



Browns Bay Monitoring Report 2025

Browns Bay is monitored by Auckland Council’s Coastal Processes Monitoring Programme to determine rates of sand gain (accretion), or sand loss (erosion), identify storm impacts, and monitor beach operations. By improving our understanding of how Auckland’s coastline changes over time, we can make more informed decisions to manage coastal hazards, guide beach maintenance, and support the resilience of our beaches into the future.



Scan the **QR code** to check out all beach data here.

This report presents changes at Browns Bay over the last year. Check out the latest [State of Environment report](#) to explore long-term trends of beach change in Tāmaki Makaurau or [click here](#) to learn more about how we measure and describe changes at the coast.

Observed Coastal Change

The Coastal Processes Programme monitors sand levels at Browns Bay with 2 profile lines running perpendicular to the shoreline (Figure 1). These long-term records help us track changes in beach width and beach volume over time.



Figure 1: Location of the 2 monitored beach profiles at Browns Bay. The representative profile shown in Figure 2 is highlighted with a black border. All beaches included in this reporting scheme are shown on the right-hand side map of Auckland.

Change in sand levels:

Figure 2 shows historic sand levels at Browns Bay Profile 2, from the rock revetment down to the water level. Sand levels currently sit in the middle of the historic range indicating a moderate beach state relative to past conditions (Figure 2).

In January this year, sand levels at the upper beach (above MHWS) were high (accretion), but by April had dropped and have remained relatively stable in the middle of the historic range for the remainder of the year.

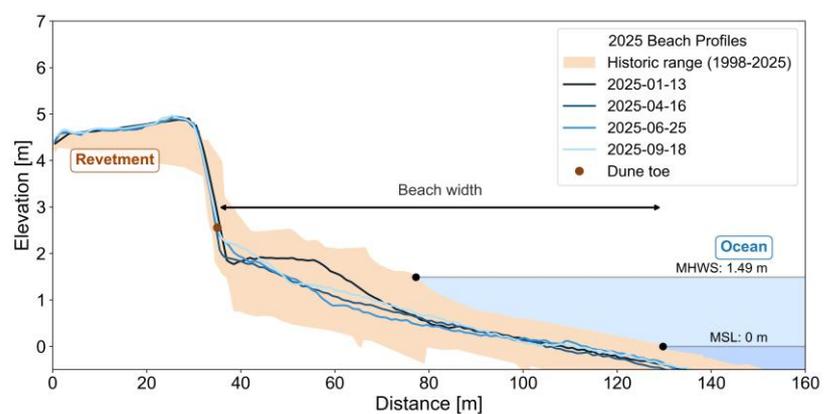


Figure 2: Changes in sand levels at Browns Bay P2. Mean Sea Level (MSL) represents the average mid-tide level, Mean High Water Springs (MHWS) marks the average high-tide line. Beach width is the distance between dune toe and MSL.

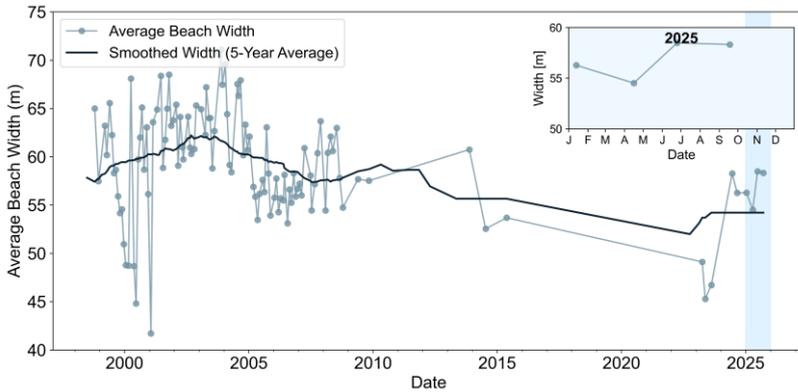


Figure 3: Beach-wide averaged width (calculated between dune toe and MSL) at Browns Bay.

Change in beach width:

Browns Bay exhibits long-term stability but with considerable short-term fluctuations likely due to locally to regionally generated storm waves (Figure 3).

In 2025, average beach width varied slightly between ~55-60 m, reaching its narrowest in April before recovering to ~60 m by June. The largest reductions in beach width occurred in 2001 and 2023 due to storm events such as Cyclone Gabrielle and Cyclone Lola.

Change in beach volume:

Since consistent monitoring began in the 1990s, the amount of sand at Browns Bay has remained roughly the same despite a large increase in beach volume between 2003-2012 (Figure 4). Decadal cycles in beach volume may reflect climatic variability and associated changes in wave conditions.

In 2025, average beach volume at Browns Bay dropped considerably between January and July before beginning to recover by October (Figure 4).

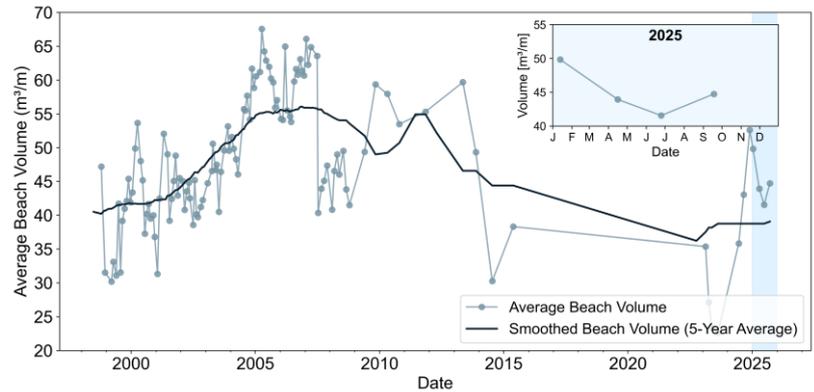
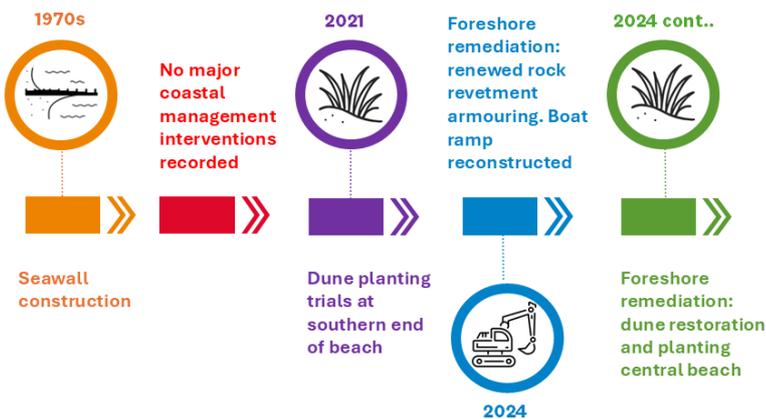


Figure 4: Beach-wide averaged volume (calculated above MSL) at Browns Bay.

Coastal Management Activities



What has been going on?

Following the seawall construction in the 1970s Browns Bay has experienced limited coastal management activities focussing only on remediation of the existing rock revetment.

The 2023 storms resulted in considerable erosion at Browns Bay triggering remediation works including repurposing legacy rock to protect the carpark and dune restoration to create a naturalised buffer.

Learn more about [Auckland's Shoreline Adaptation Plans](#).

BROWNS BAY

3 BEACH PROFILES are used to monitor Browns Bay

137 SURVEYS RECORDED a detailed monitoring record

4 SURVEYS A YEAR beach is surveyed every 3 months

27 YEARS OF DATA tracking coastal change at Browns Bay

1998 START monitoring began over two decades ago