



Ngunguru Estuary

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 report¹ 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.

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

Area description and map outputs

Ngunguru Estuary is a tidal lagoon on the east coast of the Northland peninsula. One hundred and eighty-four hectares of mangrove and 95 hectares of saltmarsh were mapped. A total of 19 saltmarsh habitats, with a total area of 47.9 ha (Table 1 & Figure 1) have been identified in the CMA² that exceed the Regional Policy Statement for Northland wetland area threshold of 0.5 hectare for significant saltmarsh.

Table 1: Significant saltmarsh identified in Ngunguru Estuary

Reference	Area (m ²)
AW30 303-556	55,830
AW30 309-552	5,545
AW30 309-555	73,328
AW30 307-557	15,539
AW30 306-558	7,727
AW31 345-561	50,403
AW31 342-563	74,063
AX31 336-537	7,193
AW31 337-559	13,165
AX31 344-540	14,011
AW31 346-557	16,429
AX31 326-537	19,691
AW31 321-547	8,146
AW30 316-546	15,018
AW30 320-553	12,360
AW30 314-552	41,157
AW30 315-548	6,133
AW31 322-544	9,011
AW30 298-553	3,4475
Total	479,222

Ngunguru is a relatively small estuary with small areas of tidal flats but well buffered edges comprising mangroves, saltmarsh and adjacent shrubland. Several threatened species use the estuary for feeding, while the sandspit provides breeding habitat for northern NZ dotterel and variable oystercatcher as well as roost sites for other waders.

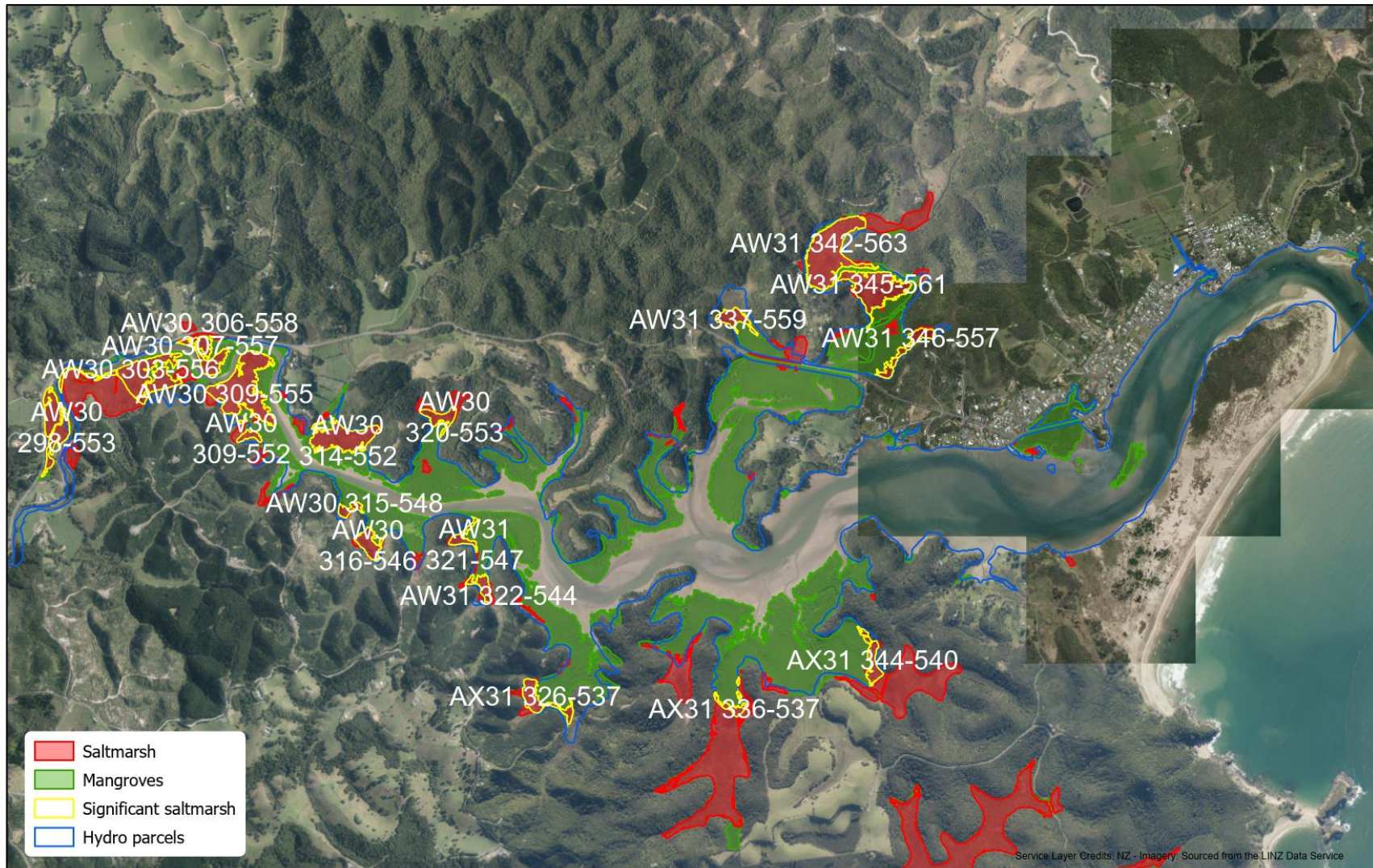
² Significant sites were only identified in the Land Information New Zealand NZ Primary Hydro Parcels area.

There are important populations of fernbirds, banded rails, crakes and Australasian bitterns in this area as well as recovering numbers of pateke (brown teal) (Table 2).

Table 2: ‘Threatened’ and ‘At Risk’ birds using saltmarsh/mangrove habitat in the Ngunguru Estuary

Species Scientific Name	Species Common Name	NZ threat classification (2016)		Significance for species
<i>Botaurus poiciloptilus</i>	Australasian bittern	Threatened	Nationally critical	Locally important breeding and feeding (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	Locally important breeding and feeding (saltmarsh/mangrove)
<i>Gallirallus philippensis assimilis</i>	Banded rail	At Risk	Declining	Locally important breeding and feeding population (saltmarsh/mangrove)
<i>Haematopus finschi</i>	NZ pied oystercatcher	At Risk	Declining	Local feeding (mangrove edges)
<i>Limosa lapponica baueri</i>	Eastern bar-tailed godwit	At Risk	Declining	Local feeding (mangrove edges)
<i>Porzana tabuensis tabuensis</i>	Spotless crane	At Risk	Declining	Locally important breeding and feeding (saltmarsh/mangrove)
<i>Anas chlorotis</i>	Brown teal, pateke	At Risk	Recovering	Locally important feeding (mangrove edges)
<i>Phalacrocorax varius varius</i>	Pied shag	At Risk	Recovering	Locally important breeding and feeding (mangrove and channels)

Figure 1: Mangrove and saltmarsh habitat in Ngunguru Estuary



Ngunguru Estuary

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0 0.130.25 0.5 0.75 1 1.25
 Kilometers

May 27 2020

Figure 2: AW31 346-557, AW31 345-561, AW31 342-563

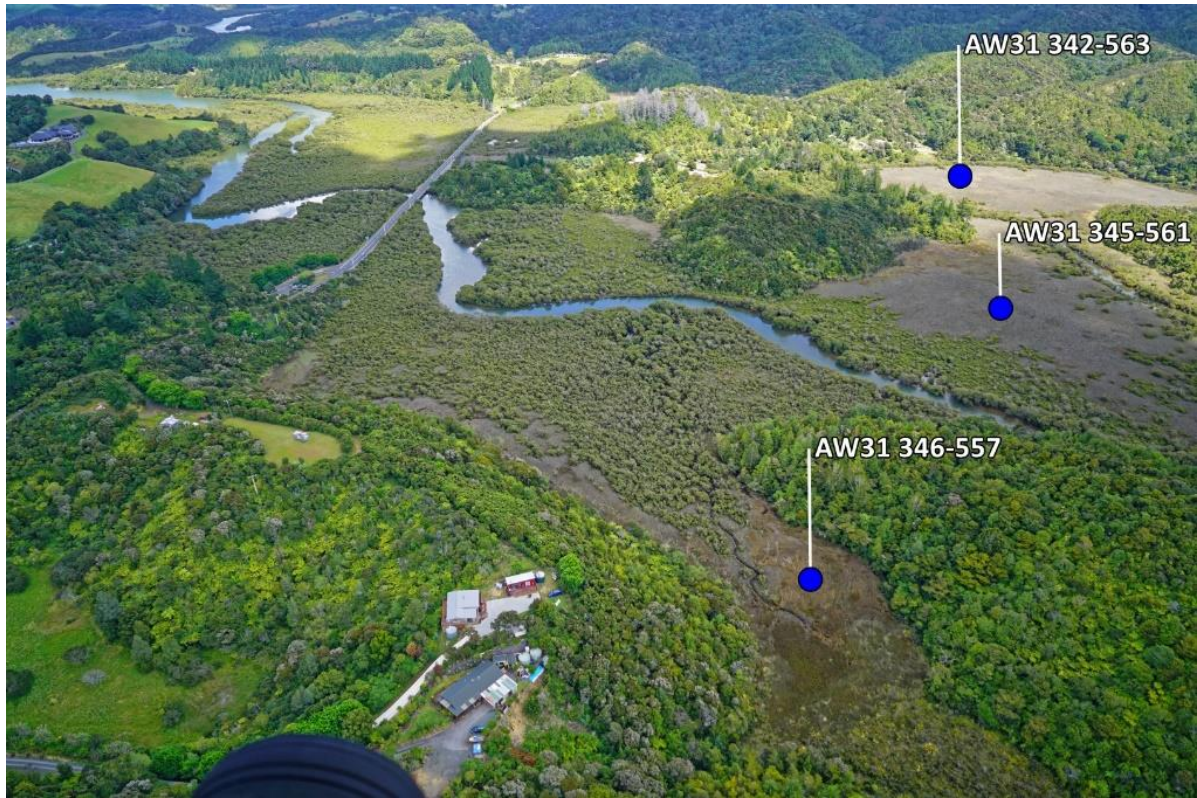


Figure 3: AW31 345-561, AW31 342-563



Figure 4: AW31 337-559



Figure 5: AW30 320-553

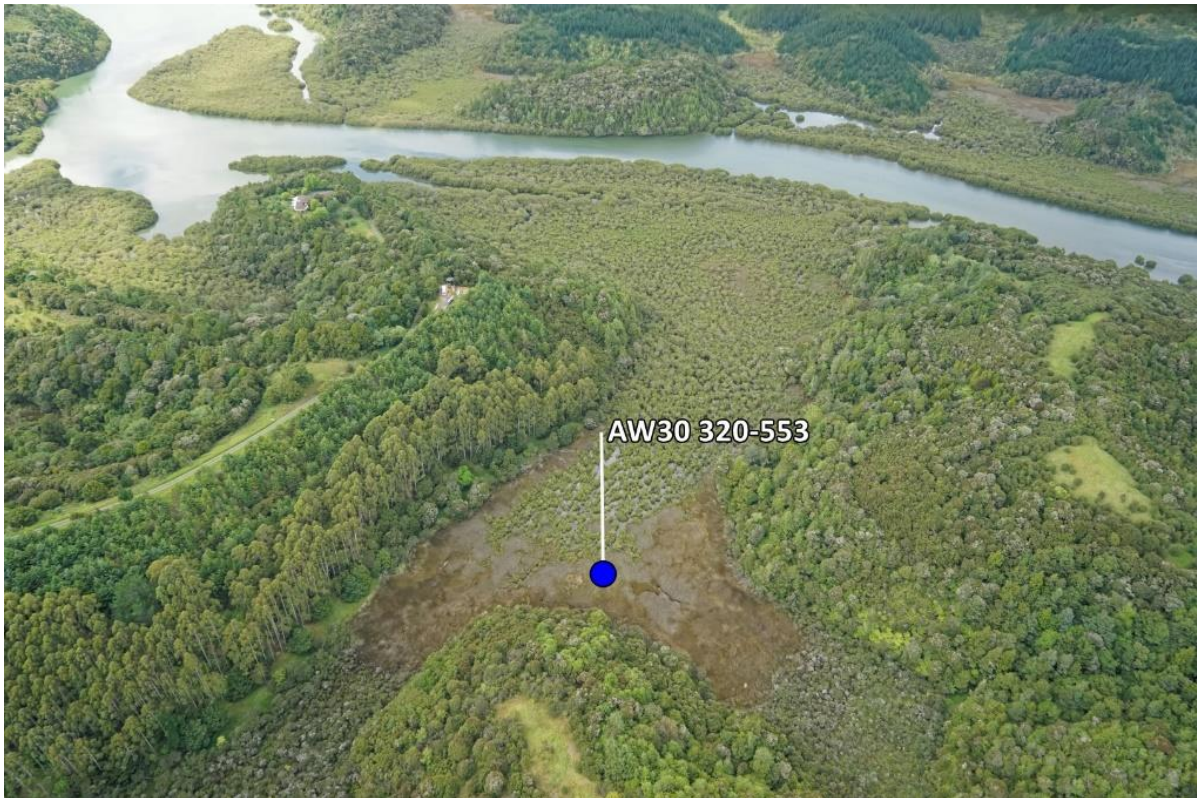


Figure 6: AW30 314-552



Figure 7: AW30 307-557, AW30 306-558, AW30 303-556



Figure 8: AW30 309-552, AW30 309-555

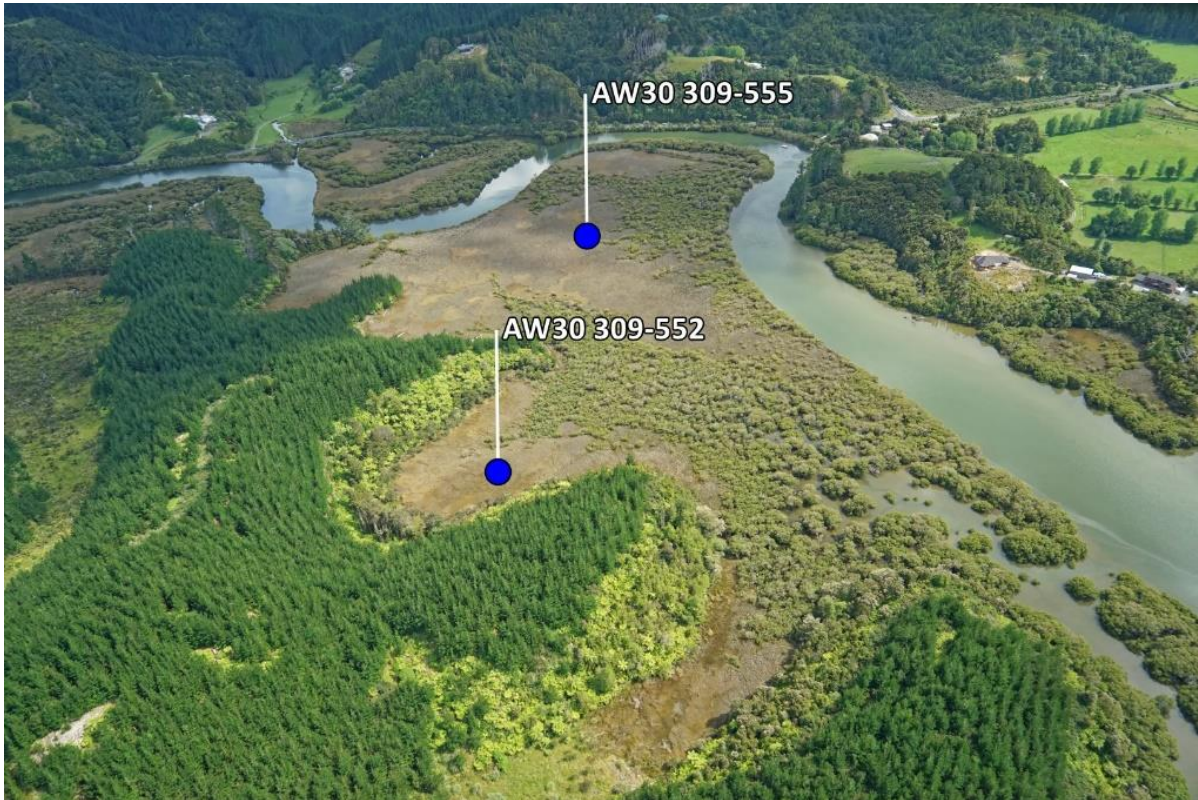


Figure 9: AW30 316-546, AW30 315-548



Figure 10: AW31 321-547, AW31 322-544



Figure 11: AW31 322-544



Figure 12: AX31 326-537



Figure 13: AX31 336-537



Figure 14: AX31 344-540

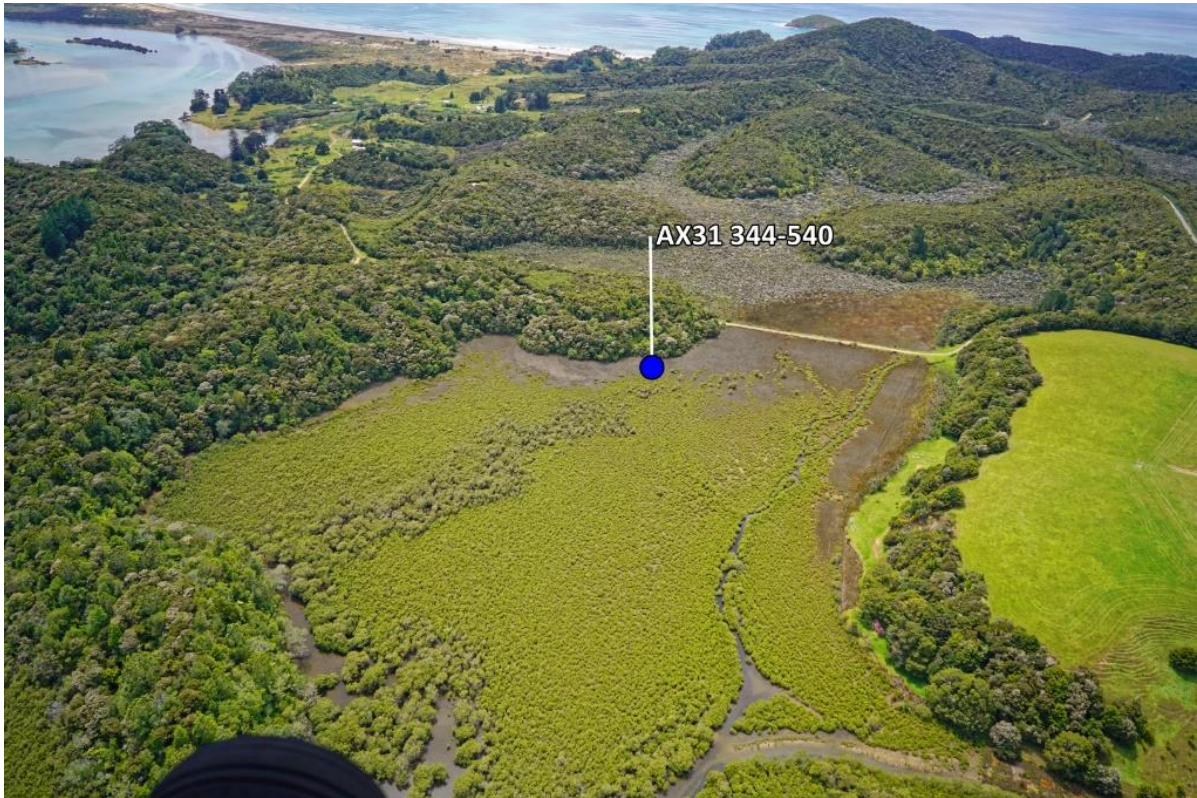


Figure 15: AW30 303-556, AW30 298-553



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