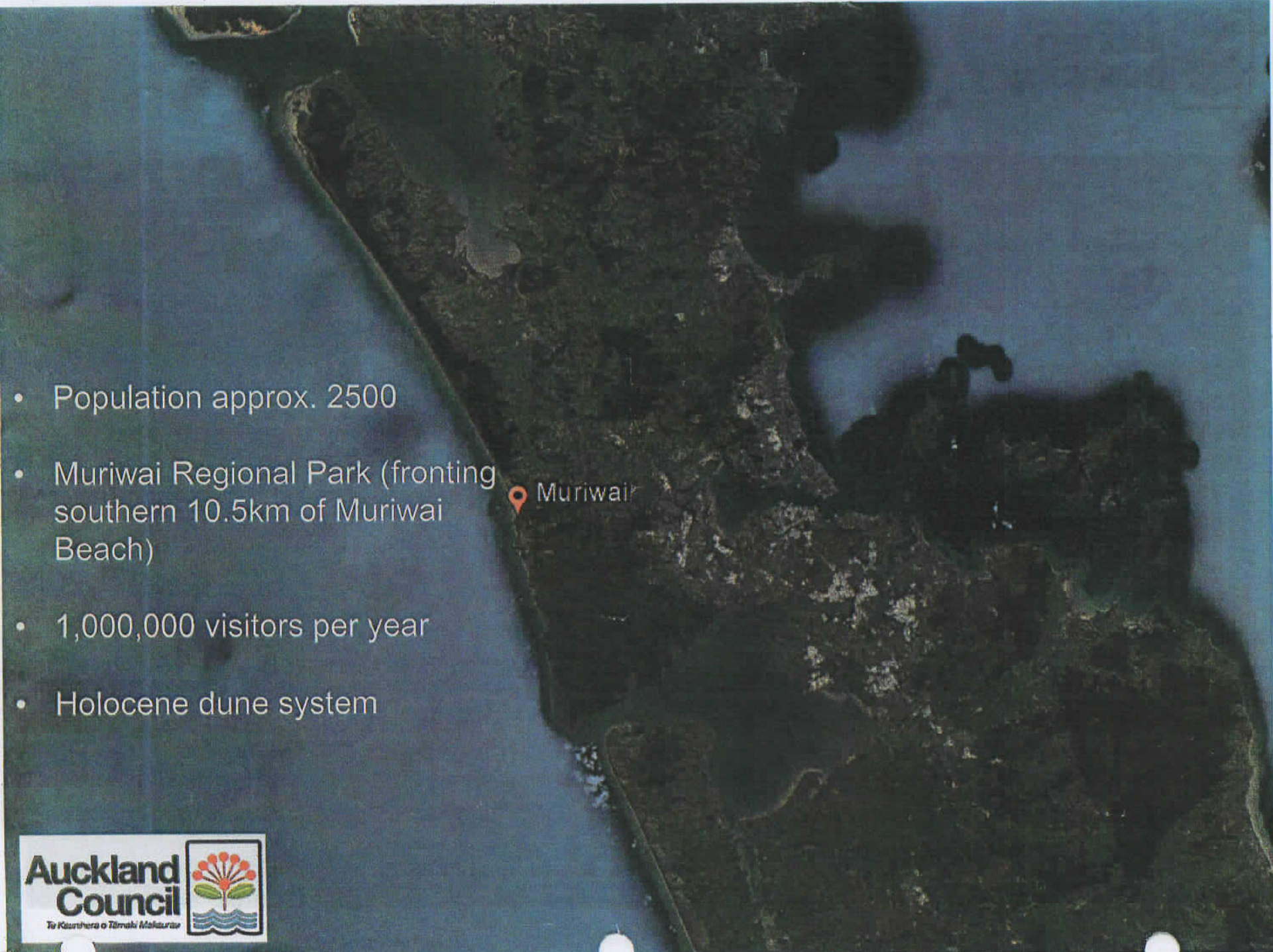


Dune Restoration, Muriwai Beach

Matthew McNeil, Senior Coastal Specialist, Engineering & Technical Services

An aerial photograph of the Muriwai Regional Park coastline. The land is dark green and brown, showing a complex dune system. The ocean is a deep blue. A red location pin is placed on the coast, with the label 'Muriwai' next to it.

- Population approx. 2500

- Muriwai Regional Park (fronting southern 10.5km of Muriwai Beach)

- 1,000,000 visitors per year

- Holocene dune system

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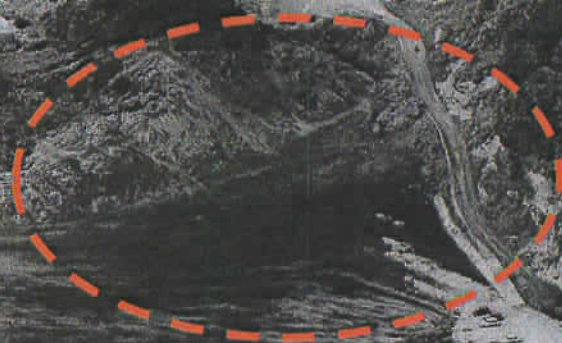
Tū Kaurihera o Tāmaki Makaurau

- Exposed to high wave energies
- Predominant wind southwest (onshore)
- Beach remains in a modally dissipative state
- Tidal range of 3 to 3.5m



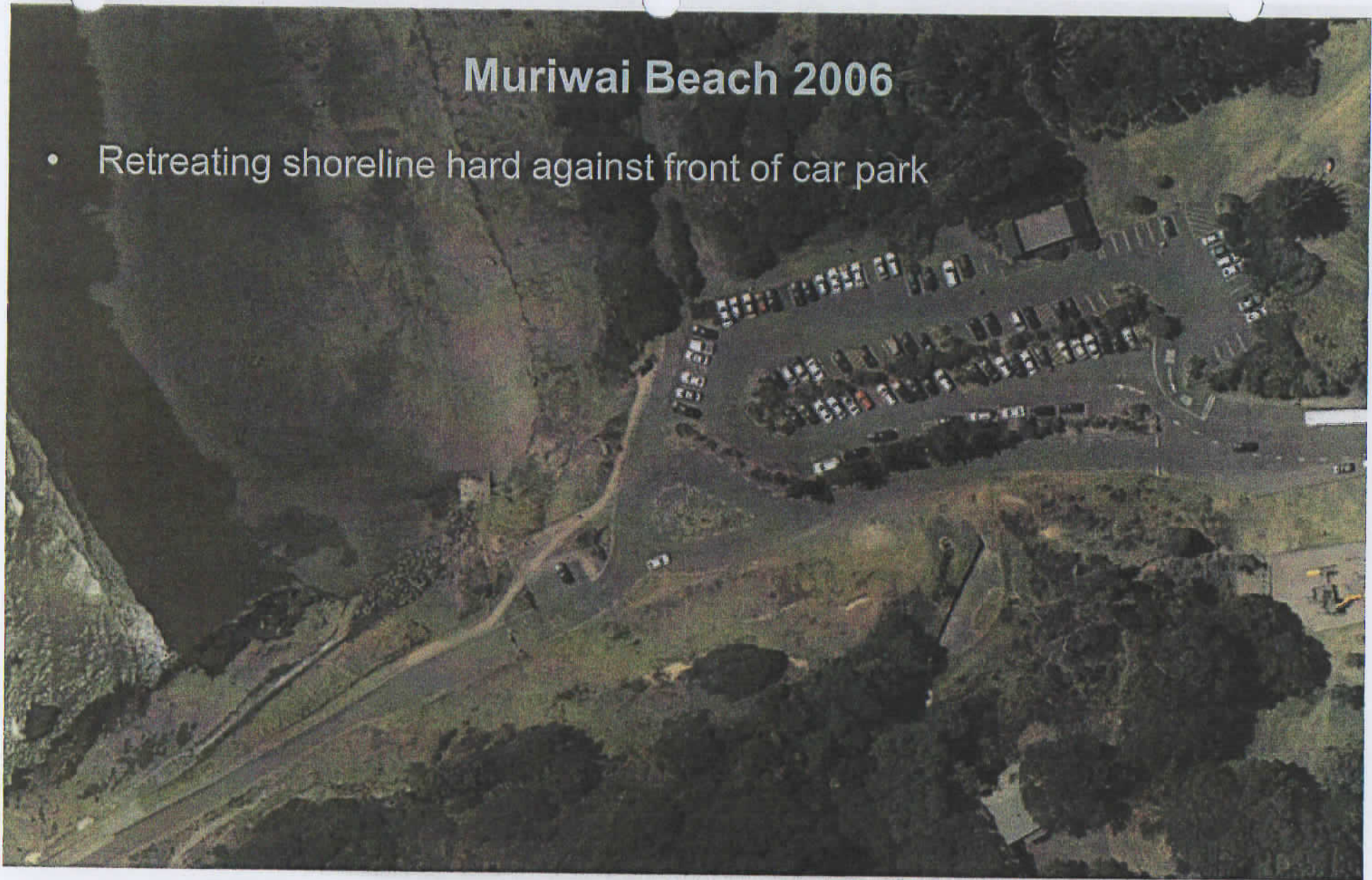
Muriwai Beach 1950/60's

- Infilling of stream valley
- Coastal armouring and retaining (Motutara Road)
- Start of observed coastal erosion (1960's)



Muriwai Beach 2006

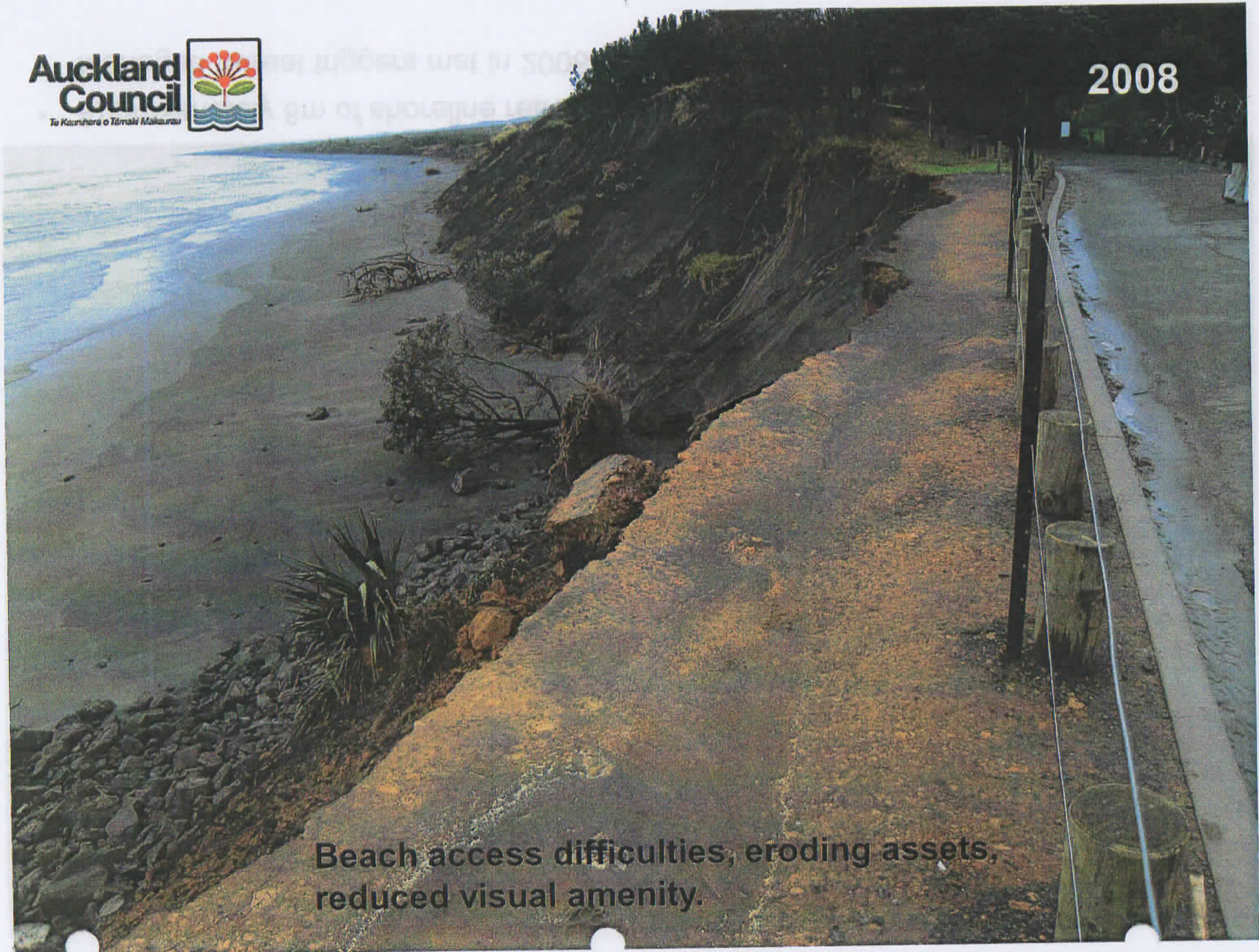
- Retreating shoreline hard against front of car park



- Approximately 8m of shoreline retreat between 2005 – 2007
- Managed retreat triggers met in 2006



2008



Beach access difficulties, eroding assets,
reduced visual amenity.

Managed Retreat 2009



Carpark realigned approx. 40m landward



Frontal dune reshaped and planted



2016 / 2017 Dune Restoration Works



SUBJECT SITE

- Foredune over-steep/unstable due to human activities, weed growth, and erosion.
- Evidence of minor tipping within dunes, comprising clay, concrete and metal.
- Potentially contaminated site, records indicating previous disposal of chemicals and hazardous substances, and noting the location of the previous surf club house.

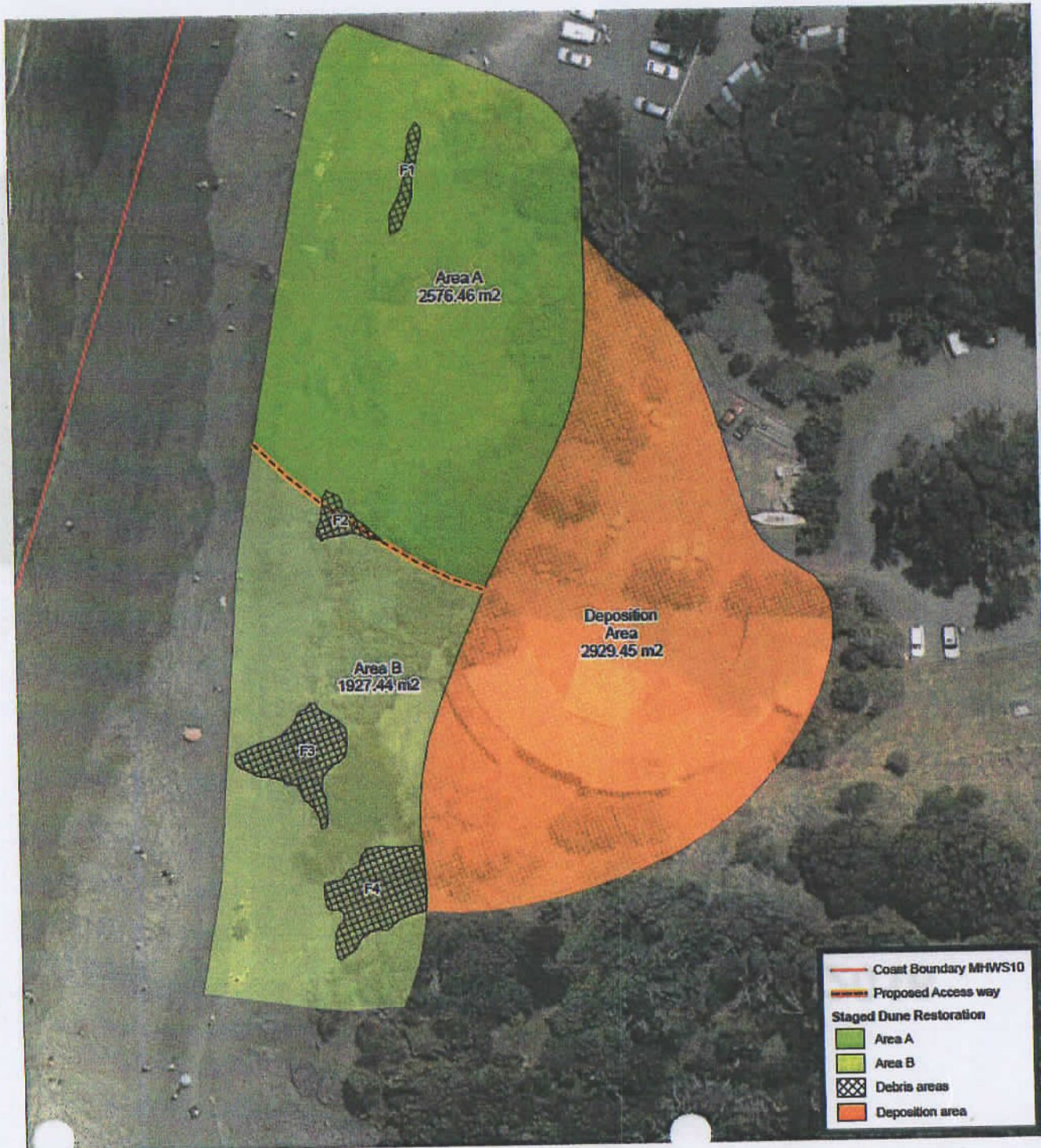
AIMS OF DUNE RESTORATION WORK

- Create a more natural & stable dune profile, enhancing the buffer the dunes provide.
- Enhance natural character and landscape values.
- Maintain and enhance recreational amenity values.



Section of Dune 2016





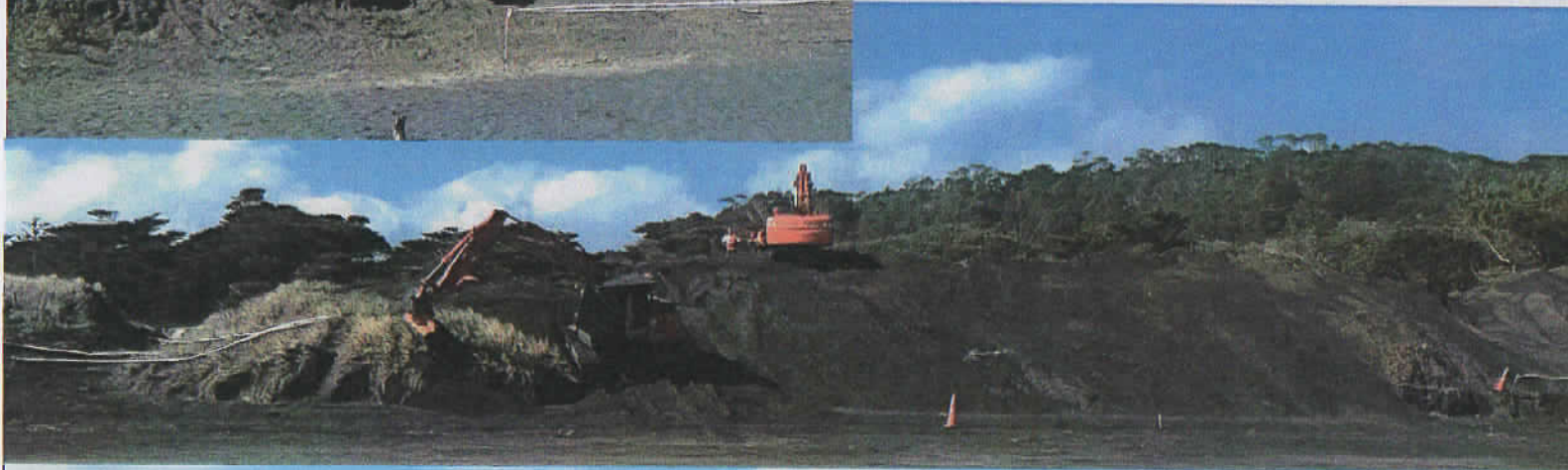


Area A dune face pre-works.



Lowering of Area A, August 2016.

Re-shaping and lowering seaward face.





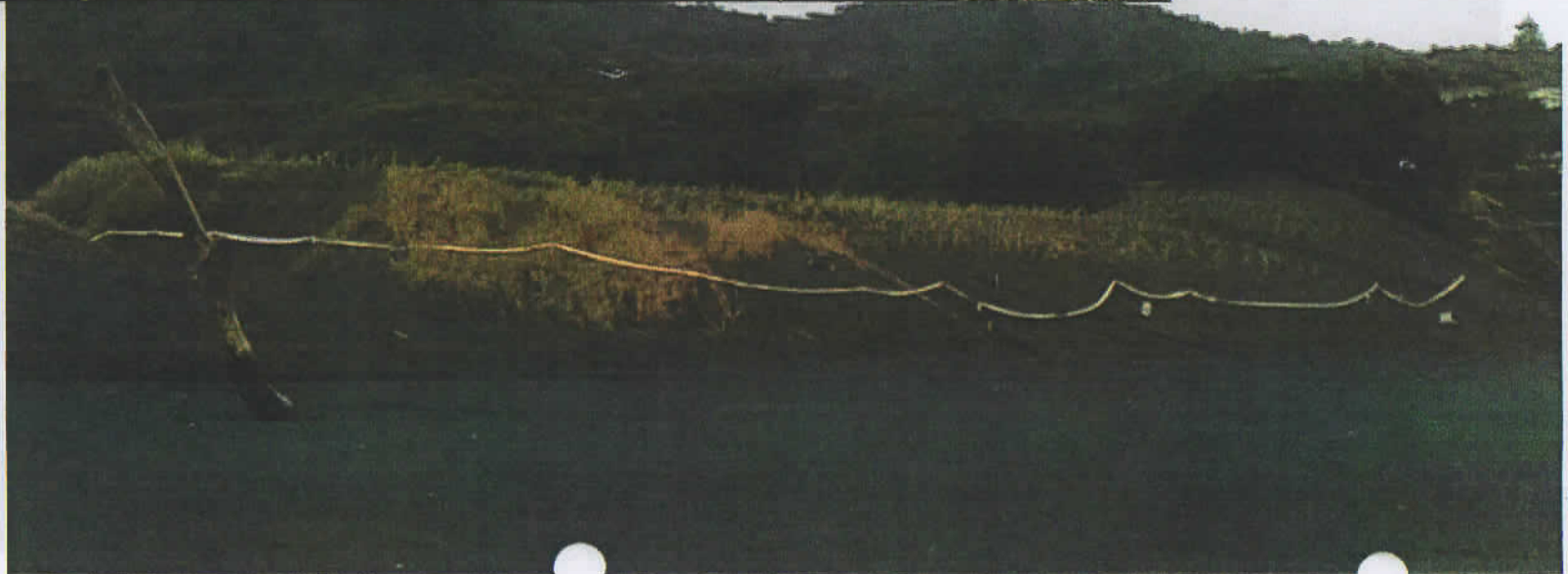
Redistribution of sand to create new backdune area for planting.



Area A planting day August 2016.

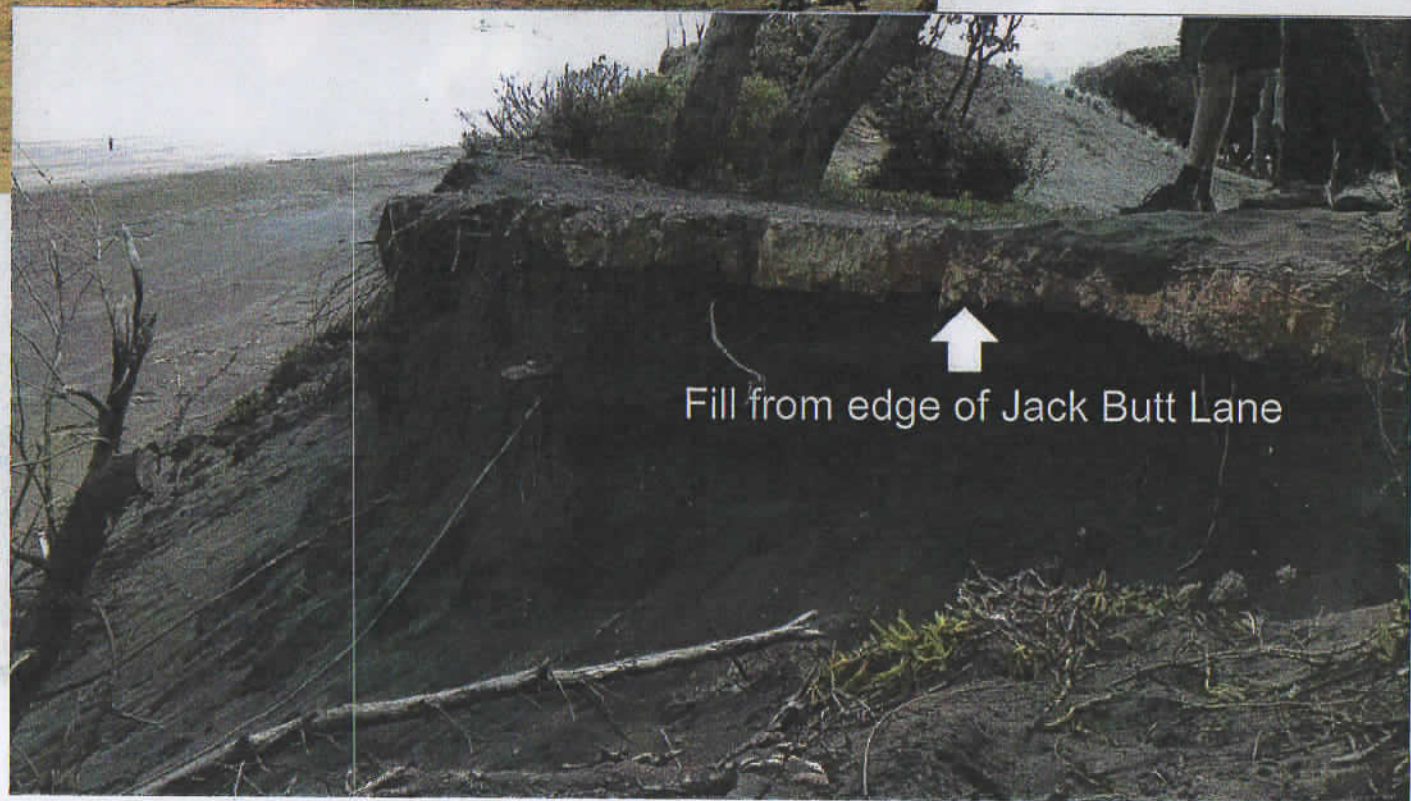


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Tā Kaunihera o Tāmaki Makaurau





Area B dune face



↑
Fill from edge of Jack Butt Lane

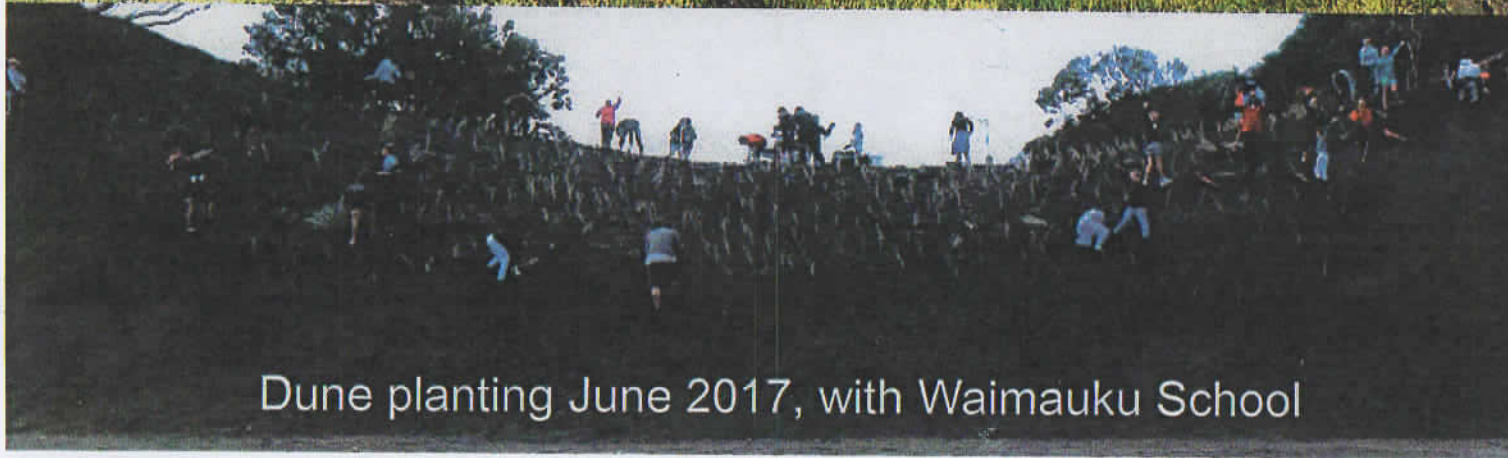


Area B. Debris / fill material removal, June 2017



Area B reshaping/lowering.





Dune planting June 2017, with Waimauku School

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