Ashley Rakahuri flood resilience project: frequently asked questions

August 2026

Q: What is this project all about?
A: We're in the early stages of an eight-year project to strengthen flood resilience along 22km of the Ashley Rakahuri River.

Our modelling shows there is a risk of floods breaking out along the river, so we're investigating different ways to reduce this risk. This could include strengthening the existing stopbanks, creating additional stopbanks to contain flows, or widening the river.

The aim is to improve flood resilience for Rangiora, Kaiapoi, Waikuku, and surrounding lifestyle blocks and farmland.

Q: Why is this work needed now?
A: While the existing stopbank scheme has protected the district for around 70 years, the risk it is managing has increased.

Across the country events such as the Kaikōura floods and Cyclone Gabrielle have shown that extreme rainfall and flooding are occurring more often and causing more damage than in the past. Scientific evidence shows that these types of events are becoming more frequent and intense.

At the same time, the consequence of flooding has increased with more people, homes, businesses, and infrastructure now located within floodplains. This project aims to ensure our flood protection reflects today's risks.

Q: What are the options being considered?
A: We're considering a range of possible solutions which may be combined, including:

- Upgrading or modifying the existing primary stopbank
- One or more secondary stopbanks
- Managed floodways
- Stopbank retreat
- Berm vegetation management
- Wetland creation / room-for-the-river approaches
- Gravel management

We may need to use different approaches for different parts of the river.

Q: How are you approaching this work?
A: Flood breakouts can travel in different directions and have varied impacts in different places. That's why we're looking at the river in three reaches, each requiring different ways to manage breakout flooding risk. The reaches are:

- Reach 1: Ōkūkū confluence to Rangiora Railway Bridge
- Reach 2: Railway Bridge to SH1 Bridge
- Reach 3: SH1 to the ocean

Q: What are the options being considered for Reach 1: the Ōkūkū confluence to Rangiora Railway Bridge?

A: The current options fall into two main categories:

- Secondary stopbank options (Options A-E): These involve constructing one or more secondary stopbanks south of the river to provide an additional layer of protection if floodwater breaks through or come over the top of the existing stopbank. The options differ mainly in where the stopbank starts and reconnects to the existing flood protection scheme, balancing flood protection benefits against impacts on landowners, development opportunities and infrastructure.
- Existing stopbank upgrade option (Option F): This option focuses on raising and strengthening the existing stopbank network, while improving erosion protection and resilience. It follows the current stopbank alignment and would generally have less impact on private property but does not provide a second line of defence if the stopbank is breached.

You can view options maps at haveyoursay.ecan.govt.nz/ashleyrakahurioptions

Q: What are the options being considered for Reach 2: Railway Bridge to SH1 Bridge?

A: Potential downstream options currently being assessed include:

- Upgrading sections of the existing stopbank system where required.
- Retreating stopbanks in selected locations to increase the river's flood-carrying capacity.
- A managed spillway upstream of SH1 to allow very large flood flows to overflow in a controlled and predictable manner.
- Modifications to stopbanks near the estuary to reduce flood levels and improve the long-term resilience of the flood protection scheme.

Q: What are the options being considered for Reach 3: SH1 to ocean reach?

A: One of the concepts being assessed is modifying sections of the existing north-side stopbank downstream of SH1 and near the estuary.

This could include lowering or removing sections of stopbank in some areas to reduce pressure on other parts of the flood protection scheme and potentially lower flood levels near Waikuku Beach during major flood events.

Potential benefits being assessed include improved flood resilience, better accommodation of future sea level rise, and opportunities for estuary restoration. However, any option would need careful consideration of effects on neighbouring landowners, land use activities and environmental values.

General

Q: How were the flood models developed?
A: The modelling uses:

- Historic breakout data
- Updated LiDAR ground levels (remote sensing technology that uses laser lights)
- Recent hydrology and climate information
- Different flow scenarios, including rare but high-impact events
- Sensitivity testing to understand how water behaves when it breaches stopbanks

Models are peer reviewed internally and will continue to be refined using information from site visits, landowner feedback, and iwi knowledge.

Q: How likely is it that the river would overtop the stopbank?
A: Our current modelling shows that the existing stopbank upstream of Rangiora has sufficient capacity for around a 3,000 cumec flood, but the capacity of the stopbank system is reduced closer to State Highway 1.

In the May 2021 flood, the peak flow was approximately 1,600 cumecs at Rangiora. Flood levels were 1 metre from the top of the stopbank at locations upstream of Rangiora (near Groyne 8) and some properties were evacuated on a precautionary basis.

The current options are designed to provide protection from a breakout either through or over the stopbank. Breakouts can occur when water erodes the vegetated berm and the stopbank itself, sometimes at flows lower than would otherwise overtop the stopbank.

An overtopping breach is where water going over the top of the stopbank scours a hole in the stopbank over time. To reduce the likelihood of this occurring, sections of the stopbank that are not high enough will also be raised as part of this project.

Q: Has there been flooding in this area before?
A: The last significant breakout near the Ōkūkū confluence was in the 1930s, which was estimated to be around a 1,700 cumec flood. There were a series of breakouts in the 1950s between the Cones Road and railway bridge, which was the last time we had a flood that was above 2,000 cumecs.

Q: How much rain do you need to get this level of flooding?
A: It would be a red warning from MetService – a significant, multi-day rainfall event that we expect would be due to a low-pressure system stalling (not moving for a number of days) to the east of Canterbury.

Q: Do all options protect against the 1-in-500-year flood event?
A: The one-in-500-year flood has been used as the design basis for these options so far, and the exact level of service (design flood) used in the upgraded stopbanks is to be confirmed through consultation with the community and councils.

Q: Can't we just make the existing stopbank higher/ wider?
A: Improving the existing stopbank is likely to be included regardless of which option is selected. But making stopbanks very tall can create unintended consequences including:

- increasing the volume of water which would be released onto nearby land in the event of a stopbank breakout,
- making it harder for water to return to the river.

Q: Do the existing groyne systems slow the water down?
A: Groynes don't reduce the speed or height of floodwaters moving down the river as a whole, but they deflect fast-moving water away from the stopbank, creating calmer areas immediately behind them. In those sheltered areas, water moves more slowly, which helps reduce erosion of the stopbank. Some of these groynes have been in place for decades and we have a project underway to renew and strengthen these important structures.

Q: Could you lower the riverbed/ remove more gravel instead?
A: Gravel extraction is an important part of how rivers are managed across Waitaha Canterbury, and more than one million cubic metres of gravel is removed from riverbeds across the region each year. However, there are limits to how much gravel can safely be taken out.

Over the long term, gravel is carried downstream each year and settles in our rivers. Because of this natural process, lowering the riverbed in one place does not provide a permanent solution, as gravel will gradually build up again over time.

Gravel extraction is carefully managed through permissions under the Resource Management Act to ensure we balance gravel supply with negative effects such as undermining flood protection assets, infrastructure, riverbank planting, private land, and important habitats.

To manage these risks, minimum riverbed levels are set in some areas. Gravel can only be extracted when the riverbed is above those levels, and extraction must stop if those thresholds are reached. Riverbed levels are regularly surveyed to make sure extraction remains sustainable.

While gravel extraction can help manage flooding and erosion hazards in some situations, it cannot provide the same level of protection as flood protection infrastructure. Stopbanks are designed to provide a reliable and predictable level of protection during large flood events by helping keep floodwaters within the river corridor.

When planning flood protection works, engineers consider a range of tools including gravel management. In many cases, however, stopbanks are needed to provide the level of protection required for communities.

Q: Is there an option to do nothing?
A: Yes, but the consequence of a large flood occurring is high so this is unlikely to be supported by decision makers. The current stopbank is designed to manage up to 2,500 cumecs of flow, but modelling suggests that a 1 in 500-year flood event could create a flow of up to 3,900 cumecs.

As floods become more frequent and severe, we need to consider ways to increase protection in flood risk areas. This is particularly crucial given the scale of flood events we're seeing around the country.

Q: Will this protect me from flooding completely?
A: No flood protection system can remove all risk. This project aims to reduce risk to people, property and farmland, not eliminate it. You can find out more about natural hazards in your area here: https://www.waimakariri.govt.nz/environment/natural-hazards

Q: My home was built recently and meets Waimakariri District Council's minimum floor-level requirements. Would a secondary stopbank make any difference for me?
A: Minimum floor levels set by Waimakariri District Council are designed to reduce the risk of floodwater entering your home under certain flood scenarios (based on existing flood protection).

Secondary stopbanks affect where floodwater goes once it leaves the main river corridor. In some areas, a secondary stopbank may reduce flood depths or slow floodwater. In other areas, it may redirect floodwater through land or buildings that would otherwise have experienced less flooding.

This means that even if your home meets current floor level requirements, a secondary stopbank could change flood water behaviour around your property in extreme events, sometimes positively and sometimes negatively. The effects depend on the size of the event, where water breaks out, and how it is redirected across the floodplain.

Q: What if the 'best' technical option isn't the one I prefer?
A: We aim to identify options that balance:

- People's safety (highest weighting)
- Feasibility and cost
- Environmental and cultural outcomes
- Equity across communities
- Practicality for farming / land use

But local knowledge is essential – you understand how water behaves on your land. If you think a technically strong option creates major impacts for you or neighbouring properties, or creates new unintended risks, let us know. We'll work through this and incorporate this information into the options.

Q: What if I am planning to develop my property (house extension, shed, subdivision)?
A: We understand the importance of certainty so you can make informed decisions about your property. At this stage, the work is focused on understanding the problem and assessing options. No decisions have been made, and no changes to land use rules or flood protection infrastructure are proposed at this point. We encourage you to talk with us early to avoid surprises.

Q: What does this mean for the value of my property or business?
A: It depends on the option selected and how it interacts with your land. Many properties will be better protected, which may improve long term certainty.

- If the project changes your access, layout, or operations, we will work with you to minimise or mitigate impacts.
- If land is required for stopbanks or floodways, you will be supported through Public Works Act processes, including independent valuation for compensation.

We will not publish parcel-specific draft maps publicly until we've attempted to speak to individual landowners, to avoid unnecessary speculation affecting property values.

While improved understanding of flood risk may influence property values in some locations over the long term, this doesn't mean banks will restrict lending or equity access. Banks assess lending and equity on a case-by-case basis considering multiple factors including property value, insurance availability, loan-to-value ratio and borrower circumstances.

You can read more about the Reserve Bank's approach to climate-related risk here: www.rbnz.govt.nz/about-us/how-we-work/our-climate-change-strategy

Q: Will I have to disclose this project if I want to sell my property?
A: Under NZ law, sellers must disclose matters that could materially affect a buyer's decision. This may include:

- Confirmed future works directly affecting the property
- Known requirements for land purchase, easements, or access
- Any formal notices issued

Because alignment options are still in development and no decisions have been made yet, the obligation is usually to disclose that *the property is within the project area*, not that any particular option will occur.

You could share this wording with your estate agent: "The property is located within the Ashley Rakahuri River Project Area. The project involves assessment and potential future works relating to flood risk management."

Q: Could my land be purchased or affected by easements?
A: Possibly, but this depends on the final preferred option. When we have identified the preferred option (likely 2027) we'll have a clearer understanding of the level of impact for individual landowners. At that point, you could be provided with:

- One-on-one support from a regional council staff member;
- Clear explanation of Public Works Act processes;
- Independent valuation;
- Options for compensation or alternative arrangements.

However, we aim to minimise disruption and explore alternatives where possible.

Q: If the preferred option increases our flood risk, or puts our land in a secondary floodplain, what does that mean for insurance?
A: Insurance decisions are made by individual insurers based on their own assessments. Being located in a floodplain does not automatically mean insurance will be withdrawn, but flood risk is one of several factors insurers consider when setting premiums, excesses and policy terms.

In Canterbury, many properties sit behind stopbanks or within mapped floodplains, including along the Ashley Rakahuri River. Insurance has generally remained available in the areas, particularly where flood risk is well understood and actively managed.

But insurance decisions are specific to each property and policy, so we encourage you to discuss your individual circumstances directly with your provider. There is also some helpful information from the Natural Hazards Commission available here: www.naturalhazards.govt.nz/insurance-and-claims

Q: What about my insurance while options are still being discussed?
A: New Zealand's National Adaptation Framework is clear that there is a difference between sharing information about risk and changes to physical risk on the ground. This recognises that better information helps people, insurers and banks make informed decisions but does not itself change the level of risk landowners face.

For this project, it means discussing options or providing updated information doesn't alter existing flood behaviour, stopbank performance, or protection levels.

But individual insurers may take different approaches. If you have concerns, we encourage you to speak directly with your insurer.

You can find out more about the national framework here: environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/adapting-to-climate-change/national-adaptation-framework

Q: Could we just upgrade the existing stopbanks?
A: This is an option that we are considering throughout the project. We have recently engaged a geotechnical engineering consultant to investigate the existing stopbanks in more detail, to determine where and how we can upgrade the stopbanks and to show what the remaining likelihood of a breakout would be if we completed those upgrades.

Q: Does Environment Canterbury have a preferred option?
A: At this early investigative stage, we do not have a preferred option/ set of options. We are testing a range of possible solutions across different reaches of the river and expect that a combination of approaches may be required.

Feedback from landowners, iwi, community members and stakeholders will help us test assumptions, identify unintended consequences and refine options before any preferred option is identified. This information will be balanced alongside technical, environmental, cultural, land-use and cost considerations.

Q: How is this work being funded/ prioritised?
A: This project was socialised in the Long-Term Plan 2024-34 with an indicative eight-year cost of $15 million. This funding will come from a mix of local targeted rates (for directly benefitting communities) and regional general rates, with potential for central government co-investment too.

You can find out more about how we fund river management work here: www.ecan.govt.nz/your-region/your-environment/flood-protection-and-community-resilience/your-river-rating-district

Q: How will my feedback be used?
A: Your feedback helps us:

- Correct assumptions
- Understand operational realities
- Identify unintended consequences
- Adjust alignments or refine options
- Improve safety outcomes

Feedback on the current options can be submitted until **10am on 31 August 2026** via the Have Your Say website: haveyoursay.ecan.govt.nz/ashleyrakahurioptions

We will summarise feedback themes and share how it has shaped decision making via this webpage.

Q: What happens if local government arrangements change during this project?
A: The Government has announced reforms to local government structures that may affect how councils are organised in the future. While there is still uncertainty about the final arrangements, the need to manage flood risk and improve community resilience will remain.

The Ashley Rakahuri flood resilience project is continuing under Environment Canterbury's current work programme and governance arrangements. Future decisions about funding, delivery and implementation would be made by the decision-makers and organisations in place at that time.

Our current focus is on understanding flood risk, assessing options and working with communities to identify a preferred approach.

Q: When will decisions be made and by who makes them?
A: Indicative timeframes are:

- **2026:** Engagement with landowners, iwi, community and Waimakariri District Council. Options refined and assessed.
- **2027:** A preferred option/s is identified and considered through Environment Canterbury's decision-making processes. Further technical investigations, consenting work and land discussions may begin.
- **2027 onwards:** Detailed design, approvals, funding decisions and construction timing would depend on future Council decisions and statutory processes.

We're responsible for making decisions on the preferred option, considering technical assessments, community feedback, iwi input, environmental considerations and funding implications.

Environment Canterbury's elected councillors remain in office until October 2028, and the project continues under current governance arrangements. However, this is a long-term project, and future stages will be influenced by factors including council decisions, funding availability, statutory approvals and wider local government reform processes.

For that reason, the timings shown above should be considered indicative and may be refined as the project progresses

Q: How can I find out more?
A: For more information, or if you have a question we haven't answered here, you can:

- **Phone** our Advisory Team on 0800 324 636
- **Email** the project team via: *rivers.delivery@ecan.govt.nz*
- **Visit** HaveYourSay.ecan.govt.nz/AshleyRakahuriOptions for the latest project information, design options, flood modelling maps and consultation opportunities.

This FAQ reflects information published on the Ashley Rakahuri Have Your Say website, as of August 2026. Where differences occur, the Have Your Say webpage is the source of truth.

Reach 1: Ōkūkū confluence to Rangiora Railway Bridge

Q: Why can't you just strengthen the Ōkūkū confluence area?
A: This is the focus for some of the options presented. But focusing on this area alone could create unintended consequences in other parts of the river. That's why it'll likely be considered in conjunction with other solutions, such as reinforcing the primary stopbank further downstream. We seek to ensure that risk is not transferred from upstream to downstream as a result of this work.

Q: Would a secondary stopbank run parallel to the primary stopbank?
A: The current alignment options are not strictly parallel to the primary stopbank, but they take a similar line while making the most of the area's natural features.

Q: Where would you build a secondary stopbank? On people's private property?
A: The current alignment options provide a general idea of where we could place secondary stopbanks to make the most of the landscape's natural features (high and low terraces). But the exact location of these would be determined with input from individual landowners.

Q: Would a secondary stopbank be publicly accessible?
A: We have to balance public access with landowners' privacy and concerns for security. We appreciate that the existing stopbanks are popular with walkers, cyclists, and motorists; however, a new stopbank crossing between private property is likely to require some level of access restriction. It is likely this would only be for regional council staff to carry out maintenance work, and landowners to access their paddocks.

Q: Would a secondary stopbank be as tall as the one that is there now?
A: Not necessarily. The height of the secondary stopbank above the existing ground level depends on where it is located in relation to terrain features, such as terraces or channels. The height also depends on the expected water depth within the stopbanks, which varies for each alignment option.

Q: How do you get flood water from the area between the secondary stopbank back to the river?
A: We would need to lower the primary stopbank in places, but it's a balancing act because lowering the stopbank may increase the frequency of minor flooding in some places due to back-flooding from the river itself. We would work with landowners and our engineers on finding a balance between the frequency of this back-flooding onto land next to the river and the required height of the stopbank to allow breakout flows to return to the river.

Q: The secondary stopbank looks like it would trap water that is coming from the Mairaki Downs area. How will you address this?
A: Any works we do will need to consider the effects on other waterways and not making flooding from these waterways and drains worse. If a secondary stopbank is the preferred option, our engineers will be making minor changes to the stopbank alignment to avoid these waterways where possible, in combination with appropriately-sized culverts through the secondary stopbank to allow the waterways to continue to flow properly.

Reach 2: Railway Bridge to SH1 Bridge

Q: Why are you considering a managed spillway near SH1?
A: Technical investigations have found that the State Highway 1 bridge is a constraint during very large flood events because it limits how much water can safely pass through this section of the river.

One option being assessed is a managed spillway on the north side of the river upstream of SH1. This would allow water to leave the river in a controlled way during extremely large floods, potentially flowing toward Saltwater Creek or the estuary.

A managed spillway could reduce pressure on the SH1 bridge and improve protection for downstream communities such as Waikuku. However, properties located within any future floodway could still be affected when the spillway operates, which is why further investigation and engagement is needed before any decisions are made.

Q: The spillway looks like it will flood my land, how do I benefit from this?
A: The spillway will activate in very rare and very large floods, and will be managed in a controlled manner compared to an uncontrolled overtopping or breakout situation. We are considering options for additional guidebanks to control where the spillway flow is directed, and we will be working through these with individual landowners and stakeholders.

Q: Why don't we just upgrade the bridge?
A: We are working with NZTA who manage the State Highway network. Any future upgrades to the bridge may mean that the spillway is no longer needed.

Q: What is stopbank retreat and why are you considering it?
A: Stopbank retreat involves constructing a new stopbank further away from the river and then lowering or removing sections of the existing stopbank once the new protection is established.

In some locations, retreating stopbanks can increase the amount of space available for floodwaters and reduce restrictions caused by the current flood protection alignment. This can improve the river's capacity to safely carry flood flows while also creating opportunities for additional flood protection planting and environmental benefits.

Where stopbank retreat affects privately owned land, any land requirements would be worked through with affected landowners, including Public Works Act processes and compensation where necessary.

Reach 3: SH1 to the ocean

Q: How frequently would the land on the north side of the river flood if you lower the stopbanks?
A: This will depend on the extent of lowering of the stopbanks or if the stopbanks are removed entirely. There may be a staged approach where the stopbanks are lowered slightly and the existing land-use can continue, or the stopbanks could be lowered to a much-reduced level of service such as a 1-in-5 year flood or eventually an annual flood. These details will depend on conversations with landowners to determine an appropriate timeline.

Q: How will sea level rise impact flood protection in this area in the future?
A: Sea level rise will increase the extent of inundation in the estuary area in the future, and will impact flood levels in the Ashley River downstream of State Highway 1.

Q: Would you be upgrading the stopbank on the south side of the river?
A: Yes, even with the proposed options for Reach 3 we would still be raising and strengthening the stopbank on the south side of the river downstream of SH1.

Q: How does this work account for land development on the south side of the river, such as Gressons Road, the Pegasus Golf Course, and Tulls Road?
A: We're working closing with staff from Waimakariri District Council (WDC) on the Ashley Rakahuri Flood Resilience Project. Our project focuses on reducing the risk and impact of out-of-river flooding, which offers increased protection to existing and future land uses.

We understand there is some concern about the impact of increased development on stormwater flow and volumes, particularly in Taranaki Creek and Waikuku Stream. Land use planning is a responsibility shared between Environment Canterbury and Waimakariri District Council, and consideration of effects on receiving waterways is normally required as part of the design and consenting process.

We've shared feedback and questions about the proposed development with WDC. You can also contact WDC directly for more information on how stormwater from new developments is managed in the district via 0800 965 468 or office@wmk.govt.nz