PAPANUI

SUB-CATCHMENT PLAN

DRAFT

TLC The Big Picture: Tackling the big issues sub-catchment by sub-catchment

Tukituki Land Care

A COHESIVE VOICE FOR THE LAND

Final Draft 27 March 2025

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Tukituki Land Care

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TUKITUKI CATCHMENT: THE BIG PICTURE

1. Introduction to The Big Picture

1.1. Purpose of The Big Picture

In 2024 Tukituki Land Care (TLC) launched The Big Picture, a six-month project designed to create independent, science-based catchment plans for the 17 sub-catchments of the Tukituki River in Central Hawke's Bay. The initiative identified each sub-catchment's unique environmental challenges and developed practical, cost-effective solutions to address them. As TLC Chair Richard Hilson explained, "We tackled the big issues sub-catchment by sub-catchment, to piece together the bigger picture."

The project employed a comprehensive research approach that combined field investigations, insights from local farmers, and an in-depth analysis of existing studies and data on the Tukituki catchment. Environmental planning consultancy, Environment, Innovation and Strategy Ltd (EIS), led by Matt Highway, undertook this work.

This project reflects TLC's dedication to improving environmental health and farm productivity, paving the way for a sustainable future for the Tukituki community.

1.2. Freshwater status of the Tukituki catchment

Summary of State of the Environment reporting

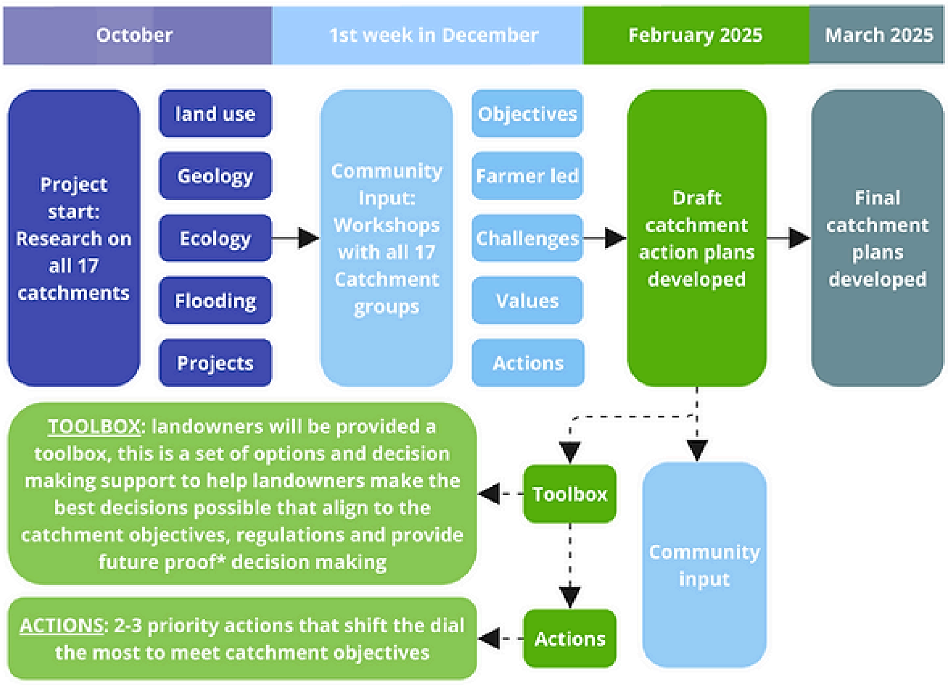
The Tukituki catchment faces water quality, land use, and climate challenges. The catchment, dominated by sheep and beef farming, has experienced significant modifications, leaving only about 10% of its land covered in indigenous vegetation. Water scarcity is a persistent issue, with decreasing river flows over the past three decades, exacerbated by droughts and climate change. Groundwater levels in the Ruataniwha Plains are under strict management to prevent further decline, but interannual variability and climate change pose ongoing risks.

Water quality is a major concern due to high levels of nitrogen, phosphorus, and sediment. The highest nitrogen concentrations in the region occur in streams draining the Ruataniwha Plains, and some areas exceed nitrogen targets by two to four times. Phosphorus and fine sediment issues, linked to erosion, contribute to poor water clarity and degraded aquatic habitats. Toxic algae, particularly Phormidium cyanobacteria, can proliferate in the river during low summer flows, posing a risk to both human and animal health. Despite these issues, the Tukituki River remains generally swimmable, except after heavy rainfall when contaminant levels rise.

1.3. Approach: creating priority actions in the Tukituki

The Big Picture project adopted a highly collaborative approach involving detailed catchment research, GIS mapping, and farmer engagement. Workshops were conducted with local farmers in each sub-catchment to better understand group dynamics, gather community values, and identify key issues and opportunities. Feedback from the workshops, survey results, and field investigations have been used to shape tailored catchment plans aligning with the local communities' specific landscape context and aspirations.

As part of the implementation phase, TLC introduced "THR3E"—three actionable steps designed for farmers in each sub-catchment to implement over three years. The TLC Farmer Toolbox was also launched, providing practical resources to help landowners make informed decisions and maximise the impact of their efforts. Additionally, monitoring strategies are to be implemented, and demonstration sites will be identified to help showcase best practices, ensuring that the plans remain relevant and actionable.



2. Tukituki's Overall Big Picture

2.1. Summary of sub-catchment challenges and priorities

The Big Picture project team has worked with farmers to identify challenges and opportunities in each of the 17 sub-catchments. While each sub-catchment has an individual plan, it is the big picture of the people, the land and the water within the Tukituki that we are trying to collectively support. The approach is reminiscent of a jigsaw puzzle where many pieces fit together and form something greater than themselves as an individual piece. Figure 1 below shows how the Tukituki sub-catchments fit together as a big picture, showing the sub-catchments that are aligned in similar top priorities. Note that the image only shows the proposed highest recommended priority area for each catchment, and all catchments will have multiple outcomes they are seeking.

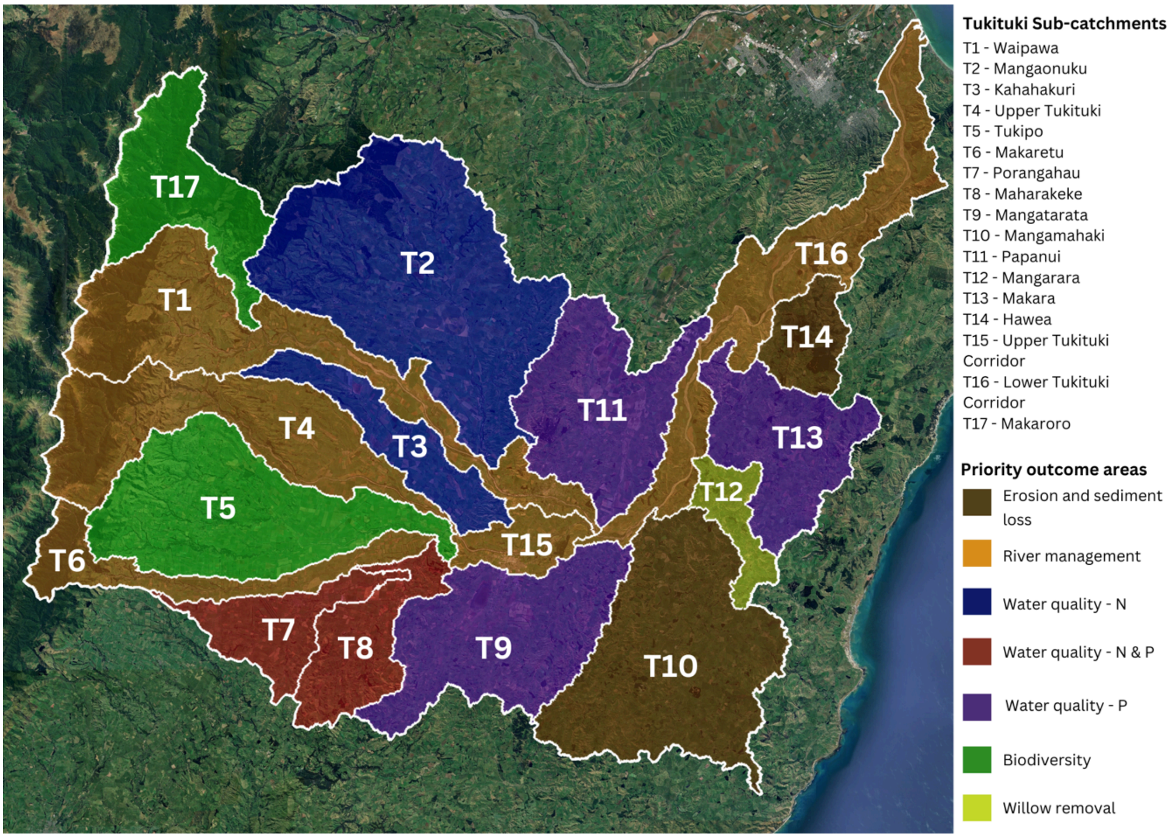


Figure 1 – Sub catchment map for the Tukituki. Coloured areas highlight the recommended priorities for each catchment.

2.2. Outcome areas most sought by farmers (from workshops)

During workshops, farmers were asked to vote on a selection of outcome areas. Below are the top five outcomes:

- Support landowners with the knowledge to make informed decisions to improve the environment
- Improve the flood resilience of the catchment, including upstream and downstream to reduce effects on the community in adverse weather events
- Protect and enhance the economic viability of the area
- Protect and enhance the quality, ecology, mauri of waterways and wetlands
- Represent farmers interests in future regional government setting of rules and regulations

PAPANUI CATCHMENT: CONTEXT AND CHALLENGES

3. Papanui Catchment Context

3.1. Background

The Papanui Catchment which is located in the central part of the Tukituki catchment (figure 2) spans approximately 16,400ha, stretching from just north of Waipawa to Te Aute Hill, south of Lake Poukawa. Once home to expansive wetlands and lakes, the catchment is now dominated by productive agricultural landscapes including sheep, beef, dairy, and various cropping systems.

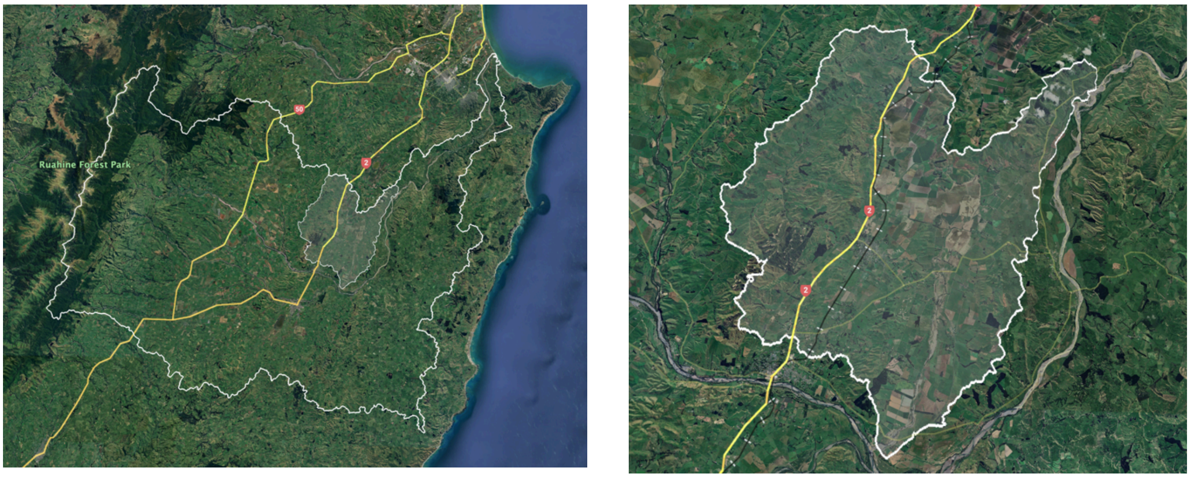


Figure 2 - Location of the Papanui catchment in the wider Tukituki

Historically, the Papanui Catchment was an area of mahinga kai for Māori, providing resources such as freshwater mussels, birds, and flax. The catchment's resource-rich landscape supported numerous pā, many of which were located along waterways and the shores of Lake Roto-ā-Tara. Five marae - Mataweka, Tapairu, Pukehou, Kahuranaki, and Te Whatuiapiti - continue to represent the tangata whenua of the area. These marae remain focal points for the community, offering places to honour traditions and host gatherings, even as many families have moved away for work or other opportunities.

European settlement in the 19th century brought extensive modification to the landscape. Rivers were diverted, wetlands drained, and forests cleared to create farmland. Lake Roto-ā-Tara, once a major feature of the catchment, was drained to reclaim fertile peatlands for agriculture. These changes have shaped the catchment's present form but also left lasting environmental impacts.

Water quality is one of the biggest challenges the catchment faces. High levels of phosphorus in waterways contribute to poor water health and encourage excessive aquatic plant growth, which clogs streams and lowers oxygen levels, impacting freshwater life. On top of this, flooding has become a significant concern. This was highlighted in Cyclone Gabrielle in 2023, which caused widespread damage to farmland and infrastructure.

To date the community has made great progress. Over 88% of the catchment is now covered by Farm Environment Management Plans (FEMPs), helping farmers meet water quality regulations and adopt better practices. In 2018, nearly 4,500 native seedlings were planted along waterways to improve stream health and control weeds. Local schools have supported the catchment community, with students getting involved in riparian planting and stream monitoring. These initiatives are helping to restore the health of the Papanui Stream and its connections to the broader Tukituki River ecosystem, while also ensuring the land remains economically viable and is celebrated for its rich heritage.

3.2. Papanui Catchment Context

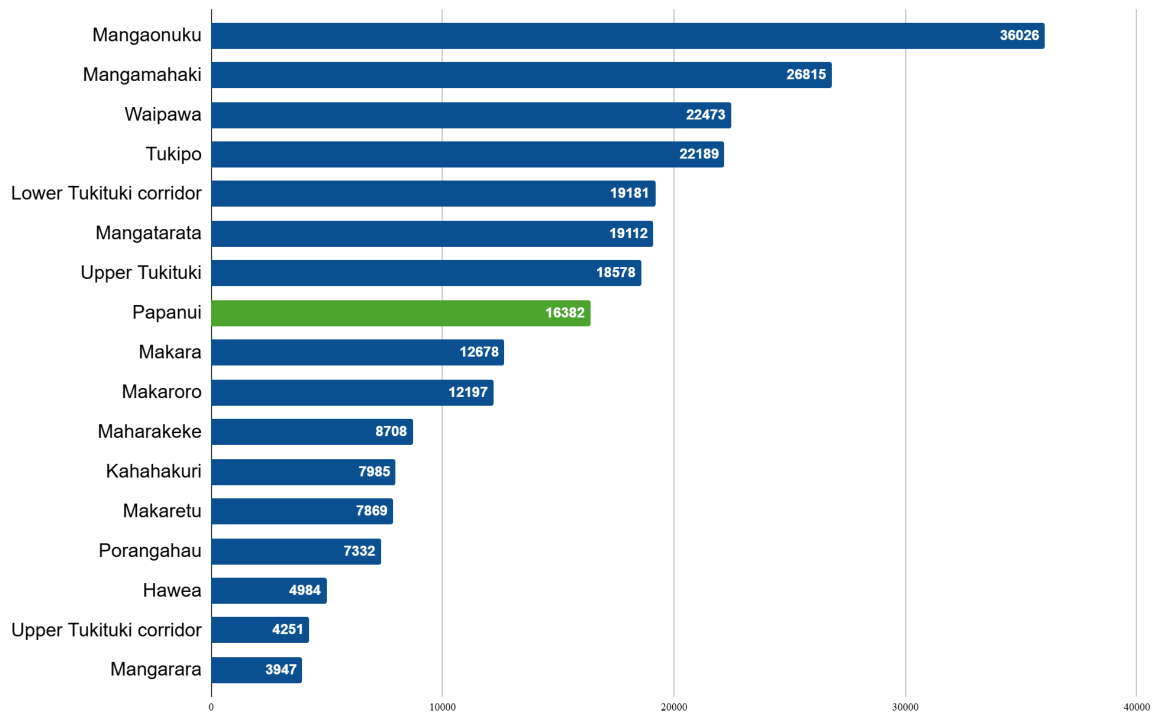


Figure 3 – Tukituki sub-catchment areas in hectares.

The Papanui catchment is 16,382ha in size which amounts to 6.55 % of the wider Tukituki catchment. The Papanui is a moderately sized sub-catchment of the Tukituki, which is 250,000ha in total (figure 3).

Land use in the Papanui is typical of the wider Tukituki catchment with 84% of the catchment in pasture, 10% in arable and 5% in exotic forest. Less than 1% of land cover is in native vegetation.

In 2024 the Papanui catchment used a TLC Demonstration Grant to ensure every child at the two primary schools in the catchment, Ōtāne and Pukehou, spent a day exploring the catchment, testing water quality at a number of sites and learning about the history and context of the catchment. The TLC Demonstration Grant also enabled the purchase of shade cupboards for both schools that will further the students' learning and help support the catchment with suitable native plants.

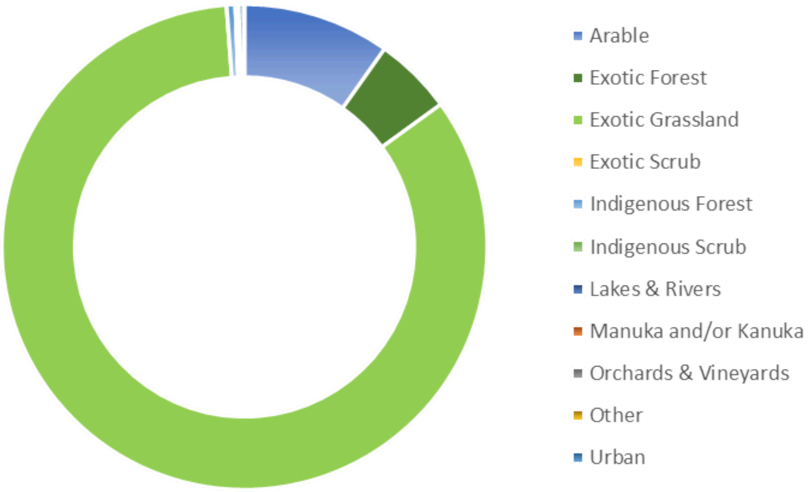


Figure 4 – Land use in the Papanui catchment

3.3. Catchment Challenges and Key Focus Areas

At the Papanui Catchment workshop on 3 December 2024, attendees reflected on their progress as a catchment group and their efforts in addressing water quality and ecological challenges. Since developing the catchment's initial strategy in 2015, the group has focused on finding practical solutions tailored to the catchment's specific challenges. During the workshop, attendees reaffirmed the relevance of the strategy's objectives, highlighting the importance of community-driven actions, celebrating successes, and encouraging a sense of ownership among landowners and stakeholders.

Regulatory changes, community involvement, and ecosystem health remain key challenges in water and land management.

Shifting consenting requirements, including changes to dissolved inorganic nitrogen (DIN) limits and the removal of OVERSEER, have created regulatory uncertainty, slowing progress. Engaging landowners and stakeholders continues to be a hurdle, limiting collaborative efforts. Ecosystem health concerns persist, with biodiversity loss, excessive seasonal instream plant growth, and invasive aquatic plants affecting waterway conditions. The Papanui Stream contributes disproportionately high levels of phosphorus (table 1), further exacerbating water quality issues. Over time, these factors have led to a decline in the mauri of waterways, necessitating ongoing monitoring to ensure DIN levels remain within acceptable thresholds.

Table 1 - Papanui catchment water quality indicators over a five-year rolling average. The standard represents water quality levels based on the Tukituki plan or national standards. See Link to the Papanui dashboard[1] for more information.*

Water Quality Parameter	Papanui	Standard*
Nitrogen (DIN)	0.717 mg/ L	0.8
Phosphorus (DRP)	0.164 mg/ L	0.015
Bacteria (E.coli)	150 (count)	260
Freshwater invertebrates (MCI)	57.3 (index)	100
Sediment (Turbidity)	2.8 mg/ L	5.6 FNU (light)

To address these key challenges, the catchment group will need on four major objective areas:

- Water quality
- Flooding
- Regulation
- Waterways

Priority actions will likely include:

- Controlling the spread of invasive plants such as Glyceria maxima and Cow Cress, with particular attention to preventing further dispersal through equipment movement.
- targeted measures are needed to reduce high sediment loss and enhance land stability in erosion-prone hill country.
- Planting strategies tailored to suit both flood-prone and dryland areas, ensuring resilience across different landscapes.
- Catchment mapping and GIS analysis to identify critical areas for phosphorus, sediment, and nutrient management, allowing for more effective mitigation actions.
- Improving water quality monitoring to help fill data gaps and provide a clearer understanding of historical phosphorus and sediment trends, guiding better management decisions.

[1] https://www.hbrc.govt.nz/environment/farmers-hub/in-the-tukituki-catchment/tukituki-dashboard/papanui-dashboard/

3.4. Landscape Constraints

The Papanui catchment is dominated by flat country in the centre of the catchment with rolling to steep country in the west. Historically, the central catchment would have been wetland areas, which has left behind fertile flat, gley and organic soil (figure 5 - left). The topography and soils have a particular way that they interact with nitrogen and phosphorus. The soils left behind by wetlands will have a low nitrogen loss profile (figure 5 - right) and will often denitrify nitrogen rich water. However, they have a reduced ability to bind phosphorus to the soil, meaning phosphorus will easily leave the soil once in contact with water.

Additionally, given that groundwater is close to the surface on the flat, with a normal range of groundwater between -0.1 m and -2.9 m, nutrient rich water has only a short distance to travel before it reaches water bodies.

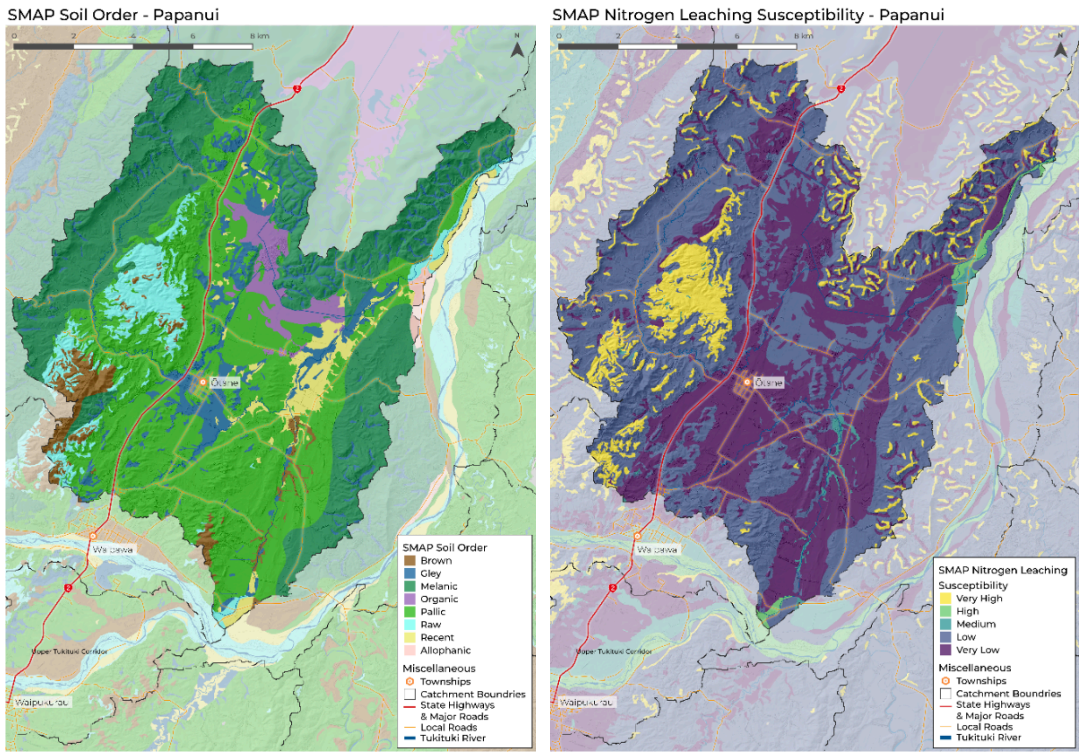


Figure 5 – Left: Soil orders in the Papanui. Right: Nitrogen loss risk in the Papanui. Both data sets have been sourced from SMAP (Manaaki Whenua).

The north and western parts of the catchment would be categorised as hill-country, and susceptible to erosion. Much of the phosphorus lost in a catchment will be attached to soil and dung and be released as erosion in rainfall events. Identification of high risk erosion areas and high flow risk areas like critical source areas (CSA) will help prioritise actions to reduce this risk.

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4. Summary of Challenges, Impacts and Priority Actions

Objective area	Water Quality	Flooding	Regulation	Waterways
Challenge	Very high phosphorus levels DIN levels close to target levels Aquatic biodiversity low.	Productive land in flat floodplains with low flows. Erosion prone hill-country.	Changing regulations and challenges around confidence in OVERSEER, reduce engagement with freshwater issues.	Invasive aquatic plants (e.g. glyceria) Little native riparian habitat Challenges of planting in flood and drought prone areas.
Impact	Waterway health reduced. Decline in aquatic biodiversity Regulation risks.	Damage to infrastructure. loss of productive land. Risk to life and livelihoods.	Challenges for farming in future when limit setting regional plans come into effect. Regulation uncertainty.	Erosion increased and water quality reduced. Money and time spent riparian planting less suitable species.
Priority action	Implement high priority good practice on farms through farm planning. Focus on highly eroded land and edge of field sediment capture to reduce phosphorus levels.	Reduce the impact flooding through soil conservation planting and slowing water in wetlands and bunds. Stabilise streambanks with planting.	Communicate to catchment why action is still important in the absence of regulation. Work with farmers on 'no risk' strategies to improve water quality and reduce the likelihood and impact of future regulation.	Create waterway planting decision support tools. Undertake demonstration planting sites to help farmers confidence in best practice riparian management.

Figure 6 – Summary of the challenges, impacts and recommended priority actions for the Papanui catchment, farmed against the four major objective areas

5. Papanui Implementation

As described above the major challenges can be categorised into four objective areas: water quality, regulation (as a poor driver of change in 2025), flooding and waterways. The below implementation approach, described in figure 7 separates out implementation into three workstreams. The workstreams are described in detail below and are:

1. On farm practice change. This includes good practice guidance and support to help meet water quality challenges and future proofing against regulation.

2. Good practice waterway management, to support landowners make cost effective decisions around Critical Source Areas and waterway management to provide a level of protection against extreme weather events.

3. Project planning leadership which helps meet all objective areas by providing support, funding, expertise, guidance and decision support.

The diagram below (figure 7) and the tables that follow provide further detail on implementation tasks (tables 2,3,4). Implementation is separated out into timeframes and people responsible for each step. The responsible parties are:

- TLC (dark blue), who are to cover overall leadership, development of 'The Big Picture' toolboxes and provide coordination support
- The Papanui catchment group (grey) who are to provide local leadership, engagement with farmers and ensure implementation is carried out
- Farmers themselves (light blue) who are to support the overall goals by implementing priority actions on their farms

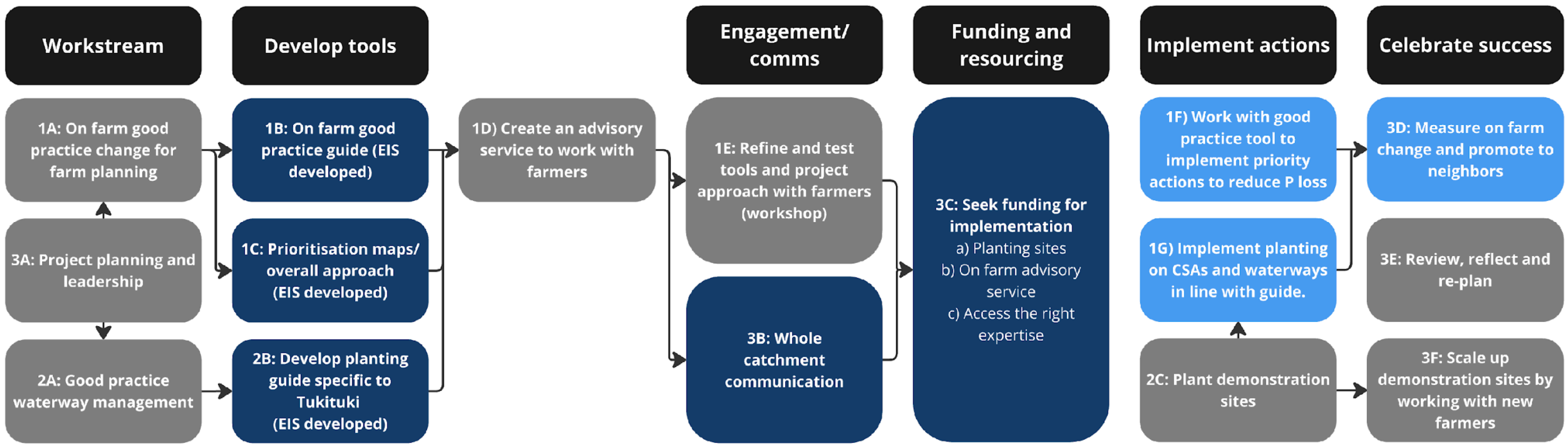


Figure 7 - Logic model for the Papanui Catchment action planning. This flow chart shows the workstreams and steps for priority actions.

Key: Tukituki Land Care | Papanui Catchment Group | Farmers

6. Actions and Workstreams

6.1. Workstream 1: On farm good practice

This workstream is designed to help farmers make practical, informed decisions to improve their land and water management while reducing environmental risks like erosion and phosphorus loss. Testing, refining and using decision support tools and prioritisation maps created by TLC, will help farmers identify the best areas to take action, whether that's planting along waterways, installing sediment traps, or improving planning.

Part of this workstream is an advisory service to provide expert or peer to peer support. The goal is to make it easier for farmers to take actions that not only benefit their farm but also contribute to healthier waterways and farm sustainability. Ideally, funding is available for demonstration projects, and farmer support. This is about making practical, farmer-led improvements that meet objectives identified by the catchment group.

Table 2 – Workstream 1 tasks and details: On farm good practice change for farm planning

Workstream and task	Who?	Details	Estimated costs
1B: On farm good practice guide	TLC	See appendix 1, this tool is a decision support tool to support farmers implement priority actions.	NA Complete
1C: Prioritisation maps/ overall approach	TLC	See appendix 2, this tool is designed to show areas in the catchment where erosion is most likely to occur and where to best build bunds, sediment traps or wetlands.	NA Complete
1D: Create an advisory service to work with farmers	Papanui group	This task is around designing and implementing the best type of advisory service to support farmers in the catchment. Advisors should be able to understand farming, environmental priorities and support farmers to plan and implement actions.	$10k/ year
1E: Refine and test tools and project approach with farmers (workshop)	Papanui group	This task ensures that the toolboxes created, and the advisory service receives farmer input to help ensure implementation success.	$2k
1F: Work with good practice tool to implement priority actions to reduce P loss	Farmers	This task is for farmers to use the good practice decision support tool, to help them implement actions on farm. Either with or without the advisory service.	Farmer cost?
1G: Implement planting on CSAs and waterways in line with guide.	Farmers	This task is for farmers to use the priority mapping tools, to help find and manage CSAs, plant waterways and install water capture devices.	$10k demonstration

6.2. Workstream 2: Good practice waterway management

This workstream is designed to help farmers manage waterways effectively by using the right plants in the right places for the best environmental and farm benefits. Ensuring money and time isn't wasted by inappropriate plant selection or management regime. A planting guide has been developed specifically for the Tukituki catchment to help farmers choose the most suitable plants for their land (see appendix 5). To show how these practices work in real-world conditions, it is recommended that demonstration sites are set up in different locations, including challenging or previously failed areas, to highlight best practices and encourage uptake. These demonstration sites will provide farmers with practical examples of what works, making it easier to apply similar strategies on their own farms. The goal is to improve water quality, reduce erosion, and enhance farm resilience while keeping the approach practical.

Table 3 - Workstream 2 tasks and details: : Good practice waterway management

Workstream and task	Who?	Details	Estimated costs
2B: Develop planting guide specific to Tukituki	TLC	See appendix 5, this tool is designed to enable selection of the right plant in the right place for the right reason.	NA Complete
2C: Plant demonstration sites	Papanui group	Select and plant demonstration sites that show best practice in challenging and varied sites.	$10k demonstration

6.3. Workstream 3: Good practice waterway management

This workstream is designed to make clear that leadership, clear communication, and ongoing learning to support farmers is key to success. This workstream ensures landowners and residents in the catchment will be kept informed about project planning, and work directly with farmers so they can provide feedback and represent the catchment's interests. It also highlights that funding requires effort and good planning is required to support on-the-ground actions and advisory services. Regular reviews will be carried out to assess progress, make improvements, and ensure the project stays effective.

Table 4 - Workstream 3 tasks and details: Project planning and leadership

Workstream and task	Who?	Details	Estimated costs
3B: Whole catchment communication	TLC	Contact (through marketing channels) the landowners and residents in the catchment to outline planning, timelines and approaches. Seek feedback on plans. Enable residents in the catchment to communicate on the catchment's behalf.	In kind
3C: Seek funding for implementation	TLC	Once planning is finalised seek implementation funding for on the ground action and advice.	In kind
3D: Measure on farm change and promote to neighbours	Farmers	Ask farmers to communicate back about what works and what doesn't. Seek their support to engage other farmers.	$2k
3E: Review, reflect and re-plan	Papanui group	Monitor and evaluate current plans and approaches. Change where required and keep going.	$2k
3F: Scale up demonstration sites by working with new farmers	Papanui group	Have demonstration days and promote through advisory networks or through communication channels to seek scale.	

APPENDICES

7. Appendix 1- TLC On-Farm Action Planning Tool

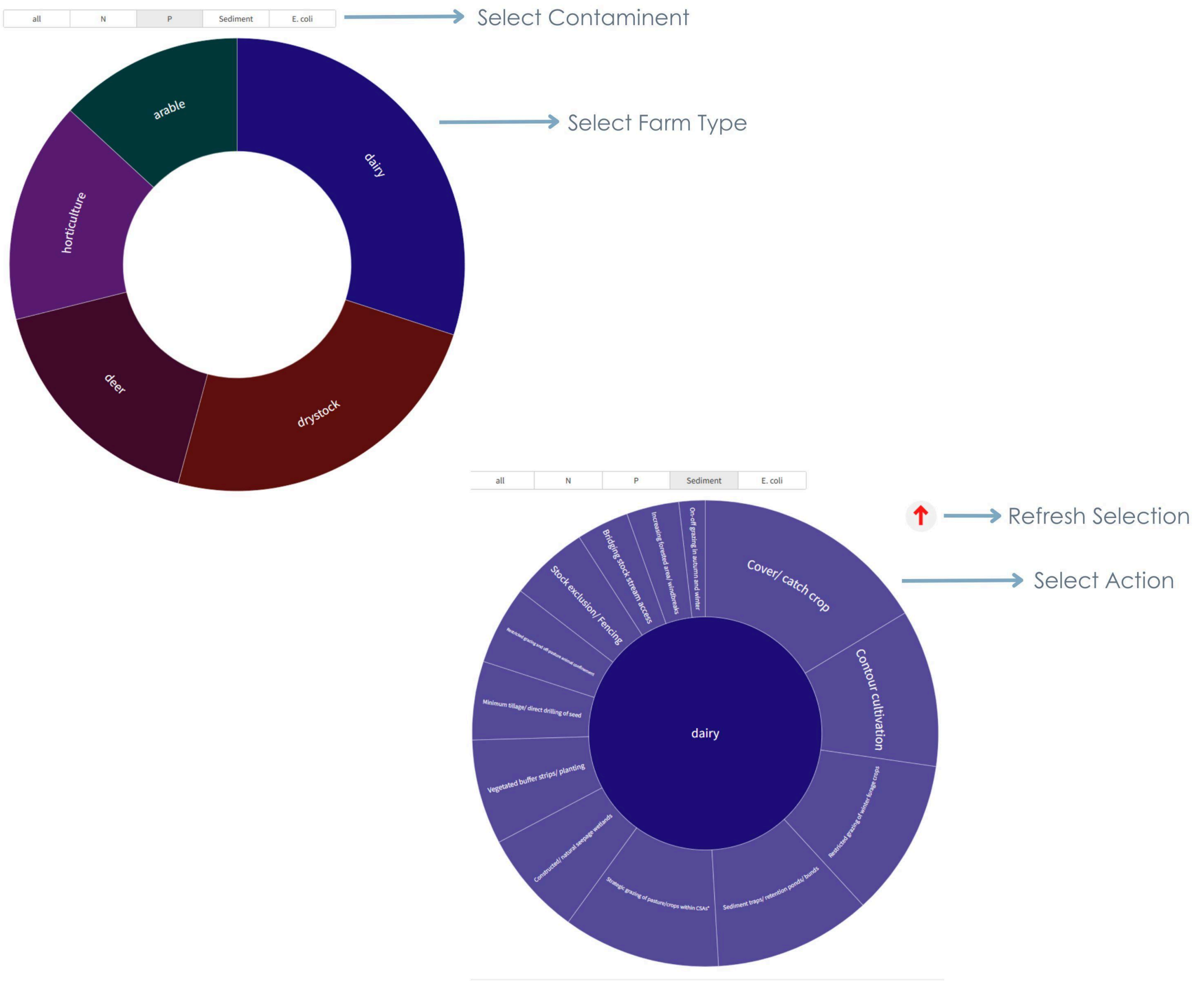
This decision-support tool is designed to help farmers identify and prioritise cost-effective environmental actions on their farms. Use the filters to explore mitigation options by contaminant and farm type.

The larger the section, the greater the impact and cost-effectiveness of the mitigation. Recommended actions are displayed in descending order, starting from the top and progressing clockwise around the circle.

How to use the tool:

Visit the TLC Farmer Toolbox at www.tukitukilandcare.org/toolbox, select the On-Farm Action Planning Tool and follow these steps:

1. Select a contaminant.
2. Choose your farm type.
3. Select an action to view more details.
4. Click the red arrow to reset your selections.



8. Highly Erodible Areas

8.1 Highly erodible areas using mapping

Each catchment in the Tukituki has been mapped using LiDAR and the revised universal soil loss equation (RUSLE) has been applied. The equation, described in IECA as having the following form: $A = R \cdot K \cdot LS \cdot C \cdot P$ where A is the annual soil loss due to erosion (t/ha year); R the rainfall erosivity factor; K the soil erodibility factor; LS the topographic factor derived from slope length and slope gradient; C the cover and management factor; and P the erosion control practice factor. The limitations of RUSLE are that it only accounts for soil loss through surface erosion (sheet and rill erosion) and ignores the effects of gully erosion.

This model enables understanding of the highest risk areas within the catchment, where soil loss is mostly likely and where to prioritise soil conservation measures

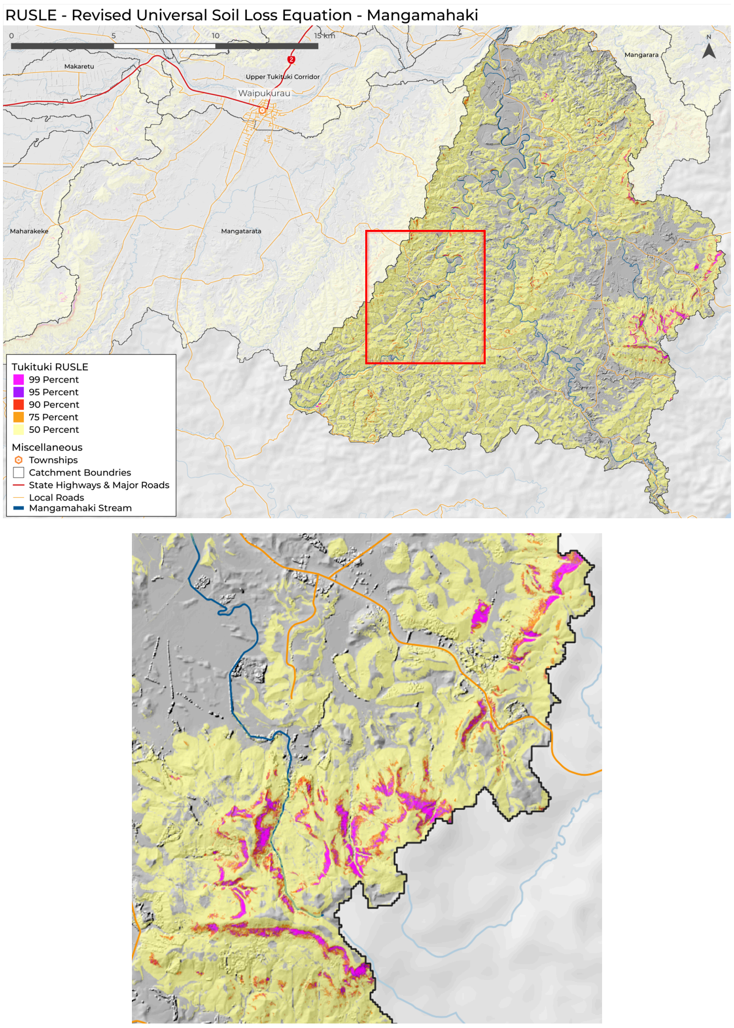


Figure 8 – RUSLE model at sub-catchment scale. High risk erosion is mapped at 99%, 95%, 90%, 75% and 50%, throughout the Tukituki catchment.

8.2 Farm planning using RUSLE

As HBRC's high resolution LiDAR data set enables high resolution mapping and prioritisation of action at Tukituki, sub-catchment and farm scale. If erosion, sediment or phosphorus is a priority for the sub- catchment, using this model will help find the areas to prioritise.

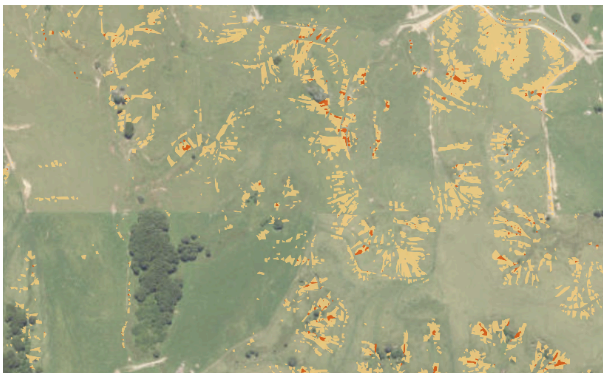


Figure 9 – From a farm planning point of view the RULSE can be used to prioritise areas to implement soil conservation measures.

8. Appendix 3 - Flow mapping to understand sites for sediment trapping

8.1. Identification of sites for edge of field mitigations (wetlands, dams, bunds)

Topographic Wetness Index (TWI) is a measure of how likely an area is to accumulate and retain water based on its slope and contributing upslope area. TWI identifies wet or poorly drained areas in a landscape, making it useful for understanding placement of edge of field[2] mitigations like bunds and wetlands.

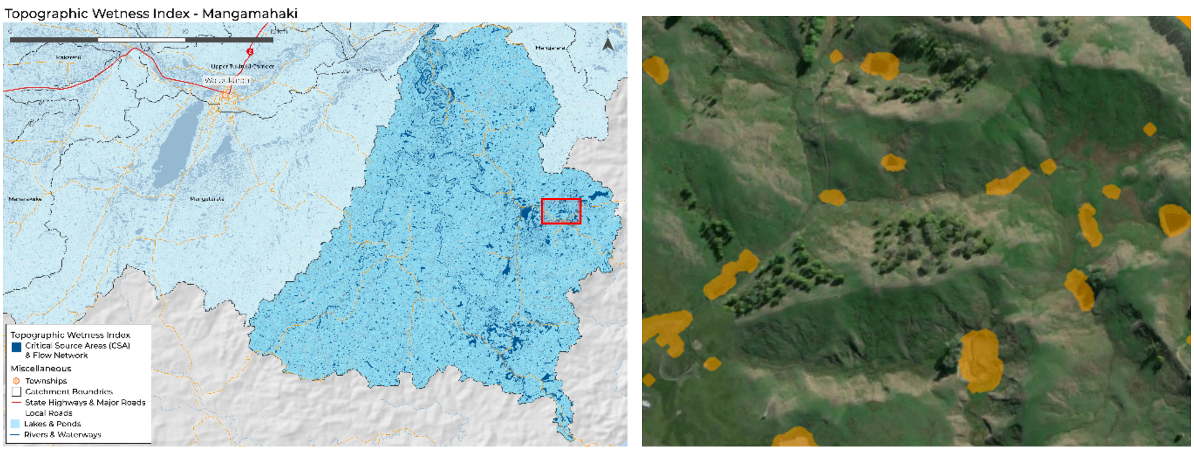


Figure 10- TWI example in a sub-catchment. Using the data layers supplied by EIS will enable exploration of the data using GIS or Google Earth.

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[2] Edge of field tactics are a group of mitigations that operate downstream of a contaminant source, and capture water to treat it. They are normally placed in overland flow path channels before water enters main waterbodies.

TWI can be a very useful tool in catchment and farm planning for those wanting to implement over and above farm actions. It does need ground truthing but can be useful in finding appropriate sites, with an estimate of water accumulation areas and volumes.

It is important to note that the edge of field mitigation needs to suit the outcome each catchment is seeking. TLC will have to be aware of single focus edge of field, which has become a common narrative in New Zealand. For example, promotion of single solutions like installing only constructed wetlands or detention bunds (detainments bunds) was common in freshwater management during the 2010s.

Figure 12 – Examples of edge of field mitigations, from large detention bunds, large wetlands through to in-line or off-line sediment traps.

9. Appendix 4 - Erosion control and sediment capture actions and effectiveness

9.1. Erosion control

There is a wide range of tactics that can be used in hill country landscapes. Table 2 below outlines the typical soil conservation tactics available for deployment in rural landscapes. The table outlines each tactic’s application, and the probable sediment loss reduction based on relevant literature.

Table 2 – Summary of the effectiveness and application of soil conservation treatments. In general, reduction percentage described below outlines the improvements possible from deploying that tactic compared to undertaking no actions at a site.

SOIL CONSERVATION TACTICS	Mass wasting (deep e.g. earth flows)	Mass wasting (shallow e.g. soil slips)	Sheet and Rill	Waterway Erosion	Gully	Tunnel gully	Erosion reduction
Space planted trees (poplars & eucalypts)	✓	✓	✓	□	✓	✓	14-70%;
Afforestation -Exotics (pines)	✓	✓	✓	□	✓	✓	87% vs pasture 19-66% in gullies 50% catchment wide
Afforestation - Manuka	✓	✓	✓	□	✓	✓	90% fewer landslides vs pasture
Afforestation - Kanuka	✓	✓	✓	□	✓	✓	65% vs pasture
Afforestation -Natives	✓	✓	✓	□	✓	✓	74% less landslides 87% less volumetric

9.2. Sediment capture

Sediment reduction and edge of field approaches to reduce the impact of soil loss have been researched less in New Zealand than afforestation and soil conservation. The below list outlines the known major interventions that can be applied in the rural landscape. The interventions exclude good management practices like stock exclusion of waterways, pasture and grazing management.

Table 3 below outlines the typical sediment attenuation tactics available for deployment in rural landscapes. The table outlines each tactic's application and the probable sediment loss reduction based on relevant literature.

Table 3 – Summary of the effectiveness and application of sediment reduction treatments that are typically applied. In general, reduction percentage described below outlines the improvements possible from deploying that tactic compared to undertaking no actions at a site.

SEDIMENT REDUCTION TACTICS	Mass wasting (deep e.g. earth flows)	Mass wasting (shallow e.g. soil slips)	Sheet and Rill	Waterway	Gully	Tunnel gully	Sediment attenuation
Grass buffers (see filter strips also) pastoral farming	☐	☐	✓	☐	☐	☐	20-30% (channelised flow) 40-80% (non channelised)
Critical Source Area management	☐	✓	✓	☐	☐	☐	20-30% (pastoral farming - channelised flow)
Grass filter strips (see buffers also)	☐	☐	✓	✓	☐	☐	90% (Tss reduced). Grass 90% better than bare soil (AC)
Detention bunds	☐	✓	✓	☐	☐	☐	70% 23-79% (Decanting earth bund)
Sediment traps (land based)	☐	☐	✓	☐	☐	☐	50-60%
Wetlands	✓	✓	✓	✓	☐	☐	60-80%
Sediment trap and wetland	☐	✓	✓	✓	☐	☐	70%
Sediment Traps (Inline waterway)	☐	☐	☐	✓	☐	☐	50%
Sediment retention pond	☐	✓	✓	☐	☐	☐	33%
Debris dams	☐	☐	☐	☐	✓	☐	80%

10. Appendix 5 - TLC Plant Selection Tool

This decision-support tool is designed to help farmers choose the right plants for on-farm environmental projects by matching the planting zone and soil type with suitable species.

Use the filters to explore options based on your specific conditions and requirements. The larger the section, the better suited the plant is to the selected environment. Recommended plants are displayed in descending order, starting from the top and progressing clockwise around the circle.

How to use the tool:

Visit the TLC Farmer Toolbox at www.tukitukilandcare.org/toolbox, select the Plant Selection Tool and follow these steps:

1. Select the planting zone from the drop down list.
2. Select your planting priority.
3. Select a species for more information.
4. Click the red arrow to reset your selections.