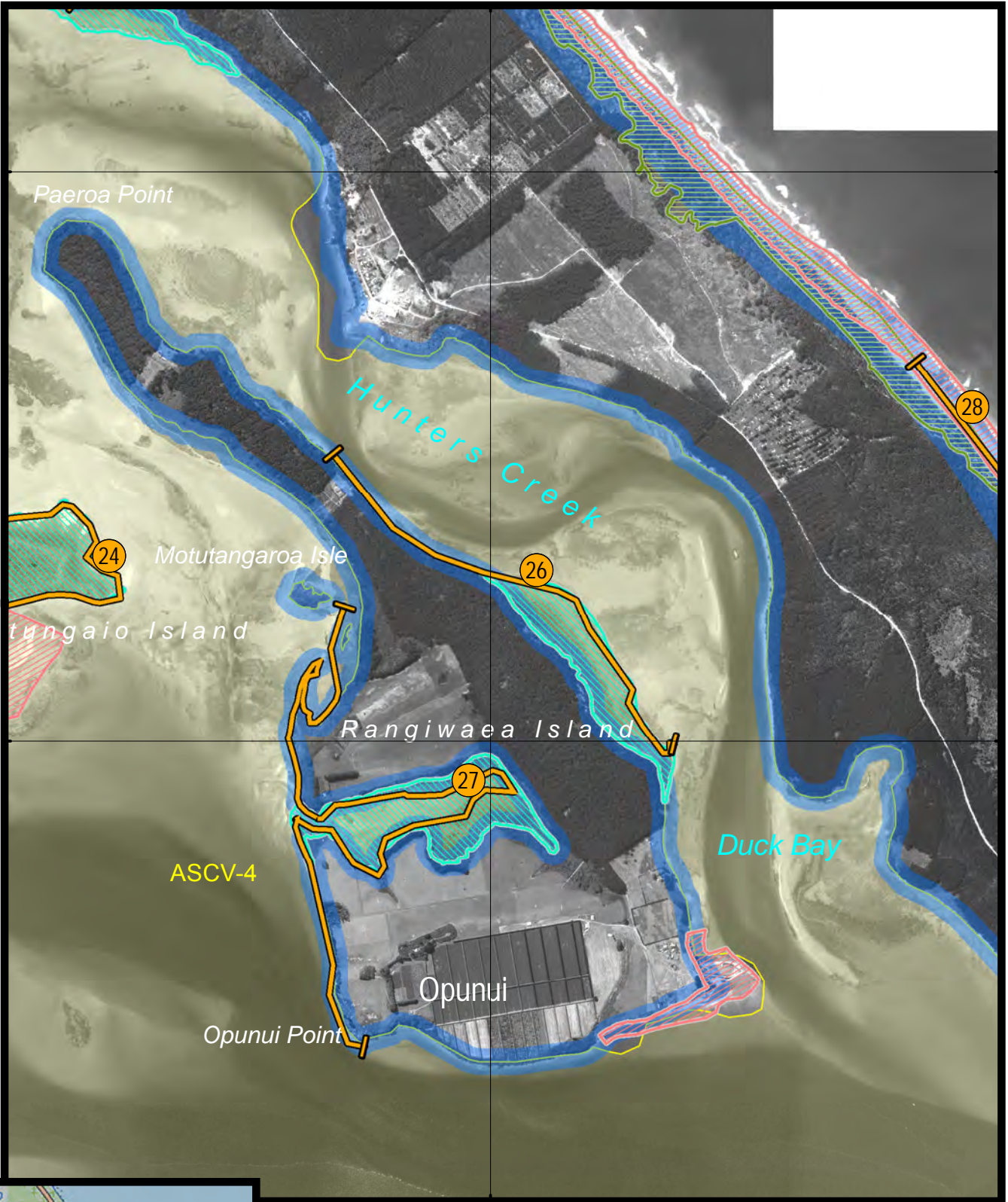









Site 26	Rangiwaea East	Risk ranking: 2
DESCRIPTION		
Saltmarsh with mangrove edge, long narrow strip eastern side of Rangiwaea Island within Hunters w4 Creek. Moderate energy tidal flows. Intertidal exposed below mid-tide.		
Foreshore type/environmental value	Sandy/muddy shores, mangroves and intertidal habitat. Habitat (intertidal), contact. All shore segments have "habitat value". All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value.	
Map sheets	NZ Topo 50 BD36 Lower Kaimai	Chart Number NZ 541
Segments	TAU-001020	
At Risk Resources		
<ul style="list-style-type: none"> • Fern bird (mātātā), banded rail (kataitai), godwit (kuaka), knots, oystercatcher (tōrea) • Cultural resources: mahinga kai, crab fisheries (papaka), kanai (mullet), tuangi (cockle) • Boat access critical for islanders 		
Notes		
<ul style="list-style-type: none"> • Where possible, oil should be prevented from entering the harbour 		
Actions		
<ul style="list-style-type: none"> • Prevent/minimise oil ingress into this system • Notify wildlife team of potential for oiling • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		
Access		
<ul style="list-style-type: none"> • Vehicle/Foot access via Jetty on Rangiwaea Island • Boat access up Hunters Creek 		

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Some deflection and booming possible
On water Recovery	High		Possible with ORV or similar prior to oil reaching island
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	If water depth allows
Shoreline Clean-up	Low		Extensive cleaning required
Natural Recovery	Medium		On-going monitoring

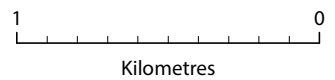


LEGEND

-  SCAT Sites
-  Shorebird Roosts
-  Site District of Local Significance
-  Coastal Habitat Preservation Zone
-  Beach Accessways
-  Area Sensitive to Coastal Hazards
-  Area of Significant Conservational Value

SITE 26 Rangiwaia East

Oil Spill Management Plan



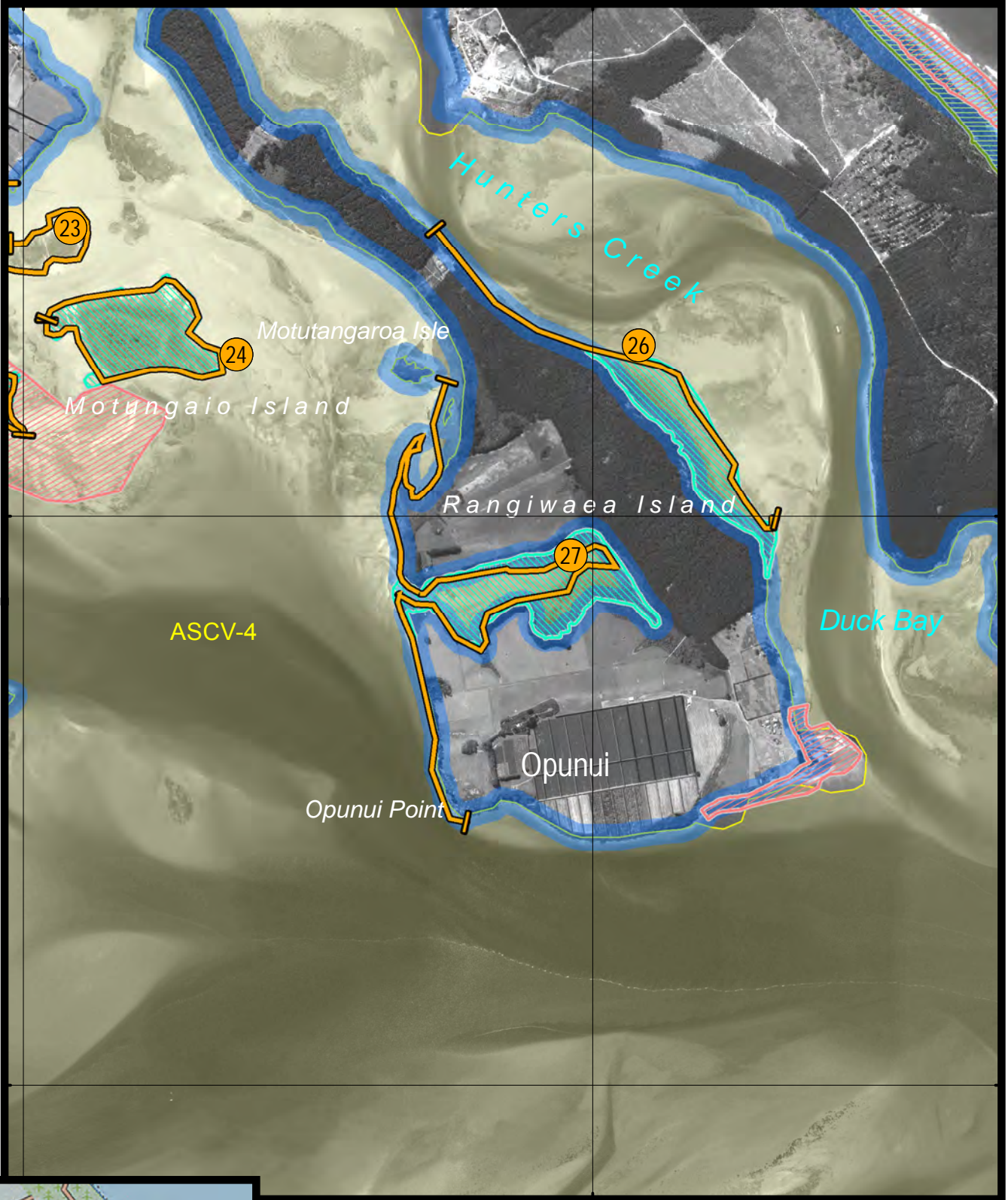
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Site 27	Rangiwaea West Estuary	Risk ranking: 1
DESCRIPTION Saltmarsh and mangrove edge, upper end Hunters Creek, shallow intertidal flats, low energy tidal movement.		
Foreshore type/environmental value	Small sand estuary, low energy, salt marsh and manuka behind. Extensive salt marsh. All shore segments have "habitat value".	
Map sheets	NZ Topo 50 BD36 Lower Kaimai BD37 Tauranga	Chart Number NZ 541
Segments	TAU-01070, TAU-01060, TAU-01050	
At Risk Resources <ul style="list-style-type: none"> • North Island fernbird (mātātā), pukeko, white-faced heron (matuku-moana), banded rail (kataitai), marsh crake (koitareke), herons, NZ Dotterel • Foreshore vegetation • Saltmarsh and mangrove Cultural sites: Mahinga kai, kaimoana		
Notes <ul style="list-style-type: none"> • Oil that enters the low energy systems of this estuary will remain for some time • Oil will harm saltmarsh and habitat and contaminate shorebirds Actions <ul style="list-style-type: none"> • Limit the amount of oil entering the estuary by placing protective boom across the entrance, with oil directed to either side for collection • Establish and maintain collection boom/skimming at estuary entrance • Notify wildlife team of potential for oiling • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required • If protection is not effective for these areas within the estuary, the effort involved in cleaning will be extensive 		
Access By boat or across private land via boat, access is via a wharf on the eastern end of Rangiwaea Island.		

Preferred Response Option Matrix








	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Some deflection and booming possible
On water Recovery	High		Possible with ORV or similar prior to oil reaching island
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	If water depth allows
Shoreline Clean-up	Low		Extensive cleaning required
Natural Recovery	Medium		On-going monitoring



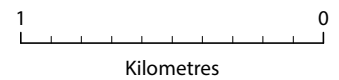
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LEGEND

-  SCAT Sites
-  Shorebird Roosts
-  Site District of Local Significance
-  Coastal Habitat Preservation Zone
-  Beach Accessways
-  Area Sensitive to Coastal Hazards
-  Area of Significant Conservational Value

SITE 27 Rangiwaea West Estuary Oil Spill Management Plan



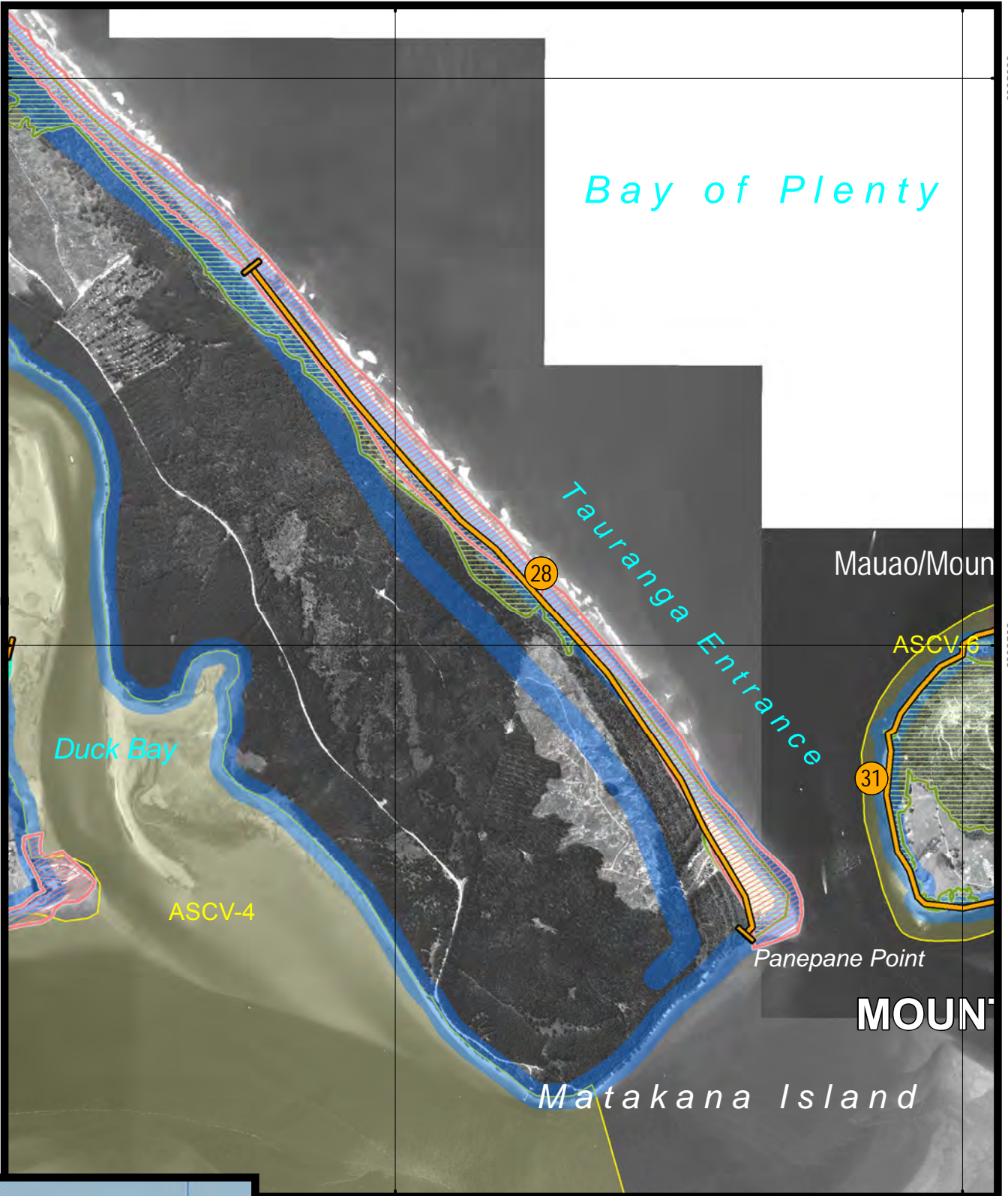
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Site 28	Panepane Pt	Risk ranking: 1
DESCRIPTION		
This site is comprised of a sandy beach and point at the south east end of Matakana Island. Adjacent to southern Tauranga Harbour entrance. The area is subject to strong tidal flows, dune vegetation.		
Foreshore type/environmental value	Sandy beach, sandy point. All shore segments have "habitat value".	
Map sheets	TOPO 50 BD37 Tauranga	Chart Number NZ 541
Segments	BOP-00180	
At Risk Resources		
<ul style="list-style-type: none"> • Second largest breeding colony of New Zealand dotterel (tuturiwhatu) in the Bay of Plenty • Other birds including oystercatcher (tōrea), godwit (kuaka) and knots • Cultural resources: Sites are highly culturally sensitive (waahi tapu), mahinga kai 		
Notes		
Minimum public use.		
Actions		
<ul style="list-style-type: none"> • Consider Pre-emptive capture New Zealand dotterels • No vehicles to access upper intertidal zone • Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		
Access		
Access to Matakana by barge, 15 minute walk or 5 minute 4WD from barge ramp. Access by boat to inner harbour corner if necessary.		
No vehicle access to intertidal zone within dotterel breeding site.		
Contact Donna Poka: 0272577242 or Opureora Marae.		

Preferred Response Option Matrix

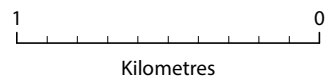
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Low		Strong tidal current, large water flow, unlikely to contain here
On water Recovery	Medium		Possible with ORV or similar
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	Good water depth and flow
Shoreline Clean-up	High		Sandy shoreline – oil will remobilise with each tide
Natural Recovery	Medium		After initial shoreline clean-up



LEGEND

	SCAT Sites
	Shorebird Roosts
	Site District of Local Significance
	Coastal Habitat Preservation Zone
	Beach Accessways
	Area Sensitive to Coastal Hazards
	Area of Significant Conservation Value

SITE 28 Panepane Pt Oil Spill Management Plan



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Site 29	Wairoa River	Risk ranking: 1
DESCRIPTION Estuarine wetland, some saltmarsh, eastern side, Wairoa Rivermouth. Some drains and willows.		
Foreshore type/environmental value	Riverbank, riparian vegetation, salt marsh. All shore segments have "habitat value". All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value.	
Map sheets	NEW ZEALAND Topo 50 BD36 Lower Kaimai	Chart Number NZ 541
Segments	TAU – 00340, TAU - 00350	
At Risk Resources		
<ul style="list-style-type: none"> • A range of wetland birds, fernbird (mātātā), bittern (matuku hūrepo), spotless crane (pūweto) and marsh crane (koitareke), banded rail (kataitai), white faced heron (kōtuku), a range of ducks and scarp • Whitebait (inanga) spawning habitat • Whitebait harvest • Cultural values: <ul style="list-style-type: none"> ▪ Site of significance, Waahi Tapu from Hangarau Marae to Oreanui Pa 		
Notes Where possible, oil should be prevented from entering the Tauranga Harbour. Oil that enters the low energy systems of this habitat will remain for some time.		
Actions		
<ul style="list-style-type: none"> • Prevent/minimise oil ingress into this system • This estuarine wetland fills from the rear and from small areas of inflow along the river bank. Limit the amount of oil entering and moving through the wetland by placing protective boom/snares across the rear and river bank entrances • Service the rear at low tide, service from snares when sufficient water for boat access • Block or boom culverts under the railway track • Notify wildlife team of potential for oiling • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required • This plan requires further reconnaissance to establish: <ul style="list-style-type: none"> ▪ Locations and methods for blocking/booming culvert • Vehicular access to rear wetland entrance creek • Mark river bank creeks for snare booming – requires boat access • Amount of snare/boom required 		

Access

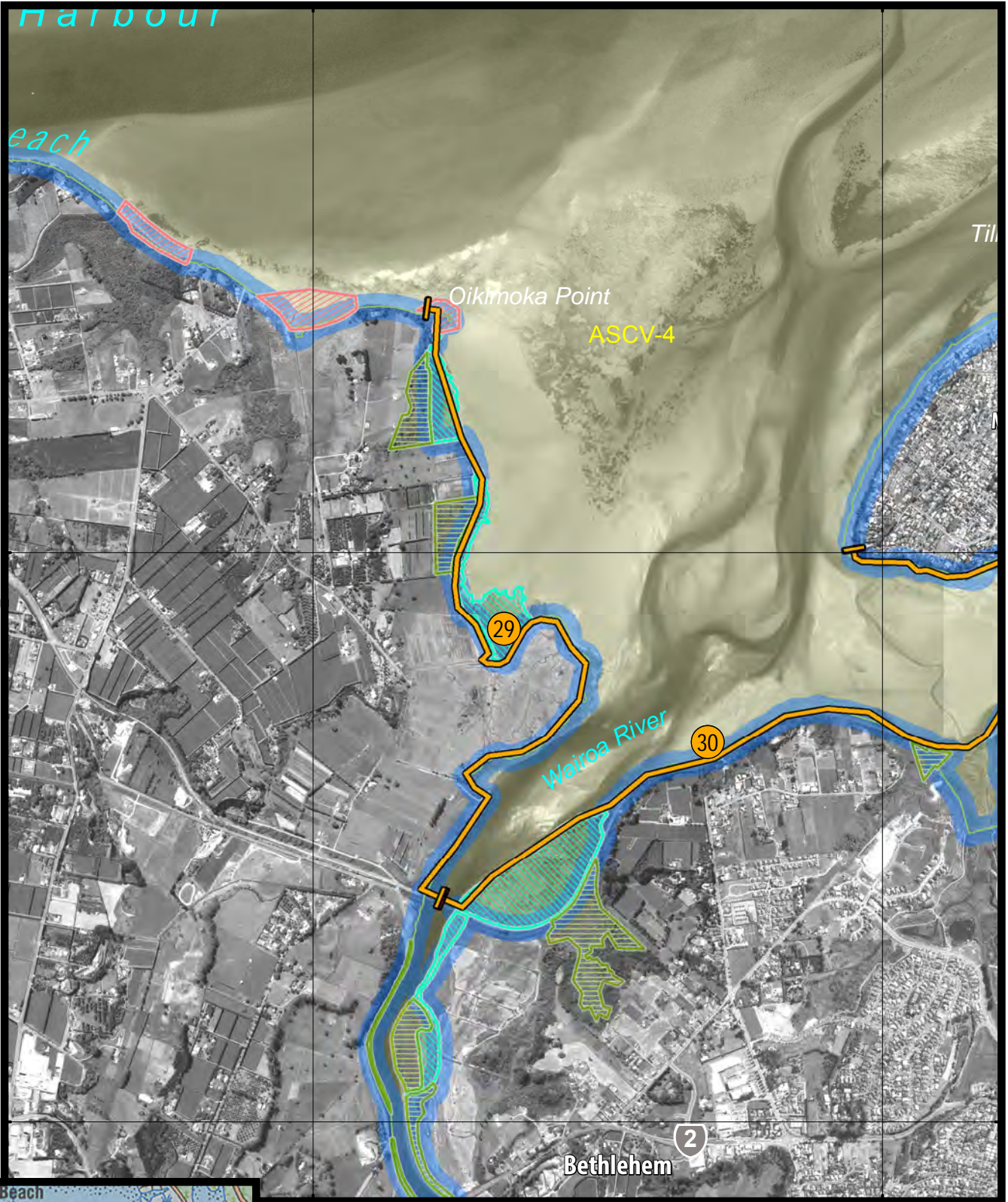
Land access is limited. Current access from Bethlehem Road and walk down railway line.

With implications for safety of responders

Access by boat – Wairoa Bridge boat ramp.

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Difficult access and large amounts of boom required
On water Recovery	Low		Very shallow/tidal area
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Depth won't allow
Shoreline Clean-up	Low		Consider NEBA - marshlands
Natural Recovery	Medium		On-going monitoring

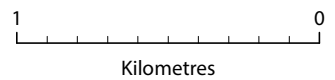


LEGEND

-  SCAT Sites
-  Shorebird Roosts
-  Site District of Local Significance
-  Coastal Habitat Preservation Zone
-  Beach Accessways
-  Area Sensitive to Coastal Hazards
-  Area of Significant Conservational Value

SITE 29 Wairoa River


Oil Spill Management Plan

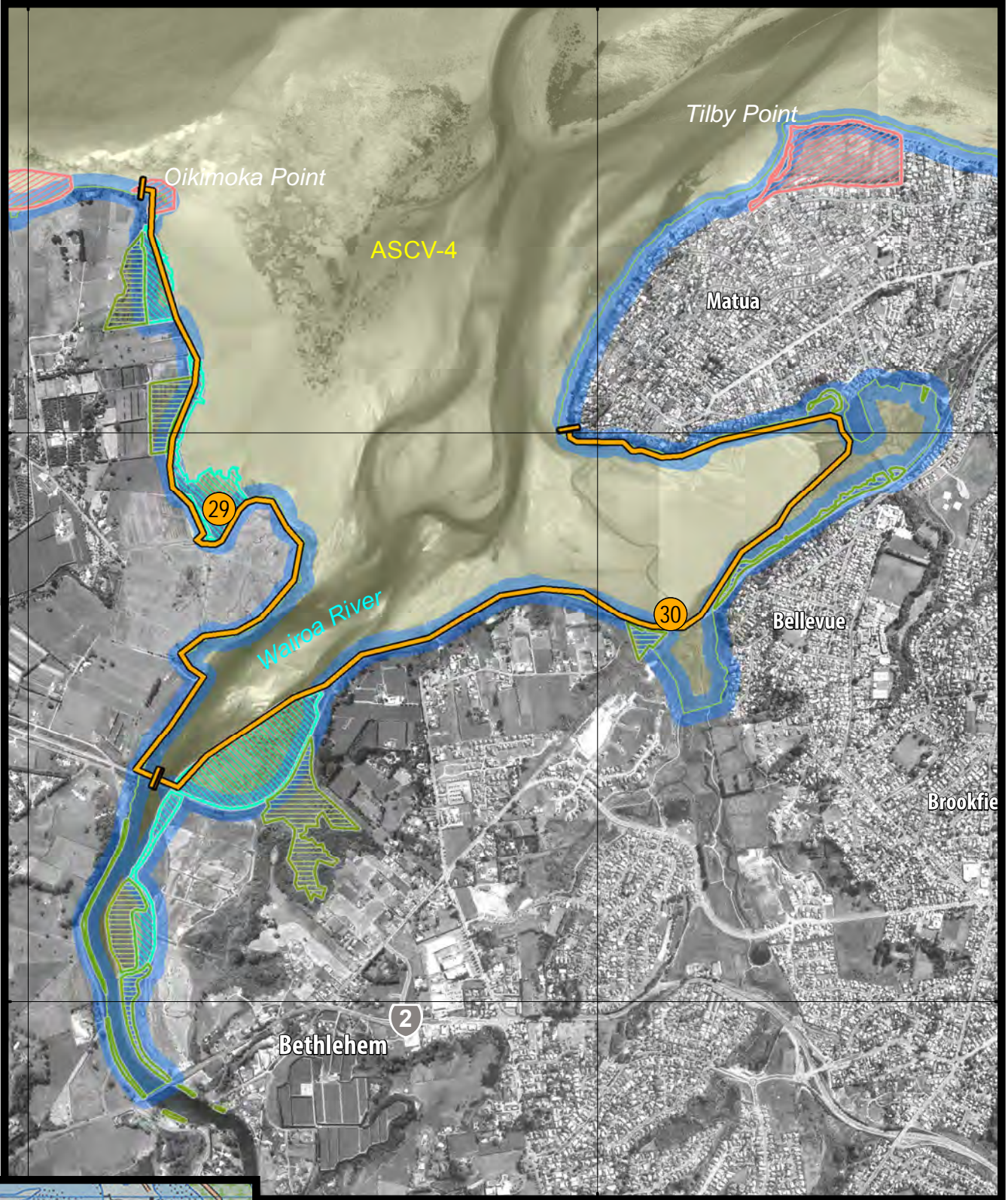


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Site 30	Matua	Risk ranking: 1
DESCRIPTION Saltmarsh near Matua in the Tauranga Harbour. Drains run through the system.		
Foreshore type/environmental value	Saltmarsh with surrounding mangrove edge. All shore segments have "habitat value" . All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value.	
Map sheets	NZ TOPO 50 BD37 Tauranga	Chart Number NZ 541
Segments	TAU-00340	
<p>At Risk Resources</p> <ul style="list-style-type: none"> • A range of wetland birds, fernbird (matata), transient bittern (matuku hūrepo), spotless crane (pūweto) and marsh crakes (koitareke), banded rail (kataitai), white faced heron (kōtuku). • Estuary habitat • Fish – flounder (patiki) • Oil that enters the low energy systems of this habitat will remain for some time. <p>Cultural Resources</p> <p>Mahinga kai, waahi tapu from the Hangarau Marae to Oreanui Pa</p>		
		



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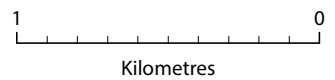


LEGEND

-  SCAT Sites
-  Shorebird Roosts
-  Site District of Local Significance
-  Coastal Habitat Preservation Zone
-  Beach Accessways
-  Area Sensitive to Coastal Hazards
-  ASCV-4 Area of Significant Conservational Value

SITE 30 Matua

Oil Spill Management Plan



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Notes/Response

- High public use area
- Where possible, oil should be prevented from entering the Tauranga Harbour
- Oil that enters the low energy systems of this habitat will remain for some time.

Actions

- Prevent/minimise oil ingress into this system
- Clean shoreline according to relevant STM (saltmarsh and reeds clean-up)
- Notify wildlife team of potential for oiling
- Consider pre-emptive capture of wildlife generally
- Activation of oiled wildlife response collection teams if required

Note: The following notes re potential protection of the site made close to the time of the grounding of the Rena. These should be reviewed prior to finalising a response plan for this site

If booming is impractical here, snares placed in the preferred flow path on the northern side of the bay, may intercept oil entering and/or leaving the area at low to mid tide when flow is constrained to this channel.

- Evaluation

Matua Estuary has been identified as Protection Priority 1 for areas within the Tauranga Harbour.

The ideal response would be to use rope snares laid in front of the mangroves. Rope snares will rise and fall on tide and could be reused if they weren't oiled. The rope would be secured to waratahs at approximately 20 m intervals. Rope snares would need to be brought in and made up - this could take up to a week. Distance required would be approximately 600 m to 700 m supported by 35 waratahs.

Alternatively, open channels could be boomed with sorbents. These will not stop oil entering mangroves and saltmarshes on edges of the estuary.

Access

- Surrounded by walking tracks, vehicle access to edge via Matua suburb
- Possible by boat at high tide only

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Large amount of boom required, snares a better option
On water Recovery	High		If possible prior to entering area
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Depth won't allow
Shoreline Clean-up	Low/Medium		Refer NEBA
Natural Recovery	Medium		On-going monitoring