

Impacts of coastal hazards on travel in Lyttelton Harbour

Summary

Christchurch City Council sought the opinions of people in the Whakaraupō Lyttelton Harbour and Koukourarata Port Levy areas to better understand communities' risk tolerances and the impacts that potential loss of main road access could have on residents and services.

This information is being used by the Council and the Whakaraupō Lyttelton Harbour and Koukourarata Port Levy Coastal Panel to develop adaptation plans that respond to the current and future risks of increased coastal flooding, coastal erosion and rising groundwater caused by sea level rise.

The survey received

151 responses

with an 80 per cent completion rate. It was carried out in December 2021, alongside interviews of community members and essential services, as part of a scholarship project between students from the University of Canterbury and Christchurch City Council.



Context

- The Whakaraupō Lyttelton Harbour to Koukourarata Port Levy area has multiple roads that act as key access points and connections across the area, as well as the main road access to Ōtautahi Christchurch and the wider Waitaha Canterbury area.
- Low-lying roads through Teddington, Allandale, Charteris Bay, Purau, and Koukourarata Port Levy are particularly at risk of coastal hazards.
- The survey questions and community interviews were underpinned by the following research question: How could the potential loss of coastal roads impact the Whakaraupō to Koukourarata communities, and how could the impacts be mitigated?



[Sea level rise] will totally affect me, as my [business] is based in Port Levy and Diamond Harbour, so getting to clients could be very tricky.
– Survey respondent

We do not have a phone line or cell-phone coverage, so currently access to the neighbour's internet is our only communication if needed.
– Survey respondent



Key findings

Awareness of coastal hazards

- The communities have a high awareness of coastal hazards overall, with 80 per cent considering themselves aware or highly aware.
- The majority (70 per cent) of respondents agree that coastal flooding and erosion will become a reality in the next 50 years.

Concern for the future and an urge for planning

- When asked how sea level rise would impact their travel patterns, some respondents expressed a lot of concern for the future and urged for planning to mitigate the impact on a growing population.
- There was general acknowledgment that sea level rise can be planned for and that risks can be mitigated.

Road and rates

- A theme from comments was the belief that the road is already in poor condition.
- When asked to choose between high-quality roads with higher rates or lower-quality roads with lower rates, the response was mostly a preference for higher-quality roads.

Community resilience

- There was generally a strong sense of unity and of the community pulling together when needed.
- There was 85 per cent agreement with the statement, “I feel a sense of community with others in my neighbourhood or local area”.

Travel patterns of those between Allandale and Port Levy (those potentially most at-risk of isolation during road closures)

- Nearly 80 per cent of respondents were employed or studying, which is a factor closely tied to needing to travel.
- Almost half the respondents said they could work remotely for a few weeks at a time or more. However, a quarter said they could not.
- The respondents are not heavily reliant on public transport (97 per cent stated they had access to a motor vehicle and could drive).

Water transport

- Opinions about the use of water transport were mixed for temporary road closure but much more agreeable for permanent road closure.
- Some people indicated in survey comments and community interviews that improvements to public transport on both sides of Whakaraupō Lyttelton Harbour would encourage use of water transport.

Essential services

- All essential services based in the communities have enough staff living locally that if the road was closed unexpectedly, it would have minimal staff impact.
- Road access is essential for deliveries; the Diamond Harbour Four Square and medical centre both receive deliveries frequently and need temperature-controlled containers.