) as per strategic direction. Contracted service.	c1013	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000
	Increase CMA works and Services budget	Increase budget to maintain mangrove seedling removal and restoration sites.	c1010	\$45,000	\$45,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$570,000
	Zone Plan	Zone Plan review	r2010			\$50,000								\$50,000
Waihou Piako	Kick start catchment planning	Introduce funding to support preparation of CMP		\$0	\$80,000	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160,000
	CMO	Role		\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$730,000
	CNW	Catchment new works associated with role		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,000,000
	CM	Catchment maintenance associated with role		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$100,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
	Capex	Utility vehicle for CMO		\$45,000										\$45,000
Waipa	CMO	Partially funded CMO role			\$29,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$462,512
	Zone Plan	Zone Plan review							\$50,000					\$50,000
West Coast	Create CMA works and service budget	Create budget to assist funding of coastal enhancement works, as per Coromandel Zone budget.		\$35,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$485,000
	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$500,000
	Zone Plan	Zone Plan review					\$50,000						\$50,000	\$100,000
Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total

Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Upper Waikato/Taupo	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities		\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$560,000
	Zone Plan review	Funding to assist Zone Plan review	catch oversight			\$50,000							\$50,000	\$100,000
Central Waikato	CMO	CMO roles scheduled yrs 2 and 4			\$73,000	\$73,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$1,168,000
	CNW	Catchment new works associated with role		50000	\$110,000	\$110,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$2,370,000
	CM	Catchment maintenance associated with role			\$10,000	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$160,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
	Capex	CMO Utility vehicle			\$45,000									\$45,000
Lower Waikato	CMO	CMO roles scheduled yrs 1,2 and 4		\$73,000	\$146,000	\$146,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$219,000	\$1,898,000
	CNW	Catchment new works associated with role		\$149,000	\$298,000	\$298,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$447,000	\$3,874,000
	CM	Catchment maintenance associated with role		\$12,000	\$24,000	\$24,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$312,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
	Capex	CMO Utility vehicle		\$70,000			\$45,000							\$115,000
	CNW	New Projects budget												
	Waikare Whangamarino CMP	Implementation and planning of Waikare Whangamarino CMP	r1410	\$50,000	\$50,000	200,000	200,000	200,000						\$700,000
	Collaborating with others	Funding to meet existing (e.g WRA) and some future collaborative project commitments led by other parties		\$175,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000
Biodiversity of scheme land	Direct costs	On ground works to implement the On Scheme Land Biodiversity programme of works - Note some offset in labour costs reduction.	V1605	\$22,980	\$22,980	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$351,800
Catchment Management Team (Tane)	Harbour and Catchment Advisor (HCA) contracted service	Additional catchment planning resource. Initial focus on West Coast Zone.		\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$930,000



Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Catchment Management Team (Tane)	West Coast - Central Unit Lead	Oversee CMO unit			\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$837,000
	Asset Management Officer	Resource in AM team to support increased catchment management outputs												
Total by Year				\$1,208,980	\$1,783,148	\$1,943,398	\$2,365,398	\$2,270,398	\$2,270,398	\$2,070,398	\$2,070,398	\$2,070,398	\$2,170,398	\$20,223,312

## Option 2

Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Coromandel	Complete HCMP	Complete the final 2 HCMP (Mercury Bay/Whitianga and Manaia Coromandel) as per strategic direction. Contracted service.	c1013	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000
	Increase CMA works and Services budget	Increase budget to maintain mangrove seedling removal and restoration sites.	c1010	\$45,000	\$45,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$570,000
	Zone Plan	Zone Plan review	r2010			\$50,000								\$50,000
Waihou Piako	Kick start catchment planning	Introduce funding to support preparation of CMP		\$0	\$80,000	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160,000
	CMO	Role		\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$730,000
	CNW	Catchment new works associated with role		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,000,000
	CM	Catchment maintenance associated with role		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$100,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
	Capex	Utility vehicle for CMO		\$45,000										\$45,000
Waipa	CMO	Partially funded CMO role			\$29,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$54,168	\$462,512
	Zone Plan	Zone Plan review							\$50,000					\$50,000
West Coast	Create CMA works and service budget	Create budget to assist funding of coastal enhancement works, as per Coromandel Zone budget.		\$35,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$485,000
	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$500,000
	Zone Plan	Zone Plan review					\$50,000						\$50,000	\$100,000

Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Upper Waikato/Taupo	Increase CNW budget	Increase catchment new works budget to meet demand and deliver treaty settlement priorities		\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$560,000
	Zone Plan review	Funding to assist Zone Plan review	catch oversight			\$50,000								\$50,000
Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
Central Waikato	CMO	Role			\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$73,000	\$657,000
	CNW	Catchment new works associated with role			\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$990,000
	CM	Catchment maintenance associated with role			\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$90,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
Lower Waikato	CMO	CMO roles scheduled yr 1 and yr 2		\$73,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$1,387,000
	CNW	Catchment new works associated with role		\$137,000	\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$2,603,000
	CM	Catchment maintenance associated with role		\$12,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$228,000
	Zone Plan	Zone Plan review							\$50,000					\$50,000
	Capex	CMO Utility vehicle		\$70,000										\$70,000
	Waikare Whangamarino CMP	Implementation and planning of Waikare Whangamarino CMP	r1410	\$50,000	\$50,000	\$200,000	\$200,000	\$200,000						\$700,000
	Collaborating with others	Funding to meet existing (e.g WRA) and some future collaborative project commitments led by other parties		\$175,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$2,200,000
Biodiversity of scheme land	Direct costs	On ground works to implement the On Scheme Land Biodiversity programme of works - Note some	V1605	\$22,980	\$22,980	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$38,230	\$351,800

Area/Zone	Role/task	Description	Budget code	Yr1 2018/19	Yr2 19/20	Yr3 20/21	Yr4 21/22	Yr5 22/23	Yr6 23/24	Yr7 24/25	Yr8 25/26	Yr9 26/27	Yr10 27/28	Total
		offset in labour costs reduction.												
Catchment Management Team (Tane)	Harbour and Catchment Advisor (HCA) contracted service	Additional catchment planning resource. Initial focus on West Coast Zone.		\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$93,000	\$930,000
	Asset Management Officer	Resource in AM team to support increased catchment management outputs												
Total by Year				\$1,146,980	\$1,621,148	\$1,826,398	\$1,696,398	\$1,646,398	\$1,646,398	\$1,446,398	\$1,446,398	\$1,466,398	\$1,496,398	\$15,419,312

## Appendix 3

CAS	Community and Services Directorate
CEO	Chief Executive Officer
CMA	Coastal Marine Area
CMO	Catchment Management Officer
CMP	Catchment Management Plan
CNW	Catchment New Works
DOC	Department of Conservation
FEP	Farm Environment Plan
FIF	Freshwater Improvement Fund
FTE	Full Time Equivalent
GOA	Group of Activities
HCA	Harbour and Catchment Advisor
HCMP	Harbour and catchment management plan
HRWO	Healthy Rivers Wai Ora
ICM	Integrated Catchment Management
KPI	Key Performance Indicator
LUV	Light Utility Vehicle
LTP	Long Term Plan
MfE	Ministry of the Environment
MPI	Ministry of Primary Industries
RMO	River Management Officer
RPS	Regional Policy Statement
SAS	Science and Strategy Directorate
SCP	Sub Catchment Plan
WCEET	Waikato Catchment Ecological Enhancement Trust
WRA	Waikato River Authority
WWRRS	Waikato Waipa River Restoration Strategy

# Fish Passage Research and Development Programme and Implementation Plan

<b>GOA:</b>	Flood Protection and Control Works
<b>Activity Name:</b>	Flood Protection
<b>Function</b>	Asset Management
<b>Service</b>	Identify requirements to ensure all assets are fit for purpose by carrying out condition and performance assessments
<b>Financial Budget Code:</b>	R9008

## 1.1 Review and approval

Prepared By:	Greg Ryan/Acting Manager, Business and Technical Services	18/10/2017
Reviewed By:	Peter Roberts/Senior Environmental Officer	20/10/2017
Signed off By:	Clare Crickett, Director Integrated Catchment Management	31/10/2017

## 1.2 Related documents

Document Title	Author	Document Reference
Native Fish Migration through Land Drainage and Flood Control Infrastructure	Richard Duirs	8873597
Regional Infrastructure Fish Passage Strategy Executive summary	Michael Lindgreen 4Sight	11144452
Detailed work programme breakdown (spreadsheet)	Michael Lindgreen 4Sight	11100242 & 11104642

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
0.1	17/10/2017	Greg Ryan	First draft
0.2	24/10/2017	Greg Ryan	Post review by Peter Roberts and Michael Lindgreen
1.0	06/11/2017	Greg Ryan	Penultimate version, reviewed by Clare Crickett
1.1	10/11/2017	Tariq Ashraf	Final version

## 2 Executive summary

The Waikato Regional Council owns and maintains a range of flood protection and land drainage infrastructure, which include pump stations, flood gates and flood defences (e.g. stopbanks). At the time these assets were commissioned, limited consideration was given to the potential impacts on

native aquatic ecology. Many of New Zealand's native fish are migratory, requiring hydraulic connection to the ocean to complete their lifecycle. Consequently, the installation of some assets has resulted in direct impacts on both upstream and downstream fish migration and in some cases fish mortality.

This proposal acknowledges the need for Council to improve fish passage through many existing assets, but also identifies several impediments to the effective and efficient incorporation of this work into the existing asset renewal programme (e.g. the need for investment prioritisation, along with the use of approaches that are backed by New Zealand evidence).

To overcome these impediments, this proposal involves the development of an Infrastructure Fish Passage research and development programme to provide the foundation for future investment of this nature, along with the trialling of approaches to resolve fish passage (as part of already schedule asset renewals) to test effectiveness in the New Zealand environment.

The costs associated with this proposal involve:

- New operational expenditure to procure specialist technical support for this proposal.
- New capital expenditure for the trialling of approaches (over and above what is provided for by the existing renewals programme).

Given the broad and region-wide benefits of this proposal, it is proposed that the above be funded using the General Rate.

The success of this proposal will be measured during the development of the next Long Term Plan, given that the outcome will be information that is sufficient to inform and guide the inclusion of fish passage remediation into the asset renewals programme.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	\$323	\$140	\$80			
<b>Operational</b>	\$718	\$119	\$75			

#### 2.1.1.1 Funding source

The work included in this proposal will be funded primarily through the Investment Fund (noting the broader region-wide benefits that will be derived), but will also leverage funding from the existing capital renewals programme (where the testing of new approaches is incorporated into the renewal of an assets), as well as funded from other interested parties in the community (see below).

#### 2.1.1.2 Funding partnerships

Potential funding partners include the Waikato River Authority, Ministry for the Environment, Department of Conservation, community groups and organisations, and private organisations – including Iwi partners. A specific work stream of this proposal is tasked with identifying these funding opportunities. Once identified and qualified specific funding proposals will be developed, corporate support service implications

Consideration	Yes/No	Discussed with Activity Lead?
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Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No	John Crane - No
Does the work include the procurement, or capture, of new data sets?	Yes	Gill Lawrence - No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes	Gill Lawrence - No
Does the work require analysis or modelling of spatial data?	No	Gill Lawrence – N/A
Does the work require the establishment of new depots or offices?	No	Trevor Martin – N/A
Does the work require the use of additional fleet vehicles?	No	Trevor Martin – N/A
Does the work require additional resources (FTE or contract)?	No	N/A

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

#### 3.1.1 Background

The Waikato Regional Council (WRC) Integrated Catchment Management (ICM) Directorate is responsible for the provision and maintenance of the major flood control and land drainage schemes throughout the Waikato Region. The schemes include stopbanks, pump stations, floodgates and detention dams that aim to reduce flood risks and manage both groundwater and surface water hydrology within the developed catchments to maintain ground conditions.

At the time these schemes were developed, limited consideration was given to the potential impacts on native aquatic ecology. Many of New Zealand’s native fish are migratory, requiring hydraulic connection to the ocean to complete their lifecycle. Consequently, the installation of scheme assets has resulted in direct impacts on both upstream and downstream fish migration and in some cases fish mortality. While these impacts have been occurring for a number of decades, and to date have been largely overlooked in favour of flood management practices to facilitate farming and protect upstream property, ICM has recognised the need for the more sustainable use and management of scheme assets. This approach acknowledges and enables Council’s current policy direction, the applicable legislative requirements and the increasing public and stakeholder awareness and expectations regarding conservation of native fish species.

To date, an initial investigation has been completed to better understand the nature of the problem, including the publication of the report “*Native Fish Migration through Land Drainage and Flood Control Infrastructure*” (Duir, 2017). This investigation/report, which was supported and endorsed by the River Managers Special Interest Group (acknowledging that the issue is not restricted to the Waikato Region) confirmed the issue and the need to improve the management of flood protection and land drainage infrastructure to achieve the legislative requirements and better, more sustainable outcomes for aquatic ecology. The legislative requirements arise principally from the RMA and its subsidiary regional planning documents but also from the Freshwater Fisheries Regulations 1983. There is a need to mitigate the risk of breaching these requirements that the current approach poses.

The Duirs report also noted that the continued operation of land drainage/flood protection activities which present a potential for direct mortality of native fish or impediment to fish passage where it would otherwise exist would not be consistent with the overarching vision and relevant provisions of the Waikato-Tainui Raupatu (Waikato River) Settlement Claims Act 2010, Waikato Tainui Environmental Plan and Hauraki Iwi Environmental Plan. Couple the above with increased societal expectations for more sustainable and responsible management of natural resources and systems,

the drivers for this project are multiple and heavily weighted towards the need to respond to the issue and effect change in the current approach to management of this infrastructure.

### 3.1.2 Purpose

The purpose of this proposal is to develop a Council, stakeholder and community endorsed implementation plan that will ultimately guide Council's future investment to address fish passage issues associated with flood protection and land drainage infrastructure (including incorporation of the necessary investment into the 2021-2031 Long-term Plan). The development of the implementation plan will also include information gathering and the trialling of various approaches to improving fish passage (as part of already scheduled asset renewal projects). The inclusion of these validation trials acknowledges that there is currently limited information available to demonstrate the effectiveness and suitability of these approaches in the New Zealand environment.

### 3.1.3 Scope and programme

The programme of work associated with this proposal will occur over years 1 to 3 of this Long Term Plan, and will involve the following work streams:

- a. Gap analysis of available information, including asset and condition information, catchment features and ecological information (to identify information gaps that are required in order to inform the implementation plan itself so as to be able to develop appropriate solutions to inform the capital renewal programme);
- b. Development of a methodology to prioritise catchments associated with assets for potential fish passage improvements;
- c. Development of an implementation plan for the Region to enable prioritised investment in fish passage improvements where appropriate;
- d. Engagement with internal and external stakeholders;
- e. The identification of monitoring/research requirements and the undertaking of field trials to inform:
  - Identified knowledge gaps;
  - The effectiveness of existing fish passage measures and methods; and
  - Trials and pilot projects of new technology.
- f. The implementation of the draft methodology on trial catchments (where assets are already scheduled for renewal);
- g. Review and refinement of the implementation plan based on outcomes from the above trials;
- h. Implementation of the plan in the 4-10 year capital renewals programme for the next Long Term Plan, including utilisation of the "toolbox" of available and promising options together with innovative thinking to identify best practical options for fish passage mitigation solutions in prioritised catchments. This will enable a prioritised 4-10 year investment programme (priorities, activities and costs), based on best available options, for the management of fish passage issues associated with drainage schemes;
- i. Inform future LTP cycles with respect to Council's fish passage requirements for drainage schemes in order to –
  - Describe the council's activities and the outcomes it aims to achieve;
  - Provide integrated decision-making and coordination of the resources, as set out in section 93 (6)(c) of the Act;
  - Provide a long-term focus;
  - Show accountability to the community and regulatory authorities;
  - Provide an opportunity for participation by the public in council decision-making processes.
- j. Adaptive management approach, where new knowledge and changing technologies can inform both the prioritisation and implementation approach.



## 3.2 What will success look like (high level benefits)

The successful outcome from this proposal will be reduced fish mortality at pump stations and improved downstream large migratory fish (eel) passage. The research and development programme and implementation plan will:

- Provide a robust basis for Council’s future investment to address fish passage issues associated with existing flood protection and land drainage infrastructure.
- Have the support of Council’s stakeholders and partners.
- Use approaches and technology that have been shown to be effective in the New Zealand environment.

## 3.3 Consequences of not proceeding

If this proposal does not proceed, fish mortality at pump stations and impeded downstream migration of native fish (in particular eel) and the consequent legislative non-compliance risks faced will continue at their present level. This issue and risk will still need to be addressed by Council in order to meet the legislative requirements and societal expectations around the reduction of harm to native fish species and the sustainable management of natural resources. However, there will be an increased risk of this work being unsuccessful given that:

- There will not be an agreed and consistent basis for the investment required, and in particular the prioritisation of assets that need to be addressed and the identification of the most effective approach for remediating the asset.
- The investment made by Council may be higher and not achieve the improvements expected, due to the use of approaches that are ineffective in the New Zealand environment.
- The piecemeal approach taken may not be supported by Council’s stakeholders and partners, restricting the potential projects to be leveraged and optimised through partnerships.

This would be more likely to result in legislative non-compliance and consequent reputational and other indirect financial and non-financial costs.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state.	This proposal will improve the efficiency and effectiveness of Council investment to improve the environmental outcomes that are provided for by flood protection and land drainage infrastructure.
Economic growth ensures natural capital and ecosystem services are maintained.	This proposal will ensure that the demand placed on flood protection and land drainage infrastructure by economic growth is managed in a way that takes into account and delivers more sustainable environmental outcomes.
New investment is attracted to the region through improved reputation and partnerships.	This proposal will require Council to lead New Zealand in the development, testing and implementation of solutions to improve the environmental performance of flood protection and land drainage infrastructure. This will require innovation from existing suppliers and may also encourage new areas of investment (e.g. the design and supply of “fish friendly” pumps).

<b>Long Term Outcome</b>	<b>How will this change improve delivery?</b>
Communities are empowered and supported to take action on agreed outcomes.	Fundamental to this proposal is engaging with stakeholders and partners, including those at a community level who have the means and a desire to become more engaged in improving the environmental outcomes provided for by flood protection and land drainage infrastructure.

<b>Strategic Direction / Corporate Plan Priorities</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Support communities to take action on agreed outcomes		
Communities are more empowered and supported to achieve their aims by us providing information, skills, funding or materials or by working in partnership with a community group.	Strong	Fundamental to this proposal is engaging with stakeholders and partners, including those at a community level who have the means and a desire to become more engaged in improving the environmental outcomes provided for by flood protection and land drainage infrastructure.
Increased focus on community engagement and partnerships, understanding communities and their needs, now and into the future.	Strong	Fundamental to this proposal is engaging with stakeholders and partners, including those at a community level who have the means and a desire to become more engaged in improving the environmental outcomes provided for by flood protection and land drainage infrastructure.
Forge and strengthen partnerships to achieve positive outcomes for the region		
Existing partnerships are strengthened and new partnerships are forged with iwi Maori, community and business organisations to achieve a step change for our environment, economy and communities.	Strong	This proposal will require Council to lead New Zealand in the development, testing and implementation of solutions to improve the environmental performance of flood protection and land drainage infrastructure. This will require innovation from existing suppliers and may also encourage new areas of investment (e.g. the design and supply of “fish friendly” pumps).

<b>Legislation</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Resource Management Act	Strong	In many cases, the activities associated with flood protection and land drainage infrastructure is within the scope of this act (as well as the Regional Policy Statement and Regional Plan). This proposal will help Council to meet these requirements in an efficient and effective manner.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Level of service agreements in relation to flood protection and land drainage infrastructure	Strong	This proposal will improve the sustainability of the services provided by flood protection and land drainage infrastructure, by providing a basis for investment that provides for flood protection/land drainage and environmental outcomes.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The following options are included:

- Status quo: Council currently undertakes the renewal of assets based on condition or performance needs. The incorporation of asset components to address fish passage issues is ad-hoc, and where it does occur can be experimental
- Option 1: This option involves the development of a Waikato Regional Council Infrastructure Fish Passage Research and Development Programme and Implementation Plan, as detailed further in this business case (including further work to understand the options available to improve fish passage, additional capital funding to expand to scope of selected capital renewals, and testing the effectiveness of work undertaken).

### 4.1 Specific objectives

1. To acquire asset and condition information, catchment features and ecological information.
2. To provide Council with a robust and consistent basis for identifying and prioritising what investment is needed to address assets with fish passage issues.
3. To confirm the options that are available to Council and are effective in addressing assets with fish passage issues.
4. To gain the support of Council's stakeholders and partners for the approach taken by Council to address assets with fish passage issues.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option 1
1. To provide Council with a robust and consistent basis for identifying and prioritising what investment is needed to address assets with fish passage issues.	Does not meet	Meets
2. To confirm the options that are available to Council and are effective in addressing assets with fish passage issues.	Does not meet	Meets
3. To gain the support of Council's stakeholders and partners for the approach taken by Council to address assets with fish passage issues.	Does not meet	Meets

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo		\$0	\$0	\$0	\$0
Option 1		\$0	\$543,500	\$913,000	\$387,425

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- It is the only option to meet the objectives identified.
- The status quo will not address the identified issue of impeded fish passage through assets, and is unlikely to meet the legislative requirements or the expectations of Council's stakeholders and partners, as well as the broader community.
- This presents several risks to Council. The most significant are that the investment is ineffective at resolving the issue (resulting in legislative non-compliance and consequent reputational and other indirect financial and non-financial costs), the investment is poorly prioritised and inefficient (pumps purchased are more expensive than required), and the investment misses opportunities to be leveraged through partnerships with stakeholders and partners.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	Nil	Years 1, 2 and 3	Existing	No labour required over and above labour resources already available and accounted for.
Opex	\$715	Years 1, 2 and 3	Investment Fund	The proposal is to receive Investment Fund funding, given that the proposal has a region-wide benefit and broader community benefits.
Capex	\$543	Years 1, 2 and 3	Investment Fund	This capital expenditure is required to bolster what is already provided for by the asset renewal programme to allow for the addressing of fish passage.
Revenue	Nil	N/A	N/A	No new revenue has been identified, although co-funding opportunities may emerge.
Contingency	\$72		Investment Fund	Based on 10% of opex

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	\$323	\$140	\$80	Nil	Nil	Nil
<b>Operational</b>	\$718	\$119	\$75	Nil	Nil	Nil
<b>Revenue</b>	Nil	Nil	Nil	Nil	Nil	Nil

#### 5.1.1 Funding partnerships

Potential funding partners include the Waikato River Authority, Ministry for the Environment, community groups and organisations, and private organisations. These will be identified and qualified, and specific funding proposals will be developed, during the course of this proposal.

In developing the financial implications for the preferred option the following assumptions have been made:

- The costs identified as based on those derived during the planning of this proposal.

- The costs exclude those actions that will be undertaken during the 2017/2018 financial year (with the exception of the monitoring being undertaken to evaluate the effectiveness of the new Orchard Road “fish friendly” pump).
- It is appropriate for this proposal to be funded from the investment fund, as it will benefit the entire region and will provide broader environmental benefits to the community.
- The capital costs identified will be combined with existing capital renewal budgets already identified as part of the 2018 – 2028 Long Term Plan.

### 5.1.2 Additional commentary

This proposal will be managed under the Waikato Regional Council project management framework, including any allocation of project contingency that becomes necessary.

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

Delivery Approach – Project

### 6.1.2 Scope/deliverables

In Scope

- Information review and GIS collation
- The development of the Waikato Regional Council Infrastructure Fish Passage Implementation Plan.
- Stakeholder communication.
- Trial implementation of the draft plan.
- Research and monitoring projects to establish effectiveness of options available (including existing renewal projects at Orchard Road Pump Station, Island Block Pump Station and Motukaraka Pump Station).
- The application of the finalised implementation plan to the asset renewal programme for the 2021 – 2031 Long Term Plan.

Out of Scope

- The additional capital investment required following the application of the implementation plan to the asset renewal programme and 2021 – 2031 Long Term Plan.

### 6.1.3 Key milestones

Milestone	Completion Date
Project scoped and costings developed	15/09/2017
Information collation, review and gap analysis completed	30/01/2018
Identification of information requirements	30/01/2018
Stakeholder communication plan developed and implemented	31/07/2018
Draft implementation plan developed	31/10/2018
Implementation plan trialled on subset of catchments	30/04/2019
Trial project outcomes reported for incorporation into implementation plan	30/06/2019
Implementation plan delivered for ELT approval/endorsement.	30/11/2019

Milestone	Completion Date
Implementation plan application to 2021 – 2031 LTP asset renewal programme	31/10/2020

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Waikato River Authority	The pilot projects for the proposal are located in the Waikato River catchment and are expected to support the outcomes being sought by the authority.	Engage
Iwi	An objective of this proposal is for the implementation plan to provide a basis for Council to work in partnership with stakeholders to improve the environmental outcomes from the operation of flood protection and land drainage infrastructure.	Engage
Department of Conservation	The pilot projects for the proposal are location in areas of interest to DoC (e.g. the Whangamarino Wetland).	Engage
WRC science staff	The proposal aims to address issues that have been raised by WRC science staff. It is therefore important that any outputs have their support.	Engage
Ministry for the Environment, community groups, private organisations	Co-funding	Engage
WRC operational staff	The proposal represents a significant change in the approach to managing flood protection and land drainage infrastructure. This will require the support of WRC staff who are responsible for the day-to-day operation of these assets.	Engage
WRC natural heritage staff	The proposal presents an opportunity for improved biodiversity outcomes from the operation of flood protection and land drainage assets. It is therefore important that WRC natural heritage staff are engaged.	Engage
Catchment committees and land drainage sub-committees	The proposal represents a significant change in the approach to managing flood protection and land drainage infrastructure. This will require the support of these committees.	Engage
WRC regulatory staff	The proposal is a commitment that was made by ICM in relation to fish passage issues identified at the Motukaraka Pump Station. It is therefore important that this be reported on to WRC regulatory staff.	Inform.
River Managers SIG	The issue that this proposal seeks to address is of interest to other regional councils, and is being communicated through the River Managers SIG.	Inform

## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
ICM – Asset Management	Low	This proposal will require access to existing asset information to inform the development of the implementation plan.	This impact will be managed by the Team Leader, against other team priorities.
ICM – Operations	Low	This proposal will require on-the-ground information to inform the development of the implementation plan, along with additional effort to support pilot projects.	This impact will be managed by the Team Leader, against other team priorities.
ICM – Technical Services	Low	This proposal will require technical feedback to incorporate any new approaches into existing technical specifications.	This impact will be managed by the Team Leader, against other team priorities.
Communications	Low	This proposal will require communications expertise to support the engagement of stakeholders.	This impact will be managed by utilising existing communications budget commitments for ICM.
Spatial Information	TBC	This proposal may require some advise regarding the incorporation of any new information into WRC systems.	This impact will be managed by working with the Manager to establish what support is required.

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
ICM – Asset Management	Medium	This proposal will introduce a new aspect to asset renewals planning (i.e. the retrofitting of new components to address fish passage issues).	This proposal has been structured so that it ties in with the next round of asset renewal planning for the 2021 – 2031 Long Term Plan (i.e. this change will not be a last minute add on to a process that is underway).
ICM – Operations	Medium	This proposal may introduce new aspects to how our assets are maintained.	We will ensure that staff involved in the maintenance of affects assets are provided with the necessary background and training.
ICM – Technical Services	Medium	This proposal will introduce a new aspect to asset design (i.e. the retrofitting of new components to address fish passage issues).	We will ensure that investigation and design projects undertaken prior to asset renewal are resources appropriately (including the right skills).

## 6.1.6 Ongoing operational management

The implementation plan will become part of Council’s overall asset management system, which is owned by the ICM Asset Management Team (within the ICM Business and Technical Services Section).

At the time of writing, there are no identified impacts on existing business structures, roles and responsibilities.

## **6.1.7 Assumptions, constraints and dependencies**

### **6.1.7.1 Assumptions**

- a. That the project schedule meets any WRC regulatory requirements.
- b. That the testing of potential approaches is able to be incorporated into existing asset renewal projects.
- c. That the region-wide benefits from this proposal are sufficient justification for general rate funding (as opposed to the targeted rate structure used to fund catchment zones).

### **6.1.7.2 Constraints**

- a. The existing asset renewal programme, which has constrained the options available to test potential approaches.
- b. Fish migration periods, which has constrained the annual period that effectiveness monitoring can be carried out.
- c. The timing of the 2021 – 2031 Long Term Plan process, which constrains when this proposal needs to be completed (so that it can inform the next asset renewal review).

### **6.1.7.3 Dependencies**

- a. The completion (and funding) of several tasks during the 2017/2018 financial year (information review and GIS collation).
- b. Approval of the existing asset renewal programme as part of the 2018 – 2028 Long Term Plan, which has been used to identify assets that are suitable for testing potential approaches.

## **6.1.8 Risks**

No high or critical risks currently identified.



# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

### 1.1 Status quo

#### 1.1.1 Option overview

Council currently undertakes the renewal of assets based on condition or performance needs. The incorporation of asset components to address fish passage issues is ad-hoc, and where it does occur can be experimental (i.e. using approaches that are untested in the New Zealand environment) and project-specific. While there are no additional direct financial costs associated with the status quo, there is a higher risk of legislative non-compliance and higher costs could be faced when renewing specific assets on an ad-hoc basis.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>The expenditure required to renew assets is closer to current asset valuations, therefore imposing less additional cost on the community.</li> </ul>	<ul style="list-style-type: none"> <li>Higher risk of non-compliance with legislative requirements and potential costs associated with this</li> <li>Flood protection and land drainage assets will (in general) continue to impede fish migration.</li> <li>The environmental performance of Council's flood protection and land drainage infrastructure will generally not meet stakeholder expectations.</li> <li>Where assets are retrofitted to address fish migration issues, the approach may not be the most effective (in relation to both the outcome, and the priority of the work against other assets).</li> <li>Partnerships with stakeholders are also ad-hoc and unplanned.</li> </ul>

#### 1.1.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
None identified	N/A

#### 1.1.4 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$0	\$0	\$0	\$0	\$0

#### 1.1.5 Assumptions, constraints and dependencies

##### 1.1.5.1 Assumptions

- That the continued interruption of fish passage by flood protection and land drainage infrastructure is unacceptable to Council's stakeholders and partners.

### 1.1.5.2 Constraints

a. The regulatory framework that flood protection and land drainage assets are operated under.

### 1.1.5.3 Dependencies

None identified.

### 1.1.6 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
That the operation of flood protection and land drainage infrastructure does not meet the expectations of Council's stakeholders and partners.	Moderate	Almost certain	
That the operation of flood protection and land drainage infrastructure does not meet regulatory requirements.	Major	Likely	

## 1.2 Option 1

### 1.2.1 Option overview

This option involves the development of a Waikato Regional Council Infrastructure Fish Passage Research and Development Programme and Implementation Plan, as detailed further in this business case.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>The impact of flood protection and land drainage infrastructure on fish migration will be progressively reduced (as part of the ongoing renewal of assets).</li> <li>The operation of flood protection and land drainage infrastructure will meet the environmental expectations of Council's stakeholders and partners, including regulators.</li> </ul>	<ul style="list-style-type: none"> <li>The addressing of fish passage issues at assets at the time of renewal is expected to increase the expenditure required to renew the asset.</li> </ul>

### 1.2.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state.	This proposal will improve the efficiency and effectiveness of Council investment to improve the environmental outcomes that are provided for by flood protection and land drainage infrastructure.
Economic growth ensures natural capital and ecosystem services are maintained.	This proposal will ensure that the demand placed on flood protection and land drainage infrastructure by economic growth is managed in a way that takes into account environmental outcomes.

Long Term Outcome	How will this option improve delivery of this outcome?
New investment is attracted to the region through improved reputation and partnerships.	This proposal will require Council to lead New Zealand in the development, testing and implementation of solutions to improve the environmental performance of flood protection and land drainage infrastructure. This will require innovation from existing suppliers and may also encourage new areas of investment (e.g. the design and supply of “fish friendly” pumps).
Communities are empowered and supported to take action on agreed outcomes.	Fundamental to this proposal is engaging with stakeholders and partners, including those at a community level who have the means and a desire to become more engaged in improving the environmental outcomes provided for by flood protection and land drainage infrastructure.

## 1.2.4 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
	Nil	\$543	\$913	\$387

## 1.2.5 Assumptions, constraints and dependencies

### 1.2.5.1 Assumptions

- a. That the project schedule meets any WRC regulatory requirements.
- b. That the testing of potential approaches is able to be incorporated into existing asset renewal projects.
- c. That the region-wide benefits from this proposal are sufficient justification for general rate funding (as opposed to the targeted rate structure used to fund catchment zones).

### 1.2.5.2 Constraints

- a. The existing asset renewal programme, which has constrained the options available to test potential approaches.
- b. Fish migration periods, which has constrained the annual period that effectiveness monitoring can be carried out.
- c. The timing of the 2021 – 2031 Long Term Plan process, which constrains when this proposal needs to be completed (so that it can inform the next asset renewal review).

### 1.2.5.3 Dependencies

- a. The completion (and funding) of several tasks during the 2017/2018 financial year (information review and GIS collation).
- b. Approval of the existing asset renewal programme as part of the 2018 – 2028 Long Term Plan, which has been used to identify assets that are suitable for testing potential approaches.

## 1.2.6 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
The completion of this proposal will increase the expenditure required to renew assets.	Moderate	Almost certain	Council will have the opportunity to consider this impact as part of normal business planning processes (e.g. Long Term Plan development).

# Business Case – Biosecurity

<b>GOA:</b>	Integrated Catchment Management
<b>Activity Name:</b>	Biosecurity
<b>Function</b>	Animal and Plant Pest Control
<b>Services</b>	Regional Pest Management Plan and Marine Pathway Management Plan Wallaby management Possum control Kauri dieback response Alligator weed and yellow flag iris Velvetleaf Wilding pines
<b>Financial Budget Code:</b>	B1605, B1606, B1607



# 1 Document Control

## 1.1 Review and approval

Prepared by:	Angus McKenzie, Place Group Limited	30 October 2017
Reviewed by:	Patrick Whaley, Manager – Integrated Catchment Services	31 October 2017
Signed off by:	Clare Crickett, Director – Integrated Catchment Management	November 2017

## 1.2 Related documents

Document Title	Document Reference
Waikato Regional Pest Management Plan (RPMP) 2014-2024	<a href="https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/">https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/</a>
Regional Pest Management Plan Operational Plan 2016/17	<a href="https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/">https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/</a>
Regional Pest Management Plan Annual Report 2015/16	<a href="https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/">https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/</a>
Report Policy and Strategy Committee - RPMP assessment against National Policy Direction for Pest Management 2015	DM10098087#

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
V1.0	26 September	Angus McKenzie	Prepare draft
V2.0	15 December	Rebecca Yeoman	Update finances

## 2 Executive summary

This business case seeks additional funding for the biosecurity activity to enable to the council to:

- Meet its obligations and responsibilities with national and regional partners under the Biosecurity Act in relation to national policy and supporting and managing incursion risks and responses.
- In partnership with other agencies, maintain and increase the gains generated through regional and interregional biosecurity programmes. This includes supporting an expansion to the PPCA in the south Waikato, increasing the direct control budget for wallaby management to implement the containment plan and more resourcing for marine biosecurity. These initiatives align with the council's ambition to become Predator Free by 2050.
- Meet the Levels of Service (LOS) specified in the Regional Pest Management Plan (RPMP) 2014-2024, specifically in relation to the control of pest plants including alligator weed.
- Proactively respond to increasing community demand for greater co-ordination and delivery of biosecurity services locally. This demand has been driven in part through the increased public awareness profile through the work of organisations such as Predator Free New Zealand and initiatives such as Predator Free 2050. Servicing this demand is likely to attract new biosecurity investment in to the region.
- Provide support to landowners, community and iwi to protect areas free of kauri dieback and support territorial authorities, contractors and tourism operators to build best practice kauri dieback practices into their day to day activities.

The following options have been assessed as part of the development of this business case:

- Option 1 - Maintain status quo.
- Option 2 - Increase funding for key pest programmes to meet LOS

Option 2 is the preferred option and additional funding is sought in the following areas:

Service	What is proposed
Wallaby management	Increase the direct control budget for wallaby management to fully implement Waikato Regional Councils (WRC) part of the containment plan.
PPCA expansion due to change in TB management	Increase direct control budget for the Priority Pest Management Programme. This has involved prioritising areas in line with biodiversity, catchment and economic values. Collaborative management plans required with Department of Conservation (DOC), Iwi and Horizons Regional Council (HRC).
Kauri dieback	Increased resourcing to <ul style="list-style-type: none"> <li>(i) support landowners, community and iwi protect areas free of kauri dieback and</li> <li>(ii) support Territorial Authorities (TA), contractors, tourism operators to build best practice kauri dieback practices into their day to day activities.</li> </ul>
Alligator weed and yellow flag iris	Increase in the amount of direct control of alligator weed and yellow flag iris.
Velvetleaf	Resourcing to implement long term management plan for the Waikato and align with the long term national management plan for velvetleaf.
Old man's beard & climbing spindle berry	Increase resourcing to implement greater level of control across priority sites in the Taupo and Upper Waikato catchments.

Wilding pines	Increase WRC contribution to the central north island wilding pine programme in collaboration with New Zealand Defence Force (NZDF), DOC, iwi, HRC and Ministry for Primary Industries (MPI). This is in line with proposed Central Government increase in funding over Years 1 and 2 of the LTP.
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The proposals set out in this business case have been circulated to regional Catchment Committees and there is full support for the changes sought. This business case recognises Council's funding constraints and therefore does not respond to all community demands for LOS for a number of pests for example, yellow bristle grass, pest fish, freshwater biosecurity pests and Canada goose.

## 2.1 Financial summary

### 2.1.1 Funding profile

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
STATUS QUO	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
B1605	3,541,126	3,555,900	4,023,491	3,200,204	3,660,379	4,413,430	4,159,377	2,310,759	4,763,328	4,806,710
B1606	949,627	986,007	995,983	967,564	970,307	975,621	975,075	976,595	974,550	971,038
B1607	2,629,475	2,611,382	2,627,442	2,657,758	2,664,323	2,713,483	2,711,037	2,755,384	2,753,078	2,785,678
<b>TOTAL STATUS QUO</b>	<b>7,120,228</b>	<b>7,153,289</b>	<b>7,646,916</b>	<b>6,825,526</b>	<b>7,295,009</b>	<b>8,102,534</b>	<b>7,845,489</b>	<b>6,042,738</b>	<b>8,490,956</b>	<b>8,563,426</b>

### 2.1.2 Funding source

Funding for the operational business case is through the biosecurity rate which is a component of the general rate.

Note: Funding for the Regional Pest Management Plan will be through general rate.

### 2.1.3 Additional resources

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	11	2	2	-	-	-	-
<b>Fixed Term</b>	-	-	-	-	-	-	-
<b>Contract</b>	-	-	-	-	-	-	-

NB New roles are only listed in the year they begin

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	Yes
Does the work require additional resources (FTE or contract)?	Yes

## 3 The case for change (Strategic Case)

### 3.1 Strategic context

Biosecurity is the exclusion, eradication or management of pests and diseases that pose a risk to the economy, environment, cultural and social values, including human health. The council is responsible for providing regional leadership for pest management activities under s12B of the Biosecurity Act 1993. The council collaborates and works in partnership with a wide range of national, regional and local organisations/communities to deliver pest management throughout the region.

The council's biosecurity programme is achieved through direct and biological control of animal and plant pests including working on community based initiatives, providing information and advice on plant and animal pest control, monitoring of pest animals and plants throughout the region, as well as developing strategy and rules for the protection and enhancement of the environment. The programme is guided by the Regional Pest Management Plan (RPMP) 2014-2024.

The council's biosecurity programme is a vital component in the national biosecurity system which is designed to mitigate and avoid significant impacts of pest species. Some of the organisms that have crossed our borders cause great losses environmentally, socially, culturally and economically. The council is reducing the impacts of this on our community by working with landowners to progressively contain and eradicate high threat low incident pests e.g. velvetleaf and alligator weed.

The council has a role in protecting the natural ecosystems which are under pressure, with invasive mammals, weeds and micro-organisms threatening ecosystems and taonga species such as kauri. Our Waikato communities value their natural environment and expect it to be in a functional state, supporting our native species. Tourism is vitally important to the vibrant Waikato economy with a large proportion of the industry based around the regions natural resources.

### 3.2 Drivers for change

The proposals set out in this business case respond to the following key drivers for change:

- Shifts in the strategic direction of key animal pest control partners, notably revisions to the national TB management plan which will result in reductions in pest management in the Waikato.
- The need to consider WRC's long term approach to new biosecurity/biodiversity pressures within the region such as wallabies and marine pests and determine appropriate management tools.
- The need to consider WRC priorities in reference to interregional/national biosecurity projects.
- The need to consider WRC priorities in reference to biodiversity alongside the development of a biosecurity strategy.
- The strategic need to review the performance and outcomes being achieved from current programmes.

This business case seeks additional funding for the biosecurity activity to enable to the council to:

- Meet its obligations and responsibilities with national and regional partners under the Biosecurity Act in relation to national policy and supporting and managing incursion risks and responses.



- In partnership with other agencies, maintain and increase the gains generated through regional and interregional biosecurity programmes. This includes supporting an expansion to the PPCA in the south Waikato, increasing the direct control budget for wallaby management to implement the containment plan. These initiatives align with the council's ambition to become Predator Free by 2050.
- Maintain the LOS specified in the Regional Pest Management Plan (RPMP) 2014-2024, specifically in relation to the control of pest plants including alligator weed.
- Proactively respond to increasing community demand for greater co-ordination and delivery of biosecurity services locally. This demand has been driven in part through the increased public awareness profile through the work of organisations such as Predator Free New Zealand and initiatives such as Predator Free 2050. Servicing this demand is likely to attract new biosecurity investment in to the region.

### 3.3 Proposal for change

The proposal for change is summarised in Table 1 below. All programmes where additional resourcing is sought:

- have high level of political support nationally, regionally and locally.
- are collaborative programmes/projects relying on in kind resources and co-funding partners.
- Have positive Cost Benefit Analysis meaning increases in resourcing will deliver positive outcomes for the region.
- Address low incidence/high risks pests i.e. those pests with a limited spatial extent and high impact if they become established.

Service	What is proposed	Rationale for the proposal
Wallaby management	Increase the direct control budget for wallaby management to fully implement WRC's part of the containment plan.	Current LOS isn't sufficient to contain wallabies and without urgent action they will be beyond our ability to manage. Dama wallabies have a limited distribution and with urgent action now we can stop the spread into the Waikato region.
Priority Pest Control Area (PPCA) expansion due to change in TB management	Increase direct control budget for the Priority Pest Management Programme. This has involved prioritising areas in line with biodiversity, catchment and economic values. Collaborative management plans required with DOC and HRC.	TB management change means that animal pests will no longer be managed in some parts of the region through the TB Free programme. Some of these areas have been managed for over 30 years, and this has resulted in significant biodiversity gains over that period. TBFree management areas include a number of the regions special places (biodiversity). Without WRC increasing level of service animal pest densities will increase with resulting impacts on forest condition, associated bird life and an overall decline in natural capital.
Kauri dieback	Increased resourcing to (i) supporting landowners, community and iwi protect areas free of kauri dieback and (ii) support TA's, contractors, tourism operators, etc build best practice kauri dieback	With current technologies and control tools the best way of managing kauri dieback is preventing its spread into disease free areas. More resource is needed to manage the disease pathways.

Service	What is proposed	Rationale for the proposal
	practices into their day to day activities.	
Alligator weed and yellow flag iris	Increase in the amount of direct control of alligator weed.	Alligator weed is a highly invasive pest plant and without management will potentially spread to most of the regions highly productive primary industry and shallow lakes and wetlands.
Velvetleaf	Resourcing to implement long term management plan for the Waikato and align with the long term national management plan for velvetleaf.	WRC is the lead agency in the region for managing velvetleaf through the RPMP (progressive containment). Velvetleaf could devastate the agricultural sector and make arable industry in the Waikato uneconomic. There is significant industry support to manage velvetleaf long term.
Old man's beard & climbing spindle berry	Increase resourcing to implement greater level of control across priority sites in the Taupo and Upper Waikato catchments.	WRC is the lead agency to manage old man's beard and climbing spindle berry through the RPMP. These pest spread quickly and will devastate natural ecosystems. There is also a risk of these vine impacting on the forestry sector.
Wilding pines	Increase WRC contribution to the central north island wilding pine programme in collaboration with New Zealand Defence Force (NZDF), DOC, iwi, HRC and Ministry for Primary Industries (MPI). This is in line with proposed Central Government increase in funding over Years 1 and 2 of the LTP.	The central north island is due to receive increased central government funding from central government from year 1 of the upcoming LTP.

### 3.4 What will success look like (high level benefits)

The following high level benefits are anticipated as a result of the changes proposed within this business case.

#### Pest management benefits

- Progress containment of wallabies with no further expansion beyond current range. Additional resourcing is available to ensure wallabies are contained.
- Picking up where TB free has left off gives WRC the opportunity to maintain the huge possum control gains that 30 years of effective pest management has delivered. NZ's largest kokako population will continue to grow. Communities will remain engaged with pest control for biodiversity gain.
- Significant areas of the Waikato will continue to be free of kauri dieback.
- If we manage the biosecurity challenges in the marine environment we will protect the aquaculture industry, Waikato's marine environments and recreational opportunities.
- Current fresh water pests will not expand their current distributions and new incursions will not get a foot hold in the Waikato region.

- Alligator weed is progressively contained to its current distribution and over time the extent is reduced.

### **Contribution to Organisational Strategy**

The proposals assist with the delivery of the following council priorities:

#### Healthy Environment:

- The Waikato has become predator free, in line with the New Zealand 2050 target, without compromising indigenous biodiversity.
- The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state.

#### Strong Economy:

- Economic growth ensures natural capital and ecosystem services are maintained.
- We are achieving the best use of the region's fresh water.

#### Vibrant Communities:

- There is increased benefit from the use and protection of our amenity and recreational features and values.
- Communities are empowered and supported to take action on agreed outcomes.
- We support all parts of the Waikato to be as successful as they can be.

### **Process Improvements and productivity gains**

- The project will enable revision of current objectives so that outcomes are better aligned with the overall biosecurity programme and level of service.
- A more focused range of programmes to ensure resources are employed in the most efficient and effective way and that new high risk incursion species are managed.
- The ability to move to a more site led approach for some pests rather than a whole of region approach.
- Address required increase levels of services due to the withdrawal of TBfree NZ operations from the Waikato over time.

## **3.5 Consequences of not proceeding**

The consequences of not proceeding with this proposal would be far reaching for WRC, potentially affecting biosecurity gains made over the years and risking organisational reputation.

The following specific consequences could result if the proposed changes do not proceed:

- Dama wallabies will become more widespread putting further pressure on our treasured forests and native habitats.
- Biodiversity continues to decline especially in areas where invasive pests such as rats and possums are not managed. The areas TB free NZ has ceased pest management contain some of the regions and NZ's most outstanding areas of native biodiversity. If WRC does not step in and maintain the gains from 30 years of effective pest management these areas will be decimated by uncontrolled pest populations. There is also potential for significant reputation impact on WRC if the programme is not expanded, as there is a high expectation from the community for WRC to maintain the gains from previous investment. Collaborative arrangements with DOC will also not be met, potentially impacting this important relationship.
- Kauri dieback will spread to areas where kauri are currently disease free. This will have long term impacts on Kauri numbers present throughout the Waikato and possibly lead to a cease in this native tree being a common component of our forests.

- Alligator weed and yellow flag iris will destroy our shallow lakes and wetlands if additional action does not occur. They also out-compete native plants and pasture and are toxic to stock.
- Wilding pines will likely gain a foothold in the central north island, threatening a unique landscape.

Further commentary on the collaborative arrangements that are at risks should funding not be forthcoming in place for specific programmes is as follows.

### Wallabies

BOPRC and WRC have worked with DOC, Manaaki Whenua Landcare Research (MWLR) and MPI for over the last two years to develop a robust operational plan to achieve containment, leading to long term eradication of wallabies. All parties have increased resourcing and are looking to further increase their funding leading to a strategic business case through MPI for central government partnership funding.

### Velvetleaf

WRC is leading management of Velvetleaf in the Waikato. Over the last 18 months together with the Foundation for Arable Research (FAR), Dairy NZ, seed merchants, MPI, contractors, landowners and wider agricultural industry, a Waikato velvetleaf management plan has been developed and implemented. All parties are contributing significantly both in terms of time and money to achieve the eradication objectives in the plan.

### Landscape scale pest control

DOC, Horizons and WRC have been developing long term management plans for areas of high priority biodiversity as TB management changes. Success of the management relies on all 3 agencies resourcing their component of the operational plans. Continuation of this management is regarded as a high priority by all iwi and will underpin future co-management of these key ecosystems. Note: These management areas also underpin our future PF2050 programme. WRC, HRC, DOC, MWLR and OSPRI recently submitted an expression of interest for the first Predator Free NZ funding round. We have now been asked to submit a full proposal for Pureora North. If successful additional resources may be required to assist implementation.

## 3.6 Alignment

Level of alignment to community outcomes ■ = primary contribution ■ = secondary contribution		
Healthy Environment	Strong Economy	Vibrant Communities
<ul style="list-style-type: none"> <li>• The Waikato has become predator free, in line with the New Zealand 2050 target without compromising indigenous biodiversity</li> <li>• The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state</li> <li>• All soil quality indicators are trending positive.</li> </ul>	<ul style="list-style-type: none"> <li>• By 2034 value added per capita will grow by 2.8% per annum so that the Waikato region is in the upper third of regions in New Zealand for economic performance</li> <li>• Economic growth ensures natural capital and ecosystem services are maintained</li> <li>• New investment is attracted to the region through improved reputation and partnerships</li> </ul>	<ul style="list-style-type: none"> <li>• Communities are empowered and supported to take action on agreed outcomes.</li> <li>• There is increased benefit from the use and protection of our amenity and recreational features and values</li> <li>• We support all parts of the Waikato being as successful as they can be</li> <li>• Co-governance with iwi is meaningful and effective</li> </ul>
Level of alignment to council priorities		
Strategic Direction Priority		Level of alignment
The Waikato has become predator free, in line with the New Zealand 2050 target, without compromising indigenous biodiversity.		Explicit alignment

The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state.	Strong alignment
Economic growth ensures natural capital and ecosystem services are maintained.	Moderate alignment
We are achieving the best use of the region's fresh water.	Moderate alignment
There is increased benefit from the use and protection of our amenity and recreational features and values.	Moderate alignment
Communities are empowered and supported to take action on agreed outcomes.	Strong alignment
We support all parts of the Waikato to be as successful as they can be.	Moderate alignment

Legislation	Alignment	How will this change improve delivery?
Biosecurity Act	Explicit	Addresses regional council responsibilities under the BSA
Resource Management	Strong	Addresses regional council responsibilities for enforcement

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
National Policy Direction for Pest Management	Explicit	Addresses the requirements of the NPD
Biosecurity 2025	Strong	Better supports the delivery of Biosecurity2025

## 4 Option evaluation (Economic Case)

The following options have been assessed as part of the development of this business case:

- Option 1 - Increase funding for key pest programmes to maintain LOS
- Option 2 – Hold rate increase to less than 5%.

### 4.1 Specific objectives

These options have been assessed against the following high level objectives for biosecurity:

1. To improve the council's regional leadership across the wider biosecurity community through the effective coordination of programmes and increased community capability.
2. To improve the protection of sites with assessed biodiversity values in targeted areas by reducing pest populations.
3. To prevent new pests from becoming established within the region.
4. To improve the delivery of results, in a timely and cost-effective and recognisable way.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Option 1 Status Quo	Option 2 – Maintain LOS
1. To improve the council's regional leadership across the wider biosecurity community through the effective coordination of programmes and increased community capability.	Meets in part	Meets

Objective	Option 1 Status Quo	Option 2 – Maintain LOS
2. To improve the protection of sites with assessed biodiversity values in targeted areas by reducing pest populations.	Does not meet	Meets
3. To prevent new pests from becoming established within the region.	Meets in part	Meets
4. To improve the delivery of results, in a timely and cost-effective and recognisable way.	Does not meet	Meets

## 4.2.2 Financial comparison of options

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
STATUS QUO	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
B1605	3,541,126	3,555,900	4,023,491	3,200,204	3,660,379	4,413,430	4,159,377	2,310,759	4,763,328	4,806,710
B1606	949,627	986,007	995,983	967,564	970,307	975,621	975,075	976,595	974,550	971,038
B1607	2,629,475	2,611,382	2,627,442	2,657,758	2,664,323	2,713,483	2,711,037	2,755,384	2,753,078	2,785,678
<b>TOTAL STATUS QUO</b>	<b>7,120,228</b>	<b>7,153,289</b>	<b>7,646,916</b>	<b>6,825,526</b>	<b>7,295,009</b>	<b>8,102,534</b>	<b>7,845,489</b>	<b>6,042,738</b>	<b>8,490,956</b>	<b>8,563,426</b>

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
OPTION 2	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
B1605	3,587,246	3,763,663	4,531,254	3,707,967	4,168,142	4,921,193	4,667,140	2,818,522	5,271,091	5,314,473
B1606	1,082,719	1,217,762	1,477,738	1,449,319	1,452,062	1,457,376	1,456,830	1,458,350	1,456,305	1,452,793
B1607	2,942,455	3,196,284	3,432,344	3,462,660	3,469,225	3,518,385	3,515,939	3,560,286	3,557,980	3,590,580
<b>TOTAL OPTION 2</b>	<b>7,612,420</b>	<b>8,177,709</b>	<b>9,441,336</b>	<b>8,619,946</b>	<b>9,089,429</b>	<b>9,896,954</b>	<b>9,639,909</b>	<b>7,837,158</b>	<b>10,285,376</b>	<b>10,357,846</b>

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is option 1, for the following reasons:

- Very high contribution to organisational strategy
- Pest management benefits
- Compliance with national legislative requirements and biosecurity initiatives
- Process Improvements and productivity gains

# 5 Financial analysis and procurement (Financial and Commercial Case)

The summary funding profile for this business case is set out below and a more detailed breakdown is provided in Appendix 1.

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
OPTION 2	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
B1605	3,587,246	3,763,663	4,531,254	3,707,967	4,168,142	4,921,193	4,667,140	2,818,522	5,271,091	5,314,473
B1606	1,082,719	1,217,762	1,477,738	1,449,319	1,452,062	1,457,376	1,456,830	1,458,350	1,456,305	1,452,793
B1607	2,942,455	3,196,284	3,432,344	3,462,660	3,469,225	3,518,385	3,515,939	3,560,286	3,557,980	3,590,580
<b>TOTAL OPTION 2</b>	<b>7,612,420</b>	<b>8,177,709</b>	<b>9,441,336</b>	<b>8,619,946</b>	<b>9,089,429</b>	<b>9,896,954</b>	<b>9,639,909</b>	<b>7,837,158</b>	<b>10,285,376</b>	<b>10,357,846</b>

\$/ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
Permanent	11	2	2	-	-	-	-
Fixed Term	-	-	-	-	-	-	-
Contract	-	-	-	-	-	-	-

### 5.1.1 Funding partnerships

#### Wallabies

Bay of Plenty Regional Council (BOPRC) and WRC have worked with DOC and MPI for over 2 years to develop a robust operational plan to achieve containment, leading to long term eradication. All parties have increased resourcing and are looking to further increase their funding leading to a strategic business case through MPI and DOC seeking increased central government partnership funding.

#### Landscape scale pest control

DOC, HRC and WRC have been developing long term management plans for areas of high priority biodiversity as TB management changes. Success of the management relies on all 3 agencies resourcing their component of the operational plans. These management areas also underpin our future PF2050 programme. Continuation of this management is regarded as a high priority by all iwi and will underpin future co-management of these key ecosystems.

#### Kauri dieback

WRC is a founding partner in the Keep Kauri Standing programme together with iwi, DOC, MPI, Northland Regional Council (NRC), BOPRC and Auckland Council (AC). Kauri forest is critically important to all New Zealanders, but it is also vulnerable and needs our protection. Recent moves by MPI aim to ramp the programme up will take the form of a National Pest Management Plan under the biosecurity act. This mechanism has only be utilised for 4 other national pests, for example Bovine TB. All partners are increasing their funding over the next 3 years and WRC will also need to as resourcing is fundamental to maintaining a viable partnership led approach.

#### Alligator weed and yellow flag iris

Alligator weed threatens farms, market gardens and urban properties (often dominating lawns), it clogs waterways and drains, increasing sedimentation and flooding risk, access to waterways for recreational purposes (boating, fishing) can be blocked and plants may affect whitebait spawning areas and it can out-compete pastures and crops, affecting farm production and profit.

Partnerships continue to develop around key sites and locations impacted by alligator weed with management now fundamental to achieving success in numerous Waikato River Restoration projects. The project partners are diverse and co-funding is significant.

Note: Yellow flag iris is a companion pest in many locations and therefore much of the management actions are identical.

#### Velvetleaf

WRC is leading management of Velvetleaf in the Waikato. Over the last 18 months together with the Foundation for Arable Research (FAR), Dairy NZ, seed merchants, MPI, contractors, landowners and wider agricultural industry, a Waikato velvetleaf management plan has been developed. All parties are contributing significantly both in terms of time and money to achieve the eradication objectives in the plan.

#### Wilding pines

The central north island wilding pine programme has been running for close to 40 years and is underpinned by strong partnerships. Members include, DOC, MPI, HRC, Hawkes Bay Regional Council, New Zealand Defence Force, New Zealand Transport Agency, BOPRC, Tuwharetoa, the community, research agencies and landowners. All parties are contributing significantly both in terms of time and money to achieve the objectives in the national plan.

### **5.1.2 Assumptions**

In developing the financial implications for the preferred option the following assumptions have been made:

- The budget for the preferred option includes offset funding from the biosecurity reserve.
- Utilisation of the reserve was approved by ICMC in May 2016.
- The budget also factors in reserve funding to offset rate increases.
- Roles are budgeted at 95% of the relevant the salary bands (Band G and H).

### **5.1.3 Procurement strategy**

Will any procurement activities be required? No.

All key procurement activities ought to be identified as key milestones in the next section.

## **6 Implementation and achievability (Management Case)**

### **6.1.1 Implementation structure**

**6.1.2 All changes proposed within this business case are operational and will be managed within business as usual structures. Scope/deliverables**

### **6.1.3 Key milestones**

Objectives outlined in the RPMP.

### **6.1.4 Stakeholder engagement**

All partners associated with pest programmes outlined in this business case are aware that WRC is looking for additional funding.

### **6.1.5 Business change/organisational impact**

Increasing operational resourcing for the biosecurity programme will have minimal organisational.

### **6.1.6 Assumptions, constraints and dependencies**

Many of the biosecurity programme partners are relying on increased funding to meet current level of service.

### **6.1.7 Risks**

Risks will be managed via business as usual.



## Appendix One: Preferred Option Financials

Biosecurity Targeted Rates	Role No.	Year 1 2018/2019		Year 2 2019/2020		Year 3 2020/2021		Year 4 2021/2022		Year 5 2022/2023		Future Years (per year) 2023/2024 - 2027/2028	
		Staff	\$	Staff	\$	Staff	\$	Staff	\$	Staff	\$	Staff	\$
Wallabies			100,000		150,000		400,000		400,000		400,000		400,000
Kauri Dieback			50,000		100,000		150,000		150,000		150,000		150,000
Alligator weed/ YFI			100,000		200,000		300,000		300,000		300,000		300,000
Velvetleaf			-		-		50,000		50,000		50,000		50,000
PPCA			-		100,000		400,000		400,000		400,000		400,000
Old Mans Beard/ Climbing Spindleberry			60,000		60,000		60,000		60,000		60,000		60,000
Wilding Pines			20,000		20,000		20,000		20,000		20,000		20,000
Biosecurity Officer (Wallabies/ PPCA)	R0767	1	79,487		79,487		79,487		79,487		79,487		79,487
Biosecurity Officer (Coromandel)	R0768		-	1	93,402		93,402		93,402		93,402		93,402
Senior Advisor - Biosecurity	R0792	0.5	46,701	1	93,402		93,402		93,402		93,402		93,402
Biosecurity Officer Compliance	R0793				93,402		93,402		93,402		93,402		93,402
<b>Total increase</b>		<b>2</b>	<b>456,188</b>	<b>2</b>	<b>989,693</b>	<b>0</b>	<b>1,739,693</b>	<b>0</b>	<b>1,739,693</b>	<b>0</b>	<b>1,739,693</b>	<b>0</b>	<b>1,739,693</b>

FTE's	2017/18						Future Years
	Baseline	2018	2019	2020	2021	2022	
<b>Permanent</b>	11	2	2				
<b>Fixed Term</b>							
<b>Contract</b>							

NB: New roles are only listed in the year that they begin

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# **Business Cases**

Public Transport

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# PT – District Networks

<b>GOA:</b>	Public Transport
<b>Activity Name:</b>	Public Transport
<b>Function</b>	Provision of bus services
<b>Service</b>	Waipa, South Waikato, Matamata-Piako and Thames-Coromandel
<b>Financial Budget Code:</b>	T1201

## 1.1 Review and approval

Prepared By:	Nigel King/Senior Policy Advisor	31 October 2017
Reviewed By:	Andrew Wilson/Manager Public Transport Operations	9 November 2017
Signed off By:	Mike Garrett/Chief Finance Officer	Date

## 1.2 Related documents

Document Title	Author	Document Reference

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

There are several network reviews sought to be undertaken covering various districts within the Waikato Region with regards to the provision of public transport services within communities. Specifically, reviews are expected to be completed for Waipa District, South Waikato District, Matamata-Piako District and Thames-Coromandel District Councils.

There are multiple drivers for undertaking this work, including existing contracts reaching the end of terms, and desires from communities for public transport services where currently none may exist. Arising from these reviews a more thorough understanding of the transport needs of these communities will be identified that may result in changes and/or enhancements to the public transport services currently provided or new services sought.

Each review will be conducted following a Business Case Approach in keeping with the investment principles of the NZ Transport Agency, a key partner in the delivery of public transport services.

Public transport services enable greater community connections and provide transport choice allowing users to access opportunities for education, employment, health and recreation. These services are expected to operate within regional communities and in some instances provide connections into the Hamilton urban network.

By working with our partners, we ensure that the public transport services sought are targeted to the needs of the community they service. This helps guide investment towards services that have the greatest likelihood of success and offer the greatest benefit to their communities.

Success may be measured through the uptake and support of services by users, which can be assessed through a variety of metrics including patronage numbers and farebox recovery ratios for services which may show upward trends over time.

## 2.1 Financial summary

### 2.1.1 Funding profile

#### *Waipa*

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	0	700,000	700,000	700,000	700,000	700,000+
<b>WRC Share</b>	0	120,050	120,050	120,050	120,050	120,050

#### *South Waikato*

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	0	300,000	300,000	300,000	300,000	300,000+
<b>WRC Share</b>		51,450	51,450	51,450	51,450	51,450

#### *Matamata-Piako*

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>		300,000	300,000	300,000	300,000	300,000+
<b>WRC Share</b>		51,450	51,450	51,450	51,450	51,450

#### *Thames-Coromandel*

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	150,000	150,000	150,000	150,000	150,000	150,000+
<b>WRC Share</b>	0	0	0	0	0	0

#### 2.1.1.1 Funding source

Funding for Public Transport is administered through the Regional Council. There is a partnership arrangement with NZTA, that funds 51% of eligible public transport services from the National Land Transport Fund. The remaining 49% is recovered via local share contributions. Local share is provided at varying ratios between the local authority in which the service operates and the Regional Council. For services that operate entirely outside of the Hamilton urban area, the local share is provided by

the relevant local authority. Where connections are made into the Hamilton urban network a portion (50%) of this funding is provided by the Regional Council.

### 2.1.1.2 Funding partnerships

**NZTA** is the primary funding partner for all public transport services, providing 51% of funding for eligible public transport services.

**Waipa District Council** – contributes to a portion of the local share for funding split 50%/50% of local share between Waipa DC and WRC

**South Waikato District Council**– contributes to a portion of the local share for funding split 50%/50% of local share between Waipa DC and WRC

**Matamata-Piako District Council**– contributes to a portion of the local share for funding split 50%/50% of local share between Waipa DC and WRC

**Thames-Coromandel District Council** – for services entirely outside of the Hamilton urban network with no connections, the local share is provided entirely from TCDC. No services are currently proposed to connect through to Hamilton.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

No additional FTEs are requested above the current available resources.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The 2015 Waikato Regional Public Transport Plan (RPTP) is under review in accordance with the requirements of the Land Transport Management Act 2003. Development of the new RPTP has commenced under the oversight of the Regional Public Transport Plan Development Subcommittee. The aim is to have a draft Plan ready for consultation alongside council's 2018-2028 LTP and adopt a new plan before 30 October 2018. The new plan will guide the planning and development of the regional public transport system over the next 10 years (2018-2028).

In determining the RPTP's key priorities, the RPTP must be consistent with the Regional Land Transport Plan (RLTP). The RPTP will also take into account local transport strategies and projects (e.g. Access Hamilton and the Hamilton Network Operating Framework) to ensure integrated planning for public transport services and infrastructure across the region.

The three problem statements identified through the business case approach are:

- Population growth and increasing dependency on cars is causing congestion in Hamilton and surrounding towns, hampering economic development and community wellbeing.

- Lack of suitable transport options is limiting access to essential services and employment, impacting on economic and social viability of communities.
- Poor perceptions and journey experiences are a barrier to retaining and growing PT patronage.

The RPTP review will identify the levels of public transport service (and associated investment) to be provided in the region. There will be long term plan budget implications should additional services be identified in the RPTP. The regional network reviews proposed primarily relate to the focus area of regional mobility.

## 3.2 What will success look like (high level benefits)

The district network reviews supporting the RPTP will focus on the transport disadvantaged and enhancing mobility of regional communities. Ensuring access to essential services such as education, healthcare, employment and social opportunities can have a significant impact on the economic and social wellbeing of our communities. It is increasingly acknowledged that enabling effective and affordable transport solutions within rural communities requires cross sector and multi-agency collaboration.

## 3.3 Consequences of not proceeding

Should the investment in any proposed public transport solutions that arise as a result of these reviews not proceed there is a risk that the region may not be able to fully realise the objectives and key priorities of the Regional Public Transport Plan, particularly with regards to enhancing regional mobility and community wellbeing.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Encouraging Regional Development	People and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Shape the development of the region so it enhances quality of life</i>		
<i>We are facilitating action to ensure people have access to essential services, such as by improving regional transport and broadband connections.</i>	Stongly Contributes	<ul style="list-style-type: none"> <li>• Ageing population with declining ability to access independent means of transport reducing access to essential services, and:</li> <li>• Increasing population and traffic congestion associated with commuter traffic between towns and Hamilton</li> </ul>

Legislation	Alignment	How will this change improve delivery?
Land Transport Management Act 2003	Explicit	Land Transport Management Act requires that any public transport service operated in a region must be provided under contract with a regional council as part of a unit unless it is an exempt service and Council is required to have a Regional Public Transport Plan which outlines how we deliver transport activities.



Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Government Policy Statement on Transport	High	The GPS is not yet released under the new government, but is likely to place significance on public transport and moving people efficiently.
There is a community expectation that a public transport system will be provided through the Regional Public Transport Plan, and if there is a public transport system WRC is required to have overarching responsibility i.e. WRC has to contract this service.	Strong	Communities are connected by a public transport network that enable independent access to essential services along with education, employment and social opportunities.

## 4 Option evaluation (Economic Case)

Each proposed district or network review will need to be subject to a business case following an approved NZTA methodology. As part of this process, key transport issues for the affected communities, and the benefits of addressing the issues will be identified. Supporting this will be objectives and options to deliver on each proposed review.

Until a review has been conducted, it is not possible to pre-determine the outcomes of the review. For this reason, the only position that can be evaluated is the status quo, or do nothing state. In each review, it is expected that there would be some increase in the level of public transport service available to each district.

### 4.1 Specific objectives

For each of the network reviews proposed, a high-level objective is identified below:

1. Waipa District - Increase PT service levels between the towns of Cambridge Te Awamutu and Hamilton to meet the needs of a growing population and help reduce congestion on key corridors.
2. South Waikato District - Establish a daily return bus service between Tokoroa, Putaruru, Tirau and Hamilton to meet the needs of a growing population and enable access to essential services along with broader education, employment and social opportunities.
3. Matamata-Piako District - Increase capacity on the existing Morrinsville Hamilton Service and establish a PT connection between Matamata and Hamilton
4. Thames Coromandel District - Establish a PT service within Thames.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet*. Add further columns, or remove, as required.

Objective	Status Quo	Option1 – Increase Service levels
1. Waipa District - Increase PT service levels between the towns of Cambridge Te Awamutu and Hamilton to meet the needs of a growing population and help reduce congestion on key corridors	<i>Meets in part – limited services currently exist.</i>	<i>Meets</i>
2. South Waikato District - Establish a daily return bus service between Tokoroa, Putaruru, Tirau and Hamilton to meet the needs of a growing population and enable access to essential services along with broader education, employment and social opportunities	<i>Does not meet – no service currently exists.</i>	<i>Meets</i>
3. Matamata-Piako District - Increase capacity on the existing Morrinsville Hamilton Service and establish a PT connection between Matamata and Hamilton	<i>Does not meet – no service currently exists</i>	<i>Meets</i>
4. Thames Coromandel District - Establish a PT service within Thames	<i>Does not meet – Permanent, but there is a current trial service in place</i>	<i>Meets</i>

#### 4.2.2 Financial comparison of options

For each review, the financial consideration of options will not be determined until each individual review has been conducted. The business case for each review will include comprehensive options to address the needs of each district.

The status quo has not been quantified as it is expected that there is no change to current services or where services are not currently provided, hence there is a zero rating for each category.

#### 4.3 Preferred option

Based on the options assessment, the preferred way forward is to undertake a business case assessment for each proposed district review in accordance with the business case approach endorsed by the NZ Transport Agency, for the following reasons:

- Ensures consistency with the funding requirements of a major partner in the provision of public transport services
- Ensures that the optimum transport solution is identified for each community.

## 5 Financial analysis and procurement (Financial & Commercial Case)

### Waipa

Description	Amount	Timing	Funding Source	Comments
Labour	Covered under existing resources for Public Transport	Ongoing	Combination NZTA and WRC	
Opex	As Below	Ongoing	As below	Co-funding from external partners

Description	Amount	Timing	Funding Source	Comments
Capex	Indirect – achieved through contracts	Ongoing	Co-funding from external partners	
Revenue	To be determined based on patronage	Ongoing	Co-funding from external partners and fares paid by users	Multiple revenue sources.
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	0	700,000	700,000	700,000	700,000	700,000+
<b>Revenue WRC</b> -	0	120,050	120,050	120,050	120,050	120,050
<b>Revenue NZTA</b> -	0	357000	357000	357000	357000	357000
<b>Revenue Local Authority</b> -	0	222950	222950	222950	222950	222950

### South Waikato

Description	Amount	Timing	Funding Source	Comments
Labour	Covered under existing resources for Public Transport	Ongoing	Combination NZTA and WRC	
Opex	As Below	Ongoing	As below	Co-funding from external partners
Capex	Indirect – achieved through contracts	Ongoing	Co-funding from external partners	
Revenue	To be determined based on patronage	Ongoing	Co-funding from external partners and fares paid by users	Multiple revenue sources.
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	0	300,000	300,000	300,000	300,000	300,000+
<b>Revenue WRC</b> -	0	51,450	51,450	51,450	51,450	51,450
<b>Revenue NZTA</b> -	0	153,000	153,000	153,000	153,000	153,000
<b>Revenue Local Authority</b> -	0	95,550	95,550	95,550	95,550	95,550

**Matamata-Piako**

Description	Amount	Timing	Funding Source	Comments
Labour	Covered under existing resources for Public Transport	Ongoing	Combination NZTA and WRC	
Opex	As Below	Ongoing	As below	Co-funding from external partners
Capex	Indirect – achieved through contracts	Ongoing	Co-funding from external partners	
Revenue	To be determined based on patronage	Ongoing	Co-funding from external partners and fares paid by users	Multiple revenue sources.
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>		300,000	300,000	300,000	300,000	300,000+
<b>Revenue WRC</b>	-	51,450	51,450	51,450	51,450	51,450
<b>Revenue NZTA</b>	-	153,000	153,000	153,000	153,000	153,000
<b>Revenue Local Authority</b>	-	95,550	95,550	95,550	95,550	95,550

**Thames-Coromandel**

Description	Amount	Timing	Funding Source	Comments
Labour	Covered under existing resources for Public Transport	Ongoing	Combination NZTA and WRC	
Opex	As Below	Ongoing	As below	Co-funding from external partners
Capex	Indirect – achieved through contracts	Ongoing	Co-funding from external partners	
Revenue	To be determined based on patronage	Ongoing	Co-funding from external partners and fares paid by users	Multiple revenue sources.
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Operational</b>	150,000	150,000	150,000	150,000	150,000	150,000+
<b>Revenue WRC</b> -	0	0	0	0	0	0
<b>Revenue NZTA</b> -	76500	76500	76500	76500	76500	76500
<b>Revenue Local Authority</b> -	73500	73500	73500	73500	73500	73500

### 5.1.1 Funding partnerships

NZTA is the primary funding partner for all public transport services, providing 51% of funding for eligible public transport services.

**Waipa District Council** – contributes to a portion of the local share for funding split 65%/35% of local share between Waipa DC and WRC

**South Waikato District Council**– contributes to a portion of the local share for funding split 65%/35% of local share between Waipa DC and WRC

**Matamata-Piako District Council**– contributes to a portion of the local share for funding split 65%/35% of local share between Waipa DC and WRC

**Thames-Coromandel District Council** – for services entirely outside of the Hamilton urban network with no connections, the local share is provided entirely from TCDC. No services are currently proposed to connect through to Hamilton.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- In each instance, the funding has assumed that the services will be eligible for NZTA funding, that there is a local share commitment from the partnering local authority and that there is a farebox recovery ratio of 30%.

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES – contingent on the outcomes of the network reviews.

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

Delivery Approach –Operational

### 6.1.2 Scope/deliverables

In Scope

- Service implementation arising from options developed to support district reviews. This includes both new services and adaptation of existing services.

Out of Scope

- District reviews and implementation of services in North Waikato

- District reviews and implementation of services in Hamilton
- Other public transport delivery projects.

### 6.1.3 Key milestones

Milestone	Completion Date
New or updated services implemented for Waipa District	Jan 2019
New or updated services implemented for South Waikato District	Jun 2019
New or updated services implemented for Matamata-Piako District	Jun 2019
New or updated services implemented for Thames-Coromandel District	Jun 2018

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
NZ Transport Agency	Co-investor in public transport infrastructure and services	Partner
Waipa District Council	Co-investor in public transport infrastructure and services in their district.	Partner
South Waikato District Council	Co-investor in public transport infrastructure and services in their district.	Partner
Matamata-Piako District Council	Co-investor in public transport infrastructure and services in their district.	Partner
Thames-Coromandel District Council	Co-investor in public transport infrastructure and services in their district.	Partner
Community	Users of public transport services.	Engage
Public Transport operators	Implementers of public transport contracts and delivery.	Engage

### 6.1.5 Business change/organisational impact

#### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Implement changes recommended by business case outcomes resulting from district reviews, including increasing services where required. Contracting and monitoring services.	Operational delivery by the public transport operations team.
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

#### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Ongoing monitoring of services	Operational delivery by the public transport operations team.
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

### 6.1.6 Ongoing operational management

Resulting deliverables/product will go to Public Transport Operations for ongoing business as usual management. No impact on other council services, existing business structures, roles and responsibilities. Skills required to carry out this work held in-house.

### 6.1.7 Assumptions, constraints and dependencies

Public transport service levels improvements are dependent on related PT services being funded and delivered by partners including district councils as approved organisations and the NZTA.

### 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
Misalignment between the outcomes of district reviews and the Regional Public Transport Plan and individual council Long Term Plans of partner organisations.	Service improvements proposed may not deliver on the expected benefits of the RTP	Moderate	Stakeholder engagement and communication is maintained through the collaborative development of district reviews and services and outcomes sought.

# Hamilton Urban Public Transport

<b>GOA:</b>	Public transport
<b>Activity Name:</b>	Public Transport
<b>Function</b>	Provision of bus services
<b>Service</b>	Hamilton Urban
<b>Financial Budget Code:</b>	T1201

## 1.1 Review and approval

Prepared By:	Lisette Balsom, Senior Policy Advisor	Date
Reviewed By:	Andrew Wilson, Manager Public Transport Operations	Date
Signed off By:	Mike Garrett, Chief Finance Officer	Date

## 1.2 Related documents

Document Title	Author	Document Reference
Regional Public Transport Plan Review: Draft Strategic Case	Lisette Balsom	11183709
Access Hamilton Review strategic case	Katherine Johns, Hamilton City Council	

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

Hamilton urban bus services are informed by two key pieces of work: the Access Hamilton Review strategic case, and the Waikato Regional Public Transport Plan (RPTP) review strategic case.

Access Hamilton is a programme that sets out the basis for Hamilton's transport planning and investment over the next 30 years. It contributes to the city's land use and transport objectives in Hamilton's 10 year plan and District Plan, and the Regional Policy Statement and Regional Land Transport Plan. WRC and NZTA participated in its development.

The RPTP is a statutorily required document prepared by the Waikato Regional Council, that guides the planning and development of the regional public transport system over the next 10 years (2018-2028).

Key problems identified from these strategic cases are:

- Hamilton's growth has been faster than projected and the gap between demand, supply and desirable levels of service and safety is growing



- This population growth and increasing dependency on cars is causing congestion in Hamilton and surrounding towns, hampering economic development and community wellbeing
- Poor perceptions and journey experiences are a barrier to retaining and growing public transport patronage.

The proposal for Hamilton urban services to address the problems identified is for incremental improvement to public transport in Hamilton over 10 years through significant increase in investment by HCC, NZTA and WRC.

The long term objective for increased investment in public transport is that more people and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs. For the Access Hamilton Strategy, the objective is to reach 7% public transport mode share within Hamilton within 10 years (currently 3%).

For the Regional PT Plan, identified benefits of significant investment in public transport are:

- A transport system that moves people more efficiently and affordably, influencing the way land is used to increasingly enhance the attractiveness and liveability of our urban areas
- Increased numbers of people have access to employment, education, and healthcare, increasing economic and social wellbeing of communities.

Success will be measured by increased patronage per head of population, improved public transport journey time on key routes, and increased access to services.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Operational – BAU Planned Growth</b>	250 (WRC share estimate \$122,000*)	500 (WRC share estimate \$250,000*)	750 (WRC share estimate \$367,000*)	750 (WRC share estimate \$367,000*)	750 (WRC share estimate \$367,000*)	750 (WRC share estimate \$367,000*)
<b>Operational – Maintaining Service Levels</b>	200 (WRC share estimate \$100,000*)	400 (WRC share estimate \$200,000*)	600 (WRC share estimate \$300,000*)	600 (WRC share estimate \$300,000*)	600 (WRC share estimate \$300,000*)	600 (WRC share estimate \$300,000*)
<b>Mass Transit Plan</b>	500 (WRC share estimate \$125,000*)					
<b>Access Hamilton Service Level Improvements</b>			500 (WRC share estimate \$250,000*)	1,000 (WRC share estimate \$300,000*)	1,000 (WRC share estimate \$300,000*)	1,000 (WRC share estimate \$300,000*)

NB – Outer years 3 to 4 onwards, estimates are provisional and subject to further refinement through the Mass Transit Plan.

### 2.1.1.1 Funding source

Funding for public transport is comprised of two key components, which includes;

- fare revenue from passengers, and;
- public subsidy requirements

Public funding for PT transport services is dynamic in that the amount of public subsidy required directly relates to usage of services, the amount of fare revenue received and service levels (cost of operating services). For example, the more fare revenue received, the less public subsidy that is required and vice versa. While higher service levels cost more and tend to increase both patronage and public subsidy requirements.

At present about 35% of total operating costs is covered by fare revenue from passengers. The remaining 55% is the public subsidy requirement.

The public subsidy requirement is jointly funded by local and central government as follows:

- 51% from central Government via the NZ Transport Agency
- 49% from local share funding leveraged by Regional Council and respective District Councils

For Hamilton urban services local share funding is leveraged by WRC via a Hamilton PT targeted rate. For those services that operate entirely outside of the Hamilton urban area, local share funding is provided by the relevant local authority. Where connections are made into the Hamilton urban network from satellite towns local share funding is split evenly between WRC's Hamilton PT targeted rate and funding from the respective district council.

### 2.1.1.2 Funding partnerships

- *Passengers via fare revenue*
- NZTA is the primary funding partner for all public transport services, providing 51% of funding for eligible public transport services.
- District councils

## 2.2 Corporate support service implications

Consideration	Yes/No	Discussed with Activity Lead?
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No	John Crane - Yes / No
Does the work include the procurement, or capture, of new data sets?	Yes	Gill Lawrence - No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes	Gill Lawrence - No
Does the work require analysis or modelling of spatial data?	No	Gill Lawrence - Yes/No
Does the work require the establishment of new depots or offices?	No	Trevor Martin – Yes/No
Does the work require the use of additional fleet vehicles?	No	Trevor Martin – Yes/No
Does the work require additional resources (FTE or contract)?	No	If yes, complete section 2.2.1

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	12.1	2	0	0	0	0	0
<b>Fixed Term</b>	0	0	0	0	0	0	0
<b>Contract</b>	0	0	0	0	0	0	0

Additional staff resource is required to support the operation of the new electronic ticketing system which has tag on tag off functionality, which will result in increased customer interface, increased patronage growth and contract management business support.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

#### **Problem**

The current review of the Regional Public Transport Plan (RPTP) has identified three key problems through a business case approach:

- Population growth and increasing dependency on cars is causing congestion in Hamilton and surrounding towns, hampering economic development and community wellbeing.
- Lack of suitable transport options is limiting access to essential services and employment, impacting on economic and social viability of communities.
- Poor perceptions and journey experiences are a barrier to retaining and growing PT patronage.

One of the key inputs into the RPTP will be the outcomes of the review of the Access Hamilton Transport Strategy. Access Hamilton outlines a strategy for improving the safety and efficiency of the city's transport network. A key component of the strategy is to ensure the city's transport system has the capacity to accommodate growth and enable economic development. Key problems identified for Hamilton transport are:

- Economic Development - Growth and economic development is happening faster than anticipated leading to congestion and demand for transport investment earlier than planned. This requires a transport system that is robust and provides suitable levels of service and reliable travel times for all modes of transport for accessing and moving around the city
- Transport Choice - Our transport system has focused on cars resulting in low use of other modes and higher future cost for transport. To avoid significant future costs and disruptive interventions there is a requirement to increase mode share for passenger transport and active modes. A mass transit plan will be developed between WRC, HCC and NZTA in 2017/18 to guide the most appropriate investment in infrastructure and service provision.

If current population trends continue along with continued dependency on cars, the city will increasingly experience severe congestion. This in turn limits economic productivity, liveability of the city and the wellbeing of its people.

The Access Hamilton Transport Strategy identifies current transport trends dominated by low occupancy cars as being unsustainable. In essence the city cannot build enough capacity to cater for cars and will be increasingly reliant on the public transport system and active modes to enable efficient movement of people.

Currently over 90 percent of all journeys within Hamilton are undertaken by car. The average occupancy of private cars is 1.2 passengers per vehicle and the physical space required to cater for the efficient movement of low occupancy vehicles is significant. At present population growth is resulting in more cars on our roads, increasing congestion and travel times and placing limitations on the economic and social wellbeing of our communities and liveability of the city.

### ***Rationale***

Census data reveals that the dominant mode of transport in Hamilton is the car and this is likely to continue without intervention. We need to increase uptake of multiple occupancy vehicle trips, and cycling and walking for short distance journeys, to achieve investment objectives in the long term.

Reducing reliance on cars and ensuring the transport network can accommodate growth will require significant improvements to the city's public transport infrastructure (provided by HCC) and services provided by WRC.

The Access Hamilton Strategy is seeking to significantly increase public transport mode share over time. Increasing mode share within Hamilton will require significant increases in investment in both public transport services and infrastructure.

Transport infrastructure will need to increasingly include public transport priority measures, such as traffic signal pre-emption and bus priority lanes, in order to enable service reliability and travel time advantage over cars. PT services will need to offer higher service frequencies and more direct routes between key population catchments and activity centres in order to be an attractive alternative to car travel.

Achieving any modal shift target will require additional investment and coordinated programmes across both HCC and WRC. The cost of the respective PT infrastructure and service improvements programmes would be dependent on service levels and timeframes for implementation. Programme options will be investigated through the development of a Mass Transit Plan for Hamilton and the wider sub-region.

It is anticipated that the initial stages of Access Hamilton work will involve a public transport investigation through a Mass Transit Plan to identify the right mix of infrastructure and service improvements. This will be done in 2017/18 leading on to implementation in the latter part of the 2018-2028 LTP. Funding implications for WRC are yet to be quantified.

The targets below, developed by the Access Hamilton Task Force, set the direction for transport over the next 30 years with a strong focus on the first 10 years. The 30 year targets for transport choice will be developed in conjunction with the Mass Transit Plan to be finalised in 2017/18.

Growth and Economic Development Measures		Current	10 year	30 year
Measure 1: Access for housing		4,000 hhs	11,638 hhs	33,300 hhs
Measure 2: Intersections where demand exceeds capacity		27	<= 27	

Transport Choice Measures		Current	10 year	30 year
Single car occupancy		80%	70%	TBC
Mode share for alternatives	Bus	3%	7%	TBC
	Walking/cycling	11%	22%	TBC
	%age trips <2km by foot	26%	50%	TBC
Public transport is easy to get to		80% agree	85% agree	TBC

### ***Proposal for change and associated timeframes***

The proposal is for incremental improvement to public transport in Hamilton over 10 years.

In the short term (1-3 years) the key priorities for public transport services are to:

- Increase the reliability of existing services – with increasing network congestion and travel times additional resource is required to maintain PT service frequencies and address declining service reliability
- Ensure existing PT services are extended to provide connectivity for residential growth areas
- Develop and agree a Mass Transit Plan in partnership with key stakeholders that identifies the future PT network design, service levels and infrastructure required to enable greater mobility of people while reducing our reliance on low occupancy vehicles.

In the medium term (4-10 years) key public transport priorities are to:

- Increase public transport mode share and reduce the city's reliance on low occupancy vehicles.

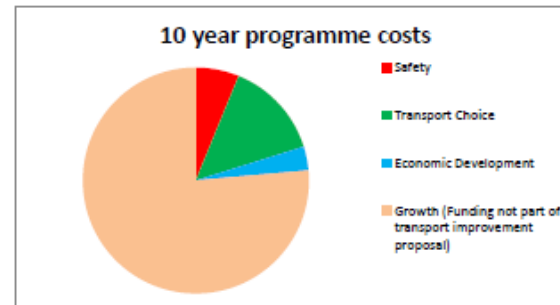
It is important that assumptions around patronage growth in the RPTP to address congestion are supported by the required investment by WRC and HCC.

Current proposed Hamilton City Council projects going for public consultation in 2018 are listed in the table on the next page.

Running alongside the RPTP review is a strategic case to examine inter-regional connections between Hamilton and Auckland. The outcome of the Hamilton to Auckland Strategic Case could identify additional LTP funding requirements to move to the next stage in the process.

AHS Outcome	Project	Total	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Safety	341 Minor Improvements	\$20,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Safety	Gordonton Road roundabouts -Thomas/Puketaha & ped/cycle path	\$11,700,000	\$4,700,000	\$2,000,000	\$4,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Safety	324 Grey/Cook Safety Upgrade	\$2,040,000	\$400,000	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0	\$0
Safety	324 Grey/Beale Safety Upgrade	\$1,530,000	\$30,000	\$0	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Safety	324 Grey/Wellington Safety Upgrade	\$2,040,000	\$400,000	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0	\$0
Safety	324 Tristram/Rostrevor Safety Upgrade	\$4,080,000	\$0	\$0	\$0	\$0	\$80,000	\$4,000,000	\$0	\$0	\$0	\$0
Safety	324 Lake/King Safety Upgrade	\$3,060,000	\$0	\$0	\$0	\$0	\$60,000	\$3,000,000	\$0	\$0	\$0	\$0
Safety	324 Pembroke/Ruakiwi/Palmerston Safety Upgrade	\$6,120,000	\$0	\$0	\$0	\$0	\$120,000	\$0	\$6,000,000	\$0	\$0	\$0
Safety	324 Anglesea/Bryce Safety Upgrade	\$1,550,000	\$50,000	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Safety	Wairere/Huntington	\$5,750,000	\$150,000	\$0	\$0	\$0	\$5,100,000	\$500,000	\$0	\$0	\$0	\$0
Choice	Bus Stop Infrastructure	\$6,500,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
Choice	Integrated Transport Modes	\$15,000,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Choice	Mass Transit Corridor Priority	\$21,000,000	\$200,000	\$0	\$1,500,000	\$2,500,000	\$2,500,000	\$5,250,000	\$3,000,000	\$0	\$3,250,000	\$2,800,000
Choice	531 Mass Transit Interchanges	\$4,300,000	\$200,000	\$0	\$0	\$0	\$100,000	\$2,000,000	\$2,000,000	\$0	\$0	\$0
Choice	531 Mass Transit Intersection Priority	\$10,700,000	\$200,000	\$1,500,000	\$1,500,000	\$500,000	\$3,500,000	\$1,500,000	\$1,000,000	\$1,000,000	\$0	\$0
Choice	531 Rotokauri Park and Ride	\$9,650,000	\$6,150,000	\$500,000	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Choice	Rotokauri Rail Platform	\$2,000,000	\$750,000	\$0	\$0	\$1,250,000	\$0	\$0	\$0	\$0	\$0	\$0
Choice	Transport Centre Rejuvenation	\$5,480,000	\$150,000	\$5,330,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Choice	Bus Maintenance Shed Upgrade	\$800,000	\$800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Choice	452 BP Biking Connectivity Projects	\$15,500,000	\$1,000,000	\$2,000,000	\$2,000,000	\$3,000,000	\$3,000,000	\$0	\$1,000,000	\$1,500,000	\$1,000,000	\$1,000,000
Choice	452 BP School Link PT and Cycleway	\$20,000,000	\$2,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Choice	452 Te Awa South River Ride	\$4,000,000	\$0	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Choice	452 BP Central City	\$3,100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000	\$0	\$0
Choice	452 BP Citywide Biking Signage	\$300,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Choice	452 BP University Route	\$7,650,000	\$150,000	\$0	\$0	\$0	\$0	\$0	\$4,000,000	\$3,500,000	\$0	\$0
Choice	Whitiora Bridge Shared Footpath	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000
Choice	Kirikiriroa Bridge Widening	\$3,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$3,000,000
Economic Development	cross city connector - Heaphy terrace signals	\$4,875,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350,000	\$2,250,000	\$2,275,000
Economic Development	324 Pembroke/Selwyn Capacity Upgrade	\$4,080,000	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$4,000,000	\$0	\$0
Economic Development	324 Tristram/Collingwood Capacity Upgrade	\$5,100,000	\$0	\$100,000	\$0	\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0
Economic Development	324 Peachgrove/Clyde Capacity Upgrade	\$4,080,000	\$0	\$80,000	\$0	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Economic Development	324 Fairfield Br/River Rd Capacity Upgrade	\$3,060,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000	\$0
Economic Development	324 Horsham/Thomas Capacity Upgrade	\$3,570,000	\$0	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,500,000	\$0
Economic Development	324 Grey/Te Aroha Capacity Upgrade	\$5,100,000	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$5,000,000	\$0	\$0
Economic Development	324 Pembroke/Ohaupo Capacity Upgrade	\$2,040,000	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$0
		\$219,955,000	\$21,160,000	\$27,510,000	\$23,650,000	\$22,400,000	\$22,610,000	\$25,400,000	\$21,150,000	\$22,500,000	\$19,350,000	\$14,225,000

Total Programme Target \$ 220,000,000  
 Expected Revenue -\$112,177,050  
 Gross Cost (Excl. Opex) \$219,955,000



## 3.2 What will success look like (high level benefits)

The long term outcome of increased investment in public transport is that more people and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

For the Access Hamilton Strategy, the objective is to reach 7% public transport mode share within Hamilton within 10 years.

For the Regional PT Plan, identified benefits of significant investment in public transport are:

**BENEFIT ONE:** A transport system that moves people more efficiently and affordably, influencing the way land is used to increasingly enhance the attractiveness and liveability of our urban areas

A key benefit of moving people more efficiently and effectively, particularly around Hamilton city, is the corresponding improvement in community wellbeing. Decreasing the priority of planning for cars while correspondingly increasing provision for public transport priority will also result in a more attractive urban form and efficient use of land.

As public transport takes up less room per person to move people than single occupancy vehicles, more people can be moved using less space, creating increasing efficiencies for the network. Economies of scale will allow for public transport to become even more affordable, attracting increased demand for more public transport (and correspondingly pedestrian)-friendly environments. Environments which prioritise people over cars are more attractive to residents, and contribute to greater perceptions of safety and wellbeing, and therefore liveability of urban areas.

Addressing poor perceptions and journey experiences of public transport and the quality of facilities and services will increase use of public transport in the region. Greater participation in public transport removes motor vehicles from roads. Increased use of public transport has environmental benefits, in particular reducing congestion and increasing traffic flow efficiency. The latter also carries economic benefits.

Increased participation in public transport will therefore have economic, environmental, and health benefits that have flow on effects for the community.

The key performance indicators to measure this benefit are:

KPI 1	Increased patronage per head of population
KPI 2	Improved public transport journey time on key routes

**BENEFIT TWO:** Increased numbers of people have access to employment, education, and healthcare, increasing economic and social wellbeing of communities

One of the primary benefits of creating an effective public transport network will be a more vibrant and liveable city for both residents and visitors.

There are many obvious benefits to population health through increased participation in active transport modes and getting more people, more active, more often.

The social benefits of enabling people to travel independently and safely around their local community using a cheap and flexible transport mode cannot be underestimated. Communities that move around also interact with each other and are strengthened in the process.

The liveability of a city is largely measured by the ease in which families can transport themselves to the places they wish to go, whether it be to school, work or the local shops. Providing good transport choices can immensely improve the liveability of an area. The ability to take public transport to locations such as school, town and recreational facilities contributes to engagement in activities and to the vibrancy of a community. There is evidence to suggest that pedestrians will linger for longer in shopping centres and thus potentially spend more. Pedestrians also tend to make use of their local neighbourhood shops.

Having Hamilton as a destination with vibrant communities and good networks will attract visitors, which in turn will have flow-on economic benefits. Making the most of the city's central geographical position and the region as 'home' to high performance sports and visitor attractions will also attract increased interest.

From an environmental perspective, public transport is seen as a more efficient mode. Public transport is also relatively much safer to travel in than by car, motorcycle or bicycle.

The key performance indicators to measure this benefit are:

KPI 1	Increased access to employment and education
KPI 2	Increased access to community services.

### 3.3 Consequences of not proceeding

Not meeting patronage growth expectations of the RPTP and the Access Hamilton Strategy would result in increased congestion, higher future transport costs and reduced economic productivity for Hamilton and the sub-region.

Any reduction in urban public transport spend would also cause political fallout with Hamilton City and other stakeholders as WRC has been an active participant in the development of the strategy and expected to work in partnership to deliver on the outcomes.

The consequence of communities that are planned for vehicle trips and not for people is that the environments themselves are not friendly for active modes; urban form is not integrated with sustainable transport choices; and less than best-practice accessibility results in reduced levels of participation. People therefore continue to use cars as their primary mode of transport, causing congestion in our towns and city, spending increasing times in cars which contributes to increases in harmful emissions and decreases productive and personal time spent elsewhere, and becoming decreasingly active. The attractiveness of living and working in the Waikato as a central and accessible region would therefore not be capitalised on.

The consequence of trips not being made because of expense or inconvenience is that opportunities for participation in health, social, education and employment are foregone.

Local social participation is a determinant of good health and therefore local access and mobility contribute to healthy, vibrant communities. Social and community participation contributes to wellbeing generally, particularly for older people.<sup>1</sup> Stopping driving, for example, is one of the most

<sup>1</sup> Koopman-Boyden, P.G. & Moosa, S. *Living alone as a lifestyle among older people in New Zealand*, Paper presented at New Zealand Association of Gerontology Conference: The Age of Ageing, 12-14 September 2014, Dunedin, New Zealand



significant predictors of depressive symptoms in older people<sup>2</sup> and the influence of mobility on quality of life for older people is very high.<sup>3</sup>

The consequences of poor perceptions and journey experiences on public transport are that urban centres in particular in the Waikato are dominated by cars. The proportion of commuters who use public transport is low in Hamilton compared to other New Zealand centres, contributing to less people supporting it, worsening performance, which in turn causes public transport to be less attractive. Congestion will continue to increase as the population increases, who will continue to use the car as a dominant transport mode.

**PERCENTAGE OF COMMUTERS WHO USE PUBLIC TRANSPORT**

Hamilton	3%
Auckland	7.4%
Wellington	21%

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Encouraging regional development	People and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority</i> Shape the development of the region so it supports our quality of life		
<i>Priority Action</i> We are facilitating action to ensure people have access to essential services, such as by improving regional transport and broadband connections.	Strongly contributes	By ensuring people and communities have access to transport, people are better able to access essential services, education, employment and social opportunities.

Legislation	Alignment	How will this change improve delivery?
The purpose of the Land Transport Management Act 2003 is to contribute to an effective, efficient, and safe land transport system in the public interest	Explicit	Creating a transport network that prioritises public transport and provides for effective and efficient access to essential services, employment and education leads to a more effective and efficient land transport system in the public interest.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Government Policy Statement on Transport	High	The GPS is not yet released under the new government, but is likely to place significance on public transport and moving people efficiently.
Access Hamilton Strategy	High	Increased investment in public transport to ease congestion and provide for more liveable communities is an explicit outcome of the Access Hamilton strategy.

<sup>2</sup> Marottoli, R. A., Mendes de Leon, C. F., Glass, T. A., & Williams, C. S. (1997). Driving cessation and increased depressive symptoms: prospective evidence from the New Haven EPESE. *Journal of the American Geriatrics Society*.

<sup>3</sup> Mollenkopf, H. (Ed.). (2005). *Enhancing mobility in later life: personal coping, environmental resources and technical support; the out-of-home mobility of older adults in urban and rural regions of five European countries* (Vol. 17). Ios Press.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Community expectation that a public transport system will be provided through the Regional Public Transport Plan, and if there is a public transport system WRC is required to have overarching responsibility i.e. WRC has to contract this service.	Strong	Community expectations of WRC to provide an efficient and effective public transport service better met.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

**Status Quo/Option 1:** Continue with status quo

**Option 2:** Introduce/increase services in areas of new development, while maintaining current levels elsewhere

**Option 3:** Implement objectives of Regional PT Plan review and Access Hamilton Strategy - move from a coverage based PT system to a prioritised transit system.

### 4.1 Specific objectives

1. Moving increased numbers of people more efficiently and affordably
2. Land use is influenced so that urban areas are increasingly attractive and liveable
3. People have increased suitable choices in how they get to where they need and want to be.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option 2	Option 3
1. Moving increased numbers of people more efficiently and affordably	Does not meet	Meets in part	Meets
2. Land use is influenced so that urban areas are increasingly attractive and liveable	Meets in part	Meets in part	Meets
3. People have increased suitable choices in how they get to where they need and want to be.	Does not meet	Meets in part	Meets

## 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo/Option 1 (Maintaining service levels plus Mass Transit Plan)	\$23.01M	(NZTA 51% = \$3M) (Fares 30% = \$1.77M)		5.9M	
Option 2- BAU with planned growth (Planned growth and Mass Transit Plan)	\$28.28M	(NZTA 51% = \$3.7M) (Fares 30% = \$2.18M)		7.25M	
Option 3- move to prioritised transit system (Maintaining service levels, planned growth, Mass Transit Plan, and Hamilton service level improvements)	\$34.52M	(NZTA 51% = \$4.51M) (Fares 30% = \$2.66M)		8.85M	

Public transport benefits calculated using the Benefit Costs Efficiency ratio of 3.9 to every \$1 invested in New Zealand (NZTA Public Transport Service Programme Cost Benefit Appraisal).

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is option 3, for the following reasons:

- The overall objective of this option would be to move from bus services that currently attempt to provide both coverage and convenient services for commuters within a non-prioritised network, to a network that clearly identifies and prioritises key routes for rapid transit bus travel during peak times, while still providing coverage for other areas.
- The objectives for this option are to create direct and frequent public transport routes with travel advantage over cars at peak times, and establish priority measures for public transport (eg bus lanes, and bus priority at intersections) in the network.
- Specific benefits for this option include enabling high volume movement of people efficiently and affordably, faster and reliable travel times, and direct and frequent services.
- Public transport also uses up less space to move people than single occupancy vehicles. If a transport network is planned with increased public transport as a priority, less land space will need to be used for roading and parking.

# 5 Financial analysis and procurement (Financial & Commercial Case)

## 5.1.1 Funding partnerships

All WRC share estimates are assuming NZ Transport Agency subsidy and 30% farebox recovery (ie money recouped through ticket price).

## 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- We achieve a 30% farebox recovery
- The City grows as per the forecasts provided by HCC

- NZTA continue to provide a 51% FAR
- HCC makes the necessary PT infrastructure investment to support modal behaviour change

### 5.1.3 Additional commentary

### 5.1.4 Procurement strategy

The current PTOM contracts allow for increased service provision through the contract variation rates

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach –Operational

### 6.1.2 Scope/deliverables

The objectives for this option are to create direct and frequent public transport routes with travel advantage over cars at peak times, and establish priority measures for public transport (eg bus lanes, and bus priority at intersections) in the network.

Specific actions are to:

- Develop a long term public transport service and infrastructure plan for the city and surrounds (a “Mass Transit Plan”)
- Improve PT service levels between Hamilton and regional towns such as Cambridge/Te Awamutu
- Investigate and establish better public transport connections with Auckland.

Regarding the Mass Transit Plan, RPTP stakeholders have discussed that such a plan should consider all modes and their integration, and decide which modes to prioritise (and disincentivise). The plan should provide for express services, targeted services to population, and working with private partners to investigate and provide for where big groups need to be (eg large employers).

The overall objective of this work is to move from bus services that currently attempt to provide both coverage and convenient services for commuters within a non-prioritised network, to a network that clearly identifies and prioritises key routes for rapid transit bus travel during peak times.

Out of Scope is:

- Regional public transport services that do not connect with Hamilton city.
- Total mobility services.

### 6.1.3 Key milestones

*Outline the high level milestones and timeline here. A milestone is a significant event that marks the end of a phase of work or the completion of a major deliverable.*

Milestone	Completion Date
New services implemented for new development areas	Ongoing
Access Hamilton adopted/endorsed by HCC, NZTA and WRC	Mar 2018

Mass Transit Plan commences	Years 3 to 4 of 2018 LTP
Regional Public Transport Plan 2018-28 adopted	October 2018
Mass transit services implemented	Years 2/3 of 2018 LTP

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Hamilton City Council	Investor in public transport infrastructure and services in Hamilton City and for services entering the city.	Partner
NZ Transport Agency	Co-investor in public transport infrastructure and services	Partner
Regional Territorial Authorities with services or intended services into Hamilton City	Co-investor in public transport infrastructure and services in their district.	Partner
Community	Users of public transport services.	Engage
Public Transport operators	Implementers of public transport contracts and delivery.	Engage

### 6.1.5 Business change/organisational impact

*Describe the impact this work will have on areas of the business – overall, by Directorate, Section or Team and outline the proposed approach to managing the change.*

#### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Implement changes recommended by Mass Transit Plan process with HCC, including increasing services where required. Contracting and monitoring services.	in partnership with HCC, NZTA and other key stakeholders.
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

#### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Ongoing monitoring of services	
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

### 6.1.6 Ongoing operational management

Resulting deliverables/product will go to Public Transport Operations for ongoing business as usual management. No impact on other council services, existing business structures, roles and responsibilities. Skills required to carry out this work held in-house.

### 6.1.7 Assumptions, constraints and dependencies

Public transport service levels improvements are dependent on related PT infrastructure improvements being funded and delivered by HCC and the NZTA.

### 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
Misalignment between HCC, WRC and NZTA's transport programmes.	Moderate: Infrastructure improvements and service improvements are not delivered simultaneously, so overall benefit of increased public transport not obtained.	Moderate	Continued inclusion of all three stakeholders in Regional PT Plan development, Access Hamilton Strategy implementation, and collaboration on Mass Transit Plan.

## Appendices

### 1 Appendix One: Evaluation of options

This section outlines the options evaluated. *As a minimum the status quo and one option must be described.*

#### 1.1 Status quo

##### 1.1.1 Option overview

The current state:

- Significant population growth in parts of the region is increasing transport demand
- Waikato people are increasingly using their cars
- Low percentage of commuters (3%) use public transport in Hamilton
- Urban design continues to prioritise cars over other modes
- Congestion is increasing because of population growth and increasing use of cars, in particular around Hamilton
- Perceptions of people who do not use public transport are not favourable to public transport
- Currently very few cost and time benefits of using public transport over private vehicles
- Our health and wellbeing are worsening because of increased use of cars.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• While patronage numbers have declined over previous years, the last 6-8 months have seen small increases in patronage, showing that an increasing number of people are using public transport.</li> <li>• People in Hamilton are provided with transport choice – an alternative to the private car.</li> </ul>	<ul style="list-style-type: none"> <li>• Population growth and increasing dependency on cars is causing congestion in Hamilton and surrounding towns, hampering economic development and community wellbeing.</li> <li>• Lack of suitable transport options is limiting access to essential services and employment, impacting on economic and social viability of communities.</li> <li>• Poor perceptions and journey experiences are a barrier to retaining and growing PT patronage.</li> <li>• Reduced service reliability as congestion increased resulting in declining customer satisfaction</li> <li>• Public transport patronage stagnation/decline- Potential to grow public transport not fully realised; environmental, health, and land use benefits not capitalised on.</li> </ul>

##### 1.1.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Encouraging regional development	People and communities are connected to some degree to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

##### 1.1.4 Assumptions, constraints and dependencies

- Ongoing dependency that Hamilton City Council will rate and provide for public transport infrastructure, while WRC will collect HCC rates for public transport services which WRC will administer.

### 1.1.5 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Public transport patronage stagnation/decline	Moderate	Moderate/likely	Current mitigation includes making public transport more appealing with initiatives such as free wifi on buses, USB chargers on-bus, realtime information app for services.

## 1.2 Option 2

### 1.2.1 Option overview

Introduce/increase services in areas of new development, while maintaining current levels elsewhere.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Increased transport choice for more people when coverage is improved.</li> <li>More people in Hamilton are provided with transport choice – an alternative to the private car.</li> </ul>	<ul style="list-style-type: none"> <li>Population growth and increasing dependency on cars is causing congestion in Hamilton and surrounding towns, hampering economic development and community wellbeing.</li> <li>Lack of suitable transport options is limiting access to essential services and employment, impacting on economic and social viability of communities.</li> <li>Poor perceptions and journey experiences are a barrier to retaining and growing PT patronage.</li> <li>People introduced to public transport network that does not provide advantage over private transport- Potential new public transport users put off and return to using private transport.</li> </ul>

### 1.2.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Encouraging regional development	More people and communities are connected to a better degree to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

### 1.2.4 Assumptions, constraints and dependencies

- Ongoing dependency that Hamilton City Council will rate and provide for public transport infrastructure, while WRC will collect HCC rates for public transport services which WRC will administer.

### 1.2.5 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Public transport patronage stagnation/decline, and therefore potential to grow public transport not fully realised; environmental, health, and land use benefits not capitalised on.	Moderate	Moderate	Making public transport more appealing with initiatives such as free wifi on buses, USB chargers on-bus, realtime information app for services. Also monitoring and review of services to check they are available to as many people as possible.



## 1.3 Option 3

### 1.3.1 Option overview

Implement objectives of Regional PT Plan review and Access Hamilton Strategy - move from a coverage based PT system to a prioritised transit system.

### 1.3.2 Pro's and Con's

Pro's	Con's
Increased public transport patronage per head of population, leading to improved levels of physical activity and air pollution caused by motor vehicles	Significant levels of increased investment required, with rating implications
Improved public transport journey time on key routes	
A transport system that moves people more efficiently and affordably	
Influence on the way land is used to increasingly enhance the attractiveness and liveability of our urban areas	
Less congestion- Businesses able to deliver goods more efficiently; people able to get to work more quickly	
Improved public transport travel times- Public transport has a travel time advantage over private vehicles	
Transport choice- More people in Hamilton are provided with transport choice – an attractive alternative to the private car.	
Greater wellbeing- People are more active, use less private vehicles which contribute to vehicle emissions	

### 1.3.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Encouraging regional development	More people and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

### 1.3.4 Assumptions, constraints and dependencies

- Ongoing dependency that Hamilton City Council will rate and provide for public transport infrastructure, while WRC will collect HCC rates for public transport services which WRC will administer.

### 1.3.5 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Lower than anticipated levels of patronage growth	Moderate	Moderate	Increased levels of investment need to be accompanied by complementary City Council policy changes which disincentivise the ease of private vehicle use, and marketing campaigns.

# North Waikato Public Transport Network Review Implementation

<b>GOA:</b>	Public Transport
<b>Activity Name:</b>	Public transport
<b>Function</b>	Public transport management and operations
<b>Service</b>	Implementation of North Waikato public transport review
<b>Financial Budget Code:</b>	T1201

## 1.1 Review and approval

Prepared By:	Vincent Kuo / Senior Policy Advisor	3 November 2017
Reviewed By:	Andrew Wilson/Manager Public Transport Operations	9 November 2017
Signed off By:	Mike Garrett/Chief Finance Officer	

## 1.2 Related documents

Document Title	Author	Document Reference
North Waikato Public Transport Network Review – Project Management Plan	Vincent Kuo	# 6530725
North Waikato Household Travel Survey Report August 2017	Susi Marinkovich	# 8840644
Stakeholder workshop on key transport problems and potential PT options – workshop notes (Nov 2017)	Vincent Kuo	# 9596466
Draft North Waikato PT options – engagement document (July 2017)	Susi Marinkovich / Andrew Wilson	# 10505110
Stakeholder and community engagement on draft options – summary of feedback	Vincent Kuo	# 11224473

## 1.3 Document change history

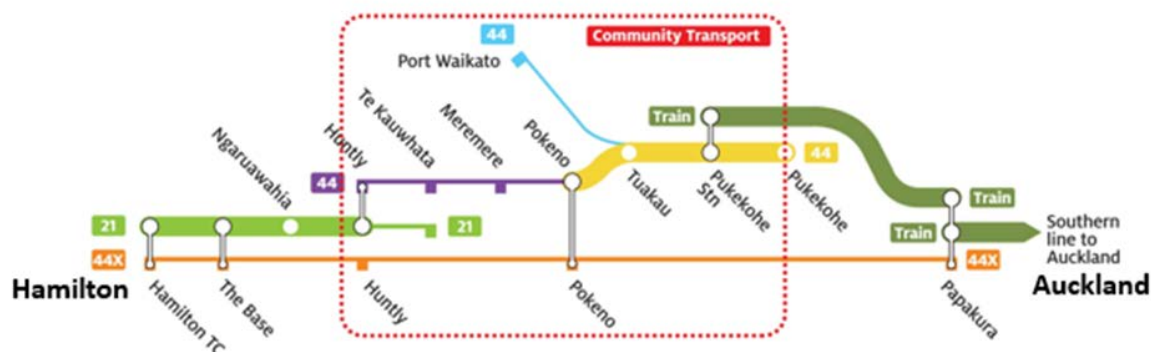
Version #	Date	Revision By	Description of Change

## 2 Executive summary

Waikato District Council, in partnership with Waikato Regional Council and NZ Transport Agency, is undertaking a review of public transport provision in the North Waikato area. The aim of this project is to identify short-term public transport options that can be implemented within the next 2018-28 Long Term Plan. The project is closely linked to the wider North Waikato Integrated Growth Management Programme Business Case (NW PBC) and will help to inform the review of the RPTP in respect to future public transport provision in North Waikato.

The North Waikato Public Transport Review has been progressed in accordance with the principles of NZTA's businesses case approach. The review is at the point where a list of potential options has been identified and refined through technical assessments and community/stakeholder consultation. The proposed service improvement options are outlined below:

## NW PT network improvement concepts



- **Pokeno to Pukekohe** (route 44 as shown in yellow) - Provision of a regular bus service between Pokeno and Pukekohe via Tuakau on weekdays and weekends. Designed to integrate with train services from Pukekohe to Auckland.
- **Huntly to Pukekohe** (route 44 as shown in purple) - Provision of a daily off-peak return service between Huntly and Pukekohe via north Waikato towns Monday to Friday, providing community connectivity and broader access to essential services.
- **Te Kauwhata to Hamilton** (route 21 as shown in green) – Extension of the existing Huntly bus service extended to Te Kauwhata for one return trip during peak periods on weekdays, providing access to employment, education and social opportunities
- **Hamilton, Huntly, Pokeno to Papakura Express Service** (route 44x as shown in orange) – Provision of a weekday commuter bus service intended to provide fast and direct access between Hamilton City, north Waikato towns and Auckland. This service could potentially be supplemented by park and ride facilities at the The Base, Huntly and Pokeno.
- **Port Waikato to Pukekohe** (route 44 as shown in blue) – retain existing once a week service, and potentially replacing this service with a community transport option, subject to further consultation with the community.
- **Community Transport Initiatives** – this option will investigate the opportunity of community initiated transport solutions to provide improved transport access, particularly in areas where public transport may not be a suitable/cost effective option.

These proposed service options were considered by Waikato District Council at its workshop on 1 November 2017 and will be included in the draft Waikato District Council's 2018-28 Long Term Plan for funding consideration.

## 2.1 Financial summary

The total cost and funding requirements from each contributing partner are set out in the diagram below:

	FUNDED BY				
	TOTAL COST	PASSENGER FARES	WAIKATO DISTRICT COUNCIL	WAIKATO REGIONAL COUNCIL	NZTA
<b>POKENO TO PUKEKOHE</b>	\$546,500	\$31,000	\$252,500	-	\$263,000
<b>HUNTLY TO PUKEKOHE</b>	\$90,850	\$3,256	\$42,594	-	\$45,000
<b>TE KAUWHATA TO HAMILTON</b>	\$52,000	\$7,500	\$11,000	\$11,000	\$22,500
<b>HAMILTON TO PAKURA</b>	\$320,000	\$102,000	\$53,250	\$53,250	\$111,500
	<b>\$1,009,350</b>	<b>\$143,756</b>	<b>\$359,344</b>	<b>\$64,250</b>	<b>\$442,000</b>

## 2.1.1 Funding profile

\$ (K) / Year	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Future Years
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>							
Pokeno to Pukekohe	\$546,500	\$558,523	\$570,811	\$583,368	\$596,202	\$609,319	\$609,319 (plus 2.2% yearly inflation)
Huntly to Pukekohe	\$90,850	\$92,849	\$94,891	\$96,979	\$99,113	\$101,293	\$101,293 (plus 2.2% yearly inflation)
Te Kauwhata to Hamilton	\$52,000	\$53,144	\$54,313	55,508	\$56,729	\$57,977	\$57,977 (plus 2.2% yearly inflation)
Hamilton to Papakura	-	\$320,000	\$327,040	\$334,235	\$341,922	\$350,128	\$350,128 (plus 2.3% yearly inflation)
<b>Total</b>	\$689,350	\$1,024,516	\$1,047,055	\$1,070,090	\$1,093,966	\$1,118,717	
<b>WRC share</b> (assuming NZTA subsidy and 14% farebox recovery)	\$24,313	\$65,664	\$67,108	\$68,652	\$70,300	\$71,987	\$71,987 (plus 2.4% yearly inflation)

### 2.1.1.1 Funding partnerships

Funding for Public Transport is administered through the Regional Council. There is a partnership arrangement with NZTA that funds 51% of eligible public transport services from the National Land Transport Fund. The remaining 49% is recovered via local share contributions.

For services that operate entirely outside of the Hamilton urban area (i.e. Pokeno to Pukekohe and Huntly to Pukekohe services), the local share is provided solely by Waikato District Council. Where connections are made into the Hamilton urban network, the local share funding is split between Waikato District Council and Waikato Regional Council.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

No additional FTEs are requested above the current available resources.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The Waikato District and in particular the North Waikato area has been experiencing significant growth, which has increased in the last 5 years, with the majority of growth over the past 10 years occurring in rural and rural residential zones. For example, growth in residential levels in Pokeno are 15 years ahead of projections at the time the Franklin District Growth Strategy was approved. The level of population growth is placing significant pressure on services and infrastructure, and the lack of public transport has been identified by the community as a barrier to accessing essential services along with education, employment and social opportunities.

Through the work on the North Waikato Public Transport Review and the North Waikato Integrated Growth Management Programme Business Case (NW PBC), two high-level problem statements have been identified and agreed by key transport partners through a facilitated Investment Logic Mapping exercise, and these are:

- **Problem 1** – Ad hoc responses to growth pressure is creating communities disconnected from services, amenities and employment (60%)
- **Problem 2** – Current and future demand on the transport network is impacting on safety, commercial activity and service reliability (40%)

The main issues for this area (described in the problem statements above) are, unplanned growth causing communities to become increasingly disconnected from essential services and employment and unaddressed increasing growth demands. This is contrary to the Future Proof Growth Strategy vision of compact urban areas around existing townships, where people can work, live and play. It is resulting in the transport network becoming inefficient and unsafe and has the potential to limit the North Waikato's ability to develop and accommodate the upper North Island's growth.

Whilst a long list of transport and land use interventions have been identified to support the delivery of the NW PBC, it is recognised that public transport will play a key role for improving transport connectivity between key growth nodes and within local communities. As part of the North Waikato Public Transport Review, a list of short-term public transport options have been identified and tested with the RPTP Development Subcommittee, Hamilton Public Transport Joint Committee, Waikato District Council and other key stakeholders and community groups.

Based on the stakeholder/community feedback and staff assessment, it was recommended that the following public transport options be included in Waikato District Council and Waikato Regional Council's 2018-28 long terms plans for funding consideration:

- A regular bus service between **Pokeno and Pukekohe** (via Tuakau) on weekdays and weekends (**no WRC funding commitment required**)
- A daily off-peak return service between **Huntly and Pukekohe** via north Waikato towns on weekdays (**no WRC funding commitment required**)
- A daily peak return service between **Te Kauwhata and Hamilton** on weekdays (**\$11,000 per annum from WRC**)
- A weekday commuter express bus service between **Hamilton, north Waikato towns and Papakura** (**\$53,250 per annum from WRC**): as a provisional activity for year two of LTP, subject to detailed feasibility assessments and the outcomes of Auckland to Hamilton Transport Connections Strategic Business Case.
- **Community Transport initiatives** – to develop a business model for coordinating and supporting community transport initiatives (*Note: a separate LTP business case has been developed for this activity*).

## 3.2 What will success look like (high level benefits)

A set of investment objectives have been identified by the North Waikato PBC project partners to clearly articulate what the outcomes of investment should be from addressing the problems identified. The investment objectives are:

- Improve North Waikato's liveability through increased access to, from and within the future urban areas, including to services and amenities, employment areas and town centres,
- Enhance Waikato's connectivity through increased effectiveness and efficiency of the multi modal transport network to, from and within the future urban areas,
- Improved national and regional economic growth through strengthening the performance of the Auckland and Waikato region connectivity and improving connections with the Waikato region, and
- Deliver on the Future Proof principles and provide infrastructure as required and consistent with development patterns set by the Future Urban Land Supply Strategy.

## 3.3 Consequences of not proceeding

Population growth is placing significant pressure on services and infrastructure and the lack of public transport has been identified by the community as a barrier to accessing essential services along with education, employment and social opportunities. Without providing adequate transport options, it is expected that communities will have restricted mobility and a sub-set of the community would not have access to an independent means of transport, limiting their economic and social wellbeing.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Encouraging Regional Development	People and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Shape the development of the region so it enhances quality of life</i>		
<i>We are facilitating action to ensure people have access to essential services, such as by improving regional transport and broadband connections.</i>	Strongly aligned	The PT service improvements in North Waikato will provide improved transport connections for towns within the North Waikato area, providing community connectivity and broader access to essential services.
<i>We work with other local and central government agencies to take a more co-ordinated approach to managing the impacts of the growth of Auckland on the Waikato.</i>	Strongly aligned	The PT service improvements in North Waikato will enable better transport connectivity between the north part of Waikato and Auckland, providing access to employment, education and social opportunities.

Legislation	Alignment	How will this change improve delivery?
Land Transport Management Act 2003	Explicit	<p>Land Transport Management Act requires that any public transport service operated in a region must be provided under contract with a regional council as part of a unit unless it is an exempt service and Council is required to have a Regional Public Transport Plan which outlines how we deliver transport activities.</p> <p>The North Waikato Public Transport Review has been undertaken, following the principles of NZTA's businesses case approach. The review also includes extensive engagement with key stakeholders, community groups and elected members.</p>

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Government Policy Statement on Transport	High	The GPS is not yet released under the new government, but is likely to place significance on public transport and moving people efficiently

## 4 Option evaluation

The North Waikato Public Transport Review has been progressed in accordance with the principles of NZTA's businesses case approach. The review was guided by a strategic case prepared through the North Waikato Integrated Growth Management PBC, and informed by a household travel survey, technical assessment and community/stakeholder feedback.

As part of the review, a list of potential public transport options has been identified and consulted with key stakeholders and community groups. A summary of stakeholder/community feedback and staff assessment is set out in the tables below.

## PT Options – POKENO TO PUKEKOHE

### Improvement Concepts



#### Service levels

- Weekdays - 40-min peak and 2 hourly off-peak – 6am to 8pm
- Weekends - 2 hourly all day - 7am to 8pm

#### Estimated cost and funding

- Total cost - \$546,500 p.a.
- WDC contributions - \$252,500

Stakeholder/community feedback	Staff assessment and recommendation
<ul style="list-style-type: none"> <li>• Strong support from key stakeholders and community groups about this option, and generally happy with the proposed service levels, particularly with 40min peak and weekend services.</li> <li>• Community feedback indicating that there is strong demand for this service option.</li> <li>• Minor feedback around bus timetable and estimated bus travel time – actual journey time could be longer than what was indicated in the timetable.</li> <li>• Need to consider the provision of PT infrastructure - currently no bus shelters in Tuakau and Pokeno.</li> <li>• Community would like understand more about the fares and ticketing system for this service (ie if the service will use AT or WRC ticketing system).</li> </ul>	<ul style="list-style-type: none"> <li>• This service will provide improved connections for Tuakau and Pokeno residents to Pukekohe, and will replace the current AT service (route 398)</li> <li>• Further discussion with AT is required to work through some of the operational details, including bus/train timetables, fares and ticketing, and contracting requirements.</li> <li>• Based on the community feedback and projected future growth in Tuakau and Pokeno, it is recommended that this bus option (with minor revisions to the timetable) be included in the draft WDC LTP for public consultation.</li> </ul>



## PT Option – Huntly to Pukekohe

### Improvement Concept



#### Service descriptions

- One daily return trip Monday to Friday, leaving Huntly at 7am and return from Pukekohe at 1.30pm
- Estimated travel time 1.5 hours each way

#### Estimated cost and funding

- Total Cost – \$90,850 p.a.
- WDC contributions - \$42,594

Stakeholder/community feedback	Staff assessment and recommendation
<ul style="list-style-type: none"> <li>• Support from key stakeholders and community groups.</li> <li>• Some suggestions were made about a new bus stop at Mercer</li> <li>• Some comments were made about the bus timetable/service levels – i.e. whether the timetable would allow enough time in Pukekohe prior to the return trip, and whether it should be a twice a day service connecting with the AT bus services that loop around Pukekohe.</li> </ul>	<ul style="list-style-type: none"> <li>• This service would replace the current fortnightly Hamilton to Pukekohe service (route 44), and provide improved connections for residents Huntly north to Pukekohe</li> <li>• Low cost/risk option (utilising off-peak vehicles from existing fleet)</li> <li>• Based on the community feedback, and staff assessment, it is recommended that this option be included in the draft WDC LTP for public consultation.</li> </ul>

## PT Option - TE KAUWHATA TO HAMILTON

### Improvement Concept



#### Service descriptions

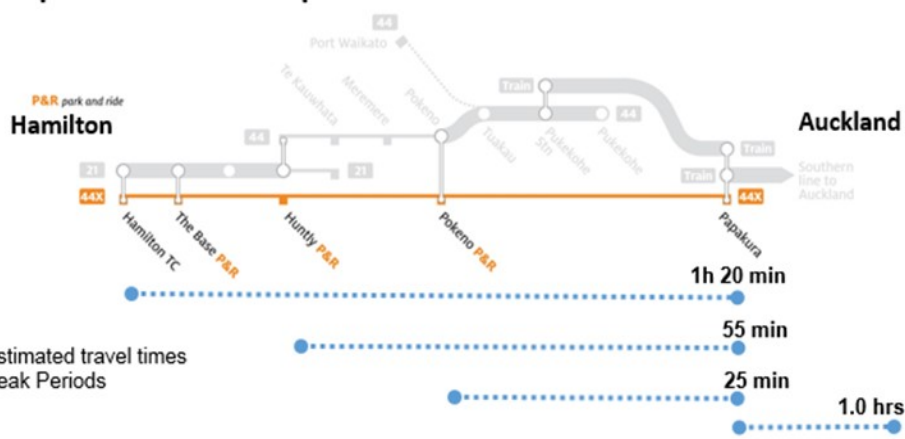
- One daily return trip Monday to Friday, leaving Te Kauwhata at 7am and return from Hamilton at 5.25pm
- Estimated travel time 1.2 hours each way

#### Estimated cost and funding

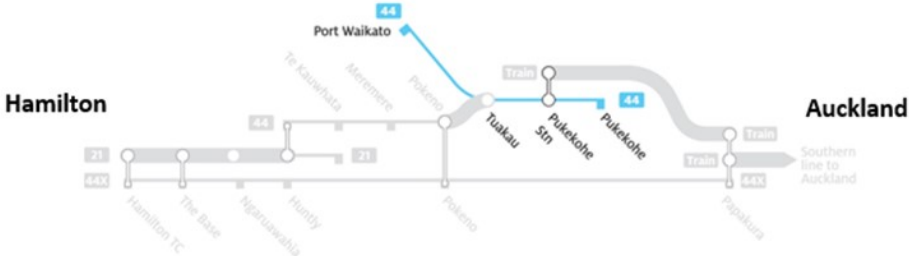
- Total Cost – \$52,000 p.a.
- WDC contributions - \$11,000

Stakeholder/community feedback	Staff assessment and recommendation

<ul style="list-style-type: none"> <li>• General support from key stakeholders and community groups.</li> <li>• Some suggestions about the service could start in Meremere.</li> <li>• Some comments were made about this service could be well utilized by school students (a lot of students are being driven to Huntly to catch Northern Connector services). Therefore it was suggested that this service should include an additional return trip for students to get back to Te Kauwhata.</li> </ul>	<ul style="list-style-type: none"> <li>• Extension of Northern Connector bus service to Te Kauwhata for one peak return trip in weekdays.</li> <li>• Provide access to employment and education</li> <li>• Strong growth projected for Te Kauwhata</li> <li>• Low cost/risk option</li> <li>• Based on the community feedback, and staff assessment, it is recommended that this option be included in the draft WDC LTP for consideration, subject to a capacity assessment of Northern Connector service.</li> </ul>
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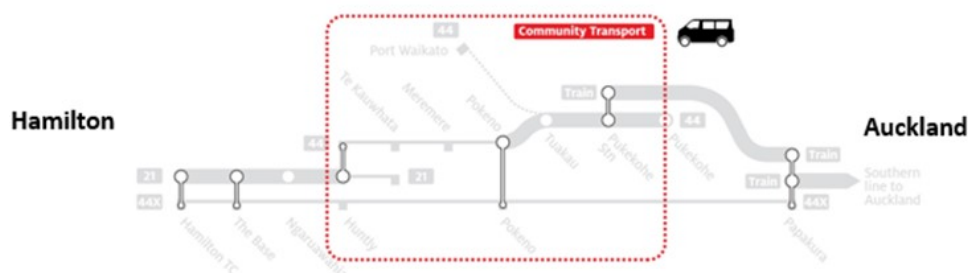
<h2 style="text-align: center;">PT Option – Hamilton to Papakura</h2>	
<p style="text-align: center;"><b>Improvement Concept</b></p>  <p style="text-align: center;">Weekday commuter bus service intended to provide fast and direct access between Hamilton, Huntly, Pokeno and Auckland – potentially supplemented by park &amp; ride sites.</p>	
Stakeholder/community feedback	Staff assessment and recommendation
<ul style="list-style-type: none"> <li>• High level support of the concept from elected members (apart from feedback from the HCC representative on the Auckland/Hamilton connection working party), stakeholders and community groups. Key matters/issues raised include: <ul style="list-style-type: none"> <li>○ Travel time reliability, particularly the congestion is getting worse on the Southern Motorway between Bombay and Papakura.</li> <li>○ Bus lanes and priority measures, both on the Southern Motorway and roads to Papakura Station are critical to ensure travel time reliability.</li> <li>○ Service frequency – general support for at least 2 trips per day on weekdays.</li> <li>○ Comments were made around potential bus stops and future Park and Ride sites,</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A wide range of feedback received on this option. Whilst they were generally supportive of the concept, there was however a number of issues raised, which will require further assessment to test the feasibility of this service.</li> <li>• It should also be noted that further work is being undertaken by cross-boundary partners (incl WDC, WRC, HCC, NZTA, Auckland Transport and Auckland Council) to identify potential option(s) for improving transport connections between Hamilton and Auckland (Transport Connections Strategic Business Case), which could have major implications for this proposed bus option.</li> <li>• Based on the community/stakeholder feedback, and the wider work being undertaken as part of Auckland to</li> </ul>

<p>including Pokeno, Te Kauwhata, Mercer and Meremere.</p> <ul style="list-style-type: none"> <li>○ Bus vehicles need to be refitted to include Wifi connections and folding tables to cater for commuters.</li> <li>○ Integration of fare and ticketing system – one bus card for the whole of journey across bus/rail services.</li> <li>● It was acknowledged that this express bus service could be an interim solution until a Hamilton to Auckland passenger rail service is put on (and potentially be replaced by this service)</li> <li>● There was also some suggestions that this service could stop at Pukekohe, instead of Papakura to avoid congestion on the Southern Motorway. This option could also link-in with the proposed Pokeno to Pukekohe bus option to allow more service frequencies.</li> </ul>	<p>Hamilton Transport Connections Strategic Business Case, it is consider prudent that this option be included as a ‘provisional activity’ in year 2 of the LTP, with implementation dependent on the outcomes of:</p> <ul style="list-style-type: none"> <li>○ Transport Connections Strategic Business Case, and/or any passenger rail proposal that was considered by the cross-boundary transport partners</li> <li>○ Detailed feasibility assessments to address the following matters: <ul style="list-style-type: none"> <li>▪ Travel time reliably, particularly on the Auckland network</li> <li>▪ Stopping points on route and future park and ride facilities</li> <li>▪ Fares/ticketing system – integration with AT Hop system</li> </ul> </li> </ul>
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<h2 style="text-align: center;">PT Option – Port Waikato to Pukekohe</h2> <p><b>Improvement Concept</b></p>  <p><b>Existing weekly service</b></p> <ul style="list-style-type: none"> <li>• Retaining the existing once a week service or consider community transport options</li> <li>• Existing service – approx 900 boardings a year</li> <li>• Contract costs - \$17, 440 p.a. (currently funded by WDC)</li> </ul>	
<p><b>Stakeholder/community feedback</b></p> <ul style="list-style-type: none"> <li>● Limited feedback from the Pork Waikato community.</li> <li>● Some support from other community boards for replacing the existing service with an on-demand community shuttle service.</li> </ul>	<p><b>Staff assessment and recommendation</b></p> <ul style="list-style-type: none"> <li>● Due to low level of stakeholder and community responses, it is recommended that this service be retained until further community engagement work is undertaken to understand the potential impact or general desire from the local community.</li> </ul>

## PT Option – Community Transport

### Improvement Concept



### Community based transport

- A charitable trust is set up and a basic business plan developed
- The vehicle is operated by local community volunteers
- Passengers will contact the trust (usually by phone) to book travel
- Successfully implemented elsewhere in NZ - requires local champion

Stakeholder/community feedback	Staff assessment and recommendation
<ul style="list-style-type: none"> <li>• High level support for the community transport concept</li> <li>• Support WRC to work in partnership with local community trusts and other community service providers, to provide advice, coordination and funding support</li> </ul>	<ul style="list-style-type: none"> <li>• The concept has been well received by the community groups and stakeholders</li> <li>• It is recommended that this option be considered in the draft WDC LTP, with an aim to develop a business model for supporting community transport initiatives. This work will link to the research project that is being undertaken in Tokora/South Waikato.</li> </ul>

## 4.1 Specific objectives

The investment objectives were developed with the wider NW PBC project partners and stakeholders. They guide decision making on where resource and funding are committed, and clearly articulate what the outcomes of investment should be to address growth issues in North Waikato area:

1. Improve North Waikato's liveability through increased access to, from and within the future urban areas, including to services and amenities, employment areas and town centres,
2. Enhance Waikato's connectivity through increased effectiveness and efficiency of the multi modal transport network to, from and within the future urban areas,
3. Improved national and regional economic growth through strengthening the performance of the Auckland and Waikato region connectivity and improving connections with the Waikato region, and
4. Deliver on the Future Proof principles and provide infrastructure as required and consistent with development patterns set by the Future Urban Land Supply Strategy

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet.*

Objective	Status Quo	Pokeno to Pukekohe	Huntly to Pukekohe	Te Kauwhata to Huntly	Hamilton to Papakura	Port Waikato to Pokeno	Community transport
1. Improve North Waikato's liveability through increased access to, from and within the future urban areas, including to services and amenities, employment areas and town centres,	<i>Does not meet</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>
2. Enhance Waikato's connectivity through increased effectiveness and efficiency of the multi modal transport network to, from and within the future urban areas,	<i>Does not meet</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets in part</i>	<i>Meets</i>
3. Improved national and regional economic growth through strengthening the performance of the Auckland and Waikato region connectivity and improving connections with the Waikato region, and	<i>Does not meet</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets in part</i>	<i>Meets</i>	<i>Meets in part</i>	<i>Meets in part</i>
4. Deliver on the Future Proof principles and provide infrastructure as required and consistent with development patterns set by the Future Urban Land Supply Strategy	<i>Does not meet</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets</i>	<i>Meets in part</i>	<i>Meets</i>

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Estimated fare Revenue	Capex	Opex (WRC share)	Labour
<b>Status Quo</b>	0	0	0	0	0
<b>Pokeno to Pukekohe</b>	To be determined	\$31,000	\$0	\$0	Contact management as part of the existing budget

	Benefits (\$'s)	Estimated fare Revenue	Capex	Opex (WRC share)	Labour
Huntly to Pukekohe	To be determined	\$3,256	\$0	\$0	Contact management as part of the existing budget
Te Kauwhata to Huntly	To be determined	\$7,500	\$0	\$11,000	Contact management as part of the existing budget
Hamilton to Papakura	To be determined	\$102,000	\$0	\$53,250	Contact management as part of the existing budget
Port Waikato to Pokeno	To be determined	\$2,000	\$0	\$0	Contact management as part of the existing budget
Community transport	To be determined	To be determined	To be determined	To be determined	Contact management as part of the existing budget

### 4.3 Preferred option

Based on the stakeholder/community feedback and staff assessment, it was recommended that the following public transport options be included in Waikato District Council and Waikato Regional Council's 2018-21 long terms plans for funding consideration:

- A regular bus service between **Pokeno and Pukekohe** (via Tuakau) on weekdays and weekends (**no WRC funding commitment required**)
- A daily off-peak return service between **Huntly and Pukekohe** via north Waikato towns on weekdays (**no WRC funding commitment required**)
- A daily peak return service between **Te Kauwhata and Hamilton** on weekdays (**\$11,000 per annum from WRC**)
- A weekday commuter express bus service between **Hamilton, north Waikato towns and Papakura** (**\$53,250 per annum from WRC**): as a provisional activity for year two of LTP, subject to detailed feasibility assessments and the outcomes of Auckland to Hamilton Transport Connections Strategic Business Case.
- **Community Transport initiatives** – to develop a business model for coordinating and supporting community transport initiatives (*Note: a separate LTP business case has been developed for this activity*).

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	Covered under existing resources for	Ongoing	Combination NZTA and WRC	

Description	Amount	Timing	Funding Source	Comments
	Public Transport			
Opex	As Below	Ongoing	As below	Co-funding from external partners
Capex	Indirect – achieved through contracts	Ongoing	Co-funding from external partners	
Revenue	To be determined based on patronage	Ongoing	Co-funding from external partners and fares paid by users	Multiple revenue sources
Contingency	To be included as part of the contracts (operating margin)	Ongoing	Co-funding from external partners	

\$ Year / (K)	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>Capital</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Operational</b>	\$689,350 (WRC share estimate \$24,313 assuming NZTA subsidy and 14% farebox recovery )	\$1,024,516 (WRC share estimate \$65,664 assuming NZTA subsidy and 14% farebox recovery )	\$1,047,055 (WRC share estimate \$67,108 assuming NZTA subsidy and 14% farebox recovery )	\$1,070,090 (WRC share estimate \$68,652 assuming NZTA subsidy and 14% farebox recovery )	\$1,093,966 (WRC share estimate \$70,300 assuming NZTA subsidy and 14% farebox recovery )	\$1,118,717 (WRC share estimate \$71,987 assuming NZTA subsidy and 14% farebox recovery )
<b>Estimated fare revenue</b>	\$143,756	\$143,756	\$143,756	\$143,756	\$143,756	\$143,756

### 5.1.1 Funding partnerships

Funding for Public Transport is administered through the Regional Council. There is a partnership arrangement with NZTA that funds 51% of eligible public transport services from the National Land Transport Fund. The remaining 49% is recovered via local share contributions.

For services that operate entirely outside of the Hamilton urban area (i.e. Pokeno to Pukekohe and Huntly to Pukekohe services), the local share is provided solely by Waikato District Council. Where connections are made into the Hamilton urban network, the local share funding is split between Waikato District Council and Waikato Regional Council.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- In each instance, the funding has assumed that the services will be eligible for NZTA funding and that there is a local share commitment from the partnering local authority
- The estimated farebox recovery ratio is about 14% for the first 3-year period and it is expected that this will increase in the outer years.

### 5.1.3 Procurement strategy

Procurement of the service level improvements will be done primarily by way of variations to existing bus service contracts. Particular services may be subject to competitive tendering. The scale of the tender process is such that the cost can be accommodated within existing budgets.

## 6 (Management Case)

### 6.1.1 Implementation structure

**Delivery Approach –Operational (implementation of North Waikato PT network review outcomes)**

### 6.1.2 Scope/deliverables

In Scope

- Administration and procurement of new contracts to implement the options identified in the NW PT network review;

Out of Scope

- Any service implementation that is outside the scope of the NW PT network review, including passenger rail.

### 6.1.3 Key milestones

Milestone	Completion Date
Implementation of service proposal – Pokeno to Pukekohe	July 2018
Implementation of service proposal – Huntly to Pukekohe	July 2018
Implementation of service proposal - Te Kauwhata to Huntly	July 2018
Implementation of service proposal – Hamilton to Papakura (subject to the outcomes of Auckland and Hamilton Transport Connections Strategic Business Case and detailed feasibility assessment)	July 2019

### 6.1.4 Stakeholder engagement

Waikato Regional Council and Waikato District Council staff have undertaken extensive engagement with key stakeholders and local community boards/committees on the draft North Waikato PT options. The outcomes of the stakeholder and community consultation are summarized in the table below:

Engagement activity	Date	Key outcomes/feedback
WDC Councillor workshop	24 May 2017	<ul style="list-style-type: none"> <li>• Draft options were generally well received, and the Council has agreed for staff to undertake further consultation on draft options with local community boards</li> <li>• Some suggestions were made about Huntly to Pukekohe service, incl. bus timetable and a new bus stop at Mercer</li> <li>• There was a general support for Hamilton to Papakura commuter service, particularly the service would help to enhance/compliment future passenger rail service</li> <li>• Need to continue to engage with AT and Central Govt about passenger rail</li> <li>• Need to engage with local community/iwi about the Port Waikato service and community transport option.</li> </ul>



Engagement activity	Date	Key outcomes/feedback
Hamilton PT Joint Committee meeting	2 June 2017	<ul style="list-style-type: none"> <li>• There was general support for the draft NW bus options</li> <li>• There were some general discussions about the Hamilton to Papakura service option, and the following points were noted:               <ul style="list-style-type: none"> <li>○ Integration of ticketing systems (Busit &amp; Hop cards)</li> <li>○ Investigation of potential park and ride facility at Pokeno (or Mercer)</li> <li>○ Bus vehicles need to cater for commuter market (WIFI &amp; workbench etc)</li> <li>○ Need to engage with AT/NZTA to investigate bus priority measures on the southern Motorway (Drury South to Papakura)</li> </ul> </li> </ul>
Franklin Local Board (incl. Mayor and 3 councillors from WDC)	6 June 2017	<ul style="list-style-type: none"> <li>• The PT options were very well received and they were interested to see the outcomes from community consultation/engagement</li> <li>• There was a quick discussion on the benefits of having a single commuter card for travel across the boundaries.</li> <li>• There was recognition about the importance of bus priority measure on SH1 north of Drury).</li> </ul>
RTP Development Subcommittee meeting	12 June 2017	<ul style="list-style-type: none"> <li>• There was general support for the draft NW bus options</li> <li>• It was noted that the commuter bus option (Hamilton to Papakura) could be an interim solution until Hamilton to Auckland passenger rail option was considered further.</li> <li>• It was suggested that DHBs and the University of Waikato should be involved as part of the stakeholder engagement process to ensure good alignment across health, education and PT services.</li> </ul>
Waikato Rural Transport Forum (with Community Waikato and local community transport providers)	26 June 2017	<ul style="list-style-type: none"> <li>• There was strong support for the investigation of community-based transport solutions to provide improved transport connections between rural communities</li> <li>• It was suggested that there are some existing local community trusts (in Huntly and Pokeno) that would be very interested about community transport scheme.</li> </ul>
Iwi feedback	June 2017	<ul style="list-style-type: none"> <li>• An iwi reference group meeting was set up, but cancelled due to no RSVPs. Waikato Tainui provided feedback to Waikato DC that any PT improvements in the North Waikato would be welcomed.</li> </ul>
Additional stakeholder feedback – Onewhero-Tuakau Community Board (received from Caroline Conroy)	26 June 2017	<ul style="list-style-type: none"> <li>• Has requested a meeting with Shelley and Andrew to discuss her feedback as follows:</li> <li>• Support hourly service Pokeno-Pukekohe, wants to discuss the route within Tuakau</li> </ul>

Engagement activity	Date	Key outcomes/feedback
		<ul style="list-style-type: none"> <li>• Suggest Huntly to Pukekohe service should be twice a day, or contracted via a local taxi company for more flexibility.</li> <li>• Hamilton to Papakura service needs a bus lane to be successful, and frequency of more than once a day. Suggest pick-ups to be at Huntly, Rangiriri, Mercer and Bombay.</li> <li>• Suggest Port Waikato service should be a bookable community shuttle solution.</li> <li>• Support community transport options for smaller communities.</li> </ul>
Additional stakeholder feedback – Franklin Local Board (received from Andy Baker)	28 June 2017	<ul style="list-style-type: none"> <li>• Support short-term bus services to Pukekohe, followed by rail introduction at a later date.</li> <li>• Mention of electric/hybrid rail as preference from Pukekohe to Auckland</li> </ul>
<b>Engagement with local community boards and community committees – June-October 2017</b>		
Workshop with representative from local community boards	29 June 2017	<ul style="list-style-type: none"> <li>• General support was voiced for all options.</li> <li>• A number of attendees were from the Meremere community and enhanced PT service here would be welcomed.</li> <li>• It was suggested that the Te Kauwhata to Hamilton service could start in Meremere.</li> <li>• It was reiterated that bus priority must be given to the Hamilton to Papakura service, both on the southern motorway, and on the road to Papakura Station.</li> <li>• Ensure that Pokeno to Pukekohe bus services the full Pokeno residential development.</li> <li>• Mention was made of the Huntly to Pukekohe service that enough time was given to passengers in Pukekohe before the return journey and that times coincided with the three AT bus services that loop around Pukekohe.</li> <li>• It was suggested that consultation needs to take place with both Counties Manukau and Waikato DHBs.</li> </ul>
Te Kauwhata Community Committee	6 <sup>th</sup> September	<ul style="list-style-type: none"> <li>• General support for the draft options, particularly the proposed Huntly to Pukekohe and Hamilton to Te Kauwhata bus routes to provide improved PT connections.</li> <li>• It was noted a bus service from Te Kauwhata to Hamilton will be well utilized by school students (a lot of students are currently being driven to Huntly to catch Northern Connector). It was strongly suggested that this service option should include an additional return trip for students to get back to Te Kauwhata.</li> </ul>

Engagement activity	Date	Key outcomes/feedback
		<ul style="list-style-type: none"> <li>• It was noted that the estimated travel time for the Hamilton to Papakura option (1h 20 min) may not be feasible given the congestions on Southern Motorway and local roads between Drury and Papakura. Councils, AT and NZTA need to look at potential bus lane and priority measures to improve travel time reliability.</li> <li>• It was also suggested that this option could go to Pukekohe, instead of Papakura to avoid congestion on the Southern Motorway.</li> </ul>
Meremere Community Committee	14 September	<ul style="list-style-type: none"> <li>• General support was voiced for all options.</li> <li>• It was suggested that the Te Kauwhata to Hamilton service could start in Meremere.</li> <li>• It was reiterated that bus priority must be given to the Hamilton to Papakura service, both on the southern motorway, and on the road to Papakura Station.</li> </ul>
Pokeno Community Committee	12 September	<ul style="list-style-type: none"> <li>• The Pokeno direct to Papakura service was more preferred for Pokeno commuters working in Auckland – they queried whether the peak service to Pukekohe needed to be as frequent from Pokeno if the direct service to Papakura was also available.</li> <li>• The Hamilton to Papakura express service needs to be early enough to ensure the residents can catch the 7.07am train from Papakura.</li> <li>• Questions was raised about using AT Hop card on the Pokeno to Pukekohe service, and the convenience of using one single bus card for connecting bus/rail services.</li> <li>• It was suggested that the residents on the other side of the off-ramp (Thames Highway) should also be consulted, they are likely (or would be interested) of using a bus service connecting to Auckland.</li> <li>• Community transport – one of the residents brought up using Go Bus or Cross Country Rentals vans in the middle of the day when they aren't used for school services.</li> <li>• It was agreed that the Community Committee will generate a post on Pokeno Facebook page to gauge feedback from residents about the NW PT options.</li> </ul>
Huntly Community Board	19 September	<ul style="list-style-type: none"> <li>• The HCB members were very impressed by the Northern Connector, particularly with the new changes – bus timetables/frequencies, fares, new vehicles and livery/branding.</li> <li>• It was suggested that the local newspapers should include more marketing/Ads to promote the service.</li> </ul>

Engagement activity	Date	Key outcomes/feedback
		<ul style="list-style-type: none"> <li>The group was very interested about the new double decker buses for the Northern Connector service. WRC will provide further details to HCB.</li> <li>Overall the HCB was very supportive with the NW PT options.</li> <li>There was a strong support for Hamilton to Papakura service. However the group noted that the travel time is going to be a critical factor – need to ensure the service can get to Auckland early enough for work/meetings. The buses would also need to be refitted (wifi, folding table) to cater for commuters.</li> </ul>
Onewhero-Tuakau Community Board	2 October	<ul style="list-style-type: none"> <li>Overall, very supportive of the draft NW options. The group reflected that PT provision is lacking in Tuakau, so any improvement would be well received by the community.</li> <li>Some CB members commented that Pokeno and Mercer should be considered as a future PT hubs, providing multi-model connections to bus and rai and park and ride.</li> <li>The group was supportive of Hamilton to Papakura option, however it was commented that the travel time between Pokeno and Papakura station is on average about 40-50 min in morning peak. It was suggested that timetable needs to consider the travel time delay from congestion.</li> <li>There was a general support of community transport option (at a conceptual level), however the group would like to receive further detail/update on future actions.</li> <li>The group was comfortable with the indicative costing for the options, and considered these were more cost-effective solutions than major roading investment.</li> </ul>

## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Implement changes recommended by business case outcomes resulting from district reviews, including increasing services where required. Contracting and monitoring services.	Operational delivery by the public transport operations team.
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Ongoing monitoring of services	Operational delivery by the public transport operations team.
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

### 6.1.6 Ongoing operational management

Resulting deliverables/product will go to Public Transport Operations for ongoing business as usual management. No impact on other council services, existing business structures, roles and responsibilities. Skills required to carry out this work held in-house.

### 6.1.7 Assumptions, constraints and dependencies

Public transport service levels improvements are dependent on related PT services being funded and delivered by partners including district councils as approved organisations and the NZTA.

### 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
Misalignment between the outcomes of district reviews and the Regional Public Transport Plan and individual council Long Term Plans of partner organisations.	Service improvements proposed may not deliver on the expected benefits of the RPTP	Moderate	Stakeholder engagement and communication is maintained through the collaborative development of district reviews and services and outcomes sought.
Other inter-regional public transport options being recommended through the Hamilton to Auckland Transport Connections Strategic Business Case	Potentially could impact on the viability of the Hamilton to Papakura service option	Moderate	The Hamilton to Papakura service option to be included in year 2 of the LTP as a provisional activity, and the implementation is dependent on the outcomes of Transport Connections Strategic Business Case

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# **Business Cases**

Science and Strategy

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# River Science Chair

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Environmental Science and Information
<b>Function</b>	Investigation and research
<b>Service</b>	Partnerships with external research providers are established and/or maintained to strengthen scientific capacity in the region.
<b>Financial Budget Code:</b>	S1019

## 1.1 Review and approval

Prepared By:	Dominique Noiton, Manager Science	22 Sept 2017
Reviewed By:	Tracey May, Director Science and Strategy	8 November 2017
Signed off By:	Tracey May, Director Science and Strategy	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference
LTP 2018-28 – Level of Service Review – Environmental Science and Information	Dominique Noiton	Doc # 10323857

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	22 Sep 2017	Dominique Noiton	Draft
2	8 Nov 2017	Tracey May	Director review

## 2 Executive summary

Waikato Regional Council (WRC) recognises the need to better understand the functioning and ecology of the region's rivers, so that it can meet its statutory responsibilities and more efficiently manage the region's freshwater resources.

In the Annual Plan 2017-18 budget, the Council approved funding to enable the establishment of a Chair of River Science at the University of Waikato. The aim is to enhance the study of the region's waterways, catchments and flood plains. By sponsoring this academic role, the Council will ensure that key issues facing the region's rivers are considered in education, research and development programmes for the benefit of the Waikato region. The Chair (Professor James Brasington) has been appointed and has now started at the University.

A collaborative approach to freshwater science by the University and Council is consistent with the principle of deepening partnership as a way to meet increasing demand for evidence-based decision-making and maintain scientific currency. It also leverages funding for river science that will address what is arguably the most significant environmental issue for our region and is a significant way the Council can recognise the essential role rivers play in the region and partner with others. We can make our investment in freshwater go further and leverage external funding.

Success will be measured by the amount of new research activities, postgraduate projects and knowledge transfer in river science relevant and applicable to the Waikato region.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	150K	150K	150K	150K	150K	150K pa

#### 2.1.1.1 Funding source

Funded through general rates.

#### 2.1.1.2 Funding partnerships

WRC has signed a Memorandum of Understanding (MoU) with the University of Waikato (Doc # 3159739) that formalises the relationship between the two organisations. The MoU recognises that the Parties share many common regional interests and identified Freshwater Sustainability as a priority over the next five years. A key deliverable of the MoU is the establishment of an academic research capacity on large rivers including flood plains, riverine lakes, estuaries and delta. The creation of a Chair of River Science is the founding block of building such capacity.

The funding applied through LTP 2018-28 process represents WRC's contribution to the salary of the River Science Chair at the University of Waikato. A key role of the Chair will be to attract funding from various sources generating new knowledge, tools and scientific capacity relevant to the region and applicable by WRC staff.

The River Science Chair supports the newly established Centre of Freshwater, Te Waiora, which is a joint initiative between the University of Waikato and NIWA.

The River Science Chair has been appointed and is expected to start by December 2017.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

No additional staff or contractors required.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The Waikato region has several large rivers (e.g. Waikato, Waipa, Waihou, and Piako rivers). Highly modified by human activities over the last century, these rivers are now in poor condition with high levels of nutrients, bacteria, and sediments. Better freshwater management to improve water quality is one of the top priorities at national and regional level. The issue around large rivers is complex and solutions will require a new way of thinking that is typically found in academic setting (e.g. universities).

WRC is funding the Chair of River Science at the University of Waikato until June 2018. Continued funding over at least the next three years is required to ensure WRC reaps the benefits from its 2017/18 investment.

WRC's continued support to the River Science Chair is in line with the MoU (Doc # 3159739) Council signed with the University. The MoU identified freshwater sustainability as one of the two priorities. The other priority is regional development, which relies heavily on the sustainability of our freshwater resources.

### 3.2 What will success look like (high level benefits)

A key role of the River Science Chair is to lead research and postgraduate programmes that will increase our understanding of how large rivers function in their natural state, and how they respond/have responded to the significant modifications imposed by human activities over time.

New knowledge generated by those research activities will be directly relevant and applicable to Waikato rivers and flood plains. The multiple benefits to WRC include:

- Improve the way WRC manages rivers, catchments and flood plains by understanding the rivers natural functioning
- Gain a confident ability to re-design Waikato flood management scheme
- Address freshwater quality, quantity and ecological health issues through access to new ideas and innovation in river management
- Ensure succession through the formation of a new generation of freshwater scientists (postgraduate programme). This is currently an issue across New Zealand as scientific and technical experts get retired or pursue their career overseas
- Increased potential for partnering, joint venture and co-investment opportunities, "turning our \$1.00 into \$5.00".

### 3.3 Consequences of not proceeding

Council approved that WRC supports the creation of the River Science Chair and allocated \$93,750 in year 2017/18 toward the salary of this position. The Chair has been appointed (Prof. James Brasington) and is expected to start by end of this year. There is a high expectation that Council will continue funding at a level of \$150K pa (with inflation adjustment).

The main consequence of not proceeding is that the innovation required to improve freshwater in the Waikato will not happen or will happen at a slow pace. Current scientific capacity has not delivered solutions that we can readily use now. New thinking is needed and the current Chair brings new ideas and experience from UK.

Risks of withdrawing WRC's funding include:

- Weaken the relationship between the University and WRC
- Loss of regional research capacity because the Chair may move to another university where funding is more secure
- Loss of ability to influence the University's research and education in river management, and loss of access to the Chair's time as priority is given to those who provide funding
- The University will go elsewhere (other regions and overseas) to fund the River Science Chair and associated research cost. This means that the Chair will focus his research on other areas not necessarily relevant to the Waikato, such as braided rivers in South Island.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy Environment	It is safe to swim and take kai from all fresh water

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
Manage freshwater more effectively to maximise regional benefit		
Te Waiora, Joint Institute for Freshwater Management and research initiatives to address freshwater issues are supported.	Partially contributes	Increased freshwater research activities relevant to the Waikato is created by the Chair of River Science in collaboration with WRC and NIWA

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

Options include:

- Status quo: Waikato Regional Council will not provide funding to the River Science Chair after 30 June 2017.
- Option 1: Waikato Regional Council continues to fund the River Science Chair for at least the next three years.

### 4.1 Specific objectives

- To continue funding the newly-established Chair of River Science at the University of Waikato
- The Chair is expected to:
  - a) Actively participate in the establishment and development of Te Waiora, Freshwater Institute and, in particular, provide leadership for multi-disciplinary research on river and catchment science and management
  - b) Be available to provide input into, and review of, the Council's river and catchment research and monitoring programmes, including attendance at relevant meetings
  - c) Be able to assist the Council in responding to issues related to river and catchment management and restoration
  - d) Encourage cooperation between the University, central and local government agencies, industry groups, and iwi in river and catchment science issues
  - e) Carry out integrative/multi-disciplinary, systems level research and teaching that would provide a focus for river and catchment science and management in New Zealand, with emphasis placed on the Waikato region

- f) Collate and coordinate information from a wide body of research already undertaken into river and catchment systems in the Waikato region, and communicate and transfer technological developments into practical outcomes for the Waikato Regional Council
- g) Lead a group of staff and students in high-level systems research in river and catchment science and management
- h) Participate in graduate and post-graduate teaching, and supervise student research on river and catchment science and management. Limited undergraduate teaching may be required, as mutually agreed between the Professor and his/her manager
- i) Promote education and understanding of river and catchment systems and management through public outreach in the community
- j) Publish the results of work in international academic peer-reviewed journals as well as in more generally accessible publications and disseminate research findings through national and international conferences
- k) Actively seek and obtain external research funding.

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet*. Add further columns, or remove, as required.

Objective	Status Quo	Option 1
1.Continue funding the Chair of River Science at the University of Waikato at least over next three years	Does not meet	Meets

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo	NA	NA	NA	NA	NA
Option 1	Estimated \$10M over 10 years for the University (Te Waiora)			\$150K pa	

Note: Status quo is no funding after 30 June 2018 (e.g. no impact on LTP).

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- Freshwater management is a critical issue for the Waikato region
- The Waikato region has large river systems that are highly modified by human activities and present unique challenges for science
- WRC has responsibility for river and catchment management and needs science to inform decisions
- New ideas are required to address water quality, quantity and ecological health of large rivers
- Funding the Chair at the University of Waikato will ensure that we have a say in the design and delivery of river research programme.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour				
Opex	\$150K	Per annum	General rates	Will need to adjust for inflation
Capex				
Revenue				
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	\$150K	\$150K	\$150K	\$150K	\$150K	\$150K
<b>Revenue</b>						

### 5.1.1 Funding partnerships

The University of Waikato is funding direct and indirect costs associated with the initiation and operations of the Chair's research and teaching activities.

At this stage, there is no other party contributing to the funding of the River Science Chair. However, co-funding opportunities will be explored when the Chair has established his own programme and network.

### 5.1.2 Procurement strategy

Will any procurement activities be required? YES current Funding Agreement expires end of June 2018.

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach – Operational

The funding of the River Science Chair is formally managed under a Funding Agreement (see Doc # 10871578) between WRC and the University of Waikato for the Oct 2017 – June 2018 period.

The overall relationship is managed by a Steering Group comprising:

- For the University: The Dean of Science and the Director of Research and Enterprise
- For the Council: Science Manager and Science Team Leader

The Steering Group will meet at least six-monthly to discuss progress on implementation of this Agreement.

It is intended that a similar Funding Agreement will be put in place should further funding be provided by WRC to support the University's River Science Chair.

## 6.1.2 Scope/deliverables

In Scope

- Contribution to the Chair's salary.

Out of Scope

- Activities generated by the Chair (e.g. research programme, student support, projects)
- Associated expenses (e.g. travel, conference fees, publication fees etc.).

## 6.1.3 Key milestones

Milestone	Completion Date
New Funding Agreement is agreed and signed	August 2018
A 3-year work programme is developed and implemented	October 2018
Annual report summarising activities, deliverables and befits to the region and WRC are provided to WRC	June 2018 June 2019 June 2020
A 3-year work programme is renegotiated and implemented	August 2020
Annual reports summarising activities, deliverables and befits to the region and WRC are provided to WRC	June 2021 June 2022 June 2023

## 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Iwi	Freshwater quality and ecological health Co-management	Partner
Dairy NZ	Collaborative work re freshwater modelling Drainage	Inform
Electricity generators	Impact of dams on rivers	Inform
Catchment Committees	Flood management	Inform

## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS Directorate	Low	Increased staff's time to work with the Chair	Use project plans to agree on staff allocation
Science Section	Low	Increased staff's time to work with the Chair	Use project plans to agree on staff allocation

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS Directorate	Medium	New science-based evidence and decision-making tools are available for policy development and practices on river management.	Include internal and external users to provide feedback at the project development phase and at reporting time.
Science Section	Medium	New knowledge on river management is generated for integration into WRC in-house science.	WRC scientists will be working closely with the River Science Chair
ICM Directorate	Medium	New information and advice are available to ICM staff to	

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
		improve river management practices including flood plains, drainage scheme, flood, and restoration.	

### 6.1.6 Ongoing operational management

The River Science Chair is expected to lead research and postgraduate activities that will generate new scientific knowledge on the functioning and ecology of large rivers in the Waikato region. In most cases, WRC scientists will be involved in the design and/or delivery, and/or reporting of new scientific activities. WRC scientists will therefore be a conduit for the transfer of knowledge to WRC.

It is also expected that the Chair will be directly involved as advisor to WRC work related to river/catchment / flood / drainage management.

### 6.1.7 Risks

No risks identified.



## Appendices

### 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

#### 1.1 Status quo

##### 1.1.1 Option overview

Council approved that WRC supports the establishment of a River Science Chair at the University of Waikato. Funding (\$93,750) was allocated in budget 2017/18 to contribute to the Chair's salary. Any continued funding beyond June 2018 will need to be approved through the LTP 2018-28 process.

The current state is that WRC is funding the River Science Chair from October 2017 to June 2018 only. Status quo is that this funding ends on 30 June 2018, and this Business Case becomes irrelevant to the LTP 2018-28 process.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Funding (\$150k) is available for other science priority projects</li> </ul>	<ul style="list-style-type: none"> <li>No real return for the \$93,750 invested in 2017/18 (six months is too short for the Chair to deliver any benefits).</li> <li>Loss of opportunity for WRC to influence freshwater research activities and capture their outputs (other Councils (Ecan) take over the funding of the Chair)</li> <li>Damaged relationships with the University and potentially NIWA as the Chair has a key role in Te Waiora Freshwater Institute.</li> </ul>

##### 1.1.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment	Status quo option will not deliver of this outcome

##### 1.1.4 High level financial overview

If the status quo is maintained no funding will be provided to the Chair of River Science position from Waikato Regional Council.

#### 1.2 Option 1

##### 1.2.1 Option overview

Option 1 is that WRC continues to fund the Chair of River Science at the University of Waikato from July 2018 on an ongoing basis with regular reviews to ensure that the agreement delivers on the expected outputs and benefits to WRC and the region.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>WRC has a strong ability to influence the design and delivery of river research programmes at the UoW</li> <li>Rate payers do not have to pay for all the Science required to achieve Council's strategic directions and priorities</li> </ul>	<ul style="list-style-type: none"> <li>Funding allocated to the UoW could have been allocated to a WRC water science project or projects</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Funding for science underpinning sustainable river management	The Chair is expected to attract a significant amount of research funding from a wide range of sources e.g. central and local government, industry in New Zealand and overseas. The value to WRC will be captured through the Funding Agreement which requests formal reporting.	Difficult to estimate. Maybe \$10M over 10 years for the University's research and postgraduate's studies in river science

Qualitative benefits	Description
Increased capacity in river science for the environmental/ water management sector in the region and nationally.	<p>The Chair is expected to:</p> <ul style="list-style-type: none"> <li>Lead a group of staff and students in high-level systems research in river and catchment science and management</li> <li>Participate in graduate and post-graduate teaching, and supervise student research on river and catchment science and management</li> <li>Promote education and understanding of river and catchment systems and management through public outreach in the community</li> </ul>

Disadvantages/Dis-benefits	Description of the potential impact
Increase workload for WRC staff	WRC has a limited capacity to respond to the Chair's requests for staff's time, data and project funding

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment	New knowledge and innovation on river and catchment management in the Waikato are generated through research activities led by the Chair of River Science

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$10M over 10 years (estimated)			\$150k pa	

### 1.2.6 Assumptions, constraints and dependencies

- It is assumed that the Chair of River Science will remain at the University of Waikato for at least 5 years. There are always professorial career opportunities in highly-rated universities around the world.
- A replacement of such a high academic role is difficult and takes time. It would be disruptive to the river science programme should this happen earlier than 5 years.

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
The Chair moves to another university	Medium		Funding is critical. WRC can contribute by continuing funding the Chair's salary AND most importantly by providing funding for Postgraduates studies and co-funding research programmes (this helps PBRF*)
			*Performance Based Research Funding (PBRF) is the main source of funding for universities' research activities. PBRF is funded through Vote Education under the Tertiary Education Commission. CRIs are not eligible for PBRF.

# S-Map Completion

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Environmental Science and Information
<b>Function</b>	Provision of Environmental Information and Science
<b>Service</b>	Support of policy development and implementation through provision of more detailed information and data.
<b>Financial Budget Code:</b>	L1409

## 1.1 Review and approval

Prepared By:	Liz D Tupuhi, Team Leader Land and Soil Science	20 October 2017
Reviewed By:	Dominique Noiton, Manager Science	31 October 2017
Signed off By:	Tracey May, Director SAS	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference
2018-2028 LOS - Environmental Science and information 01.04.2017	Dominique Noiton	10323857
Healthy Rivers Wai Ora Business Case	Place Group	
Peat soil information	Justin Wyatt	11202966

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	20 Oct 2017	Liz Tupuhi	Draft
2	31 Oct 2017	Dominique Noiton	Draft review
3	8 Nov 2017	Tracey May	Director review

## 2 Executive summary

This business case sets out the reasons for accelerating the delivery of S-Map (option 1), a tool that assists in setting nitrogen reference points (NRPs) and developing farm plans as well as underpinning regional soil management decisions and catchment contaminant models. This business case is for additional money for years 3 and 4 of the LTP2018-28. However, it also addresses additional funding requested for years 1 and 2 for the Healthy Rivers Plan Implementation (HRPI) the updates within this business case also need to be reflected in the HRPI business case. The Hauraki and Coromandel (HC) plan review if developed with similar requirements to that of HRWO will be reliant on S-Map and OVERSEER<sup>®</sup> to set NRPs and informing Farm Environment Plan implementation. Estimated costs for completing S-Map to the required standard in these areas are set out in this business case.

## 2.1 Financial summary

### 2.1.1 Funding profile

**2018/19 and 2019/20:** Complete S-map for Waikato-Waipā catchments. **Total cost is \$500,000** composed of:

1. \$90,000 from L1409: existing BAU budget (the completion of s-map for the whole of Waikato was originally planned over 15 years)
2. \$205,000: additional new funding requested in HRPI for years 1 and 2 in the HRPI business case.

**2020/21 and 2021/22:** Complete S-map for Hauraki and Coromandel catchments. **Total cost is \$620,000 over 2 years** (\$310,000 pa) composed of:

1. \$175,000 pa from L1409: existing BAU
2. \$135,000 pa: additional new funding requested in this Business case.

**2021 -2027:** Complete S-map for the West Coast catchment at a total cost of \$350,000.

\$ Year \ (K)	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	\$295,000	\$295,000	\$310,000	\$310,000 <sup>2</sup>	\$90,000 <sup>2</sup>	\$90,000 <sup>3</sup>

<sup>1</sup>The first year of the LTP funding request is covered within the HRWO business case, it is identified here for clarity and completeness. <sup>2</sup>BAU funding for s-map. <sup>3</sup>later years of the LTP require ongoing BAU funding for the finalisation of S-Map on the West Coast.

#### 2.1.1.1 Funding source

General rates

**2018/19 and 2019/20:** Complete S-map for Waikato-Waipā catchments. **Total cost is \$500,000** composed of:

3. \$90,000 from L1409: existing BAU budget (the completion of s-map for the whole of Waikato was originally planned over 15 years)
4. \$205,000: additional new funding requested in HRPI for years 1 and 2 in the HRPI business case.

**2020/21 and 2021/22:** Complete S-map for Hauraki and Coromandel catchments. **Total cost is \$620,000 over 2 years** (\$310,000 pa) composed of:

3. \$175,000 pa from L1409: existing BAU
4. \$135,000 pa: additional new funding requested in this Business case.

**2022 -2028:** Complete S-map for the West Coast catchment at a total cost of \$350,000.

#### 2.1.1.2 Funding partnerships

There are no funding partners, however, Manaaki Whenua Landcare Research (LCR) who are the only organisation capable of producing S-Map have been putting assistance in-kind into the development of the base information for S-Map final layers (via development of Digital Soil modelling (DSM) methods and co-variate input layers).

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	Yes
Does the work require the establishment of new depots or offices?	no
Does the work require the use of additional fleet vehicles?	no
Does the work require additional resources (FTE or contract)?	no

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	N/A						
<b>Fixed Term</b>	TBC						
<b>Contract</b>	\$100K	\$205K <sup>1</sup>	\$205K <sup>1</sup> K	\$135K	135K		

<sup>1</sup> \$205K of this funding is additional and included in the HRPI business case.

For each new permanent or fixed term role requested complete the [New Staff Request](#) form.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The Vision and Strategy for the Waikato River is advanced by the delivery of the HRWO plan change. S-Map, currently supported by Waikato Regional Council (WRC), is regional scale (1:50,000 scale) soil information, which classifies soils (e.g. Soil Order, Family and Sibling identification) through a combination of modelling and mapping.

S-map is a key component for the development of Farm Environment Plans by providing soil information required to set Nitrogen Reference Points (NPRs) using the OVERSEER<sup>®</sup> model.

The development of S-maps has received limited funding in the past, which meant that the completion of the whole region was planned over a 15-year period. S-map is available for the Waipa River catchment and most of Upper Waikato catchment. S-map has also been produced for large areas of the Hauraki and Coromandel, but there are many gaps in the mapping and a variety of scales were used in this early process.

Additional funding is requested in 2018/19 – 2019/20 to complete S-maps for the remaining Waikato River catchment in time for the implementation of HRPI (for farm plan development and potentially to assist with the NRP setting). An incomplete S-map coverage of the Waikato catchment means that WRC will establish NRP using two approaches: S-Map for Waipa River catchment and part of Upper Waikato catchment; and a digital soil model based Soil Order layer for the remainder of the catchment. This is not ideal, as there will be data quality and accuracy compromises and policy implementation inconsistencies across NRPs resulting from the use of two soil information sources.

To enable a more efficient, cost effective and certain outcome for the coming plan review additional funding is requested in years 3 and 4 to complete S-map for Hauraki and Coromandel catchments, and year 5 to 8 to will complete the West Coast zone with funding from BAU. If not funded then the farming community, consultants and farm planners will have to use less reliable information, which may be either too conservative (with the risk of later recrimination from the community) or too lenient (risk of instream values not being met).

S-map will also provide essential information to Sea Change; Tai Timu Tai Pari (Sea Change) implementation. Much of the work involved to achieve the outcomes identified in Sea Change require actions to be taken on land and within the catchments of the Coromandel and Hauraki. S-Map will assist in identifying soil properties within catchments that are more likely to have an impact in the Hauraki Gulf and Firth of Thames through vulnerability to erosion or leaching.

## 3.2 What will success look like (high level benefits)

Successful outcomes will be:

- Waikato catchment has complete s-map coverage at a 1:50,000 scale that enables farm plans and potentially NRP to set using one baseline soil information source
- Hauraki Coromandel Plan Change has reliable and consistent NRP and farm planning information
- Greater likelihood of freshwater management unit limits being met
- Soils vulnerable to erosion and/or leaching of contaminants are identified and managed appropriately.

Successful outputs are:

- Soil information is available digitally at detail that enables land owners to manage their land more appropriately
- NRP are set using the S-Map siblings pathway in OVERSEER<sup>®</sup>
- S-Map available to the farming community at a scale of 1:50,000
- Farming community and farm planners are able to develop farm plans that are more appropriate to their farms (note S-Map will not give comprehensive farm scale soil mapping as the cost of this is prohibitive, but the regional scale mapping is effective for regional planning purposes and assists greatly with the farm planning).

## 3.3 Consequences of not proceeding

The consequences of not funding this request are:

- Less reliable information
- Outcomes from OVERSEER<sup>®</sup> are potentially too conservative or too lenient to set regionally robust NRPs
- Potential to have a negative impact on working relationships within the (rural) community
- Potential that instream limits are not met in timeframes identified.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy Environment	<i>Positively influence future land use choices to ensure long term sustainability</i> Provides good spatial information free of charge to the rural community on the suitability of their soil for a particular land use. Enables WRC to develop policy, and provide guidance on sustainable and suitable land uses.
Development of HC plan change	Completion of S-Map for Hauraki and Coromandel will enable its use to set NRPs and assist in farm planning.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority: Forge and strengthen partnerships to achieve positive outcomes for the region</i>		
<i>Priority Action: Implement the Vision and Strategy for .... HRWO</i>	Strong contribution	Assist farm planning (see also HRPI BC).
<i>Priority: Support communities to take action on agreed outcomes</i>		
<i>Priority Action: Our data is more readily accessible so communities can make use of it to make good decisions</i>	Strong contribution	Farming community has good quality regional scale soil data on which to base their long term strategic considerations
<i>Priority Action: Communities are more empowered by use providing information</i>	Strong contribution	Farming community has good quality regional scale soil data on which to base their farm plans
<i>Priority from the Strategic Direction, we “Positively influence future land use choices to ensure long term sustainability”</i>		
<i>Priority Action: We plan and make decisions on land use based on multiple values and benefits</i>	Strong contribution	Our regional plan address land use using robust soil data and models, enabling NRPs to be set and ongoing management issues to be identified and addressed.
<i>Priority Action: We are delivering on HRWO plan change</i>	Strong contribution	The HRWO business case addresses this requirement, in addition it should be recognised that any future plan changes will also require this information to enable delivery.
<i>Priority from the Strategic Direction, we “manage freshwater more effectively to maximise regional benefit.”</i>		
<i>Priority Action: A broader range of tools is developed to protect our waterways...</i>	Strong contribution	S-Map and OVERSEER <sup>®</sup> are tools that enable improved management of effluent and fertiliser use on farms and therefore reduce leaching
<i>Priority from the Strategic Direction, we “Shape the development of the region so it supports our quality of life</i>		
<i>Priority Action: We work with other local and central government agencies to take a more co-ordinated approach to managing the impacts of the growth of Auckland on the Waikato</i>	contributes	We have better information on how to best utilise our soils and plan our more intensive development.



Legislation	Alignment	How will this change improve delivery?
RMA sec 5(2)(b)	Explicit	We safe guard the life supporting capacity of our soils.
RMA sec 30	Explicit	Enables WRC to deliver clear guidance within developed policies on the management approach and tools to be used.
RMA sec 35	Strong	Provides further ability to gather data and provide information on the state of the region's soil resource.

## 4 Option evaluation (Economic Case)

Two options have been assessed in developing this business case. These are:

- The status quo – continue to develop s-map with a rate \$90K per annum expenditure
- Option 1 accelerate development – the recommended approach for this business case.

Only option 1 meets all of the identified objectives.

### 4.1 Specific objectives

1. Provide robust, consistent and defensible information for the development of policy guidelines and directions for Hauraki- Coromandel plan change
2. Provide robust, consistent and defensible management tool for the farming community
3. Enable the Hauraki- Coromandel plan change to be more pro-active by the delivery of appropriate data
4. Provide farm planners with good data to assist in the development of farm plans
5. Soils vulnerable to erosion and/or nutrient leaching within the Hauraki and Coromandel catchments are more accurately identified.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo Slow progress	Option1 Accelerated
1. Provide robust, consistent and defensible information for the development of policy guidelines and directions for Hauraki- Coromandel plan change	Does not meet	Meets
2. Provide robust, consistent and defensible management tool for the farming community	Does not meet	Meets
3. Enable the HC plan change to be more pro-active by the delivery of appropriate data.	Does not meet	Meets
4. Provide farm planners with good data to assist in the development of farm plans	Meets in part	Meets
5. Soils vulnerable to erosion and/or nutrient leaching within the Hauraki and Coromandel catchments are more accurately identified.	Does not meet	Meets

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo	Minor due to long term		N/A	\$90,000	
Option 1	See HRWO assessment		N/A	\$310,000	

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is option 1, for the following reasons:

- Provides the best soil information underpinning OVERSEER®
- Consistent data source across the Hauraki and Coromandel catchments provides more relative NRPs
- NRPs are more robust based on improved and nationally accepted soil information
- Provides a consistent and robust bases from which to develop farm plans
- Makes available good soils information for other applications e.g. Sea Change Tai Timu Tai Pari, land use suitability considerations
- Provides a soil inventory
- Assists in delineating and identifying vulnerable soils and soils with special characteristics e.g. peat, pumice and poor draining soils.

## 5 Financial analysis and procurement (Financial and Commercial Case)

As described this business case addresses only Hauraki-Coromandel catchments (years 2 and 3) and West Coast (Years 4-7). Note that Waikato-Waipā catchments (year 1) is addressed in the HRWO Business case and is only referred to in this Business case for completeness.

Although the reason for requesting this work be fast tracked is to address the likely need of S-Map for policy development and implementation at this time it is considered that there will minimal impact on other business owners.

Description	Amount	Timing	Funding Source	Comments
Labour				
Opex	\$610K	Years 2 and 3	General Rates	The total cost of completion of s-map across whole of region in the order of \$1.47M
	\$350K	Years 4-7		
Capex	N/A			
Revenue				
Contingency				

\$ Year \ (K)	2018	2019	2020	2021	2022	Future Years
Capital	N/A	N/A	N/A	N/A	N/A	
Operational	\$205,000	\$205,000	\$310,000	\$310,000	\$90,000	\$90,000
Revenue						

### 5.1.1 Funding partnerships

There are no funding partners, however, Landcare Research, the only organisation capable of producing S-Map, have provided in kind assistance into the development of base information (e.g. Digital Surface Models (DSM), and Digital Elevation Models (DEM) as required).

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- It is assumed that the requirements of Hauraki – Coromandel plan review will be similar to those of Waikato-Waipā
- The supplier/s will be able to plan and undertake the work in the timeframes identified
- Required WRC staff will be available to undertake this work and it will be considered a priority for the staff involved.

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES

Procurement of services will be necessary. While this is a significant procurement. Landcare Research (LCR) is only provider that can provide the complete service. There is an existing Approved Contractor Agreement that enable us to contract LCR using work briefs. The total value of procurement over three years of the LTP which will see S-Map completed for half of the work for Hauraki-Coromandel plan change and the Waikato River catchment is estimated to be \$810,000 (\$1.2 million will see the completion of HCPC area by end of year 4) while to complete the whole region within approximately eight years would be \$1.46 million.

In procuring these services we will follow the WRC procurement policy and will seek exceptional circumstances through the tender board to enable a multi-year (8years) contract for \$1.36million to be established with LCR. The size and nature of this work means that the supplier needs certainty of commitment to enable them to build capacity within their organisation.

## 6 Implementation and achievability

### 6.1.1 Implementation structure

#### Delivery Approach –Project

It is considered that the delivery of S-Map at this time is a project for the following reasons:

- *Deliver revolutionary improvement rather than improvement through an evolutionary process*  
While the process could be undertaken more slowly it would not result in the revolutionary improvement in land management that our plans, strategic direction and community expectations are requiring of us.
- *Are not routine (as its deliverable is unique or novel)*  
The work is not routine, it is the mapping, modelling and making available of new information that enables better management decisions.
- *Utilise transient resources*  
The mapping and modelling work is undertaken through contracted services with close involvement of WRC scientists.
- *Are finite i.e. have a defined beginning and end*

It is expected that this work will be completed in approximately 4 -8 years depending on exact requirements and our ability to undertake the West Coast S-Map work.

- *Are subject to cancellation*

The contracted work is subject to cancellation, but to do so would leave the WRC with a piece of work that is almost good/almost useful, but not fully either due to incompleteness.

### 6.1.2 Scope/deliverables

#### In Scope

- Delivery of regional scale soil mapping for the whole of the region
- S-Map scale being 1:50,000
- Metadata/methods report, this would preferably be an in scope deliverable, but details of this will need to be finalised through contractual arrangements.

#### Out of Scope

- Farm scale soil information.

### 6.1.3 Key milestones

Outline the high level milestones and timeline here. A milestone is a significant event that marks the end of a phase of work or the completion of a major deliverable.

Milestone	Completion Date
Confirm contractual agreement with LCR for completion of Waikato region (if business case agreed)	June 2018
Commence year 1 work for lower Waikato and parts of upper Waikato (HRPI)	July 2018
Complete year 1 work	June 2019
Upload year 1 work to national s-map layer	September 2019
Commence year 2	July 2019
Receive and upload year 2 data onto S-Map website	September 2020
Commence year 3	July 2020
Receive and upload year 3 data onto S-Map website	September 2021
Commence year 4 West Coast	July 2021

### 6.1.4 Stakeholder engagement

Stakeholder engagement will be governed by the Policy team. However, it is likely that the farming community and Hauraki Iwi Collective will have interest in this work.

### 6.1.5 Business change/organisational impact

The immediate impact of this work will be on the soil scientists within the land and soil team. Once this work has been completed it will be used as a tool to assist with BAU in other teams. The tables below sets out potential impacts.

#### 6.1.5.1 Level of impact to participate in the change process/initiative

The impact of this business case is limited to land and soil science.

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Land and Soil science	High	Additional contract management requirements are likely	Other lower priority work will not be undertaken during this time. To meet budget requirements \$85,000 per year of other work funding will be diverted to cover s-map development. This means that in years 3 and 4 of the LTP further work will be undertaken to

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
			implement the recently completed sediment monitoring review. Consideration will be given to contracting additional resources
Policy	Low	Minor input maybe required as they develop their policy framework	It is not expected to require specific management.

#### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
RUD and ICM Farming services	High	Implementation of Hauraki Coromandel – this is likely to be at least 4-5 years from now.	Any impact will need to be managed through the implementation process. It is likely that this will be similar to the process developed for HRWO

The level of impact of the take up of the outputs is dependent on the form that the policy development takes. If it is the same as, or similar to the HRWO then the impact can be expected to be high. For this assessment the assumption has been made that this will be the case.

#### 6.1.6 Ongoing operational management

The output from this work is a nationally available GIS layer that identifies soils to sibling category at 1:50,000 scale. The GIS layer remains the property of LCR, as such the maintenance and management of the layer is the responsibility of LCR

#### 6.1.7 Assumptions, constraints and dependencies

- That policy developed for Hauraki/Coromandel and other zones within the region will result in similar requirement to that of Waikato-Waipā
- If this is the case then the development of that policy is dependent on S-Map availability
- That once developed the S-Map becomes a useful tool for development of FEPs and setting NRPs
- That there will be other useful applications of S-Map (e.g. assisting with Sea Change Tai Timu Tai Pari implementation, identification of vulnerable soils etc.).

#### 6.1.8 Risks

No high risk issues were identified as a result of undertaking this approach.

Risk	Impact	Likelihood	Comments/mitigation
Reputation/image	Minor	Moderate	<b>Medium risk:</b> Rural community is less likely to feel that different parts of our regional community are being dealt with differently – unfair/bias treatment/unfair advantage etc.
Legislation	Insignificant	Unlikely	<b>Low risk:</b> Greater certainty of approach across the region.
Environmental	Minor	Moderate	<b>Medium risk:</b> increased <b>probability</b> of arresting degradation of soil and water quality over a shorter period of time.

# Appendices

## 1 Appendix One: Evaluation of options

### 1.1 Status quo

#### 1.1.1 Option overview

Status quo means that no additional funding is allocated and the completion of s-map for the whole region will rely on BAU budget e.g. \$90,000 p.a.

S-Map is a regional scale **electronically available soil map that details Soil Order, Family and Siblings and has been developed and mapped** nationally over a number of years. The development methodology has improved over the years, with initial work being simply to improve the delineation of legacy soil maps to update and reclassify the soils to S-Map Soil Order, Family and Siblings. These legacy maps did not cover the whole of the region, and in many cases were of differing quality, age and scale. As such, the early S-Map areas are acceptable for some uses, but have many gaps in information.

Soil mapping is important as soils vary spatially and differ markedly in their ability to retain moisture, nutrients and withstand frequent tillage depending on their natural structural qualities. S-Map is a very useful tool for our farming community to help them manage their land most appropriately. When combined with OVERSEER® S-Map enables farmers to establish how much effluent and fertiliser their land needs and can take without significant leaching to groundwater and through this pathway to surface water. Nitrogen application is the main practice of interest in this situation.

WRC currently funds S-Map mapping at \$90,000 per annum. At this funding rate it was estimated that the whole region would be completed in approximately 15 years. The work started prior to the development of HRWO and the improvements to OVERSEER® that have enabled greater accuracy of loading and leaching rates. The Waipa River catchment is the only catchment that has been mapped and modelled using modern (DSM) techniques and therefore represents the example for s-map. The remaining of the Waikato region have not been mapped in any form.

With the development of HRWO and the use of NRPs the importance of having good S-Map information has increased. We cannot meet the needs of HRWO or upcoming Hauraki-Coromandel and West Coast plan review with our existing level of S-Map coverage.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Cost neutral</li> <li>• Some data available for policy purposes</li> <li>• Could use other mechanism to fix NRP, but these are not as robust</li> </ul>	<ul style="list-style-type: none"> <li>• Very long term requirement</li> <li>• Tendency for Landcare Research to prioritise other larger contracts over our work</li> <li>• Limited and less timely data available for policy purposes</li> <li>• Inability to fix NRP equitably across catchments and region</li> </ul>

### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Cost neutral	BAU of \$90,000 per annum	Difficult to get priority with supplier
		Very long term to complete region to required standard

Qualitative benefits	Description
S-Map completed area by area	As S-Map is completed over time, improved information will become available to farmers.

Disadvantages/Dis-benefits	Description of the potential impact
Time taken to complete region	Puts WRC at risk by forcing use of different tools onto different parts of the rural community.
Inability to meet policy development requirements	At current funding we have not been able to meet the requirements for HRWO and will not be able to meet any similar requirements for Hauraki Coromandel.

### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Very long term regional s-mapping completed	Does not improve delivery of the outcome, enables original delivery.
Policy changes to improve water quality	Cannot assist in meeting these objectives as development of S-Map lags behind the development of policy.

### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$90,000	Rates	N/A	\$90,000	0.2 FTE (existing)

### 1.1.6 Assumptions, constraints and dependencies

- To continue with the status quo funding for S-Map the assumption must be made that WRC does not need the information provided by S-Map to meet the requirements of any current or foreseeable future policy development.

### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Reputation/image	Moderate	Likely	<b>High Risk:</b> Rural community is likely to feel that different parts of our regional community are being dealt with differently – unfair/bias treatment/unfair advantage etc.
Legislation	Moderate	Moderate	<b>Medium risk:</b> Inconsistent policy across the region which leads to lack of certainty and hence alignment with RMA planning requirements
Environmental	Moderate	Moderate	<b>Medium risk:</b> Continued degradation of soil and water quality over the period taken to develop S-Map

## 1.2 Option 1

### 1.2.1 Option overview

Fast tracking the delivery of S-Map to meet the needs of Hauraki Coromandel policy development. The process of providing data on which policy can rely takes times and requires adequate funding.

While it is anticipated that the land modules of Hauraki Coromandel are not to be developed until 2021/22 to enable delivery of this essential tool work must be accelerated.

Option 1 is to undertake to update and complete the S-Map development for Hauraki and Coromandel. This will involve assessing the areas for which first generation S-Map existing, completing the areas where no S-Map exists and enabling a coherent and cohesive S-Map to be delivered.

At this time there are areas of the Hauraki/Coromandel that have S-Map developed using legacy information. The quality varies across the zones and as mentioned there are gaps where no information exists. S-Map for the entire Hauraki and Coromandel will use (where possible) existing soil data but will be based on a DSM approach consistent with that used for the Waikato River catchment.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Information is provided in timely manner for inclusion into plan change process</li> <li>Farmers/rural community have robust and consistent information and approach</li> <li>There is clear guidance and one approach to developing NRPs or equivalent.</li> <li>Increased funding of S-Map will improve LCRs ability to deliver on time.</li> <li>The information gained will be applicable to two major programmes of work Hauraki Coromandel and Sea Change and will contribute strongly to both.</li> </ul>	<ul style="list-style-type: none"> <li>Increased cost for years 2 &amp; 3 of LTP (\$135,000 per annum)</li> <li>Increased resourcing, but within current labour allocation – estimated increase from current 0.2FTE to year 1 0.5FTE (to assist with HRWO implementation of s-map) and years 2 and 3, 0.4FTE</li> <li>There remains a potential risk associated with LCR's ability to deliver.</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
\$310,000	Per annum for years 3 and 4 of this LTP, this is made up of \$90,000 BAU, \$85,000 savings from not undertaking other works and \$135,000 per annum from business case. The majority of the work not undertaken will be implementation of the sediment monitoring network review and associated requirements.	\$135,000 years 3 and 4.
The above information is the cost of undertaking the work not the benefit of doing it. The benefit of the work being undertaken is estimated in the cells below		
\$500,000- \$1,000,000	Estimated savings in future reworking of current information and potential litigation on the basis of lack of certainty and regional consistency of approach to land management impacts.	From years 4 onward of the LTP.
The estimated saving are for HC only, there may be further costs associated with HRWO due to the requirements for setting NRPs without having complete catchment coverage by S-map.		

Qualitative benefits	Description
S-Map is available for policy purposes	Certainty of approach for policy and community.

Disadvantages/Dis-benefits	Description of the potential impact
Short term increase in cost	The cost of development is compressed, but would enable better resourcing of the provider.



Disadvantages/Dis-benefits	Description of the potential impact
Short term increase in human resources	Scientists involved may not be available for other work that is identified as a priority later in the LTP cycle.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Policy changes to improve water quality	Supports efforts to improve water quality through better understanding of land use capability.

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$310,000	Rates	N/A	\$310,000	0.3-4 FTE

### 1.2.6 Assumptions, constraints and dependencies

- That policy developed for Hauraki/Coromandel and other zones within the region will result in similar requirement to that of HRWO.
- If this is the case then the development of that policy is dependent on S-Map availability
- That once developed the S-Map becomes a useful tool for development of farm plans and setting NRPs
- That there will be ongoing and other useful applications of S-Map (e.g. assisting with Sea Change Tai Timu Tai Pari implementation).

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Reputation/image	Minor	Moderate	<b>Medium risk:</b> Rural community is less likely to feel that different parts of our regional community are being dealt with differently – unfair/bias treatment/unfair advantage etc.
Legislation	Insignificant	Unlikely	<b>Low risk:</b> Greater certainty of approach across the region.
Environmental	Minor	Moderate	<b>Medium risk:</b> increased <b>probability</b> of arresting degradation of soil and water quality over a shorter period of time.

# Peat Soils Information

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Environmental Science and Information
<b>Function</b>	Understanding regional state and trend of the environment & Investigations and Research
<b>Service</b>	Current state and trend of the environment is monitored, analysed, and reported on including environmental indicators & Knowledge and information gaps on local and regional issues are identified and addressed through targeted scientific investigations.
<b>Financial Budget Code:</b>	L1408 or L1409

## 1.1 Review and approval

Prepared By:	Justin Wyatt, Scientist	20 Oct 2017
Reviewed By:	Liz D Tupuhi, Team Leader, Land and Soil Science	24 Oct 2017
Reviewed By:	Dominique Noiton, Manager Science	31 Oct 2017
Signed off By:	Tracey May, Director Science and Strategy	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference
2018 – 2018 LTP. Levels of Service review. Environmental science and information. 01.04.2017	Dominique Noiton	Doc # 10323857
2018 – 2028 LTP Business case – Science - S-map completion – Liz Tupuhi	Liz Tupuhi	Doc # 11219524

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	20 Oct 2017	Justin Wyatt	Draft
2	24 Oct 2017	Liz Tupuhi	Draft review
3	31 Oct 2017	Dominique Noiton	Draft review
4	8 Nov 2017	Tracey May	Director review

## 2 Executive summary

About 80% (~75,000 ha) of Waikato's peatland has been drained for agriculture. Drained peat subsides and emits carbon dioxide while undrained peat wetlands represent unique ecosystems. Peatlands are important economically, with about 10% of the regions dairy farming located on them. Peat subsidence contributes to a range of land management problems and current practises mean these losses will continue until all the peat is gone, leading to a potential loss of productivity and ecosystem services.

A monitoring network is required to meet our obligations under section 35 of the RMA. In the future it will provide the ability to interrogate land use and drainage influences on the rates of peat subsidence. A spatial model showing change in the landscape will help Waikato Regional Council (WRC) understand, and plan for, potential impacts, as well as providing a platform to raise awareness among stakeholders. It is expected that this work will build a solid foundation for future, more intensive, investigations into understanding and slowing peat subsidence. This work also places WRC on the pathway to achieving a number of long-term outcomes and aligns well with the corporate strategic direction.

This work will be supported by the completion of the Waikato S-map work, as that work will define the area of peat soils. The subsidence monitoring network developed for this work will contribute to improving our soil quality knowledge on peat soils (a.k.a Organic Soils) and the region's soil quality monitoring programme.

### Summary points

- The first three years of the LTP are for a project of work to gather **baseline** information
- **The cost is \$390,000 over the three years**
- This work will **become business as usual** with monitoring of the network requiring **\$100,000 every 5 years**
- To enable continuation of other work it is likely that the \$100,000 will be additional to budget. However, the soil strategy may indicate that other work can be reduced
- The work will be undertaken by existing staff
- Further investigative work is likely to be necessary
- No high risk issues were identified in taking the recommended approach.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	-	-	-	-	-	-
<b>Operational</b>	\$110 000	\$145 000	\$135 000	-	-	~ \$100 000 Every 5 years

#### 2.1.1.1 Funding source

Funded through investment fund equalisation.

#### 2.1.1.2 Funding partnerships

There are no funding partnerships for this work. However, depending on the requirements of Hauraki Coromandel Plan Change and the ongoing plan review further funding from other sources may be required.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	Yes
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes
Does the work require analysis or modelling of spatial data?	Yes
Does the work require the establishment of new depots or offices?	No

Consideration	Yes/No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Fixed Term</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Contract</b>	N/A	\$110,000	\$145,000	\$135,000	N/A	N/A	N/A

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The Waikato region has about 94,000 ha of peatlands, of this, about 80% has been drained for agriculture and the remainder is managed for conservation and flood protection. In some locations peat has been estimated to be up to 12 m deep. Peat represents about 10% of the region's dairy pastoral land and our blueberry growing industry is dependent on peat soils. Drainage, to retain productivity of existing land uses, leads to land subsidence of up to 10 cm yr<sup>-1</sup> and CO<sub>2</sub> emissions of approximately 6.97 t ha yr<sup>-1</sup>. Current land management practices mean these losses will continue.

Ongoing peat subsidence contributes to a range of land management problems including; increased risk of flooding, prolonged inundation and high soil moisture, reduced sustainability of remnant wetlands, and a requirement to upgrade or install infrastructure (e.g. flood protection/pumping, roads and utilities etc.) to maintain productivity. In the near future, the impact of subsidence is likely to be exacerbated by sea level rise in the Lower Waikato and Hauraki catchments. The emissions of CO<sub>2</sub> add to our regional greenhouse gas (GHG) footprint and depending on future policy these emissions could attract a tax, require mitigation and/or need to be accounted for. With the loss of peat there is a potential loss of productivity and ecosystem services, whilst assumed to be problematic these impacts are largely unknown, this creates uncertainty for the council and our communities.

Previous work has focused on quantifying the general rates of peat subsidence in the Waikato region, but a robust regional monitoring network has never been established. Furthermore, current understanding of the spatial variation in subsidence rates under different land and drainage management practices is poor.

Recognising the risk peat subsidence poses, the Waikato Regional Policy Statement (WRPS) through implementation of method 14.5.1 requires regional plans to control activities on peat soils "to slow the rate of subsidence and carbon loss". Owing to the lack of information, WRC has limited ability to implement this method. Furthermore, information gaps constrain WRC and land owners ability to plan for future management of this vital resource.

Over the next three years this work proposes to; use existing information to define the peat soil resource and issues associated with subsidence, develop a robust peat subsidence monitoring network to gather information on the long term trends of peat subsidence, use a paired site approach to provide information in the short term to understand the impacts of land use on peat subsidence, and develop a spatial tool to explore the potential physical impacts of peat subsidence.

This work strongly aligns with existing research on peat in the Waikato Region (see section 5.1.3 for further detail). Whilst these other projects are different (e.g. GHG emissions, nutrient cycling) they contain elements which will complement this work.

## 3.2 What will success look like (high level benefits)

At the end of the three year project it is anticipated that WRC will:

- Have a better understanding of the peat soil resource, its management, and the issues associated with existing land management practices.
- Be meeting its requirements under section 35 of the RMA through the development of a robust monitoring network.
- A network that provides the ability to interrogate land use and drainage influences on the rates of peat subsidence.
- Have some information to understand how it might implement method 14.5.1 of the RPS (i.e. reducing subsidence) and also provide some guidance for land managers.
- Have a spatial model, showing how the landscape might change in the future due to peat subsidence. This will help WRC understand, and plan for, potential impacts, as well as providing a platform to raise awareness among stakeholders.

## 3.3 Consequences of not proceeding

The main consequences of not proceeding is that existing management practices on peat will continue, resulting in;

- A WRPS method which remains difficult to implement because it is not supported by evidence based information.
- Land and drainage managers continuing to have poor science and policy direction regarding the management of peatlands.
- Continued peat soil loss at a rate which is likely to be faster than necessary and, in the longer term, no opportunity to consider options for stopping peat subsidence.
- No understanding of full costs of ongoing subsidence and loss of peat soils, likely leading to undesirable long term outcomes for communities, the regional economy and environment.
- The wider farming and supporting community remain largely unaware of the issue of peat subsidence and potential future impacts.
- The lifespan of some nationally significant wetlands (e.g. Moanatuatua) continue to be impacted and the requirement of the National Policy Statement for Freshwater Management to protect the significant values of wetlands is not supported.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy Environment	<i>Land use is sustainable</i> – So long as peat is drained it will subside until it no longer exists, this is unsustainable. However, investing in our understanding of peat subsidence and building knowledge to allow us to reduce and eventually stop peat subsidence will put WRC on the right track to achieve this long term outcome.
Healthy Environment	<i>The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state</i> – See justification above, building knowledge which eventually facilitates approaches to reduce subsidence will slow the loss of natural capital, and in the longer term stopping subsidence will preserve this natural capital indefinitely.

<b>Long Term Outcome</b>	<b>How will this change improve delivery?</b>
Strong Economy	<i>Economic growth ensures natural capital and ecosystem services are maintained</i> - See justification above, also such investigations may identify land uses which optimise both sustaining production and reducing peat subsidence.
Strong Economy	<i>The Waikato is moving towards a low carbon economy</i> - Any strategies lead to a reduction in peat subsidence will likely result in a decrease in CO <sub>2</sub> emissions.
Vibrant Communities	<i>Communities are less vulnerable and more resilient to natural hazards, the effects of climate change and changes to society and the economy</i> - A better understanding of the peat resource and subsidence rates will allow better planning for infrastructure and natural hazards.

<b>Strategic Direction / Corporate Plan Priorities</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
<i>Positively influence future land use choices to ensure long term sustainability.</i>		
<i>We plan and make decisions on land use based on multiple values and benefits, including economic and non-economic.</i>	<i>Strongly contributes</i>	Whilst a small community of interest, future land use and management decisions will be guided by improved understanding of peat subsidence rates; across the region, and under different land use and drainage types.
<i>If shown to be feasible, we create an entity in partnership with others to buy land, enter into joint ventures and incentivise good land use practises so land use can be changed to better suit the land's long term sustainability.</i>	<i>Partially contributes</i>	Through the spatial modelling work a preliminary indication of those areas on drained peat which may be suitable for either purchase or incentivised land use change may be able to be identified. This land use change could include wetland farming (paludiculture) or managed reversion back to their globally unique Waikato bog vegetation.
<i>Increase communities understanding of risks and resilience to change.</i>		
<i>We are all better informed of risks and drivers for change affecting communities</i>	<i>Strongly contributes</i>	Whilst a small community of interest, understanding subsidence rates (this work) and peat extent (soil mapping work), will help understand when and where peat will be lost and therefore, better help communities plan and understand what action might be required in the future.
<i>We more actively reduce long term risks to communities from storm damage and weather related natural hazards; and long term risks of sea level rise to settlements and infrastructure</i>	<i>Partially contributes</i>	Areas which will be impacted by both sea level rise and subsidence will be able to be identified through the spatial modelling work. As well as those areas which are likely to be more prone the impacts of inundation and prolonged high soil moisture conditions

<b>Legislation</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
RMA sec 5(2)(b)	<i>Explicit</i>	We are starting on the pathway to develop knowledge which will hopefully lead to safe guarding the life supporting capacity of our peat soils.
RMA sec 30	<i>Explicit</i>	Enables WRC to deliver clear guidance within developed policies on the management approach and tools to be used.
RMA sec 35	<i>Strong contributes</i>	Provides further ability to gather data and provide information on the state of the region's peat soil resource.

<b>Other (NPS, SLA, explicit LoS arrangement, best practice etc.)</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Regional Policy statement (RPS); Policy 14.5 Peat Soils	<i>Strongly contributes</i>	WRC will develop evidence based knowledge to build an information base to implement method 14.5.1 of the RPS.
National Policy Statement for Freshwater Management	<i>Partially contributes</i>	The long term goal of gathering information to slow and in the even longer term hopefully stop peat subsidence will allow the significant values of wetlands to be protected in those situations where adjoining wetlands are being impacted by peat subsidence (e.g. Moanatuatua).
Good management practise guide "For Peats Sake"	<i>Partially contributes</i>	This work will provide the opportunity to update the good management practise guide for peat sake with subsidence rates associate with specific land uses or drainage activities.
Proposed Soil Strategy	<i>Strongly contributes</i>	Will help achieve the vision of the proposed Waikato Regional Council Soil Strategy by filling identified knowledge gaps.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

Two options were assessed in developing this business case. These being;

- The status quo which represents funding allocated during the 2015 to 2025 LTP process where funding of \$30 000 per year to look at peat soil issues was deferred until the 2018/19, 2019/20 and 2020/21 years.
- Option 1, replaces the status quo and requests \$390 000 over years 1 to 3 of the LTP and then \$100 000 every 5 years thereafter.

### 4.1 Specific objectives

The overall objective of this work is to improve the understanding and management of the peat soil resource in the Waikato Region. It is anticipated that this will be achieved through the following actions.

1. Bringing together of regional peat soil resource information (peat type, depth, subsidence rate, land use etc.) into a centralised corporate layer. It is anticipated that improved peat soil extent will be provided by existing soil mapping work.
2. Identification of existing land uses and drainage practises on peat soils and the issues associated with these.
3. The development and implementation of a statistically robust peat subsidence monitoring network for the purpose of a peat subsidence indicator. Through stratified design the network will cover the broad range of peat types, land uses and drainage management on peat providing future information on subsidence under these.
4. Development and implementation of a method (likely to be paired site approach or historical information analysis) to, by the end of this project, provide information on the broad differences between subsidence rates on land uses currently practised on drained peat in the Waikato region.

- Develop a spatial model to understand how the region might change with subsidence, couple this with other scenarios such as sea level rise. This model should be able to be added to as knowledge on peat soils grows.

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1
1. Summary of the peat resource.	Meets in part	Meets
2. Identification existing management practices on peat and the issues associated with these.	Meets in part	Meets
3. Development of a robust subsidence monitoring network	Does not meet	Meets
4. Development of a method to determine subsidence rates between different land uses.	Meets in part	Meets
5. Development of a spatial model to visualise the impacts of peat subsidence.	Does not meet	Meets

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo	Unknown	N/A	N/A	\$90 000	-
Option 1	Unknown	N/A	N/A	\$390 000	

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- More likely to deliver on stated objectives and address research gaps than the status quo.
- Is a more coherent and long term approach, which will feed into future work.
- Builds a robust evidence based monitoring network which will allow future interrogation of data and therefore better understanding of peat subsidence.
- Will gather information on the short term around the impacts of land use on peat subsidence through a targeted study.
- Has had strong input from researchers at Landcare Research and the University of Waikato.
- Includes a mechanism to develop a method to visualise the impacts of peat subsidence, therefore creating a communication tool.

# 5 Financial analysis and procurement (Financial and Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour				
Opex	\$390 000	over three years	Investment fund	Will be used on contracted services.
Capex	N/A	N/A	N/A	
Revenue	N/A	N/A	N/A	
Contingency	N/A	N/A	N/A	

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital	N/A	N/A	N/A			N/A
Operational	\$110 000	\$145 000	\$135 000			~ \$100 000 Every 5 years



\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Revenue	N/A	N/A	N/A			N/A

### 5.1.1 Funding partnerships

There are no funding partnerships for this work.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- That this work will not be undertaken by other agencies (e.g. Universities or Crown Research institutes) with funding from central government.
- That the soil mapping work currently underway in the Lower Waikato will better define the peat soil (a.k.a Organic Soil) extent in that area and therefore provide information for this project.
- That future funding will allow the monitoring network to continue.

### 5.1.3 Additional commentary

This work aligns with two existing peat soil projects.

The first being the PEATWISE project, which is a three-year program (2017-2020) investigating greenhouse gas emission from drained agricultural peat in the Waikato, this is being led by the University of Waikato and funded by MPI. The project seeks to determine CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> emissions from drained peat soils under different drainage intensities.

The second is a Sustainable farming fund project (Sustainable nutrient management on Waikato peat soils - 48101) which is investigating nutrient cycling in peat soils in the Waikato. This is being led by AgResearch and funded by MPI with support from local farmers, Waikato Regional Council, DairyNZ and Balance Agri-Nutrients.

The Science and Strategy Land and Soil team at Waikato Regional Council has strong ties with both the University of Waikato and AgResearch.

A third project proposal being undertaken by the UoW involves further work building on the PEATWISE work as an international collaboration. This work is complementary to the work put forward in this proposal and will enable greater understanding of the issues associated with the use of peat soils.

### 5.1.4 Procurement strategy

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach – Project

The Project will be managed by a Land and Soil Scientist with overview from Land and Soil Team Leader and Science Manager. Spatial digitising, mapping and modelling will be undertaken by the Waikato Regional Council Spatial Information Team. This will require personnel hours from each of these

teams, this relationship should be co-ordinated by the project leader (Land and Soil Scientist) with overview from respective team leaders and managers.

Technical guidance, input and project support will be sought by subject experts from the University of Waikato and Landcare Research. This relationship will be managed through contracts.

Outputs are expected to be maps, summaries from workshops and technical reports. Where contractors are engaged these will be included as specific milestones.

Because the project includes the setup of a monitoring network – ongoing work should be considered operational and will require ongoing funding. This future funding is included under “future years” in the “funding profile” (Sections 2.1.1 and 5).

### 6.1.2 Scope/deliverables

In Scope

- Compiling existing peat soil information.
- An understanding of those peat soils at risk of subsidence and the land and drainage management practises undertaken on those soils.
- Development and implementation of a regional scale peat subsidence monitoring network and indicator.
- Determination of peat soil subsidence under different land uses.
- Development of a spatial model to visualise the impacts of peat subsidence

Out of Scope

- Evaluation of the environmental, economic and social consequences of peat subsidence.
- Nutrient cycling and losses from peat soils.
- Investigation of the feasibility of methods to stop subsidence (e.g. land retirement or land use change etc.).
- Development and testing of farm scale methods to reduce or stop peat subsidence.
- Experimental work.
- Measuring carbon loss due to peat subsidence (currently being undertaken by University of Waikato).

### 6.1.3 Key milestones

M#	Milestone	Lead Provider	Completion Date
	Contract work		31 July 2018
	<b>Understanding Waikato’ peat resource</b>		
1.1	Bring regional peat resource information together	WRC	31 October 2018
1.2	Workshop to identify at risk areas and potential good management practises	WRC	31 January 2019
	<b>Quantify the subsidence rates of peat soils across the Waikato region</b>		
2.1	Develop and test a method to monitor peatland subsidence	Contractor	31 January 2019
2.2	Design a robust regional peat subsidence monitoring network	Contractor	30 June 2019
2.3	Determine peat depth and surface height for sites in the regional monitoring network	Contractor	30 June 2020
	<b>Identify strategies to reduce peat subsidence (land use impacts)</b>		
3.1	Develop an approach and identify sites to specifically compare peat subsidence amongst different land uses (to provide information on the effect of land use/management quickly).	Contractor	31 January 2020

M#	Milestone	Lead Provider	Completion Date
3.2	Measure peat surface height for sites in close proximity but under different land uses	Contractor	31 January 2021
	<b>Analysing results from previous milestones outlining implications for peat land policy/management and recommendations for future monitoring/research.</b>		
4.1	Analyse results from previous milestones	Contractor	30 April 2021
4.2	Develop spatial model for visualising peat subsidence.	WRC	31 January 2021
4.3	Present results and information to stakeholders	WRC	30 June 2021
4.4	Final Report including recommendations	Contractor	30 June 2021

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Integrated Catchment Management	Information for; flood scheme management, good management practises, and farm environmental plans.	Inform
Catchment Committees	Information for flood scheme management	Inform
Resource Use Directorate	Information for future consent conditions.	Inform
Science and Strategy (Policy Implementation)	Information to help implement section 14.5 of the regional policy statement.	Inform
Landcare Research Ltd	Possibly – contracted to undertake measurement work	Engage
The University of Waikato	Possibly – contracted to undertake measurement work. Also linkages with existing PEATWISE greenhouse gas emissions work.	Engage
AgResearch	Linkages with their existing Sustainable Farming Fund peat nutrient cycling project.	Engage

### 6.1.5 Business change/organisational impact

#### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Land and soil (SAS Directorate)	High	Increased staff time to organise project, participate and manage contracts.	Reduce emphasis in other areas to allow this work to be achieved (e.g. less external work and spread other tasks across the team) also much of the physical work will be contracted.
Spatial information (SAS Directorate)	Medium	Increased staff time for collation of spatial data and development of spatial model.	Use project plans and clear communication to agree on staff allocation
Technical Services (ICM Directorate)	Low	Increased staff time for provision of peat management information and attendance at workshop.	Use project plans and clear communication to agree on staff allocation
Relevant zone teams and Managers (ICM Directorate)	Low	Increased staff time for provision of peat management information and attendance at workshop.	Use project plans and clear communication to agree on staff allocation

#### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS Directorate	High	New science-based evidence and decision-making tools are available for policy development	Include internal and external users to provide feedback at the project

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
			development phase and at reporting time.
ICM Directorate	High	New guidance associated with peatland management.	Include internal and external users to provide feedback at the project development phase and at reporting time.

### 6.1.6 Ongoing operational management

Because an aspect of this work establishes a monitoring network and indicator future funding will be required, these costs are estimated to be about \$100 000 every 5 years.

At this stage the skills to undertake this ongoing monitoring work lie outside the council, therefore the data gathering for this work will need to be contracted.

### 6.1.7 Assumptions, constraints and dependencies

- The analysis of this option assumes that this work is not undertaken or funded by other agencies (e.g. Universities or CRIs with funding from central government).
- That the soil mapping work currently underway in the Lower Waikato will better define the peat soil (a.k.a Organic Soil) extent in that area and therefore provide information for this project.
- To be successful this project will require future operational funding as indicated in the future years budgeting.

### 6.1.8 Risks

No high risk issues were identified as a result of undertaking this approach. (See options for risk assessment).

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

### 1.1 Status quo

#### 1.1.1 Option overview

A business case mini was submitted to the 2015 to 2025 Long-term plan process. This requested \$30,000 per annum for three years, however, funding was deferred until the 2018/19, 2019/20 and 2020/21 financial years. This business case recognised that there was not enough information to adequately implement section 14.5 (peat) of the Waikato Regional Policy Statement (RPS).

The objective of the 2015 – 2025 business case was to “initiate and oversee research on current and emerging peat soils issues to inform education and meet the requirements of the Regional Policy Statement methods 14.5.2 and 14.5.3”.

The following research gaps were identified:

- Quantitative data on peat subsidence under long term cropping compared with pasture
- The characteristics and rate of soil formation on underlying mineral sediments
- Economic implications of the transition from peat soils to underlying mineral sediments
- Regional long term carbon loss from land uses on peat soils
- The impacts of peat soil subsidence on infrastructure.

The \$90,000 over the three years was intended to fund a combination of contracted researchers to undertake several small studies and contribute to one or more post graduate projects.

However, it should be pointed out that the funding requested in this option will not be able to answer all the five research gaps outlined above. For those which are attempted the new information acquired is likely to be limited.

#### 1.1.2 Pro’s and Con’s

Pro’s	Con’s
<ul style="list-style-type: none"> <li>• Some limited information will be collected to help better understand peat soil subsidence and its consequences.</li> </ul>	<ul style="list-style-type: none"> <li>• The funding for this option is likely to be insufficient for the number of questions it seeks to answer. Therefore, the Waikato Regional Council will still not have a full picture of the peat resource, the different rates of subsidence across the region, and a good method to determine which land uses and land management practises are worse for subsidence.</li> <li>• This approach will not provide a solid knowledge base for future investigations into approaches to reduce subsidence.</li> </ul>

### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Funding will be limited to \$90 000 for the entire project.	Cost of this work contributes to an increase in rates of \$90 000, however this is less than option 1 which requires \$390 000 of funding which could be allocated elsewhere.	\$300 000 over the 2018/19, 2019/20 and 2020/21 financial years.
There will be some understanding of the economic impacts of peat subsidence.	Information from this work will contribute to understanding the cost of long term peat subsidence.	Unknown, but about 10% of the regions dairy farming land use is on peat so this could be considerable.

Qualitative benefits	Description
New information on peatland subsidence will be obtained, but this is likely to be very limited.	This work might provide some very limited information on; rates of subsidence under cropping, the rate of soil formation once peat is lost, economic consequences of peat loss and the impacts of peat soil subsidence on infrastructure.
Addition to current understanding of good management practises on peat soils.	Information of peat soil subsidence under cropping may be used to update the good management practise guide "For Peats Sake".

Disadvantages/Dis-benefits	Description of the potential impact
A strong knowledge base of information is not developed for future peat subsidence work.	In an attempt to cover a number of topics with a small amount of funding the resulting information is likely to be insufficient to completely meet the requirements of Regional Policy Statement methods 14.5.1, 14.5.2 and 14.5.3.
Waikato Regional Council still lacks a good understanding of its peat resource and the rates of subsidence across the region.	To manage the issue of peat subsidence Waikato Regional Council needs to better understand the resource and have a network to adequately monitor subsidence at a regional scale.

### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Strong economy	The Waikato region is moving towards a low carbon economy. Any work to understand and potentially reduce peat subsidence will lead to a reduction in CO <sub>2</sub> emissions.
Vibrant communities	Communities are less vulnerable and more resilient to natural hazards, the effects of climate change and changes to society and the economy. Understanding the impacts of subsidence and also its effects on infrastructure will help improve long term management of flood protection.

### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Unknown	N/A	N/A	\$90 000	

### 1.1.6 Assumptions, constraints and dependencies

- The analysis of this option assumes that this work is not undertaken or funded by other agencies (e.g. Universities or CRIs with funding from central government).
- That the soil mapping work currently underway in the Lower Waikato will better define the peat soil (a.k.a Organic Soil) extent in that area and therefore provide information for this project.

To be successful this project will require future operational funding as indicated in the future years budgeting.

### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Impact on reputation/poor public perception due to the peat subsidence issue remaining unresolved.	(2) Minor	(4) Likely	<p>Medium Risk</p> <p>Through inadequate investment to understand peat subsidence the issue continues unresolved.</p> <p>The research gaps identified in the original business case are not clearly aligned with the requested funding. It is anticipated that the requested funds are not adequate to meet all of the research gaps identified.</p> <p>Better planning and resourcing required. Also management of expectations to understand that this project is about understanding subsidence and methods to slow subsidence rather than stop it.</p>
Impact on reputation/poor public perception due to the council continuing to be unable to implement Policy 14.5 of the RPS.	(2) Minor	(4) Likely	<p>Medium Risk</p> <p>Information is still insufficient to help guide planners towards policies which will result in the slowing of peat subsidence.</p> <p>Better planning around what is required to implement section 14.5 of the RPS is needed, as are more resources.</p>

## 1.2 Option 1

### 1.2.1 Option overview

Waikato Regional Council funds work to improve the understanding of the region's peat subsidence rates.

Using existing information the area of peat soils in the region is identified and a central inventory of peat soils information (e.g. depth, subsidence rates) for the Waikato Region is compiled into a GIS based corporate layer. Peat soils posing the greatest risk due to subsidence will be identified, as will drainage management practises and the key issues for each area.

A method to monitor peat subsidence will be developed and tested. A robust network will be designed and the first round of monitoring will be completed. Monitoring will cover the range of peat types, land uses and drainage management across the region, and be repeatable on a five yearly basis as required by the 2015 – 2025 LTP. This will be an improvement on the existing monitoring, which covers less than 50% of the regions peatland, also in some cases this spatial coverage is poor (e.g. Hauraki) and some transects are located along drain lines.

In future this will monitoring network provide the ability to understand subsidence under multiple scenarios and provide a knowledge base for future research into reducing peat subsidence. It will avoid the need to rely on historical sites and provide a framework to monitor any strategies implemented under section 14.5 (peat) of the Regional Policy Statement. Also, the proposed network could be used to form the basis of a peat (a.k.a Organic) soil quality indicator.

Realising that information is required now, work will be undertaken to develop and implement a method to understand the rates of subsidence under different land uses, and if possible drainage design, in the Waikato Region. This method is not as robust as the long term monitoring approach but will hopefully provide preliminary values for peat subsidence under different land uses in the short term.

Using existing data, a spatial model is developed to allow visualisation of peat subsidence. This will provide a tool which can be used to communicate the issue of peat subsidence as well as being used to understand its impacts. This spatial model can be added to as new data becomes available.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>WRC has a robust network to monitor peat subsidence into the future – therefore meeting section 35 of the RMA.</li> <li>WRC has an improved understanding of its peat resource and the issues associated with subsidence.</li> <li>WRC is in a strong position to continue to build on its understanding of peat subsidence and therefore be able to better manage the issue in the future.</li> </ul>	<ul style="list-style-type: none"> <li>This option does not completely provide for the needs of section 14.5 of the RPS, as this will take time and further work.</li> <li>Could be seen as slow moving – not answering all the questions immediately.</li> <li>The reality is that so long as peat is drained it will subside, whilst this work might lead to strategies to eventually reduce subsidence – drained peat will still continue to be lost until it is all gone. Therefore this work is a step towards other projects which might answer these long term issues and perhaps eventually provide strategies to stop subsidence.</li> <li>Does not investigate the impacts of specific land management practises on peat subsidence (e.g. cultivation for pasture renewal).</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
A better ability to plan for required flood management infrastructure.	In the long term collecting better data on peat subsidence will allow the council to better understand where and when peat subsidence will be an issue and therefore undertake	Unknown
A better ability to plan for future land management.	In the long term, understanding the rates of peat subsidence under a variety of scenarios (peat type, drainage management, and land management) will allow land managers to better plan future land uses and management and understand what the consequences of subsidence might be.	Unknown

Qualitative benefits	Description
The variability of peat subsidence in the region is better understood.	The development of a robust monitoring program with sites that adequately cover the different peat types, their uses and drainage management will allow a better evidenced based understanding of peat subsidence across a range of scenarios and an ability to move away from the reliance on historical monitoring locations.
A good knowledge base of peat subsidence information is developed.	A robust monitoring program will provide a good base for future investigative work and allow a good base to understand the drivers of different rates of peat subsidence.



Qualitative benefits	Description
Development of a network to better monitor the outcomes of section 14.5 (peat) of the RPS	The RPS requires that regional plans control activities to reduce peat subsidence, the current network of existing peat subsidence monitoring sites is not suitable to do this. Furthermore, the current approach is unable to determine peat subsidence at time intervals of less than 10 years.
WRC will begin to have a quantitative understanding of which land uses are worse or better for peat subsidence.	In the longer term, the monitoring programme will allow a robust investigation of differences between land uses and drainage management practises. In the short term this work will provide some preliminary information on the impacts of land use differences.
WRC will have developed a tool to help communicate the impacts of subsidence.	By developing a spatial model, which incorporates subsidence. WRC will be able to inform stakeholders about the potential impacts of peat subsidence.

Disadvantages/Dis-benefits	Description of the potential impact
Increased workload for Waikato Regional Council staff.	Staff members will be required to manage and provide input into this project.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this change improve delivery?
Healthy Environment	<i>Land use is sustainable</i> – So long as peat is drained it will subside until it no longer exists, this is unsustainable. However, investing in our understanding of peat subsidence and building knowledge to allow us to reduce and eventually stop peat subsidence will put WRC on the right track to achieve this long term outcome.
Healthy Environment	<i>The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state</i> – See justification above, building knowledge which eventually facilitates approaches to reduce subsidence will slow the loss of natural capital, and in the longer term stopping subsidence will preserve this natural capital indefinitely.
Strong Economy	<i>Economic growth ensures natural capital and ecosystem services are maintained</i> - See justification above, also such investigations may identify land uses which optimise both sustaining production and reducing peat subsidence.
Strong Economy	<i>The Waikato is moving towards a low carbon economy</i> - Any strategies lead to a reduction in peat subsidence will likely result in a decrease in CO <sub>2</sub> emissions.
Vibrant Communities	<i>Communities are less vulnerable and more resilient to natural hazards, the effects of climate change and changes to society and the economy</i> - A better understanding of the peat resource and subsidence rates will allow better planning for infrastructure and natural hazards.

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Unknown	N/A	N/A	\$390,000	

### 1.2.6 Assumptions, constraints and dependencies

- The analysis of this option assumes that this work is not undertaken or funded by other agencies (e.g. Universities or CRIs with funding from central government).
- That the soil mapping work currently underway in the Lower Waikato will better define the peat soil (a.k.a Organic Soil) extent in that area and therefore provide information for this project.
- To be successful this project will require future operational funding as indicated in the future years budgeting.

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Impact on reputation/poor public perception due to the peat subsidence issue remaining unresolved.	(2) Minor	(3) Moderate	<p>Medium Risk</p> <p>Through inadequate investment to understand peat subsidence the issue continues unresolved.</p> <p>Better planning and resourcing required. Also management of expectations to understand that this project is about understanding subsidence and methods to slow subsidence rather than stop it.</p>
Impact on reputation/poor public perception due to the council continues to be unable to implement Policy 14.5 of the RPS.	(2) Minor	(3) Moderate	<p>Medium Risk</p> <p>Information is still insufficient to help guide planners towards policies which will result in the slowing of peat subsidence.</p> <p>Better planning around what is required to implement section 14.5 of the RPS is needed, as are more resources.</p>
Soil mapping work is not comprehensive enough in some areas reducing the quality of any monitoring network design.	(2) Minor	(3) Moderate	<p>Medium Risk</p> <p>Part of this work relies on having a reasonable regional scale understanding of peat soil extent. It is expected that existing soil mapping work (SMAP) will improve this understanding.</p> <p>Discussion about achieving better peat soil delineation in S-map has begun internally (As at October 2017) and this will hopefully conclude with additional work being contracted in this area.</p>

# Oracle to SQL server migration

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Spatial Information
<b>Function</b>	Data Management
<b>Service</b>	The role of the data management part of the Section is to manage hundreds of mainly spatial datasets ensuring that the data is up to date, restrictions on use is known and data is made available externally in formats that the stakeholders can consume and use.
<b>Financial Budget Code:</b>	D1201A SAS Capital

## 1.1 Review and approval

Prepared By:	Gill Lawrence / Manager Spatial Information	29 October 2017
Reviewed By:	John Crane, CIO	31 October 2017
Signed off By:	Tracey May, Director Science and Strategy	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	29 Oct 2017	Gill Lawrence	Draft
2	31 Oct 2017	John Crane	Draft review
3	8 Nov 2017	Tracey May	Director review

## 2 Executive summary

The ArcGIS implementation project (see section 3.1) did not include the migration from the Oracle Spatial database and the purpose of this business case is to address that gap describing the rationale and the business drivers for the change.

This business case requests an increase of one operational role. This role is required whether this Oracle project goes ahead or not. There is constant increasing demands on the section to support the rest of the organisation with projects and BAU tasks impact. One additional role would initially assist this project so reducing by one the originally projected need for two contracted data management / spatial analysis resources. Thereafter there is an operational requirement for this role to meet ongoing need.

### The Problem

In 2015 an internal review of the Corporate GIS system at WRC was undertaken. [GIS refers to the software, data and infrastructure system – spatial information is the term that includes the people and processes]. The aim was to check whether we had the right tools for the job currently; was the software fit for purpose and were there better options available. The review covered all aspects of the GIS system – browsers, desktop and database.

During the review, the 2015 SISP ([Doc # 3200002](#)) was used to check direction and ensure alignment with any proposed future direction. The SISP covers spatial information at a high level coupled with giving direction for the underlying ICT infrastructure that underpin spatial information.

### **The Proposal**

This project has two phases and covers three main activities. The first phase in Year One is the Planning and Exploration Phase. This phase plans to use a Request for Information (RFI) process to go to market to investigate the best solution for a spatial database for the future that would match requirements. This could prove to be the existing Oracle Spatial, a move to Microsoft SQL or to an open source solution such as PostGRE/PostGIS.

The RFI would also be used to establish the best migration process based on what the organisation currently has including a very large number of datasets and processes, to the new solution. The additional operational role would assist in remodelling of the data along with existing resources within the Section. This activity is sizeable and is described in more detail in Section 5.3.1.

The IRIS partners are planning to adopt an ESRI feature model prior to June 2018. This is a significant change from the existing “dumb” geometry model. This has unknown impacts on this project at this stage which will be explored in this phase.

The last part of the first phase would be to fully plan the implementation, then seek approval to move to the next phase if the required, and to obtain the contracted resources for the project.

Year 2, would see the Implementation Plan to the desired solution. This is a project that would involve the Spatial Information Section, IT Section and Business Solutions at times as well key resources across the organisation e.g. in ICM and Environmental Monitoring. The project would occur over one year and involve first the setting up of the DEV environments and testing potential migrations then moving first to Test then Live environments. It will involve a refresh of the web maps and web services.

An important aspect of the project is the integration with other corporate applications such as IRIS, Financials, WISKI, and Conquest. Integration already exist with all of these applications.

### **Objectives:**

The specific objectives of this proposal/business case are:

1. Complete the migration project to ArcGIS
2. Efficiencies gained through reduction in work arounds to enable data to be a format that can be consumed by organisational applications (e.g. ArcGIS, IRIS, Conquest)
3. Cost savings through a reduction in licencing costs and a potential cost in future contracted services
4. Reduce technical complexity by removing the dependency on Oracle products and skillsets to manage these
5. To be on a solution that is in line with the principles and directions of the SISP
6. To be on a solution that enables increased sharing of opportunities with other partners e.g. Councils, NIWA, Land Information New Zealand
7. For the Spatial Information Section to have reduced applications to support

8. Future recruitment across all roles in the Spatial Information Section will be easier and achieve a faster uptake in roles because there is experience in the market of the solution WRC is using.

### Benefits

The specific benefits of this proposal/business case are:

- Ability to meet demand for Requests for Service across the organisation without pressure to juggle resources and reprioritise planned work
- Ability to create new apps, maps and other interactive solutions requiring spatial input without significant delays while special scripts are developed (previous examples are “map my farm”, Coastal Inundation tool)
- To be following the line of direction of the SISP as indicated in the objectives above
- To position WRC well to be able to collaborate with other councils and organisations so being able to provide increased spatial information for the community to enable knowledge and the ability to be able to plan and make decisions
- Ability to be able to develop and share new solutions with Land Information NZ, NIWA and others
- Seamless integration to the Waikato Data Portal.

### Measures of success

The specific measures of success of this proposal/business case are:

- reduction in licencing of at least \$32,500 per year (greater if open source solution decided)
- request for Service reports that meeting timeframes
- Oracle Spatial removed
- decline in use of Oracle skillset from DBAs
- Oracle Spatial to other database scripted workarounds removed and reduction in time spent internally to create these scripts.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	-	\$329,500	-	-	-	-
<b>Operational</b>	85,000*	85,000	87,600**	87,600	87,600	525,600

\*new operational position

\*\* continuation of new operational position and ongoing annual licencing of SQL if this were the solution chosen

#### 2.1.1.1 Funding source

Year 1, 2018/19 –

- **Opex: Additionally requested internal labour:**
  - new staff resource [data management/analyst] - **\$85K [requested even if the project does not go ahead]**  
Remainder is from existing funding:
  - Existing internal labour
  - undertake RFI in second half of the year – finding out process-wise how to undertake this change over; considering whether Microsoft SQL server is the best way to go or if other alternatives such as open source PostGRE/PostGIS should be considered
  - continue to restructure data to ESRI and SQL server geometries format

- IT to set up DEVL SQL spatial Server
- Project manager - 0.25; set up begins; assist with RFI.

#### Year 2 , 2019/20 – Capex:

- Purchase of SQL licences (if that is the solution) of \$19,500
- 0.5 DBA for one year - \$60K
- 1.0 FTE data management/spatial analyst over one year - \$120K
- 0.25 project manager - \$30K. Could be internal if there is capacity
- BA/DBA spatial development person/s (all up equivalent of 1.0 FTE - \$100K).

Remainder is from existing funding:

- Existing internal labour

**Total capital requested for Year 2: \$329,500**

#### 2.1.1.2 Funding partnerships

No funding partnerships available as this is internal IS functions.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

#### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>		1*	1	1	1	1	1
<b>Fixed Term</b>							
<b>Contract</b>			1.75 FTEs (3 positions)				

\*There is a requirement for one additional permanent staff member starting in 2018.

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

#### The Problem:

In 2013 a whole of enterprise GIS review was undertaken by Vicinity Solutions and an update in 2015. This review looked at the browser, desktop and underlying database components and proposed five potential ways that the organisation could move towards.

In 2015 an internal review of the Corporate GIS system at WRC was undertaken taking into consideration what Vicinity had found. [GIS refers to the software, data and infrastructure system – spatial information is the term that includes the people and processes]. The aim was to check whether we had the right tools for the job currently; was the software fit for purpose and were there better options available. The review covered all aspects of the GIS system – browsers, desktop and database.

During the review, the 2015 SISP ([Doc # 3200002](#)) was used to check direction and ensure alignment with any proposed future direction. The SISP covers spatial information at a high level coupled with giving direction for the underlying ICT infrastructure that underpin spatial information. The SISP refers to the following which were all relevant to what the spatial information proposed change was looking at:

- Getting to the line of acceptable ICT performance and good practice
- Enabling efficiency improvements
- Minimise technical diversity and data fragmentation, focussing on core platforms including the extension of the IRIS footprint
- Focus increasingly on collaboration across local government agencies (and that common and consistent platforms help to facilitate this)
- Data strategies such as open data principles and data warehousing
- Consolidation of corporate database platform using native database for applications
- Integrated approach to IRIS, property rating, EM data, mobile solutions (*– all of these are tightly coupled with spatial information*).

The review concluded with recommendations for a change in scope

Original proposed scope:

1. GIS Viewer (browser) - move to ESRI ArcGIS
2. GIS Desktop - move from Intergraph to ESRI (ArcGIS)
3. Database – move from Oracle to SQL Server.

Revised scope:

1. GIS Viewer (browser) - move to ESRI ArcGIS
2. GIS Desktop - move from Intergraph to ESRI (ArcGIS).

The reasoning at the time for the change in scope i.e. removal of database migration from Oracle to SQL Server was:

- It was felt this project should be an IT-driven project, dependent on IT resource and DBA expertise (not spatial)
- It would add too much complexity and risk to the project
- the GIS platform was not dependent on this migration – ArcGIS could continue to use the existing Oracle database.

A successful ArcGIS implementation project was undertaken as outlined above in the revised scope with the browsers and desktop ArcGIS solutions being in place since March 2017.

#### **Proposal for change, rationale and associated timeframes**

The ArcGIS project did not include the migration from the Oracle Spatial database and the purpose of this business case is to address that gap describing the rationale and the business drivers for the change.

During the ArcGIS implementation project the project team and the contractor discovered that there were aspects of the underlying Oracle spatial database that the ArcGIS system could not integrate with without changing the data views. This resulted in the project having to take on a large task to remodel data into an optimal format for ArcGIS (e.g. materialized views, altered geometry structure, etc.). This involved data management staff (1133 hours); spatial analysts, DBA (700 hours); total: 1800 hours.

As GIS has been in the organisation since the 1990s, there are over 800 corporate datasets with many underlying layers; plus across the organisation there are many 'workspaces' that have a dependency on the old system. These all need to be migrated across. What has been achieved so far are the key data and workspaces; significant effort is still required.

While there is one staff person who has been tasked as the lead for this, constant increased demands on the section to support the rest of the organisation with projects and BAU tasks impact; for instance a CE KPI has reprioritised the work for this year that that the staff person will achieve; Healthy Rivers is a priority project and is also impacting this resource with tasks being requested that need the skillset in this role. This underpins the request in this business case for an additional operational resource. This role would assist this project so reducing by one the originally projected need for two contracted data management/spatial analyst resources. There is an ongoing need for the extra staff person no matter whether this project is given approval to go ahead or not.

While the remodelling of the data enables integration the key reasons for moving off the Oracle database onto a new solution are to:

- enable efficiency improvements because the requirement to remodel data and devise specific integration scripts for other corporate applications (IRIS, Conquest, WISKI, LAND) will be removed
- consolidation of corporate database platform using native database for applications (resulting in a reducing Oracle footprint and an increasing MS SQL or open source footprint)
- minimise technical diversity (particularly relevant for the diminishing skills in IT to support Oracle Spatial)
- enable a spatial integrated approach to IRIS, property rating, WISKI data, mobile solutions which will assist projects such as Healthy Rivers Wai Ora
- position the organisation to enable spatial collaboration across local government agencies because of common, consistent platform
- enable data strategies such as open data principles and data warehousing which should assist integration with projects such as the Waikato Data Portal.

Business drivers:

- the SISIP indicated that database technology would shift to Microsoft. This would be at the most appropriate time e.g. when an upgrade occurred. (the ARCGIS upgrade has occurred but as explained above, this last aspect of the upgrade was not done)
- missing out on functionality that Oracle does not have



- ability to take on functionality/more efficient processing because others are also on the same platform (e.g. Waikato Data Portal; NIWA and LINZ)
- other areas of the business have shifted or are shifting to SQL. At some point soon the Oracle Spatial will be the only Oracle database. This will have an impact on interconnectedness between databases causing work arounds (e.g. IRIS and Oracle currently; Conquest)
- Scarce resource – Oracle Spatial DBA capability will reduce in the organisation because the need is predominantly for SQL skills. Currently Oracle Spatial DBA resources are needed on a semi-regular basis. Without that in-house resource there would be added expense to get contracted services in and timeframes for service is likely to be impacted by this method.

Timeframes proposed for this project are (more detail in section 6.1 under scope):

***Planning and establishment phase (Year 1):***

- recruit new staff position
- undertake an RFI to explore potential software and migration solutions
- undertake gap analysis for integration of other systems
- gain approval to continue into a migration implementation project based on the information from the RFI (go/no go point)
- develop project framework undertake recruitment for contractors to start in Year 2
- continue to remodel data
- install the DEV environment to enable trialling data in the new environment
- begin designing, documenting and trialling the migration process
- establish contracts.

***Implementation phase (Year 2):***

- infrastructure implementation
- complete designing, documenting and trialling & testing the migration process;
- migrate to new database environment
- rewrite all GIS views
- repoint over 800 layer files to new database
- refresh all web maps and web services
- redesign and test existing scheduled tasks e.g. for IRIS, Conquest, LAWA, WISKI, Hydrol
- train staff.

## **3.2 What will success look like (high level benefits)**

**What success will look like?**

If the proposed change is implemented:

- increase of one operational role eases pressure to achieve projects and support through requests from across the organisation
- all data will be migrated from Oracle to Microsoft SQL or an open source database such as PostGRE/PostGIS
- licencing for Oracle Spatial will cease
- the requirement to source Oracle skillsets externally will no longer exist
- optimised processes will remove the need for workarounds that currently exist to supply data to all forms of the ESRI applications suite we are using.

**What key benefits would result?**

- ability to meet demand for Requests for Service across the organisation without pressure to juggle resources and reprioritise planned work
- reduction in licencing of at least \$32,500 per year (greater if open source solution decided)

- ability to create new apps, maps and other interactive solutions requiring spatial input without significant delays while special scripts are developed (previous examples are “map my farm”, Coastal Inundation tool)
- Reduction internal staff costs for scripting workarounds
- ability to be able to develop and share new solutions with Land Information New Zealand, NIWA and others
- seamless integration to the Waikato Data Portal.

#### How would we measure this?

- request for Service reports about meeting timeframes
- presence of Oracle Spatial or not
- decline in use of Oracle skillset from DBAs
- reduction in number of special scripts written to cater specifically to Oracle data being integrated to another database or output.

### 3.3 Consequences of not proceeding

#### Consequences for council if this investment is not undertaken

- Pressure on the section to meet demand for Requests for Service resulting in loss of reputation
- Spatial Information staff increased chance of disengagement because of pressures, frustration in not being able to undertake the job well and unable to achieve what the organisation could achieve (e.g. increased visualisation of data in new ways) and lack of job satisfaction
- decrease in the ability achieve efficiencies by partnering with other organisations and with the Waikato LASS councils
- falling 'below the line' with a fundamental corporate application
- cumbersome workarounds creating inefficiencies
- lost opportunity to get the best use out of the new ESRI software
- difficulties in integrating across other software in use across the organisation (IRIS, Conquest, LAND).

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Processes and systems – we have the right tools to get the job done	A move away from Oracle Spatial will enable improved processes using up to date scripting, removal of work arounds and manual processes; better alignment in data management across the organisation

Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority: INFORMATION LED: We become an 'information led' organisation, realising the value of data and information.</i>		
<i>Priority Action</i> – establish and implement a programme of work to enable our communities to have access to our data, information and expertise	<i>Partially</i>	Greater ease in development of Interactive models, maps and other outputs which enable the community to have access to our spatial data and information, particularly through interactive models. This enables the community to be able to make decisions.
<i>Priority Action</i> - Use the new ArcGIS software to deliver more data and maps internally and externally	<i>Partially</i>	ArcGIS more natively integrates with SQL or open source. Oracle requires data to be remodelled and work-arounds to be created. This project will address this.
<i>Priority – Transformational Technology</i>		

Corporate Plan Priorities	Alignment	How will this change improve delivery?
Priority Action – implement technology solutions that enable more efficient internal operations	Partially	This project would remove inefficiencies of internal processes

Legislation	Alignment	How will this change improve delivery?
N/A		

Other (NPS, SLA, explicit LoS arrangement, best practice etc.)	Alignment	How will this change improve delivery?
SISP: this gives the direction that there should be: <ul style="list-style-type: none"> <li>• a focus on a limited set of default core platforms</li> <li>• minimise technical diversity</li> <li>• leverage opportunities for collaborative and shared technology investments</li> </ul>	Partially	Minimise scripted workarounds required to link between different spatial applications and corporate applications e.g. IRIS, LAND, Conquest and WISKI data

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The options include:

- Option 1 - **Status quo**: In this option there would be no change and no new funding required.
- Option 2: **migrate to Microsoft SQL or Open Source solution**

### 4.1 Specific objectives

The specific objectives of the Option 2: migrate to Microsoft SQL or Open Source solution proposal/business case are:

1. Complete the migration project to ArcGIS – this piece of work was not included in the ArcGIS Implementation project because of its size, effort and the IT driver and resourcing not existing at that time
2. Reduction in work arounds to enable data to be a format that can be consumed by organisational applications (e.g. ArcGIS, IRIS, Conquest)
3. Remove the dependency on Oracle products and skillsets to manage these
4. To be on a solution that is in line with the principles and directions of the SISP
5. To be on a solution that enables increased sharing of opportunities with other partners e.g. Councils, NIWA, Land Information New Zealand
6. For the Spatial Information Section to have reduced applications to support
7. Future recruitment across all roles in the Spatial Information Section will be easier and a faster uptake in roles because there is experience in the market of the solution WRC is using
8. Reduction in licencing costs.

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

Option 1 – continue with the status quo of Oracle Spatial  
 Option 2 - migrate to Microsoft SQL or Open Source solution

Objective	Option 1 Status Quo	Option 2
1. Complete the migration project to ArcGIS	Does not meet	
2. Reduction in work arounds	Does not meet	Meets
3. Remove the dependency on Oracle products and skillsets	Does not meet	Meets
4. Solution in line with the principles and directions of the SISP	Does not meet	Meets
5. Enable increased sharing	Does not meet	Meets
6. Spatial Information Section to have reduced applications to support	Does not meet	Meets
7. Future recruitment across all roles in the Spatial Information Section will be easier and a faster	Does not meet	Meets
8. Reduction in licencing costs	Does not meet	Meets

### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Option 1 Status Quo	\$329,500 not required	N/A	N/A	\$52K*	\$85K
Option 2	\$32,500*** from Year 3	N/A	\$329,500 **	\$2,600**	\$85K

\*Existing Oracle Spatial licencing; existing budget in IT Section

\*\* initial cost of SQL licences in capital (\$19,500) then ongoing annual licencing of SQL (\$2,600) in opex if this were the solution chosen which give us cost savings

\*\*\* estimated benefit from Year 3 – see Appendix section 1.2.3

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 2: to start with a Planning and Establishment Phase, then continue into an Implementation phase for migration from Oracle to either SQL or open source solution for the following reasons:

- A Planning and Establishment Phase would include an RFI which would provide information on advantages and disadvantages of the different options, costings, method of migration, resources required
- A Planning and Establishment Phase would give time to understand potential synergies with other organisations and the benefits that would result
- A Planning and Establishment Phase would prove (or not) the business drivers, the potential savings and the return on the investment
- Implementation of SQL or open source would meet the specific objectives listed in section 4.1 and therefore be of greater benefit for the organisation than staying with the status quo
- While there is an increase in the Level of Service to undertake the project, by Year 3 there are expected to be efficiencies in processes and use of staff time as well as savings in licencing with a potential cost savings of \$32,500 pa thereafter.

## 5 Financial analysis and procurement (Financial and Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	\$85K	Operational role through the LTP	General rates	Additional operational role plus existing staff.
Opex	\$2,600	Year 3 onwards	General Rates	Existing opex
Capex	\$329,500	Year 2	Depreciation	This includes licencing. If SQL: licencing – initial purchase of \$16,800 for 3 servers in capital then annual perpetual cost of \$2,600 p.a. for the three servers in opex
Revenue	N/A			
Contingency				Not added at this stage till undertaken RFI

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>		\$329,500				
<b>Operational</b>	85K	85,000	87,600**	87,600	87,600	525,600
<b>Revenue</b>	N/A					

\*new operational position

\*\* continuation of new operational position and ongoing annual licencing of SQL if this were the solution chosen

### 5.1.1 Funding partnerships

N/A for this planning and establishment and implementation project.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- The Planning and Establishment Phase, through the RFI, will discover the most appropriate solution to use
- Approval will be given to the Implementation Project if the business drivers and benefit are proven through the Planning and Establishment phase. If not the project will cease at the end of the Planning and Establishment Phase
- The licencing model will change and a reduction in licencing costs achieved regardless of whether it is SQL or open source (Minimum reduction will be \$32,500)
- Oracle Spatial will be retired in time after the project
- IT will no longer require to have Oracle Spatial DBA skills.

### 5.1.3 Additional commentary

Whilst a budget of \$329,500 has been suggested it is not until the Planning and Establishment phase has been completed that the actual figures will be known.

It is also difficult to calculate resources required but best attempts at assessment this have been made.

### 5.1.4 Procurement strategy

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach –Project

This is a project, intended to be managed formally as such. In Year 1 there will be a number of steps that will finalise what will be delivered leading into the development of the implementation project plan. Year 2 will formally undertake the implementation stage of the project. It is expected that the project will be completed in Year 2.

#### *Governed and Managed:*

This project will operate with the following project structure:

- Steering Group made up of CIO (John Crane), Business manager (Gill Lawrence), SAS Director (Tracey May), Spatial Information Team Leaders (Leanne Sinclair, Bryan Clements)
- Project Team will be made up of Data Management Staff (Sharon Fitzpatrick, Raewyn Paradine, Aimee Rossi), Spatial Analysts (Kerry Jones, Aaron Jeffries, Daniel Tait), DBA (Caleb Gabbie/Stephen Cooper), GIS Administrators (Spencer Han, Carlos Galceran)
- Project manager (TBD)
- Identify and engage with stakeholders group from across WRC business and potentially external partners.

In Year 1 the project team will meet fortnightly and report to the Steering Group 2 monthly.

Once the project is into the implementation stage in Year 2 will use daily stand up meetings for Project team and continue to report to the Steering Group 2 monthly.

#### *Resourcing:*

The following is the split between existing internal staff and contractors/new roles

- Year 1, 2018/19 –
  - ***This business case is requesting funding for an operational role:***
    - One new staff resource [data management/analyst].
  - Existing internal labour for project team
    - data management staff and spatial analysts
    - DBA
    - project manager
    - business analyst.

This requested operational role would be required as a part of this project. However this role would be required operationally whether or not this project goes ahead. There is considerable pressure on the section to respond to all the demands currently. In order to support the current level of demand and the expected growth that will come through the new LTP projects it is expected that there is an ongoing need for one more resource in the Section whether or not this Business Case is approved.

This role would need to be recruited externally through the usual Snap hire process. This may be a difficult role to source as there is often more emphasis on analysis than the depth of data management that is required. However a recruitment exercise 18 months ago was successful.

- Year 2 , 2019/20
  - **Additionally requested contracted services** - will use WRC procurement methods
    - 0.5 DBA for one year (IT have indicated that they won't have the capacity) – likely to use Datacom or Spark who have these resources who are on the LASS approved contractors.

- 1.0 FTE data management/spatial analyst over one year (Spatial Information won't have the capacity). Will use LASS approved contractor list in first instance (likely to be from Eagle, e-Spatial, Beca or Tonkin Taylor).
- 0.25 project manager (major project over long period so will need a project manager). Could be internal if there is capacity. Otherwise will go to LASS approved contractor list first.
- ~80 hours Business analyst from Business Solutions spatial development person/s – (note: the hours could be considerably more if IRIS migration becomes part of this project; see 6.1.2).

In total this is additional contracted services of the equivalent of 1.75 FTE.

### 6.1.2 Scope/deliverables

In Scope

#### ***Planning and Establishment phase (Year 1):***

- undertake RFI in Year 1– this is to find out process-wise how to undertake this migration; to consider whether Microsoft SQL server is the best solution or whether there other alternatives such as open source PostGRE/PostGIS that should be considered.
- IRIS - determine what level of IRIS integration is required within this project. This recognises that IRIS partners are planning to adopt an ESRI feature model (before July 2018) within the SQL database; a departure from the “dumb” geometry storage currently used. This will have as yet unknown impacts and opportunities for Spatial Information and WRC as a whole.
- similar gap analysis for integration of other systems such as LAND, Conquest, Wiski which could result in redesign and optimisation of existing processes.
- gain approval to continue into a migration implementation project based on the information from the RFI (go/no go point).
- develop project framework – project plan; in depth business case; resourcing required; (new role to assist).
- undertake recruitment for contractors to start in Year 2.
- continue to remodel data into optimal format for ArcGIS (e.g. materialized views, altered geometry structure, etc.). (new role as well as existing roles; will also require DBA assistance). This is a large task – Phase 2 of ArcGIS project commenced this activity and has already used the following hours:
  - new role equivalent – 1133 hours
  - other resources 700 hours
  - total: 1800 hours.
- install the DEV new environment in three servers.
- project team to trial data in the chosen DEV environment (new role included).
- begin designing, documenting and trialling the migration process (new role involved).
- undertake gap analysis to find mismatches between Oracle and the proposed system (new role involved).

#### ***Implementation phase (Year 2):***

- install Spatial extensions on the new server environment – (contractor assistance plus new role)
- back up Oracle
- back up Enterprise GeoDatabases
- complete designing, documenting and trialling the migration process; includes testing (new role involved)
- migrate Oracle spatial data into new database environment
- rewrite all GIS views including Materialised views if required (key for new role)
- repoint over 800 layer files to new database – (key for new role but others involved too)

- refresh all web maps and web services in Devl to take data from new source. Test – significant time in this step (new role involved)
- redesign and test existing scheduled tasks and associated processes (FME and SQL scripts eg for IRIS, Conquest, LAWA, WISKI, Hydrol, LAND)
- testing!
- test and Live migration then testing – (new role to assist)
- migrate Enterprise GeoDatabase then test
- refresh all web maps and web services in Test and Live to take data from new source. Test – can be iterative and a long process
- training for staff – how to point to new environment rather than Oracle.

#### Out of Scope

- In Year One, none of the Implementation phase will be undertaken.

### 6.1.3 Key milestones

Milestone	Completion Date
Complete recruitment for operational internal resource	Sept 2018
Complete RFI assessment	Feb 2019
Get decision to go into detailed project management planning for Implementation of the migration	March 2019
Complete the project management planning	May 2019
Complete recruitment for contractors	June 2019
Complete Establishment phase	June 2019
Complete the rewrite of the Materialised views and the repointing of over 800 layer files to database	
Complete Test migration	April 2020
Complete Live migration	June 2020
Complete migration of Enterprise GeoDatabase	June 2020
Complete internal staff training	June 2020

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Eagle	Supplier of ArcGIS software	Engage
RFI respondent potentially	Contractor might suggest a different way of undertaking the project that we would wish to engage with them on	Engage
IRIS partners	IRIS partners already use ESRI on SQL Server so engage to see what resources can be re-used if SQL used	Engage
Land Information NZ, NIWA	If an open source solution was decided these two organisations may have information that could be shared to assist deliver the solution	Inform, possibly Partner
EBOP, eCan, TCDC?	If a SQL solution was decided other councils may have information that could be shared to assist deliver the solution	Inform, possibly Partner
WCLASS data portal team and contributing councils	Depending on the solution, there may be synergies across the two projects that could result in working together	Partner
Internal stakeholders	ICM (integration with Conquest, mobile capture) SAS (WISKI and other EM systems); Business Solutions (IRIS) Finance (rating ; valuation)	Engage



## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
IT, Community Services	High	Need for DBAs - heavy requirements in the early stages of the implementation phase. Expected to be 0.5 of an FTE for 1 year	Work with IT to recruit a contracted resource
Remainder of the Spatial Information Section, SAS Directorate	Medium	Staff not available for other BAU tasks Impact of a major project occurring within the open plan	Backfill so that there is adequate resourcing Meetings and long discussions to be held in meeting rooms
Across the organisation – all staff who use desktop ArcGIS and corporate data	Low	Need to be able to find the data in the new server	Training by GIS Admins and communications through the project about what to expect and the timeframes

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Spatial Information	High	Data management processes completely changed; new scripts to become familiar with	Testing and training, supporting documentation
Spatial Information and DBAs	High	New servers to manage with new processes	Testing and training, supporting documentation
Spatial Information and ICM Asset Management	Medium	Change in processes which might cause initial slowing of BAU tasks of which there is a high dependency on their day to day work	Ongoing support (short specific training sessions?) from GIS Admins and Spatial Information Champions
Across the organisation – all staff who use desktop ArcGIS and corporate data	Low	Change in processes which might cause initial slowing of occasional BAU tasks	Ongoing support from GIS Admins and Spatial Information Champions

## 6.1.6 Ongoing operational management

The resulting product be handed over for ongoing business as usual management to a combination of GIS Administrators, Data Management Staff and IT DBAs. This is the same as the resourcing and management that is currently occurring with Oracle Spatial.

No specific impact is expected on existing business structures, roles and responsibilities once the Implementation project is complete.

It is expected that the organisation will have the skills required to carry out this work operationally because of the training that will occur in the project.

## 6.1.7 Assumptions, constraints and dependencies

### Assumptions

- The Planning and Establishment Phase will find out the most appropriate solution to use

- Approval will be given to the Implementation Project if the business drivers and benefit are proven through the Planning and Establishment phase. If not the project will cease at the end of the Establishment Phase
- The licencing model will change and a reduction in licensing costs achieved regardless of whether it is SQL or open source (minimum reduction of \$32,500)
- Oracle Spatial will be retired in time after the project
- IT will no longer require to have Oracle Spatial DBA skills.

#### Constraints

- Amount of time DBAs and Business Analysts (from BS) currently have to support
- Reduced DBA resourcing on existing Oracle Spatial
- The existing BAU load on the project team.

#### Dependencies

- Funding being available for the contracted services and new role
- Availability of a project manager
- The right skillset available for the new data management/spatial analyst role
- Assistance from existing DBAs until a contracted resource is appointed.

#### 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
That the project is larger than expected resulting in an increase in budget requirements	Major	Moderate	Undertake Establishment Phase to find out what would be required and to develop a robust business case and project management plan
That the Data management / Spatial analyst role is not approved resulting in a lack of resource to be able to undertake the project and for ongoing operational tasks	Critical	Moderate / likely	Contracted resource budget allocated for the short to medium term
That the Data management / Spatial analyst role cannot be sourced resulting in a lack of resource to be able to undertake the project and for ongoing operational tasks	Critical	Moderate	Use contracted resource as a short term measure until appropriate person can be recruited
That the DBA contracted resource is not approved resulting in a critical resource limitation to the project	Critical	Moderate / likely	Without this resource the project could not go ahead
That the RFI does not result in ideas that can be applied to the project so that there is a dependency on the Spatial Information Section to devise the best project plan and product solution	Minor	Unlikely	Make contact with some potential companies to alert them that the RFI will be issued
That the project is impacted by BAU tasks that have been prioritised over the project	Major	Moderate	Agree the priority before the project starts Take any conflict to the Steering Group for resolution Have additional funding contingency to be able to bring in contracted resources if required

# Appendices

## 1 Appendix One: Evaluation of options

### 1.1 Option 1 - Status quo

#### 1.1.1 Option overview – current state

In 2015 a review of the Corporate GIS system at the organisation was undertaken. The aim was to check whether we had the right tools for the job currently; was the software fit for purpose and were there better options available. The outcome of the review and the resulting implementation project was that a successful ArcGIS implementation project was undertaken that migrated to new ArcGIS browsers and desktop solutions.

The ArcGIS project did not include the migration from the Oracle Spatial database. This resulted in the need to remodel data into an optimal format for. In the project this was a significant task that involved data management staff (1133 hours); spatial analysts, DBA (700 hours); total: 1800 hours. It only covered the most critical datasets to enable the core integration with other corporate applications and for essential data. There are still many corporate datasets with underlying layers and workspaces that have a dependency on the old Oracle system. These all need to be migrated across.

What has been achieved so far are the key data and workspaces; significant effort is still required. Without completing this last part of the ArcGIS migration project there are inefficiencies in scripting processes, data needing to be remodelled.

There is a need for ongoing increase of one operational role whether this Oracle project goes ahead or not. There is constant increasing demands on the section to support the rest of the organisation with projects and BAU tasks impact. One additional operational role would assist this project so reducing by one the originally projected need for two contracted data management/spatial analysis resources. Thereafter there is an operational requirement for this role to meet ongoing need.

While there is one staff person who has been tasked as the lead for this, constant increased demands on the section to support the rest of the organisation with projects and BAU tasks impact. This underpins the request in this business case for an additional operational role. This role would assist this Oracle project so reducing by one the originally projected need for two contracted data management / spatial analysis resources. There is an ongoing need no matter whether this project is given approval to go ahead or not.

Over the last 12 months a number of the Oracle databases in use for other applications have been or are being migrated off Oracle to SQL. These include Conquest, Financials and WISKI. There are two impacts as a result:

1. There is a decreasing amount of DBA skill available to support Oracle spatial. There is a constant need for that skill as scripts need to change etc. This gap will widen as the GIS becomes the only Oracle database requirement. This means that whenever the GIS Administrators require DBA assistance for day to day or project help, contractors will have to be used. This will cause delays and will be an added expense.
2. Spatial integration occur with Conquest, Financials, IRIS and WISKI. If the GIS were also migrated to SQL there would be more efficient means of migration. If there was a move to an open source database rather than SQL, there would still be other organisations and skills who

would have similar mixes of software solutions to be able to offer advice, support and possible collaboration. The work of the RFI would tease out these options further.

### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>No project required to migrate therefore saving money and time</li> <li>To a limited extent there are some Oracle features which are an asset e.g. conversion of latitude and longitude coordinates. However experience has proved that Business Solutions can code to create custom function for this. If it considered that this is a manageable. An RFI and analysis could further test how extensive the gap is.</li> </ul>	<ul style="list-style-type: none"> <li>Workarounds need to be created to allow integration between corporate applications</li> <li>Soon there won't be adequate DBA daily support</li> <li>There are still a large number of datasets that need to be remodelled</li> </ul>

### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Capex costs	No requirement for capex project	\$329,500 Year 2

Qualitative benefits	Description
Knowledge already exists	Staff already know how to use Oracle and ArcGIS for analysis
Data management analysts and GIS Administrators' knowledge	Data management and GIS Administrators already have documentation and skillsets to use Oracle

Disadvantages/Dis-benefits	Description of the potential impact
Inefficiencies in data use	Constant workarounds and script rewriting
Missed opportunities for long term cost savings	Licensing and use of external contractors for interactive solutions development won't be realised
Only software using Oracle in the organisation	Custom scripting to enable integration
Few councils use the Oracle database	Difficulty in collaborating on projects e.g. Waikato Data Portal could not have an end to end solution for WRC
Skillsets	Reduction in Oracle skillset in WRC causing reliance on external companies for support

### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
A well-integrated GIS solution	This won't assist
Easier integration with corporate applications	Difficulties will remain requiring workarounds and new scripts
Staffing	The request is for one additional operational staff person. This would ease pressure to meet the demand that currently exists and that is expected to grow with the growth of the LTP coverage. Regardless of the status quo or new database solution an additional role is sought.
New interactive solutions	Likely to still need external contractors to assist with developments

### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$329,500)	N/A	N/A	\$52K*	\$85K

\*Existing Oracle Spatial licencing; existing budget in IT Section

## 1.1.6 Assumptions, constraints and dependencies

### Assumptions

- A decision to remain with the status quo will mean continuing to use Oracle Spatial
- No additional licencing will be required – existing budget already exists in IT (\$52K)
- Oracle Spatial will be the only Oracle database in the organisation and therefore will not support the direction of travel for the SISP
- IT will be required to have Oracle Spatial DBA skills or there will be a need to contract the resource to meet ongoing need which could potentially cost ~\$15K pa.

### Constraints

- Amount of time DBAs and Business Analysts (from BS) currently have to support
- Having to find workarounds to make Oracle Spatial integrate well with other applications
- Few councils use Oracle Spatial so there are few opportunities to share ideas and to collaborate
- The need to maintain the Oracle spatial capabilities in the Section, whilst also needing SQL (for IRIS, and this need will grow over time).

### Dependencies

- Ongoing assistance from existing DBAs or fund contracted resource
- Still require the data to be migrated so that the ArcGIS system can function well.

## 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
That the Data management / Spatial analyst role is not approved resulting in a lack of resource to be able to undertake ongoing operational tasks	Critical	Moderate / likely	Contracted resource budget allocated for the short to medium term
That the Data management / Spatial analyst role cannot be sourced resulting in a lack of resource to be able to undertake the project and for ongoing operational tasks	Critical	Moderate	Use contracted resource as a short term measure until appropriate person can be recruited
That the DBA contracted resource is not approved resulting in a critical resource limitation for ongoing support	Critical	Moderate / likely	Scare resource will impeded day to day timeframes, delivery, job satisfaction for those needing assistance
Future recruitment will be difficult as Oracle Spatial capability becomes more rare	Major	Moderate	Training resulting in longer time for effective recruitment results

## 1.2 Option 2 – undertake RFI then move to SQL or open source solution

### 1.2.1 Option overview

#### Proposal for change, rationale and associated timeframes

The ArcGIS implementation project (see section 3.1) did not include the migration from the Oracle Spatial database and the purpose of this business case is to address that gap describing the rationale and the business drivers for the change.

There is a need for an ongoing increase of one operational role whether this Oracle project goes ahead or not. There is constant increasing demands on the section to support the rest of the organisation with projects and BAU tasks impact. One additional role would assist this project so reducing by one the originally projected need for two contracted data management/spatial analysis resources. Thereafter there is an operational requirement for this role to meet ongoing need.

This project involves a proposal to investigate the best solution for a spatial database for the future that would match requirements, to plan a project and then to implement the desired solution.

Key drivers to migrate from the Oracle database onto a new solution are to

- enable efficiency improvements because the requirement to remodel data and devise specific integration scripts for other corporate applications (IRIS, Conquest, WISKI, LAND) will be removed.
- Scarce resource – Oracle Spatial DBA capability will reduce in the organisation. Currently needed on a semi-regular basis. Without that in-house resource there would be added expense to get contracted services in; timeframes for service is likely to be impacted.
- consolidation of corporate database platform using native database for applications (resulting in a reducing Oracle footprint and an increasing MS SQL or open source footprint)
- SISP driver - minimise technical diversity (particularly relevant for the diminishing skills in IT to support Oracle Spatial).
- enable a spatial integrated approach to IRIS, property rating, WISKI data, mobile solutions which will assist projects such as Healthy Rivers Wai Ora.
- SISP driver - position the organisation to enable spatial collaboration across local government agencies because of common, consistent platform.
- SISP driver enable data strategies such as open data principles and data warehousing which should assist integration with the Waikato Data Portal.
- ability to take on functionality/more efficient processing because others are also on the same platform (e.g. Waikato Data Portal; NIWA and LINZ).

Timeframes proposed for this project are (more detail in section 6.1 under scope):

***Planning and establishment phase (Year 1):***

- an RFI to explore potential software and migration solutions
- gap analysis for integration of other systems
- gain approval to continue into a migration implementation project based on the information from the RFI (go/no go point)
- develop project framework undertake recruitment for contractors to start in Year 2
- continue to remodel data
- install the DEV environment to enable trialling data in the new environment
- begin designing, documenting and trialling the migration process
- recruit new staff position and establish contracts.

***Implementation phase (Year 2):***

- infrastructure implementation
- complete designing, documenting and trialling the migration process;
- includes testing
- migrate to new database environment
- rewrite all GIS views
- replot over 800 layer files to new database
- refresh all web maps and web services
- redesign and test existing scheduled tasks e.g. for IRIS, Conquest, LAWA, WISKI, Hydrol,
- train staff.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• enable efficiency improvements integrating with other corporate applications (IRIS, Conquest, WISKI, Rating)</li> </ul>	<ul style="list-style-type: none"> <li>• Time</li> <li>• Costs</li> <li>• Effort</li> </ul>

Pro's	Con's
<ul style="list-style-type: none"> <li>no longer requirement for scarce Oracle Spatial DBA capability</li> <li>reduction in technical diversity for the organisation</li> <li>efficiencies in creating new complex projects that have a reliance on spatial such as Healthy Rivers Wai Ora</li> <li>potential increased to enable spatial collaboration across local government agencies because of common, consistent platform</li> <li>easier integration with the Waikato Data Portal, LAWA, IRIS</li> </ul>	<ul style="list-style-type: none"> <li>Impact on business as usual and the ability to be driving new creative developments to support the organisation while the project is underway</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Reduction in licensing costs	Oracle licensing reduction to SQL; could be greater if open source	Reduction \$32,500, Year 3
Oracle Spatial DBA capability	No need to contract Oracle Spatial DBA resource or maintain internal expertise	Est \$15K pa from Year 3

Qualitative benefits	Description
Skillset change and reduction in hours spent on workarounds	Data management analysts, Business Analysts and GIS Administrators will only need to manage the new solution, not a combination of Oracle and SQL

Disadvantages / Dis-benefits	Description of the potential impact
Upskilling	Data management analysts and GIS Administrators will need to learn some new skills to support the solution
Training	A small amount of training will need to occur across the organisation for higher end ArcGIS users
Loss of Oracle uniqueness	As with any software, Oracle does have some functions that are not present in others.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
A well-integrated GIS solution	ArcGIS is designed with either SQL or open source backend databases. This option would deliver that solution
Easier integration with corporate applications	If the solution was SQL it would mean easier integration across other corporate applications without the need for ongoing specific scripts to be developed. Applications would associate more natively together
Staffing	The request is for one additional operational staff person. This would ease pressure to meet the demand that currently exists and that is expected to grow with the growth of the LTP coverage
New interactive solutions	To meet the Strategic Direction of increased data and information, interactive solutions that have a mapping component are desirable. This solution will enable faster development and greater likelihood of being able to collaborate with other councils because WRC would no longer be on Oracle, which few councils still use e.g. eCAN has a Find my farm tool. It would be possible to share scripts to address concerns they have and to deliver a WRC solution

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
\$32,500 reduction pa from Year 3	N/A	\$329,500	N/A	\$85K

### 1.2.6 Assumptions, constraints and dependencies

#### Assumptions

- The Establishment Phase will find out the most appropriate solution to use through the RFI
- Approval will be given to the Implementation Project if the business drivers and benefit are proven through the Establishment phase. If not the project will cease at the end of the Establishment Phase
- Licencing model will change from Year 3; net result will be a reduction minimum of \$32,500
- Oracle Spatial will be retired in time after the project
- IT will no longer require to have Oracle Spatial DBA skills.

#### Constraints

- Amount of time DBAs and Business Analysts (from Business Solutions) currently have available to support
- Reduced DBA resourcing on existing Oracle Spatial
- The existing BAU load on the project team.

#### Dependencies

- Funding being available for the contracted services and new role
- Availability of a project manager
- The right skillset available for the new data management/spatial analyst role
- Assistance from existing DBAs until a contracted resource is appointed
- That other projects do not require committed resources to be reprioritised.

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
That the project is larger than expected resulting in an increase in budget requirements	Major	Moderate	Undertake Establishment Phase to find out what would be required and to develop a robust business case and project management plan
That the Data management / Spatial analyst role is not approved resulting in a lack of resource to be able to undertake the project and for ongoing operational tasks	Critical	Moderate / Likely	Contracted resource budget allocated for the short to medium term
That the Data management / Spatial analyst role cannot be sourced resulting in a lack of resource to be able to undertake the project and for ongoing operational tasks	Critical	Moderate	Use contracted resource as a short term measure until appropriate person can be recruited
That the DBA contracted resource is not approved resulting in a critical resource limitation to the project	Critical	Moderate / Likely	Without this resource the project could not go ahead
That the RFI does not result in ideas that can be applied to the project so that there is a dependency on the Spatial Information Section to devise the best project plan and product solution	Minor	Unlikely	Make contact with some potential companies to alert them that the RFI will be issued



<b>Risk</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Comments/mitigation</b>
That the project is impacted by BAU tasks that have been prioritised over the project	Major	Moderate	Agree the priority before the project starts Take any conflict to the Steering Group for resolution Have additional funding contingency to be able to bring in contracted resources if required

# NPS Freshwater E.coli Monitoring

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Environmental Monitoring
<b>Function</b>	Inland waters Priority 4 #42
<b>Service</b>	NPS Freshwater E.coli Monitoring
<b>Financial Budget Code:</b>	D1204

## 1.1 Review and approval

Prepared By:	Edmund Brown EM Manager	25 Sept 2017
Reviewed By:	Nicole Hubbard	06 Oct 2017
Signed off By:	Tracey May, Director Science and Strategy	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference
National Policy Statement for Freshwater Management 2014 (amended 2017)	MfE	<a href="http://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014-amended-2017">http://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014-amended-2017</a>

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	25 Sep 2017	Ed Brown	Draft
2	6 Oct 2017	Nicole Hubbard	Draft review
3	8 Nov 2017	Tracey May	Director review

## 2 Executive summary

WRC currently monitors a wide suite of water quality parameters at 110 sites on a monthly basis as part of our routine State of the Environment monitoring - covered in Appendix 1 under status quo. The National Policy Statement on freshwater (NPSFM) has been amended to require more monitoring in relation to ensuring rivers are swimmable within Freshwater Management Units set by each Council. WRC has set four freshwater management units covering the Waikato and Waipa Rivers which will require an increase in the frequency of E.coli monitoring at representative locations. As a result WRC will need to increase the frequency of monitoring from monthly to a combination of weekly or daily depending on the level of E.coli measured. This new monitoring will require an increase in costs for laboratory analysis and labour to enable the collection of the water sample. The benefits from the monitoring are that we met our NPS obligations. The new LOS monitoring will not improve water quality or reduce the health issues.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	0	0	0	0	0	0
<b>Operational</b>	250	250	250	250	250	250

#### 2.1.1.1 Funding source

General rate.

#### 2.1.1.2 Funding partnerships

No likely partners.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	<b>No</b>
Does the work include the procurement, or capture, of new data sets?	<b>Yes monitoring data, but not GIS.</b>
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	<b>No</b>
Does the work require analysis or modelling of spatial data?	<b>No</b>
Does the work require the establishment of new depots or offices?	<b>No</b>
Does the work require the use of additional fleet vehicles?	<b>Yes – identified in CAPEX request spreadsheet</b>
Does the work require additional resources (FTE or contract)?	<b>Yes</b>

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	0	56.5	56.5	56.5	56.5	56.5	56.5
<b>Fixed Term</b>	-	-	-	-	-	-	-
<b>Contract</b>	0	193.5	193.5	193.5	193.5	193.5	193.5

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

To meet statutory NPS monitoring requirement focused towards swimmability of waterways. Due to the poor water quality of many of our rivers the monitoring of E.coli will increase under the proposed amendments to NPS of freshwater.

### 3.2 What will success look like (high level benefits)

Meeting statutory NPS requirements. NPS sets requirements on location by representativeness and frequency of sampling.

### 3.3 Consequences of not proceeding

Fail to meet NPS statutory requirements – political and reputational implications.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy Environment – it is safe to swim and take kai from all freshwater	Improved measurements of water quality in particular swimmability in relation to E.coli

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>FORGE AND STRENGTHEN PARTNERSHIPS TO ACHIEVE POSITIVE OUTCOMES FOR THE REGION</i>		
The Vision and Strategy for the Waikato River is advanced by delivering on the Healthy Rivers Wai Ora plan change and catchment services.	Strong	Improved measurements of water quality in particular swimmability in relation to E.coli
<i>POSITIVELY INFLUENCE FUTURE LAND USE CHOICES TO ENSURE LONG TERM SUSTAINABILITY</i>		
We are delivering on the Healthy Rivers Wai Ora plan change. Water quality and water quantity are connected in decision making.	Strong	Improved measurements of water quality in particular swimmability in relation to E.coli
<i>MANAGE FRESHWATER MORE EFFECTIVELY TO MAXIMISE REGIONAL BENEFIT</i>		
We continue to work closely with landowners and other organisations to improve land use and water use practices.	Low	

Legislation	Alignment	How will this change improve delivery?
RMA,	Strong	Meet our requirements under the RMA - NPS
River Settlement Legislation	Strong	Better understanding of state of water quality
Environmental Reporting Act 2015 - specified dates and reporting domains	Strong	Meet our requirements under the ER Act

Other (NPS, SLA, explicit LoS arrangement, best practice etc.)	Alignment	How will this change improve delivery?
National Policy Statement for Freshwater Management 2014,	Strong	Meet our requirements
Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy for the Waikato River	Strong	Meet our requirements

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The options include:

- Status quo: Monthly monitoring of E.Coli at all 110 regional monitoring sites. Does not meet requirements of NPSFM for combination of weekly and daily monitoring depending on E.Coli levels.
- Option 1: Status quo of monthly monitoring of E.Coli at all 110 regional monitoring sites and addition of four representative sites with weekly/daily monitoring all year round, one from each of the four Healthy River Plan Change Freshwater Management Units. Would require FTE to undertake fieldwork.
- Option 2: Similar to option 1 but the four additional sites are only monitored over the summer for four months rather than year round. Fieldwork could be done by student or contractor.
- Option 3: Similar to option 2 but the four additional sites are increased to 12 sites to give increase catchment coverage and are only monitored over the summer for four months rather than year round. Fieldwork could be done by student or contractor.

### 4.1 Specific objectives

1. Meet NPS on Freshwater E.coli monitoring minimum requirements relating to swimmability of rivers.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective i.e. *Meets, Meets in part, Does not meet*. Add further columns, or remove, as required.

Objective	Status quo	Option 1	Option 2	Option 3
1. Meet NPS	<i>Meets in part</i>	Meets	Meets	Meets

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo		0	0	NFI**	NFI**
Option 1		0	0	193.5	56.5
Option 2				64.5	20
Option 3				193.5	20

\*\*Cost is difficult to isolate as it is mixed in with existing full suite of water quality monitoring for more locations, more parameters and at difference frequency.

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 3 for the following reasons:

- Option 3 with sampling focused only during summer and reasonable representation of at least 2 swimming sites in each of the four Freshwater Management Units in the Waikato River.

## 5 Financial analysis and procurement (Financial and Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	\$20,000	Early 2018/19 FY	General rates	
Opex	\$193,500	Early 2018/19 FY	General rates	
Capex	0	-	-	
Revenue	0	-	-	
Contingency	0	-	-	

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital	0	0	0	0	0	0
Operational – including labour	213.5	213.5	213.5	213.5	213.5	213.5
Revenue	0	0	0	0	0	0

### 5.1.1 Funding partnerships

None – WRC business no other partners.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- Based on scaling of existing water quality sampling to the cost just for E.Coli but at a higher frequency than current service.

### 5.1.3 Procurement strategy

Will any procurement activities be required? Yes – extension of current laboratory contract.

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach – Operational

- This level of service is an operational activity and will be managed as part of BAU water quality sampling already undertaken by Environmental Monitoring. No new project is required.
- Require new role to undertake the sampling as we do not have the labour resource to undertake the higher frequency sampling required under this new legislation.
- This will occur as routine work with no end date when up and running.

## 6.1.2 Scope/deliverables

### In Scope

- Collect water samples to be analysed for E.Coli at representative locations on a weekly basis. If exceedance occurs increase frequency to daily monitoring until it is under the limit. Currently just monthly monitoring
- Lab analysis
- Results on Land Air Water Aotearoa.

### Out of Scope

- Other contaminants
- Collection of samples at this frequency at remainder of WRC network
- Automated monitoring if and when technology become available.

## 6.1.3 Key milestones

Milestone	Completion Date
Student or contractor to undertake summer sampling	Early 2018/19 FY
Samples to lab and reporting on LAWA website	Early 2018/19 FY

## 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Public	Making rivers swimmable	Inform
Iwi	Making rivers swimmable	Inform

## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Section	Low	Greater workload – cannot be implemented if not resourced by lab costs and FTE.	Apply for funds and labour via LTP
Directorate	Low	-	-

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Section	Low	Increase of BAU so not a huge impact other than labour and lab costs	Apply for funds and labour via LTP
Directorate	Low	-	-

## 6.1.6 Ongoing operational management

Deliverables which are lab results will be managed in Environmental Monitoring along with other similar data. These will be loaded on to LAWA website for public consumption similar to other data. Extension of BAU.

No impact beyond Environmental Monitoring section.

## 6.1.7 Assumptions, constraints and dependencies

- Impact within and beyond EM will be low under the assumption that both funding for lab costs and the labour are both provided. Cannot meet the level of service with just one component.

**6.1.8 Risks**

<b>Risk</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Comments/mitigation</b>
H&S – score of 6 giving Medium risk	Minor	Moderate	Extension of BAU – slips, trips and bumps occur. Managed with JSA’s and SOPs.



## Appendices

### 1 Appendix One: Evaluation of options

This section outlines the options evaluated.

#### 1.1 Status quo

##### 1.1.1 Option overview

Currently monitor E.Coli on a monthly basis. Do not increase to weekly and then daily sampling when level are high.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>No change maintain current costs and staff levels.</li> <li>Under Status quo we already have a good understand if rivers have E.Coli issues.</li> </ul>	<ul style="list-style-type: none"> <li>Do not meet NPS requirements. Political and reputational fallout with government, community and Waikato River Iwi</li> </ul>

##### 1.1.3 Anticipated Benefits

Disadvantages / Dis-benefits	Description of the potential impact
Not able to identify individual short duration events from spills or pipe breakages. But this identification will always be lagged by at least two days as it takes time to process/analysis the water sample for E.Coli. Cannot be measured instantly e.g. as for temperature.	There will be little change in our current understanding or managing of land use activities or spills on the occurrence of E.coli. We can generally identify rivers at risk from existing monitoring under status quo.

##### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment – it is safe to swim and take kai from all freshwater	Does not improve just maintains current situation of SOE reporting rather than trying to act as an event warning system. Event warning is difficult with E. Coli as it cannot be measured directly and take about two days to get meaningful results.

##### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Less illness	0	0	NFI**	NFI**

\*\*Cost is difficult to isolate as it is mixed in with existing full suite of water quality monitoring for more locations, parameters and at difference frequency

##### 1.1.6 Assumptions, constraints and dependencies

This options assumes that there will be no change in lab costs.

##### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Political	Moderate	High	High degree of focus from MfE and government on swimmability. Mitigation use Option 1 below
Iwi expectations	Moderate	High	Mitigation use Option 1 below

## 1.2 Option 1

### 1.2.1 Option overview

Meet minimum NPS requirements by selecting four representative sites, one from each of the four Healthy River Plan Change Freshwater Management Units, rather than all WRC existing monitoring locations. Undertake weekly and then daily monitoring when an exceedance of E.coli occurs rather than just monthly monitoring under status quo. This occurs all year round as swimmability expectation under healthy Rivers is based on swimability all year.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Meets NPS requirements but regional coverage of actual swimming spots is low.</li> </ul>	<ul style="list-style-type: none"> <li>Costs more as extra samples collected (labour) and analysed (contracted services). But only 4 sites in the region are sampled and expected to provide representativeness of swimming spots. Noting 74 other locations are monitored on a monthly basis in the Waikato River catchment from existing routine monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>May result in less illnesses</li> </ul>	<ul style="list-style-type: none"> <li>The warning will be given at least a day after the sample is taken from the river so may not get the information to the public in time for short duration exceedances.</li> </ul>
<ul style="list-style-type: none"> <li>Greater understanding of when E. Coli is exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Expensive monitoring when most E.Coli exceedance are often from landuse activities which are generally constant. Rivers at risk are already identifiable from status quo monitoring. Exceedance are often associated with high river flows after heavy rain. These occasions are when most people are not recreating in the river anyway so the delayed warning is of limited benefit.</li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Probably none – meeting legislation		

Qualitative benefits	Description
Possibly less illness	Dependent of results getting back from lab in time and public following the information. At this stage we are not aware of high level of illness from current recreational activities which can be solely attributed to river water quality. Estimate is only 5% of cases may be sourced from rivers.

Disadvantages/Dis-benefits	Description of the potential impact
Expensive gathering of information that may be of little practical benefit other than reinforcing the concerns we have already around E.Coli and water quality	Mainly political impact if not undertaken in line with NPS. May be no noticeable change in likelihood of public getting ill from swimming in rivers.

## 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment – it is safe to swim and take kai from all freshwater	Improved measurements of water quality in particular swimmability in relation to E.coli. The water quality will not improve but we will have more information informing us of what we already know. Due to time to undertake analysis may have limited effectiveness to inform people when not to swim due to a short-term E.coli event.

## 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Possibly less illness	0	0	NFI**	NFI**

\*\*Cost is difficult to isolate as it is mixed in with existing full suite of water quality monitoring for more locations, parameters and at difference frequency

## 1.2.6 Assumptions, constraints and dependencies

- Dependency – to undertake this service we need both lab costs and FTE. One or the other on their own will not enable the LOS to be met.

## 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Not monitoring every bathing location just representative locations	Moderate	Moderate	Mitigation spend \$4.4 million and monitor all water quality sites in the region.

## 1.3 Option 2

### 1.3.1 Option overview

Similar to Option 2 but restricting the sampling to the summer months (4 months) rather than full year. Meet minimum NPS requirements by selecting 4 representative sites rather than all WRC existing monitoring locations. Undertake weekly and then daily monitoring when an exceedance of E.coli occurs rather than just monthly monitoring under status quo.

### 1.3.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Meets NPS requirements but regional coverage of actual swimming spots is low.</li> </ul>	<ul style="list-style-type: none"> <li>• Costs more as extra samples collected (labour) and analysed (contracted services) compare to status quo but 1/3 of the costs of option 1 if sampling for 4 months rather than 12. But only 4 sites in the region are sampled and expected to provide representativeness of swimming spots. Noting 74 other locations are monitored on a monthly basis in the Waikato River catchment from existing routine monitoring.</li> <li>• May not meet healthy Rivers expectations of year round swimability and associated monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>• May result in less illnesses</li> </ul>	<ul style="list-style-type: none"> <li>• The warning will be given at least a day after the sample is taken from the river so may not get the information to the public in time for short duration exceedances.</li> </ul>

Pro's	Con's
<ul style="list-style-type: none"> <li>Greater understanding of when E. Coli is exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Expensive monitoring (but less than Option 1) when most E.Coli exceedance are often from landuse activities which are generally constant. Rivers at risk are already identifiable from status quo monitoring. Exceedance are often associated with high river flows after heavy rain. These occasions are when most people are not recreating in the river anyway so the delayed warning is of limited benefit.</li> </ul>
<ul style="list-style-type: none"> <li>Moving to just summer sampling could reduce the labour requirement and use contractor or summer students</li> </ul>	<ul style="list-style-type: none"> <li>Summer students are not available for the last month of sampling and cannot be covered by in-house staff. Will need to find alternative labour source</li> </ul>

### 1.3.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Probably none – meeting legislation		

Qualitative benefits	Description
Possibly less illness	Dependent of results getting back from lab in time and public following the information. At this stage we are not aware of high level of illness from current recreational activities which can be solely attributed to river water quality. Estimate is only 5% of cases may be sourced from rivers.

Disadvantages/Dis-benefits	Description of the potential impact
Expensive gathering (less than Option 1) of information that may be of little practical benefit other than reinforcing the concerns we have already around E.Coli and water quality	Mainly political impact if not undertaken in line with NPS. May be no noticeable change in likelihood of public getting ill from swimming in rivers.

### 1.3.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment – it is safe to swim and take kai from all freshwater	Improved measurements of water quality in particular swimmability in relation to E.coli. The water quality will not improve but we will have more information informing us of what we already know. Due to time to undertake analysis may have limited effectiveness to inform people when not to swim due to a short-term E.coli event.

### 1.3.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Possibly less illness	0	0	NFI**	NFI**

\*\*Cost is difficult to isolate as it is mixed in with existing full suite of water quality monitoring for more locations, parameters and at difference frequency

### 1.3.6 Assumptions, constraints and dependencies

- Dependency – to undertake this service we need both lab costs and FTE. One or the other on their own will not enable the LOS to be meet.

### 1.3.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Not monitoring every bathing location just representative locations.	Moderate	Moderate	Mitigation spend \$4.4 million and monitor all water quality sites in the region.

## 1.4 Option 3

### 1.4.1 Option overview

Similar to 2 by restricting the sampling to the summer months (4 months) rather than full year but increasing the number of sites by at least 2 times resulting in better regional coverage for the same cost as Option 1. Meet minimum NPS requirements by selecting larger representative sites rather than all WRC existing monitoring locations. Undertake weekly and then daily monitoring when an exceedance of E.coli occurs rather than just monthly monitoring under status quo.

### 1.4.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Meets NPS requirements but regional coverage of actual swimming spots is low.</li> </ul>	<ul style="list-style-type: none"> <li>Costs more as extra samples collected (labour) and analysed (contracted services) compare to status quo and option 2 but increase sites from 4 to around 10.</li> <li>May not meet healthy Rivers expectations of year round swimability and associated monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>May result in less illnesses</li> </ul>	<ul style="list-style-type: none"> <li>The warning will be given at least a day after the sample is taken from the river so may not get the information to the public in time for short duration exceedances.</li> </ul>
<ul style="list-style-type: none"> <li>Greater understanding of when E. Coli is exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Expensive monitoring (Same as option 1) when most E.Coli exceedance are often from landuse activities which are generally constant. Rivers at risk are already identifiable from status quo monitoring. Exceedance are often associated with high river flows after heavy rain. These occasions are when most people are not recreating in the river anyway so the delayed warning is of limited benefit.</li> </ul>
<ul style="list-style-type: none"> <li>Moving to just summer sampling could reduce the labour requirement and use contractor or summer students</li> </ul>	<ul style="list-style-type: none"> <li>Summer students are not available for the last month of sampling and cannot be covered by in-house staff. Will need to find alternative labour source</li> </ul>

### 1.4.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
Probably none – meeting legislation		

Qualitative benefits	Description
Possibly less illness	Dependent of results getting back from lab in time and public following the information. At this stage we are not aware of high level of illness from current recreational activities which can be solely attributed to river water quality. Estimate is only 5% of cases may be sourced from rivers.

Disadvantages/Dis-benefits	Description of the potential impact
Expensive gathering (Same as Option 1) of information that may be of little practical benefit other than reinforcing the concerns we have already around E.Coli and water quality	Mainly political impact if not undertaken in line with NPS. May be no noticeable change in likelihood of public getting ill from swimming in rivers.

#### 1.4.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment – it is safe to swim and take kai from all freshwater	Improved measurements of water quality in particular swimmability in relation to E.coli. The water quality will not improve but we will have more information informing us of what we already know. Due to time to undertake analysis may have limited effectiveness to inform people when not to swim due to a short-term E.coli event.

#### 1.4.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
Possibly less illness	0	0	NFI**	NFI**

\*\*Cost is difficult to isolate as it is mixed in with existing full suite of water quality monitoring for more locations, parameters and at difference frequency

#### 1.4.6 Assumptions, constraints and dependencies

- Dependency – to undertake this service we need both lab costs and FTE. One or the other on their own will not enable the LOS to be met.

#### 1.4.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
This option does more representative sites than Options 1 and 2 but still quite sparse compared to all bathing locations.	Moderate	Moderate	Mitigation spend \$4.4 million and monitor all water quality sites in the region.

# Implementation of 'Sea Change' Hauraki Gulf Marine Spatial Plan

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Environmental Information <b>Note:</b> implementation of the HGMSP is also being progressed through other BAU activities including Resource Management Policy, Biosecurity, Catchment Planning and Management and Resource Use
<b>Function</b>	Implementation of Sea Change Hauraki Gulf Marine Spatial Plan (HGMSP)
<b>Service</b>	
<b>Financial Budget Code:</b>	Yet to be allocated

## 1.1 Review and approval

Prepared By:	Ben Bunting, Principal Advisor SAS	31 October 2017
Reviewed By:	Tracey May, Director SAS	8 November 2017
Signed off By:	Tracey May, Director SAS	8 November 2017

## 1.2 Related documents

Document Title	Author	Document Reference
HGMSP draft implementation plan for WRC (June 2017)	Ben Bunting	Doc # 10317453
HGMSP WRC implementation Year 1-3 VERSION for LTP (October 2017)	Ben Bunting	Doc # 11308497

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	3 Nov 2017	Ben Bunting	Initial draft for Director review
2	10 Nov 2017	Tracey May	Director review amendments
3	19 Dec 2017	Ben Bunting	Update following Councillor workshop of 13 Dec

## 2 Executive summary

The Hauraki Gulf Marine Spatial Plan (HGMSP) is a non-statutory document that seeks to improve the mana, health and integrated management of the Hauraki Gulf Marine Park. It covers Hauraki Gulf, Firth of Thames, Eastern Coromandel and all contributing land catchments including the Coromandel Peninsula and Waihou-Piako rivers.

WRC invested significantly in the development of the HGMSP. Through *Our Strategic Direction 2016-2019* WRC is committed to playing an active role in implementing the components of the HGMSP that align with its statutory responsibilities and partnership commitments.

On 27 June 2017 Council's Strategy and Policy Committee received and endorsed the draft WRC HGMSP Implementation Plan but sought substantial refinement and reduction of proposed costs.

This refinement and reprioritisation has occurred to identify where HGMSp outcomes can be better embedded within Council's 'business as usual' (BAU) activities and also within other LTP business cases.

This business case represents those implementation activities not being delivered as BAU or included in other LTP business cases. These activities focus on reducing and monitoring sediment and nutrients entering the Hauraki Gulf Marine Park and marine biosecurity. The proposed direct costs over LTP years 1-3 total \$598,000 with delivery through contracted services managed by existing staff. Central government support of Council's implementation efforts is also anticipated to the value of \$300,000 over five years.

Stakeholder, tangata whenua and central government interest in implementing the HGMSp is significant. Central government will view favourably our preparedness to consider implementation.

All out territorial partners in the Sea Change study have been engaged and these discussions have been helpful and favourable noting that responsibility for implementation in our region rests best with WRC.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	266	166	166	166	166	TBC

#### 2.1.1.1 Funding source

As the HGMSp is a new initiative new funds are requested. It is not included under any existing LOS.

Implementation of elements of the HGMSp will also occur indirectly through other LTP bids and business as usual activities across the organisation in relation to resource management policy, science, biosecurity, integrated catchment management and resource use programmes.

#### 2.1.1.2 Funding partnerships

External – Funding opportunities and partnerships will be sought and facilitated with the Auckland Council and the central government agencies identified to implement the HGMSp. Central government has signalled its intent to implement the HGMSp as part of its marine programme commencing in 2018-19 and this is expected to include support to Council's implementation efforts. This is conservatively estimated at \$300,000 over five years.

Further partnership opportunities to implement elements of the HGMSp will identified and realised with tangata whenua and with research institutes to ensure consistent measurement and monitoring across the HG Marine Park and catchments.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No



Consideration	Yes/No
Does the work require additional resources (FTE or contract)?	No

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The Hauraki Gulf Marine Spatial Plan (HGMSPP) is New Zealand's first marine spatial plan. It was developed by Stakeholder Working Group (SWG) over a 3-year collaborative process. HGMSPP recognises that the 'status quo' is no longer sustainable or cognisant of community expectations.

WRC was a key partner in funding and developing the HGMSPP, along with Auckland Council, MPI, DOC and HG Forum.

Recommended actions in the HGMSPP were developed, prioritised and authored by the SWG, supported by science and other information provided to or sought by the working group.

WRC invested significantly in the development of the HGMSPP. Through *Our Strategic Direction 2016-2019* WRC is committed to playing an active role in implementing the components of the HGMSPP that align with its statutory responsibilities and partnership commitments.

On 27 June 2017 Council's Strategy and Policy Committee received and endorsed the draft WRC HGMSPP Implementation Plan. That draft implementation proposed implementation as envisaged by the Stakeholder Working Group (SWG) that authored the plan at an indicative cost \$7.5 million of over a 6-7 year timeframe. Committee members expressed concern in regard to the estimated costs of implementation, and requested staff to further refine these figures, focussing on priority actions for Council consideration.

This refinement and reprioritisation has occurred through the budgeting and LTP processes to date, the focus of which has been to identify where relevant HGMSPP outcomes can be better embedded within Council's 'business as usual' (BAU) activities and also within other LTP business cases.

This business case represents those implementation activities not being delivered as BAU or included in other LTP business cases. These activities focus on reducing and monitoring sediment and nutrients entering the Hauraki Gulf Marine Park and marine biosecurity. The proposed direct costs over years 1-3 total \$598,000. No additional staff are sought.

Stakeholder interest in implementing the HGMSPP is significant given the three-year collaborative process to development plan. WRC stakeholders have identified the HGMSPP as a higher priority compared Councillors. For this reason staff feel it is important that the LTP contain a standalone budget line for the HGMSPP implementation.

Central government has signalled its intent to implement the HGMSPP commencing in 2018-19 and this is expected to include support to Council's implementation efforts to the value of \$300,000 over five years. Led by the Department of Conservation the HGMSPP is included in the list of priority briefing topics for the new government. Briefings will be supported by the Ministry for Environment and Ministry of Fisheries (formerly MPI).

The proactive approach taken by WRC, along with Auckland Council, to consider implementation of the HGMSPP has been recognised and praised by some Sea Change stakeholders. Central government will view favourably our preparedness to consider implementation.

Our territorial partners in the Sea Change study area (TCDC, Hauraki DC, Matamata-Piako DC and Waikato DC) also can play a role in the implementation of the HGMSPP. This is already occurring indirectly, mainly through their BAU activities. WRC staff have discussed with these territorial

authorities how they might identify and consider HGMSp outcomes and embed the HGMSp as a strategic reference document.

These discussions have been helpful and favourable with all district councils noting that responsibility for implementation in our region rests best with WRC.

## 3.2 What will success look like (high level benefits)

Implementation of the HGMSp will see improved integrated management of the HG Marine Park leading to improved:

- environmental states (marine and terrestrial)
- resilience to development and use pressures
- sustainable fisheries (recreational, commercial and aquaculture)
- tangata whenua outcomes
- relationships with tangata whenua, Sea Change stakeholders and central government
- collaborative funding opportunities and economic efficiencies for the integrated management of the HG
- positive reputational outcomes for WRC.

## 3.3 Consequences of not proceeding

Stakeholder interest in implementing the HGMSp is significant given the three-year collaborative process to development plan and the level of WRC investment. WRC stakeholders have identified the HGMSp as a higher priority compared Councillors and expectations or implementation by agencies are strong.

If some visible form implementation were not to proceed there would be criticism of WRC. The extent of criticism would depend on the implementation actions of the other key partner agencies. Criticism would be expected from tangata whenua and other Sea Change stakeholders anticipating terrestrial and marine improvements to the integrated management of the HG.

Assuming the new central government views Sea Change as favourable, WRC not proceeding with visible implementation of the HGMSp may constrain it receiving future funding opportunities around coastal management.

## 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Land use is sustainable	Land use sustainability, particularly catchment management which integrates terrestrial and marine, is a pillar of the HGMSp
It is safe to swim and take kai from all fresh water	Implementation will contribute to our monitoring and knowledge of stream quality where it enters the CMA. These sites are popular for locals as well as families visiting the Coromandel. Implementation will also improve knowledge and management of shellfish grounds and marine aquaculture in the HG.
The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state	Implementation will improve the overall state of the marine and terrestrial environs of the HG. Specific WRC actions in regard to sediment/nutrient reduction, biosecurity and restoration.
New investment is attracted to the region through improved reputation and partnerships	Implementation aims to improve investment through aquaculture, forestry and tourism outcomes.

Long Term Outcome	How will this change improve delivery?
The Waikato economy benefits from having Auckland as our neighbour	Auckland residents are strong economic contributors to tourism in the Coromandel. Maintaining the quality of the natural visitor assets (including water) and visitor infrastructure is paramount to the Coromandel's reputation as the Waikato region's nature based tourism jewel.
There is increased benefit from the use and protection of our amenity and recreational features and values	Implementation advocates improved recreation/tourism outcomes seeks to reduce and eliminate destructive and unsustainable activities that reduce the recreation/tourism amenity and values.
Co-governance with iwi is meaningful and effective	Implementation recognises the role of iwi in the management of coast and advocates for meaningful and effective partnerships in that regard.

Strategic Direction Priorities	Alignment	How will this change improve delivery?
Forge and strengthen partnerships to achieve positive outcomes for the region		
<i>Priority Action:</i> Existing partnerships are strengthened and new partnerships are forged with iwi Māori, community and business organisations to achieve step change for our environment, economy and communities.	Strong	The HGMSPP advocates for expanded aquaculture opportunities. Iwi is already a significant player in the HG aquaculture industry and continues to advocate in this regard.
Enhance the values of the region's coasts and marine area		
<i>Priority Action:</i> We play an active role in implementing Sea Change.	Achieves	Self-explanatory
<i>Priority Action:</i> We develop a more integrated approach to managing coastal issues.	Achieves	Implementation of the HGMSPP supports the integrated management principles of the HG Marine Park Act. It would also improve integration of our coastal planning/policy, regulatory, science and monitoring programmes
<i>Priority Action:</i> Governance of the Hauraki Gulf better supports good management of the coast.	Strong	Implementation of the HGMSPP seeks to improve and align governance of the HG at all levels – from local catchment committees through to central government.
<i>Priority Action:</i> We improve our understanding of coastal land use and resource use trends and pressure.	Achieves	
<i>Priority Action:</i> There is increased, meaningful community participation in the implementation of management plans for the region's coastal marine areas to sustainably manage the marine resources.	Achieves	Community engagement and participation will occur through activities of agencies in implementing the HGMSPP, through engagement in the development of WRC's harbour and catchment management plans and Regional Coastal Plan review.
<i>Priority Action:</i> Harbour Management Plans for Whitianga and Coromandel are completed.	Achieves	The HGMSPP identifies development and implementation of these harbour and catchment management plans. Not that the development of these a part of a separate LTB business case. Development of these plans will be informed by other information obtained through the implementation of the HGMSPP.

Legislation	Alignment	How will this change improve delivery?
	Strong	Implementation aligns with the purposes of the legislation towards integrated management of the Hauraki Gulf Marine Park.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
NZ Coastal Policy Statement	Strong	The HGMSP aligns with the NZCPS, which provides policy directions for the Waikato Regional Coastal Plan.
NES-Marine Aquaculture (TBC)	Strong	The NES seeks to provide the marine aquaculture industry with certainty and promotes responsible management of biosecurity. The HGMSP supports both.
NES-Production Forestry	Partial	The NES provides for localised consideration of sensitive areas (e.g. steep slopes). The HGMSP supports responsible management of sensitive areas through its actions relating to sediment outcomes.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. Refer to Appendix One for a detailed description of the options evaluated.

### 4.1 Specific objectives

1. Implementation of Sea Change Hauraki Gulf Marine Spatial Plan (HGMSP)

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1
1. Implementation of Sea Change Hauraki Gulf Marine Spatial Plan (HGMSP)	Meets in part	Meets

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1.

## 5 Financial analysis and procurement (Financial & Commercial Case)

### 5.1.1 Funding partnerships

Central government has signalled its intent to implement the HGMSP commencing in 2018-19 and this is expected to include support to Council's implementation efforts. This is conservatively estimated at \$300,000 over five years. Note this amount has not been included in the funding profile at Section 2.

### 5.1.2 Procurement strategy

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach –Project

All tasks identified in the business case would be delivered via contracted services.

WRC procurement and contract management policies would guide the delivery of the tasks.

Governance in terms of coordination and reporting would be through SAS as the business case owner.

#### Scope/deliverables

Year 1:

Task No.	Detail and milestone	Directorate	Cost (\$000)
1.1	Scope and establish sediment monitoring baseline for Firth of Thames (31 Dec 2019)	SAS (coastal science)	100
1.2	Monitor and understand the effects of changing nutrient levels in the Firth of Thames (ongoing)	SAS (coastal science)	116
3	Review existing sediment guidelines (30 June 2019)	RUD	50

Year 2:

Task No.	Detail	Directorate	Cost (\$000)
2.1	Sediment monitoring Firth of Thames (ongoing)	SAS (coastal science)	50
2.2	Monitor and understand the effects of changing nutrient levels in the Firth of Thames (ongoing)	SAS (coastal science)	116

Year 3:

Task No.	Detail	Directorate	Cost (\$000)
3.1	Sediment monitoring Firth of Thames (ongoing)	SAS (coastal science)	50
3.2	Monitor and understand the effects of changing nutrient levels in the Firth of Thames (ongoing)	SAS (coastal science)	116

### 6.1.2 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Hauraki Gulf Forum	All agencies involved in the implementation of Sea Change HGMSPP are represented on the Hauraki Gulf Forum. The Forum would be used for agencies to report on implement progress.	Inform

Stakeholder	Interest	Method of Engagement
Auckland Council	Auckland and Waikato Council both share the same policy and regulatory interests over the Hauraki Gulf. Some commonality in approaches would be useful and may provide cost efficiencies.	Inform and partner
HGMSP agency steering group	This steering group comprises executives from Waikato and Auckland councils, DOC and MPI. It will focus on the mechanics of implementation of the HGMSP including key messaging, priorities, partnership opportunities and identifying cost efficiencies.	Inform and partner

### 6.1.3 Business change/organisational impact

#### 6.1.3.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
SAS coastal science	Low	Management of contracted services	Negligible. Low impact managed through BAU
RUD	Low	Management of contracted services	Negligible. Low impact managed through BAU

### 6.1.4 Assumptions, constraints and dependencies

- Nil

### 6.1.5 Risks

Risk	Impact	Likelihood	Comments/mitigation
Staff capacity to manage additional contractors	Low	Low	Nil.

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

### 1.1 Status quo

#### 1.1.1 Option overview

Status quo – no standalone business case to implement the components of HGMSp identified in this business case. Some implementation of HGMSp outcomes would continue to occur through BAU activities and any funded business cases with deliverables relevant to the HGMSp.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Some implementation would occur</li> </ul>	<ul style="list-style-type: none"> <li>No dedicated WRC investment visible</li> </ul>

#### 1.1.3 Anticipated Benefits

Qualitative benefits	Description
Implementation	Some implementation of HGMSp outcomes would continue to occur through BAU activities and any funded business cases with deliverables relevant to the HGMSp

Disadvantages/Dis-benefits	Description of the potential impact
Less knowledge of study area	Not investing in scientific knowledge, including establishing baselines, could constrain our future science, monitoring and policy efforts.
Resource management outcomes	Not investing in scientific knowledge, including establishing baselines, could delay positive resource management outcomes.

#### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Same as detailed at Section 3.4	No improvement as status quo.

#### 1.1.5 Assumptions, constraints and dependencies

- Nil

#### 1.1.6 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Nil.			

## 1.2 Option 1

### 1.2.1 Option overview

Implementation of the HGMSp as per business case business case to implement the components of HGMSp identified in this business case in addition to any implementation through BAU activities and any funded business cases with deliverables relevant to the HGMSp.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Broader delivery of HGMSP implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Greater costs compared to status quo</li> </ul>
<ul style="list-style-type: none"> <li>• More visible HGMSP implementation</li> </ul>	
<ul style="list-style-type: none"> <li>• Improved long-term knowledge of study area through establishing of monitoring baselines</li> </ul>	
<ul style="list-style-type: none"> <li>• Improved resource management outcomes</li> </ul>	
<ul style="list-style-type: none"> <li>• Better informed policy development (esp RCP review)</li> </ul>	

### 1.2.3 Anticipated Benefits

Qualitative benefits	Description
Broader delivery of HGMSP implementation	<ul style="list-style-type: none"> <li>• Broader delivery of HGMSP implementation</li> <li>• More visible HGMSP implementation (to stakeholders)</li> <li>• Improved long-term knowledge of study area through establishing of monitoring baselines</li> <li>• Improved resource management outcomes</li> <li>• Better informed policy development (esp RCP review)</li> </ul>

Disadvantages/Dis-benefits	Description of the potential impact
None compared to status quo	

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
As per 3.4	As per 3.4

### 1.2.5 Assumptions, constraints and dependencies

- Nil



# Freshwater Strategy

<b>GOA:</b>	Science and Strategy
<b>Activity Name:</b>	Regional Strategy and Development
<b>Function</b>	Regional strategies
<b>Service</b>	Development and facilitation of regional strategies to address strategic issues.
<b>Financial Budget Code(s):</b>	P1614, D1005, D1404, D1405

## 1.1 Review and approval

Prepared By:	Dominique Noiton, Manager Science	27/09/2017
Reviewed By:	Tracey May, Director Science and Strategy	8 Nov 2017
Signed off By:	Tracey May, Director Science and Strategy	8 Nov 2017

## 1.2 Related documents

Document Title	Author	Document Reference
Freshwater Strategy publication	Blair Dickie	On website
Freshwater Strategy – Actions	Blair Dickie	10593539
Freshwater Strategy – Tasks and budget	Blair Dickie	10206417

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	27 Sep 2017	Dominique Noiton	Draft
2	8 Nov 2017	Tracey May	Director review
3	19 Dec 2017	Ben Bunting	Updated

## 2 Executive summary

The Waikato Freshwater Strategy ('the Strategy') was approved by Council in June 2017. It was agreed that the funding of implementation activities related to freshwater allocation and use would be considered as part of the 2018-28 Long-Term Plan.

The Strategy provides a roadmap for the Waikato Regional Council (WRC) to achieve an even more integrated water management regime which will deliver the best use of freshwater over a 30-50 year timeframe and beyond. The strategy aims to deliver the best use of water through time and the steps needed to get there. It addresses 16 issues grouped into three distinct themes:

- Focussed Advocacy
- Smarter methods
- Better information.

It is key to addressing two of the Council's identified strategic priorities for 2016-2019. These are:

- Positively influence future land use choices to ensure long-term sustainability
- Manage freshwater more effectively to maximise regional benefit.

A cross-directorate project team has worked to identify the key actions we need to take as an organisation to deliver the freshwater strategy. The strategy takes a staged approach, with priority actions for all directorates identified for the 2018-2028 period. Some actions continue business as usual, others are new and unplanned.

The project delivers on the six specific actions from the Council's 2016–2019 Strategic Directions:

1. Our data and information is more readily accessible so communities can use it to make good decisions.
2. A Regional freshwater Strategy is developed and findings implemented.
3. A broader range of tools is developed to protect our waterways, allocate what is available and do it more quickly, simply and cost effectively.
4. Water quantity and water quality are connected in decision-making.
5. Iwi rights and interests in freshwater agreed with central government are recognised and provided for.
6. We advocate more strongly for and are involved with regional economic development that delivers positive environmental and social outcomes across the region.

The implementation plan has been designed subject to **CEO KPI Measure 3.7: Implementation Plan** is adopted by council and provides a prioritised approach that is incorporated in 2018-2028 LTP planning.

The focus of and priorities identified in years 1-3 of this business case relate to meeting Council's external reporting requirements and systems improvements (better information), as well as integrated water management (smarter methods).

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital						
Operational*	90,000	370,000	400,000	400,000	350,000	350,000 pa

#### 2.1.1.1 Funding source

Initial phases of the implementation will be funded by general rates.

#### 2.1.1.2 Funding partnerships

Funding partnerships will be sought with central government agencies (MFE and MBIE), Waikato River Authority, research providers, other regional councils, industry and community groups. However, no partnerships are currently in place. It is expected that the Freshwater Institute recently established by the University of Waikato and NIWA will provide a regional platform to develop and cement those partnerships.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes
Does the work include the procurement, or capture, of new data sets?	Yes
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes
Does the work require analysis or modelling of spatial data?	Yes
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

Water quality of rivers, streams, lakes and aquifers across the Waikato region, and nationally, has degraded over time to a level that is now a major public concern. Water quantity is also a concern as we have already reached our allocable water limits. With predicted population increase, further pressure, and therefore further water degradation is expected unless we change the way we manage water.

To address these issues, WRC developed a Waikato Freshwater Strategy ('the Strategy'), which was approved by Council in June 2017. It was agreed that the funding of implementation activities related to freshwater allocation and use would be considered as part of the 2018-28 Long Term Plan.

The Strategy provides a roadmap for WRC to achieve a fully integrated water management regime that will deliver the best use of freshwater over a 30-50 year timeframe and beyond. It addresses 16 issues grouped into three distinct themes:

- Focussed Advocacy for legislative reform and ongoing decision making
- Smarter methods with an analysis of options including allocation methods and economic instruments
- Better information including supply and demand balance, allocation pressures, water usage and freshwater climate science.

The strategy takes a staged approach, with priority actions identified for the 2018-2028 period. Some actions continue business-as-usual, others are new and unplanned. This business case is seeking funding for new and unplanned activities above Business-as-Usual baseline.

### 3.2 What will success look like (high level benefits)

The long-term success is described in the Strategy as: "Freshwater in the Waikato is managed so that there will be enough for everyone who wants it". Progress toward this goal will be monitored using SoE (freshwater) indicators and trend analysis.

Benefits from the successful implementation of the Freshwater Strategy include:

- A clear understanding of the resource, its value to society and interactions with other resources
- A platform from which the Waikato community knowledgeably and effectively engages in the national discussion on freshwater management
- A fresh direction for WRC actions in relation to freshwater information

- An integrated freshwater information system provides geographically relevant freshwater data and information that meet the needs and interests of the Waikato community, freshwater users and wider partners and stakeholders.

### 3.3 Consequences of not proceeding

Business-as-usual will not create the “game changing” actions required to shift the way we manage our water resource. This means that the freshwater choices available to the future generations will not be fully realised.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Healthy Environment	Better freshwater management improve water quality and quantity for future generations

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
Manage freshwater more effectively to maximise regional benefit		
A Regional Freshwater Strategy is developed to protect our waterways, allocate what is available and do it more quickly, simply and cost-effectively	Strong	An action plan takes a cross-organisational approach and coordinates key tasks into 3 objectives: Focused Advocacy, Smarter Methods and Better Information
Positively influence future land use choices to ensure long-term sustainability		
The Freshwater Strategy will consider land use change and impact on freshwater.	Strong	The Strategy considers impact of land use on freshwater from an environmental, economic, social and cultural perspective

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
NPS Freshwater Management	Strong	Better freshwater management at catchment level reflecting the different demands on the resource across the region (FMU approach) Integrated and sustainable way to support economic growth within water quantity and quality limits.
Vision and Strategy for the Waikato River	Strong	Improve health for Waikato and Waipa rivers

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

1. Status quo
2. Additional funding allocated to Strategy Implementation

### 4.1 Specific objectives

1. Focused advocacy
2. Smarter methods
3. Better information.

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

For each objective listed in section 4.1 identify how well each option meets the objective ie. *Meets, Meets in part, Does not meet*. Add further columns, or remove, as required.

Objective	Status Quo	Option1
1. Focused advocacy	Meets in part	Meets
2. Smarter methods	Meets in part	Meets
3. Better information	Meets in part	Meets

## 4.3 Preferred option

Status quo is not a preferred option because this would be equivalent to WRC continuing doing what we have always done in the past at the same slow pace. We know that this is not good enough and that the community and government want demonstrable results fast.

Therefore, based on the options assessment, the preferred way forward is **option 1** because it will give the impetus necessary to improve water quality and quantity within the required timeframe. To achieve this we need additional and coordinated resources.

# 5 Financial analysis and procurement (Financial & Commercial Case)

A complete list of tasks and associated budgets is given in Doc#10206417.

Task (FWS Action No.)	Project code	Description	Amount (\$)
2.3.2.2. Collate information that demonstrates the relative benefits of moving from current approaches of water allocation to integrated/comprehensive water management.	P1614	Opex:	70K year 2 50K years 3+
2.4.1.7 Influence and plan for external reporting requirements (e.g. LAWA, Environmental Reporting Act, MfE)	D1005	Opex	100K pa years 2+
2.4.3.2 Improve WRC's understanding of potential climate scenarios and subsequent impacts on freshwater			
2.4.3.5 Improve understanding of the relationship between water quantity, water quality and ecosystems.			
2.4.3.6 Research the hydrological role seepages and wetland ecosystems play in sustaining water quantity and model for an FMU, with a view to extending modelling to other FMU's if proven beneficial.			
2.4.2.1 Decide on criteria and propose the number and location of FMUs across the region and factor in environmental (including ecosystem), social and economic factors.	D1404	Opex:	90K year 1 200K year 2 100K year 3 100K year 4

Task (FWS Action No.)	Project code	Description	Amount (\$)
2.4.4.2 Develop water quality accounting system.			50K year 5+
2.4.3.9 Research and model the impacts and opportunities of manipulating current lake system management regimes. E.g. Lake Waikare.	D1405	Opex:	150K pa years 3+

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational</b>	90	370	400	400	350	350 pa
<b>Revenue</b>						

### 5.1.1 Funding partnerships

The Strategy does not provide for funding partnerships. However, there will be funding opportunities from the WRA, central government (MfE and MBIE), industry and community groups.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- That the implementation of the Freshwater Strategy is still a priority for 2018-21.

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES, however the planning of the Freshwater Strategy is not at the level where we can give milestone details re procurement.

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

The governance and project delivery structure and processes have not yet been decided. An action of the strategy is to “re-invigorate the ‘Land and Water Portfolio’ within the Waikato Regional Council to implement the strategy through the alignment of actions across all directorates”.

### 6.1.2 Scope/deliverables

In Scope

- All recommendations from the Waikato Freshwater Strategy.

Out of Scope

- The preparation of detailed implementation programmes.

### 6.1.3 Key milestones

Milestone	Completion Date
Completion dates outlined in Doc # 10206417 will need to be reviewed to align with LTP timeframes.	

#### **6.1.4 Stakeholder engagement**

Stakeholders engagement was conducted for “Let’s talk water” engagement project.

#### **6.1.5 Ongoing operational management**

There is no detailed project plan for the implementation of the Strategy. Currently, it is expected that each Budget Owners/ Managers will integrate the delivery of the tasks listed in Doc # 10206417 relevant to their business, providing adequate funding is allocated.

#### **6.1.6 Assumptions, constraints and dependencies**

- Not considered in the Freshwater Strategy document.

## Appendices

### 1 Appendix One: Evaluation of options

#### 1.1 Status quo

##### 1.1.1 Option overview

*Status quo* means that no additional funding is allocated to the Freshwater Strategy and therefore its implementation will only rely on existing (BAU) budgets.

More details on the tasks that are BAU and those requiring additional funding are given in Doc # 10206417.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>May encourage other funders to contribute if the strategy is critical to their business</li> </ul>	<ul style="list-style-type: none"> <li>Limited ability to improved water quality and quantity across the region within timeline set by Government</li> </ul>

Disadvantages/Dis-benefits	Description of the potential impact
There is a disconnection between what WRC says (Glossy brochure, external communication, RMLA award) and not funding the Strategy.	Loss of credibility from the public and stakeholders

##### 1.1.3 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment	Status quo option will not improve the delivery of this outcome
Strong Economy	Status quo option will not improve the delivery of this outcome

#### 1.2 Option 1

##### 1.2.1 Option overview

Option 1 means that additional funding is allocated to the Strategy implementation at the level requested in Section 2.1.1 Funding profile.

##### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>WRC has the resources required to implement the Strategy as proposed to the public</li> </ul>	<ul style="list-style-type: none"> <li>Success is not guarantee and achievements in 10 years may not be seen as worth the investment.</li> </ul>

##### 1.2.3 Anticipated Benefits

Qualitative benefits	Description
Clear directions for freshwater management	

##### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Healthy Environment	The Strategy proposes a shift in freshwater management required to ensure there is enough fresh water for everyone in the future



Long Term Outcome	How will this option improve delivery of this outcome?
Strong Economy	Best use of fresh water through time via better allocation systems using new methods based on better information

The project delivers on the six specific actions from the **Council's 2016 – 2019 Strategic Directions**:

1. Our data and information are more readily accessible so communities can use it to make good decisions.
2. A Regional freshwater Strategy is developed and findings implemented.
3. A broader range of tools is developed to protect our waterways, allocate what is available and do it more quickly, simply and cost effectively.
4. Water quantity and water quality are connected in decision-making.
5. Iwi rights and interests in freshwater agreed with central government are recognised and provided for.
6. We advocate more strongly for and are involved with regional economic development that delivers positive environmental and social outcomes across the region.

### 1.2.5 Assumptions, constraints and dependencies

- Not considered in the Freshwater Strategy document.

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# **Business Cases**

Cross Organisational

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# Regional Plan Change 1 Healthy Rivers/Wai Ora (PC1) – Implementation



**Healthy Rivers**  
PLAN FOR CHANGE

Maniapoto Māori Trust Board  
Raukawa Charitable Trust  
Te Arawa River Iwi Trust

**Wai Ora**

HE RAUTAKI WHAKAPAIPAI

Tūwharetoa Māori Trust Board  
Waikato Raupatu River Trust  
Waikato Regional Council

<b>GOAs:</b>	Community and Services Integrated Catchment Management Science and Strategy Resource Use
<b>Activity Names:</b>	Land Management Advisory Services Information Services Communications Environmental Monitoring Environmental Science and Information Catchment planning and management Consent Processing and Compliance Monitoring
<b>Function:</b>	Healthy Rivers/Wai Ora: Proposed Waikato Regional Plan Change 1 (PC1)
<b>Service:</b>	Implementation
<b>Financial Budget Codes:</b>	S2009, L1244, L1243, HRWOCAP, D1204, D1205

## 1 Document control

### 1.1 Review and approval

Prepared by:	Angus McKenzie, Place Group Limited	24 October 2017
Reviewed by:	Maggie Sullivan, Project Manager - Healthy Rivers Implementation	November 2017
Signed off by:	Chris McLay, Director – Resource Use Directorate	November 2017

### 1.2 Related documents

Document Title	Document Reference
HRWO Implementation Plan	<a href="https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/9602004">https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/9602004</a>

Project Management Plan – Waikato Regional Plan Change 1 Implementation Project	<a href="https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/11065127">https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/11065127</a>
HRWO communications and engagement plan Nov 2016.docx	<a href="https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/11225047">https://discover.wairc.govt.nz/otcs/llisapi.dll/overview/11225047</a>
Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments	<a href="https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/ReadProposedPlan/Final-PlanChange1-with-insert-of-withdrawal.pdf">https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/ReadProposedPlan/Final-PlanChange1-with-insert-of-withdrawal.pdf</a>
Section 32 Report -Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments	<a href="https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/ReadProposedPlan/Section-32-with-partial-withdrawal-addendum-added.pdf">https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/ReadProposedPlan/Section-32-with-partial-withdrawal-addendum-added.pdf</a>

### 1.3 Document change history

Version #	Date	Revision by	Description of Change
V1.0	24 October 2017	Angus McKenzie, Place Group Limited	Draft business case prepared
V1.1	9 November 2017	Angus McKenzie, Place Group Limited	Revisions to draft business case based on project team feedback

## 2 Overview

Water quality has consistently been identified as the top issue for the Waikato region and is a high priority for the council in its Strategic Direction 2016-2019. Healthy Rivers/Wai Ora: Proposed Waikato Regional Plan Change 1 (including variation 1) (PC1) is a bold response to addressing the complex issue of water quality in the Waipa and Waikato catchments.

PC1 is one of the largest plan changes of its kind in New Zealand, applying to approximately 10,000 properties and covering a land area of some 1.1M hectares. Council is currently managing PC1 through the Resource Management Act (RMA) Schedule 1 process, submissions have been received and are currently being summarised. Hearings are planned for late 2018.

The overall aim of PC1 is to take the first step towards achieving the water quality objectives of the Vision and Strategy over an 80 year timeframe. PC1 requires specific actions to be undertaken within the first 10 year period of plan, with the aim of achieving a 10% improvement in water quality within the catchments.

The implementation of PC1 is a significant undertaking for the council as the plan introduces controls, tools and processes to manage land use that have not previously been used. Key areas where new approaches/skills and additional resourcing will be required include:

- Requiring, supporting and enabling the development of farm environment plans (FEP).
- Certifying independent third parties to make key technical decisions.
- Approving independently audited industry self-management schemes.
- Developing and adopting new information technology (IT) systems (and changing existing systems) to enable efficient implementation management.
- Developing and managing an accounting framework to publicly track progress toward reaching the PC1 objectives.

This business case is driven directly from the adoption of PC1 and seeks funding for the long term implementation of PC1 in the following key activity areas:

- Farm environment planning and sub-catchment planning.
- Regulatory implementation systems/processes and industry scheme activities.
- Plan effectiveness, monitoring and science activities.
- Supporting activities, including development of IT systems, communications and stakeholder engagement.

## 2.1 Business case context

PC1 implementation has been progressing since October 2016 guided by the *“Implementation Plan for the Proposed Waikato Regional Plan Change 1 – Waikato and Waipa Catchments”* (<https://discover.wairc.govt.nz/otcs/lisapi.dll/overview/9602004>). The implementation plan includes a high level 10year budget for PC1 implementation.

Following its presentation to Council in December 2016, the implementation plan was formally endorsed by Council in February 2017, alongside approval of 2017/18 funding for implementation through the annual plan.

This the business case seeks long term funding for implementation from 2018/19 to 2027/28 for the activities described in the endorsed Implementation Plan.

In addition to these activities, funding is also sought for following activities which have been subsequently been determined by staff as essential to the successful implementation of PC1:

- Additional funding to advance the S-map (soil maps) programme to ensure the availability of high quality data for Nitrogen reference points and the assessment Farm Environment Plans. Soil maps are necessary to improve the accuracy of Nitrogen reference points calculated sizing “Overseer”. S-maps are also required for other land and soil projects in the organisation and to provide better information to land owners in the region for improving land management.
- Provision for licensing fees for the “Overseer” business model from Year 2. “Overseer” is the preferred model for ensuring that all relevant properties have established a Nitrogen reference point within the required plan timeframes.
- An increase in funding for the delivery of IT components, due to the need to contract external expertise to develop and deliver the farm plan portal, ensure that appropriate data is captured to inform later modelling and to make provision for the development and management of spatial data.
- Additional funding for modelling required to track progress against the anticipated outcomes of PC1.
- An extension to the project management and technical integration services to year 2019/20 to ensure that project oversight is retained and that appropriate allowance is made for embedding the project into business as usual.

## 2.2 Assumptions

This business case has been developed on the following assumptions as consistent with the implementation plan:

- Funding is sought for the delivery of implementation activities required by the notified version of PC1 (which had legal effect from its notification date 22 October 2016).

- The funding and resourcing profile is based on delivering the required activities to meet the timeframes and priorities set out within PC1.
- That as the first schedule process progresses, the provisions of the PC1 may change. It must be acknowledged that any substantial change to PC1, has the potential to change the way the plan is implemented, including the cost of implementation.
- Government's national direction programme for freshwater will not substantially change.
- Government will continue to prioritise freshwater management and there will be increased central involvement.
- That existing council resources will be appropriately prioritised, allocated and aligned to support the delivery of the implementation within the required timeframes.
- That relevant key sectors will directly participate in implementation, industry schemes will be approved within the dairy and vegetable growing sectors, and most members of those sectors will join available industry schemes.
- That the private sector has the capacity, capability and intention to support the implementation activities required by PC1, particularly with respect to the willingness of farm nutrient advisors and farm environment planners to be certified, and to undertake the independent third party roles envisaged by PC1.
- That the council will continue with its current strategic direction to move towards a more customer focussed operating model, supported by high quality information technology and data management systems.
- WRC will continue to implement water quality improvements through a project-by-project approach.

## 2.3 Financial summary

### 2.3.1 Funding profile

The proposed funding profile for PC1 implementation over the 10 year period is summarised below.

\$ (K) Year	2017/18 Baseline	2018/19	2019/20	2020/21	2021/22	2022/23	Future Years
Capital	1,680	2,152	952				
Operational	1,068	2,380	2,385	2,110	1,990	1,990	6,980

### 2.3.2 Additional resources

Implementation will require the following resources over the 10 year period.

	17/18 baseline	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Permanent	4	10	11.5	12	13	13	14	14	15	15	15
Fixed Term	7	6	3.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
Contract	4	4	1.5	0	0	0	0	0	0	0	0
Total resources	15	20	16.5	12.5	13.5	13.2	14.2	14.2	15.2	15.2	15.2
Resource Change	15	5	-3.5	-4	1	-0.3	1	0	1	0	0



### 2.3.3 Funding sources

The funding sources for the activities proposed within this business case are as follows:

1. Land Management Advisory Services, Information Services, Communications, Environmental Monitoring, Catchment planning and management, and Environmental Science and Information resources are to be funded via the general rate.
2. Resource Use Directorate resources required to establish and manage the implementation project and establish and implement new regulatory systems and processes in relation to farm plans will be funded via general rate.
3. Consent and compliance monitoring resources required to process consents and ensure PC1 compliance will be funded on a cost recovery basis as per the current regulatory funding policy.

## 2.4 Corporate support service implications

The implementation will have a range of service implications across corporate support services. The activities proposed for funding through this business case have been discussed and scoped the relevant corporate activity leads as set out below.

Consideration	Yes/No	Requirement	Discussed with Activity Lead?
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes	Implementation will require the development of a new property registration/farm plan portal, alongside systems to manage data and ensure that data is integrated into existing systems.	John Crane - Yes
Does the work include the procurement, or capture, of new data sets?	Yes	Registration data, NRP values, information contained in FEP (land use analysis) will all be new data sets for council. Data will also be required to inform modelling.	Gill Lawrence – Yes
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	Yes	New maps, spatial layers or spatial data sets are required to support farm planning and processing.	Gill Lawrence - Yes
Does the work require analysis or modelling of spatial data?	Yes	Modelling will be required for monitoring progress against PC1 objectives.	Gill Lawrence - Yes
Does the work require the establishment of new depots or offices?	No		Trevor Martin – Yes
Does the work require the use of additional fleet vehicles?	Yes	Additional staff in the resource use area will require vehicles.	Trevor Martin – Yes
Does the work require additional resources (FTE or contract)?	Yes	Additional permanent, fixed term and contract resources will be required for implementation.	

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

The activities sought for funding in this business case are driven directly by the requirements of PC1 and reflect the requirements of the implementation plan and activities that have subsequently been determined by staff as essential to the successful implementation of PC1.

The implementation of PC1 will necessitate additional work in the following key council delivery areas:

- Regulatory implementation systems/processes, including systems to process Farm Environment Plans and industry scheme activities managed through the Resource Use Directorate.
- Advice and support to landowners to develop farm environment plans and the development of sub-catchment plans, largely managed through the Integrated Catchment Management Directorate.
- Plan effectiveness, monitoring and science activities largely managed through the Science and Strategy Directorate.
- Supporting activities, including development of IT systems, communications and stakeholder engagement largely managed through the Community Services Directorate.

The key changes required in reference to these work areas is summarised below. Further detailed description of the required activities is contained within the PC1 implementation plan.

Service	What is proposed
<p><b>Farm environment planning and sub-catchment planning</b></p>	<p>Declining water quality in the Waikato and Waipa catchments is largely due to the effects of agriculture. Farmer engagement has been focused on understanding how agriculture can address this challenge, preparing the industry for change, and providing advice to the Healthy Rivers Project.</p> <p>Now that Plan Change 1 has been notified, this activity is refocused to support implementation of the Farm Environment Planning and sub-catchment planning provisions of the plan.</p> <ul style="list-style-type: none"> <li>• Rather than a generic industry engagement process and given that the policies and requirements of Healthy Rivers are known, the work will be different to business as usual in the Council. It is possible to carry out this task in a very targeted manner and become focused on engaging farmers in priority one sub-catchments on the requirements of the plan change and support them through the process of preparing Farm Environment Plans.</li> <li>• Production of supporting information products, including sub-catchment profiles to support the engagement of farmers in Farm Environment Planning are required by Healthy Rivers.</li> <li>• This is a new activity that proposes to do more to support farmer engagement in Farm Environment Planning requirements under Healthy Rivers. It provides farmers with supporting information about the catchment they farm in, how to prepare a Farm Environment Plan, and where to get help.</li> </ul> <p>A range of information on issues and solutions, including a sub-catchment 'profile', will be prepared for each sub-catchment, providing an outline of the features of the catchment and identifying opportunities for enhancement. This will be used in the process of encouraging farmers to make changes on their farm that will have a positive impact on the condition of their catchment. The development of sub-catchment plans, where required, is also provided for in this proposal.</p>

Service	What is proposed
	<ul style="list-style-type: none"> <li>• Informing farmers of the catchment and ecosystem context in which their farm business operates is a direct appeal to their role as guardians of their environment. In particular, farmers typically become enthusiastic and protective when they are shown what lives in their streams, riparian areas and natural bush remnants, especially if they understand how that relates to neighbouring or downstream areas.</li> <li>• There is also provision for coordinated or collective action through sub-catchment plans that could produce efficiencies or a greater benefit where required. This is a specific policy provision of Healthy Rivers.</li> </ul>
<b>Plan effectiveness, monitoring and science activities</b>	<p>Community expectation is that information is available on the health of rivers and lakes. The Council is proposing to do more to undertake required level of monitoring for Healthy Rivers.</p> <p>Focus is on monitoring areas not currently covered, namely river periphyton and lake water quality. Otherwise rivers and streams are adequately monitored under business as usual. Sediment will need more monitoring but is largely covered by required regional monitoring.</p> <p>Development of an accounting framework to publicly track progress toward reaching the PC1 objectives.</p> <p>Additional funding to advance the S-map (soil maps) programme to ensure the availability of high quality data for Nitrogen reference points and the assessment Farm Environment Plans. Soil maps are necessary to improve the accuracy of Nitrogen reference points calculated using "Overseer". S-maps are also required for other land and soil projects in the organisation and to provide better information to land owners in the region for improving land management.</p> <p>Additional funding for modelling required to track progress against the anticipated outcomes of PC1.</p>
<b>Regulatory implementation systems/processes and industry scheme activities</b>	<p>To enable Implementation in regards to addressing the increased number of resource consents requiring processing and assessment for compliance, Council is proposing to do more to keep up with the additional demand.</p> <p>This includes development of regulatory systems and consent/FEP processing expertise within the Council staff.</p> <p>Additional regulatory resources will be needed to:</p> <ul style="list-style-type: none"> <li>• Requiring, supporting and enabling the development of farm environment plans (FEP).</li> <li>• Certifying independent third parties to make key technical decisions.</li> <li>• Approving independently audited industry self-management schemes.</li> </ul>

Service	What is proposed
<b>Supporting activities, including development of IT systems, communications and stakeholder engagement</b>	<p>Development of information technology systems to support customers and staff in meeting the requirements of Healthy Rivers including:</p> <ul style="list-style-type: none"> <li>• Development of a web based portal for property registration, submission of Nitrogen reference points and farm environment plans.</li> <li>• Additional systems to manage new data and ensure that data is integrated.</li> <li>• Additional systems for spatial data and collection of data to inform modelling.</li> </ul> <p>An increase in funding from the implementation plan is sought for the delivery of IT components. This is due to the need to contract external expertise to develop and deliver the farm plan portal, ensure that appropriate data is captured to inform later modelling and to make provision for the development and management of spatial data.</p> <p>To enable implementation of components to deliver PC1, support is required for more customer engagement with landowners and the other key stakeholders to ensure that requirements of the plan change are met. This will require additional resources in the communications area to initiate and facilitate communications campaigns to support the changes required.</p> <p>Provision for licensing fees for the “Overseer” business model from Year 2. “Overseer” is the preferred model for ensuring that all relevant properties have established a Nitrogen reference point within the required plan timeframes.</p>

## 3.2 What will success look like (high level benefits)

PC1 is the first step towards achieving the water quality objectives of the Vision and Strategy over an 80 year timeframe. PC1 requires specific actions to be undertaken within the first 10 year period of plan, with the aim of achieving a 10% improvement in water quality within the catchments.

Benefits of PC1 over the 80 year timeframe were defined through modelling analysis completed through the PC1 development phase. This analysis included evaluation of the impacts of changes on a range of Māori, environmental, social and economic indicators and definition of the key benefits. It is anticipated that successful implementation will result in a reduction in the loads of contaminants N, P, sediment and faecal bacteria entering the Waikato and Waipa Rivers.

The business case proposal seeks funding for a range of implementation activities that will support the successful implementation of PC1 and will therefore contribute significantly to achieving the PC1 objectives.

## 3.3 Key consequences of not proceeding

Not proceeding with the proposals outlined in this business case will result in the council not being able to implement PC1. The key consequences of not proceeding include:

- Failure to give effect the statutory obligations under the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010 and Nga Wai o Maniapoto (Waipa River) Act 2012 (the River Acts). The

three River Acts established the Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato (Vision and Strategy) as the primary direction setting document for the Waikato and Waipa Rivers. The Vision and Strategy prevails over any inconsistencies in a national policy statement or New Zealand coastal policy statement, and is deemed to be part of the Waikato Regional Policy Statement.

- Significant reputational damage for council in at national, regional and local level. PC1 has built significant “social capital” through its collaborative development with a wider range of community interests. Should implementation fail the reputational impact will be significant and long lasting. This failure could lead to a range of key stakeholders refusing to collaborate on implementation.
- Farmers and other landowners/managers would be unsupported in their implementation of the PC1 requirements. Widespread non-compliance with the rules could result, leading to potentially significant compliance costs.
- Without proactive implementation efforts from the council, the risk of widespread non-compliance is more likely to occur, which will require a greater level of resource to resolve. Some farmers are more likely to engage effort into avoiding, ignoring or actively fighting the need for change on their farms.
- Implementation of PC1 has progressed significantly since October 2016, IT systems are in development, standards and protocols for the regulatory applications are in process have been developed and significant landowner engagement on PC1 has occurred. Should funding for implementation be discontinued most of the investment to date will be a sunk cost to council.

### 3.4 Alignment

The activities proposed within this business case are highly aligned with the strategic direction of the Council, legislative drivers and non-statutory drivers as follows.

Long Term Outcome	How will this change improve delivery?
Implementation of PC1	All activities will contribute to delivery of required implementation activities. The successful implementation will lead to water quality improvements over time.

Strategic Direction	Alignment	How will this change or improve delivery?
<b>SUPPORT COMMUNITIES TO TAKE ACTION ON AGREED OUTCOMES</b>		
Our data and information is more readily accessible so communities can use it to make good decisions.	Contributes	PC1 monitoring platform and accounting framework
<b>FORGE AND STRENGTHEN PARTNERSHIPS TO ACHIEVE POSITIVE OUTCOMES FOR THE REGION</b>		
Existing partnerships are strengthened and new partnerships are forged with iwi Māori, community and business organisations to achieve step change for our environment, economy and communities.	Strongly contributes	Implementation of PC1 will continue to strengthen partnerships with iwi. Implementation processes will support customers to improve water quality and achieve step change.

The Vision and Strategy for the Waikato River is advanced by delivering on the Healthy Rivers Wai Ora plan change and catchment services	Explicit	Implementation of PC1 will give direct effect to the Vision and Strategy.
We continue to support Treaty negotiations and deliver on co-management and co-governance requirements.	Strongly contributes	Implementation of PC1 will give direct effect to the Vision and Strategy.
<b>POSITIVELY INFLUENCE FUTURE LAND USE CHOICES TO ENSURE LONG TERM SUSTAINABILITY</b>		
We plan and make decisions on land use based on multiple values and benefits, including economic and non-economic.	Contributes	Modelling and monitoring of implementation outcomes will assist future decision making on land use choices.
We are delivering on the Healthy Rivers Wai Ora plan change	Explicit	Implementation of PC1 will result in sustainable land use changes with the Waikato and Waipa catchments.
<b>MANAGE FRESHWATER MORE EFFECTIVELY TO MAXIMISE REGIONAL BENEFIT</b>		
We are delivering on the Healthy Rivers Wai Ora plan change.	Explicit	Implementation of PC1 will result in sustainable land use changes with the Waikato and Waipa catchments.
Iwi rights and interests in fresh water agreed with central government are recognised and provided for	Contributes	Implementation of PC1 will give direct effect to the Vision and Strategy.
We continue to work closely with landowners and other organisations to improve land use and water use practices.	Strongly contributes	Implementation processes will support customers to improve water quality and achieve step change.

<b>Legislation</b>	<b>Alignment</b>	<b>How will this change or improve delivery?</b>
Resource Management Act	Very strong	Gives effect to a wide range of regional council responsibilities under the RMA.
Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010,	Very strong	Gives effect to the Act.
River Iwi Waikato River Act 2010 Ngati Tuwharetoa, Raukawa, and Te Arawa	Very strong	Gives effect to the Act.
Nga Wai o Maniapoto (Waipa River) Act 2012	Very strong	Gives effect to the Act.

<b>Other (NPS, SLA, explicit LoS arrangement, best practice etc)</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>

Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato	Explicit	(Vision and Strategy) as the primary direction setting document for the Waikato and Waipa Rivers. The Vision and Strategy prevails over any inconsistencies in a national policy statement or New Zealand coastal policy statement, and is deemed to be part of the Waikato Regional Policy Statement. Healthy Rivers gives effects to the Vision and Strategy
National Policy Statement for Freshwater Management 2014	Very strong	The National Policy Statement for Freshwater Management 2014 (NPS FM) requires regional councils to formulate freshwater objective and set limits or targets (a target is a limit to be achieved within a specified timeframe). Regional councils must ensure that water quality impacts are avoided, or addressed where that has already occurred.
Regional Policy Statement	Very strong	PC1 implementation will assist the council and community to meet a wide range of objectives, policies and methods in the RPS.
Plan Change 1	Explicit	Implementation is a direct response to Plan Change 1.

## 4 Option evaluation (Economic Case)

Given that the council has notified PC1 and is in the process of implementing the plan, the following options have been assessed in the development of this business case:

- Option 1 - Maintain status quo.
- Option 2 – Implement Plan Change 1.

Maintaining status quo is not considered to be a reasonable option given that PC1 has legal effect and therefore must be implemented by the council.

Option 2 closely reflects the implementation plan and is therefore considered to be the preferred option, for the following reasons:

- It has a very high overall contribution to organisational direction and strategy.
- It will ensure that the council gives effect to a Plan Change that has legal effect and will also ensure compliance with national legislative requirements.
- It will result in water quality improvements over the 80 year horizon set out in PC1.
- It will ensure that Treaty obligations are met and that co-management arrangements are implemented.

Further options were considered during the development of the PC1 implementation plan and these options were not endorsed by Council.

## 5 Financial analysis and procurement (Financial & Commercial Case)

### 5.1.1 Funding profile

The proposed funding profile for PC1 implementation over the 10 year period is summarised below.

\$ (K) Year	2017/18 Baseline	2018/19	2019/20	2020/21	2021/22	2022/23	Future Years
Capital	1,680	2,152	952				
Operational	1,068	2,380	2,385	2,110	1,990	1,990	6,980

### 5.1.2 Additional resources

Implementation will require the following additional resources over the 10 year period.

	17/18 baseline	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Permanent	4	10	11.5	12	13	13	14	14	15	15	15
Fixed Term	7	6	3.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
Contract	4	4	1.5	0	0	0	0	0	0	0	0
Total resources	15	20	16.5	12.5	13.5	13.2	14.2	14.2	15.2	15.2	15.2
Resource Change	15	5	-3.5	-4	1	-0.3	1	0	1	0	0

### 5.1.3 Funding sources

The funding sources for the activities proposed within this business case are as follows:

1. Land Management Advisory Services, Information Services, Communications, Environmental Monitoring, Catchment planning and management, and Environmental Science and Information resources are to be funded via the general rate.
2. Resources to established are to be
3. Consent processing and compliance monitoring resources will be funded on a cost recovery basis as per the current regulatory funding policy.

### 5.1.4 Funding partnerships

There is likely to be opportunities to leverage funding from external stakeholders to assist with the implementation of PC1. Funding opportunities will be scoped as part of the project during 2018/19.

### 5.1.5 Assumptions

In developing the financial implications for the preferred option the assumptions noted in section 2.1 of this business case have been applied.

### 5.1.6 Procurement strategy

Procurement will be required on an ongoing and as required basis for the delivery of this business case. Procurement activities will follow the Procurement Policy and processes.

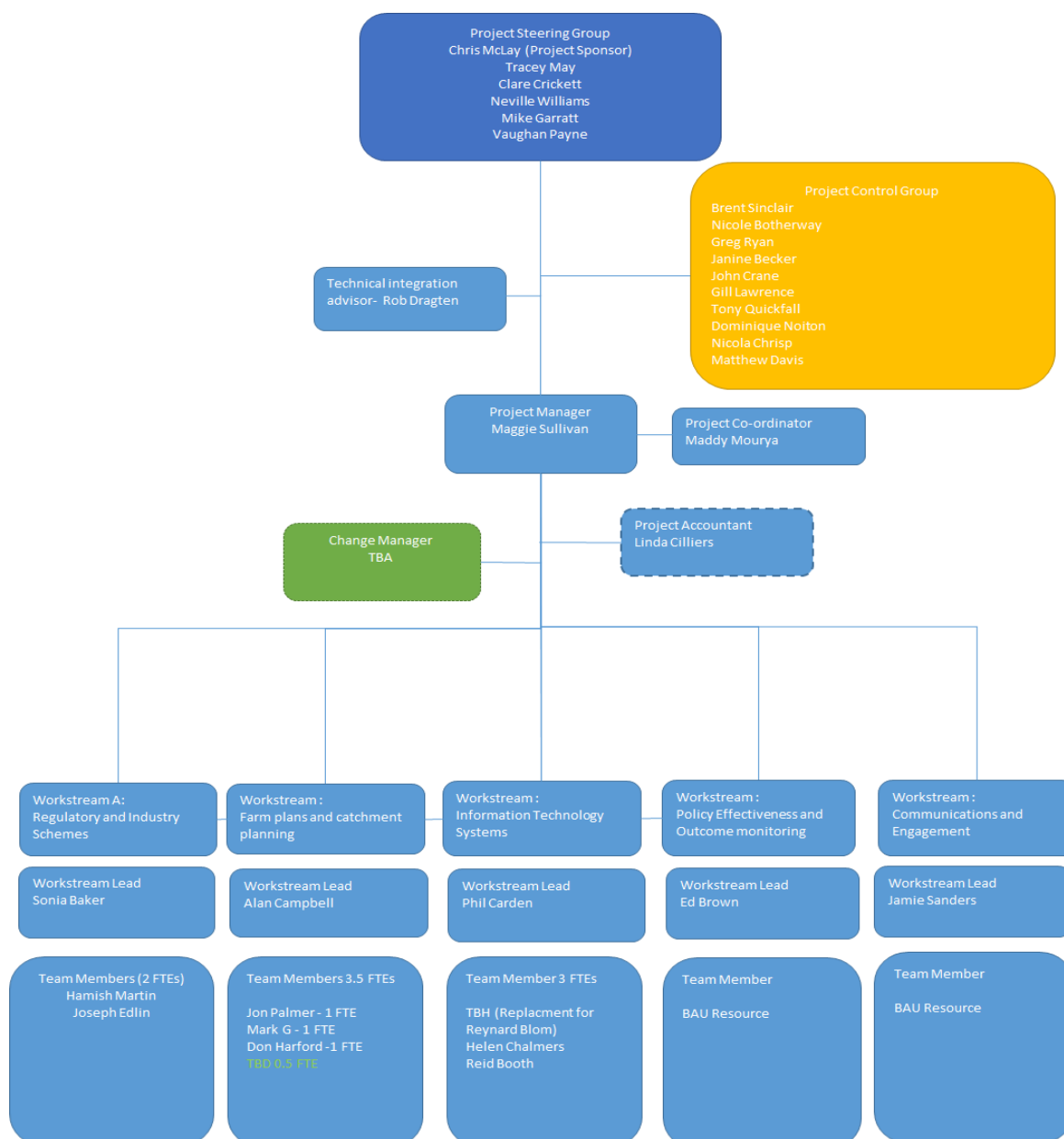


# 6 Implementation and achievability (Management Case)

## 6.1.1 Implementation structure

The implementation of PC1 is to be managed as a project. The internal project management structure for the project over 2017/2018 period is set out below and is based around the delivery of implementation activities within five workstreams:

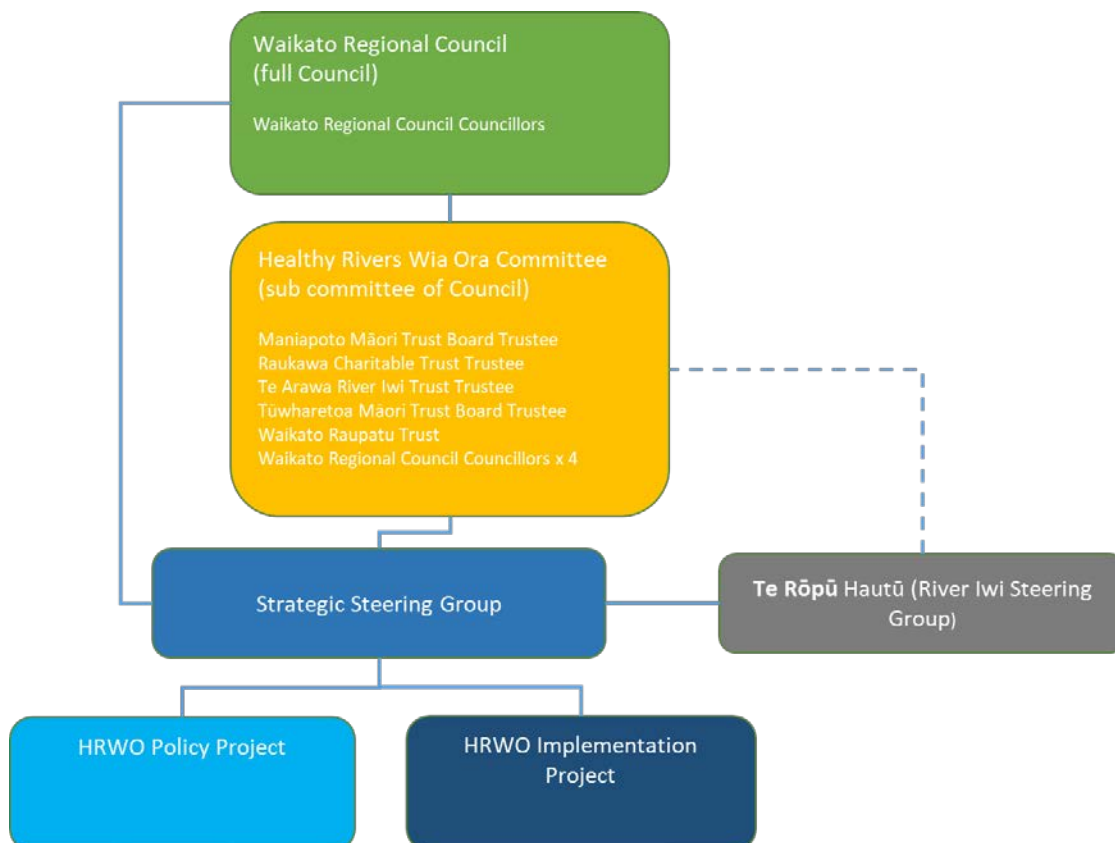
- Regulatory
- Farm and sub-catchment planning
- Information technology systems
- Policy effectiveness, outcome monitoring and science
- Communications and engagement support



### 6.1.2 Project Governance

The implementation project has a political interface with Council and Healthy Rivers Wai Ora Committee and a strategic management interface with Te Rōpū Hautū as summarised below. This interface is to be managed through the Strategic Steering Group.

The implementation project is also directly linked to the HRWO policy project and reported on at a political level through the Strategic Steering Group.



### 6.1.3 Key milestones

PC1 implementation is to be delivered in four high level phases over the next 10 year period as summarised below. Phase 1 is planned to conclude in March 2019, with the registration of all relevant properties and the submission of nitrogen reference points for relevant land holdings within the Waipa and Waikato catchments.



The high level milestones for the next twelve months are as follows:

Task Name	2018														
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
<b>Regulatory and Industry Schemes</b>															
Develop and finalise a process for registration				◆ 1/09											
Develop and finalise a process for submitting NRPs				◆ 1/09											
Develop the criteria against which applications for industry scheme approval will be assessed.								◆ 29/12							
Develop the systems, processes and resources to evaluate Industry Scheme applications.														◆ 29/06	
Develop the systems, processes and resources to evaluate applications for resource consent under PC1								◆ 29/12							
Develop the system, processes and resources for certifying Farm Nutrient Advisors.				◆ 30/06											
Develop the system, processes and resources for certifying Farm Environment Planners														◆ 29/06	
Investigate and report on the viability of developing a third party independent auditing scheme for monitoring the completion of FEP mitigation actions														◆ 29/06	
<b>Workstream: Farm environment and catchment planning</b>															
Develop Standards for certifying Farm Environment Planners				◆ 30/06											
Develop standards, protocols and template for Farm Environment Plans				◆ 30/06											
Produce first 4 sub-catchment profiles				◆ 30/06											
Produce sub catchment profiles at a rate of 15 per year, starting with P1 sub-catchments														◆ 29/06	
Deliver land management training programmes to potential CFEPs														◆ 29/06	
Develop and run CFEP moderation process														◆ 29/06	
Develop and deliver an engagement programme for landowners to engage farmers in sub catchment profiles and HRWO outcomes, starting in P1 sub-catchments														◆ 29/06	
<b>IT infrastructure</b>															
Identify new internal business processes and implement consequential system changes required to enable PC1 implementation				◆ 30/06											
<b>Project Services</b>															
Secure 10 year funding for HRWO implementation through LTP															◆ 29/06

### 6.1.4 Stakeholder engagement

A specific communications plan has been developed for PC1 implementation and this is located here. <https://discover.wairc.govt.nz/otcs/llisapi.dll/link/9573486>

### 6.1.5 Business change/organisational impact

The overall business change/organisational impact of PC1 implementation is likely to be significant.

Key areas of change will include:

- Requiring, supporting and enabling the development of farm environment plans (FEP).
- Certifying independent third parties to make key technical decisions.
- Approving independently audited industry self-management schemes.

- Developing and adopting new information technology (IT) systems (and changing existing systems) to enable efficient implementation management.
- Developing and managing an accounting framework to publicly track progress toward reaching the PC1 objectives.

Provision for change management resources within the funding sought to explore these impacts in detail and support the implementation of the required changes.

### **6.1.6 Ongoing operational management**

It is anticipated that all the outputs, business systems and process changes resulting from PC1 implementation will be embedded into business as usual over time. Planning for integration is a formal component of the implementation project scope and is to be addressed through change management processes.

### **6.1.7 Assumptions, constraints and dependencies**

This business case has been developed on the following assumptions as consistent with the implementation plan:

- Funding is sought for the delivery of implementation activities required by the notified version of PC1 (which had legal effect from its notification date 22 October 2016).
- The funding and resourcing profile is based on delivering the required activities to meet the timeframes and priorities set out within PC1.
- That as the first schedule process progresses, the provisions of the PC1 may change. It must be acknowledged that any substantial change to PC1, has the potential to change the way the plan is implemented, including the cost of implementation.
- Government's national direction programme for freshwater will not substantially change.
- Government will continue to prioritise freshwater management and there will be increased central involvement.
- That existing council resources will be appropriately prioritised, allocated and aligned to support the delivery of the implementation within the required timeframes.
- That relevant key sectors will directly participate in implementation, industry schemes will be approved within the dairy and vegetable growing sectors, and most members of those sectors will join available industry schemes.
- That the private sector has the capacity, capability and intention to support the implementation activities required by PC1, particularly with respect to the willingness of farm nutrient advisors and farm environment planners to be certified, and to undertake the independent third party roles envisaged by PC1.
- That the council will continue with its current strategic direction to move towards a more customer focussed operating model, supported by high quality information technology and data management systems.
- WRC will continue to implement water quality improvements through a project-by-project approach.

### **6.1.8 Risks**

#### **Engagement/compliance**

Successful PC1 implementation will rely on landowners in the catchments doing what is required of them. This implementation plan has been developed on the assumptions that high levels of engagement will occur and will result in high levels of compliance. If this assumption proves incorrect,

there will be considerable challenge in successfully implementing the plan change within the plans current timelines. The current implementation plan budget does not make allowance for widespread resistance to engaging in the obligations created by the plan change.

### **Sector participation**

In previous plan changes delivered by WRC, an extensive collaborative engagement programme was developed between the council and the dairy industry to maximise engagement with farmers to apply for a resource consent to authorise their water use under variation 6. In the case of variation 6, the stakes for a dairy farmer of not engaging were arguably higher than in PC1, because the failure to lodge an application for resource consent by the deadline introduced a risk that landowners may not be able to legally access enough water for their business to continue to operate. Despite multiple points of contact (such as media, personalised letters, and extensive advertising), some landowners required one or more personal phone calls from dairy sector representatives outlining the critical business risk they faced in order to get the farmers to engage. Furthermore, variation 6 farm water consents were only required by dairy farmers, a sector that is comparatively much more engaged with the Waikato Regional Council than some sectors affected by PC1.

Under PC1 it is expected that most dairy farmers will operate under an industry scheme, and that the majority of farmers who will need to engage with the council will be drystock farmers. As a group, this sector generally has had a much lower level of engagement with Resource Management Act (RMA) processes than dairy farmers. In addition, there is no critical business risk faced by the farmers should they choose not to engage. Engagement may potentially be challenging and time consuming.

It is unknown whether the sectors will be willing to commit sufficient engagement resources to implement PC1, in a similar way to what they did to implement variation 6.

The council proposes to run some trial engagement process with several small to moderate sized catchments to test its engagement methods and community responses. This will help the council to identify effective engagement approaches, and to estimate costs and resource needs. This information will be used to refine the PC1 implementation budgets for the Councils Long Term Plan for the 10year period commencing in 2018/19.

### **First schedule process**

The development of this implementation plan has identified a number of practical implementation and interpretation issues within the current rule framework. The areas of most concern relate to the nitrogen reference point, the commercial vegetable growing rules, the landuse change rules, and a number of interpretation issues. The plan change will require changes to make it practicably implementable. These issues have formed part of the council's own submission on the plan change.

A number of critical implementation dates in the plan occur prior to the time that the proposed plan is likely to become operative. It is expected that actions such as registration, submission of NRP data, lodging some FEPs and processing of some resource consents will be carried out under provisions that may later change. There is a risk that any subsequent rule changes may require all of the actions already completed to be revisited. For example, if landowners and occupiers complete the 2000 FEPs required under the first tranche of the proposed plan, and then the FEP process is changed either in the council decision or any subsequent environment court appeal, there is a risk the plans may need to be done again, or possibly have to be accepted, but may not be fit for purpose. This risk either leads to increased cost and workload for all parties, or reduces the effectiveness of the plan change.

This implementation plan is based on the form and content of the existing plan change. Any changes to the plan change through the first schedule may change the implementation approach and resourcing estimates. For example, if the requirement for registration was removed from the plan change, the requirements for the web portal IT system would be fundamentally changed, and would need to be revisited.

There is significant risk in investing the sums of money required to implement PC1 while decisions on the form and content of PC1 are not yet made. However, there is also a significant risk that if the council delays starting implementation, the key implementation elements (such as the IT systems, the regulatory systems, and the certification systems) will not be ready in time to meet the deadlines set out in the notified version of PC1, thereby preventing large numbers of land users from being able to become compliant with the new rules.

On balance, the Council has decided to continue with implementing the key regulatory and IT systems to meet the existing PC1 deadlines, while also asking through its submission that the deadlines be re-examined for practicality.

### **Reliance on third parties**

The plan change introduces the use of independently audited self-management as a method for achieving PC1s objectives. It certifies independent third parties to make decisions about the appropriateness of mitigation actions, and through implementation, these third parties may also be certified to audit the completion of these mitigation actions. This may be an uncomfortable space for some farm planners, whose current business model is based around helping farmers to achieve what they want to, rather than telling farmers what they can and can't do. There is a risk that some independent farm planners may be reluctant to require robust enough mitigation actions to achieve the objectives of the plan. This may in turn lead to farm planners withdrawing from the farm planning certification, reducing the pool available for getting the NRPs and FEPs completed.

# **Business Cases**

Corporate Services

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# Corporate System Replacement

<b>GOA:</b>	Corporate Support Services
<b>Activity Name:</b>	Information Services
<b>Function</b>	Business Solutions
<b>Service</b>	Provision of overall solution architecture, requirements identification and analysis, designing, developing or sourcing solutions, implementation of systems and ongoing support
<b>Financial Budget Code:</b>	

## 1.1 Review and approval

Prepared By:	John Crane, CIO	Date
Reviewed By:	Name/Role	Date
Signed off By:	Name, Director <Directorate>	Date

## 1.2 Related documents

Document Title	Author	Document Reference

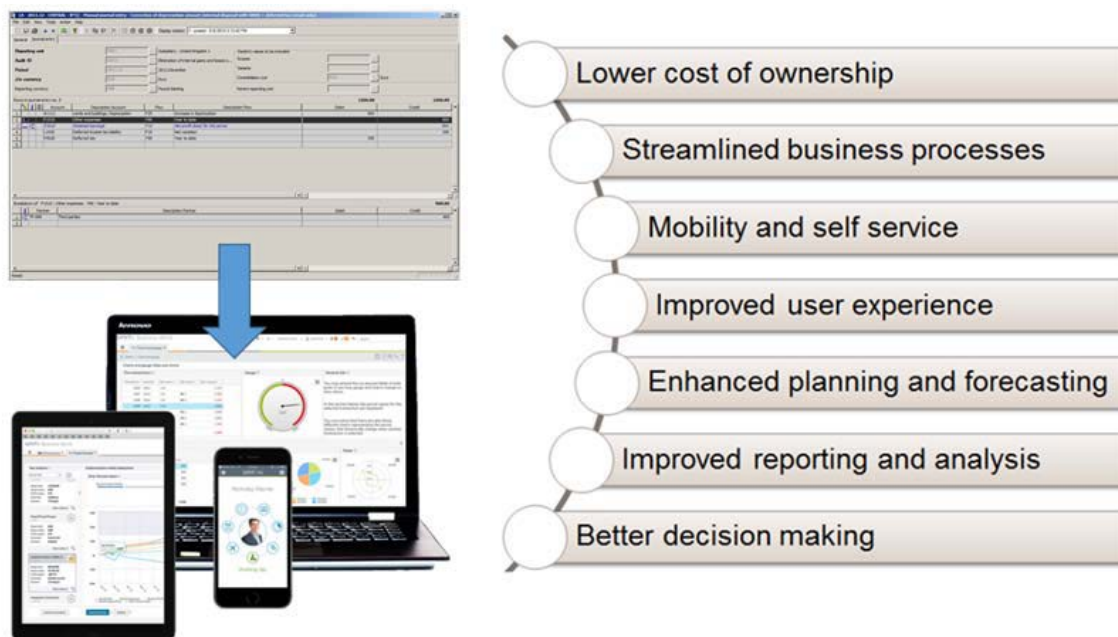
## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	29/9/17	Tracey Powrie	Initial draft
2	4/10/17	Tracey Powrie	Review by John Crane and Janine Becker
3	31/10/17	John Crane	Final draft

## 2 Executive summary

The Corporate System Replacement project is one of several strategic business investments Council is proposing that will leverage information technology to enhance the effectiveness of the organisation. The underlying rationale for the proposed investment is to enable better business outcomes by replacing our dated and poorly performing core systems and processes (Finance, HR and Asset Management) with modern, efficient technology – supported by LEAN, consistent, standard, best practice business process.

The key drivers for the project, and benefits council will be able to realise, are summarised as:



### Alignment with IS Strategy

The proposed solution aligns with and supports the IS Strategy, vision and principals, based on selecting and implementing technologies that support the objectives and outcomes of Councils business. As a core business platform for Council a new integrated corporate information system will introduce a set of modern information technology solutions and components that will enable the modernisation of Council's business practises. The solution will provide opportunities for Council to consider potential automation with other business processes outside of the core project deliverables of Finance, HR and Asset Management. We have the opportunity to significantly rationalise our current software solutions. We believe we could retire approximately 15 different and fragmented software solutions and replace with one. In terms of total cost of ownership this is expected to be lower cost, and certainly lower effort.

### Doing Nothing is "Not an Option"

A review of Councils financial systems was undertaken in 2016 to assess whether these are suitable for the organisation's current and future needs, or if there is a compelling case for change. The review identified a significant number of issues concerning the current system, particularly relating to risk, age, complexity, inconsistency of data, poor alignment with others in local government and poor fit with the IS strategy. Similar concerns have been raised regarding the future fit of our Asset Management and HR solutions. Continuing with our existing platforms will require large scale and costly (in terms of vendor support and internal resources) upgrades in the near future and ongoing costly and resource intensive maintenance and support.

Work is commencing to carry out an evaluation process to June 2018 to select a preferred solution and vendor, and present a detailed business case and implementation project management plan for approval. This proposal outlines the costs associated with the procurement and implementation of a new integrated corporate information system by the end of June 2020. It considers the costs associated with the procurement of the new software solution, implementation resources, the additional fixed-term staff required to support the implementation process (such as project management, change management and technical business and solutions analysis) and the additional level of fixed-term staffing that will be required to backfill critical 'business as usual' staff who will be required to participate in the project delivery as subject matter experts.

Council staff have been closely observing the process that Greater Wellington Regional Council (GWRC) have been working through for the replacement of their 20+ year old SAP system with an integrated solution covering Financials, Enterprise Asset Management, HR and Payroll. Similar to Council, GWRC's Financials, Asset Management and HR/Payroll solutions are dated, do not efficiently and effectively support required business processes, are not fully integrated and require ongoing effort (by technical and business teams) to maintain and upgrade – with little value returned in terms of improved functionality or capability.

The indicative costs, and level of resourcing required, of the proposed project are similar to those outlined by GRWC in their approved business case, and WRC's own replacement project will leverage the material and learnings from GWRC to a large extent.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	Future Years
<b>Capital</b>	0	0	0	0
<b>Operational – Vendor (procurement &amp; impln)</b>	1.5M	750K	0	0
<b>Operational – Staff backfill, Change mgmt. (est)</b>	1M	1M		0
<b>Operational – 2 Business Analysts (3 year FT)</b>	200	200		0
<b>Operational – Software Subscription</b>			400	400
<b>Operational – Total indicative cost</b>	<b>2.7M</b>	<b>1.95M</b>	<b>400K</b>	<b>400K</b>

Note: The current software maintenance fees for Oracle EBS, Hyperion, PSE (HR & Payroll) & Conquest would disappear – saving at least \$250K per annum from 2020.

#### 2.1.1.1 Funding source

As the preferred option is to procure a software as a service solution, the costs are not able to be capitalised. It is intended that the costs of the procurement and implementation of the new corporate information system will be spread across the expected ten year life of the solution, therefore the indicative cost to Council per year for 10 years is \$615,000 per annum inclusive of principal and interest payments.

#### 2.1.1.2 Funding partnerships

None

## 2.2 Corporate support service implications

Consideration	Yes /No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	Yes
Does the work require additional resources (FTE or contract)?	Yes

### 2.2.1 Additional resources

Two additional technical fixed term staff (Business Analysts) will be required to support the analysis, process design and implementation activities associated with the implementation project. Existing technical staff in the Information Services teams will also be deployed to the project, primarily the Corporate Systems Lead from the Business Solutions team.

Additional resources will be required to deliver the project including a project manager, change manager and an appropriate level of fixed term staffing required to backfill critical business as usual staff who will be required to participate in the project delivery as subject matter experts. These have not been specifically identified at this point as additional resources, however indicative costs of \$1M per year are included in the level of increased operational funding proposed for the project. The two Business Analyst roles are proposed as three year fixed term roles as these roles are required to support the successful operationalisation of the new corporate information system and handing over to business as usual. It is expected that one Business Analyst will support the Financial and HR/Payroll work streams and the other the Asset Management work stream.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>							
<b>Fixed Term</b>	0	2	2	0	0	0	0
<b>Contract</b>							

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

A review of Council's financial system was undertaken in 2016 to assess whether this is suitable for the organisation's current and future needs, or if there is a compelling case for change. The review identified a significant number of issues concerning the current system, particularly relating to risk, age, complexity, inconsistency of data, poor alignment with others in local government and poor fit with the IS strategy. The recommendation was made, and endorsed by the Executive Leadership Team in September 2016, to replace the financial system with a software platform that is able to meet WRC's needs with little or no customisations and that is more aligned with the guiding principles set out in the IS strategy and in common with the financial systems being used by other local government authorities within New Zealand.

Subsequently, staff have been closely observing the process that Greater Wellington Regional Council (GWRC) have been working through for the replacement of their 20+ year old SAP System with an integrated solution covering Financials, Enterprise Asset Management, HR and Payroll. Similar to GWRC, Council's Asset Management and HR/Payroll solutions are also dated, do not efficiently and effectively support required business processes, are not fully integrated and require ongoing effort (by technical and business teams) to maintain and upgrade – with little value returned in terms of improved functionality or capability.

The value to Council provided by a fully integrated information system solution across these functions is compelling and would provide an opportunity for Council to take a transformational step (or leap) forward rather than continuing to progress through a piecemeal and incremental approach. Some of the benefits we would achieve include:

- The approach would be based around 'adopt' rather than 'adapt'. These types of integrated solutions are pre-configured around standard and best practice in our sector. Adopting this best standard practice through the implementation of a new enabling software solution is the best (and probably only) way to get beyond the current complexity and uniqueness in our current processes that have built up over many years and often based around individual preferences. This was also a common theme at GWRC.
- A single and fully integrated solution helps to better integrate the processes that operate across the different areas of our business (such as asset management, people and resource management, payroll, billing, etc). Ultimately, it will enable us to become a more integrated organisation and our business processes will be more efficient and effective.
- The integrated solution is based on shared components. For example, there is a single asset register which handles all the maintenance and replacement (and H&S risks) associated with the assets as well as the financial treatment. The same applies with HR information, chart of accounts, etc. It moves us away from separate 'islands of information' and ensures that we have single and authoritative sources of core master data.
- We have the opportunity to significantly rationalise our current software solutions. We believe we could retire approximately 15 different and fragmented software solutions and replace with one. In terms of total cost of ownership this is likely to be lower cost, and certainly lower effort. It also means we will 'get there' in terms of refreshing our technology solutions (at the current rate of travel with our incremental approach across so many systems by the time we get to the end we'll need to start again). This will also allow us to deploy our constrained resources onto more valuable customer and information provision focused activities.
- The solutions come with modern and efficient functionality around mobile access, employee and manager self-service, workflow and reporting (including built-in Business Intelligence dashboards).
- These types of solutions are generally fully web and mobile enabled, and available as a cloud-based software as a service (SaaS), which would help us to remove a large part of our IT infrastructure (and reducing total cost of ownership). This is one of the directions outlined in the SISP.
- This solution would sit well alongside IRIS as our core Regulatory information system solution. The two solutions complement each other rather than overlap or compete, and means that we would be consolidating our software around a much smaller set of core solutions (also as per the direction outlined in the SISP).
- Depending on the solution we select to meet our strategic and business requirements, it could provide further collaboration opportunities with GWRC.

The proposal is to carry out an evaluation process to June 2018 to select a preferred solution and vendor, and to have completed the migration to the new integrated corporate information system by the end of June 2020.

## **3.2 What will success look like (high level benefits)**

Delivering greater efficiency, more visibility, useful information for managers, reduced risk, reduced overall costs to support and maintain the current suite of software solutions, and a shift to standard and simpler processes enabled by a single, integrated solution across these business functions.

At this point it is difficult to quantify the anticipated benefits realised from the project, and it is expected that most of the benefits realised will be qualitative in nature. Analysis of the anticipated benefits will be undertaken as part of the work to June 2018 to develop the implementation business case and project management plan, and further extended through the initial design phase of the implementation project once commenced. GWRC have identified initial quantitative benefits of

between \$0.8m to \$0.9m estimated in annual savings through efficiencies with asset management mobility, payables, finance, administration, and general reporting and analysis.

### 3.3 Consequences of not proceeding

We need to make a change and we need to make it now. Our existing Financials, Asset Management and HR/Payroll systems are not fit for the future, are impacting our ability to internally function efficiently and effectively, and are costly to maintain. The review of our current Financials system identified a significant number of issues concerning the current system, particularly relating to risk, age, complexity, inconsistency of data, poor alignment with others in local government and poor fit with the IS strategy.

If we do not make the change we will continue to achieve reduced efficiency in managing these functions, poor visibility of management information in these areas, increasing risk and complexity with respect to the technologies involved, and increasing cost of ownership. Our complex business processes built around complex and out-dated supporting software solutions will continue to inhibit our ability to deliver LEAN, effective and efficient business processes.

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
N/A	While there is no direct alignment between this work and improving delivery to our long term outcomes there is indirect alignment through the provision of efficient and effective internal services and information systems which supports the organisation to deliver on its outcomes.

Corporate Plan Priorities	Alignment	How will this change improve delivery?
Transformation Technology	Strongly Aligned	Provides a step change to using modern, fit for future technology solutions that enable mobility, and information access when are where they need it, to effectively and efficiently carry out their job.
Information Led	Strongly Aligned	Improved centralised, integrated information, and accessibility to information, will be available to support decision making.
Continuous Improvement	Strongly Aligned	Existing business processes will be reviewed using a LEAN lens to ensure that they are efficient and effective. Best standard practice processes will be adopted wherever possible.
Customer Centric	Strongly Aligned	A modern, integrated solution supports improved customer service

Legislation	Alignment	How will this change improve delivery?
Local Government Act 2002	Strongly Aligned	As required by the Act this solution supports the required focus on good-quality local infrastructure, local public services, and performance of regulatory functions

<b>Other (NPS, SLA, explicit LoS arrangement, best practice etc)</b>	<b>Alignment</b>	<b>How will this change improve delivery?</b>
Adoption of best practice business processes	Strongly Aligned	Adopting best standard practice through the implementation of a new enabling software solution is the best way to get beyond the current complexity and uniqueness in our current processes that have built up over many years.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The options include:

- Status quo: Continue to operate the existing complex and inefficient processes for our internal functions around finance, people and enterprise asset management, with any improvements constrained by an aging, fragmented, costly and increasingly high risk set of technology solutions.
- Option 1: Simplify and standardise the processes for our internal finance, people and asset management functions through the implementation of an enabling and more integrated technology platform.

### 4.1 Specific objectives

1. Alignment with IS Strategy
2. Lower cost of ownership
3. Streamlined business processes
4. Improved mobility and self service capability
5. Improved user experience
6. Enhanced planning and forecasting
7. Improved reporting and analysis
8. Enabling better decision making
9. Acceptable level of risk in the ability of our technology solutions to continue to support Councils internal business needs.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1
1. Alignment with IS Strategy	<i>Does not meet</i>	<i>Meets</i>
2. Lower cost of ownership	<i>Does not meet</i>	<i>Meets</i>
3. Streamlined business processes	<i>Does not meet</i>	<i>Meets</i>
4. Improved mobility and self service capability	<i>Does not meet</i>	<i>Meets</i>
5. Improved user experience	<i>Does not meet</i>	<i>Meets</i>
6. Enhanced planning and forecasting	<i>Does not meet</i>	<i>Meets</i>
7. Improved reporting and analysis	<i>Does not meet</i>	<i>Meets</i>
8. Enabling better decision making.	<i>Does not meet</i>	<i>Meets</i>
9. Acceptable level of risk in the ability of our technology solutions to continue to support Councils internal business needs.	<i>Does not meet</i>	<i>Meets</i>

## 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo	0	0			
Option 1	TBC	0		5.05M	400K

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is to procure and implement a software solution to replace Council's existing Financials, HR/Payroll and Asset Management business information systems. There are a significant number of issues concerning the current systems, particularly relating to risk, age, complexity, inconsistency of data, poor alignment with others in local government and poor fit with the IS strategy. Continuing with our existing platforms will require large scale and costly (in terms of vendor support and internal resources) upgrades in the near future and ongoing costly and resource intensive maintenance and support.

# 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Opex - Labour – Fixed Term Business Analyst x 2	600K	Immediate	Internal borrowing	Additional Business Analyst and resources (two) required to contribute to the analysis, design and implementation activities of the project.
Opex – Vendor costs	2.25M	Immediate – spread over the life of the project	Internal borrowing	Procurement, vendor consultancy – analysis, design, integration, migration and implementation.
Opex – Internal project resources	2M	Immediate – spread over the life of the project	Internal borrowing	Project management, change management and an additional level of fixed term staffing that will be required to backfill critical business as usual staff who will be required to participate in the project delivery as subject matter experts.
<b>Total Opex</b>	<b>4.85M</b>			

\$ (K) / Year	2018	2019	2020	Future Years
<b>Capital</b>	0	0	0	0
<b>Operational – Vendor (procurement &amp; impln)</b>	1.5M	750K	0	0
<b>Operational – Staff backfill, Change mgmt. (est)</b>	1M	1M		0
<b>Operational – 2 Business Analysts (3 year FT)</b>	200	200	0	0
<b>Operational – Software Subscription</b>			400	400
<b>Operational – Total indicative cost</b>	<b>2.7M</b>	<b>1.95M</b>	<b>400K</b>	<b>400K</b>

### Approach to funding

As the preferred option is to procure a software as a service solution, the costs are not able to be capitalised. It is intended that the costs of the procurement and implementation of the new corporate



information system will be spread across the expected ten year life of the solution, therefore the indicative cost to Council per year for 10 years is \$615,000 per annum.

### 5.1.1 Funding partnerships

None

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- That the migration to the new information system can be completed within two years.
- A software as a service solution will be identifiable and be cost-effective.
- The resources and costs identified are indicative, based upon what staff consider it would take to purchase and implement the solution. This includes business process improvements, staff training and change management.
- The indicative resources, costs, and timeframes, are comparable to those identified by GRWC in their implementation business case.
- Ongoing costs of the provision and maintenance of a software as a service solution are expected to be the same as, or similar to, the current cost of the annual licencing and maintenance of existing solutions that will be replaced and therefore are not shown as an ongoing additional cost to current costs as the baseline. This existing cost remains as part of the baseline budget.
- Once a decision is made to progress with the implementation project from July 2018, consideration can be given as to whether existing software licencing for the software solutions to be replaced could cease – potentially providing a saving of \$250,000 which could contribute to the project costs. The risk and impact of any failure of unsupported software solutions during this time will need to be taken into consideration.
- A detailed business case, confirming the actual solution and resources, costs and timeframes associated with its successful implementation, and benefits will be provided by June 2018.

### 5.1.3 Additional commentary

We will work closely with GWRC through our evaluation process and final business case process to ensure that we leverage from their process and experience.

### 5.1.4 Procurement strategy

Will any procurement activities be required? YES

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach –Project

The project management framework will be followed with the appropriate gates. An implementation project will be established upon the completion of the 2017/18 requirements, evaluation and selection project and the approval of the implementation business case by ELT which will be used for the Initiation gate.

Overall governance will be managed via a Steering Committee (SC) made up of the Directors whose business is directly impacted by the implementation of the new solutions – Finance & Transport, ICM and Community & Services. A Project Control Group (PCG) will be established comprised of the

Managers of the business teams involved in and responsible for the project delivery – Finance, People & Capability, Asset Management, Information Services and the vendor. Project reporting will follow the project management framework, with regular reporting on status and financials to the PCG and SC.

Alongside an overall Project Manager, a Change Manager and a Communications Advisor will be appointed together with Workstream Leads – at this point these are likely (but to be confirmed in the implementation project planning phase) to be related to the business and technical delivery areas, eg. Finance, HR/Payroll, Asset Management and Integration.

### 6.1.2 Scope/deliverables

The scope will be fully defined in the implementation business case. The high level in and out scope items at this point however are:

#### In Scope

- Replacement of the existing Financials, Rating, HR/Payroll and Asset Management software solutions
- Replacement of supporting software solutions e.g. this could include but not be limited to Land, RID, WRC Purchasing, WRC Timesheets, Hyperion Planning, Hyperion Reporting, Interplan, PES, Fulcrum. To be confirmed during implementation planning.

#### Out of Scope

- Potentially use of the new Asset Management solution to support asset management activities outside of ICM. There is potential for this to occur however it may be more appropriate to be carried out as a further phase. To be confirmed during implementation planning.
- Replacement of IRIS as our Regulatory and Customer Engagement supporting software solution.

### 6.1.3 Key milestones

Indicative key milestones are outlined below. These will be confirmed through the development of the implementation business case. Work will commence in the 2017/18 financial year to select the preferred vendor and solution.

Milestone	Completion Date
Requirements gathering, RFP due diligence and selection of preferred vendor/solution	End April 2018
Negotiation with preferred vendor and contract preparation	May/June 2018
Approval of implementation business case ( <b>GATE</b> before project commences)	End June 2018
Recruitment of project manager and technical resources	July 2018
Appointment of business staff and backfilling commences	From July 2018
Signoff of Design Phase ( <b>GATE</b> before implementation commences)	End December 2018
Implementation commences	January 2019
implementation completed, including staff training	End June 2020
Post go live support	End September 2020

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Council	Progress, any significant issues	Inform
ELT	Progress, any significant issues, impacts on their Directorates and timings	Inform
Vendor	Successful project, shared responsibility as key delivery partner	Partner

Stakeholder	Interest	Method of Engagement
Finance Section	Timing, resource commitments and timings for project delivery and for uptake	Engage
People & Capability Section	Timing, resource commitments and timings for project delivery and for uptake	Engage
ICM Directorate	Timing, resource commitments and timings for project delivery and for uptake	Engage
All Staff and Managers	Progress, some level of contribution through the project for some staff/teams with interfaces to the key delivery areas, how/when they will be trained and supported to use the new processes and solutions.	Inform, Engage

## 6.1.5 Business change/organisational impact

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Information Services	Medium	Capacity to provide required resources alongside other work	Additional resource identified as required for the project
Business Excellence			
Finance	Medium	Capacity to provide required resources to ensure successful implementation	Backfill of subject matter experts is proposed to ensure required resources are available.
People & Capability			
ICM Directorate			
Managers & Staff	Low	Staff will be required to participate in testing and training.	Identify what is needed, who and when in the planning phase

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Finance	High	Use of the new processes and tools	Subject matter experts involved in the project delivery who are then the key users and support for other staff in the business.
People & Capability			
ICM Directorate			
Managers & Staff	Low	Use of the new processes and tools	Effective training and support mechanisms, champions / super users identified across the organisation.

## 6.1.6 Ongoing operational management

The ongoing costs of the provision and maintenance of a software as a service solution are expected to be the same as, or similar to, the cost of the annual licencing and maintenance of existing solutions that will be replaced and therefore are not shown as an ongoing additional cost to current costs as the baseline.

It is expected that business staff who currently administer and support the effective use of the software solutions used in their business areas as a part of their current roles will spend less time on user support and ongoing upgrades that currently. Existing technical staff current focused on keeping existing systems running will be able to be deployed to more value add activities. This will be investigated as part of the implementation business case.

The additional two fixed term Business Analyst and Business Solutions Analyst resources have been identified for three years to enable the successful operationalization and bedding in of the new solution.

### 6.1.7 Assumptions, constraints and dependencies

- The implementation business case is approved by the end of June 2018.
- The vendor is available to commence the project from July 2018.
- The design phase of the project will commence from July 2018.
- The required project resources will be able to be sourced and commence from July 2018.
- Appropriate backfill will be able to be sourced when required to enable existing subject matter experts to be able to participate in the project delivery when required.

### 6.1.8 Critical Risks

Risk	Impact	Likelihood	Comments/mitigation
Cannot find an integrated solution that meets Councils requirements	Major	Unlikely	GWRC have found an appropriate solution for their needs which are similar to ours as a Regional Council. If a single integrated solution cannot be found an integrated best of breed solution may be required.
Cannot source the required project management and technical resources to support the implementation project	Major	Moderate	Start recruitment as soon as possible and enlist the aid of agencies. Resource with internal staff and attempt to backfill these.
Cannot access the required business resources when required to support the implementation of the project when they are required	Major	Moderate	Involvement of business managers and key staff in planning and identification of how best to resource the project for success. Backfill staff where possible. Gain ELT/organisational commitment to the priority of this project over BAU/other projects.

# Appendices

## 1 Appendix One: Evaluation of options

### 1.1 Status quo

#### 1.1.1 Option overview

A review of Councils financial systems was undertaken in 2016 to assess whether these are suitable for the organisation's current and future needs, or if there is a compelling case for change. The review identified a significant number of issues concerning the current system, particularly relating to risk, age, complexity, inconsistency of data, poor alignment with others in local government and poor fit with the IS strategy. Continuing with our existing platforms will require large scale and costly, in terms of vendor support and internal resources, upgrades in the near future and ongoing costly and resource intensive maintenance and support.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Staff know the solutions and have found ways to 'make them work'</li> </ul>	<ul style="list-style-type: none"> <li>Increased risk of failure or inability to upgrade to meet legislative changes</li> <li>Complex, out-dated, difficult to use user experience.</li> <li>Requires mobility, self-service and customer service solutions to be built on top of the current technologies – does not come as standard.</li> <li>Costly and resource intensive to maintain and upgrade.</li> <li>Not meeting our business requirements</li> <li>Driven the creation of complex and customised business processes and solutions.</li> <li>Challenging for new staff to get up to speed quickly with the tools they need to use to do their job.</li> <li>Multiple vendors/providers to work with and manage.</li> <li>Is not aligned with the IS Strategy.</li> </ul>

#### 1.1.3 Anticipated Benefits

There are no identifiable benefits to Council with the current situation.

#### 1.1.4 Delivery of Long Term Outcomes

The current situation does not improve delivery of any of the long-term outcomes.

#### 1.1.5 High level financial overview

The cost of ownership of the existing solutions in terms of labour that is used to support the current solutions is difficult to quantify. It is estimated that the annual cost of licencing and maintenance is \$400K. Upgrades are expensive in terms of vendor costs, staff involvement and length of time it takes to undertake an upgrade. Generally upgrades are required every 2-3 years to maintain currency. Approximately the equivalent of three technical development staff are involved in keeping these three key business solutions running.

Benefits (\$'s)	Revenue	Capex	Opex	Labour
0	0	1M Estimated combined cost of required upgrades of core platforms on average every three years	400K approximately annually in software subscription	Approximately 3 development staff and a number of staff across the organisation as part of BAU roles

### 1.1.6 Assumptions, constraints and dependencies

- It would cost more to upgrade to the latest versions of our existing solutions, further integrate and build additional functionality required, and continue overtime to maintain these. Oracle EBS (our financial management solution) is a Tier 1 solution and as such has a higher cost of ownership than other similar solutions used by local authorities. Oracle EBS is not used by any other local authority in NZ.
- Our ability to markedly improve the effectiveness and efficiency of our business processes is constrained by our existing solutions.

### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Failure of one of these key support solutions – Financials, HR/Payroll, Asset Management	Catastrophic	Moderate	Continue to apply costly and resource intensive upgrades
Not meeting changing business requirements	Catastrophic	Almost Certain	Continue to apply costly and resource intensive upgrades, and resource costly additional in-house or contract development

## 1.2 Option 1

### 1.2.1 Option overview

Enable better business outcomes by replacing our dated and poorly performing core systems and processes (Finance, HR and Asset Management) with modern, efficient technology – supported by LEAN, consistent, standard, best practice business process.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Alignment with IS Strategy</li> <li>• Lower cost of ownership</li> <li>• Streamlined business processes</li> <li>• Improved mobility and self service capability</li> <li>• Improved user experience</li> <li>• Enhanced planning and forecasting</li> <li>• Improved reporting and analysis</li> <li>• Enabling better decision making</li> <li>• Acceptable level of risk in the ability of our technology solutions to continue to support Councils internal business needs.</li> <li>• Single vendor to work with instead of multiple.</li> </ul>	<ul style="list-style-type: none"> <li>• Costly and resource intensive during the project implementation phase</li> </ul>

Pro's	Con's
<ul style="list-style-type: none"> <li>Constrained development staff can focus on other value added areas of development – online services, customer service, business intelligence and mobility</li> </ul>	

### 1.2.3 Anticipated Benefits

At this point it is difficult to quantify the anticipated benefits realised from the project, and it is expected that most of the benefits realised will be qualitative in nature. Analysis of the anticipated benefits will be undertaken as part of the work to June 2018 to develop the implementation business case and project management plan, and further extended through the initial design phase of the implementation project once commenced.

It is anticipated that this option will deliver greater efficiency, more visibility, useful information for managers, reduced risk, reduced overall costs to support and maintain the current suite of software solutions, and a shift to standard and simpler processes enabled by a single, integrated solution across these business functions. GWRC have identified initial quantitative benefits of between \$0.8m to \$0.9m estimated in annual savings through efficiencies with asset management mobility, payables, finance, admin, and general reporting and analysis.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
N/A	While there is no direct alignment between this work and improving delivery to our long term outcomes there is indirect alignment through the provision of efficient and effective internal services and information systems which supports the organisation to deliver on its outcomes.

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
TBC	0	0	5.65M	620K

### 1.2.6 Assumptions, constraints and dependencies

- That the migration to the new information system can be completed within two years.
- A software as a service solution will be identifiable and be cost-effective.
- The resources and costs identified are indicative, based upon what staff consider it would take to purchase and implement the solution. This includes business process improvements, staff training and change management.
- The indicative resources, costs, and timeframes, are comparable to those identified by GRWC in their implementation business case.
- Ongoing costs of the provision and maintenance of a software as a service solution are expected to be the same as, or similar to, the cost of the annual licencing and maintenance of existing solutions that will be replaced and therefore are not shown as an ongoing additional cost to current costs as the baseline.
- A detailed business case, confirming the actual solution and resources, costs and timeframes associated with its successful implementation and benefits will be provided by June 2018.

### 1.2.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Cannot find an integrated solution that meets Councils requirements	Major	Unlikely	GWRC have found an appropriate solution for their needs which are similar to ours as a Regional Council. If a single integrated solution cannot be found an integrated best of breed solution may be required.
Cannot source the required project management and technical resources to support the implementation project	Major	Moderate	Start recruitment as soon as possible and enlist the aid of agencies. Resource with internal staff and attempt to backfill these.
Cannot access the required business resources when required to support the implementation of the project when they are required	Major	Moderate	Involvement of business managers and key staff in planning and identification of how best to resource the project for success. Backfill staff where possible. Gain ELT/organisational commitment to the priority of this project over BAU/other projects.



# Technology Growth

<b>GOA:</b>	Corporate Support Services
<b>Activity Name:</b>	Information Services
<b>Function</b>	
<b>Service</b>	
<b>Financial Budget Code:</b>	M2050

## 1.1 Review and approval

Prepared By:	John Crane, Chief Information Officer	4 <sup>th</sup> October 2017
Reviewed By:	Name/Role	Date
Signed off By:	Neville Williams, Director Community and Services	Date

## 1.2 Related documents

Document Title	Author	Document Reference

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	22/10/2017	John Crane	Initial draft

## 2 Executive summary

This request is for additional funding to cover the increasing technology operating costs resulting from organisation growth, increasing prevalence of technology across all WRC functions and the ongoing shift of IT expenditure from capital investment to consumption-based operating costs.

The growth in demand and consumption of technology can be grouped into 3 key areas:

1. IT Infrastructure (servers, data storage, data centre facilities)
2. Desktop PC's and Mobile devices (laptops and tablets)
3. Software

### 1. Increase in IT Infrastructure Services

This is driven by a combination of two things ...

- Increased consumption. We will consume more infrastructure services because we will capture more data, operate more systems and provide services to more people. New and emerging technologies will also contribute to this as use of sensors and monitoring devices increases, resulting in a large scale increase in data.
- Continued migration of our infrastructure from a model where we purchase and own physical infrastructure assets (servers, storage units, etc) to one where we access infrastructure as a

managed service and pay for consumption (a 'utility' model). These operating costs will continue to replace capex costs for infrastructure replacement.

## 2. Purchase of additional personal computing & mobile devices

We have more devices in circulation (including mobile/tablet devices) and this is likely to continue to increase as user numbers continue to grow to support several major new projects. There is also a continued move towards deployment of tablet devices to support improved efficiency and access to information. Our current and growing fleet of equipment will also be due for ongoing replacement at end of life.

## 3. Increase in Software Services / Subscriptions

We are increasingly accessing software 'as a service' (SaaS) where we pay a monthly subscription fee per user rather than purchase software as a capital asset and pay annual support fees for that asset.

Expenditure on software will increase as we continue to use more software systems in areas where we currently don't have enabling technology, and these new requirements are likely to be met as SaaS rather than the traditional capex model and annual software maintenance fees.

This increase is in line with the investment direction outlined in the IS Strategy (SISP), which stated ...

"[...] additional investment is likely to be in the following forms:

- Additional operational costs from a proposed shift towards delivering and accessing IT services based on consumption (such as Infrastructure as a Service) and subscription based licencing fees. This would be offset to some extent by a reduction in capital expenditure.
- Some additional investment where new software solutions or new (additional) technology platforms or devices are required. Examples include Data Warehousing & Business Intelligence, mobile devices and development of mobile applications."

## 2.1 Financial summary

The projected costs are based on our best estimate of what is likely to happen over the LTP period. There are many scenarios and combinations of factors that will influence where costs be incurred and how much they will be across the 3 categories above. The thing that we can be confident about is that we will have more users, using more technology devices and software and generating more data that needs to be stored, backed-up and secured. All these will incur more technology costs across each of the 3 categories.

We can also be confident that given current technology directions and our own IS strategy that an increasing amount of our technology costs will be as consumption-based operating costs and subscriptions, with a reduction in capital expenditure. The IS capex budget has been reduced to reflect this for both software and IT infrastructure.

### 2.1.1 Funding profile

#### Additional Funding:

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital - PC's &amp; Mobile Devices</b>	109	119	124	124	124	124
<b>Operational - IT Infrastructure</b>	100	200	300	300	300	300 - 450
<b>Operational - Software Services</b>	150	175	200	200	200	200

**Reduction in existing budgets:**

\$ (K) / Year	Baseline	2018	2019	2020	2021	2022	Future Years
Capital - Server Replacement	130	100	50	20	10	10	10
Capital - Corporate Info Systems	250	250	200	150	100	100	100

**2.1.1.1 Funding source**

General rates.

**2.1.1.2 Funding partnerships**

None

**2.2 Corporate support service implications**

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

**2.2.1 Additional resources**

Not applicable

**3 The case for change (Strategic Case)****3.1 Proposal for change**

The use of technology at Waikato Regional Council is continuing to grow, and as a result, the overall cost of providing technology will increase in line with this growth.

The growth in consumption of technology can be grouped into 3 key areas:

1. IT Infrastructure (servers, data storage, data centre facilities)
2. Desktop PC's and Mobile devices (laptops and tablets)
3. Software

In addition to growth related to the increase in users (such as more devices), there is also growth from greater use of technology (for example, more software solutions to enable greater efficiency and improved customer engagement) and more data being generated, which needs to be stored and backed-up.

Another factor driving increased technology costs will be the anticipated 'explosion' of data that is likely to come from the increased use of sensors and monitoring devices in a broader range of applications.

At the same time, there will be a shift from capital expenditure for infrastructure and software towards operational expenditure as these increasingly become accessed as cloud-based services. Some of this

increase will be offset by reduction in capital expenditure and avoidance of increased capital expenditure.

## 3.2 What will success look like (high level benefits)

Success will be the ability to meet the demand for technology growth, meaning we can better ensure that all WRC system users have access to user devices that are effective in enabling greater efficiency, that we are able to quickly respond to increasing demands for new and improved software and the necessary infrastructure to manage increased data volumes.

## 3.3 Consequences of not proceeding

Potential consequences of not proceeding include ...

- Unbudgeted costs (where the provision of additional infrastructure capacity is non-discretionary)
- Constraints on our ability to provide additional capacity to support growth
- Constraints on our ability to enable business process improvement and efficiency through subscription to new software solutions.
- Inefficient use of personal and mobile computing technology.

## 3.4 Alignment

This request is closely aligned with the IS Strategy (SISP), reflecting an increasing shift from capital-based purchase and ownership of IT assets (infrastructure and software) towards more predictable operating costs associated with subscriptions and consumption-based use of IT infrastructure services.

Corporate Plan Priorities	Alignment	How will this change improve delivery?
<b>Transformational Technology</b>		
Investment into online applications to reduce transaction costs	Partially Contributes	
Develop use of data analytics to support effective decision making.	Partially Contributes	
Implement technology solutions that enable more efficient internal operations.	Strongly Contributes	
Implement new technologies for capture and presentation of data and information.	Strongly Contributes	
<b>Information Led</b>		
Identify technology solutions to enable our customers and communities to increasingly interact with us through digital channels.	Partially Contributes	
Use the new ArcGIS software to deliver more data and maps internally and externally.	Partially Contributes	
Improve our capacity and capabilities around data acquisition, analytics and presentation to improve the delivery of our service.	Partially Contributes	

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

The options include:

- Status quo: Maintain existing budgets for IT infrastructure, personal computing devices and software based on no increase in user numbers, data growth or new system requirements.
- Option 1: Make funding provision for meeting the increase in demand from across the organisation based on additional system users, data growth and new software solutions.

### 4.1 Specific objectives

1. Provide for increasing technology expenditure resulting from growth and new requirements.
2. Align with the anticipated shift from capital to operational expenditure.

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1
1. Provide for technology expenditure growth	Does not meet	Meets
2. Align with the shift from capex to opex	Does not meet	Meets

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- It aligns with the expected increase in demand and consumption of technology that will result in increased expenditure.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour				
Opex	\$250,000	FY2018-19		Additional infrastructure & software
Capex	\$109,000	FY2018-19		Additional PC's & mobile devices
Revenue				
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital - PC's & Mobile Devices	109	119	124	124	124	124
Operational - IT Infrastructure	100	200	300	300	300	300 - 450
Operational - Software Services	150	175	200	200	200	200

Reduction in existing budgets:

\$ (K) / Year	Baseline	2018	2019	2020	2021	2022	Future Years
Capital - Server Replacement	130	100	50	20	10	10	10
Capital - Corporate Info Systems	250	250	200	150	100	100	100

### 5.1.1 Funding partnerships

None

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- That there will continue to be a shift from capital to operating expenditure for IT infrastructure and for software.
- That there will be a significant increase in data volumes within the next 3 years as WRC builds its data warehousing capability, and as we start to collect large amounts of data from monitors and sensors (the 'Internet of Things').
- That there will continue to be growth in the use of software and that overall user numbers will continue to grow.
- That technology will continue to become an increasingly prevalent part of all activities and services.
- That several major projects will start to deliver technology solutions and accumulate data over the next 3 years (such as HRWO, Online Services Roadmap, etc.).

### 5.1.3 Procurement strategy

Will any procurement activities be required? YES (potentially)

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

This business case is requesting increased operational funding.

### 6.1.2 Scope/deliverables

In Scope

- IT infrastructure services (including servers, data storage, backup, operating software and other infrastructure components).
- Desktop computers, laptops, tablets and other mobile devices.
- Business software.

### 6.1.3 Ongoing operational management

The operational management will be through the existing Information Services roles and responsibilities.

### 6.1.4 Assumptions, constraints and dependencies

- That WRC's system user numbers will continue to grow at a similar rate as has been the case over recent years.

- That there will be more software in use as new and existing areas of activity and services are enabled by software solutions.
- That data volumes and corresponding infrastructure requirements will grow significantly.
- That software and infrastructure will be accessed increasingly as cloud-based services.

### **6.1.5 Risks**

There are no significant risks identified with this request for funding to provide for technology growth.

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

### 1.1 Status quo

#### 1.1.1 Option overview

Maintain existing levels of expenditure for technology solutions.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>No expenditure increase</li> </ul>	<ul style="list-style-type: none"> <li>Unable to meet the increasing demand and expectations for technology.</li> <li>Business process improvements potentially constrained by insufficient technology capacity.</li> <li>Insufficient funding for managing the increased operational requirements as major projects implement new technology solutions.</li> </ul>

#### 1.1.3 Anticipated Benefits

Not applicable.

#### 1.1.4 Delivery of Long Term Outcomes

Not applicable.

#### 1.1.5 High level financial overview

Not applicable.

#### 1.1.6 Assumptions, constraints and dependencies

Not applicable.

#### 1.1.7 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Insufficient funding for non-discretionary procurement of additional IT infrastructure, personal computing devices or software.	Moderate	Likely	

### 1.2 Option 1

#### 1.2.1 Option overview

Provide funding or technology growth as outlined in this Business Case.



**1.2.2 Pro’s and Con’s**

Pro’s	Con’s
<ul style="list-style-type: none"> <li>• Able to meet the increasing demand and expectations for technology.</li> <li>• Sufficient technology capacity to enable business process improvements.</li> <li>• Sufficient funding for managing the increased operational requirements as major projects implement new technology solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased expenditure.</li> </ul>

**1.2.3 Anticipated Benefits**

Qualitative benefits	Description
Ability to meet growth in technology demand.	Sufficient funding to provide technology infrastructure, software and personal computing devices to meet the expected growth in demand.

**1.2.4 Assumptions, constraints and dependencies**

- That WRC’s system user numbers will continue to grow at a similar rate as has been the case over recent years.
- That there will be more software in use as new and existing areas of activity and services are enabled by software solutions.
- That data volumes and corresponding infrastructure requirements will grow significantly.
- That software and infrastructure will be accessed increasingly as cloud-based services.

**1.2.5 Risk Profile**

There are no significant risks identified with this request for funding to provide for technology growth.

# IS Capacity Increase

<b>GOA:</b>	Corporate Support Services
<b>Activity Name:</b>	Information Services
<b>Function</b>	Service Desk & Business Solutions
<b>Service</b>	
<b>Financial Budget Code:</b>	M2050

## 1.1 Review and approval

Prepared By:	John Crane, Chief Information Officer	4 <sup>th</sup> October 2017
Reviewed By:	Name/Role	Date
Signed off By:	Neville Williams, Director Community and Services	Date

## 1.2 Related documents

Document Title	Author	Document Reference

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	22/10/2017	John Crane	Initial draft

## 2 Executive summary

This proposal is for two additional FTE's in the Information Services team to meet the increased demand from organisation growth (more users), the increase in technology (more systems, more devices and more data), an increase in the number of projects and improvement initiatives that require technology solutions, and a general increase in expectations around service levels and time to respond.

The roles requested are:

- 1 x Service Desk Analyst
- 1 x Business Solutions Analyst

### Service Desk Analyst:

The IS Service Desk team are operating with the same resource capacity that has been in place for at least five years. During this time the number of users has grown by more than 20%. At the same time, the number of devices has grown considerably through the deployment of more mobile phones (now more than 380 across WRC) and more than 150 mobile tablet devices on top of the increased number of PC's. All meeting rooms now also have more technology deployed and there are more business systems in use. The pace of change is also increasing, with the time between technology changes and upgrades reducing and the expectations of the organisation in terms of response increasing.

The Service Desk currently receive more than 1200 support calls per month and there is a continual backlog of approximately 150 calls outstanding at any given time. Any leave within the team significantly increases the backlog. This demand makes it difficult for the team to find capacity to deliver improvements and updates to our workplace technology (such as the rollout of standard profiles for tablet devices and upgrade of PC's to Windows10). The result is a need to increasingly rely on expensive external resources to avoid falling too far behind and a risk of increasing constraint and frustration across the organisation at the overall service levels.

#### Business Solutions Analyst:

The Business Solutions team is unable to meet the demand from a growing number of concurrent projects alongside continuous improvement and operational support. The project load will increase through several larger projects over the next 3 years and as the wider organisation continues to look to technology to enable process improvement and efficiency. Each will deliver more technology solutions to support and manage. With a broad range of systems to support and the relatively small size of the Business Solutions Team, this also restricts flexibility around assigning team members to new projects.

Increasing the size of the Business Solutions Team by one FTE will assist in meeting some of the demand and reduce the constraint around resources to support technology enabled improvement initiatives and projects. It will also reduce the risk of 'shadow IT' that arises from this constraint – where people subscribe to software services without engaging the guidance of the Business Solutions team, creating a fragmented set of technology solutions.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational – Salaries for 2 x FTE</b>	170	172	174	176	176	176

#### 2.1.1.1 Funding source

General rates.

#### 2.1.1.2 Funding partnerships

None.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
Permanent	0	2	2	2	2	2	2
Fixed Term							
Contract							

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

As outlined in the Executive Summary above, organisation projects & improvement initiatives are constrained by the lack of IS resources with sufficient capacity to meet the demand and expectation from the combination of growing 'business as usual' services (driven by more users & more systems), and increasing volume of improvement and major project requirements.

The proposal is to add one Service Desk Analyst and one Business Solutions Analyst as the bare minimum needed to address the retrospective growth over the last five or more years.

### 3.2 What will success look like (high level benefits)

Success will mean Information Services has sufficient capacity to meet ongoing and increasing demand for resources to support new projects, business process and solution improvements, and delivery of day-to-day IT services. It means that the IS teams will be able to move beyond a purely reactive state where we are constantly struggling to keep up – to a proactive, positive and enabling state.

### 3.3 Consequences of not proceeding

The role of Information Services within our organisation is to enable. However, without sufficient capacity and resources to deliver our services in an effective and timely manner we increasingly become a constraint as more and more of the organisations activities, improvement initiatives and major projects become increasingly dependent on information and technology.

Not proceeding with the additional resources required will result in an ongoing and increasing constraint on our ability to provide sufficient resources to maintain reasonable levels of service, support existing systems, upgrades to systems to keep up with the pace of technology change and to provide the necessary level of engagement and guidance for major projects around their technology requirements.

### 3.4 Alignment

Corporate Plan Priorities	Alignment	How will this change improve delivery?
Transformational Technology		
Implement technology solutions that enable more efficient internal operations.	Strongly Contributes	

Corporate Plan Priorities	Alignment	How will this change improve delivery?
Information Led		
Identify technology solutions to enable our customers and communities to increasingly interact with us through digital channels.	Achieves	

## 4 Option evaluation (Economic Case)

### 4.1 Specific objectives

1. To enable the IS Service Desk to maintain acceptable service levels. +
2. To provide some capacity in the Service Desk to be able to support the implementation of technology upgrades and new capabilities.
3. To reduce the constraint around the availability of Business Solutions Analysts to support existing systems, upgrades, technology enabled business process improvements and large business projects.
4. To address the capacity constraints in a sustainable and cost effective manner.
5. Retains expertise in-house – avoiding regular need to re-skill new resources being contracted for short-term engagements.

### 4.2 Summary comparison

The options considered are:

**Status Quo:** Maintain existing resource levels within the Service Desk and Business Solutions Teams.

**Option 1:** Increase of 1 x FTE for the Service Desk and Business Solutions Teams (total of 2 x FTE's).

**Option 2:** Use of contract resources.

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1	Option 2
1. Maintain acceptable service levels	Does not meet	Meets	Meets in part
2. Provide capacity for technology upgrades & rollouts	Does not meet	Meets	Meets in part
3. Reduce the constraint around Business Solutions Analysts	Does not meet	Meets	Meets in part
4. Address capacity constraints in an affordable manner	Does not meet	Meets	Meets in part
5. Retains expertise in-house, avoiding regular re-skilling	Does not meet	Meets	Does not meet

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo					
Option 1					\$170K
Option 2					\$280K

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 1, for the following reasons:

- It goes some way towards meeting the unconstrained and increasing demand for IT services and solutions from across the organisation.
- It provides a more cost effective and sustainable way to increase capacity across these two areas.
- As there is an ongoing need, it ensures that we are retaining the internal know-how and expertise, rather than regularly replacing the resources and having to upskill each time.

- It avoids any risk around long-term contract resources being perceived as employees.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour	\$170K	FY2018-19		
Opex				
Capex				
Revenue				
Contingency				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>						
<b>Operational - salaries</b>	\$170	\$172	\$174	\$176	\$176	\$176
<b>Revenue</b>						

## Appendices

### 1 Appendix One: Evaluation of options

#### 1.1 Status quo

##### 1.1.1 Option overview

The status quo option is to maintain the existing levels of IS resource capacity for the IS Service Desk and the Business Solutions teams. As these are currently below the level needed to meet the demand from across the organisation and with the demand from more users, more technology devices, more software solutions and more projects then maintaining the status quo would mean that Information Services would become an increasing constraint on organisation efficiency and on major projects.

##### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Resource capacity unable to meet organisation demand.</li> <li>Organisation improvement and transformation is constrained.</li> <li>Risk of 'shadow IT'.</li> <li>Increasing frustration and poor perception of Information Services.</li> </ul>

##### 1.1.3 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Frustration & poor perception of delivery from Information Services.			
Emergence of 'Shadow IT' causing fragmentation of data, cyber security risks and inefficiency.			
Ongoing constraint on organisational improvement initiatives.			

#### 1.2 Option 1

##### 1.2.1 Option overview

Additional resources as outlined in this proposal:

1 x Business Solutions Analyst

1 x Service Desk Analyst

##### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Provide additional capacity to reduce the constraint around sufficient IS resources.</li> <li>Retains the know-how and expertise in-house and avoids regular productivity loss as contracted resources are refreshed.</li> <li>More affordable and sustainable option than long-term contract resources.</li> </ul>	<ul style="list-style-type: none"> <li>Additional cost when compared to the 'do nothing' option.</li> </ul>

Pro's	Con's
<ul style="list-style-type: none"> <li>Avoids risks associated with long-term contractors being perceived as employees.</li> </ul>	

### 1.3 Option 2

#### 1.3.1 Option overview

Use of contracted resources to meet the gap in capacity.

#### 1.3.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Provide additional capacity to reduce the constraint around sufficient IS resources.</li> </ul>	<ul style="list-style-type: none"> <li>Doesn't retain the know-how and expertise in-house and avoids regular productivity loss as contracted resources are refreshed.</li> <li>Less affordable and sustainable option than employees.</li> <li>Creates risks associated with long-term contractors being perceived as employees.</li> </ul>

#### 1.3.3 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Long term contractors maybe seen as employees under employment laws.	Minor	Moderate	



# Business Intelligence

<b>GOA:</b>	Corporate Support Services
<b>Activity Name:</b>	Information Services
<b>Function</b>	Business Intelligence
<b>Service</b>	
<b>Financial Budget Code:</b>	M2050

## 1.1 Review and approval

Prepared By:	John Crane, Chief Information Officer	4 <sup>th</sup> October 2017
Reviewed By:	Name/Role	Date
Signed off By:	Neville Williams, Director Community and Services	Date

## 1.2 Related documents

Document Title	Author	Document Reference

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
1	22/10/2017	John Crane	Initial draft

## 2 Executive summary

The opportunity is to leverage the data that is accumulating through the systems that support our everyday activities and services, pulling it together in a data warehouse and making it visible through business intelligence dashboards and analytics. This would enable our managers and staff to gain better insights into how we deliver our services, our performance in relation to those services and identify opportunities to keep improving these.

This request supports the achievement of the Corporate Plan priorities of Information Led and Transformational Technology, and it enables Information Services to deliver one of the desired outcomes of the SISP.

In order to deliver the business intelligence capability that we have committed to we intend to utilise a combination of external resources and expertise along with a small internal capability. This proposal is for a single FTE to work alongside the Team Leader Business Intelligence (currently being recruited) as the basis for our internal capability, with some funding for contracted services to supplement this. The request also covers additional costs for business intelligence software and infrastructure services that will enable presentation and visualisation of the data.

Some 'tactical' and one-off dashboards have been created to date to demonstrate the concept and capability, and to assist with specific information requirements (in areas such as health & safety, leave management and customer data), but these are very labour-intensive and not delivered in any kind of

automated and repeatable process. They also only focus on very limited sets of data, rather than combining different data sets. Success would see the ongoing delivery of an increasing set of business intelligence dashboards that would support greater insights and better decision-making across a broad range of our service delivery and our internal operations.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	0	0	0	0	0	0
<b>Operational - 1 x FTE BI Analyst</b>	120	120	120	120	120	120
<b>Operational - BI Software</b>	75	75	75	75	75	75
<b>Operational - BI Contract Services</b>	50	65	75	75	75	75

#### 2.1.1.1 Funding source

General rates.

#### 2.1.1.2 Funding partnerships

Some additional funding support may be available in the form of shared and collaborative business intelligence initiatives with other Regional Councils and delivered through RSHL. However, this wouldn't reduce the need for the resources and funding from this proposal – it will enable us to do more and to progress some areas at a faster pace.

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	Yes
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	0	1	1	1	1	1	1
<b>Fixed Term</b>							
<b>Contract</b>							

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

Provide some internal capacity and capability to develop and deploy business intelligence capabilities (visual dashboard presentation of information and performance metrics, with drill-down analysis capability) across WRC's internal service delivery, regulatory functions and internal support functions. The new role is for a Business Intelligence Specialist who will work with the Team Leader Business Intelligence.

The request is also to fund some contracted services to provide additional capacity and expertise, along with funding for BI software.

Providing the resources and funding as outlined in this business case will enable Information Services to realise WRC's intent to be an Information Led organisation and for IS to deliver on one of the core aspects of the SISP.

From here, we will be able to put together a Business Intelligence strategy and roadmap and move forward with an iterative and ongoing development of higher value BI dashboard reporting and analytics that will provide better visibility of our service delivery and performance, along with better decision-making and identifying areas for improvement.

### 3.2 What will success look like (high level benefits)

A continually growing data warehouse and business intelligence platform with combined data from across different areas to provide better information, new insights and support better decision making. Ultimately, we will become an increasingly 'Information Led' organisation.

Through this proposal we will develop an internal team with the expertise to build, implement, support and enhance the business intelligence platform and work with our peers across other regional councils to develop shared BI capabilities.

### 3.3 Consequences of not proceeding

We will fail to meet the increasing demand for business intelligence capabilities from across all internal and external service delivery areas of our organisation.

We will continue to miss the opportunity to leverage our data assets and to become an information led organisation. We will lack insights into our services and miss opportunities to improve and optimise these, and we will risk making poor decisions due to lack of timely and insightful information.

### 3.4 Alignment

Corporate Plan Priorities	Alignment	How will this change improve delivery?
<b>Information Led</b>		
Improve our capacity and capabilities around data acquisition, analytics and presentation to improve the delivery of our services.	Achieves	
<b>Transformational Technology</b>		

Corporate Plan Priorities	Alignment	How will this change improve delivery?
Develop use of data analytics to support effective decision-making.	Strongly Contributes	
Implement new technologies for capture and presentation of data and information.	Strongly Contributes	

## 4 Option evaluation (Economic Case)

Refer to Appendix One for a detailed description of the options evaluated.

The options included are:

- Status quo: Deliver minimal and adhoc business intelligence capabilities based on any current internal resource capacity and expertise.
- Option 1: Fund the minimum resource required to progressively build business intelligence capabilities across WRC.

### 4.1 Specific objectives

1. Support the 'Information Led' priority for the Corporate Plan
2. Start the development of an organisation-wide data warehouse & BI platform
3. Start to build an internal capability to manage and grow WRC's BI capabilities
4. Enable WRC to leverage our growing data assets in order to gain new insights around our services (internal and external) and identify opportunities for improvement

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option1
1. Support the 'Information Led' priority for the Corporate Plan	Does not meet	Meets
2. Start the development of an organisation-wide data warehouse & BI platform	Does not meet	Meets
3. Start to build an internal capability to manage and grow WRC's BI capabilities	Does not meet	Meets
4. Leverage our data assets for new insights & improvement opportunities	Does not meet	Meets

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
Status Quo					
Option 1				\$245K	
Option 2					

### 4.3 Preferred option

The preferred way forward is option 1, for the following reasons:

- It supports WRC's intent to be an Information Led organisation.
- It starts to build capabilities for the Information Services team to enable the wider organisation to have greater insights into their services and functions through business intelligence dashboards and analytics, supporting improved services, efficiencies and decision-making.
- It enables Information Services to deliver one of the desired outcomes of the SISP.
- It supports the achievement of the Corporate Plan priorities of Information Led and Transformational Technology

## 5 Financial analysis and procurement (Financial & Commercial Case)

Description	Amount	Timing	Funding Source	Comments
Labour				
Opex	245	FY2018-19		Consists of: <ul style="list-style-type: none"> <li>Salary for BI Analyst = \$120K</li> <li>BI Software (SaaS) = \$75K</li> <li>BI Contracted Services = \$50K</li> </ul>
Capex				

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital	0	0	0	0	0	0
Operational - 1 x FTE BI Analyst	120	120	120	120	120	120
Operational - BI Software	75	75	75	75	75	75
Operational - BI Contract Services	50	65	75	75	75	75

### 5.1.1 Funding partnerships

No specific funding partnerships at this stage, but noting the potential for shared and collaborative initiatives with other regional councils and through RSHL. Whilst these wouldn't reduce the amount being requested through this proposal they could enable WRC to progress further and deliver more value from the available funding.

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- The preferred resourcing model for Business Intelligence will be a combination of internal and external expertise.
- Subscriptions for business intelligence software will be required.

### 5.1.3 Procurement strategy

Will any procurement activities be required? NO

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

This business case is requesting funding for an operational role and capability.

### 6.1.2 Scope/deliverables

In Scope

- Ongoing design, development and support of a WRC data warehouse and business intelligence capability.

- Engagement across WRC to understand requirements and priorities that will determine the direction for the business intelligence roadmap and the content of BI dashboards.
- Collaboration with peers across the regional council sector to develop shared business intelligence solutions.

#### Out of Scope

- Resources to analyse the information being presented through business intelligence dashboards. The role of Information Services is to enable the wider organisation by making the information available in a form that can be easily accessed, understood and analysed to provide business insights and support improved decision making.

### **6.1.3 Ongoing operational management**

The ongoing operational management will be through the newly appointed Team Leader Business Intelligence alongside the other operational capabilities from across the Information Services team. The internal capabilities will be supplemented by external consulting resources.

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated.

### 1.1 Status quo

#### 1.1.1 Option overview

The status quo means that we will have limited capabilities and capacity to meet the increasing demand for data and information. Our approach would be to continue with building some one-off and tactical dashboards as these are requested and as funding for outsourced development (unbudgeted) would permit.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Not able to leverage the value of our growing data assets.</li> <li>Poor visibility of our performance across the delivery of our internal and external services.</li> <li>Not aligned with our strategic intent to be an information led organisation.</li> </ul>

#### 1.1.3 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Failure to leverage our data to gain insights into our services - missing opportunities to improve and optimise these.	Moderate	Likely	
Poor decision-making due to lack of timely and insightful information.	Moderate	Likely	

### 1.2 Option 1

#### 1.2.1 Option overview

Provision of funding for a single FTE (BI Analyst), for contracted services to supplement the internal resources & expertise and BI specific software as outlined in this business case.

#### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Provides the capabilities and capacity required to develop and support a data warehouse and business intelligence capability for WRC in line with one of the desired outcomes of the SISP and with the Corporate Plan priorities of Information Led and Transformational Technology.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

#### 1.2.3 Anticipated Benefits

Qualitative benefits	Description
Support for improved decision-making.	Visibility of information and analytics to provide new insights and to support improved decision-making.
Business improvements	Improved efficiency and service delivery.

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# PMO resourcing

<b>GOA:</b>	Corporate Services
<b>Activity Name:</b>	Business Excellence & PMO
<b>Function</b>	Provision of an Enterprise P3 Office
<b>Service</b>	Build & sustain P3 capability Provide P3 design services
<b>Financial Budget Code:</b>	M2040 (Labour) ; 6018 (Direct Costs)

## 1.1 Review and approval

Prepared By:	Katherine Browne/ Senior Project Management Advisor	Date
Reviewed By:	Tracey Powrie, Manager, BEX/PMO	Date
Signed off By:	Neville Williams, Director, Community & Services	Date

## 1.2 Related documents

Document Title	Author	Document Reference
ePMO Charter	Katherine Browne	10642290

## 1.3 Document change history

Version #	Date	Revision By	Description of Change
0.1	3 October 2017	Katherine Browne	First draft for review

## 2 Executive summary

WRC has identified a need for more consistent successful project and programme delivery, as well as a focus that the ongoing benefits from projects are realised. Being successful in this area will in turn contribute to trust and confidence from the community that the funds entrusted to the council are delivering the outcomes required.

Following a period of non-operation the Enterprise Project Management Office (ePMO) has been re-established with an objective of raising project, programme and portfolio maturity across the organisation. The objectives and activities required to do this can be summarised as follows:

- Establishing successful foundations ('right roles, right people', design and alignment of projects, toolsets and frameworks)
- Supporting effective and efficient execution (coaching/support, assurance overview, information flows and decision making)
- Lifting maturity (functional interfaces, embedding learning, change management)

The organisations engagement with the ePMO is steadily increasing, and as sizable and complex project based work continues to be planned and initiated the demand will materially increase. The challenge will be balancing the 'here and now' of coaching support, toolsets and processes, with being

able to create sufficient influence in the wider environment which materially impacts delivery success. Both are required to be in place for the desired lift in maturity.

The intended benefits for the ePMO have been agreed as:

- All projects, programmes and portfolios (P3) will easily demonstrate direct alignment to strategic or business outcomes
- Robust, well informed decision making that will underpin P3 success
- An increased maturity in P3 driving more consistent delivery success that underpins strategic outcomes
- The “right sizing” of the P3 approach maximises efficiency and effectiveness.

To enable the realisation of the intended ePMO benefits this business case is proposing an increase to 2FTE from the current 1.4FTE (with the 0.4FTE currently ceasing from August 2018). The additional FTE would be a PMO Capability Lead, who would be focused on maintaining and enhancing the project frameworks and toolset support, whilst also working alongside the individual project managers.

This will provide the ability to ensure that there is the capacity and capability in the ePMO to also focus on the development and design of appropriate programmes and portfolios, which intrinsically influence individual project success. This will be a material shift in approach for some areas and as such will need strong change leadership

With the breadth, size and complexity of the projects that the organisation is committed to both now and looking forward, and their intrinsic relationship to how much of organisational change is delivered, the consequences of not appropriately resourcing the ePMO will result in a much higher risk of the full range of intended benefits not being delivered.

Consideration was also given to the options of retaining the status quo or deferring the on-boarding of the role (and hence needing to extent the 0.4 FTE for a further ten months). However, neither of these were the preferred option due to neither fully meeting the objectives indicated.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
Capital	0	0	0	0	0	0
Operational	140,000	140,000	140,000	140,000	140,000	

#### 2.1.1.1 Funding source

The funding for this will need to be sourced from the general rate.

#### 2.1.1.2 Funding partnerships

No funding partnerships are available for this role

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No

Consideration	Yes/No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	Yes

### 2.2.1 Additional resources

List the number of additional FTE (permanent or fixed term) and/or contract resources that will be required to deliver this work by financial year based on the preferred option.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	1	1	1	1	1	1	
<b>Fixed Term</b>	0	0	0	0	0	0	
<b>Contract</b>	0	0	0	0	0	0	

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

WRC has identified a need for more consistent successful project and programme delivery, as well as ensuring that the ongoing benefits from projects that have been committed to are realised. Success in this area will in turn contribute to trust and confidence from the community that the funds entrusted to the council are delivering the outcomes required.

Following a period of non-operation the Enterprise Project Management Office (ePMO) has been re-established and a refresh exercise undertaken to reconfirm the problems and opportunities intended to be addressed via the ePMO. Additionally this exercise was used to elicit expectations from key stakeholders.

Several key themes emerged and are being used to shape the immediate areas of focus for the ePMO and were captured in the agreed ePMO Charter (Doc 10642290). The activities driven from this can be summarised as follows:

- Establishing successful foundations
  - Driving the philosophy of right roles, right people
  - Design and strategic alignment of projects
  - Owning toolsets and frameworks (enabling assets)
- Supporting effective and efficient execution
  - Providing P3 support and coaching
  - Assurance overview
  - Information flows and decision making
- Lifting maturity (in relation to project, programme and portfolio approaches and practises).
  - Leveraging functional interfaces for alignment
  - Embedding learnings
  - Change management

To date the ePMO has begun establishing the PM toolsets (pSoda), updating the Project Management Framework and providing hands-on support/coaching for PM's (in particular those who are new to undertaking a project management role). A high level plan spanning through to December 2018 has

been created with the intention of raising the maturity level of the organisation. This will require a focus that extends beyond the mechanics and support for individual project delivery, to one that includes the influence of the project environment on delivery (for example how projects and programmes are established and designed in light of organisational strategy and competing demands, how the necessary cross-functional/directorate effects can be aligned in relation to projects, programmes and portfolios, etc...).

The appetite for engagement with the ePMO activities and services by the organisation is steadily increasing, reflecting the value that they recognising. As sizable and complex project based work continues to be planned and initiated this demand will grow even further. The challenge faced by the ePMO will be around being able to service the 'here and now' demand for individual project support, standards and toolsets, as well as being able to create sufficient focus on the wider environment which materially influences delivery success. Both of these elements are needed if the desired lift in maturity is to be achieved.

To enable successful outcomes this business case is proposing an increase to 2FTE from the current 1.4FTE (with the 0.4FTE currently ceasing from August 2018). The additional FTE would be a PMO Capability Lead, who would be focused on maintaining and enhancing the project frameworks and toolset support, whilst also working alongside the individual project managers.

This will provide the ability to ensure that there is the capacity and capability in the ePMO to also focus on the development and design of appropriate programmes and portfolios, which intrinsically influence individual project success. This will be a material shift in approach for some areas and as such will need strong change leadership.

Initial consideration was also given to the option of complete outsourcing of the PMO function however this was discounted early due to the unknown budget impact (anecdotally known to be high, likely close to contract rates) and the view that the business need would be unlikely to be well serviced via a less than full time presence that is able to respond and support 'on demand'.

## 3.2 What will success look like (high level benefits)

The intended benefits for the ePMO have been agreed as:

- All projects, programmes and portfolios (P3) will easily demonstrate direct alignment to strategic or business outcomes
- Robust, well informed decision making will underpin P3 success
- Increased maturity in P3 drives more consistent success that underpins strategic outcomes
- The "right sizing" of the P3 approach maximises efficiency and effectiveness.

In addition there is the opportunity for the maturing of P3 practise to complement, reinforce and reshape some wider organisational practises. Examples may include:

- The use of a portfolio and programme approach to reshape some aspects of the LTP process to be more outcome driven
- The use of a portfolio and programme approach to foster and facilitate cross functional and cross directorate working in relation to projects,
- The use of a portfolio and programme approach to reinforce the driver from Fit for Purpose of driving decision making to the lowest practical level in the organisation.
- The opportunity to refine the effective alignment of organisational and corporate resources to support successful delivery (strategy/demand vs supply)

### 3.3 Consequences of not proceeding

With the breadth, size and complexity of the projects that the organisation is committed to both now and looking forward, and their intrinsic relationship to how much of organisational change is delivered, the consequences of not appropriately resourcing the ePMO should be considered from several perspectives:

- The progress made to date in relation to the organisations engagement and associated value from the ePMO will likely plateau and even decline over time as it will become harder and harder to access what they need for project delivery when they need it.
- The ePMO complements other functions involvement in project delivery, and a decline in its ability to contribute, influence and shape projects will in turn negatively impact the contribution of others e.g. poor PM practise will result in unnecessary effort by other staff to sort out resourcing impacts/balancing, a lack of confidence in delivery that then manifests as demand for ever increasing level of detail to assure themselves that it is on track, etc...
- The intended ePMO benefits will be at a much higher level of risk of not being realised, which in turn drives the potential for reputational impact due to a drop in confidence resulting from poorly performing projects.
- The increased risk of benefit leakage from individual projects without appropriate support, as they fail to deliver in line with the original commitments.

### 3.4 Alignment

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Corporate Plan Priority: Continuous Improvement</i>		
Establish an Enterprise Project Management Office	Delivers	More consistent success of individual projects, influence/creation of environment that enables project success.
<i>Corporate Plan Priority: Information led, Customer Centric, transformational technology</i>		
Implement technical solutions that enable more efficient internal operations	Supports	Ensuring that staff leading these projects are appropriately supported to be successful.
Implementation of a Corporate Information System	Supports	Ability to provide support for project design for this large organisational change project.
Establish and implement a programme of work that to enable our communities to have access to our data, information and expertise	Supports	Provide the project disciplines to support both project selection and design, as well as delivery.
Develop and implement the online services roadmap	Supports	Provide the project disciplines to support both project selection and design, as well as delivery.

Whilst WRC is not specifically covered by Treasury's Investment Confidence Rating process, the framework that Treasury uses is useful context for consideration of what is required from a WRC perspective (in relation to responsible investment practises and use of public money).

In short, the Investor Confidence Rating uses an evidence-based approach which looks at nine elements of an organisations performance when managing significant investments and assets.

International best practice methodologies are used for some elements to provide an assessment of capability.

Maturity scales are used and typically look at how realistic, repeatable and robust the processes underpinning best practice are, such as an organisation's effectiveness in planning and delivering benefits. There are five lead indicators that indicate a strong connection between an organisation's capability and future performance, and four lag indicators that look at the organisation's recent past performance against commitments.

The indicators are as follows:

<b>Lead indicators</b>
1. Asset management maturity
2. Portfolio, programme and project maturity
3. Quality of long term investment plan
4. Procurement capability index (PCI)
5. Organisational change management maturity
<b>Lag indicators</b>
6. Benefits delivery performance
7. Project delivery performance
8. Asset performance
9. System performance

Treasury's approach can be used as a suitable independent external comparator, which reinforces the organisational value that a well-resourced and functioning ePMO can support.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

### 4.1 Specific objectives

The agreed ePMO scope includes (refer to ePMO Charter)

1. Establishing successful P3 foundations
2. Supporting effective and efficient P3 execution
3. Lifting maturity (in relation to project, programme and portfolio approached and practises)

### 4.2 Summary comparison

#### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option 2	Option 3
1. Establishing successful P3 foundations	Meets in part	Meets	Meets in part
2. Supporting effective and efficient P3 execution	Meets	Meets	Meets
3. Lifting maturity	Meets in part	Meets	Meets in part

#### 4.2.2 Financial comparison of options

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
<b>Option 1 (status quo)</b>	0	0	0	0	No change to current baseline

	Benefits (\$'s)	Revenue	Capex	Opex	Labour
<b>Option 2</b>	0	0	0	10k per annum	130k per annum above baseline
<b>Option 3</b>	0	0	0	Yr 1: 5k Yr 2 onwards: 10k	Yr 1: 20,000 Yr 2 onwards: 130,000

### 4.3 Preferred option

Based on the options assessment, the preferred way forward is Option 2 (Increase the ePMO resource to 2FTE through the addition of a PMO Capability Lead), for the following reasons:

- Best option for meeting objectives in a timely manner, through provision of sufficient capacity and capability to support the range of projects and programmes currently planned for the organisation (includes giving consideration to their size and complexity).
- Enables the ePMO to deliver the benefits and activities agreed, including a much stronger focus on the establishment and design of individual projects and programmes, as well as 'whole of organisation' efforts on achievability (capacity, priorities/decision making, etc) that are key factors influencing the environment for project success.
- Allows WRC to attract and retain the required level of skilled resources into the ePMO roles.

## 5 Financial analysis and procurement (Financial & Commercial Case)

Based on the preferred option identified in the previous section the following outlines the budget impact.

Description	Amount	Timing	Funding Source	Comments
Labour	130,000	Annual	General rate	Base salary costs only as per below table, figure is additional to baseline
Opex	10,000	Annual	General rate	Professional development, maintenance of professional quals, etc...
Capex	0			
Revenue	0			
Contingency	0			

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Capital</b>	0	0	0	0	0	0
<b>Operational</b>	140,000	140,000	140,000	140,000	140,000	
<b>Revenue</b>	0	0	0	0	0	0

Year 1 - 3	Labour budget	Notes
<i>Baseline</i>	<i>150,000</i>	<i>Existing PMO labour budget</i>
Plus	130,000	PMO Capability Lead Additional role.
<b>Total</b>	<b>130,000</b>	<b>Additional to labour baseline per annum</b>

#### 5.1.1 Funding partnerships

Not applicable

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- There is \$150k per annum of existing baseline labour budget that continues.
- That both roles in the ePMO require resizing and a market premium applied.
- Hence for the purposes of this business case a salary of \$130k for the PMO Capability Lead. This represents 100% of J band (noting the above point).
- It is assumed that the PMO Capability Lead would on-board in July 17 to ensure a pSoda handover period with the Project Coordinator role that ceases in August 17.
- With the addition of the PMO Capability Lead, the 0.4FTE Project Coordinator role would not be renewed.
- Given the nature of the roles outlined it is envisaged that there will be a need for robust, ongoing professional development that will be above that budgeted as standard. This will likely involve advanced skills development, maintaining currency of professional qualifications and conference attendance. For budgeting purposes a figure of \$5k per role per annum has been assumed (total of 10k per annum)
- It is assumed that the pSoda licences and any development activities will continue to be funded from the organisational Information Services budget.
- It is assumed that there is due to the nature of the roles in the ePMO that there will be a need for robust, ongoing professional development that will be above that budgeted as standard. This will likely involve advanced skills development, maintaining currency of professional qualifications and conference attendance.
- It is assumed that there will continue to be PM Champions in the organisation that also support the direction and efforts of the ePMO.
- It is assumed that any extension of the ePMO function into the change management space will require additional suitable resource.

### 5.1.3 Procurement strategy

Will any procurement activities be required? No

### 5.1.4 Risks

Risk	Impact	Likelihood	Comments/mitigation
Sourcing appropriately experienced candidates able to undertake the roles.	H	M	Ensuring role sizing is accurate to support recruitment activities.
Having a gap between the completion of the 0.4 contract and the replacement.	M	M	Propose to start recruitment by start of new financial year.



# 1 Appendix One: Evaluation of options

This section outlines the options evaluated. As a minimum the status quo and one option must be described.

## 1.1 Status quo

### 1.1.1 Option overview

The status quo is that the benefits being sought through the ePMO are being delivered via 1.4FTE's (Senior Project Manager Advisor and 0.4 Project Coordinator who is focussed solely on pSoda system support). Note that the Project Coordinator is fixed term only until August 2018, hence the status quo reverts to 1FTE after this point.

### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Focus on more robust individual project delivery</li> </ul>	<ul style="list-style-type: none"> <li>Current experience has shown that this level of capability does not support the organisation's needs.</li> </ul>

### 1.1.3 Anticipated Benefits

Qualitative benefits	Description
Incremental improvement in some individual project deliveries.	Focus continues on individual project and PM support to assist with 'point' improvements to project delivery

Disadvantages/Dis-benefits	Description of the potential impact
Organisational maturity in PM will not lift to the level desired	To lift organisational maturity a focus on the broader aspects that impact project delivery is needed e.g. capacity management, P3 information flows and decision making, etc... There will not be the capacity to focus on these as the 'here and now' of day to day project challenges will continue to consume the bulk of effort.
Current role capacity further constrained if 0.4FTE doesn't continue.	With the FT Project Coordinator role finishing in August 18, if not funded to continue the SPMA will be diverted to do system administration work which will further constrain the capacity to make change.

### 1.1.4 High level financial overview

Year 1 - 3	Labour budget	Notes
<i>Baseline</i>	<i>150,000</i>	<i>Existing PMO labour budget</i>
<b>Total</b>	<b>0</b>	<b>No change to baseline budget</b>

Benefits (\$'s)	Revenue	Capex	Opex	Labour
0	0	0	0	Yr1 - 3: 0k (no change to baseline)

### 1.1.5 Assumptions, constraints and dependencies

- Assumes no change to professional development budget.
- It is assumed the FT Project Coordinator role will cease in August 2018.

### 1.1.6 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Maturity levels do not increase as desired, resulting in original benefits not be realised.			

## 1.2 Option 2

### 1.2.1 Option overview

Increase of ePMO resource to 2 FTE through the addition of a PMO Capability Lead from year 1 (18/19). This role would incorporate the 0.4 of fixed term system support that is currently in place until August 2018 i.e. current 0.4 Project Coordinator role would cease at the conclusion of the fixed term period.

This is level of resourcing anticipated to be needed to deliver on the benefits, approach and activities that were agreed in the ePMO Charter. The intended benefits were agreed as:

- All projects, programmes and portfolios (P3) will easily demonstrate direct alignment to strategic or business outcomes
- Robust, well informed decision making will underpin P3 success
- Increased maturity in P3 drives more consistent success that underpins strategic outcomes
- The “right sizing” of the P3 approach maximises efficiency and effectiveness.

Additionally, this option will create the opportunity for the maturing of P3 practise to complement, reinforce and reshape some wider organisational practises. Examples may include:

- The use of a portfolio and programme approach to reshape some aspects of the LTP process to be more outcome driven
- The use of a portfolio and programme approach to foster and facilitate cross functional and cross directorate working in relation to projects,
- The use of a portfolio and programme approach to reinforce the driver from Fit for Purpose of driving decision making to the lowest practical level in the organisation.
- The opportunity to refine the effective alignment of organisational and corporate resources to support successful delivery (strategy/demand vs supply)

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Ability to better broaden focus out beyond individual projects, to programmes and portfolios focus.</li> <li>• Better able to service organisational demand for support</li> <li>• Benefits in ePMO Charter able to be realised</li> </ul>	<ul style="list-style-type: none"> <li>• Incurs additional budget</li> </ul>

### 1.2.3 High level financial overview

Year 1 - 3	Labour budget	Notes
<i>Baseline</i>	<i>150,000</i>	<i>Existing PMO labour budget</i>
Plus	130,000	PMO Capability Lead Additional FTE and budget
<b>Total</b>	<b>130,000</b>	<b>Additional to baseline per annum</b>

Benefits (\$'s)	Revenue	Capex	Opex	Labour
0	0	0	10k per annum	Yr 1-3: 130k per annum (above baseline)

### 1.2.4 Assumptions, constraints and dependencies

- Includes 5k per annum, per PMO role for professional development
- Assumes that both PMO roles are resized and market premium applied
- Assumes that Project Coordinator roles ceases at the conclusion of the current fixed term in Aug 18.

### 1.2.5 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Sourcing appropriately experienced candidates able to undertake the roles	H	M	Ensure that role sizing is accurate, and market forces recognised, to support recruitment activity.
Having a gap between the completion of the 0.4 contract and the replacement.	M	M	Propose to start recruitment by start of new financial year.
Increased capacity continues to be consumed by individual projects.	H	M	Right roles, right person philosophy to lessen the need for support (where appropriate) by individual projects. Ongoing reporting against ePMO Charter to ensure early flags if activities compromise the desired outcomes.

## 1.3 Option 3

### 1.3.1 Option overview

Defer on-boarding the PMO Capability Lead until year 2, and continue to fund the 0.4FTE Project Coordinator role from Sept 18- June 19 (10 months)

### 1.3.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>• Budget impact delayed</li> <li>• Benefits in ePMO Charter able to be realised eventually</li> </ul>	<ul style="list-style-type: none"> <li>• Delays the delivery of benefits</li> <li>• Momentum may be lost, meaning that ability to make meaningful change is diminished.</li> </ul>

### 1.3.3 High level financial overview

Year 1	Labour budget	Notes
<i>Baseline</i>	<i>150,000</i>	<i>Existing PMO labour budget</i>
Plus	20,000	Extension of 0.4 FTE Project Coordinator for remainder of year 1 (10mths, September 18 to June 19) Additional FTE and budget to baseline
<b>Total</b>	<b>20,000</b>	<b>Additional to baseline for Year 1</b>

Year 2-3	Labour budget	Notes
<i>Baseline</i>	<i>150,000</i>	<i>Existing PMO labour budget</i>
Plus	130,000	PMO Capability Lead (1FTE)
<b>Total</b>	<b>130,000</b>	<b>Additional to baseline per year for Years 2 + 3</b>

Benefits (\$'s)	Revenue	Capex	Opex	Labour
0	0	0	Yr 1: 5k Yr 2 onwards: 10k	Yr 1: 20,000 Yr 2 onwards: 130k per annum (above baseline)

### 1.3.4 Assumptions, constraints and dependencies

- Includes 5k per annum, per PMO role for professional development
- Assumes that both PMO roles are resized and market premium applied
- Assumes that PMO capability Lead role deferred until Yr 2
- Assumes that Project Coordinator extended at 0.4FTE for the remaining 10mths of year 1.

### 1.3.5 Risk Profile

Risk	Impact	Likelihood	Comments/mitigation
Delay in on-boarding required capacity means that momentum is lost, making change more difficult.	M	H	

# 2 Appendix Two: Approved ePMO Charter (#10642290)

## WRC Enterprise Project Management Office Charter (doc 10642290)

<b>1. Purpose</b>	The WRC Enterprise Project Management Office (EPMO) is designed to be an organisational service to lift project, programme and portfolio (P3) capability and maturity as a way of delivering business benefit. The EPMO will have both a strategic and operational focus in order to achieve this.
<b>2. Background</b>	This Charter reflects what the EPMO will do once established (rather than be the plan for the EPMO establishment). The P3 Maturity Programme Plan contains the detail of the EPMO activities for delivery. (P3 Maturity Programme Plan) Following a period of non-operation, a PMO refresh exercise has been undertaken to reconfirm the problem/s that need addressing and expectations of delivery/scope to ensure that its efforts are focused appropriately. With a new role in place, this Charter, combined with the P3 Maturity Programme Plan, captures the outputs of the refresh and the pathway forward. WRC currently operates a dispersed model for project management with Project Management practitioners (PM's, Proj Coord, etc) embedded in the Directorates that their projects are focused on. This provides the benefit of increased directorate knowledge for these roles and this model is reflected in how the EPMO is organised and its role.
<b>3. Intended Benefits</b>	<ul style="list-style-type: none"> <li>All P3 easily demonstrate direct alignment to strategic or business objectives</li> <li>Increased maturity in P3 drives more consistent success that underpins strategic outcome</li> <li>Robust, well informed decision making underpins P3 success</li> <li>"Right sizing" of P3 approach maximises efficiency and effectiveness</li> </ul>
<b>4. Organisational context</b>	
<b>5. Stakeholders</b>	

### 6. Principles

- The following principles will guide the activities of the Enterprise PMO:
1. The EPMO will work in partnership with the organisation, rather than as the 'project police'.
  2. No hands on P3 management will be undertaken by the EPMO.
  3. As the owner and champion of P3 standards, the EPMO will balance the upholding of standards with appropriate flex based on individual situations.
  4. Accountability for individual project success remains with the agreed Project Sponsor.
  5. The ability for projects to be successful is intrinsically linked to the influence of programmes and portfolios that they relate to.
  6. Toolsets and frameworks on their own are insufficient to deliver the maturity required – behavioral change is also required.

### 7. High level approach      8. Scope of Service      9. Approval

SUCCESSFUL FOUNDATIONS
<p><b>Drive philosophy of right roles, right people</b></p> <ul style="list-style-type: none"> <li>- Ownership of organisational base position descriptions</li> <li>- Recruitment support</li> <li>- PM specific induction</li> <li>- P3 training and education</li> </ul> <p><b>Own toolsets and frameworks (Enabling assets)</b></p> <ul style="list-style-type: none"> <li>- pSoda</li> <li>- P3 training materials</li> <li>- Processes and templates</li> <li>- Facilitate PM Peer Review Group</li> </ul> <p><b>Design and alignment</b></p> <ul style="list-style-type: none"> <li>- Guide and influence establishment of projects, programme and portfolios (includes strategic alignment)</li> <li>- P3 Governance structures, roles and responsibilities</li> </ul>
SUPPORT EFFECTIVE AND EFFICIENT EXECUTION
<p><b>Provide P3 support and coaching</b></p> <ul style="list-style-type: none"> <li>- Individual PM peer review activities</li> <li>- Day to day PM support and coaching as needed</li> </ul> <p><b>Information flows and decision making</b></p> <ul style="list-style-type: none"> <li>- Organisational P3 reporting design and delivery</li> <li>- Facilitating effective use of information in decision making processes</li> <li>- Organisational repository of projects?</li> </ul> <p><b>Assurance overview</b></p> <ul style="list-style-type: none"> <li>- Undertake in line with approved project plans</li> <li>- Participation in procurement/ engagement of any independent project services assurance providers</li> </ul>

**Approval of this Charter indicates commitment and support for the Enterprise PMO, and provides the mandate to undertake the service in full.**

Signed : \_\_\_\_\_

Date: \_\_\_\_\_

LIFT MATURITY
<p><b>Leverage functional interfaces for alignment</b></p> <ul style="list-style-type: none"> <li>- Champion P3 needs with other corporate functions</li> <li>- Collaborate to establish effective / efficient interfaces between P3 and other corporate activities</li> </ul> <p><b>Embed learnings</b></p> <ul style="list-style-type: none"> <li>- Organisational wide perspective on assurance / review outputs, and actions on any common themes</li> <li>- Ownership of lessons learnt amalgamation. Drive incorporation of outcomes in toolsets and/or escalation as necessary.</li> </ul> <p><b>Change management</b></p> <ul style="list-style-type: none"> <li>- Provide active leadership to support positive behaviour change in relation to P3</li> </ul>

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# **Unfunded Proposals**

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## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Biodiversity support

**Person Responsible** Alan Saunders

<b>Priorities Alignment</b>	Support communities to take action on agreed outcomes	Select
	Forge and strengthen partnerships to achieve positive outcomes for the region	Select
	Positively influence future land use choices to ensure long term sustainability	Select

<b>Other Drivers</b>	Required legislatively	Select
	Select	Select
	Select	Select

**Business Case Reference** n/a

### Background (what is it and why do we need to do it?)

An additional FTE is requested to increase capacity to work collaboratively and respond to requests which provide biodiversity advice and information to those carrying out WRC activities. Recent investigation indicated that Regional Councils need to take a stronger approach to conserving biodiversity. Waikato Regional Council is developing an implementation plan to achieve this goal. Failure to action this proposal may mean that WRC does not have the capacity to meet its statutory responsibilities and could contribute to further biodiversity declines.

### Objectives (what is it trying to achieve?)

To empower more effective action across the Council's activities. A variety of teams would work together to integrate management. Innovative approaches would be devised. For example, devising a 'green engineering' approach to dealing with floodwater storage, identifying and using native wetland species able to survive and oxygenate water in areas most likely to suffer prolonged floodwater inundation.

### Implications of not funding

Biodiversity will continue to decline as a result of the works and services carried out by WRC. We will not be able to meet customer expectations to provide advice on biodiversity related matters and may not get the added benefits associated with supporting community groups to undertake biodiversity work that supplements WRC's work programme. In addition, capacity building won't be maintained.

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour			100k		100k	100k
Direct Costs						
Allocated Costs						
<b>Total Expenditure</b>			100k		100k	100k

	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	[70% of expenditure]	0	[30% of expenditure]

<b>Estimate of Mandated Portion of Spend</b>	NA
<b>Estimate of Non-Mandated Portion of Spend</b>	100% of expenditure

### Commentary on Financial Variance

[text]

## Budget / Project Outline - LTP Unfunded



Hyperion Name Biodiversity monitoring

Priorities Alignment	Support communities to take action on agreed outcomes	Select
	Positively influence future land use choices to ensure long term sustainability	Select
	Select	Select

Other Drivers	Required legislatively	Select
	Other drivers 3	Select
	Select	Select

Business Case Reference SAS - biodiversity monitoring (Doc#11219709)

### Background (what is it and why do we need to do it?)

- The bar is being raised for SOE monitoring across the country. Currently WRC undertakes only very limited monitoring of the state of biodiversity across the region. Recently a national standardised Regional Council Terrestrial Biodiversity Monitoring Framework was developed, consisting of a suite of 18 terrestrial biodiversity indicators. These indicators are designed to enable regional councils to meet their RMA State of the Environment (SOE) reporting obligations at a whole-region scale (Tier 1 Monitoring). The Willis Report, a thinkpiece on the biodiversity role of regional councils, recommends this shift from reliance on piecemeal, case study and, on occasions, anecdotal information to the use of comprehensive and robust indicators within a systematic monitoring framework. All Regional Council Chief Executives, including WRC's CE, have endorsed the Willis Report, including this shift. Several regional councils have already implemented the new monitoring framework.

- Councillors and Committees frequently ask for proof that our biosecurity operations are yielding results for biodiversity. Currently we do not directly measure the biodiversity outcomes (except for the Hamilton Halo Project). Instead we measure reductions of predator numbers (outputs) and rely upon research predictions of the probable biodiversity gains that will result. This approach is taken because of limited resources.

### Objectives (what is it trying to achieve?)

- Meet WRC's minimum RMA obligations for terrestrial biodiversity maintenance and SOE monitoring - Currently, WRC only gathers information about forest fragmentation and the extent and protection of indigenous vegetation and of freshwater wetlands. This very light SOE reporting has been acceptable to date because there hasn't been a national framework or accepted standards. This is likely to change as more and more regional councils adopt the new national framework.

- Be in a position to confirm to councillors and committees that our biosecurity operations and other biodiversity management activities are improving indigenous biodiversity and progressing us towards the long term outcome for ecosystems we are aiming at. In our Strategic Direction 2016-2019 we aim that 'The full range of ecosystem types, including land, water and coastal and marine ecosystems, is in a healthy and functional state'. Monitoring the outcomes for biodiversity allows us to look at the effectiveness of our management and restoration efforts and, when necessary, implement a process of adaptive management to keep us heading in the right direction.

### Implications of not doing this work

1. Failing to proceed with the Tier 1 monitoring will result in WRC falling significantly behind the accepted standard for regional council State of the Environment monitoring as other councils around the country implement the standardised framework.
2. CEO will not be able to deliver on the agreed joint approach to SOE monitoring detailed in the Willis Report.
3. Not proceeding with direct biodiversity outcome monitoring will result in WRC lacking robust data to back up management and restoration activities. Questions about biosecurity operational effectiveness asked by Council and Committees will not be able to be answered. We will not be able to provide certainty that the money we are spending on biosecurity operations is making a difference or determine how much of a difference it is making. Instead we will need to continue to rely upon achieving the outputs (management results) that research indicates is sufficient to achieve specific biodiversity goals. We will not know that we need to adapt when our biodiversity management measures fail to achieve the desired outcomes.

## Budget / Project Outline - LTP Unfunded

### Financials

Income	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
General Rates						
Targeted Rates						
Fees & Charges						
<b>Total Income</b>						

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour						
Direct Costs						
Allocated Costs						
<b>Total Expenditure</b>						

	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	[% of expenditure]	[% of expenditure]	[% of expenditure]

<b>Estimate of Mandated Portion of Spend</b>	[% of expenditure]
<b>Estimate of Non-Mandated Portion of Spend</b>	[% of expenditure]

### Commentary on Financial Variance

[text]

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Yellow Bristle Grass

<b>Priorities Alignment</b>	Support communities to take action on agreed outcomes	Select
	Increase communities understanding of risks and resilience to change	Select
	Select	Select

<b>Other Drivers</b>	Select	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

### Background (what is it and why do we need to do it?)

Yellow bristle grass (YBG) impacts highly on intensive pastoral farming and has rapidly spread across the entire Waikato region and North Island. Agricultural cropping practices and roadside management has contributed to the spread of YBG to previously uninfested areas. YBG impacts on intensive pastoral farming primarily dairying. This proposal will try to reduce the impacts and contain the pest to current distribution by adding it to the RPMP and enforcing the Biosecurity Act s52 statutory obligation (No one shall communicate (move) or allow the spread of YBG). Although it is already widely distributed throughout the region it still has the potential to increase in distribution and impacts. Management of YBG is extremely difficult and it is intractable. It requires farmers to manage the pest as part of their on farm practices. It is important to note that this approach would likely cause large disruption to roading maintenance and cropping throughout the region and is unlikely to achieve the desired outcome.

### Objectives (what is it trying to achieve?)

Yellow Bristle grass is contained to its current distribution, with no impacts on pastoral farming.

### Implications of not funding

In order to successfully maintain YBG an extensive programme would need to be established. Part funding of this programme would not achieve the objective of containing the distribution without funding any programme. YBG will continue to spread throughout the region impacting agricultural crops.

## Budget / Project Outline - LTP Unfunded

### Financials

Income	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
General Rates						
Targeted Rates	1.4m	1.4m	1.4m	0	1.4m	1.4m
Fees & Charges						
<b>Total Income</b>						

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	9 FTE		0 9 FTE		9 FTE	0
Direct Costs	\$820k	\$820k	\$820k		\$820k	\$820k
Allocated Costs						
<b>Total Expenditure</b>	1.4m	1.4m	1.4m	0	1.4m	1.4m

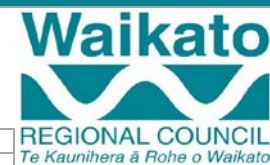
	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	0% of expenditure	100% of expenditure	0% of expenditure

<b>Estimate of Mandated Portion of Spend</b>	
<b>Estimate of Non-Mandated Portion of Spend</b>	100%

### Commentary on Financial Variance

[text]

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Canada goose

**Person Responsible** Brett Bailey

<b>Priorities Alignment</b>	Forge and strengthen partnerships to achieve positive outcomes for the region	Shape the development of the region so it enhances our quality of life
	Support communities to take action on agreed outcomes	Manage freshwater more effectively to maximise regional benefit
	Increase communities understanding of risks and resilience to change	Select

<b>Other Drivers</b>	Select	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

**Background (what is it and why do we need to do it?)**  
 Canada goose ceased to be classed as a game bird in 2011 which means that they can be controlled by anyone at anytime. Currently no coordinated population control has been initiated in the Waikato. Anecdotal evidence suggests that Canadian geese numbers are increasing both within the Waikato but across New Zealand. Management however is difficult and individual landowners or communities may require assistance and support to be effective. Staff have been asked to scope what it would take to increase the current LOS (which is currently advice only) and lead a Canadian goose control programme.

**Objectives (what is it trying to achieve?)**  
 Reduce impacts of Canadian geese at key high priority sites.

**Implications of not undertaking this work**  
 Canada goose numbers have been steadily increasing and are very wide spread. It is likely that without active management Canada geese will continue to spread to other water bodies, posing a potential threat to both the economy (competition with stock) and the environment (congregate on open water, defecating).

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	?		0.5	0.5	0.5	0.5
Direct Costs	0	0	250000	250000	250000	250000
Allocated Costs						
<b>Total Expenditure</b>			290000	290000	290000	290000

	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	80	20	0

<b>Estimate of Mandated Portion of Spend</b>	0
<b>Estimate of Non-Mandated Portion of Spend</b>	100%

### Commentary on Financial Variance

Canada goose control in the Waikato has no current budget or hours allocation. In order to develop and implement a pest control programme significant resources would be required with a high risk of success.



## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Fresh water biosecurity

**Person Responsible** Brett Bailey

<b>Priorities Alignment</b>	Forge and strengthen partnerships to achieve positive outcomes for the region	Shape the development of the region so it enhances our quality of life
	Manage freshwater more effectively to maximise regional benefit	Support communities to take action on agreed outcomes
	Increase communities understanding of risks and resilience to change	Select

<b>Other Drivers</b>	Select	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

**Background (what is it and why do we need to do it?)**  
 There is a strong community, iwi and stakeholder expectation for WRC to take a bigger role in management of freshwater biosecurity. This links to but is wider than management of pest fish and includes pest plants, organisms such as dydimo and lake snow and links with current check, clean dry programme. There is currently a small operational budget (\$5,000) and very limited staff time dedicated to management of freshwater biosecurity risks and relies on \$20k MPI funding per year to fund a part time advocacy position in Taupo.

**Objectives (what is it trying to achieve?)**  
 Current fresh water pests will not expand their current distributions, new incursions will not get a foot hold in the Waikato region and high threat pests are excluded from the region.

**Implications of not undertaking this work**  
 There are risks of spreading invasive pests from infested water bodies within the Waikato to clean water bodies. There is a greater risk of invasive fresh water pests (e.g. lake snow) coming from outside the region. The current programme is under resourced. If it isn't scaled up the probability that new pest incursions occur such in our high value water bodies and rivers will remain very high.

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	0	0	0	0	0	0
Direct Costs			80000	80000	80000	80000
Allocated Costs						
<b>Total Expenditure</b>			80000	80000	80000	80000

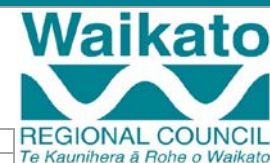
	Healthy Environment	Strong Economy	Vibrant Communities
Outcomes Alignment	100%	0	0

Estimate of Mandated Portion of Spend	0
Estimate of Non-Mandated Portion of Spend	100%

### Commentary on Financial Variance

Current relies completely on MPI.

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Pest Fish

**Person Responsible** Brett Bailey

<b>Priorities Alignment</b>	Forge and strengthen partnerships to achieve positive outcomes for the region	Shape the development of the region so it enhances our quality of life
	Manage freshwater more effectively to maximise regional benefit	Support communities to take action on agreed outcomes
	Increase communities understanding of risks and resilience to change	Select

<b>Other Drivers</b>	Select	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

### Background (what is it and why do we need to do it?)

There is a strong community expectation for WRC to take a stronger role in the management of pest fish including koi carp. The legislative responsibilities mostly sit with DOC as the lead with Council as a supporting agency. DOC and WRC are currently leading the development of a pest fish action plan that will provide clarity on the actions required (and possible) to manage pest fish in the Waikato. There is currently no staff resource or operating \$\$ for implementation of the plan or pest fish in general. The only programme currently funded is a koi carp trial at the outlet of lake Whangapae due to be completed June 2018.

### Objectives (what is it trying to achieve?)

Maintain distribution of pest fish, such as koi carp and bullhead catfish to their designated containment areas and to reduce impacts of pest fish at identified high priority sites throughout the region.

### Implications of not undertaking this work

Pest fish will continue to have negative impacts on the waterways, shallow lakes and wetlands throughout the Waikato and Waipa river catchments and have the potential to spread further throughout the Waikato Region. Native biodiversity values will continue to decline as pest fish invade and numbers increase. Water clarity decreases.

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	50,000	30,000	1		1	1
Direct Costs			87,000		87,000	87,000
Allocated Costs						
<b>Total Expenditure</b>			180,000		180,000	180,000

	Healthy Environment	Strong Economy	Vibrant Communities
Outcomes Alignment	100%	0%	0%

Estimate of Mandated Portion of Spend	0
Estimate of Non-Mandated Portion of Spend	100%

### Commentary on Financial Variance

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** H1604 Hazardous Substances Management

<b>Priorities Alignment</b>	Forge and strengthen partnerships to achieve positive outcomes for the region	Select
	Shape the development of the region so it enhances our quality of life	Select
	Select	Select

<b>Other Drivers</b>	Required legislatively	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

**Background (what is it and why do we need to do it?)**  
 Historically there has been no appetite from Council to fund this service (business case was not funded during previous LTP). Approximately four years ago a contractor was employed to contact organisations and develop an inventory of sites holding chemicals. Waikato Regional Council has obligations under Sections 30 and 62 of the Resource Management Act (RMA) and the objectives of the Waikato Regional Policy Statement (RPS) to manage hazardous substances. The risk of a significant hazardous substances emergency is growing over time due to increased heavy traffic movements and industry expansion. The Waikato region also acts as a nationally important (strategic) transport corridor for Auckland city with significant volumes of hazardous material moving through the region daily.

**Objectives (what is it trying to achieve?)**  
 A strategically integrated and coordinated framework for hazardous substances management in the Waikato region that helps WRC meet its legal obligations. Development and maintenance of an inventory of sites that manufacture or use hazardous substances in significant quantities. Identify significant regional transport routes for hazardous substances. Prioritisation of risks and development of one contingency plan every two years, starting with site or activities of the highest potential risk. Dissemination of relevant information to other agencies. An improved capacity to respond to emergency hazardous substance incidents across the relevant agencies. A reduction in harm to communities and the environment through better preparation for such events. To aid the Fire Service in the event of a fire related to hazardous substances.

**Implications of not funding**  
 The implications of not funding Hazardous Substance Management is that the council is at significant risk of not meeting their legal obligations. **While a legal opinion or advice has not been undertaken, should a significant hazardous material event/emergency occur, the council may be found negligent in their duties and possibly liable for any recourse/compensation.** In order to meet our obligations, an FTE (preferred) or a contractor is required.

## Budget / Project Outline - LTP Unfunded

### Financials

Income	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
General Rates	\$20,452.19	\$16,349.09	\$16,516.81	\$4,103.10	\$16,680.60	\$17,134.85
Targeted Rates	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fees & Charges	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Income</b>	<b>\$20,452.19</b>	<b>\$16,349.09</b>	<b>\$16,516.81</b>	<b>\$4,103.10</b>	<b>\$16,680.60</b>	<b>\$17,134.85</b>

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	\$0.00	\$6,089.59	\$6,217.56	-\$6,089.59	\$6,217.56	\$6,217.56
Direct Costs	\$0.00	\$3,225.00	\$3,000.00	-\$3,225.00	\$3,000.00	\$3,000.00
Allocated Costs	\$313.20	\$7,034.50	\$7,299.26	-\$6,721.30	\$7,463.05	\$7,917.30
<b>Total Expenditure</b>	<b>\$313.20</b>	<b>\$16,349.09</b>	<b>\$16,516.81</b>	<b>-\$16,035.89</b>	<b>\$16,680.60</b>	<b>\$17,134.85</b>

	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	0%	50%	50%

<b>Estimate of Mandated Portion of Spend</b>	100%
<b>Estimate of Non-Mandated Portion of Spend</b>	0%

### Commentary on Financial Variance

[text]

# Unfunded: Community transport grants

<b>GOA:</b>	<u>Public transport</u>
<b>Activity Name:</b>	<u>Public transport</u>
<b>Function</b>	
<b>Service</b>	<u>Community transport grants</u> <u>Community transport coordination</u>
<b>Financial Budget Code:</b>	<u>T1201</u>

## 1.1 Review and approval

Prepared By:	Lisette Balsom, Senior Policy Advisor	Date
Reviewed By:	Andrew Wilson, Manager Public Transport Operations	Date
Signed off By:	Mike Garrett, Chief Finance Officer	Date

## 1.2 Related documents

Document Title	Author	Document Reference
Regional Public Transport Plan Review: Draft Strategic Case	Lisette Balsom	11183709

## 1.3 Document change history

Version #	Date	Revision By	Description of Change

## 2 Executive summary

The limited availability of essential services, employment and transport options results in higher costs for people who live rurally, reduced opportunities for participation in their communities, and therefore reduced health and wellbeing of these communities. A lack of coordination between community transport services may also result in reduced benefits for providers and their communities.

A key part of current regional transport planning focuses on the transport disadvantaged and enhancing mobility of rural communities. Using mechanisms such as availability of a grant and/or providing coordination between community transport providers, can ensure access to essential services such as education, healthcare, employment and social opportunities which can have a significant impact on the economic and social wellbeing of our communities. It is increasingly acknowledged that enabling effective and affordable transport solutions within rural communities requires cross sector and multi-agency collaboration.

While WRC is not necessarily expected to be a major funder of rural transport solutions, it is being increasingly looked to as an organisation capable of playing a key role in facilitating multi agency collaboration across a number of service providers. The review of the Regional Public Transport Plan presents an opportunity to establish a regional framework for enabling greater cross sector collaboration and more effective transport solutions for rural communities.

The requested funding below would be utilised as seed funding to leverage other funding sources and incentivise the creation of community initiated and operated transport solutions within our regional towns and rural communities.

This approach sees the Regional Council providing support for the establishment of the transport initiatives. The ongoing operation of the initiative is managed and funded by the community often with support from charities. This approach has been successfully utilised within Canterbury and other regions for a number of years.

Critical to the success of the approach is the establishment of effective community entities and organisational structures that oversee the operation and ongoing funding of the transport initiatives. This often takes the form of charitable trusts, which have legal status and obligations and are subject to independent audits from central government agencies. Establishing trusts and effective organisational structures can be daunting for community groups.

Success will be measured by people in rural communities' and regional towns having increased access to employment, education, healthcare and social opportunities.

## 2.1 Financial summary

### 2.1.1 Funding profile

\$ (K) / Year	2018	2019	2020	2021	2022	Future Years
<b>Operational - Community Transport Coordination / Facilitation</b>	100 (WRC share estimate \$50,000*)	100 (WRC share estimate \$50,000*)	100 (WRC share estimate \$50,000*)	100 (WRC share estimate \$50,000*)	100 (WRC share estimate \$50,000*)	100 (WRC share estimate \$50,000*)
<b>Capital - Community Transport Vehicle Grants</b>	50 (WRC share estimate \$24,500*)	50 (WRC share estimate \$24,500*)	50 (WRC share estimate \$24,500*)	50 (WRC share estimate \$24,500*)	50 (WRC share estimate \$24,500*)	50 (WRC share estimate \$24,500*)

#### 2.1.1.1 Funding source

Part of the operational funding outlined below would be utilised to fund a shared resource that would work across the region and assist communities groups through relevant process and establish effective organisational structures. The role of this resource would be to make an otherwise daunting task easy and significantly reduce a barrier to the creation of community transport initiatives. The resource would provide ongoing support by helping organisations trouble shoot challenges that arise from time to time and by sharing best practice learnings throughout the region.

**The capital component of the funding above would be used to part fund up to 50 percent of the purchase of vehicles by respective community grumps. The notion of only part funding vehicles is important as it is critical the community groups are invested in the outcome of the initiative. The purpose of the grant is to make the community initiative more viable, not for Council to be the sole funder.**

#### 2.1.1.2 Funding partnerships

*Describe who, why, what level and duration of funding partnerships available*



Typical funding partners for established schemes elsewhere in New Zealand are listed below. It is anticipated the same would apply in the Waikato should a similar scheme be established.

- Community groups
- NZ Transport Agency
- Charitable trusts

In the Waikato interested stakeholders to date include:

- Waikato DHB
- University of Waikato
- Trust Waikato
- Various community boards

## 2.2 Corporate support service implications

Consideration	Yes/No
Does the work include the procurement or development of new technology or information systems, or does it include the major enhancement of existing technology or information systems?	No
Does the work include the procurement, or capture, of new data sets?	No
Does the work require the development/publishing of new maps, spatial layers or spatial data sets?	No
Does the work require analysis or modelling of spatial data?	No
Does the work require the establishment of new depots or offices?	No
Does the work require the use of additional fleet vehicles?	No
Does the work require additional resources (FTE or contract)?	No

### 2.2.1 Additional resources

No additional Council FTE is required. It is anticipated that proposed coordination resource would be part funded by WRC but employed by an NGO such as Community Waikato, which currently has extensive and established connections with community groups throughout the region. Management of vehicle grants can be accommodated with the scope and role of existing WRC staff within the public transport team.

\$ (K) / Year	2017/18 Baseline	2018	2019	2020	2021	2022	Future Years
<b>Permanent</b>	0	0	0	0	0	0	0
<b>Fixed Term</b>	0	0	0	0	0	0	0
<b>Contract</b>	0	0	0	0	0	0	0

## 3 The case for change (Strategic Case)

### 3.1 Proposal for change

#### *Problem*

This problem covers the lack of publically available and accessible transport options with appropriate routes, frequencies, and times in particular for rural populations and regional towns within Waikato who are experiencing ageing population and population decline.

The problem includes the lack of coordination between transport providers, and how available services are communicated to communities.

The problem also includes affordability of services, both for funders and for users.

Evidence to support this problem is that:

- Essential services and employment opportunities are limited in particular in rural areas
- Transport options to take people to essential services and employment are limited in particular in rural areas
- Lack of coordination between community transport services may result in reduced benefits for providers and their communities
- The limited availability of essential services, employment and transport options results in higher costs for people who live rurally, reduced opportunities for participation in their communities, and therefore reduced health and wellbeing of these communities.

#### *Proposal*

The requested funding below would be utilised as seed funding to leverage other funding sources and incentivise the creation of community initiated and operated transport solutions within our regional towns and rural communities.

It is also proposed that WRC look to how community operated transport initiatives can be coordinated, and the roles of transport partners in this coordination.

#### *Rationale*

A key part emerging from current regional transport planning is a focus on the transport disadvantaged, and enhancing mobility of rural communities. Ensuring access to essential services such as education, healthcare, employment and social opportunities can have a significant impact on the economic and social wellbeing of our communities. It is increasingly acknowledged that enabling effective and affordable transport solutions within rural communities requires cross sector and multi-agency collaboration.

While WRC is not necessarily expected to be a major funder of rural transport solutions, it is being increasingly looked to as an organisation capable of playing a key role in facilitating multi agency collaboration across a number of service providers.

The current review of the Regional Public Transport Plan presents an opportunity to establish a regional framework for enabling greater cross sector collaboration and more effective transport solution for rural communities.

#### *Timeframe*

These proposals would have an immediate timeframe to begin scoping eligibility criteria for community transport grants, and undertaking enabling work to determine how best to begin a community transport coordination trial.

## **3.2 What will success look like (high level benefits)**

The key benefit of an increased number of self-sustaining and coordinated transport entities operating within the region is that increased numbers of people will have access to employment, education, and healthcare, increasing economic and social wellbeing of communities.

There are many obvious benefits to population health through increased participation in active transport modes and getting more people, more active, more often.

The social benefits of enabling people to travel independently and safely around their local community using a cheap and flexible transport mode cannot be underestimated. Communities that move around also interact with each other and are strengthened in the process.

The liveability of an area is largely measured by the ease in which families can transport themselves to the places they wish to go, whether it be to school, work or the local shops. Providing good transport choices can immensely improve the liveability of an area. The ability to take public transport to locations such as school, town and recreational facilities contributes to engagement in activities and to the vibrancy of a community. There is evidence to suggest that pedestrians will linger for longer in shopping centres and thus potentially spend more. Pedestrians also tend to make use of their local neighbourhood shops.

Having Waikato as a destination with vibrant communities and good networks will attract visitors, which in turn will have flow-on economic benefits. Making the most of the region’s central geographical position and as ‘home’ to high performance sports and visitor attractions will also attract increased interest.

The key performance indicators to measure this benefit are:

KPI 1	Increased access to employment and education
KPI 2	Increased access to community services.

### 3.3 Consequences of not proceeding

Access to essential services will remain limited for those living within communities that do not have transport services. Any reduction in community transport services due to funding constraints would go against community expectation and not address the increased demand from growth and changes in population demographics occurring throughout our region.

The consequence of trips not being made because of expense or inconvenience is that opportunities for participation in health, social, education and employment are foregone.

Local social participation is a determinant of good health and therefore local access and mobility contribute to healthy, vibrant communities. Social and community participation contributes to wellbeing generally, particularly for older people.<sup>1</sup> Stopping driving, for example, is one of the most significant predictors of depressive symptoms in older people<sup>2</sup> and the influence of mobility on quality of life for older people is very high.<sup>3</sup>

### 3.4 Alignment

Long Term Outcome	How will this change improve delivery?
Encouraging regional development	People and communities are well connected to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

<sup>1</sup> Koopman-Boyden, P.G. & Moosa, S. *Living alone as a lifestyle among older people in New Zealand*, Paper presented at New Zealand Association of Gerontology Conference: The Age of Ageing, 12-14 September 2014, Dunedin, New Zealand

<sup>2</sup> Marottoli, R. A., Mendes de Leon, C. F., Glass, T. A., & Williams, C. S. (1997). Driving cessation and increased depressive symptoms: prospective evidence from the New Haven EPESE. *Journal of the American Geriatrics Society*.

<sup>3</sup> Mollenkopf, H. (Ed.). (2005). *Enhancing mobility in later life: personal coping, environmental resources and technical support; the out-of-home mobility of older adults in urban and rural regions of five European countries* (Vol. 17). Ios Press.

Strategic Direction / Corporate Plan Priorities	Alignment	How will this change improve delivery?
<i>Priority</i> Shape the development of the region so it supports our quality of life		
<i>Priority Action</i> We are facilitating action to ensure people have access to essential services, such as by improving regional transport and broadband connections.	Strongly contributes	Shape the development of the region so it enhances our quality of life by ensuring people and communities have access to essential services, education, employment and social opportunities.

Legislation	Alignment	How will this change improve delivery?
The purpose of the Land Transport Management Act 2003 is to contribute to an effective, efficient, and safe land transport system in the public interest.	Explicit	Creating a transport network that provides for the most effective and efficient access to essential services, employment and education leads to a more effective and efficient land transport system in the public interest.  The Act also specifically requires that the transport disadvantaged will be provided for.

Other (NPS, SLA, explicit LoS arrangement, best practice etc)	Alignment	How will this change improve delivery?
Government Policy Statement on Transport	High	The GPS is not yet released under the new government, but is likely to place significance on public transport.
Community expectation for greater flexibility in the transport system.	Strong	Community expectations of WRC to provide an efficient and effective public transport service better met.

## 4 Option evaluation (Economic Case)

This section outlines the objectives being sought, compares the options evaluated and the preferred option. **Refer to Appendix One for a detailed description of the options evaluated.**

**Status Quo/Option 1:** Continue with status quo – limited ad-hoc community transport initiatives exist where viable.

**Option 2:** Introduce opportunity of grant available to support community transport provision  
Stakeholders recognise the importance and value of locally run services by people who know their communities and their needs. In many cases, community services are run by volunteers who operate tight budgets and do not have the financial means to cover all of the services they would like to. The objective of this option is that community transport initiatives receive the support required to be as effective and efficient as possible, while retaining local focus and ownership. To progress with this work, key stakeholders will work with community transport providers to understand their objectives and ways of operating, to investigate how they can be supported.

## 4.1 Specific objectives

1. Moving people around more efficiently and affordably in the region
2. Providing suitable transport for the transport disadvantaged
3. Increasing people's choices in how they get to where they need and want to be.

## 4.2 Summary comparison

### 4.2.1 Non-financial comparison of options

Objective	Status Quo	Option 2
1. Moving people around more efficiently and affordably in the region	Meets in part	Meets
2. Providing suitable transport for the transport disadvantaged	Meets in part	Meets
3. Increasing people's choices in how they get to where they need and want to be	Meets in part	Meets

## 4.3 Preferred option

Based on the options assessment, the preferred way forward is a package of Option 2 for the following reasons:

- Successful community transport initiatives receive the support required to be as effective and efficient as possible, while retaining local focus and ownership.
- Efficiencies in working together can be identified and trialed, which may lead to more people being able to access more services, and/or more often.

# 5 Financial analysis and procurement (Financial & Commercial Case)

### 5.1.1 Funding partnerships

NZTA and community groups will be a funding partner. Other parties may provide financial assistance

### 5.1.2 Assumptions

In developing the financial implications for the preferred option the following assumptions have been made:

- NZTA provide a 51% FAR.

Other parties may provide financial assistance.

### 5.1.3 Additional commentary

*Note any additional financial commentary here, including how any allocation of contingency will be managed and approved.*

### 5.1.4 Procurement strategy

Will any procurement activities be required? NO

## 6 Implementation and achievability (Management Case)

### 6.1.1 Implementation structure

#### Delivery Approach – Operational

### 6.1.2 Scope/deliverables

The objective of the community transport grants option is that community transport initiatives receive the support required to be as effective and efficient as possible, while retaining local focus and ownership.

To progress with this work, key stakeholders will work with community transport providers to understand their objectives and ways of operating, to investigate how they can be supported.

The community transport coordination option entails looking into establishing a shared coordination framework across various service providers and funders. Specifically, developing a coordination/shared solution pilot is seen as an important action in determining the feasibility of such an undertaking.

This option includes key organisations working together to find areas of mutual objectives, and therefore how they could each contribute to funding and/or service provision.

A necessary enabling action for this work is to undertake a stocktake of what services are currently available, across all modes.

### 6.1.3 Key milestones

Milestone	Completion Date
Confirm WRC funding	June 2018
Execute partnering and co-funding agreement with select NGO	September 2018
Confirm vehicle grant criteria and application process	September 2018
Appoint NGO transport coordinator	October 2018
Scheme goes live	October 2018

### 6.1.4 Stakeholder engagement

Stakeholder	Interest	Method of Engagement
Community transport providers	Co-investor in objectives for public transport in the region	Partner
NZ Transport Agency	Co-investor in objectives for public transport in Hamilton City	Partner
District Councils	Investor in public transport services for their district	Partner
Waikato District Health Board	Investor in transport services for patients	Partner
Waikato University	Investor in transport services for staff and students	Partner
Wintec	Investor in transport services for staff and students	Engage
Ministry of Education	Investor and coordinator of school transport services where students eligible	Engage
Community	Users of public transport	Engage

## 6.1.5 Business change/organisational impact

Describe the impact this work will have on areas of the business – overall, by Directorate, Section or Team and outline the proposed approach to managing the change.

### 6.1.5.1 Level of impact to participate in the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Establish grants framework and administration, and how to provide coordination function for community transport services	
Transport Policy	Low	Take changes into account in transport planning, provide policy direction.	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

### 6.1.5.2 Level of impact to take up and use the outputs of the change process/initiative

Business Area	Impact (H, M, L)	Impact	How will you manage the impact?
Public Transport Operations	Medium	Establish grants framework and administration, and how to provide coordination function for community transport services	
Transport Policy	Low	Take changes into account in transport planning	Incorporate through Regional Land Transport Plan and Regional PT Plan review.

## 6.1.6 Ongoing operational management

Resulting deliverables/product will go to Public Transport Operations for ongoing business as usual management. No impact on other council services, existing business structures, roles and responsibilities. Skills required to carry out this work held in-house.

## 6.1.7 Assumptions, constraints and dependencies

- Success of these initiatives is dependent on co-funding from external partners where applicable.

## 6.1.8 Risks

Risk	Impact	Likelihood	Comments/mitigation
Community demand/expectations beyond what can feasibly be delivered.	Minor	Moderate	Regular communications and agreement on expectations.

# Appendices

## 1 Appendix One: Evaluation of options

This section outlines the options evaluated.

### 1.1 Status quo

#### 1.1.1 Option overview

Access to essential services are limited for those living within communities that do not have transport services. For people who do not have access to a car in rural areas, transport choices to access services in larger centres are often non-existent, inaccessible, inconvenient or expensive.

Most people living in rural Waikato, including small towns, do not have access to any transport services. Some communities have community-run transport options, with varying structures and availability. In the absence of convenient services, people may have to rely on neighbours or friends in a community for transport.

Community transport services providers are currently not generally coordinated, and therefore may be duplicating one another's services. Rural transport is not centrally coordinated nor dealt with in a consistent manner across the region.

Because of the lack of coordination, people are also not getting the full picture of transport options available to them.

Community transport services find difficulty in attracting funding for their services, given they are not aware of the wider context within which they operate, and therefore whether they are competing for funding rather than collaborating to provide a stronger investment proposition.

There are effective individual services operating for specific needs, but there are inefficiencies because of restrictions to funding and interoperability between the services. Excess capacity on services is often not used. For example, the University of Waikato buses students from some rural towns into the Hamilton campus - this bus departs its origin with empty seats and local residents question why they cannot use the service.

#### 1.1.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"><li>• Current community transport services are community-led, and provide for specific purposes, eg University of Waikato buses for students of identified rural areas.</li></ul>	<ul style="list-style-type: none"><li>• Access to essential services will remain limited for rural communities.</li><li>• Any reduction in community transport services due to funding constraints would go against community expectation and not address the increased demand from growth and changes in population demographics occurring throughout our region.</li><li>• Opportunities for participation in health, social, education and employment are foregone.</li></ul>



### 1.1.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
To be determined		

Qualitative benefits	Description
Access to community transport services	Some people continue to receive suitable community transport services for their health and education needs.

Disadvantages/Dis-benefits	Description of the potential impact
Access to essential services will remain limited for rural communities.	Opportunities for participation in health, social, education and employment are foregone.

### 1.1.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Encouraging regional development	People and communities are connected to a small degree to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

### 1.1.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
To be determined				

### 1.1.6 Assumptions, constraints and dependencies

- Constraint in ability to deliver to community expectations for public transport within Regional Council budgets.

### 1.1.7 Risk Profile

Identify any key risks, impact and likelihood (using the corporate risk framework), and mitigations

Risk	Impact	Likelihood	Comments/mitigation
Numbers and coverage of community transport providers reduces due to lack of funding.	Minor	Moderate	Current mitigation includes membership of Rural Transport Forum to ensure WRC is across key issues for community transport providers.

## 1.2 Option 2

### 1.2.1 Option overview

This option is to introduce the opportunity of a grant available to support community transport provision. Stakeholders recognise the importance and value of locally run services by people who know their communities and their needs. In many cases, community services are run by volunteers who operate tight budgets and do not have the financial means to cover all of the services they would like to.

The objective of this option is that community transport initiatives receive the support required to be as effective and efficient as possible, while retaining local focus and ownership.

To progress with this work, key stakeholders will work with community transport providers to understand their objectives and ways of operating, to investigate how they can be supported.

### 1.2.2 Pro's and Con's

Pro's	Con's
<ul style="list-style-type: none"> <li>Community transport initiatives retain local focus and ownership</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Community transport providers supported to provide effective transport services</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Increased transport choice for more people when coverage is improved.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

### 1.2.3 Anticipated Benefits

Quantitative (financial) benefits	Description	Value and timing
To be determined		

Qualitative benefits	Description
Transport choice	More people in the region are provided with transport choice.
Greater wellbeing	People are more able to access essential services, employment and recreation, contributing to their overall wellbeing.

### 1.2.4 Delivery of Long Term Outcomes

Long Term Outcome	How will this option improve delivery of this outcome?
Encouraging regional development	More people and communities are connected to a better degree to each other, to services (including health and other essential services), and to opportunities including recreation, education and jobs.

### 1.2.5 High level financial overview

Benefits (\$'s)	Revenue	Capex	Opex	Labour
To be determined				

### 1.2.6 Assumptions, constraints and dependencies

- Constraint in ability to deliver to community expectations for public transport within Regional Council budgets.

### 1.2.7 Risk Profile

Identify any key risks, impact and likelihood (using the corporate risk framework), and mitigations

Risk	Impact	Likelihood	Comments/mitigation
Undue expectations of community transport providers of level of support from Regional Council	Minor	Unlikely	Clear communications and collaboration with community transport providers.

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** Software Licence Resource

**Person Responsible** John Crane

<b>Priorities Alignment</b>	Select	Select
	Select	Select
	Select	Select

<b>Other Drivers</b>	To meet corporate plan objectives	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

### Background (what is it and why do we need to do it?)

This request is to provide a resource dedicated to co-ordinating and administering all WRC software licences to ensure compliance at the lowest cost, that we aren't paying for licences that we aren't needing whilst ensuring that we aren't in breach of licence agreements that could result in significant financial penalties. Software licencing is the largest single direct cost item for IS (\$1.6m per annum for support and maintenance fees, along with approximately \$200K for software subscriptions). The constant change in user numbers, increasing use of contract resources, increase in the number of systems and the changing way that software is licenced makes it increasingly complex and time consuming to manage.

### Objectives (what is it trying to achieve?)

Ensure that are software licencing is effectively and proactively managed so that we are compliant at the lowest cost. Also provide some centralised procurement capabilities within IS for software licences and subscription and across other purchase categories, rather than having a number of specialist technical resources and managers performing procurement activities.

### Implications of not undertaking this work

Lost opportunity to lower the license compliance costs.  
 Low visibility of licence usage.  
 Lost opportunity to reduce time spent by specialist IT resources and managers on procurement activities.

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour			75,000		75,000	75,000
Direct Costs						
Allocated Costs						
<b>Total Expenditure</b>						

	Healthy Environment	Strong Economy	Vibrant Communities
Outcomes Alignment	[% of expenditure]	[% of expenditure]	[% of expenditure]

Estimate of Mandated Portion of Spend	[% of expenditure]
Estimate of Non-Mandated Portion of Spend	[% of expenditure]

### Commentary on Financial Variance

## Budget / Project Outline - LTP Unfunded



**Hyperion Name** LASS contribution

**Person Responsible** John Crane

<b>Priorities Alignment</b>	Forge and strengthen partnerships to achieve positive outcomes for the region	Select
	Select	Select
	Select	Select

<b>Other Drivers</b>	To meet corporate plan objectives	Select
	Select	Select
	Select	Select

**Business Case Reference** N/A

**Background (what is it and why do we need to do it?)**  
 Provision for collaborative initiatives with Waikato LASS, particularly emerging from work to try to define a Digital Strategy for Waikato LASS. A regional digital strategy will set a common vision for the region, set principles for working together and identify common actions leading to a more efficient collaborative way of working across the region. WRC needs appropriate resourcing to engage in this work.

**Objectives (what is it trying to achieve?)**  
 Work towards regional best practice, shared Digital Strategy and shared technology solutions (where relevant).

**Implications of not undertaking this work**  
 Lost opportunities to work with others in the region on collaborative and best practice solutions that benefit our citizens and communities.

## Budget / Project Outline - LTP Unfunded

### Financials

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour						
Direct Costs			50,000		50,000	50,000
Allocated Costs						
<b>Total Expenditure</b>						

	Healthy Environment	Strong Economy	Vibrant Communities
Outcomes Alignment	25%	25%	50%

Estimate of Mandated Portion of Spend	[% of expenditure]
Estimate of Non-Mandated Portion of Spend	[% of expenditure]

### Commentary on Financial Variance

[text]

## Budget / Project Outline - LTP Unfunded



Hyperion Name

Person Responsible

Priorities Alignment	<input type="text" value="Select"/>	<input type="text" value="Select"/>
	<input type="text" value="Select"/>	<input type="text" value="Select"/>
	<input type="text" value="Select"/>	<input type="text" value="Select"/>

Other Drivers	<input type="text" value="To meet corporate plan objectives"/>	<input type="text" value="Select"/>
	<input type="text" value="Select"/>	<input type="text" value="Select"/>
	<input type="text" value="Select"/>	<input type="text" value="Select"/>

Business Case Reference

### Background (what is it and why do we need to do it?)

Plan and execute the delivery of the Online Services Roadmap across all of WRC. This piece of work is aligned to the BPS target to ensure New Zealanders can complete their transactions with government easily in a digital environment with the aim to have an average of 70 per cent of New Zealanders' most common transactions with government will be completed in a digital environment by 2017.

Continuing advances in technology have resulted in changing expectations from our customers. To ensure we can meet the needs of the communities we serve, the council must keep abreast of developments that could provide increased accessibility and improved ratepayer value. These issues are key drivers for the Customer Engagement Strategy.

### Objectives (what is it trying to achieve?)

1. Customers find us easier to deal with
2. Customers get what they need from us faster
3. Customers are pleased with the quality of service they receive from us
4. Staff find the systems work well for them

### Implications of not funding

Growing customer dis-satisfaction with a lack of online resource could lead to disenfranchisement and lack of trust in WRC. Increasingly manual processes and systems in a digital world will also likely see an increase in resource demands. Staff will be disengaged with the organisation due to the lack of progress in this space.

## Budget / Project Outline - LTP Unfunded

### Financials

Income	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
General Rates	0	0	0	0	0	0
Targeted Rates	0	0	0	0	0	0
Fees & Charges	0	0	0	0	0	0
<b>Total Income</b>	0	0	0	0	0	0

Expenditure	Actuals 16 / 17	AP 17 / 18	LTP Proposed Year 1	Variance	LTP Proposed Year 2	LTP Proposed Year 3
Labour	0	0	390000	0	390000	390000
Direct Costs	0	0	0	0	0	0
Allocated Costs	0	0	0	0	0	0
<b>Total Expenditure</b>	0	0	390000	390000	390000	390000

	Healthy Environment	Strong Economy	Vibrant Communities
<b>Outcomes Alignment</b>	33	33	33

Estimate of Mandated Portion of Spend	0%
Estimate of Non-Mandated Portion of Spend	100%