



RENEWING WELLINGTON AIRPORT'S SEA DEFENCES

Wellington Airport is investigating options for renewing the seawalls at our southern end which protect vital infrastructure against erosion and inundation.

These coastal defences were established between 50 and 70 years ago. Engineering advice and peer review has confirmed they are reaching the end of their natural lifespans and need replacing.

This work is essential to increase our resilience and adaption to climate change, given that sea levels are rising and the frequency and severity of storms is likely to increase.

As well as protecting the airport, they also protect Moa Point Road, Moa Point Road tunnel, stormwater infrastructure and major sewage pipes to the Moa Point wastewater treatment plant which treats most of Wellington's sewage.

The three main areas of the coastal defences (marked below) are the southern seawall, western seawall and Lyall Bay breakwater.

After careful consideration we have narrowed down several options for the upgrade and/or renewal of each structure. We are now consulting with airlines, local councils, mana whenua and community groups to help us make final decisions.



Southern seawall



SOUTHERN SEAWALL

This is the most critical to the airport of the three structures and is likely to extend further seaward. The options here are:

- Overlay the existing seawall with large concrete blocks (known as ‘armour units’ with the exact size and shape to be determined during design) and rock; or
- Remediate the existing seawall, plus build a separate concrete breakwater further offshore (this would be approximately 450 metres long by 40 metres wide).

In both options, the existing seawall crest level would remain roughly the same or marginally higher (one to two metres), and the length approximately 400 metres. The overall footprint is likely to be the same or marginally larger than at present.

WESTERN SEAWALL

The design chosen here will need to be interlinked with the Lyall Bay breakwater option. These three options would each be approximately 600 metres in length, the same as the existing seawall:

- Overlay the existing seawall with new rock armour (seawall crest at current level); or
- Rebuild the seawall with rock underlay and armour, with the seawall crest maintained at the current height; or
- Rebuild the seawall with rock underlay and armour, with a reinforced concrete crest wall potentially two metres above the existing height (depending on activities behind the seawall).

The option chosen here will depend on any contribution from Wellington City Council, given the seawall also protects vital council infrastructure (Moa Point Road, Moa Point Road tunnel and pipes connecting to Moa Point wastewater treatment plant). There are additional options for ground improvements here to protect these assets against earthquakes and liquefaction, but this would be dependent on council support.



Western seawall



Lyall Bay breakwater

LYALL BAY BREAKWATER

The design chosen for this breakwater will need to be interlinked with the western seawall.

One option is to simply monitor and manage the existing breakwater, given it is doing a sufficient job, while natural processes take their course. The breakwater would be expected to break into sections and lower over time to sea level. The reef beneath it also helps to protect the western seawall. This option would be combined with the higher western seawall option.

Alternatively, it could have the existing concrete blocks repaired and armour units added for additional protection.

WHAT HAPPENS NEXT?

Feedback we receive from consultation will help us select the final options.

We will then apply for resource consent which will be undertaken in two stages; firstly for the southern seawall, and then for the Lyall Bay breakwater and western seawall.

Initial work for the southern seawall could begin in early 2025, but this is subject to change and could be reviewed if there is any storm damage or further deterioration.

Q&A

What state are the seawalls in right now?

They are doing their job, but some of these structures are nearly 70 years old and weren't designed or built to withstand the weather conditions Wellington is likely to face in the future. They are also considered vulnerable to earthquakes. Major damage to the runway or sewage pipes could have a catastrophic impact with sewage released into Lyall Bay and Wellington cut off from the rest of the world. That is why this project is so important.

How disruptive will work be for local residents and people who use the roads in this area?

It's too early to say and depends on the final options chosen. However, the work is likely to involve temporary lane and/or road closures around the area, increased heavy traffic at times and some noise. As with all airport projects, we would keep the community informed and have specific plans to minimise noise and disruption as much as possible.

How long will the work take?

Again, it will depend on the final options. The seawall project could be completed in 18 – 24 months at full pace, but is likely to proceed more gradually over a number of years.

Will this affect the Miramar Golf Club?

Wellington Airport owns the southern half of the Miramar Golf Course. We are likely to use some of this land for construction and storing armour units, and we will inform the community in advance once plans are confirmed.



What does this mean for a possible runway extension?

This seawall project is separate from any decision on a runway extension, so it doesn't rule it in or out. We still think a longer runway would deliver enormous benefits to Wellington by improving our connectivity, but there are no immediate plans for this to happen just yet. Our seawall programme is urgent asset management and climate resilience work that needs to occur regardless.

Will the new seawalls look very different?

This will depend on the final options chosen, but none of the draft options are radically different or obtrusive. The southern seawall offshore breakwater option would involve a new structure further south in Lyall Bay, and one of the western seawall options has a higher crest level than at present which would limit views from the road and footpath.

What impact could these options have on surf at Lyall Bay?

We understand this is a key matter for consideration and we are commissioning further research into what influence, if any, this work could have on surfing conditions in Lyall Bay. We will share this as soon as it is available.

What impact will this work have on marine ecology such as sealife and birds?

This will be carefully assessed as part of the resource consent process. However, given the limited footprint of the work and the good understanding we have about the ecology of the area, we don't expect there to be much of an impact. Construction work will be carefully planned to manage effects on birds, sea mammals and other aquatic life.

Will there be new public spaces such as cycle paths and benches to sit on?

Not on the southern seawall as this is an operational space closed to the public. For the western seawall it would depend on the final option chosen, but it would need to be raised higher than the present options and require the support of Wellington City Council if there was to be a new pedestrian/cycle path.



YOUR FEEDBACK

Your views are important to us. Please let us know your feedback via our short online survey at www.surveymonkey.com/r/NXJ9H3L and/or by emailing wellingtonairport@wellingtonairport.co.nz



Lyall Bay breakwater