



# Herekino Harbour

## Intertidal vegetation mapping

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# Mapping process and purpose

A remote sensing method has been used to map wetland/saltmarsh and mangrove habitat in Northland. This mapping aims to improve spatial intertidal habitat data for Northland. Please refer to the separate methodology report<sup>1</sup> for details of the mapping process.

This is one of 19 worksheets that display the extent and location of mapped wetland/saltmarsh and mangrove habitats in the Northland region. The worksheets also identify intertidal saltmarsh habitat that exceeds the Regional Policy Statement for Northland (RPS) wetland area threshold of 0.5 hectare for significant saltmarsh (referred to below as significant saltmarsh). Oblique aerial images of all significant saltmarsh features and a summary of significant avifaunal values that are associated with this coastal wetland are also included in the worksheets. The saltmarsh and mangrove layers are available via an online viewer:

<https://localmaps.nrc.govt.nz/LocalMapsGallery/>

Where coastal wetlands extend inland, the degree of salt influence reduces until wetland transitions from saltmarsh to a freshwater wetland. In order to limit the identification of significant features to saltmarsh habitat and avoid mapping freshwater wetland, the landward extent of significant saltmarsh was delimited using selected LINZ hydro parcels. In a small number of instances (eg. Whangārei Harbour, Pātaua Estuary, Horahora Estuary and Kāretu River), where the hydro parcel clearly omitted areas of intertidal habitat, the LINZ NZ property parcel was used. By limiting the mapping of significant saltmarsh to areas within the LINZ hydro parcels, there is a high level of confidence that the significant saltmarsh mapped by this project is saltmarsh and not freshwater wetland.

During the validation process it was apparent from the oblique imagery that typically inland of the hydro parcels the saltmarsh transitions to freshwater habitat. By utilising the LINZ hydro layer, degraded habitat that may not have dominant indigenous vegetation has been avoided, as has wetland or saltmarsh on private title. However, by using the LINZ NZ property parcel and LINZ hydro parcels as the inland boundary, some saltmarsh habitat inland of these boundaries will have been omitted. Further work is required to develop a robust method to delineate the landward extent of saltmarsh habitat.

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<sup>1</sup> MacDonald, Griffiths, Griffin, Pene & Umuroa (2020). Northland Intertidal vegetation mapping methodology.

# Area description and map outputs

Herekino Harbour is a shallow down valley system on the west coast of the Northland peninsula, of which 153 hectares of mangrove and 90 hectares of saltmarsh were mapped. A total of fifteen saltmarsh sites have been identified, that exceed the RPS wetland area threshold of 0.5 hectare for significant saltmarsh, with a total area of 55 ha (Figure 1 & Table 1).

**Table 1:** Significant saltmarsh identified in Herekino Harbour

Reference	Area (m <sup>2</sup> )
AV26 178-974	5,217
AV26 183-944	5,902
AV26 173-934	8,832
AV26 179-942	9,162
AV26 186-985	13,969
AV26 183-957	15,516
AV26 185-985	17,548
AV26 172-960	17,922
AV26 185-977	19,473
AV26 181-969	19,931
AV26 182-978	21,332
AV26 181-942	49,090
AV26 184-981	108,049
AV26 183-963	117,402
AV26 188-980	122,143
<b>Total</b>	<b>551,487</b>

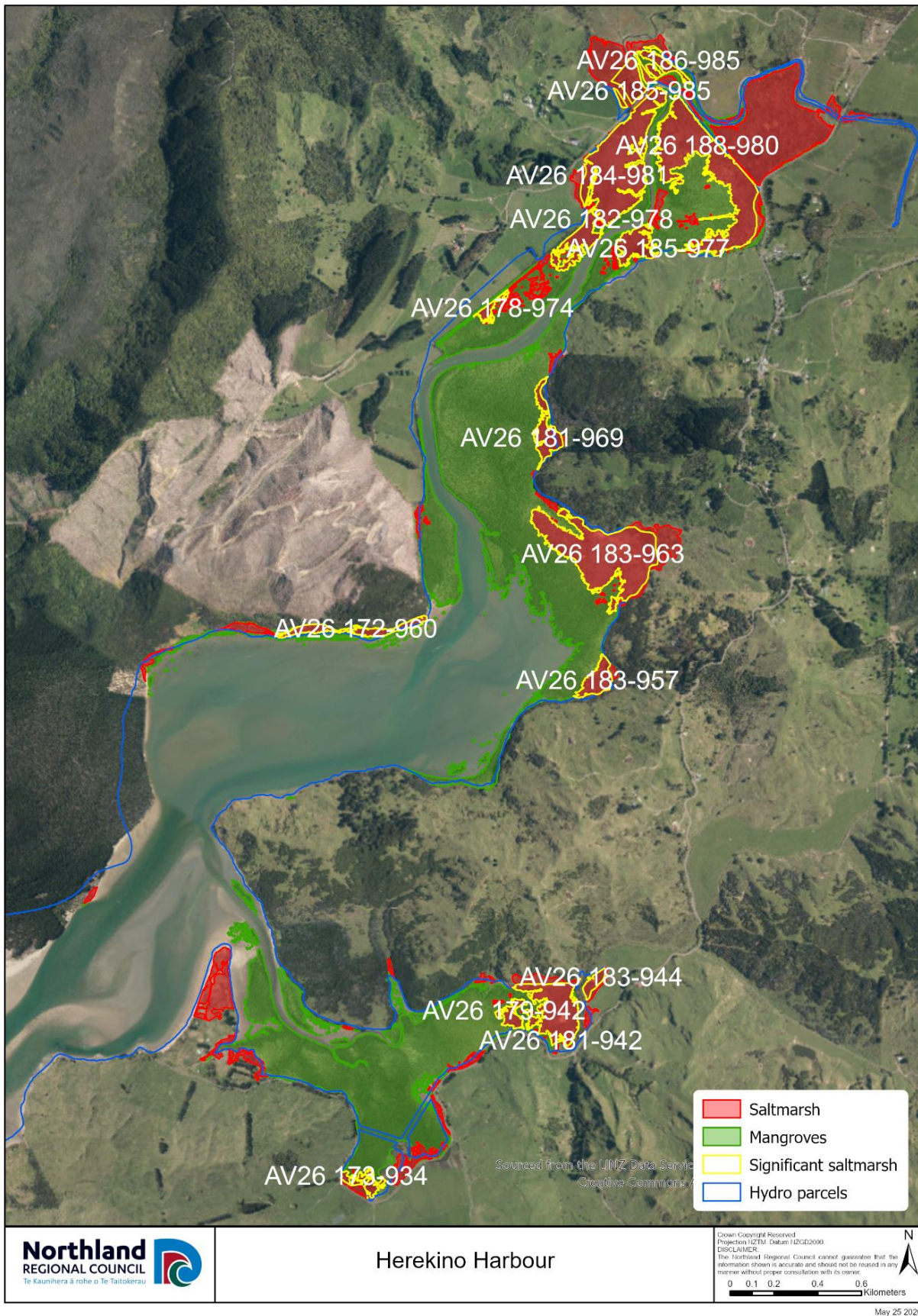
Herekino is a small harbour flanked by a mosaic of mangrove, saltmarsh, shrubland, farmland and nearby plantation forestry. Tidal flats are limited but stream channels penetrate some distance with varying levels of mangrove and saltmarsh habitat.

The harbours support few waders, most of them local residents, eg. northern NZ dotterel, variable oystercatcher and pied stilt. Australasian bittern, reef heron, pied shag, banded rail, spotless crane and fernbird also occur in this harbour (Table 2).

**Table 2:** 'Threatened' and 'At Risk' birds using saltmarsh/mangrove habitat in the Herekino Harbour

Scientific Name	Common Name	NZ threat classification (2016)		Significance for species
<i>Botaurus poiciloptilus</i>	Australasian bittern	Threatened	Nationally critical	Locally important feeding and breeding (saltmarsh/mangrove)
<i>Hydroprogne caspia</i>	Caspian tern	Threatened	Nationally vulnerable	Local feeding (mangrove channels)
<i>Bowdleria punctata vealeae</i>	North Island fernbird	At Risk	Declining	Nationally important breeding and feeding (saltmarsh/mangrove)
<i>Gallirallus philippensis assimilis</i>	Banded rail	At Risk	Declining	Nationally important breeding and feeding (saltmarsh/mangrove)
<i>Porzana tabuensis tabuensis</i>	Spotless crake	At Risk	Declining	Local breeding and feeding (saltmarsh/mangrove)
<i>Phalacrocorax varius varius</i>	Pied shag	At Risk	Recovering	Locally important breeding and feeding (mangrove channels)

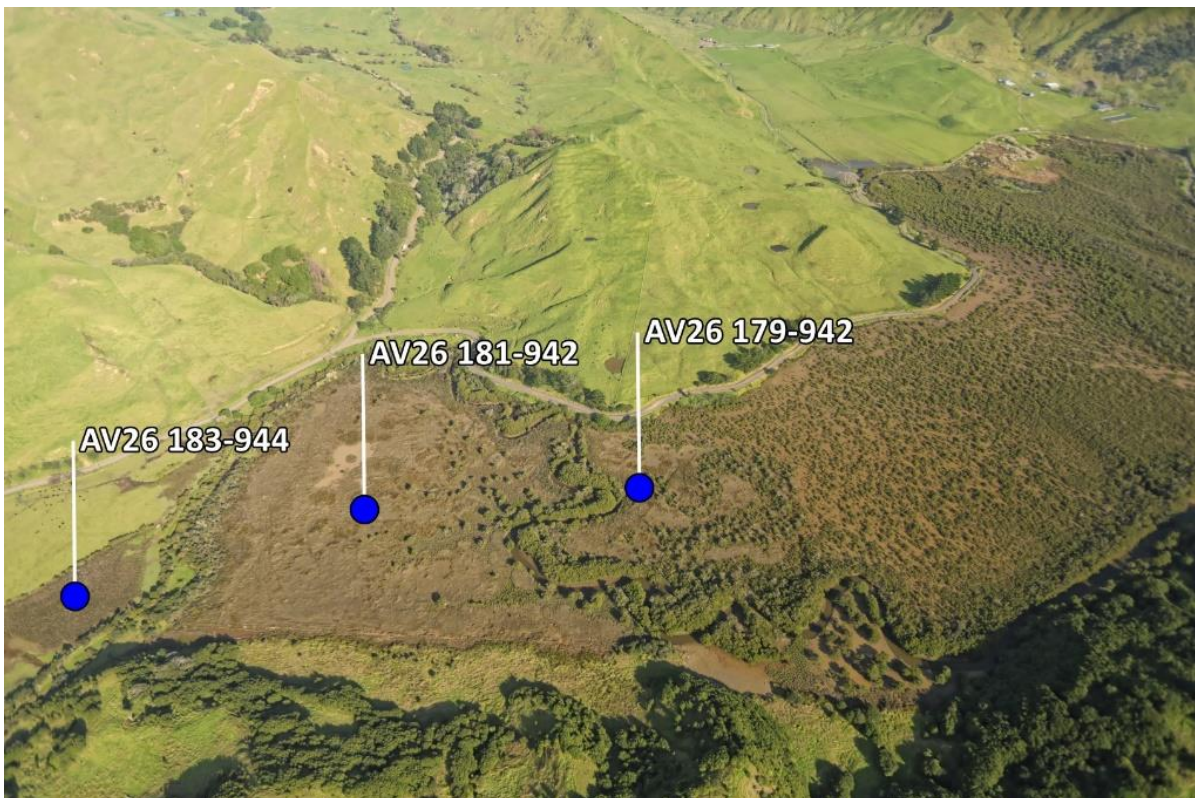
**Figure 1:** Mangrove and saltmarsh habitat in Herekino Harbour



**Figure 2:** AV26 173-934



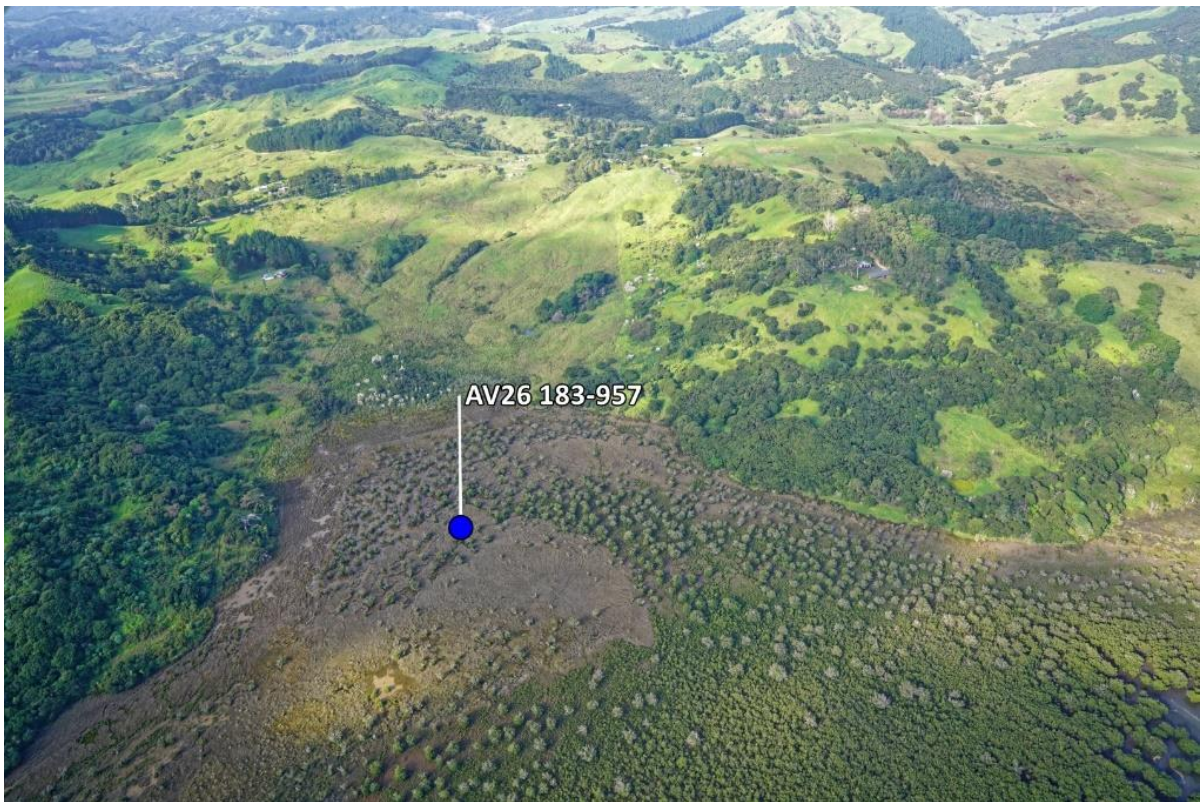
**Figure 3:** AV26 183-944, AV26 181-942, AV26 179-942



**Figure 4:** AV26 183-963



**Figure 5:** AV26 183-957



**Figure 6:** AV26 188-980

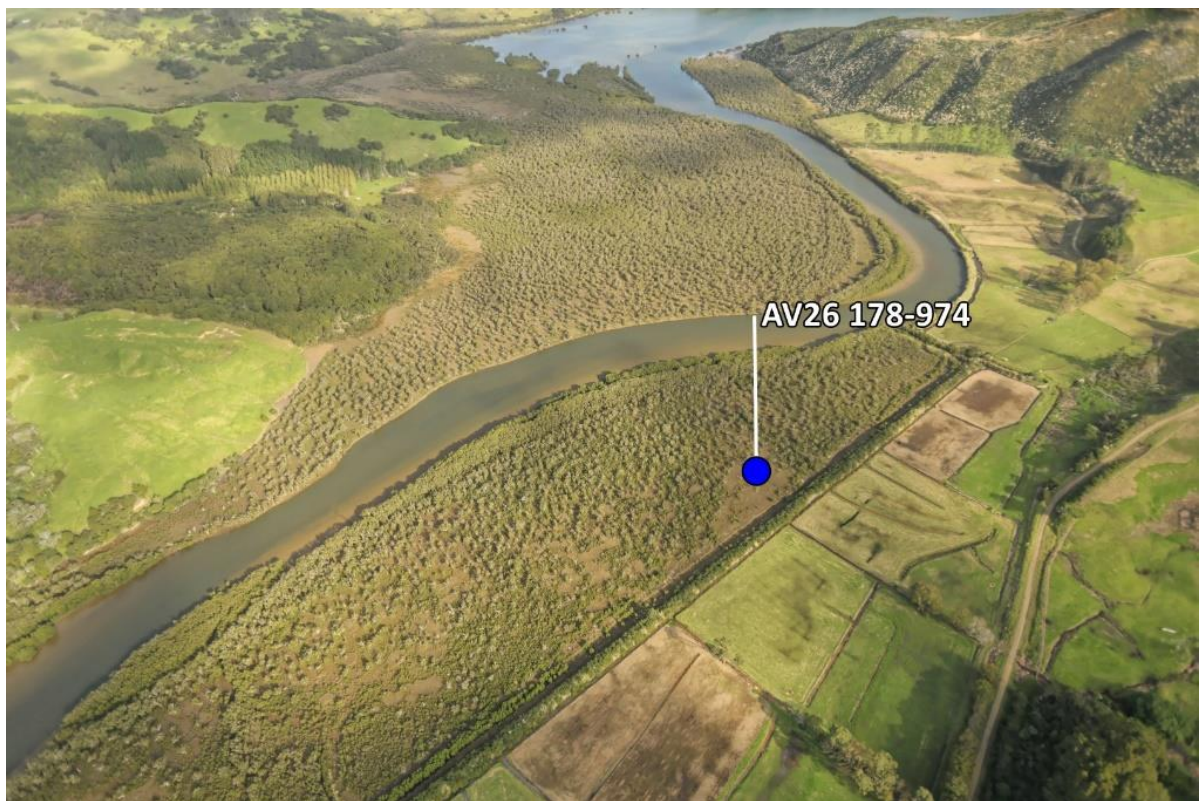


**Figure 7:** AV26 182-978, AV26 185-977, AV26 188-980, AV26 184-981





**Figure 8:** AV26 178-974



**Figure 9:** AV26 184-981, AV26 188-980



**Figure 10:** AV26 186-986, AV26 186-985, AV26 184-981, AV26 185-985



**Figure 11:** AV26 181-969



**Figure 12:** AV26 172-960



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