Whananaki Estuary
Intertidal vegetation mapping

Date: 28 May 2020

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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[1] 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

Whananaki Estuary is a tidal lagoon on the east coast of the Northland peninsula. Seventy-four hectares of mangrove and 33 hectares of saltmarsh have been mapped. Ten saltmarsh habitats, with a total area of 18.2 ha (Figure 1 & Table 1) have been identified in the CMA[2] that exceed the Regional Policy Statement for Northland wetland area threshold of 0.5 hectare for significant saltmarsh.

Table 1: Significant saltmarsh identified in Whananaki Estuary

Reference	Area (m^2)
AW30 297-687	24,834
AW30 298-687	26,784
AW30 298-689	19,088
AW30 305-696	10,531
AW30 315-678	25,032
AW30 302-698	5,524
AW30 316-680	7,882
AW30 308-696	6,676
AW30 304-695	50,754
AW30 303-691	5,391
Total	**182,496**

Whananaki is a relatively small estuary with well buffered edges of mangroves, saltmarsh and adjacent shrubland. Low numbers of several threatened species use the estuary mainly for feeding and some breeding on the sandspit, eg. northern NZ dotterel and variable oystercatcher. The more significant species populations include Australasian bittern, fernbird, banded rail and pateke, which is recovering in the Whananaki River catchment following predator management (Table 2).

Table 2: 'Threatened' and 'At Risk' birds using saltmarsh and adjoining mangrove habitat in the Whananaki Estuary

Species Scientific Name	Species Common Name	NZ threat classification (2016)		Significance for species
Botaurus poiciloptilus	Australasian bittern	Threatened	Nationally critical	Locally important breeding and feeding (saltmarsh/mangrove)
Hydroprogne caspia	Caspian tern	Threatened	Nationally vulnerable	Local feeding (mangrove channels)
Bowdleria punctata vealeae	North Island fernbird	At Risk	Declining	Locally important breeding and feeding (saltmarsh/mangrove)

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

Species Scientific Name	Species Common Name	NZ threat classification (2016)		Significance for species
Gallirallus philippensis assimilis	Banded rail	At Risk	Declining	Locally important breeding and feeding (saltmarsh/mangrove)
Anas chlorotis	Brown teal, pateke	At Risk	Declining	Nationally important breeding and feeding (mangrove edges)
Phalacrocorax varius varius	Pied shag	At Risk	Recovering	Local feeding (mangrove and channels)

Figure 1: Mangrove and saltmarsh habitat in Whananaki Estuary

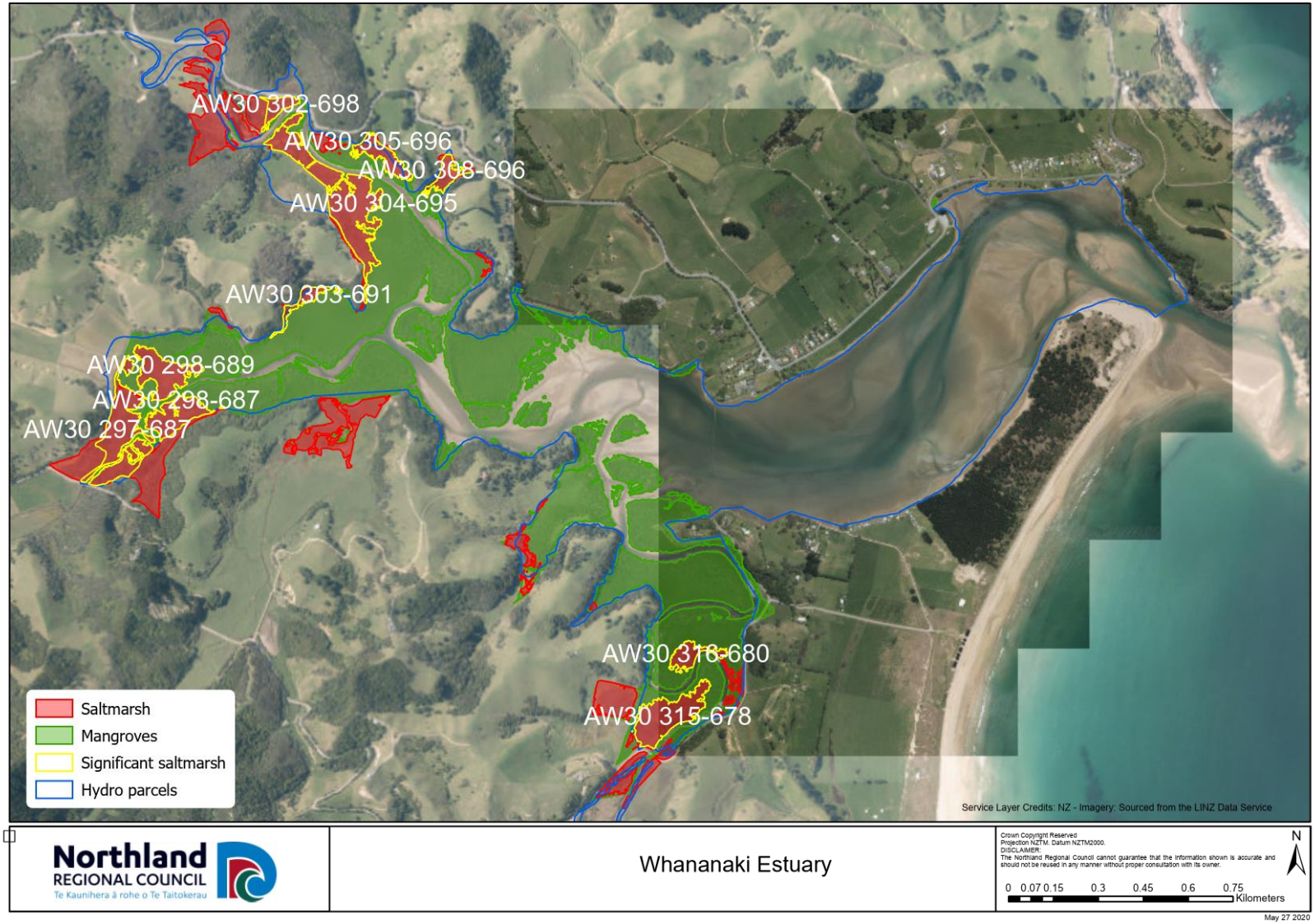

Figure 2: AW30 308-696, AW30 303-691

Figure 3: AW30 308-696

Figure 4: AW30 308-696

Figure 5: AW30 302-698

Figure 6: AW30 302-698, AW30 305-696, AW30 304-695

Figure 7: AW30 304-695, AW30 305-696

Figure 8: AW30 297-687, AW30 298-689, AW30 298-687

Figure 9: AW30 315-678

Figure 10: AW30 316-680, AW30 315-678

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