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ENGAGING FARMERS IN IMPROVING WATER QUALITY:

# THE RERE STORY

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# SUMMARY

The story of Gisborne's Wharekopae Water Quality Improvement Project (the Rere Project) will strike chords across New Zealand.

E.coli contamination from sheep and cattle is afflicting the Wharekopae River. The Rere Falls and Rockslide that form part of this River are major swimming sites for locals and visitors. Permanent signs at these sites warn people not to swim due to the risk posed by E.coli bacteria, which many ignore.

Since 2015, Gisborne District Council (GDC) and Beef and Lamb New Zealand have been engaging with Rere Farmers to try and raise water quality together to a swimmable standard. Farmer interest and participation in the project has been high and this report tells the story of the Rere Project to date, including lessons, next steps and strategic implications.

The core ingredients of the Rere Project are as follows.

1. Interagency collaboration between GDC, Beef and Lamb, AgFirst and the Ministry for the Environment
2. A farmer centred approach and a community based process involving workshops, farm visits and engaging three farms in water quality monitoring
3. E.coli research exploring most cost effective and high impact E.coli mitigation measures on hill country farms
4. Increased water quality monitoring in the area
5. These incentives were provided to encourage farmer engagement in the project:
  - The invitation to improve water quality in the river
  - Free expertise and face to face assistance from an AgFirst Consultant to complete a voluntary Farm Environment Plan for their farm
  - Ability to apply for grants funding for water quality improvement actions, via a GDC fund set up for this project (the Rere Fund)
  - Access to useful research (the E.coli research).

The project reflected the agencies commitment to working with farmers to shape the project, taking a whole farm approach, bringing farmer and technical knowledge together, growing the state of knowledge about the River and learning by doing.

Fourteen farms in the Rere area have voluntarily completed a Farm Environment Plan for their farm, plus a further six farms in the wider Wharekopae Catchment (20 voluntary FEPs completed in total). Further farms have committed to completing an FEP and are being followed up. Around 8-10 farms had

significant involvement in the Rere Project and engagement was highest from those with farms bordering the River.

The 'swimmable river' goal of the project held strong appeal for farmers. Other factors driving farmer engagement were the incentives above, plus a desire to build community goodwill towards farmers, the open and positive approach of GDC and Beef and Lamb, the chance to learn more about water quality and to connect with neighbours.

Farmer engagement was hampered by lack of interest or perceived relevance for their farm; some perceptions that the River's water quality is 'not that bad'; water quality being viewed as a lower priority on their farm than other issues such as erosion; not being able to afford to address water quality or concern about potential costs to improve water quality.

Tangible on-farm impacts of the project to date include 4.2km of new fencing, increased stock exclusion from waterways, increased numbers of applications to the Rere Fund, improved water quality monitoring and the Farm Environment Planning process positively influencing thinking and action on-farm.

The off-farm impacts include positive media and profiling of farmer action on water quality, building relationships and goodwill between GDC, Beef and Lamb and Rere farmers, raising awareness around water quality and gaining national attention through the project's nomination for the Green Ribbon Environment Awards.

The critical success factors for the project were considered to be its relationship based approach, seeking the views and input of farmers from the start, the funding and FEP incentives, very positive interagency collaboration and having the right people in the mix from agencies, skillful facilitation, positive media, regular communications and interactions with farmers and a community process that worked for the local community.

Iwi have not been approached to engage in the Rere Project to date and this is acknowledged as a significant flaw, to be rectified in the next stages of the project.

Other areas for improvement were more proactively engaging the local community at the front end of the project, being clearer at the start on project goals and process and bringing in other parts of council to address community issues raised. The E.coli research had a mixed reception – some found the model too simplistic while others found it insightful. An area to improve is that of water quality monitoring – including better baseline information and a greater emphasis on informing farmers about stream health and what is happening in the stream.

## KEY LESSONS FROM THE RERE PROJECT

- At the heart of the Rere project is the social and recreational value of the Falls and Rockslide. Connecting water quality improvement with a local treasure supports engagement.
- It is important to make a strong case for change to farmers, including clear links to farm practices at the outset. Not all Rere farmers were convinced of the need to invest their time and resources in improving water quality.
- Develop a clear, compelling aim for the project with farmers and the local community, or otherwise ensure that the project aim has high appeal.
- Prioritise engaging those whose land is closest to the waterway concerned. Target influential farmers and community members to engage with first and encourage them to invite others in.
- The Rere Project affirms the value of taking a farmer centred, relationship based, ground up, positive and collaborative approach. Farmers need to feel respected, valued and part of shaping an initiative in order to engage and build a sense of ownership.
- Positive interagency collaboration is needed to pool expertise and resources, but collaborators and people to involve should be carefully chosen. Having a strong Beef and Lamb facilitation and engagement role was seen as being key to success – engagement may not have been as high if GDC was the sole agency inviting farmers to take part.
- Provide a range of incentives to engage, including access to valued expertise, as well as funding and other resources to take action.
- The FEP process was a key foundation of this project and FEPs hold promise as levers for change for better environmental outcomes.
- Seek to achieve some quick visible ‘wins’ and maximise the tangible results that can be gained – farmers and agencies need to see momentum and clear changes to stay engaged.
- Ensure good communication with farmers and keep the media spotlight away until there is something substantial to share. Do the legwork to ensure a positive media positioning. Farmer sensitivities are high around land and water issues and any negative media coverage needs to be avoided.
- Identify success indicators for the project with farmers and create feedback loops that speak to those indicators. Seek to improve the state of data and evidence surrounding the waterway.
- Undertake robust water quality monitoring over time and support a learning focus through meaningful evaluation. Educate people about the long term nature of water quality improvement.
- If including research components, think through the value to farmers and applied practice when scoping this research, and involve farmers in this scoping.

## NEXT STEPS AND STRATEGIC IMPLICATIONS

Most farmers want the Rere Project to continue. Some want it to become catchment wide and to spread to other catchments. There was some desire for more joint farm planning in Gisborne, and eventually to have joint FEPs involving collectives of farmers and catchment scale FEPs. A review of some Rere FEPs is planned in a year's time to update them and check on progress.

In April 2017, GDC applied to the Freshwater Improvement Fund for \$800,000 to scale the Rere Project to the Wharekopae Catchment. A decision is expected around November 2017.

Strategic implications arising from the Rere Project include the following:

- How can Farm Environment Plans be maximised as levers for holistic farm management and better environmental practices? To be effective, FEPs need to be compulsory, be regularly reviewed and have a monitoring system and incentives built in. Incentives could include access to funding and expert advice, and an accreditation or quality assurance system.
- How can subcatchment projects such as the Rere Project be scaled successfully to catchments? Scaling issues relate to funding, how to retain a farmer centred approach, providing attractive farmer incentives, how to maintain successful interagency collaboration and communication and achieve quality monitoring of progress and change.
- Supporting farmers to investigate and trial more sustainable land uses such as native forest reversion, honey and ecotourism in places such as Rere is needed. This would hold particular appeal for farmers with large areas of unproductive land and those struggling to keep their farm viable.
- Another issue to explore is the development of farmer-to-farmer advisory services and collectives to support holistic farm management, undertake joint FEPs and seek funding for things such as water reticulation at subcatchment or catchment scales. These would need skillful facilitation and support to be established and maintained.

# 1. INTRODUCTION

The need to improve freshwater quality is the focus of intense national attention in New Zealand. In the Gisborne District, E.coli contamination of waterways from farming sheep and cattle is a serious, widespread problem. The 2017 [Proposed Gisborne Regional Freshwater Plan](#)<sup>1</sup> identifies water quality improvements in the Wharekopae River as a priority.

In 2015, [Gisborne District Council](#)<sup>2</sup> (GDC) and [Beef and Lamb New Zealand](#)<sup>3</sup> began an initiative to improve water quality in the Rere Falls and Rock Slide area, which forms part of the Wharekopae River. The Rere Falls and Rock Slide are a major local and tourist attraction, despite their water quality regularly falling below safe swimming standards due to E.coli contamination.

The Wharekopae Water Quality Improvement Project involved GDC and Beef and Lamb engaging with local farmers, to work together to improve water quality. There has been a positive buzz about this project from the start. Local media have picked it up<sup>4</sup> and the project was a finalist in the [Green Ribbon Environment Awards](#) in June 2017.

The Ministry for the Environment (MfE) has a keen interest in understanding what drives behaviour change to achieve better environmental outcomes in rural communities. It has funded this social research to see what can be learned from the Rere experience to inform other water quality improvement efforts. This report describes the approach taken in Rere, how the project was perceived by the farmers and agencies involved, along with lessons, next steps and strategic implications arising.

*Rere Falls*



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<sup>1</sup> See <http://www.gdc.govt.nz/proposed-freshwater-plan-2/>.

<sup>2</sup> See <http://www.gdc.govt.nz/>.

<sup>3</sup> See <http://www.beeflambnz.co.nz/>.

<sup>4</sup> See for example <http://www.scoop.co.nz/stories/AK1702/S00168/rere-community-working-to-improve-water-quality.htm>, and <http://gisborneherald.co.nz/localnews/2703654-135/rere-water-quality-showcase>, <http://gisborneherald.co.nz/environment/2822813-135/rere-water-quality-project-a-finalist>.



## 2. METHOD

Between January and May 2017, face-to-face and phone interviews were held with agency representatives and farmers involved in the project.

Farmers from 12 farms were interviewed for this research, including all farms immediately adjacent to the Wharakopae River. Two of these interviews were face to face, the rest were by phone. One farming couple sent feedback via email. Three short case studies are included of farmer experiences of the project. Quotes are not attributed to any agency or person in this report, to preserve anonymity.

Agencies involved, their role and representatives are listed in Table One.

*Table One: Participating Agencies*

AGENCY	ROLE/S	REPRESENTATIVES
<b>Gisborne District Council</b>	Project lead, funder, organiser and facilitator	Laura Savage (initial project lead) Alice Trevelyan (project lead) Nicki Davies Lois Easton
<b>Beef and Lamb New Zealand</b>	Joint facilitator, funding contribution	<a href="#">Mark Harris</a> <a href="#">Kylie Brewer</a>
<b>AgFirst</b>	Led and undertook Farm Environment Planning with landowners	<a href="#">Erica van Reenen</a>
<b>AgResearch</b>	E.coli researcher looking at options to address E.coli on hill country farms	<a href="#">Dr. Richard Muirhead</a> <sup>5</sup>
<b>University of Waikato</b>	Economic analyst assessing most cost effective E.coli options for farmers	<a href="#">Dr. Graeme Doole</a> <sup>6</sup>
<b>Ministry for the Environment</b>	Funder of research and keenly interested in the project, approached by GDC to fund the research	<a href="#">Jo Armstrong</a>

<sup>5</sup> See <https://www.youtube.com/watch?v=Ndm1cLgEmBU> for a 40 minute presentation by Richard to the Environment 2017 Conference on E.coli called Sh\*t: What's Happening?

<sup>6</sup> See <https://www.youtube.com/watch?v=YxwyJqAFgxw> for a two minute Youtube on Graeme's background and work on agriculture and economics.



## 2.1 COMMUNITY PARTICIPATION

Around 15 farms have been directly involved in the Wharekopae Water Quality Improvement Project (hereafter the Rere Project). Most are owner operated by families, though there are several managed farm stations and some DOC and Landcorp land (DOC was not involved in the project). Several farms had been sold or were in the process of being sold during the last two years and some succession is occurring as farm management passes from one generation to the next. One of the participating farms was the subject of a Country Calendar feature<sup>7</sup> in August 2016. Many of the participating farmers have lived there a long time and have strong ties with the area.

While there are strong iwi and Māori historical and cultural ties to this area, there has been no iwi involvement in this project to date. This is an acknowledged flaw of the project and will be addressed in the next stages of the project, once these have been confirmed (see next steps).

## 3. CONTEXT

*“The major impacts sheep and beef farming are having on water quality is through nitrogen leaching and phosphorus, sediment and faecal coliform run-off. There are a number of practices to mitigate these impacts such as riparian fencing and planting, erosion control on steep hill country, avoiding pugging and compaction damage, smart use of fertiliser and sensible management practices with crops, particularly in winter.”*

*van Reenen<sup>8</sup>, 2012 (p2)*

Freshwater quality issues are looming large in Gisborne and nationally. In Gisborne, steep hill country makes up around 70% of Gisborne’s land area and sheep and beef farming prevails. In the hill country water quality is affected by the issues noted above. In the Poverty Bay flats sediment and nutrient loading from fertilisers, cropping and phosphates are key issues, with all of these issues plus stormwater and septic systems affecting waterways in urban areas. Forestry is also impacting negatively on water

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<sup>7</sup> See <https://www.tvnz.co.nz/shows/country-calendar/episodes/s2016/e24>, 27 August 2016, Tombleson family. This is a 21 minute documentary featuring their biological farming approach which is producing ‘eco-lamb’, mustering of wild goats and tourist walking trails, including a walk along the Wharekopae River.

<sup>8</sup> Van Reenen, Erica (2012), *Increasing uptake of environmental practices on sheep and beef farms*, Kellogs Rural Leaders Programme 2012.

quality in the Gisborne District<sup>9</sup>. See [here](#)<sup>10</sup> for potential stream pollutants on farms and how they can find their way into waterways.

The Wharekopae River is 30km in length, with a catchment size of 32,000 hectares, involving 50 hill country sheep and beef farms. The river is accessible for swimming for most of its length, and is the highest use freshwater swimming river in the region. The Rere Rockslide and Falls are significant swimming sites for locals and visitors and the river also provides important habitat for Long Fin Eel, Trout and Blue Duck.

E.coli<sup>11</sup> levels routinely exceed safe swimming standards at the Rere Rockslide and Falls. One cowpat has around one billion E.coli, which is enough to contaminate around one million litres of water. Initial faecal source tracking<sup>12</sup> by Gisborne District Council (GDC) revealed that E.coli in the Wharekopae River was derived mainly from farm sources.

*Sliding down the Rere Rockslide*



Gisborne District Council's Proposed Freshwater Plan requires all farms classified as dairy farms or intensively farming to complete a Farm Environment Plan (FEP). Farm Environment Plans identify the goals of the farm, the existing farm management approach and planned environmental objectives and practices. These cover nutrient management, soil management, riparian and wetland management, livestock management, offal pits, silage and waste management, cropping management and biodiversity management. Only one of the Rere farms involved in the project is required by GDC to complete an FEP (this is a managed farm station).

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<sup>9</sup> A July 2015 GDC report outlines issues and options for the management of woody debris and forestry slash from clearfell forestry operations, Future Tairāwhiti Committee, go to <http://www.gdc.govt.nz/agendas-and-minutes-2/> and search under Forestry, July 2015 for this report.

<sup>10</sup> See <https://www.niwa.co.nz/our-science/freshwater/tools/shmak/manual/10manage>.

<sup>11</sup> E.coli stands for Escherichia Coli, a bacteria expelled into the environment through faecal matter, in this case mainly from cattle and sheep, but also from goats, deer, rabbits and birds. See [https://en.wikipedia.org/wiki/Escherichia\\_coli](https://en.wikipedia.org/wiki/Escherichia_coli).

<sup>12</sup> GDC intends to undertake more in-depth faecal tracking in the Wharekopae River catchment, if funding can be sourced.

# 4. RERE PROJECT EMERGENCE AND APPROACH

Beef and Lamb had a small amount of funding available and discussed potential joint projects with GDC staff. After discussing a range of hotspots Rere was chosen. These staff then brokered funding and input from their respective agencies to form an interagency collaboration. The GDC staff member<sup>13</sup> contacted a farmer they knew in the Wharekopae Catchment and that farmer offered to host the first community workshop on the project at their home.

## 4.1 PROJECT AIMS

The stated aim of the project was to bring the river up to a swimmable standard and be able to remove the health warning signs at the Rere Falls and Rock Slide. The focus of the project was on E.coli, although other relevant water contaminants such as sediment from erosion, phosphates, nitrogen, solid waste and fertilisers were raised in the Farm Environment Plan process (described later).

## 4.2 PROJECT INGREDIENTS

The core ingredients of the Rere Project and the principles underpinning its approach are summarised in Diagram One and Diagram Two. The core ingredients are further described in Table Two.

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<sup>13</sup> The first GDC staff member leading this project went on maternity leave less than a year after it started. A new GDC staff member picked the project up around mid-2016.

Diagram One: Project ingredients

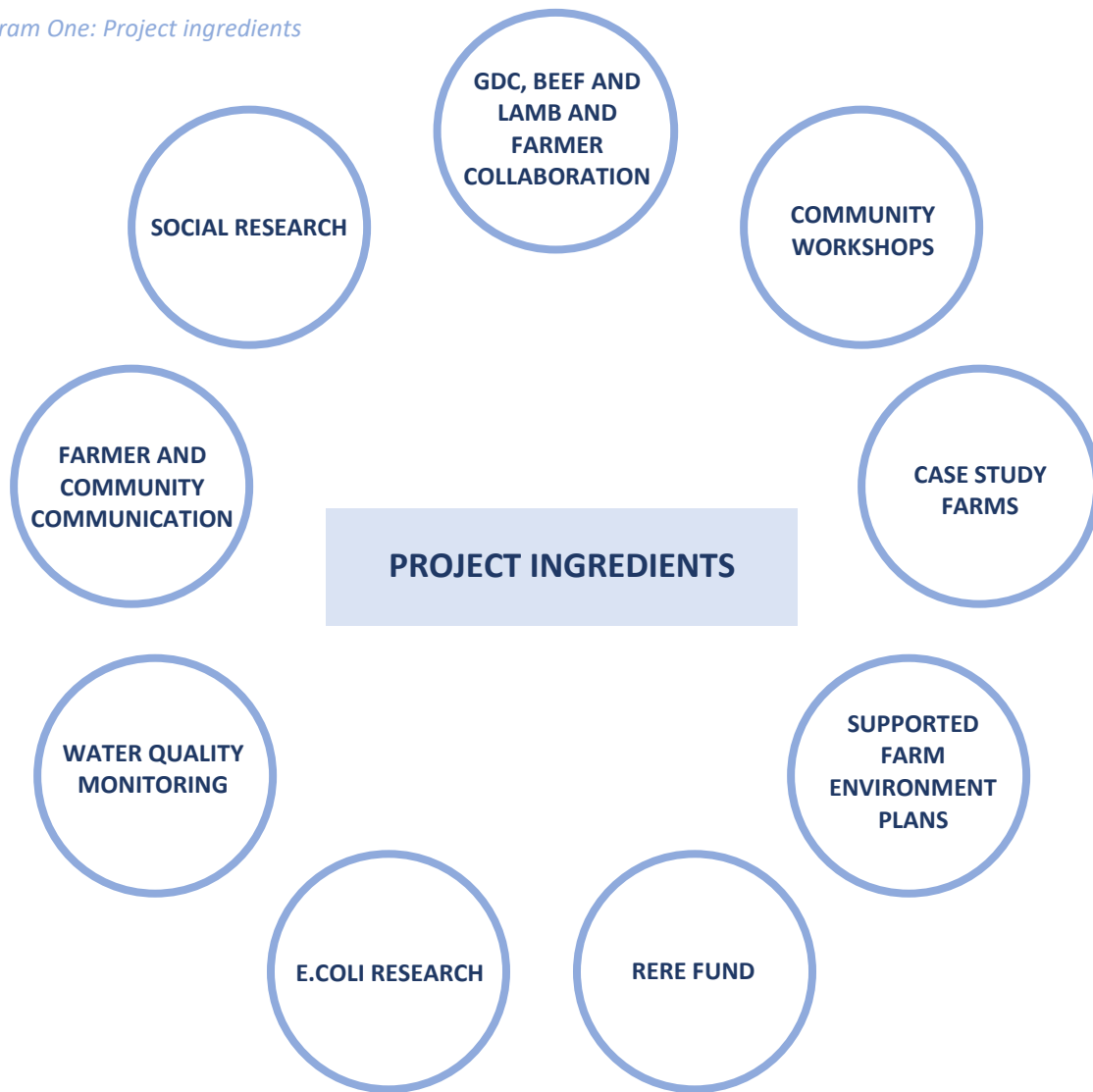


Diagram Two: Project principles

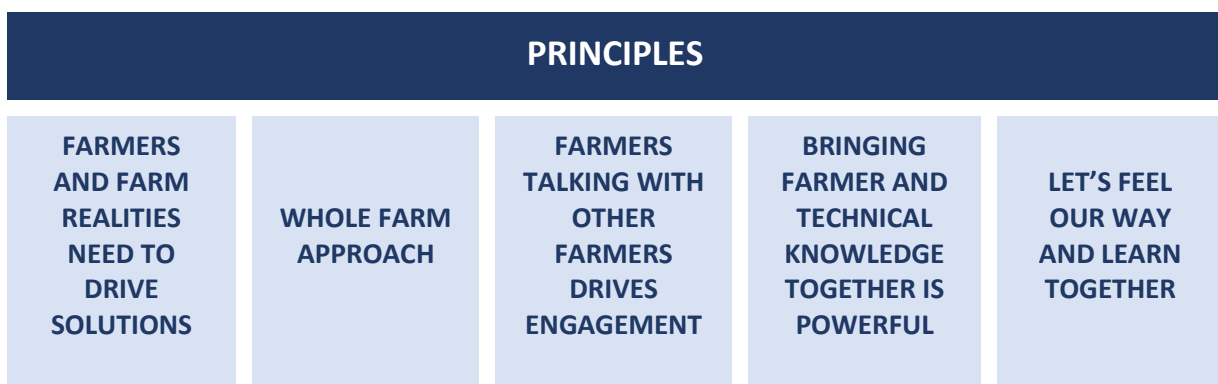


Table Two: What happened when in the Rere Project

CORE INGREDIENT	ROLE/S	WHAT HAPPENED AND WHEN
<b>Interagency and farmer collaboration</b>	Joint funding and facilitation, working together	GDC and Beef and Lamb began the project by inviting farmers in Rere to a community workshop. Based on farmer feedback at this workshop, GDC approached MfE to fund the E.coli and social research. AgFirst was brought in to run the FEP process.
<b>Community workshops</b>	Engage farmers and drive action	<ol style="list-style-type: none"> <li>1. Workshop One on a local farm introduced the project, shared three water quality improvement examples from Hawke's Bay Regional Council, a local farmer and a Tauranga farmer, asked for views on how to proceed, went on a farm walk, discussed on-farm issues and shared some resources (September 2015). It also asked farmers what they wanted the project to include and how it could run. All landowners whose land impacts on the River were invited to each workshop, plus the wider community via local media and the Beef and Lamb e-diary network.</li> <li>2. Workshop Two at the Rere School introduced Farm Environment Planning (FEPs) and offered assistance to farmers to complete an FEP for their farm. It included a local farmer's perspective on the FEP process, introduced the E.coli research (July 2016) and asked for case study farms to do water quality sampling on their farm. Two farmers volunteered and a third was invited to do this sampling.</li> <li>3. Workshop Three on a local farm presented initial findings from the E.coli research, introduced the social research and included a farm visit to a challenging site involving a steep slope coming down to a stream, to discuss E.coli mitigation options (March 2017).</li> </ol>
<b>Case study farms</b>	Support water quality monitoring and learning about water quality	Three farms undertook water quality monitoring at five on-farm locations in 2016. They kept a diary of rainfall and reported what they were doing on their farm in relation to high or low E.coli readings. These farms also informed the E.coli model described further below.

CORE INGREDIENT	ROLE/S	WHAT HAPPENED AND WHEN
<b>Farm Environment Plans</b>	Take a whole farm approach to improving water quality and environmental practices on farms, funded by Beef and Lamb and GDC	Farm Environment Plans enable farmers to assess their current farming operations and identify areas where they can make environmental and economic improvements. This includes identifying E.coli hot spots and other sources of contaminants on their farms. From March 2016, an AgFirst Consultant met with each farmer, generally at their home, took them through an FEP and captured their responses to form a draft FEP. This was emailed to the farmer to review and amend before being finalised and returned. Annual reviews of FEPs are planned with each farm. See more on FEPs further below.
<b>Rere Fund</b>	GDC fund set up to support on-farm changes to improve water quality in the Wharakopae Catchment	Farmers who completed a Farm Environment Plan to a high standard were able to apply to funding from the GDC's Rere Fund (set up for this purpose), to assist with implementing E.coli mitigation strategies such as fencing of waterways, riparian planting, water reticulation systems and sediment traps. GDC contributes 75% and farmers 25% (cash or in-kind through labour, for example). As of June 2017, three rounds of funding have been held totalling around \$100k.
<b>E.coli research</b>	To identify cost effective on-farm mitigation measures for E.coli	The idea to do E.coli research came out of the first community workshop. Dr. Richard Muirhead from AgResearch in Dunedin was commissioned to identify on-farm options to mitigate E.coli water contamination. Dr. Graeme Doole from the University of Waikato was commissioned to create an economic model identifying the most cost effective of these options. See more on this research below.
<b>Water quality monitoring</b>	Improve water quality data	Annual water quality monitoring undertaken monthly in the summer season at the Rere Falls and Rockslide was increased to weekly summer monitoring and monthly winter monitoring in 2017. E.coli multiplies with heat. The three case study farms also monitored five additional sites.
<b>Farmer and community communication</b>	Keep Rere community informed, raise public awareness	Regular (sometimes monthly) email communication was held with Rere farmers and media releases and communications were regular and positive about the project. Quarterly updates were given via the Conservation Quorum, and a local farmer posted on the Farming Women Tairāwhiti Facebook page.

CORE INGREDIENT	ROLE/S	WHAT HAPPENED AND WHEN
<b>Social research</b>	To understand perceptions and drivers of success for this project	The Ministry for the Environment funded this research to understand more about what supports behaviour change on the ground in rural communities, to improve environmental outcomes.

*Community workshop in a local woolshed in Rere, March 2017*



## 4.3 E.COLI RESEARCH

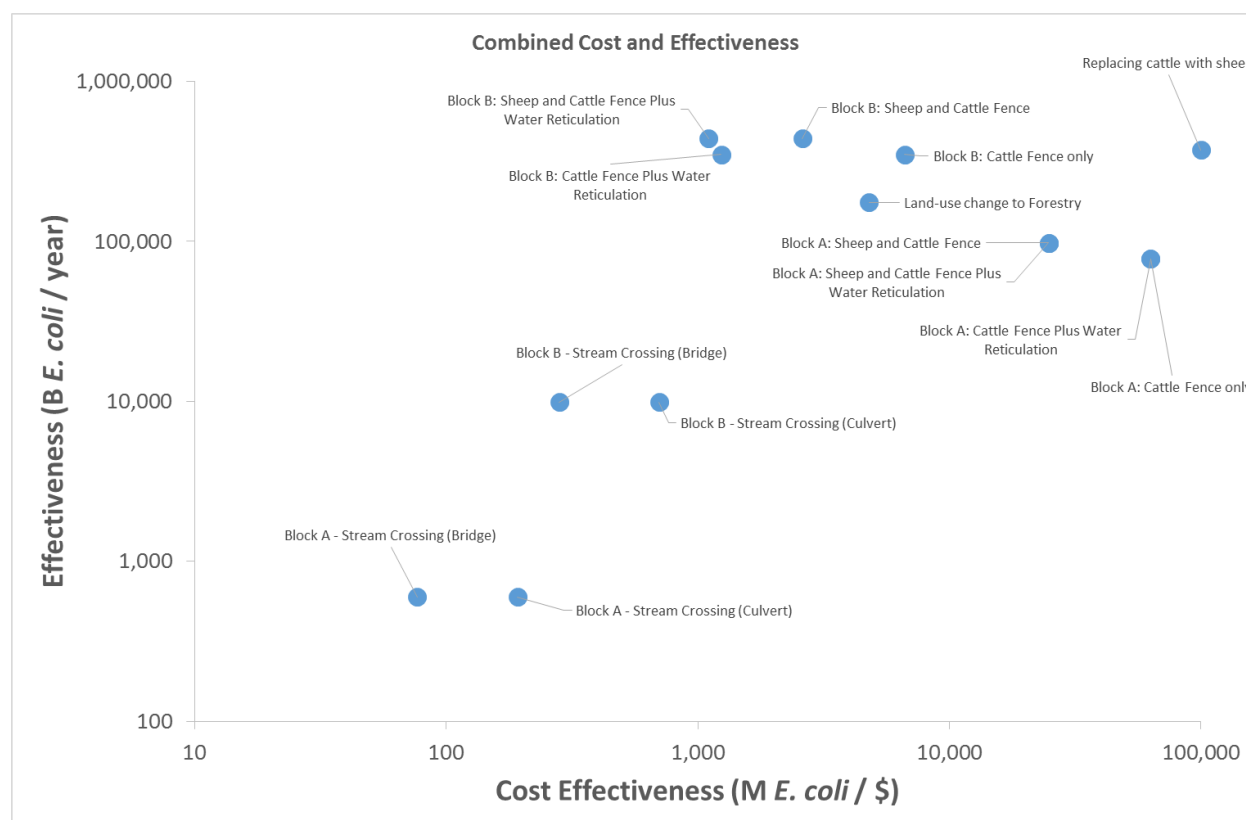
The E.coli research sought to identify key mitigation measures that can be implemented on-farm to effectively reduce E.coli levels. These measures focused on:

- Fencing and other stock exclusion from streams, wetlands and seepage areas, including flat land versus steep land, sheep versus cattle exclusion
- Changing stocking rates and type (the numbers and ratios of sheep and beef)
- Water reticulation without fencing
- Land use change (pastoral to indigenous forestry reversion)
- Stock crossings (culverts or bridges).



This research also sought to identify the most cost effective mitigation options for farmers. Farmers were asked to complete a questionnaire, which followed the Farm Environment Plan framework. The research model estimates the E.coli load into the stream, effectiveness and cost effectiveness of different options. The model was tested on the three case study farms in the catchment. The model only deals with non-flood, low flow conditions, as E.coli cannot be controlled in flood events and high rainfall situations. Researchers emphasise the indicative nature of the model.

#### *Key findings from the E.coli research – what is most effective and cost effective*



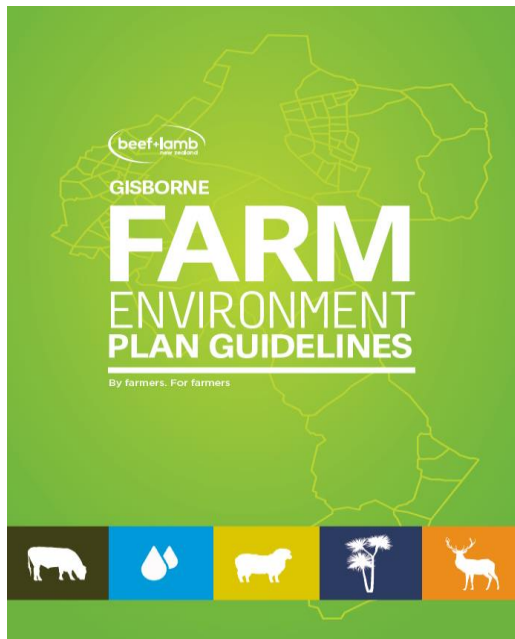
A key finding of the E.coli research was that replacing cattle with sheep was the most cost effective way to reduce E.coli on these farms. See the research reports for full findings<sup>14</sup>.

<sup>14</sup> Contact [alice.trevelyan@gdc.govt.nz](mailto:alice.trevelyan@gdc.govt.nz) for the research reports.

## 4.4 FARM ENVIRONMENT PLANS<sup>15</sup>

*“FEPs are not sexy for some, but the right person will make it a valuable process.”*

*Gisborne-specific FEP guidelines*



[Farm Environment Plans](#)<sup>16</sup> provide a template for farmers to build an environmental plan for their farm that can be tailored to the individual farm system, and complies with the relevant regulations of their Regional Council. A Gisborne Specific Template was developed by GDC and Beef and Lamb, with input from the AgFirst consultant who undertook the FEP process in Rere.

The FEP process began with farmers being sent an email with an offer of free assistance to complete FEPs. Several people replied. In the July 2016 workshop in which the FEP process was introduced there was a good response, followed by direct phone contact with farmers seeking their agreement to complete an FEP and making a time to visit to fill out the plan. The AgFirst Consultant involved was upfront about the 5-6 hour time commitment required and most visits involved a walk over of parts of the farm.

Funding assistance through the Rere Fund wasn't initially mentioned when people were approached to complete an FEP. Key success factors behind the high uptake of voluntary FEPs completed included:

- Emphasising that doing an FEP is documented proof that farmers are being proactive about water quality
- Stating clearly that the process is not about telling farmers what to do, that it is their plan for their farm, and that advice offered that does not have to be taken up
- Noting that it is possible that GDC or government will require farmers to do FEPs in the future
- Noting that Gisborne has its own guidelines and offering this for free to farmers
- Applying some 'encouragement' if needed by saying that a farmer was in 'the last five' to complete an FEP in their community
- Three farmers in this project had reportedly been asked if they had an FEP as a quality assurance mechanism (by a meat company for example).

<sup>15</sup> For more on FEPs see AgResearch (October 2016), *It's Everybody's Business: Whole Farm Plans – a vehicle for implementing policy*, A report for Horizons Regional Council <http://www.horizons.govt.nz/news/best-practice-farm-plans-hit-milestone>.

<sup>16</sup> See <http://www.beeflambnz.com/farm/environment/farm-environment-plans/>.

The AgFirst Consultant signed off the Rere FEPs, but noted that who will do this in Gisborne overall is still being finalised. She considered that farmers are realising that sooner or later they are going to need to do FEPs.

## 5. WHAT SUPPORTED FARMER ENGAGEMENT

*“It’s hard to stomach being vilified. That’s what made us get involved.”*

*“This has always been a good community, we back each other, we all live around the River, we swim and play in it. It’s an asset in our region and we are proud of it.”*

Farmers were asked what motivated them to get involved in the project. Key themes are shared below.

### 5.1 THE POTENTIAL TO IMPROVE WATER QUALITY AND FARM SUSTAINABILITY

Love for the river and being able to swim safely in the river are key farmer motivations for engaging in this project. Many of the families involved have lived in the area for multiple generations and recall a pristine river in times past with teeming with fish, eels and other aquatic life. One farmer used to use river water to make whiskey.

Handing land on in a better state and making a sustainable profit are also motivators for farmer involvement. Water quality is important to a farm business – for example to keep animals healthy. There is however some feeling in the community that the water quality of the river is ‘not that bad’, especially when compared with some other rivers in New Zealand. Some farmers were not convinced that the water is not safe for swimming, when they have not personally had any problems with E.coli.

## 5.2 THE OPPORTUNITY TO IMPROVE LOCAL IMAGE

*Mussels in the Wharekopae River*



The fact that the Rere Falls and Rockslide are a local tourist attraction is one driver: *“We want to retain our clean, green image, it’s important to us as farmers and as people”*. The bad press about water quality nationally was noted: *“We want to avoid what has happened to rivers in the South Island”*.

Several farmers referred to public hostility towards them from non-farmers regarding farming impacts on the environment: *“Most farmers feel attacked, especially those who have put a lot of effort into the environment, we are lumped in with the worst ones. Rere is a well cared for area. If GDC can help us get there quicker than that’s all good”*.

Wanting to build goodwill and raise the perception of farmers in the community was a driver for some to get involved. The positive media coverage of the project supported farmers to engage and to keep engaged.

## 5.3 A POSITIVE APPROACH BASED ON OPENNESS AND RELATIONSHIPS

*“We got a high level of engagement even though costs are likely to accrue. It’s easy now, as we are not asking people to spend money. Engagement will drop off if regulation comes in or we ask people to spend money. If we keep incentivising engagement will continue, if not it will drop and we will be like everywhere else – going to court.”*

A friendly approach to the community by agencies and good relationships between agencies and farmers drove engagement across the board. GDC staff involved were seen as open and approachable, with positive attitudes and offering useful incentives (all carrots and no sticks).

Community goodwill towards GDC has been lifted in the Rere community through this project. For example, the local community had been putting in complaints and requests for service from GDC for a long time regarding waste and litter left by people at the Rere Falls and Rockslide. A GDC staff member involved in this project followed this up within GDC and got some action. There was general acknowledgement from farmers interviewed of the positive approach taken by GDC in this project.

The Beef and Lamb role was said to be critical in engaging farmers and bringing people together initially, due to its role in supporting the farming industry and through personal relationships held by Beef and

Lamb staff in the District. Farmer engagement levels may have been different if GDC had made the first approach to the community on its own.

Direct relational approaches to farmers appeared to work well in this project, especially from Beef and Lamb and AgFirst – phoning people and meeting face to face, talking and building connections. Beef and Lamb staff noted that this approach is low cost from their perspective, as it utilises personal networks and works with the most willing and interested people in the community.

There was an absence in this project of adversarial organisations and attitudes. The focus was kept on the aim of making the River swimmable, one that everyone can get behind. The positivity of this project has been bolstered by incentives and openness from agencies, though some question what would happen to all the goodwill and engagement if incentives disappear or if regulations raise their head.

## 5.4 ATTRACTIVE INCENTIVES

The offer of free expertise to do an FEP and access to funding were good motivators to participate. Requiring people to do an FEP before accessing funding was smart tactically and has partly driven the high success rate of FEP completion.

The AgFirst Consultant was well received and formed friendships through the FEP process, coming to people's homes and sometimes spending many hours talking and working through the FEP. Farmers generally shared openly about their situation (financial and otherwise) and valued the opportunity to consider options and make some plans.

*Farm visit to view a tricky site, March 2017*



## 5.5 CONNECTING WITH NEIGHBOURS AND LEARNING MORE ABOUT WATER QUALITY

This is a close-knit community, with an email network and a Friends of Rere group<sup>17</sup>. Having community workshops on people's farms was positive, and walking their land and discussing farm challenges together brought people closer. Some people were attracted to the community workshops because they wanted to learn more about what was going on in terms of local water quality. They also provided a chance to catch up with the neighbours.

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<sup>17</sup> Some local farmers are also part of Farming Women Tairāwhiti on Facebook.

## 5.6 PEER INFLUENCE AND WORD OF MOUTH

*“Farmers respond to what other farmers do and what has worked for them.”*

The agencies involved approached well-known and influential farmers in the community first about the project and to do an FEP: *“Word of mouth is most powerful for farmers. It’s personal, all about relationships”*. Once these farmers got involved and took up the offer to do an FEP, that drew others in.

At the third workshop in March 2017, several farmers from the wider Wharekopae catchment attended, who were interested in being part of the project. A farmer from the Hawke’s Bay had also heard of the project and came along to check it out. This is a testimony to the good public communications throughout the project.

Some values and beliefs emerged from the Rere farming community that hold keys to understanding what will support farmer engagement and behaviour change on the ground.

- A strong sense of equality and for everyone to be treated equally
- A supportive community where people are keen to help each other out
- Pride as farmers and a passion for farming
- Optimism and ability to face challenges such as drought and storms (resilience and ability to adapt)
- Love for the land and generally strong bonds to land, water and animals
- Tendencies to skepticism, straight talking and cynicism
- A desire for action and tangible results alongside theory
- A desire for evidence and a need to be convinced to make significant changes.

## 6. DISINCENTIVES TO ENGAGE

*“There is a spectrum of environmental attitudes. Those who are on the River are supportive of doing something about the River; those who are further off wonder why should we make work for ourselves? It’s good to focus on River landowners. There is some perception that the River is fine, we should just keep out of stagnant areas and when there is a flood.”*

There were a range of attitudes and responses from farmers to this project, from those who were resistant to getting involved to those who were open and keen. Some farmers had significantly greater involvement as case study farms, undertaking water quality monitoring, meeting with the E.coli researcher and having regular interactions with GDC staff to discuss findings.

Any hint of requirement, threat or regulation from GDC (or any other agency) in relation to this project would reportedly have had people fleeing.

### 6.1 FARMERS NOT ON THE RIVER LESS ENGAGED

Distance from the river or lack of waterways moving through the farm affected engagement: *“Those not on the River are not engaged”*.

Even some who do have the River and tributaries flowing through their land can feel that their farm does not contribute significantly to waterway contamination: *“We don’t do cropping or intensive farming so that doesn’t apply to us”*.

### 6.2 UNWILLINGNESS TO FACE IMPACT

*“A lot of people have got their heads in the pond in terms of water management.”*

It can be easy for farmers and landowners not to face the impact of their activities on water quality: *“Rivers are tricky, you can make a mess and not have to deal with it – it goes downstream. We may not be so interested if our kids weren’t swimming in it”*. One farmer noted that in some cases farm impacts on water quality can’t easily be acted on, giving the example of a dead cow in a stream that can’t be moved without use of heavy machinery.



## 6.3 COSTS AND PERCEIVED TRADE-OFFS BETWEEN ECONOMICS AND ENVIRONMENT

*“Some of the things people want you to do [on your farm], in practical terms they don’t know what they’re talking about. There are differences between what people think can happen and farm realities - sometimes the economics doesn’t stack up.”*

Demonstrating the value of improving water quality to some farmers can be challenging, especially if there are no clear economic benefits involved, and potentially significant costs. Some farmers were wary of engaging for these reasons. Environmental practices and economic return tend to be set up in opposition (i.e. you can only have one or the other).

For some, the financial bottom line will always dictate the course of action taken:

*“At the end of the day I am trying to make as much money as possible for my employers. Everyone’s got to earn their living. If you don’t own the property, at the end of the day you should be doing this and that but the boss can say ‘No, you can’t’. We’re trying to do our best here”.*

Several farmers noted that ten years ago having waterways on a farm for stock was a selling point, but that now it could be a negative thing. There was a clear feeling from farmers that requirements and regulations governing freshwater management are going to intensify. This causes some anxiety about the cost implications and future viability of their farms.

### CASE STUDY ONE

“We can do better on our farm for the River, but if we fence the stream off it will get full of weeds. The Falls are surrounded by weeds. We need exclusion and good planting – we want to do beneficial stuff without creating more problems.

We have a long list of things to do on our farm before we can make major in-roads on water quality. We will exclude cattle on the flats but can’t get the sheep out. I would love to see the school get on board with monitoring and how to care for the stream. Show the schools what we are doing, bring them out to us.

Even with good press people moan because farmers are being given funding. We need to keep the messages simple. The environmental picture has exploded in Gisborne and farmers are under the gun.

People are attracted to success; working quietly in the background improving things is not going well, farmers need to shout about our successes. The people that matter are on the streams. Local people have ownership, make sure people support and believe in better water quality. We need to shine a careful light on all of this and not get information out there that will blame people.”

## 6.4 LACK OF ALTERNATIVE WATER SOURCES

Water sources in Gisborne on dry, steep hill country farms are few and alternatives to streams, wetlands or swampy areas are expensive (such as water reticulation). In many places fresh waterways are the sole water source for animals and all animals are attracted to streams, especially in the hot weather typical of Gisborne summers. Unless stock and other animals are effectively excluded from waterways and have high quality alternative water sources they will access them.

## 6.5 ISSUES WITH FENCING AND RIPARIAN MARGINS

On steep hill country farms fencing is expensive and not always achievable, given land movement, topography and weather events. Issues were also raised about what becomes of riparian margins that are fenced. There are issues with willows self-seeding and weeds such as blackberry taking off in riparian margins. One person pondered what riparian margins are worth in economic terms.

## 6.6 GOOD ENVIRONMENTAL PRACTICE CAN BE HARD TO WORK OUT AND LOWER PRIORITY

At the March 2017 community workshop, participants visited a challenging site on the host farm and discussed what tactics could be used to farm in this area while protecting the stream. This demonstrated how difficult it can be to find workable solutions to different farm terrain, especially where steep slopes come down onto streams. It also showed the value of local farmers discussing farm management options with each other, alongside technical experts and farm consultants.

Farm realities in the Rere area include those above plus erosion issues and the need to stabilize hills: “A lot of farms need trees on them because there is so much slippage”. Best practice for water quality can be difficult to work out and compete with other priorities. While there is no recipe, there is some generic good practice such as:

- Keeping water sources for animals away from streams
- Keeping cattle out of streams
- Providing lots of shade and water for animals
- Thinking like an animal and making it easy to guide their behaviour, for example training them via the use of hotwires
- Taking different approaches in times of high and low rainfall and river flow, and during summer and winter.

People in this project noted the complex nature of water quality and the wide range of influences on it, including seasonal effects and weather events. The area is still hugely affected from the 1988 Cyclone Bola, also by drought and rainfall patterns. In this context, raising understanding of the greatest on-farm impacts on water quality is of huge value to farmers.

One farmer would like to see the use of chemicals on farms addressed: *“I would like to see no Round Up being sprayed, no ‘spray and pray’, it all pollutes the River; everything we eat has been tainted by Round Up. I would rather keep the River clean through no use of chemicals, but this is not a popular view to have, no one is interested in this. The younger ones are worse than the older ones, they are out to produce money and quantity, not quality”.*

## CASE STUDY TWO

“Our farm is above the Rock Slide and Falls and the river runs through it for 3-4 km. We have been here for three generations. I have been sad to see the changes to our stream; we haven’t seen trout for six to seven years. Cyclone Bola was a big influence, we used to have Blue Duck in the river all the time – they vanished after Cyclone Bola.

This project has enabled us to get ideas about what is causing poor water quality. The FEP has made us look at our nutrient budgeting and loading, to make sure we are not over applying fertilizer. The FEP plan has been good, we are implementing it. We got funding to fence off 1km and are doing voluntary fencing ourselves.

Everyone is buying into the concept of improving water quality, GDC haven’t been heavy handed; they have been coming to ask our advice, with no threats. The collaborative approach has been appreciated. The project has created goodwill and a sense of togetherness.

We will need extra funding to ensure better water quality on our farm. Sheep and beef farming hasn’t been as profitable as dairy, we haven’t been able to invest in environmental measures. We need help – funding to plant and fence and to do water reticulation. We would put water reticulation in and hot wires but the cost is prohibitive and there is no economic return. We are applying for funding now to exclude all stock from a tributary.

To do a lot of these things, unless you have funding support, they won’t happen. We have showed an attitude that other areas might follow; we have picked up the ball and run with it. It’s not as hard as you might think.

The media has a huge effect, it is usually very negative. All farmers I know want to protect the environment but we run a business.”

# 7. PROJECT IMPACTS AND ACHIEVEMENTS TO DATE

*New fencing at Mokonui Station along the edge of the Wharekopae River*



There have been a range of project impacts to date, with some farms making significant practical changes, some planning them and some noting no change: “We haven’t changed anything, we are more aware of fences that we may need to put in over time, we are not highly stocked, we will do what we can but won’t go broke to do it”.

On and off-farm impacts to date are summarised below.

## 7.1 ON-FARM IMPACTS

- 4.2km of new fencing
- 14 Rere Fund<sup>18</sup> applications
- Thinking widened – fencing not only option
- Increased stock exclusion from waterways
- Installation of new water reticulation systems
- Improved water quality monitoring
- Fewer E.coli exceedances<sup>19</sup>
- FEPs influencing planning, budgeting and action

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<sup>18</sup> In the first round of the Rere Fund two applications were received, four in the second and eight in May 2017. Applications have also shifted from support for fencing to on-site water reticulation such as ponds.

<sup>19</sup> There were fewer E.coli exceedances identified through water quality monitoring in the summer period of 2016/2017, but it is too early to attribute causes for this. At least three years of data is needed to see trends.

## 7.2 OFF-FARM IMPACTS

- Goodwill raised for GDC and farmers
- Positive profiling of farmer action on water quality
- Water quality awareness raised
- Interagency relationships cemented
- Rere story on national radar
- Community based approach affirmed
- FEPs in the spotlight

# 8. WHAT PEOPLE LIKED ABOUT THE PROJECT

## 8.1 FARMER PERSPECTIVES

When asked what they liked about the Rere Project, three themes emerged from farmers. These align with the factors that supported farmer engagement in the project.

### THE APPROACH TAKEN

*“Knowing GDC is engaged and will provide resources is positive and proactive, it’s a credit to the team at GDC that staff and management have engaged with us. The team need a pat on the back from Councillors – great communications too.”*

The GDC and Beef and Lamb approach of coming out into the community at the start, asking farmers about their views and what would work best for them, built trust and goodwill in the process. Farmers liked to see the collaborative approach between GDC and Beef and Lamb and bringing scientists and researchers into the mix.

## THE CHANCE TO LEARN MORE ABOUT WATER QUALITY AND OPTIONS TO MITIGATE

Farmers valued learning about different options to mitigate E.coli and having their thinking broadened out from fencing being the main solution (which is not seen as practical on steep hill country land): *“We thought the pressure was to fence, but we can now see different options – people aren’t going to be forced to fence”.*

## FARM ENVIRONMENT PLAN PROCESS AND HOLISTIC APPROACH

*Discussing Farm Environment Plans, Community workshop July 2016*



The FEP process supported some farmers to be more tactical and strategic about their farm management, through its whole farm approach and focus on risk management. They found the FEP process helped them to make choices and lift their game environmentally: *“We liked the different way of thinking about the farm, what we do and where, the philosophy of looking at different options”.*

Some valued the bringing in of fresh ideas through the FEP process, for example to move farm tracks out of boggy areas: *“Having Erica involved with the FEP process was the biggest help. She looked at the farm as a whole: environmental, scientific, stock, personnel, financial issues, [and] took a holistic approach”.*

For some the FEP process highlighted things that they were doing that were not useful: *“The FEP opened our eyes that some of what we’ve done is not beneficial, like planting a side stream. We are more aware of issues on our farm and what to do about them”.*

The principle of providing farmers with skilled support to do FEPs was supported. *“Doing the FEP lifted a weight off our shoulders. The media is creating fear, we get negative feedback from urban people”.*

Several farmers however who completed an FEP don’t intend to use them: *“We did an LEP [FEP], we won’t be following it, we are doing our own thing anyway”.*

## CASE STUDY THREE

“This has been our family farm for four generations, since 1907. Our farm is below the Falls and the River flows through our land, we are custodians of it for others. The health of the River is vital for our land and our animals and for the future of our business as a farm.

The best thing for us has been the FEP process. We now have a five to ten year plan and are using it to budget. We are being more tactical and strategic; we are doing research on the best bang for buck in terms of our priorities. We are focusing on financial return in the next year. The FEP helps us make choices.

Already we are improving water reticulation, we have a new pipe going in and new water troughs planned. We are focusing more on the environmental side. This project has helped us step back and be more strategic.”

## 8.2 AGENCY PERSPECTIVES

When asked what they liked about the Rere Project, six themes emerged from agencies.

### COMMUNITY BASED, OPEN AND COLLABORATIVE APPROACH

Those representing agencies liked the way that farmers were involved in developing project goals and also liked having regular contact with farmers. They felt that this project skillfully brought together farmers, agencies and research. *“We got the whole community together – agencies, science and farmers and showed we can work together”.*

Having a flexible approach and seeing where things went were also highly valued: *“I liked the fact that the project took a leap of faith, with no guarantee of a real return in terms of water quality improvement. We didn’t have a predetermined outcome and we didn’t put targets, measures and outcomes around it other than the River being ‘swimmable’”.*

### THE RIGHT PEOPLE

Agencies considered that the right people and a positive dynamic among the agencies was a great feature of this project: *“It’s all about having the right people in the mix – investing in good people,*



*having faith and agency support. The team of people who worked with the farmers has been the right mix".* The key people involved from each agency are seen as 'people who get stuff done', who are responsive to the community and understand how to work with people in communities. All of them have farming backgrounds, which improves their credibility with the farming community.

## RESEARCH COMPONENT

Agencies like the project being grounded in data and research. Existing water quality data was reviewed as a first step for the E.coli research. This was reportedly enough to show that the Rere Falls and Rockslide fell way below acceptable water quality standards and to be able to make a clear link to the farms. These findings helped farmers to accept the E.coli issue and its relationship to their farms (although not all were convinced).

Agencies appreciated that the scientists were prepared to engage with the farmers and visit the catchment. Having the scientists spend time there and visit farms supported buy-in from farmers. Credit was given to the Ministry for the Environment for investing in the research and seeing the value of the project's community based approach.

## FARM ENVIRONMENT PLAN PROCESS

Bringing FEPs into the mix in this project was seen as very positive. Using the driver of improving water quality in the Wharekopae River was considered a useful lever to introduce farm environment planning to this community. Taking a tailored approach to each FEP was viewed as good practice, including being flexible to accommodate a time and process that worked for farmers to do their FEP.

Ensuring FEP recommendations reflect farm realities and are responsive to their situation, by working to find win-win situations rather than 'balancing' or compromising between economic and environmental issues, was seen as a success of the project. The FEP process can push the boundaries in terms of what can be achieved environmentally, through building good relationships and offering valued expertise to farmers.

It was considered efficient to have a joint FEP workshop to get initial engagement in the FEP process. One person felt that a cost-benefit analysis comparing the one to one approach to doing FEPs, versus the cost of taking a regulatory approach would be useful.

## JOINT FUNDING AND THE RERE FUND MECHANISM

The joint resourcing of this project among three agencies was viewed positively. In terms of funding contribution, Beef and Lamb funded the community workshop process and part of the FEP process, the Ministry for the Environment funded the research aspects and GDC funded project management, part of the FEP process, the Rere Fund and water quality monitoring.

Having GDC funding available to support people to take action via the Rere Fund was considered a key success factor in this project.

## GOOD COMMUNICATIONS, PROFILE AND POSITIVE PUBLICITY FOR FARMERS

This project provided good publicity for farmers and all of the agencies involved, and created a sense of community action emerging around water quality.

Overall, from a GDC perspective, positives were GDC commitment to the project, having skilled staff involved, having funding available, taking time to assess who can do the work and employing the AgFirst Consultant.

# 9. WHAT COULD HAVE BEEN ADDED, CHANGED OR IMPROVED?

Perceived areas for improvement fell into three categories: engagement, research scope and better data and information.

## 9.1 ENGAGEMENT

A significant perceived weakness from GDC's perspective was the lack of engagement with iwi in the project and working to understand cultural values and associations with the area. This is a priority to address in the next stages of the project.

Agencies commented that more proactive targeting of those who didn't come to workshops could have occurred in hindsight, including doing the groundwork to get more community involvement from the start.

One farmer would have liked to see a one pager of the proposed process at the start, including crisp, clear communications about what is being offered (although this was not entirely known at the start of the project). This person wanted indicators of success to have been identified early on and tangible deliverables to keep people engaged: *"Prove to resisters that it's getting results and its long term"*.

This farmer also suggested involving Federated Farmers at the start and asked why they weren't involved - Federated Farmers have not been involved in the project, although several farmers involved are part of Federated Farmers.

Stronger involvement from the Reserves part of GDC from the start of the project would have been preferred to address waste issues quickly at Rere Falls and Rockslide, although understaffing issues for this team were acknowledged. When a community project such as this occurs a whole of council approach is needed.

## 9.2 RESEARCH

The E.coli research received a mixed reception from farmers – some felt the model was too simplistic and couldn't account for the complexities of specific farms. There was concern about the quality of data that local and central government uses to base its policies and decision making on and that this data can be too far from farm realities.

E.coli was noted as one of the most difficult pollutants to study and the E.coli research was said to be pushing the boundaries of current knowledge. A key question raised by one farmer was whether it is actually possible to improve water quality when there is sheep and beef pastoral farming above the Rere Falls.

In future research of this kind, one of the researchers suggested that behaviour change measurement linked to E.coli mitigation strategies identified in the research model (or to any of the strategies identified in FEPs) could be developed. Then behaviour change could be tracked through these strategies and qualitative research undertaken on the main drivers for positive on-farm actions, to link farmer motivations with behaviour change.



## 9.3 BETTER DATA, 'RESULTS' AND STORIES

Farmers reported having received mixed information about what is happening to water quality in their area: *"We want good information about where things stand in terms of water quality improvement"*.

The data and evidence about what is going on environmentally is important: *"Farmers love information and evidence to go with their observations. It would be great to give a monitoring pack to the local school and get the kids to record what they find"*.

An agreed set of stream health indicators could have been identified early on and a more intentional approach to water

quality testing developed and communicated. Farmers were very interested in water quality monitoring and wanted to see more findings on this: *"The lack of information about the River at the start was alarming, we had no baseline. This meant it was a stab in the dark"*. More follow up on water quality monitoring on case study farms was also sought.

Farmers commented that it would be important to keep sharing what is happening in the project and to get results into the public arena. There is also a strong desire to tackle the perceived 'us and them' culture between farmers and non-farmers around environmental issues. Good stories of positive farmer practices need to be shared more, locally and nationally.

# 10. WHAT NEXT FOR THE RERE PROJECT?

*"The dream scenario is to expand to the wider catchment, the whole Wharekopae Stream and replicate the basics in other catchments. The basic model is to workshop issues in the community, support them to pick it up and incorporate changes into their farm practices."*

For all of the agencies involved and for engaged farmers, there was a clear desire to keep the initiative going and to broaden it out to the whole catchment and beyond. From the work in Rere to date, specific next steps called for were as follows.

- An annual or biannual follow up with Rere farmers who have an FEP to check on progress and adapt the FEP.
- Farmers would like the Rere Fund to continue and other assistance to be made available such as labour to help plant and fence. One farmer suggested that farmers having access to a water systems design expert would be useful.
- Continuing to communicate with the Rere community and Gisborne wide on water quality monitoring results and showcasing great work being undertaken by farmers through the Rere Fund was suggested. People wanted the good media profile and communications to continue. Social media could also play a part here, though it was noted that social media has drawbacks in terms of people potentially posting negative comments.
- There were suggestions to put signs up at the Rere Falls and Rockslide about this initiative (this is planned to occur by November 2017).
- Tracking tangible impacts over time from this project was suggested, such as fencing, planting and water systems put in place, FEPs completed, new farms brought on board and so on. Impact on water quality in terms of E.coli also needs to be monitored robustly.
- Some farmers would like to see a farmers' collective in Rere explored. One farmer proposed a smaller group involving landowners to be formed from this project to continue the work, form a collective plan and take it catchment wide. Support to establish such a collective would be needed. This person suggested paying someone to sit down to draw an overall plan of what needs to be done to address water quality in the catchment, to thrash out with the group: *"We won't change anything unless we can see an overall plan. If GDC are serious and resource it people will come on board"*. The collective could look at seeking funding and getting good deals on things such as poles, planting and water reticulation.

In April 2017, GDC applied to the [Freshwater Improvement Fund](#)<sup>20</sup> for \$800,000 to scale the Rere Project approach to the Wharekopae Catchment. A decision is expected in November 2017.

Key ingredients to scale include a farmer centred process, interagency collaboration, a funding mechanism, skillful facilitation, use of FEPs as a lever for change and quality monitoring and evaluation to track progress.

Future projects of this kind were advised to prioritise communities who are willing, open and proactive. There was some concern however that GDC funding for Rere would be diluted or disappear if this approach moves to other catchments: *"Who will fund all the work needed?"*

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<sup>20</sup> See <http://www.mfe.govt.nz/more/funding/freshwater-improvement-fund>.

# 11. STRATEGIC IMPLICATIONS

*“Communities need to have a rethink. If you want pure water then plant back into native bush around waterways. People also need to be more conscious about what they sprinkle onto their land. The more costs you put on people, the more stock you have to put on to cover them. To work with farmers, it has to be their idea. Work with them reasonably and gradually; strict rules and restrictions will get their back up. You need to go out to people and work with them.”*

The backdrop to the Rere Project is the thorny question of how to fund water quality and other ecological improvements at local and catchment scales, especially on private land.

*“Funding of the future is the big question.”*

*“It’s all driven by the dollar. We need to try and find a balance and a model that’s fair.”*

There is an expectation among Rere farmers that regulatory requirements around land and water for farmers are set to increase. Farmer feedback from this project indicated a range of responses to this expectation, from defiance, to uncertainty and acceptance:

*“Regulatory stuff is coming down, it’s best to get together to get the jump on it. I would like to see more of this kind of work; groups need to stop worrying about fiefdoms. Some people who are commercially driven will miss the boat by going it alone.”*

Some would like farmers to be adequately compensated if they have to retire land surrounding waterways and implement water reticulation:

*“I would like to see central government getting more involved. At least 50% of people going to Rere Falls and Rockslide are from overseas, tax payers and ratepayers need to contribute.”*

Strategic implications from the Rere Project are identified below.

## 11.1 FEP POTENTIAL

As one currently available mechanism to support holistic farm management and better on-farm environmental practices, how can FEPs be maximised? FEPs can be weak mechanisms without support, and support for farmers to complete FEPs now is generally low. Councils and other agencies would do well to invest in the development of FEP advisors who can influence change at the farm level. Engaging farmers in FEPs is likely to be more effective when done by a non-council agency.

FEPs also need regular review to be effective: *“No-one has cracked the review issue and how to have a strong model for FEPs”*. Funding can be sought to develop and implement national software to track and update FEPs. The Rere Project provides a good opportunity to track the extent to which FEP actions are implemented over time and what supports or inhibits their implementation.

## 11.2 HOW TO SCALE?

The Rere Project has identified key ingredients for success at the sub catchment level. Scaling issues include funding, how to achieve a farmer centred approach, how to build in effective farmer incentives, successful interagency collaboration, good communication and robust monitoring of change. This research affirms the view that farmers will need funding and other assistance to improve water quality and other environmental outcomes (van Reenen 2012 p2).

## 11.3 SUSTAINABLE LAND USE POTENTIAL

Economic viability is an issue for some farmers and moving to more sustainable agricultural practices is one of the keys to improving water quality and other ecological outcomes.

On face value, Rere is not an area that is teeming with options in terms of alternative land use – kanuka forestry was mentioned as one potential alternative, along with ecotourism and walking tracks (which at least one local farming family has already set up). Some farmers are reportedly talking about having sheep only strategies, fencing off bush and planting pine. Supporting local farmers to explore alternatives to sheep and beef could be a positive next step in this catchment, to identify economically viable and more environmentally friendly land use alternatives.

Another useful step would be to support farmers around what to do with unproductive areas of land in the short to medium term. If these are planted there is concern however that they would not be able to be utilized later. A key role for research is to identify high impact strategies on farms to address environmental issues, in this case for example putting in alternative water systems.

## 11.4 FARMER COLLECTIVES AND ADVISORY SUPPORT

Some farmers in the Rere Project expressed interest in forming a farmer collective to undertake joint FEPs and seek funding for things such as stock exclusion and water reticulation. Rere farmers also valued the farm site visits in which people shared views on how to improve water quality in tough areas.

Farmer led mentoring and support schemes could be established in Rere and more widely in Gisborne, to help improve practices on-farm. These could be as informal as meeting once a year to discuss challenging farming issues in Rere, to GDC and other agencies helping to set up subcatchment, catchment and district wide farmer mentoring schemes.