



Whangapē 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 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

Whangapē Harbour is a shallow drowned valley estuary system on the west coast of the Northland peninsula. Sixty-six hectares of mangrove and 188 ha of saltmarsh have been mapped. A total of 42 saltmarsh sites have been identified, that exceed the RPS wetland area threshold of 0.5 hectare for significant saltmarsh, with a total area of 154 ha (Table 1 & Figure 1).

Table 1: Significant saltmarsh habitat in Whangapē Harbour

Reference	Area (m ²)
AV26 229-922	5,556
AW26 237-894	5,767
AV26 249-950	5,864
AV26 254-953	6,349
AW26 245-894	6,918
AV26 246-924	7,117
AW26 200-897	7,162
AW26 230-880	7,182
AV26 244-928	7,224
AW26 238-898	7,942
AV26 244-938	7,961
AV26 211-900	8,048
AV26 212-915	8,521
AV26 231-916	8,738
AW26 230-881	8,766
AV26 234-933	9,474
AV26 203-907	10,253
AV26 217-909	10,849
AV26 204-916	11,625
AW26 222-898	12,080
AW26 241-889	12,094
AV26 236-928	12,832

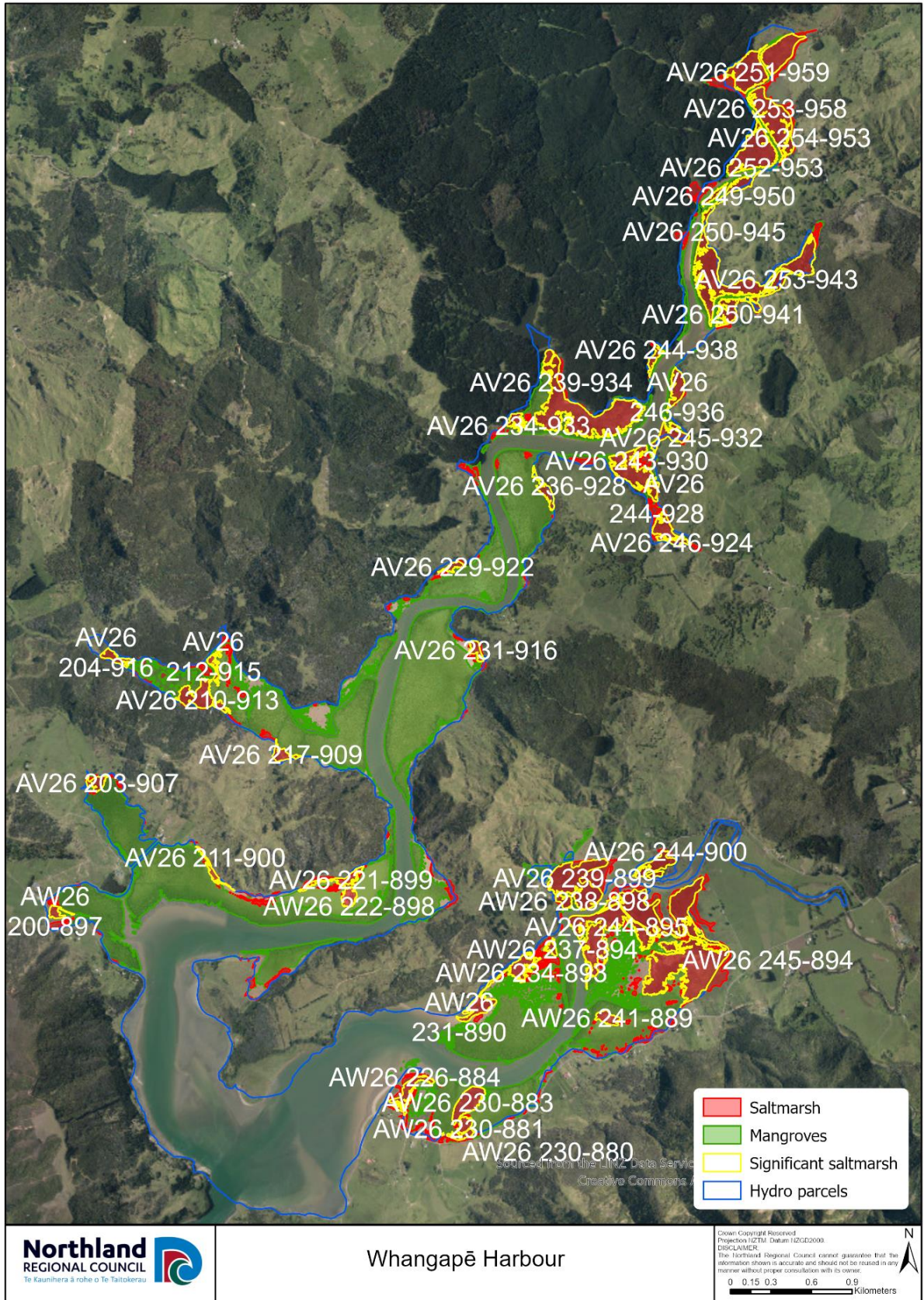
Reference	Area (m ²)
AV26 221-899	14,508
AV26 245-925	18,272
AV26 250-941	19,874
AV26 253-943	20,414
AV26 246-936	20,561
AW26 226-884	20,861
AW26 234-893	21,320
AV26 245-932	22,322
AW26 231-890	24,538
AV26 244-900	26,086
AW26 230-883	32,316
AV26 210-913	37,090
AV26 243-930	50,485
AV26 251-959	54,391
AV26 252-953	68,471
AV26 239-899	85,333
AV26 253-958	111,656
AV26 250-945	152,543
AV26 239-934	169,071
AV26 244-895	383,222
Total	1,541,658

Whangapē 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 Whangapē Harbour

<i>Species Scientific Name</i>	<i>Species Common Name</i>	<i>NZ threat classification (2016)</i>		<i>Significance for species</i>
<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 crane	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 Whangapē Harbour



Awaroa River

Twenty-nine significant saltmarsh features were identified the Awaroa River, totalling 90 hectares (Table 3).

Table 3: Significant saltmarsh habitat in Awaroa River

Reference	Area (m ²)
AV26 229-922	5,556
AV26 249-950	5,864
AV26 254-953	6,349
AV26 246-924	7,117
AW26 200-897	7,162
AV26 244-928	7,224
AV26 244-938	7,961
AV26 211-900	8,048
AV26 212-915	8,521
AV26 231-916	8,738
AV26 234-933	9,474
AV26 203-907	10,253
AV26 217-909	10,849
AV26 204-916	11,625
AW26 222-898	12,080

Reference	Area (m ²)
AV26 236-928	12,832
AV26 221-899	14,508
AV26 245-925	18,272
AV26 250-941	19,874
AV26 253-943	20,414
AV26 246-936	20,561
AV26 245-932	22,322
AV26 210-913	37,090
AV26 243-930	50,485
AV26 251-959	54,391
AV26 252-953	68,471
AV26 253-958	111,656
AV26 250-945	152,543
AV26 239-934	169,071
Total	899,311

Figure 2: AV26 231-916



Figure 3: AV26 236-928

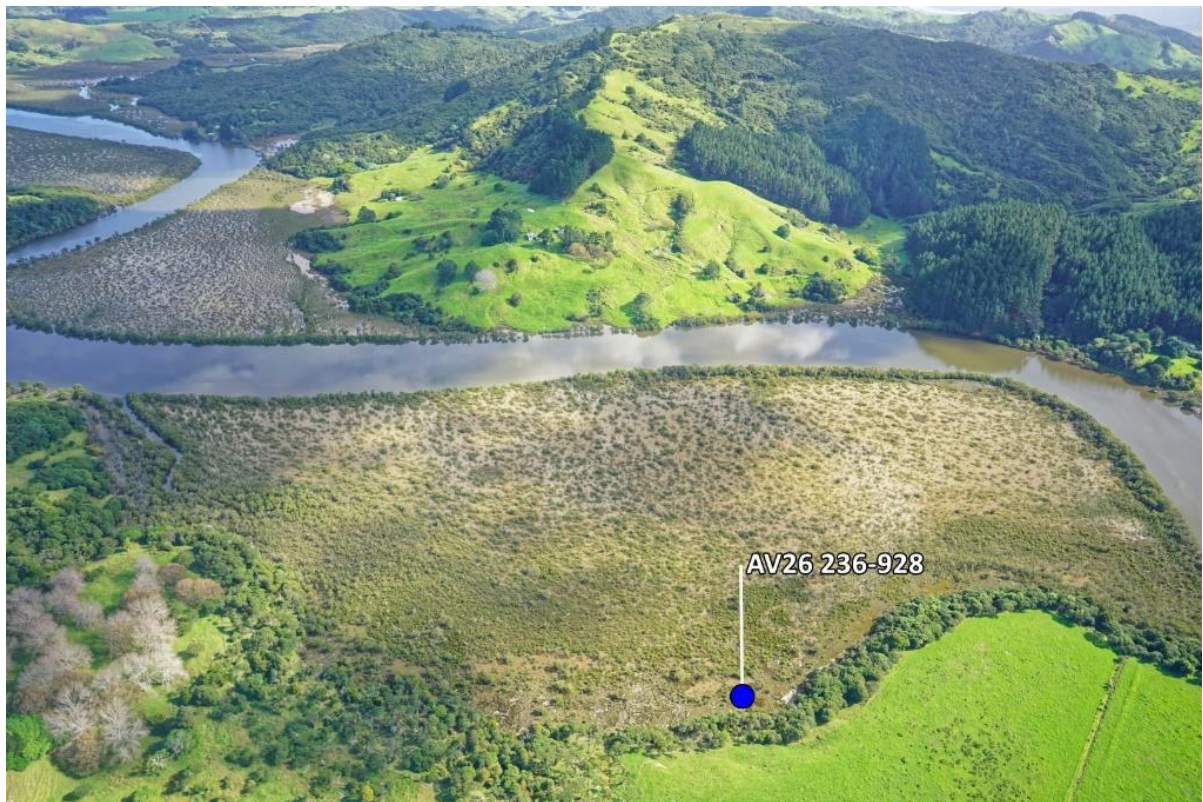


Figure 4: AV26 246-924, AV26 245-925, AV26 243-930

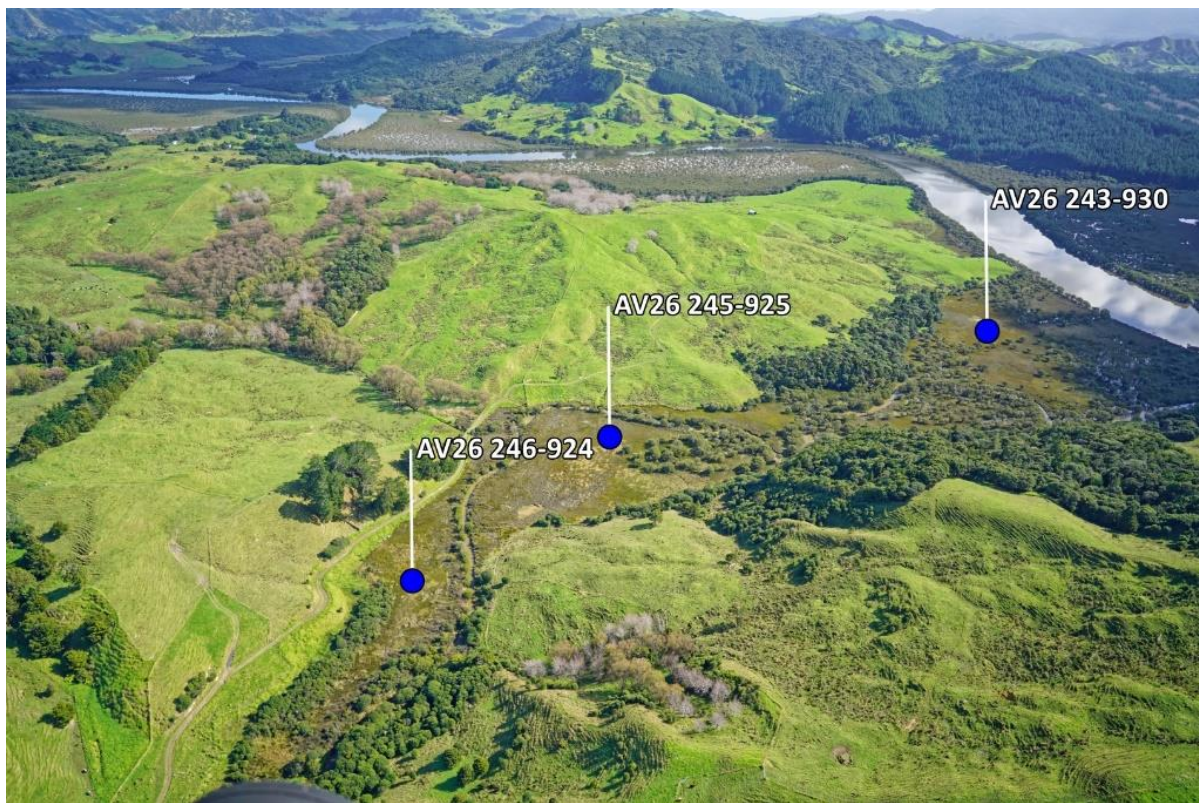


Figure 5: AV26 244-928, AV26 244-928



Figure 6: AV26 246-936, AV26 239-934



Figure 7: AV26 253-943, AV26 250-945



Figure 8: AV26 250-941, AV26 250-945



Figure 9: AV26 250-945

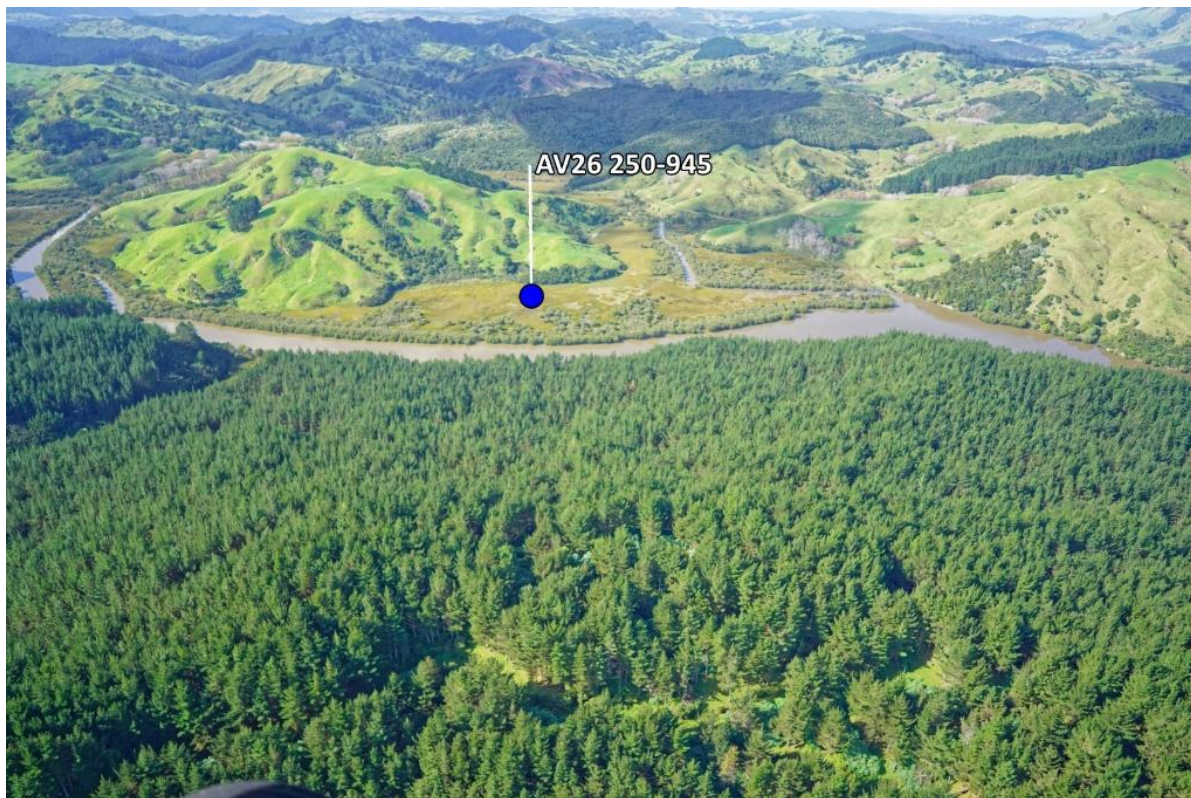


Figure 10: AV26 249-950, AV26 250-945



Figure 11: AV26 253-958, AV26 254-953



Figure 12: AV26 253-958



Figure 13: AV26 251-959

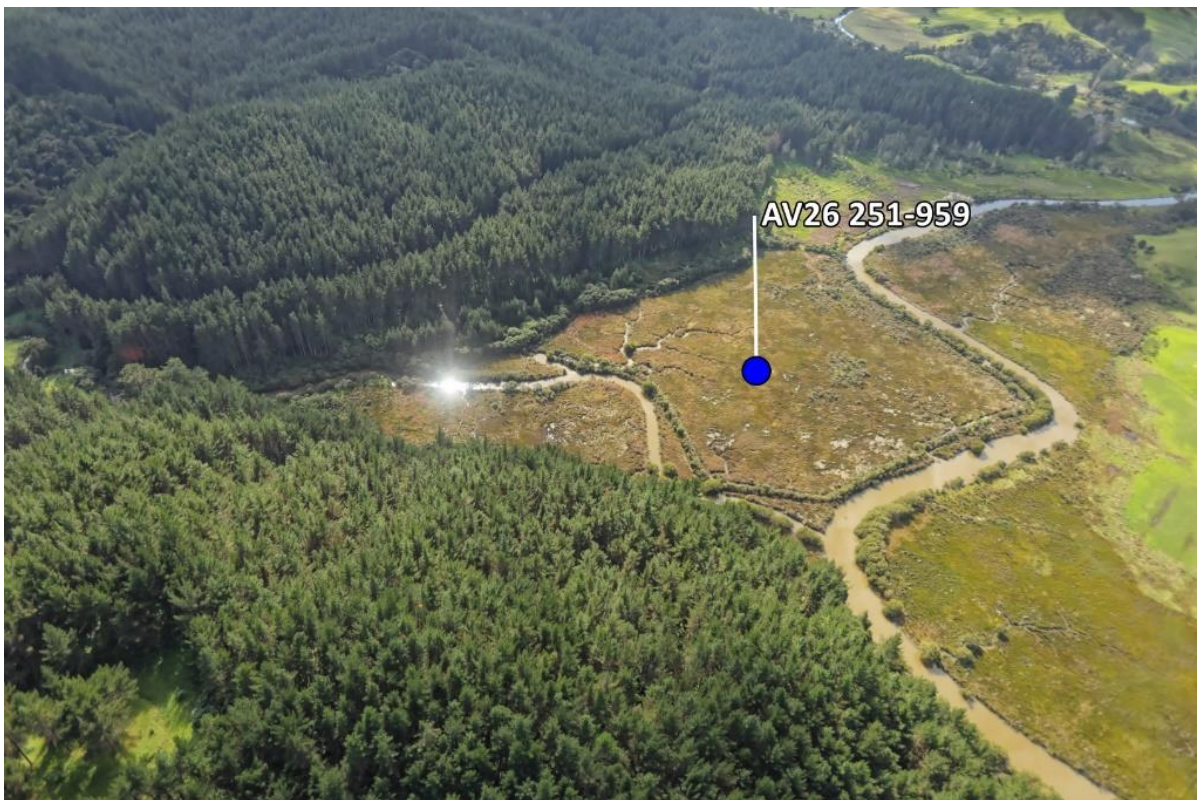


Figure 14: AV26 252-953



Figure 15: AV26 244-938, AV26 246-936

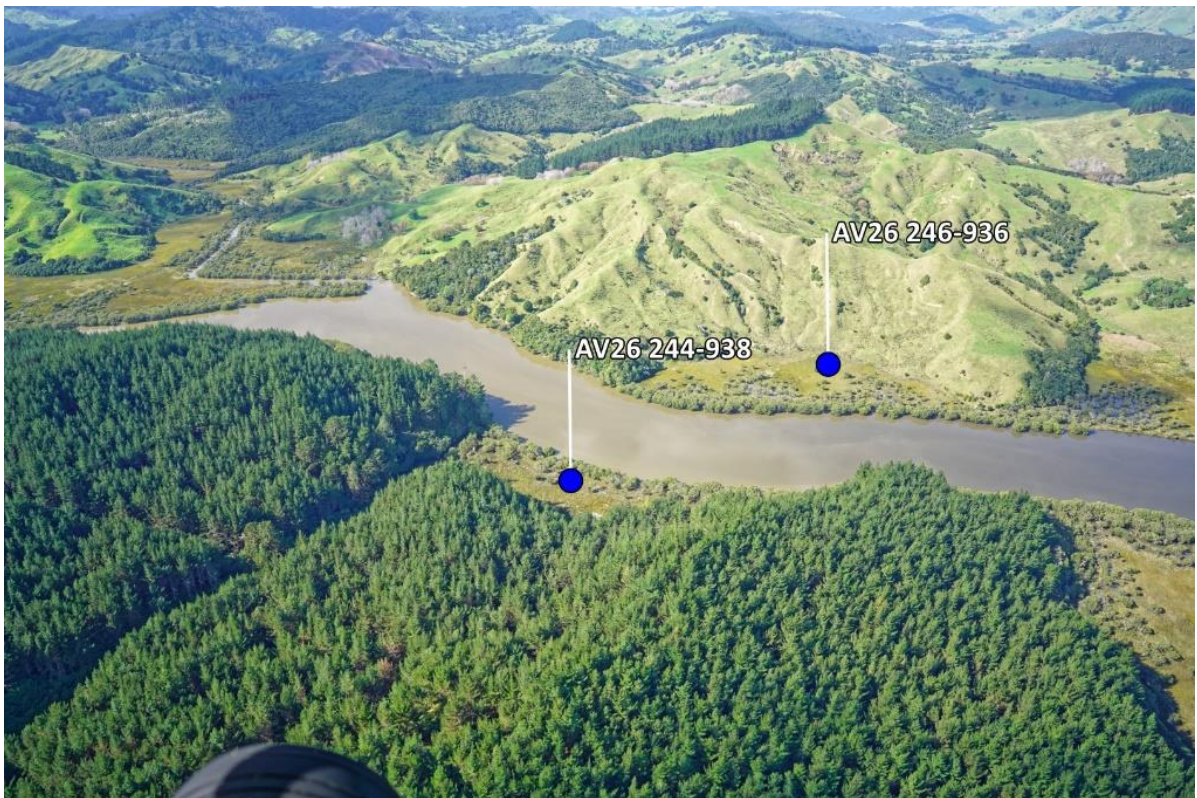


Figure 16: AV26 239-934, AV26 243-930



Figure 17: AV26 234-933, AV26 239-934



Figure 18: AV26 229-922



Figure 19: AV26 204-916

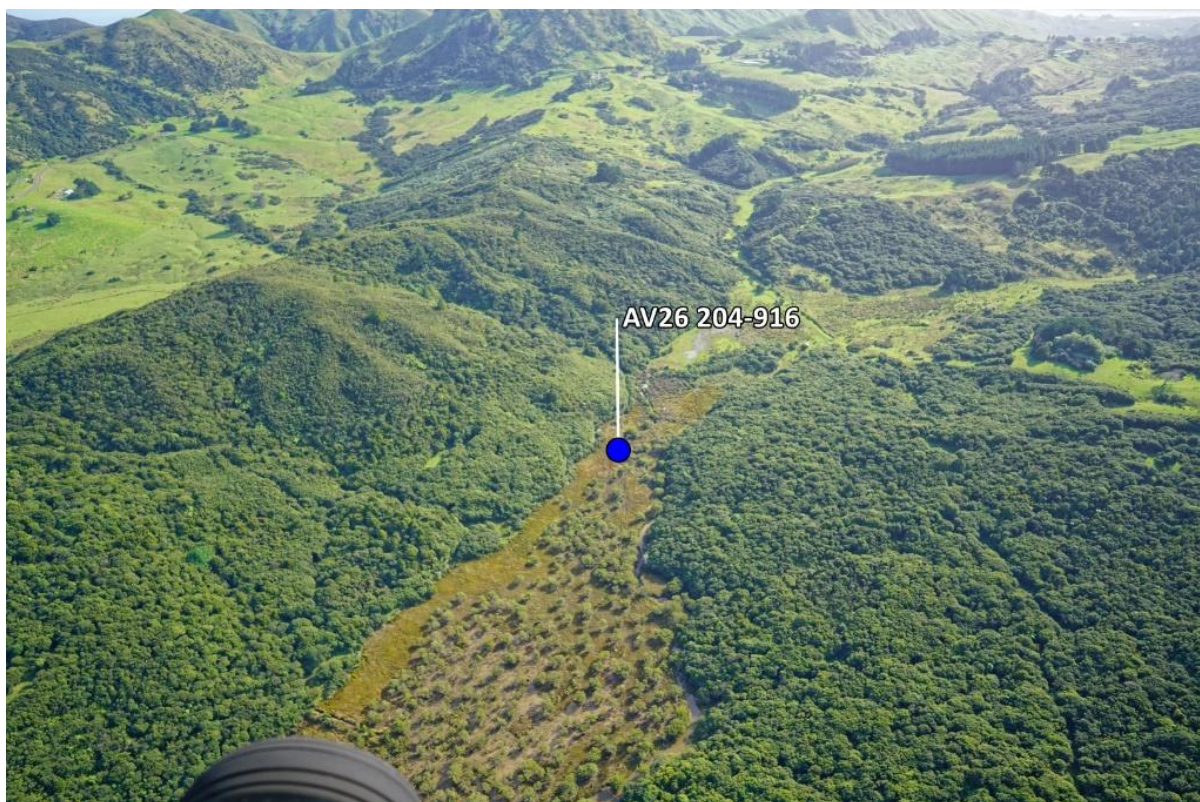


Figure 20: AV26 212-915, AV26 210-913

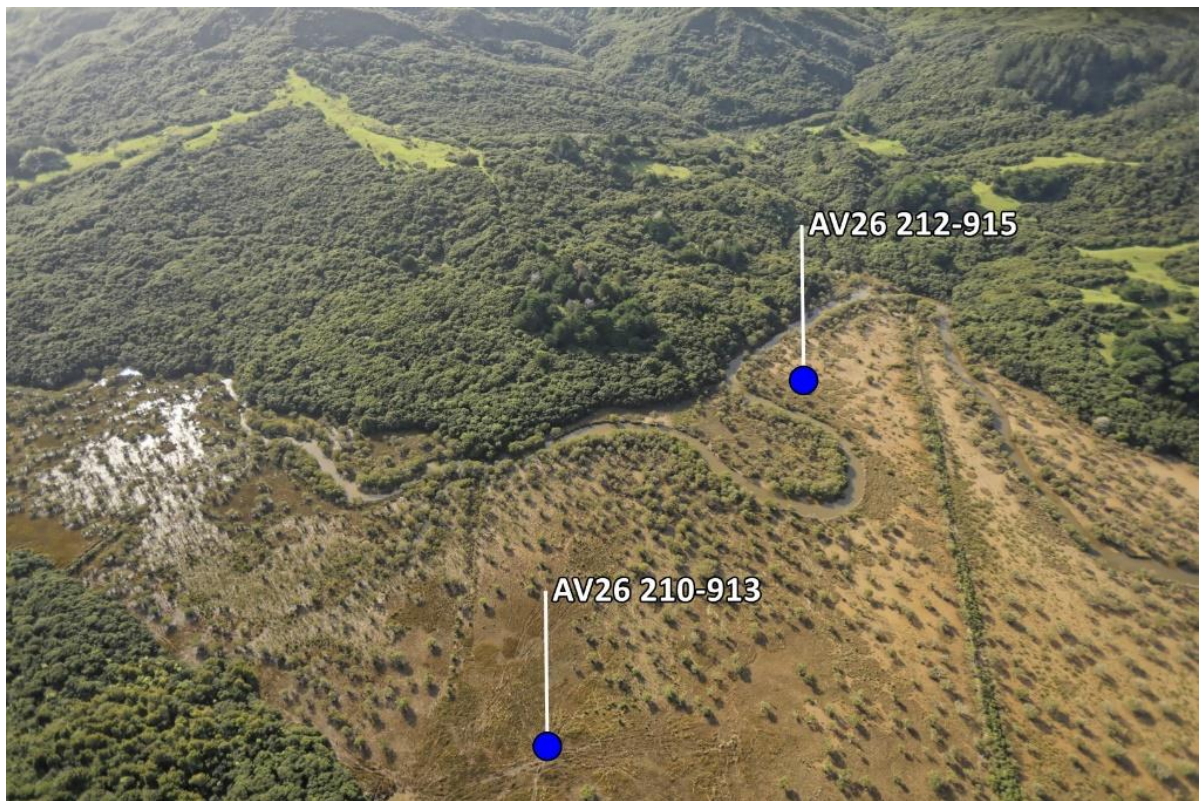


Figure 21: AV26 210-913

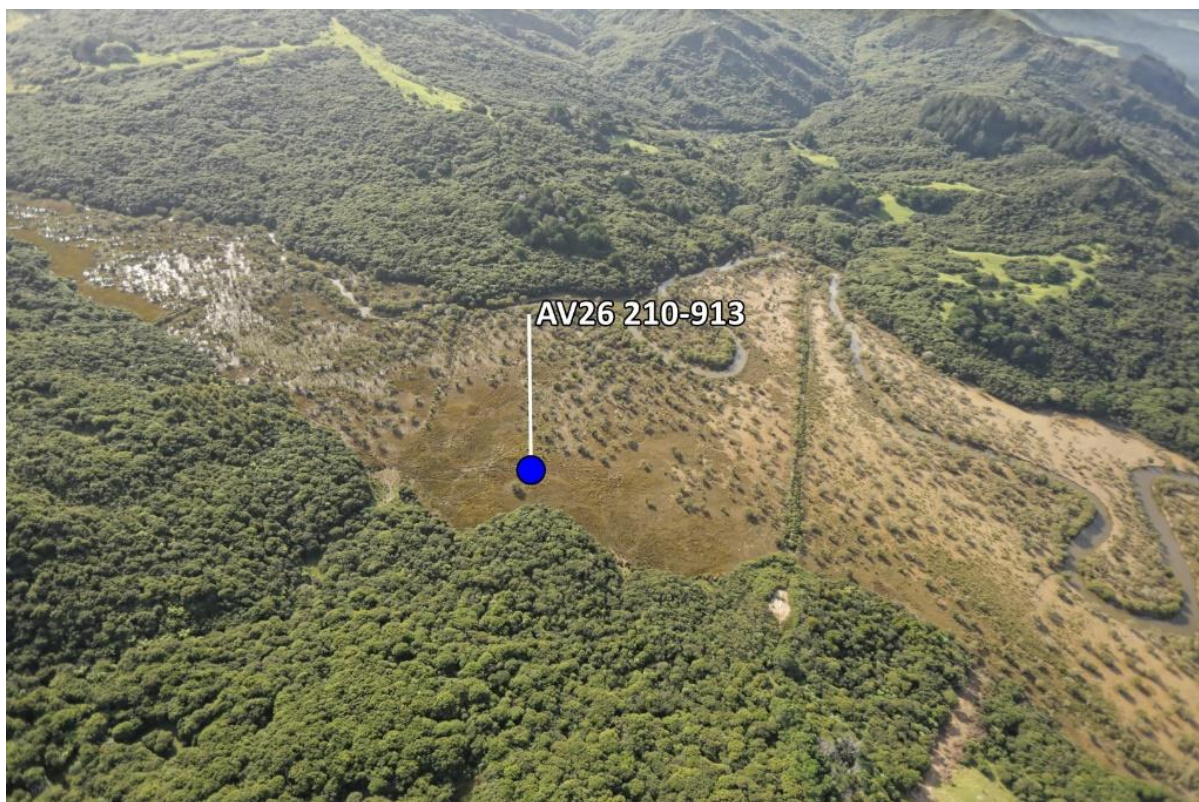


Figure 22: AV26 217-909

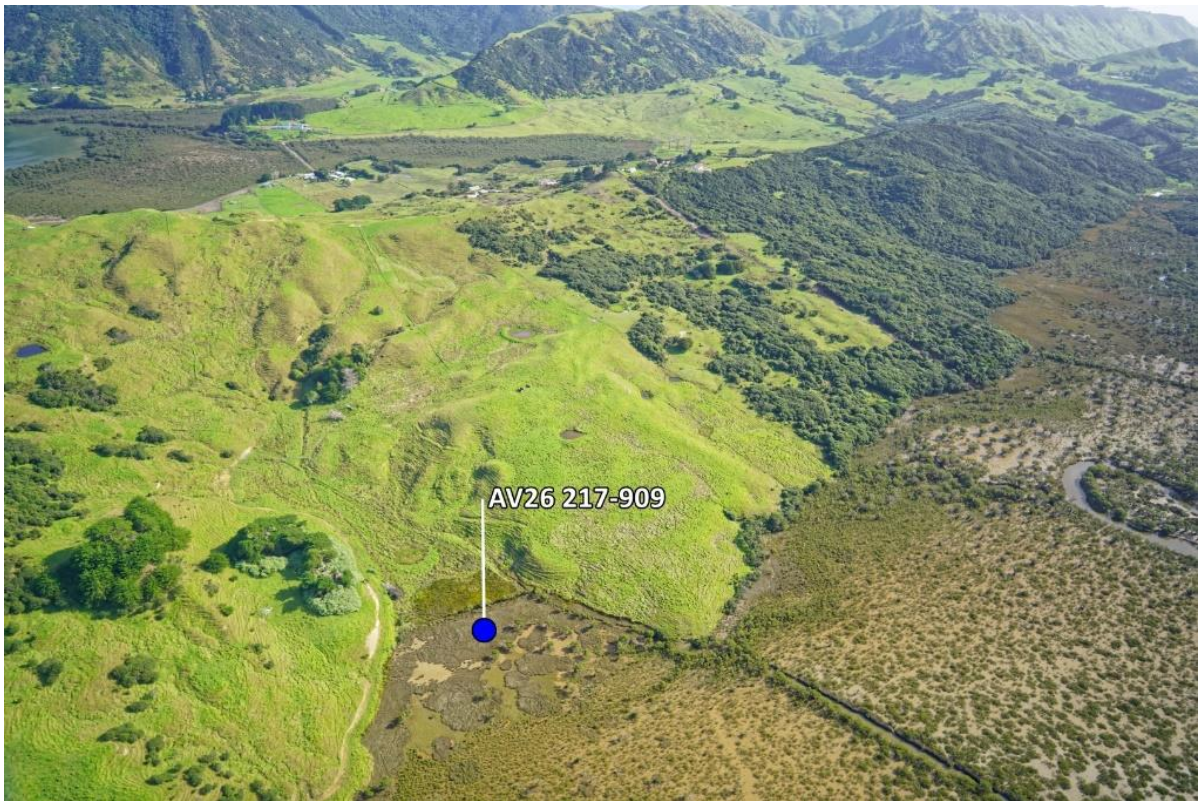


Figure 23: AV26 221-899, AW26 222-898

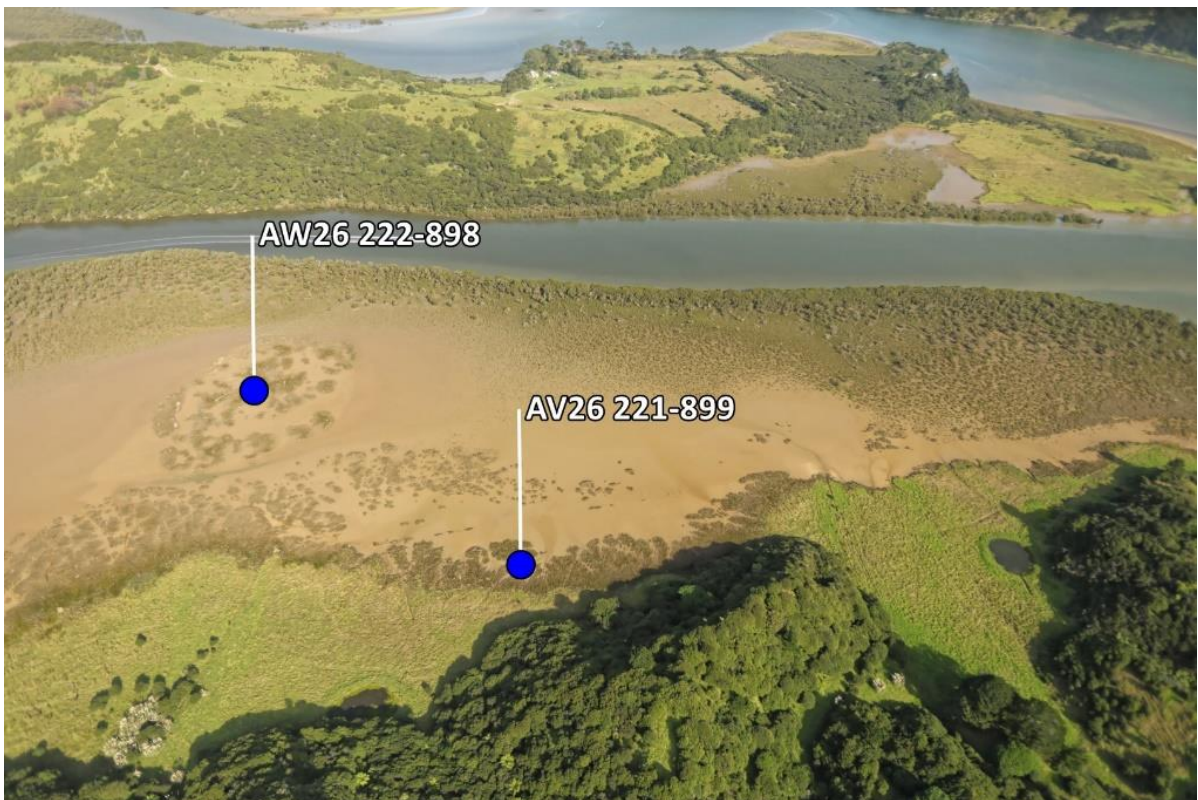


Figure 24: AV26 211-900



Figure 25: AV26 203-907

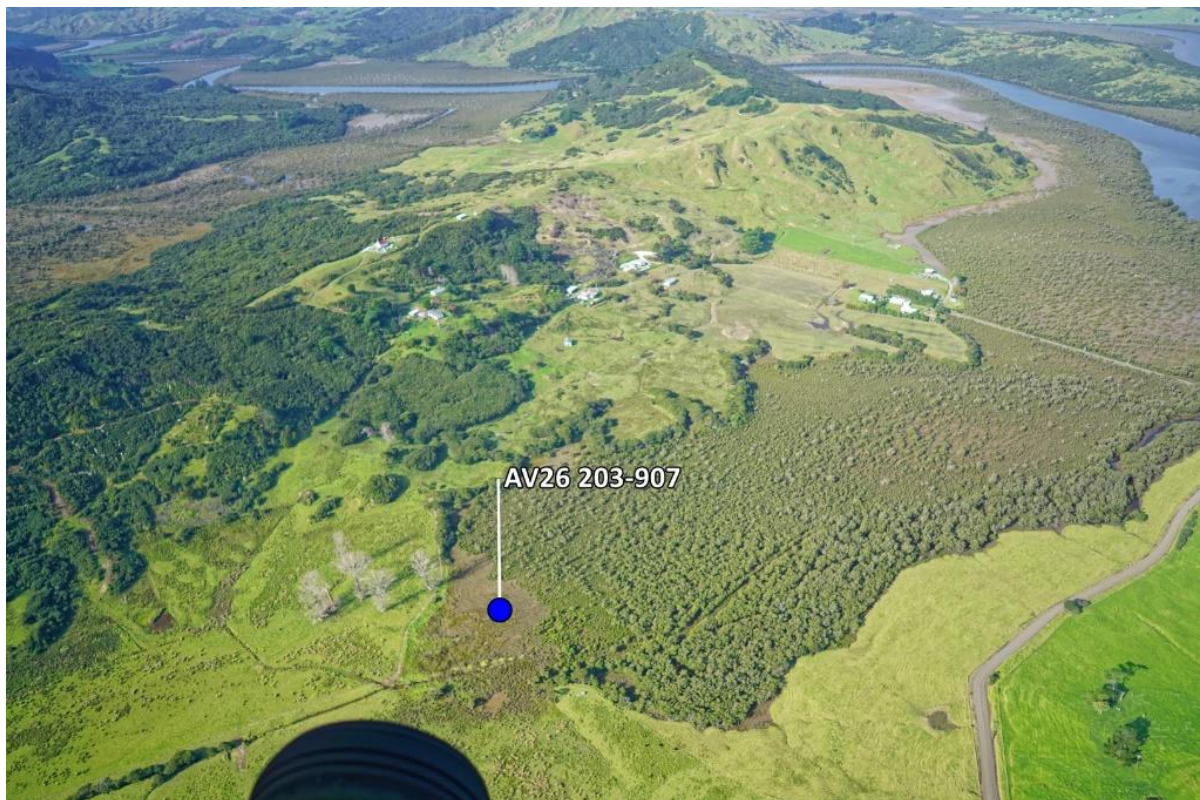


Figure 26: AW26 200-897



Rotokakahi River

Thirteen significant saltmarsh features were identified the Rotokahi River, totalling 64 hectares (Table 4).

Table 4: Significant saltmarsh identified in Rotokakahi River

Reference	Area (m ²)
AW26 237-894	5,767
AW26 245-894	6,918
AW26 230-880	7,182
AW26 238-898	7,942
AW26 230-881	8,766
AW26 241-889	12,094
AW26 226-884	20,861
AW26 234-893	21,320
AW26 231-890	24,538
AV26 244-900	26,086
AW26 230-883	32,316
AV26 239-899	85,333
AV26 244-895	383,222
Total	642,347

Figure 27: AW26 231-890



Figure 28: AW26 234-893, AW26 237-894, AW26 231-890



Figure 29: AW26 238-898, AV26 239-899



Figure 30: AV26 244-895, AW26 237-894

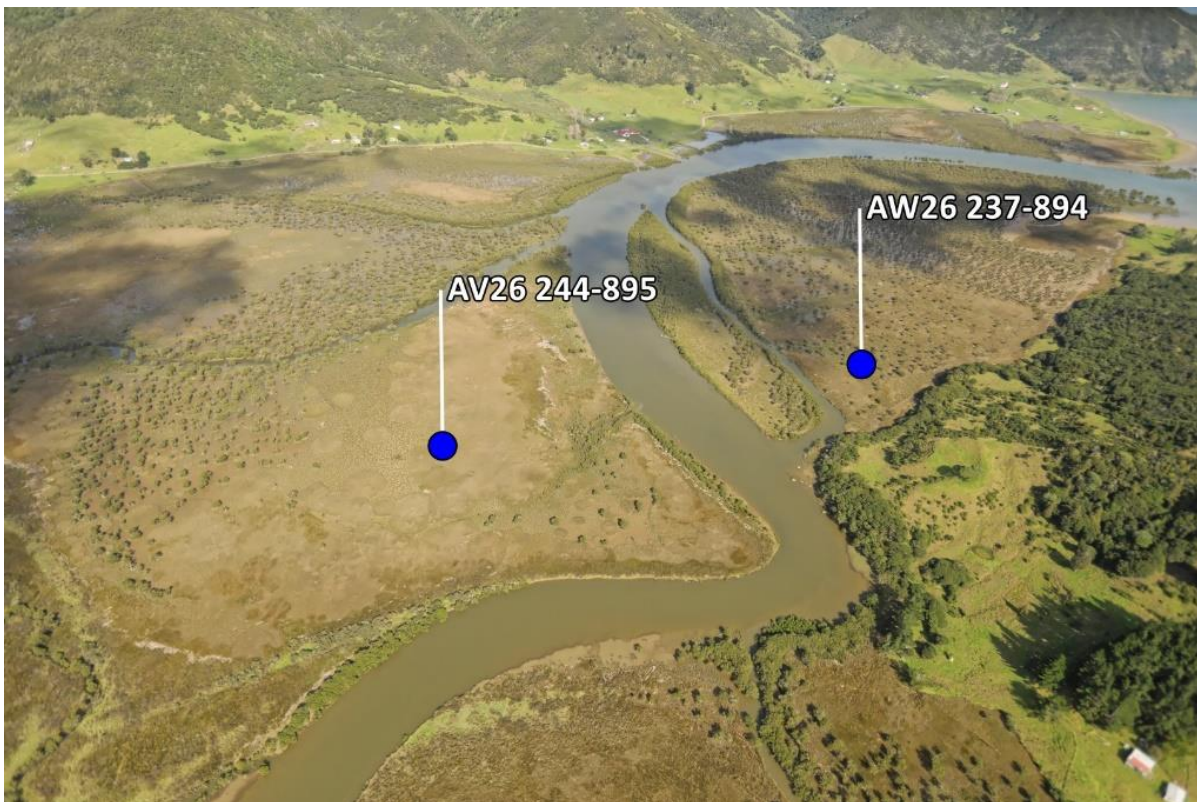


Figure 31: AV26 244-895

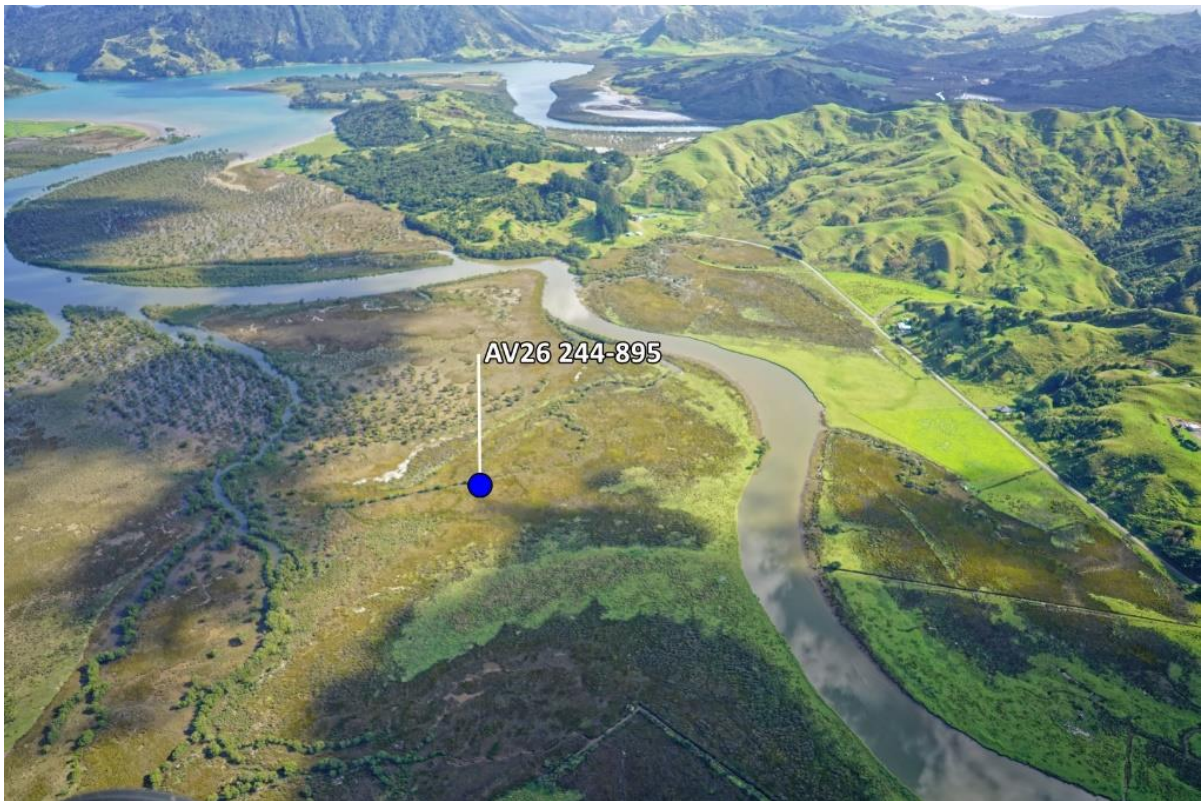


Figure 32: AV26 244-895, AW26 245-894



Figure 33: AV26 244-900, AV26 244-895



Figure 34: AV26 244-895, AW26 245-894



Figure 35: AW26 241-889



Figure 36: AW26 226-884, AW26 230-883, AW26 230-881, AW26 230-880

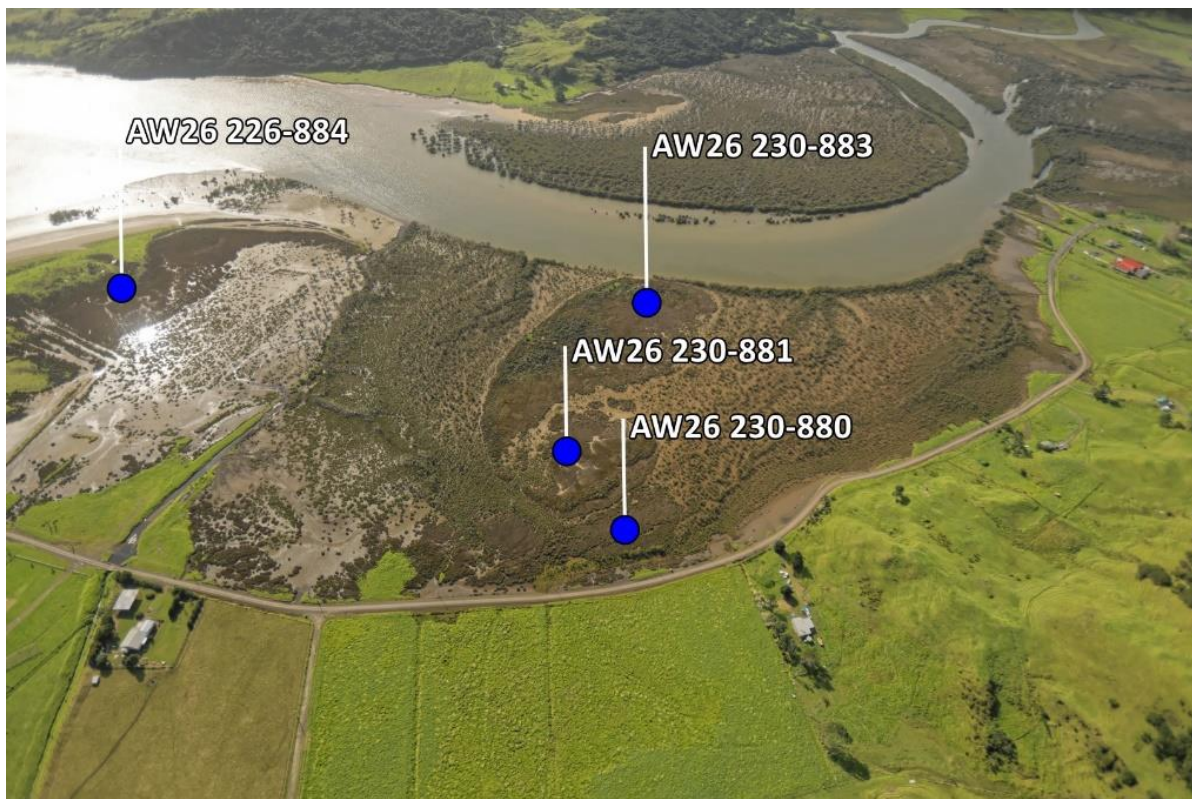


Figure 37: AW26 238-898, AV26 239-899



Figure 38: AW26 226-884



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