

Adapting to sea-level rise

Information for property owners

We've put together some information below to help you in your thinking about sea-level rise and its impacts.

The Government's role

Central Government is responsible for making the laws and setting up the funding arrangements to support adaptation to sea-level rise and other climate hazards. This includes any process for moving private homes and properties away from at-risk areas in the future (retreat).

In response to the severe weather events caused by Cyclone Gabrielle in February 2023, the Environment Select Committee started an inquiry into climate adaptation with a focus on funding and enabling 'community-led retreat'. It's expected the findings will inform the creation of new laws in 2024 to support a system of community-led retreat.

Christchurch City Council's role

The timing and severity of sea-level-rise impacts will vary across the district, so we're doing our adaptation planning in sections, starting with communities in the Whakaraupō Lyttelton Harbour to Koukourarata Port Levy area.

There are places in this area where coastal hazards are either already having an impact or will have an impact over the next 30 years, and where there is a high level of risk for publicly owned coastal assets such as roads, pipes and parks.

Christchurch City Council's (the Council) funding will be focused on these public assets – which contribute to the health, safety, and wellbeing of communities – once a decision has been made about if and how to maintain them.

People who own private land and any built structures on it are responsible for managing their own assets. We have an online interactive hazard map that allows property owners to understand the risk to their property and neighbourhood., available at gis.ccc.govt.nz/hazard-viewer

You can also learn more about the coastal hazards work we're doing, become involved in our planning for coastal communities, and subscribe to updates, at ccc.govt.nz/coastalcommunities

Insurance

Insurance typically provides cover for sudden and unforeseen events, so it's possible that some insurers will reduce or withdraw cover for property damage from sea-level-related hazards once these become more frequent and extreme.

The role of insurers is to price risk, so if new data on hazards shows a change in risk, insurers could use this information to change how they assess and price it.

Coastal hazards are just one of the factors considered by insurance companies when pricing risk, so there's no guarantee that insurance premiums will decrease in response to any adaptation actions the Council takes. It's also possible the Council's actions would be taken into consideration when insurers made decisions about whether to keep insurance cover in areas affected by coastal hazards.

For more information, please see our Insurance and Climate Change factsheet at ccc.govt.nz/coastalhazardsinfo

Property values

It's not possible to say with accuracy at this stage how coastal property values will be affected by sea-level rise. Not all properties will be affected equally, and some properties may be able to adapt to certain hazards sooner or to a greater extent than others.

Generally speaking, hazards may present a risk to property values, particularly if they become more frequent or extreme over time.

Options for private properties

There are different ways to address the risks to your property depending on how and when you could be impacted by coastal hazards. We've outlined some different adaptation options below that could help slow down erosion or reduce the likelihood of your property flooding. While these options may increase the resilience of your property for a time, they cannot fully mitigate the risks of living in an at-risk location. As sea levels rise, there'll be ongoing costs involved in maintaining these measures and you may wish to consider moving away from the hazard altogether.

The information below is meant as a general guide for property owners. A site assessment would be needed to provide advice on the best way to address the risks to a specific property.

Flood-proofing

There are several ways to flood-proof a building, including:

- raising the floor and electrical sockets above future flood levels.
- using building materials that can cope with getting wet for short periods, like concrete and steel, or protecting bricks with a water-resistant render (coating).
- There are also short-term measures that will help keep water out, like floodgates and sandbags.

Flood-proofing a building can be expensive and will work better on some building types than others. It provides some protection against flood events and perhaps rising groundwater, but not erosion.

It's important to note that while your property might be flood-proofed, its supporting infrastructure (like driveways and roads) and services (like power and internet) might not be.



Adaptable buildings

Adaptable buildings are designed to cope with changes in the environment, such as rising groundwater levels, flood events and, in some cases, erosion. An adaptable building could be a floating house built to rest above the water; it could be amphibious, so that it rests on land normally but rises and floats during a flood; or it could be relocatable, so that it can be moved when the risks or impacts from coastal hazards become too great.

Building a new house or structure in a location at risk from coastal hazards is a decision that should be considered very carefully. Adding adaptable features will likely add to the cost of a new build but improve the resilience of your property.

As with flood-proofing, don't forget that supporting infrastructure and services might still be at risk and impacted by coastal hazards, even when your property isn't.

Improving drainage

There are things you can do to help water drain away from your property during a storm event. Start by checking your pipes and drains to make sure they're clean and clear. Pay attention to where water pools during a storm event. Hard surfaces, like concrete, stop water from being able to drain away and could be replaced with garden or lawn in these areas.

Drainage is only effective at reducing the impacts of flooding and won't provide any protection against erosion. Drainage becomes a lot harder in areas with a high groundwater table, as rain and floodwater is less able to drain away into the ground.



Protection from coastal erosion

There are things we can do to limit the amount of land eaten away by the sea during large tides and storm events. In most cases, public land sits between the coast and private properties. You shouldn't carry out any work on this land without permission from the Council first.

Regenerating our coastal ecosystems and replanting the coastline with natives can provide protection against erosion and benefit the natural environment. For advice about what you could plant in different areas, please refer to this document: lucas-associates.co.nz/assets/Document-PDFs/Lyttleton-Harbour-Basin-Ecosystems-low-res2.pdf

You can also reduce the erosion risk to your assets by locating buildings, sheds and garden beds away from the coastline.

Hard structures, like rock walls, may be an option, but they'd likely need resource consent and may have impacts on neighbouring properties and the environment.

Living with flooding

Change is guaranteed, whether you use any of the above options or not. This means we'll all need to learn to live with some changes by doing things differently in the future.

For example, you may need to reduce your reliance on roads by working from home, where possible, when they're flooded; or you might need to have backup supplies and electricity ready in case services go out.

Learning to check the tides before heading down to coastal walkways or parks is also a good idea, as these may start to get increasingly wet during high tides. We can also improve our ability to observe and communicate when public facilities and infrastructure are closed or out-of-service.

Moving away from coastal hazards

Over time, the risks and impacts of coastal hazards will increase. As this happens, the options above will become less effective and more expensive to maintain, insurance may also become more expensive or less available, and the community around you may change as councils, service providers and other members of the community respond to rising sea levels.

There may come a time when you need to consider moving away from the hazards, either in response to gradual changes or to an extreme storm event.

Your wellbeing

Thinking about climate change and the impacts of coastal hazards can affect different people in different ways, and at different times.

Te Whatu Ora – Health New Zealand recommends the 'five ways of wellbeing' as evidence-based actions proven to support individual and community wellbeing: cdhb.health.nz/your-health/add-five-ways-to-wellbeing-into-your-day

If you or someone you care about is really struggling, you can:

- Make an appointment with your GP
- Free call or text 1737 any time, 24 hours a day
- Call Lifeline on 0800 543 354 or text HELP to 4357.