

Kōrero mai

Have your say on improving our waterways

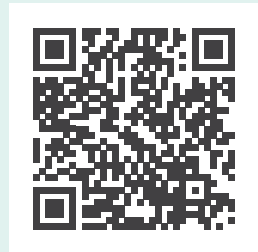
The Ōtūkaikino Draft Stormwater
Management Plan

ccc.govt.nz/haveyoursay

Tell us what you think by
Tuesday 2 May 2023

How to have your say

We'd like your feedback on the Draft Ōtūkaikino Stormwater Management Plan. Submissions can be made until **Tuesday 2 May 2023**.



ccc.govt.nz/the-council/haveyoursay/show/574



Online: ccc.govt.nz/haveyoursay



Email*: engagement@ccc.govt.nz



Deliver to*

Attention: Krystle Anderson
Te Hononga Civic Offices
at 53 Hereford Street by
5pm Tuesday 2 May 2023



Post to*

Freepost 178 (no stamp required)
Attention: Krystle Anderson
Christchurch City Council
PO Box 73016
Christchurch 8154

* Please include your full name and postal address. If your feedback is on behalf of a group or organisation, you must include your organisation's name and your role in the organisation.

Please note:

We require your contact details. Your feedback, name and address are provided to decision makers. Your feedback, with name only will be available on our website. However, if requested we will make feedback including contact details, publicly available. If you feel there are reasons why your contact details and/or feedback should be kept confidential, please contact the Engagement Manager by phoning (03) 941 8999 or 0800 800 169.

Talk to the team

If there is a community meeting you would like us to attend, please let us know. You can also phone any time to speak with us directly about this project.

Krystle Anderson
Engagement Advisor
03 941 8096
engagement@ccc.govt.nz

ccc.govt.nz/haveyoursay

Read the full draft plan

This is a summarised version of the full Ōtūkaikino Stormwater Management Plan, for the purposes of consultation.

You can download and read the full draft plan on our website at ccc.govt.nz/haveyoursay or contact us for a printed copy.

What's stormwater?

Stormwater is any water that falls on roads, paths and other hard surfaces. The water picks up pollution from these surfaces and then flows via drains into local waterways. This affects the water quality and health of local streams and rivers.

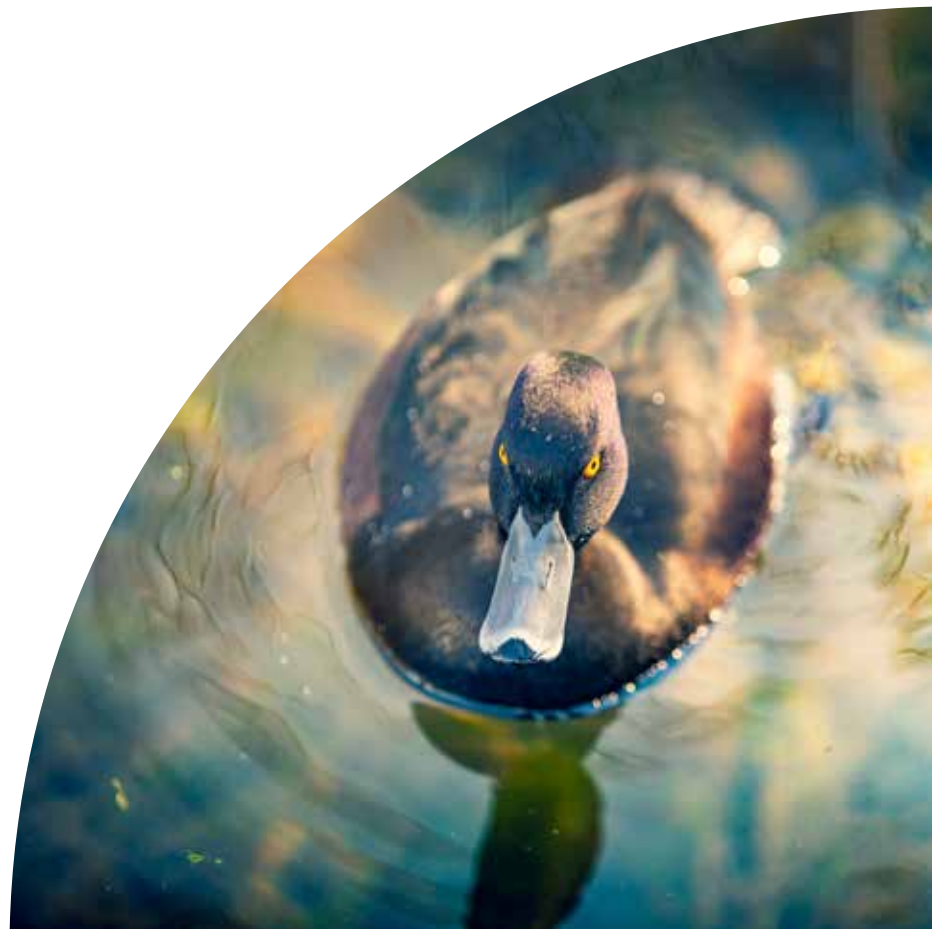
What's a stormwater management plan?

A stormwater management plan sets out the ways Christchurch City Council will meet the requirements of its stormwater resource consent, which was granted by Environment Canterbury in 2019. This 25-year resource consent is called the Comprehensive Stormwater Network Discharge Consent (CSNDC). Its purpose is to improve surface and groundwater quality and address problems caused by the nature of stormwater discharged into waterways. It promotes water quality improvements over time in order to meet targets in the Land and Water Regional Plan.

What's the purpose of the Ōtūkaikino Stormwater Management Plan?

The Ōtūkaikino Stormwater Management Plan has three key purposes:

1. To propose targets for lowering stormwater contaminants.
2. To describe the ways stormwater discharges will be improved over time to meet environmental objectives.
3. To discuss how flooding risks will be dealt with, if there are any.



Compliance and beyond

This stormwater management plan sets out what we need to do in order to meet the conditions of the CSNDC – compliance. A separate Surface Water Improvement Plan, expected to be delivered in 2023, will set out the ways we want to go above and beyond those conditions – improvement. This second plan will be considered as part of the Council’s next Long-Term Plan.

Compliance

Comprehensive Stormwater Network Discharge Consent (CSNDC) (standards and targets)



Stormwater Management Plan

A plan to meet standards and targets set by the CSNDC to limit the contaminants being discharged into waterways.

Improvement

Integrated Water Strategy 2019 (goals and improvements)



Surface Water Improvement Plan

(expected delivery end of 2023)

A plan identifying the best practicable options to control contaminants at their sources and to improve ecology and stream health over the long term.

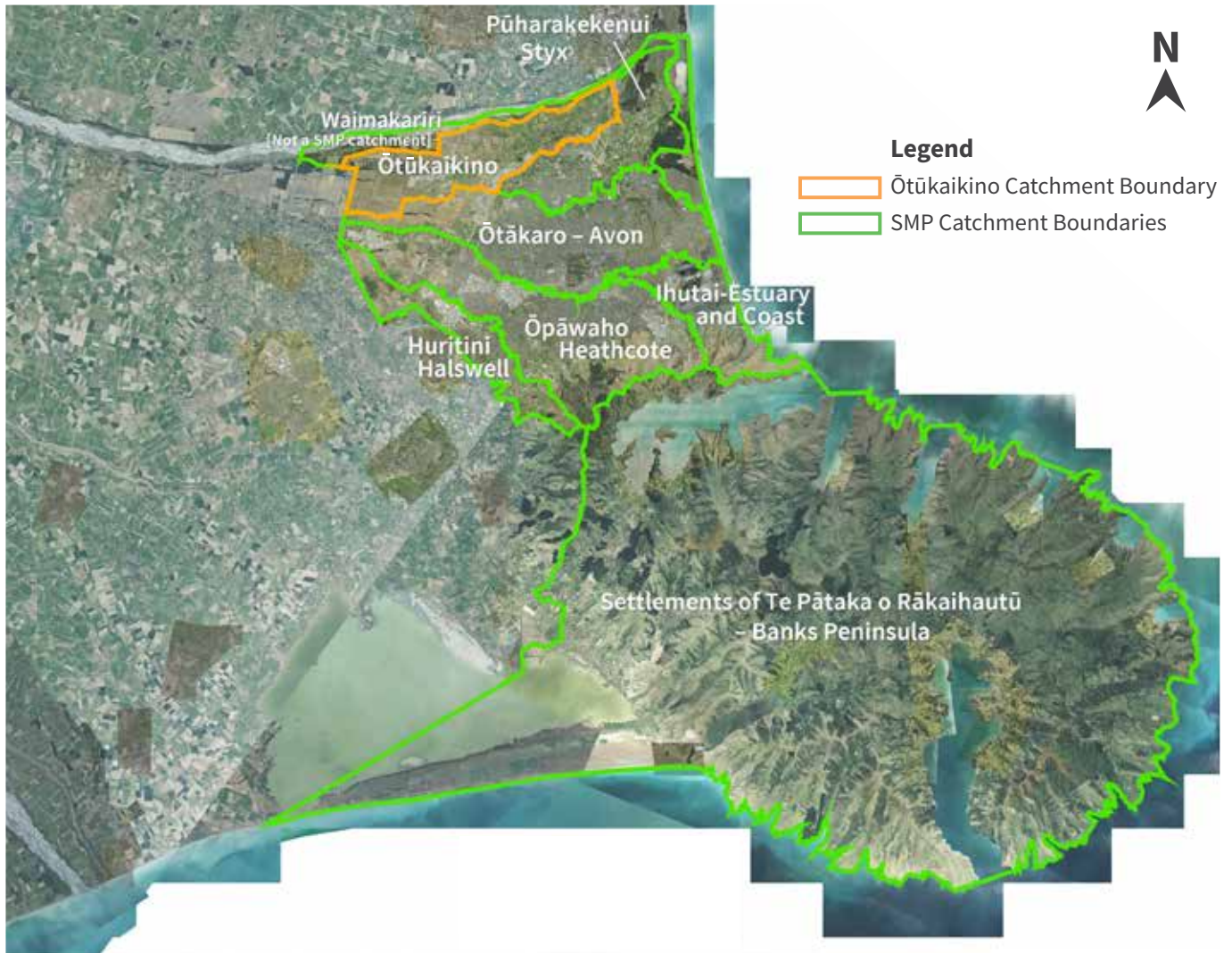


Both plans will be funded through the Council’s Long-Term Plan 2024–2034.



Coverage

This Stormwater Management Plan is one of seven plans being prepared over the period 2020 to 2024 for the Ōpāwaho-Heathcote, Huritini-Halswell, Pūharakekenui-Styx, Ōtākaro-Avon, Ihutai-Estuary and Coastal and Ōtūkaikino catchments, and the Te Pātaka-o-Rākaihautū Banks Peninsula settlements.



The boundaries of the seven stormwater management catchments within the area covered by the Comprehensive Stormwater Network Discharge Consent.

The Ōtūkaikino catchment

The Ōtūkaikino catchment covers an area that, until the 1930s, was the old river bed of the main (south) branch of the Waimakariri River. The catchment lies north of Johns Road, from Chattertons Road to the Main North Road and Chaney's Road intersection. This area is 6,200 hectares.

The Ōtūkaikino Creek and several other streams flow all year round, fed by water from the Waimakariri River. The eastern parts of the catchment are drained by pipes and drains, but rainfall and stormwater from the western half of the catchment drains into the ground, which is gravelly

and porous. The Ōtūkaikino Creek and its tributaries have the best water quality in the city.

Belfast, part of Chaney's, McLeans Island, and Coutts Island are all located within the Ōtūkaikino catchment area.

The main issues

Water quality and ecological health

Most Ōtūkaikino waterways are in rural parts of the catchment and don't face the same issues as urban streams and rivers throughout the city.

Stormwater runoff from the western part of the catchment goes into the ground either naturally or via private facilities, while stormwater runoff from the eastern part of the catchment enters the Ōtūkaikino Creek near Belfast.

The ecological health of the Ōtūkaikino Creek is classed as "good" and the creek is relatively free from contaminants, aside from those typically linked to agriculture.

It's important that we future proof the stormwater network to support increasing residential development in the catchment area so that stormwater is adequately treated before being discharged into waterways.

The draft Stormwater Management Plan for Ōtūkaikino proposes that all stormwater will be treated through basins and wetlands, or infiltrated into the ground. Treatment basins and wetlands don't remove all contaminants from stormwater, so the Council will need to monitor the condition of the creek for changes.

Flooding risks

The geography of Christchurch makes it vulnerable to flooding and stormwater management plans are an important tool for managing the effects of flooding on residential, commercial and industrial areas.

Urban parts of the Ōtūkaikino catchment are protected by a stopbank along the south bank of the Waimakariri River. It is known as the primary stopbank. A secondary stopbank runs along the edge of the urban area. Both are maintained by Environment Canterbury.

Residential, commercial and industrial land along Johns Road and in parts of Belfast sits above the anticipated level of flooding from the creek, providing protection and adequate drainage for stormwater. Localised flooding is possible in some of the low-lying parts of Belfast. The Waimakariri stopbanks reduce the impact of extreme flooding and would provide protection if the Waimakariri River breached its banks.

While the Council doesn't currently need to manage flooding in the Ōtūkaikino Creek, the draft Stormwater Management Plan considers the way we manage surface flooding to enable development to continue safely.

Tangata whenua and cultural values

Values

Water is a taonga (a treasured natural resource) and represents the lifeblood of the environment for tangata whenua. A relationship with the environment is central to Māori creation stories, spiritual belief, and ways to manage resources. Land, water and resources are a statement of identity. In a particular area, they relate to a group's origin, history, and tribal relationships. The whakapapa of a waterway would determine its use in tohunga (spiritual), waiwhakaheketupapaku (burial sites), waitohi (spiritual use), waimataitai (coastal mix of fresh and salt water, estuaries), waiora (spiritual healing water), and mahinga kai (food gathering).

The maintenance of water quality and quantity is perhaps the greatest resource management issue for tangata whenua.

All waterways are a major feature within the landscape and should remain unchanged. Culturally, all waterways are significant and come together as one. Waterways begin as rain drops and connect together as streams, lakes, estuaries, and wetlands, all leading to the sea.

Ōtūkaikino

The Ōtūkaikino Creek formed along the old river bed of the Waimakariri River. The Waimakariri River, is one of the largest rivers in Canterbury and until the 1930s, the main branch of the river ran through the Ōtūkaikino catchment.

Historically, the Waimakariri River is highly significant to mana whenua, as it is associated with many mahinga kai sites, urupa, kāinga and kāinga nohoanga. The name Ōtūkaikino also refers to a protected wetland reserve to the east of the waterway, which has been designated by mana whenua as a traditional wai whakaheke tūpāpaku (water burial site).

A cultural health assessment of this catchment was carried as part of the 2022 mātauranga monitoring report. The monitoring indicated that the catchment is in moderate cultural health, with sites where extensive restoration works have been undertaken scoring the highest. Over the years the catchment has been highly modified from a braided river to a low plains spring-fed stream and adjacent agricultural land uses and roads were identified as the largest pressures on site health.

Position Statement

A Position Statement on the Ōtūkaikino Draft Stormwater Management Plan is being prepared by Mahaanui Kurataio. The Position Statement was not delivered before the consultation period. When it is available you can download and read the full statement on our website at ccc.govt.nz/haveyoursay





Controlling the contaminants



What we know about sediment

- Road wear and vehicle tyres are believed to be a major source
- Therefore stormwater discharges are a significant source
- Construction is a source
- Pastoral activities are a source
- Deposits from the atmosphere are a moderate source
- Stream-bank erosion may be a source.



What we know about copper

- Vehicle brake-pads are a major source of copper
- Copper in rainfall contributes
- Soils are a minor to moderate contributor
- Small changes in the number of copper roofs can affect copper concentrations in stormwater
- Products used to clean roofs and pathways may contribute.



What we know about zinc

- Roofs are the source of maybe 65-70 per cent
- Tyres are the source of maybe 25-30 per cent
- Other zinc-coated steel items (fences, ventilation ducts, poles) may produce 1 to 5 per cent
- House and garden products (e.g. moss control) make some contribution
- Soil contributes to a small extent.

Possible ways to control contaminants

Contaminant	Source	Possible controls	Near-term c controls
Sediment, copper, zinc	New land developments	<ul style="list-style-type: none"> Council facilities On-site (private) devices 	<ul style="list-style-type: none"> Council facilities On-site (private) devices
Sediment	Construction and excavation sites	Put in place ways to monitor and manage on-site erosion and sediment.	The Council requires building sites to put in place erosion and sediment control measures to manage on-site erosion and sediment.
Sediment	Roads	<ul style="list-style-type: none"> Treat run-off from main roads Road sweeping on many roads 	<ul style="list-style-type: none"> Treat run-off from some main roads Road sweeping; frequency could potentially increase
Zinc	Bare steel roofs (new)	<ul style="list-style-type: none"> All new roofs zinc-free (non-steel) or low-zinc Treat all roof run-off 	<ul style="list-style-type: none"> Old roofs replaced with less polluting materials Treat very contaminated roof run-off
Zinc	Poorly maintained residential roofs	Most residential roofs are painted. Educate property owners about paint maintenance.	Old roofs replaced with less polluting materials. Educate property owners about paint maintenance.
Zinc	Vehicle tyre wear	A non-toxic tyre alternative introduced by industry.	No near-term solution is known about.
Copper	Vehicle brake-pads	<p>Legislation requiring low or no copper in brake pads.</p> <p>Stormwater treatment.</p>	Educating the industry and consumers about choosing low or no copper in brake pads.
Copper	Architectural copper (roofs, spouting)	Architectural copper could be banned.	Clear coating over copper cladding to immobilise copper.
Industrial waste and spills	Poorly controlled industrial sites	Surveillance, education, site improvements, enforce.	Surveillance, educate, site improvements, enforce.



Comment	How controls could be put in place
This is a partial solution, as it would only apply to the development of new land.	Build facilities in new developments to limit increases in flow rate and to capture suspended solids.
This has been difficult and often poorly managed on-site. However, erosion and sediment control measures are now being regularly checked by building inspectors.	Now required as a condition of resource consents.
Would also remove some zinc and copper.	Introduce run-off treatment for busy roads over the long term.
Pre-painted aluminium/zinc coated roofing is the most common new residential roofing type.	Investigate various mitigation options and choose a best practicable option.
Old paint coatings expose zinc primer and zinc substrate. This is about half as bad as having a bare roof.	Investigate various mitigation options and choose a best practicable option.
<ul style="list-style-type: none"> • There is no current alternative. • Keep monitoring overseas developments. • Stormwater treatment is only partially effective. 	Work with the Government through the Ministry for the Environment.
<ul style="list-style-type: none"> • This is already happening in the USA. • There are some low-copper pads available in NZ. • Stormwater treatment is only partially effective 	Copper brake-pads are becoming available by market forces and/or Government regulation.
Storm-water runoff from copper roofs must be treated (CCC Bylaw requirement)	District Plan rule or controls through the Building Act.
The Council's Pollution Prevention Team is working on this.	Contaminating materials could be better contained on-site; some contaminants could be diverted into the sewer.

Our goals



1. Control sediment discharges

Our goals are:

- 1.1. To ensure the quality of stormwater from all developed areas is treated to best practice.
- 1.2. To have 100 per cent of stormwater treatment facilities built and operating to Waterways and Wetlands Design Guidelines standards.
- 1.3. To have less than 5 per cent of all consented construction activities reported non-compliant due to sediment discharges – by 2025.
- 1.4. To investigate ways to reduce the environmental effects of sediment discharges – by 2023.
- 1.5. To look at options for carrying out street sweeping, sump cleaning, and send-to-wastewater trials – in 2022/23.

Recommended for the Surface Water Improvement Plan

- 1.6. Reduce road sediment by the best practicable option determined by the results of street sweeping, sump cleaning and trialling alternative treatments.



2. Control zinc contaminants

Our goals are:

- 2.1. To have 100 per cent of stormwater treatment facilities constructed and conforming to Waterways and Wetlands Design Guidelines standards.
- 2.2. To investigate zinc mitigation measures and carry out cost/benefit analyses toward identifying their effectiveness as best practicable options – by 2023.
- 2.3. To consult with key stakeholders and identify a long-term zinc strategy in line with current technologies – by 2025.
- 2.4. To collaborate with local and regional government in a joint submission to central government seeking national measures and industry standards to reduce the discharge of contaminants from buildings and vehicles.

Recommended for the Surface Water Improvement Plan

- 2.5. Adopt a strategy to limit zinc, based on finding the best practicable options.
- 2.6. Research and trial ways of trapping roof-sourced zinc on-site.



3. Control copper contaminants

Our goals are:

- 3.1 To consult with the Government, through the Ministry for the Environment, about legislation to limit the copper content in vehicle brake-pads.
- 3.2 To not permit stormwater discharges into the network from unprotected copper building cladding, spouting or downpipes.
- 3.3 To investigate a District Plan rule to discourage the use of copper building claddings.



4. Control industrial site contaminants

Our goals are:

- 4.7. To compile a database of industrial sites considered to be medium or high risk based on the best available information – by 2025
- 4.8. To audit high-risk industrial sites by the approved procedure under the Comprehensive Stormwater Network Discharge Consent.



5. Engagement and education

Our goals are:

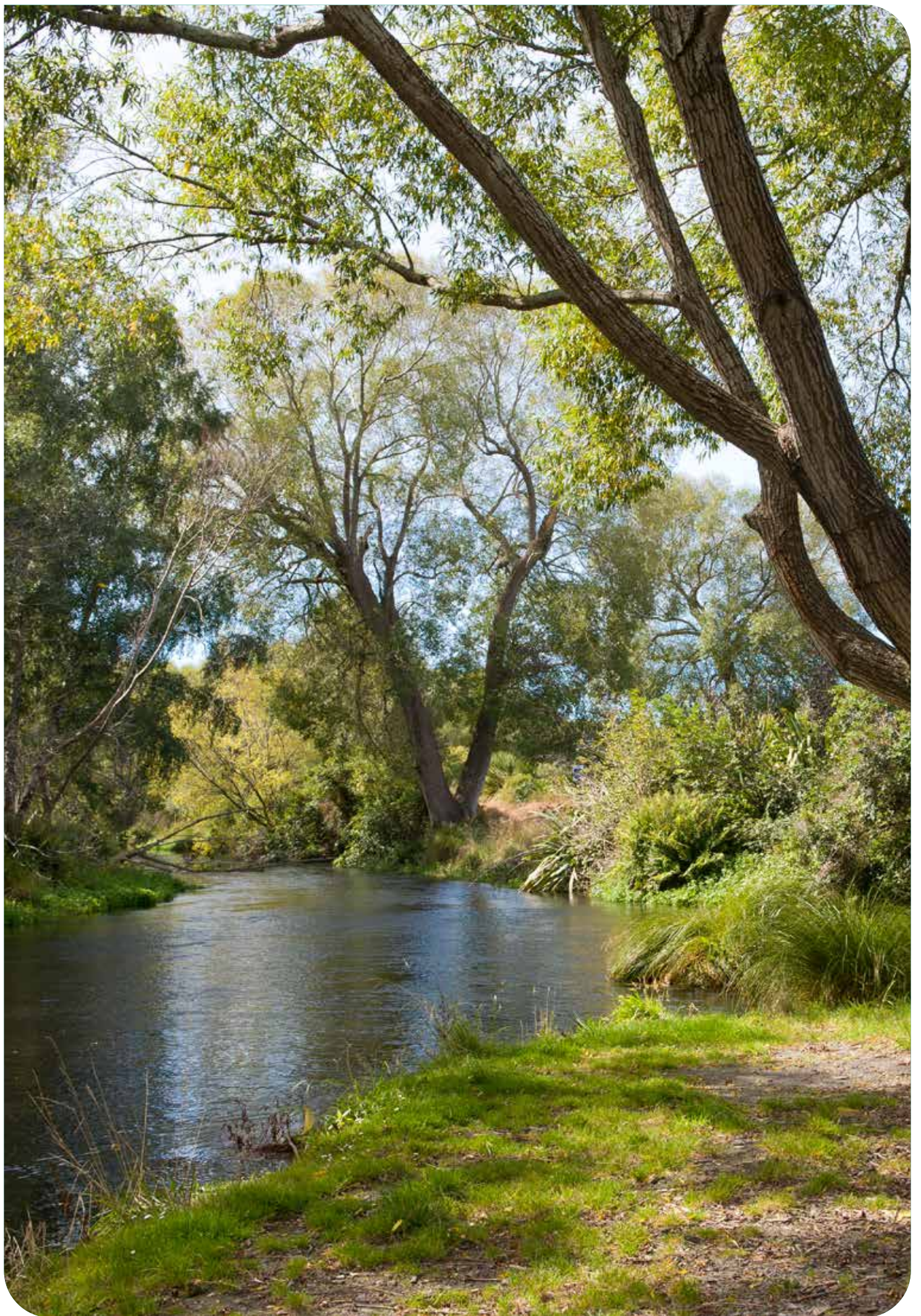
- 5.1 To work with community groups to educate participants about current stormwater practice and to enable the public to take action to stop contaminants at source – by 2025.
- 5.2 To engage regularly with the Ministry for the Environment to collaborate on initiatives to reduce contaminants – by 2025.



6. Manage flooding

Our goals are:

- 6.1 To limit the quantity of stormwater from all new development sites to pre-development levels, and minimise stormwater increases from re-development sites through consent conditions.
- 6.2 To protect houses from flooding during and after development by having controls on new floor levels.
- 6.3 Continue to improve flood models and our knowledge of flood risks.



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