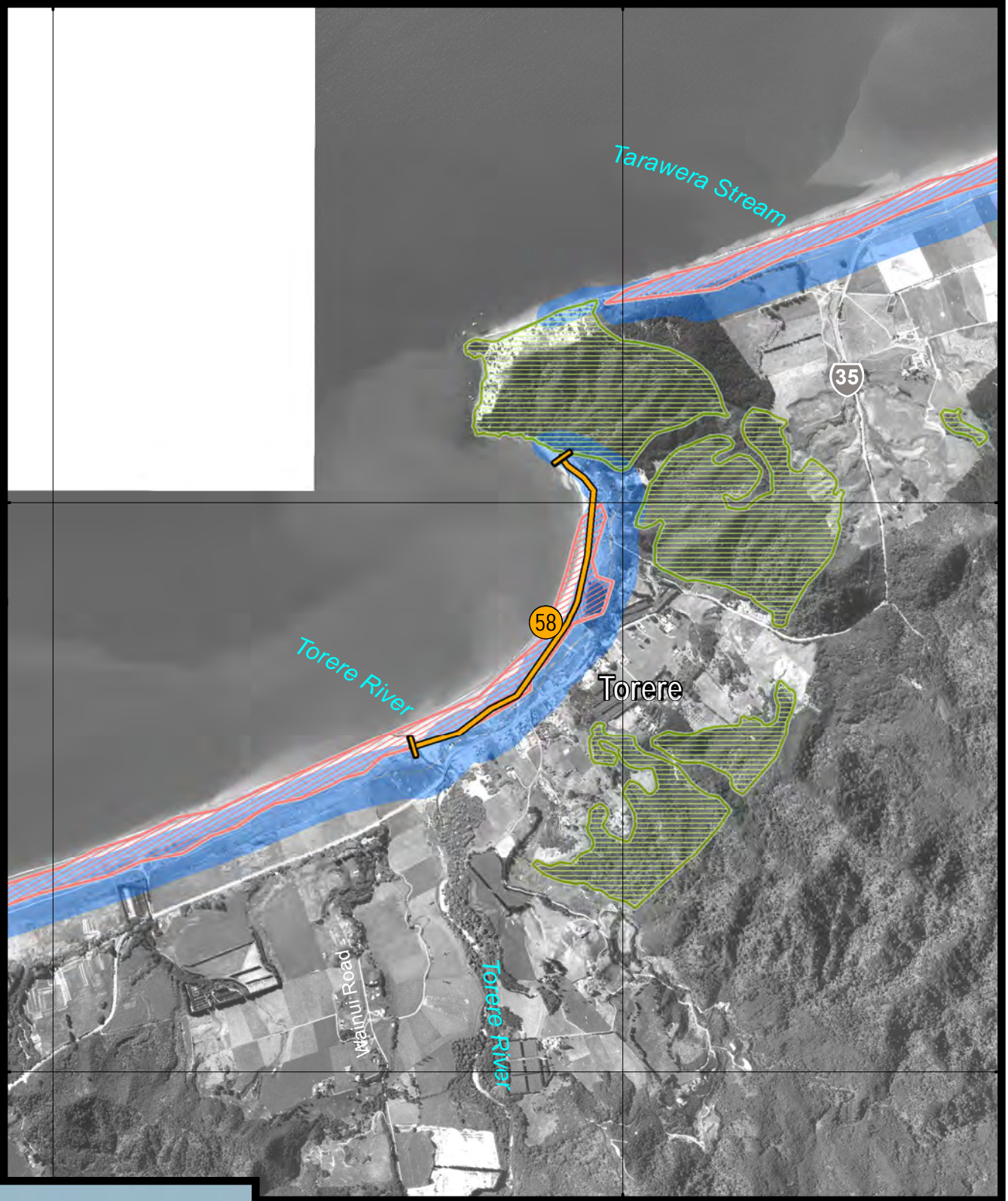


Site 58	Waiiti River and Torere	Risk ranking: 3
<p>DESCRIPTION</p> <p>This site includes two river mouths, one either side of Torere township with water crossing the ocean beach into estuary at higher tidal states.</p> <ol style="list-style-type: none"> To the south-west: Waiiti is a small river mouth usually cut off from the beach at low tide forming a small lagoon behind the spit. To the north-east: Torere lagoon exits at small river mouth at the eastern end of the beach, with the narrow lagoon extending west towards Torere. 		
Foreshore type	Steep pebble/cobble beach, Lagoon, riparian vegetation	
Map sheets	NZ Topo 50 BD 43 Ruakokore	Chart Number NZ 542
Segments: EBOP 00150		
<p>At Risk Resources</p> <ol style="list-style-type: none"> Waiiti: Shore birds including New Zealand dotterel (tuturiwhatu) Torere lagoon: Amenity value <p>Both Waiiti and Torere lagoon:</p> <ul style="list-style-type: none"> Kahawai fishery All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value Cultural sites: including kaimoana 		
<p>Notes</p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal habitat.</p> <p>Actions</p> <ul style="list-style-type: none"> Consider entrance closure at incoming tides and release river water when required (feasibility dependent on river flow) Consider collection and recovery near river mouth Booming near each mouth to prevent oil entering connecting channel Notify wildlife team Discuss pre-clean-up of intertidal debris - tidal range specific Consider pre-emptive capture of wildlife generally Activation of oiled wildlife response collection team 		
<p>Access</p> <ol style="list-style-type: none"> Waiiti River: Beach access is from state Highway 35 south-west of Torere Township Torere lagoon: Access road just north-east of Torere township 		

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booming is possible depending on weather conditions
On water Recovery	Medium		Logistics may prevent this
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Suitable off-shore
Shoreline Clean-up	High		Good access to foreshore, but fine grainy gravel area
Natural Recovery	Medium		Some natural recovery a possibility but good to avoid










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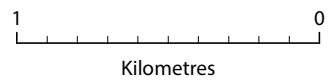


INSET

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 58 Waiiti River & Torere Oil Spill Management Plan



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Site 59	Motu River	Risk ranking: 2
DESCRIPTION Site of tidal braided river mouth. Highly active river mouth with sand bar enclosing lagoon and saltmarsh.		
Foreshore type/environmental value	River mouth, saltmarsh, Fishery, Lagoon. All shore segments have "habitat value".	
Map sheets	NZ Topo 50 BE 42 Houputu	Chart Number NZ 542
Segments: EBOP R 00200		
At Risk Resources <ul style="list-style-type: none"> • New Zealand dotterel (tuturiwhatu) (non 2011-11-05) • Some gulls, oystercatchers breeding on beach at mouth • Fish breeding location – nationally significant snapper spawning area and regionally significant kahawai fishery. The area extends seaward of Mean High Water Springs in a six nautical mile radius from Tokaroa Rock and along the coast from Haurere Point in the south to Ohae Point in the north • Kaimoana • All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value Cultural sites: <ul style="list-style-type: none"> • Culturally significant kahawai fishery (December) 		
Notes It is thought unlikely that oil will enter the estuary due to the bar that has formed across the river mouth and due to the net outflow of water from the river. Oil that does enter the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat.		
Actions <ul style="list-style-type: none"> • Vegetation adjacent to the estuary shore line– use snares to absorb oil and enhance the effectiveness of the natural flow for self-cleaning of the estuary. Consider using locally sourced manuka/kanuka in place of snares. Consult carefully with local iwi as these species are <i>te rongoa</i> (medicinal plants) and are therefore considered a <i>taonga</i> (cultural treasure). Experience during the 2015 pipeline spill in Tauranga found kanuka/manuka to be just as effective in absorbing oil as snares supplies which were quickly exhausted. • Limit oil entering the southern lagoon and saltmarsh through protective barrier/ booming. • Shoreline clean-up along the ocean beach on both sides of the mouth of the estuary Priority clean-up of spit entrances to limit remobilisation of oil into estuary • Notify wildlife team • Consider pre-emptive capture of New Zealand dotterel • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		

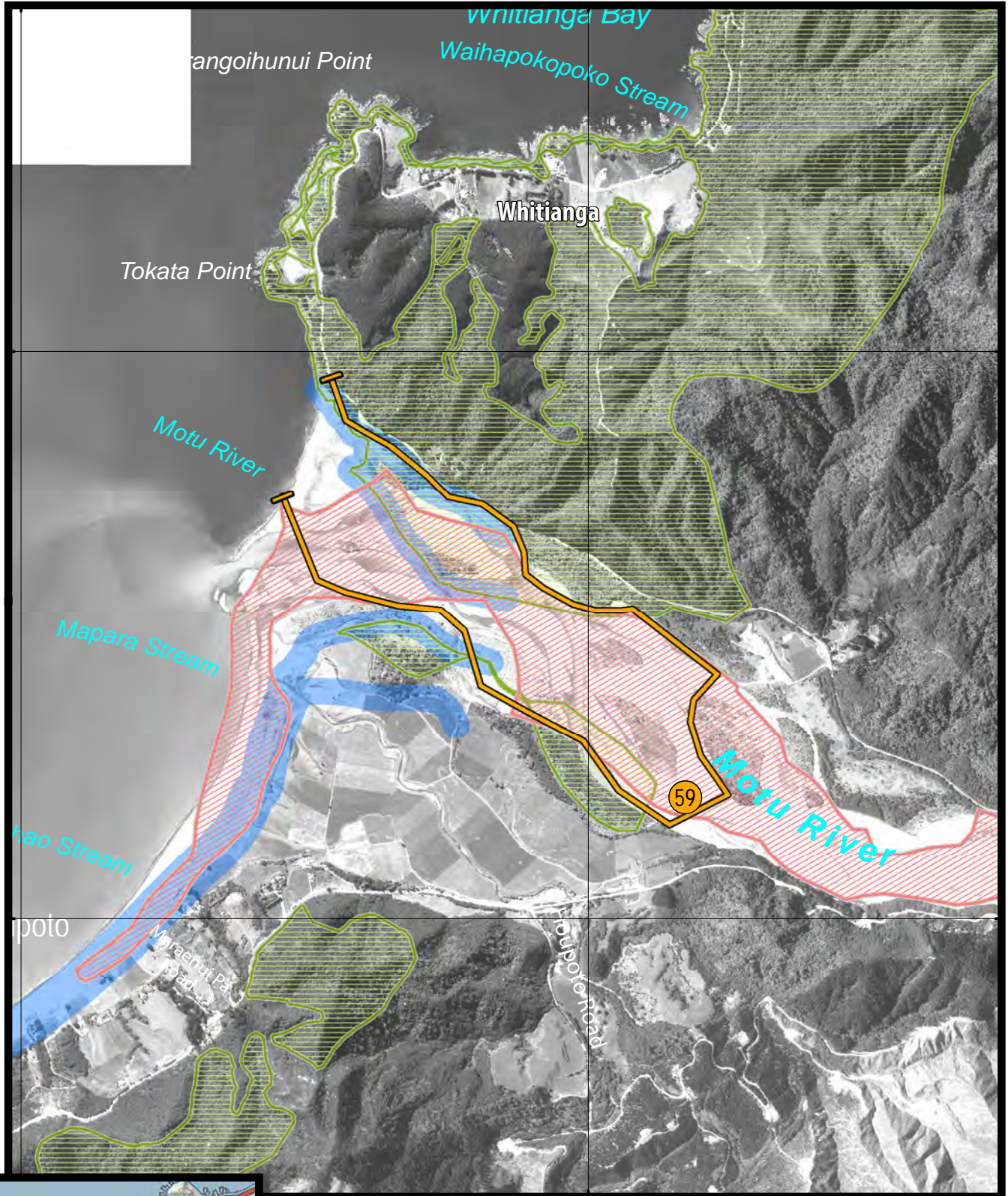
Limited Communications: Council R.T may be patchy in the Motu Valley but good west of this area, no Marine VHF close to shore unless the On Scene Commander operates a hand held marine set, telephone from local residents, cell phone from SH 35 high up on the east side from the lookout at the top of the road.

Access

Access to beach areas and the Motu River Estuary is indicated on the topographical map, SH 35. Access to Motu Estuary from the east side of the Motu River is limited to walking down from the lookout. Access from the west side is via farmland or access track from turn off to marae. The nearest boat launching ramp is located at the Ōpōtiki Wharf.

Preferred Response Option Matrix








	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up
On water Recovery	Medium		Possible off-shore with ORV or similar but weather and location may prohibit
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for off-shore use
Shoreline Clean-up	High		Sandy shoreline suitable for shoreline clean-up
Natural Recovery	Medium		Some natural recovery may be required due to shifting foreshore.



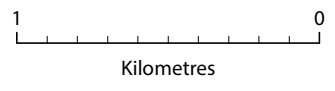
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LEGEND

-  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 59 Motu River Oil Spill Management Plan



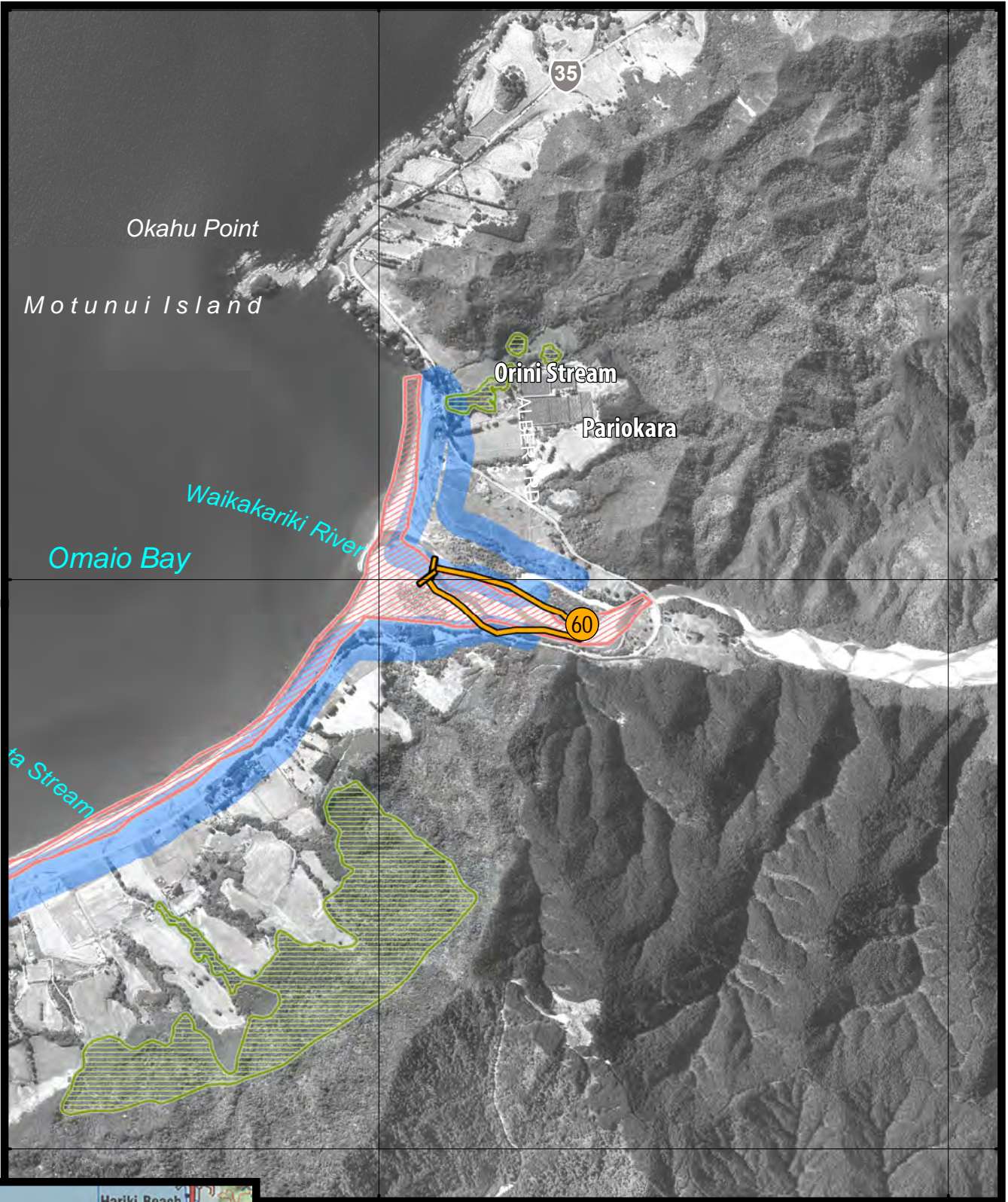
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Site 60	Haparapara	Risk ranking: 3
<p>DESCRIPTION</p> <p>Sandspit enclosed estuary located at northern end of beach in Omaio Bay. Haparapara river is generally a low flow river with a mobile entrance with a lagoon located to the south of entrance. Sandspits and beaches are pebble/cobble.</p>		
Foreshore type	Lagoon, Open water in channel, saltmarsh	
Map sheets	NZ Topo 50 BD 42 Te Kaha	Chart Number NZ 542
Segments: EBOP R 00230		
<p>At Risk Resources</p> <ul style="list-style-type: none"> • Shorebird feeding areas • Possible shell collecting sites • All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value • Cultural sites 		
<p>Notes</p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal and sand flats habitat</p> <p>Actions</p> <ul style="list-style-type: none"> • Consider containment and recovery system as close as possible to the mouth, with deflection away from saltmarsh areas • OR bulldoze entrance closed at high tides and release river water when required to refresh water • Notify wildlife team • Discuss pre-cleanup of intertidal debris - tidal range specific • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		
<p>Access</p> <p>State highway 35. Access possible from tracks to north and south of estuary.</p>		








Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up. Bulldoze entrance
On water Recovery	Medium		Logistics an issue
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for off-shore use
Shoreline Clean-up	High		Best option
Natural Recovery	Medium		Some natural recovery may be required.

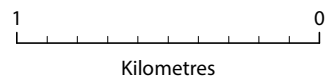


INSET

LEGEND

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

SITE 60 Haparapara Oil Spill Management Plan



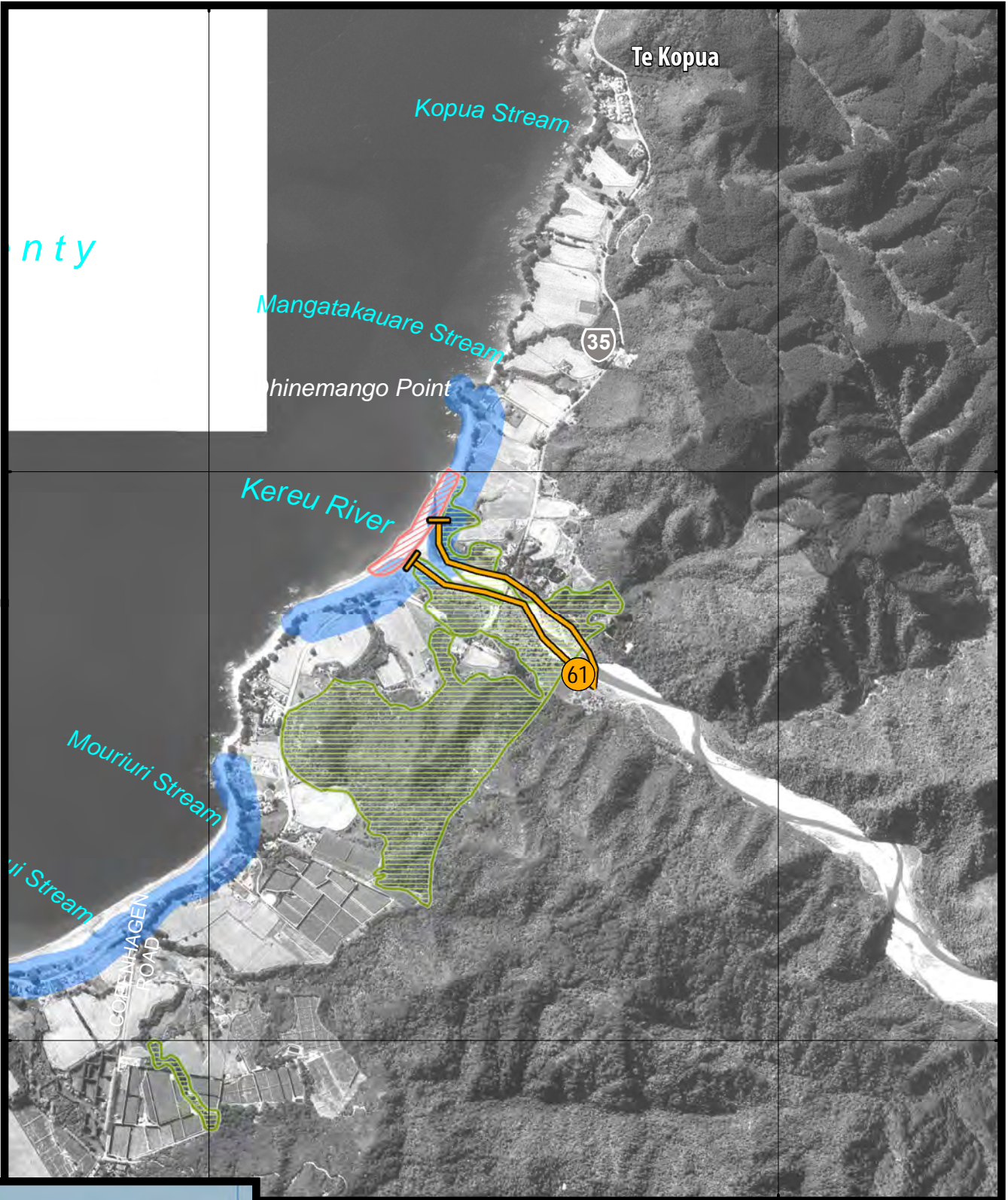
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Site 61	Kereru River Mouth	Risk ranking: 3
<p>DESCRIPTION</p> <p>This site is a sand spit enclosed estuary of the Kereru River; generally a low flow river with a small mouth/entrance that is open at higher tide states, forming a lagoon behind the spit. Sand spits and beaches are pebble/cobble.</p>		
Foreshore type	Lagoon, pebble/cobble sand spit and beaches, riparian vegetation	
Map sheets	NZ Topo 50 BD 42 Te Kaha	Chart Number NZ 542
Segments: EBOP R 00280		
<p>At Risk Resources</p> <p>A lagoon area is enclosed behind the sand-spit.</p>		
<p>Notes</p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal habitat</p> <p>Actions</p> <ul style="list-style-type: none"> • Consider collection and recovery on sandy areas (near road bridge or southern side of mouth) • Bulldoze entrance closed at high tides and release river water when required (feasibility dependent on river flow) • Clean-up of shore on north side of lagoon • Priority clean-up of entrance sides to limit remobilisation of oil into estuary • Notify wildlife team • Discuss pre-clean-up of intertidal debris - tidal range specific • Consider pre-emptive capture of New Zealand dotterel • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		
<p>Access</p> <p>State Highway 35. Access from the north is across farmland. Access from the south is by access roads, one next to road bridge.</p>		

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up. Bulldoze entrance
On water Recovery	Medium		Logistics an issue
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for off-shore use
Shoreline Clean-up	High		Best option
Natural Recovery	Medium		Some natural recovery may be required.










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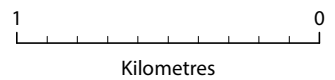


LEGEND

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

SITE 61 Kereu River Mouth

Oil Spill Management Plan



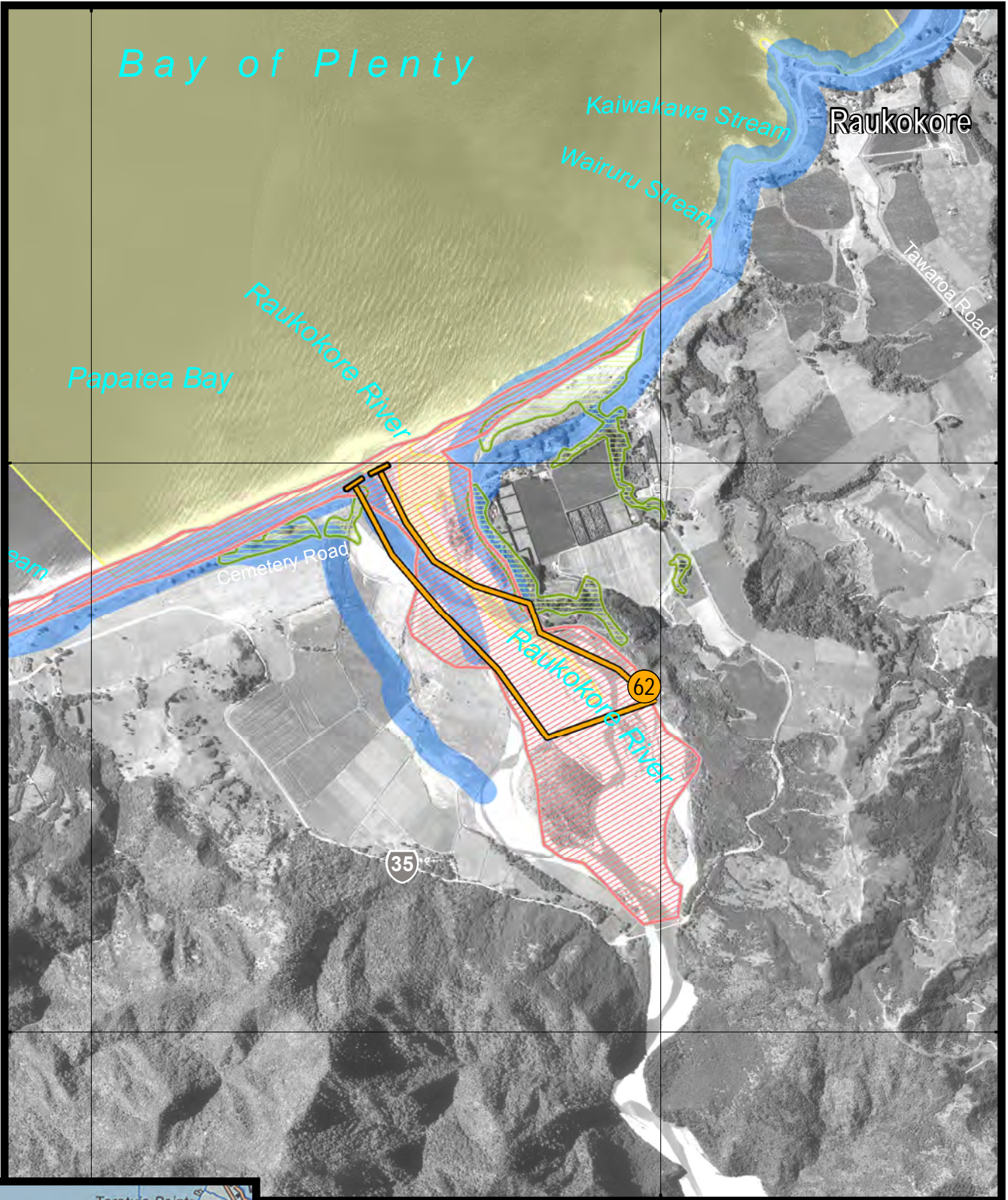
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Site 62	Raukokore River	Risk ranking: 3
<p>DESCRIPTION</p> <p>This site is a sand spit enclosed estuary. Generally a low flow river with a small mouth/entrance that is open at higher tide states, forming a lagoon behind the spit with associated saltmarsh.</p> <p>Sand spits and beaches are pebble/cobble.</p>		
<p>Foreshore type/environmental value</p>	<p>Saltmarsh, Lagoon, All shore segments have "habitat value".</p>	
<p>Map sheets</p>	<p>NZ Topo 50 BD 43 Ruakokore</p>	<p>Chart Number NZ 542</p>
<p>Segments: EBOP R 00320</p>		
<p>At Risk Resources</p> <ul style="list-style-type: none"> • Shorebird feeding areas • Banded dotterel (pohowera) on river flats • Saltmarsh and reeds • Braided river bed • Intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value • Cultural sites 		
<p>Notes</p> <p>The estuary at the mouth of the river is a sensitive area, particularly the north eastern lagoon.</p> <p>Oil that does enter the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat.</p> <p>Actions</p> <ul style="list-style-type: none"> • Consider protective booming of north eastern saltmarsh and lagoon • Bulldoze entrance closed at high tides and release river water when required to refresh water. • Shoreline clean-up along the ocean beach • Notify wildlife team • Discuss pre-clean-up of intertidal debris - tidal range specific • Consider pre-emptive capture of wildlife generally • Activation of oiled wildlife response collection teams if required 		
<p>Access</p> <p>Access to beach areas and the Ruakokore Rivermouth is indicated on the topographical map, SH 35: access to the west is across farmland; to the east by access track from Cemetery Road.</p>		

Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up. Bulldoze entrance
On water Recovery	Medium		Logistics an issue
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for off-shore use
Shoreline Clean-up	High		Best option
Natural Recovery	Medium		Some natural recovery may be required.



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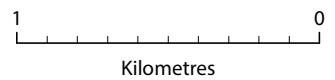


INSET

LEGEND

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

SITE 62 Raukokore River Oil Spill Management Plan



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