

# Annex 4 – Sensitive Areas and Coastal Information

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# Sensitive Areas classification

The sensitive sites identified in this plan are identified for their environmental, cultural or economic significance for the region and the potential effects of an oil spill on these sites. Many of these sites are regionally important sites (for natural character, significant cultural value, natural features and landscapes and indigenous biological diversity), within the Bay of Plenty Regional Coastal Environment Plan 2019.

## Oil Spill risk

Historical records show that most significant spills that occur in the Bay of Plenty region, occur in Tauranga Harbour during bunkering of ships, tank loading/discharge operations or the internal transfer of oil within a ship.

There is a Bunker Ship Korimako operating within the Tauranga Harbour area. This vessel transfers MDO or HFO to visiting vessels alongside under its own SOPEP arrangement. Information related to this ship can be found in WEBEOC under Korimako. Ship to Ship transfers are notified on the BOPRC oil transfer site: [Site User \(boprc.govt.nz\)](https://www.boprc.govt.nz)

There are commercial vessel refuelling operations that occur at other sites around BOP coastline. OTSMP holders will transfer from a mobile tanker or fixed fuel bowsers and fuel will generally be of a non-persistent nature.

Spills that occur in other harbours or the coastal area of the region are generally very small, are of a non-persistent oil nature (petrol, diesels) and occur during pleasure/fishing boat refuelling operations. There is a significant risk of terrestrial sources of oil spill from railway crossings over water and road bridges throughout the Bay of Plenty.

International shipping casualties over the years illustrate the potential for a large spill and currently with the continued growth in vessel movements into Port of Tauranga and other transiting vessels past East Cape, this risk continues to threaten the Bay of Plenty Coastline.

# Priority areas for protection

This section contains site sheets and maps that show the priority areas for protection inside the Tauranga Harbour and within the remainder of the Bay of Plenty Coastal Marine Area. Also included is a description of the areas, information on access, possible response options and restrictions on options.

## Tauranga Harbour

Tauranga Harbour is a large tidal estuary covering an area of 218 km<sup>2</sup>. The name 'Tauranga' means 'landing place.'

The surrounding land from which water runs into the harbour is used extensively for urban, horticultural and agricultural purposes. At the eastern end of the harbour are the landmark Mauao or Mount Maunganui and the city of Tauranga. This entrance is deeper and allows for a large amount of cargo ships to enter and leave the Port of Tauranga. At the western end is the small coastal settlement of Otawhiwhi or Bowentown. This entrance is shallower but is often used by recreational boaties.

Largely covered by pine plantations, Matakana Island forms a natural barrier between the harbour and the Pacific Ocean. Matakana Island is also home to a number of people who live in the island's settlement. The island is largely covered in plantation pines for forestry. Many beaches are littered with fallen logs and debris which could become oiled in event of a spill landing on the shoreline. Consider beach pre-cleans to reduce secondary contamination of shoreline debris. The sheltered side of the island has inlets and lagoons and the ocean side of the island is popular with local surfers.

The harbour waters are mostly shallow. At low tide, more than 60% of the harbour bed is exposed. The estuaries of Tauranga Harbour are home to many kinds of wildlife. Young fish spawn in the shallow waters and many birds nest on the harbour margins. A large volume of water enters and leaves the harbour with each tide.

The harbour has long been an important resource for the people of the Bay of Plenty. For Maori, the harbour has strong spiritual significance and is a traditional source of food. Flounder, kahawai, mussels and cockles are some of the kaimoana (seafood) that can be collected from the harbour. There are often limits as to how much can be collected and where they can be collected from.

Economic activity revolves around the Port of Tauranga, which operates several kilometres of wharves on land, which has been reclaimed from the harbour at Sulphur Point and at Mount Maunganui. Established in 1873, the port handles more export cargo than any other port in the country. The port also transfers large volumes of a wide variety of oils, including persistent oils and waste oil slops.

# Site Maps

## Index

Site Maps available in Objective – Folder ID fA342204

W:\Environmental Monitoring\Oil Spill Sensitive Sites Annex\Updated maps 2024

Site No.	Description
	Index Map
	Port of Tauranga – Sulphur Point
	Port of Tauranga – Mt Maunganui
01	Waiau/Athenree
02	North Tanners Point
03	Upper Tuapiro Estuary
04	Tuapiro Estuary Spit
05	Uretara Upper
06	Uretara East
07	Waikoura Point
08	Rereatukahia
09	Puketutu Point
10	Matakana North
11	Matahui Point
12	Matakana South
13	Aongatete
14	Wainui
15	Central Mangroves
16	Te Hopai
17	Apata Estuary
18	Blue Gum Bay
19	Pahoia North
20	Pahoia South
21	Tahunamanu Spit/Island
22	Hunters Creek
23	Opureora Spit
24	Motungaio Island
25	Te Puna
26	Rangiwāea East
27	Rangiwāea West Estuary

Site No.	Description
28	Panepane Point
29	Wairoa River
30	Matua
31	Mauao – Mount Maunganui
32	Moturiki (Leisure) Island
33	Motuotau (Rabbit) Island
Site No.	Description
34	Waikareao Estuary
35	Waimapu – Yatton Park
36	Waimapu – Windermere
37	Waipu Bay/Tauranga Airport
38	Rangataua Bay North
39	Welcome Bay
40	Rangataua Bay South
41	Motiti Island
42	Taumaihi Island ('The Knoll')
43	Maketū Estuary, beach and spit
44	Ōkurei Point
45	Waihī Estuary
46	Waitahanui Stream
47	Hauone Stream
48	Pikowai Stream
49	Herepuru Stream
50	Matatā Lagoon
51	Rangitāiki River East
52	Whakatāne River/Estuary
53	Kōhī Point
54	Ōhiwa Harbour/Estuary
55	Waiotahe Estuary
56	Waioeka Estuary (Ōpōtiki Harbour)
57	Waiaua Estuary
58	Waiiti River and Tōrere
59	Mōtū River
60	Haparapara
61	Kereru River Mouth
62	Raukōkore River
63	Orete Point
64	Oruatiti and Waikanapanapa

Site No.	Description
65	Whangaparaoa River
66	Otarawhata Island
67	Whakaari (White Island/Volkner Rocks)
68	Karewa Island
69	Tūhua (Mayor Island)
70	Moutoki Island
71	Rūrima Island
72	Motunau (Plate) Island
73	Motuhorà (Whale) Island
74	Motuhaku (Schooner Rocks)
75	Whakatōhea Mussels

Site	Port of Tauranga – Sulphur Point		Risk ranking: 2 (1=High) 1 2 3
<p><b>DESCRIPTION</b></p> <p>The Port of Tauranga has two separate wharves divided by the Tauranga Harbour. The Sulphur Point wharf is 750 m long and is used to offload and store shipping containers.</p> <p>This site also includes Tauranga Marina located on the northern end of Sulphur Point.</p>			
<b>Foreshore type</b>	Port – wharf with piles and rip rap wall Marina – rip rap wall and piers		
<b>Map sheets</b>	NZMS 260 Series	<b>Chart number</b> NZ5412	
<p><b>At Risk resources</b></p> <ul style="list-style-type: none"> <li>• Commercial port</li> <li>• Tauranga Marina (561 berths)</li> <li>• Little blue penguins, and pied shags under wharves in Marina</li> <li>• Reef heron on marina breakwater rocks</li> </ul>			
<p><b>Notes</b></p> <p>When oil is expected to move to the south, its movement should be directed as follows:</p> <ul style="list-style-type: none"> <li>• If originating from Sulphur Point Wharf, it should be directed to the southern area of the wharf (sandy beach area) by use of booms. Oil may be recovered at these sites by the use of suitable recovery equipment. Currents at the north end of the Sulphur Point wharves tend to maintain a Nor-North-westerly flow throughout flood and ebb tide cycles. It is thought this due to a combined a whirlpool effect in the central channel and the flow up the Otumoetai Channel on a flood tide (tends to a northwesterly direction). During the ebb tide flows tend to a northerly direction as flows from the upper southern harbor become dominant. This makes the north end of Sulphur Point a good observation and potentially productive oil containment and recovery location depending on tidal stage and spill location.</li> <li>• In the event of oil spillage in the marina, an oil boom may be deployed in order to close the entrance and try to contain the oil. However, the floating nature and finger jointed construction of marina piers typically make them poor containment structures. Indeed, oils may be trapped within the structure of the piers and may require extensive cleaning using techniques such as prop washing, divers and water blasting. Note that the marinas may provide a diverse habitat for marine life including rare sponges. Typically, spillage occurring in the marina will be of a non-persistent type and should be left to evaporate. Fire and vapour risk should be assessed at regular intervals. Agitation may help the rate of evaporation, particularly when skinning has occurred. Where there is a risk of fire or explosion, New Zealand Fire and Emergency is the lead agency.</li> <li>• Tauranga Marina Society - Phone (07) 578 8747.</li> <li>• Port of Tauranga – Emergency Enquiries - Phone (07) 572 8888.</li> </ul>			
<p><b>Access</b></p> <p>Access to the port is restricted and authorised personnel only are allowed on the wharves. Road access is through the Sulphur Point gate on Mirrielees Road.</p> <p>Road access to the Tauranga Marina is via Keith Allen Drive. Boat ramps located at marina.</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and recovery	Medium		Strong currents but possible to direct oil to collection areas
On water recovery	High		Possible with Awanui and the Lamor Oil Skimmer and pump system - see above
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Best on strong tides
Shoreline clean-up	Medium		Good for sandy shoreline areas, harder for rocky areas
Natural recovery	Medium		Rocky shoreline will be difficult to clean

<b>Port of Tauranga – Mt Maunganui</b>		<b>Risk ranking: 2 (1=High) 1 2 3</b>
<b>DESCRIPTION</b>		
<p>The Port of Tauranga has two separate wharves divided by the Tauranga Harbour. The Mount Maunganui wharf is 2.5 km long and includes the tanker berth at the southern end. This site also includes Tauranga Bridge Marina to the south of the Port.</p>		
<b>Foreshore type</b>	Port – wharves with piles and rip rap walls Marina – floating breakwater and piers	
<b>Map sheets</b>	<b>NZMS 260 Series</b>	<b>Chart number</b> NZ5412
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• Commercial Port</li> <li>• Tauranga Bridge Marina (500 berths)</li> <li>• Little blue penguins, and pied shags under wharves in marina</li> <li>• Reef heron on marina breakwater rocks</li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>• Consider activating the Port/Industry Booming Plan. Note, if the spill is not from a transfer site, the cost of activating the plan may initially rest with the Regional Council until a spiller is identified.</li> <li>• The BOPRC equipment store is located within the Mount Maunganui Port next to Shed 8.</li> </ul> <p>When oil is expected to move to the south, its movement may be directed as follows:</p> <ul style="list-style-type: none"> <li>• If originating from the Mount Maunganui Wharf, it may be directed to the Butters Wharf area by the use of an oil boom or booms and recovered.</li> </ul> <p>When oil is expected to move to the north, its movement may be directed as follows:</p> <ul style="list-style-type: none"> <li>• When oil is moving north from the main wharves, then the Pilot Bay area may be protected by rigging a boom from the northernmost corner of No.1 Berth, to act as a containment system allowing for recovery of oil by a recovery system mounted on a floating plant.</li> <li>• In the event of oil spillage in the marina, an oil boom may be deployed in order to close the entrance and try to contain the oil. However, the floating nature and finger jointed construction of marina piers typically make them poor containment structures. Indeed, oils may be trapped within the structure of the piers and may require extensive cleaning using techniques such as prop washing, divers water-blasting. Note that the marinas may provide a diverse habitat for marine life including rare sponges. Typically, spillage occurring in the marina will be of a non-persistent type and should be left to evaporate. Fire and vapour risk should be assessed at regular intervals. Agitation may help the rate of evaporation, particularly when skinning has occurred. Where there is a risk of fire or explosion, New Zealand Fire and Emergency is the lead agency.</li> <li>• Port of Tauranga – Customer Services Centre – Phone (07) 572 8888.</li> <li>• Tauranga Bridge Marina – Phone (07) 575 8264.</li> </ul>		
<b>Access</b>		
Marina – Te Awanui Drive Boat ramp located of Totara Street Port - Access to the port is restricted and authorised personnel only are allowed on the wharves. Road access is through the Hull Road and Rata Street gates		

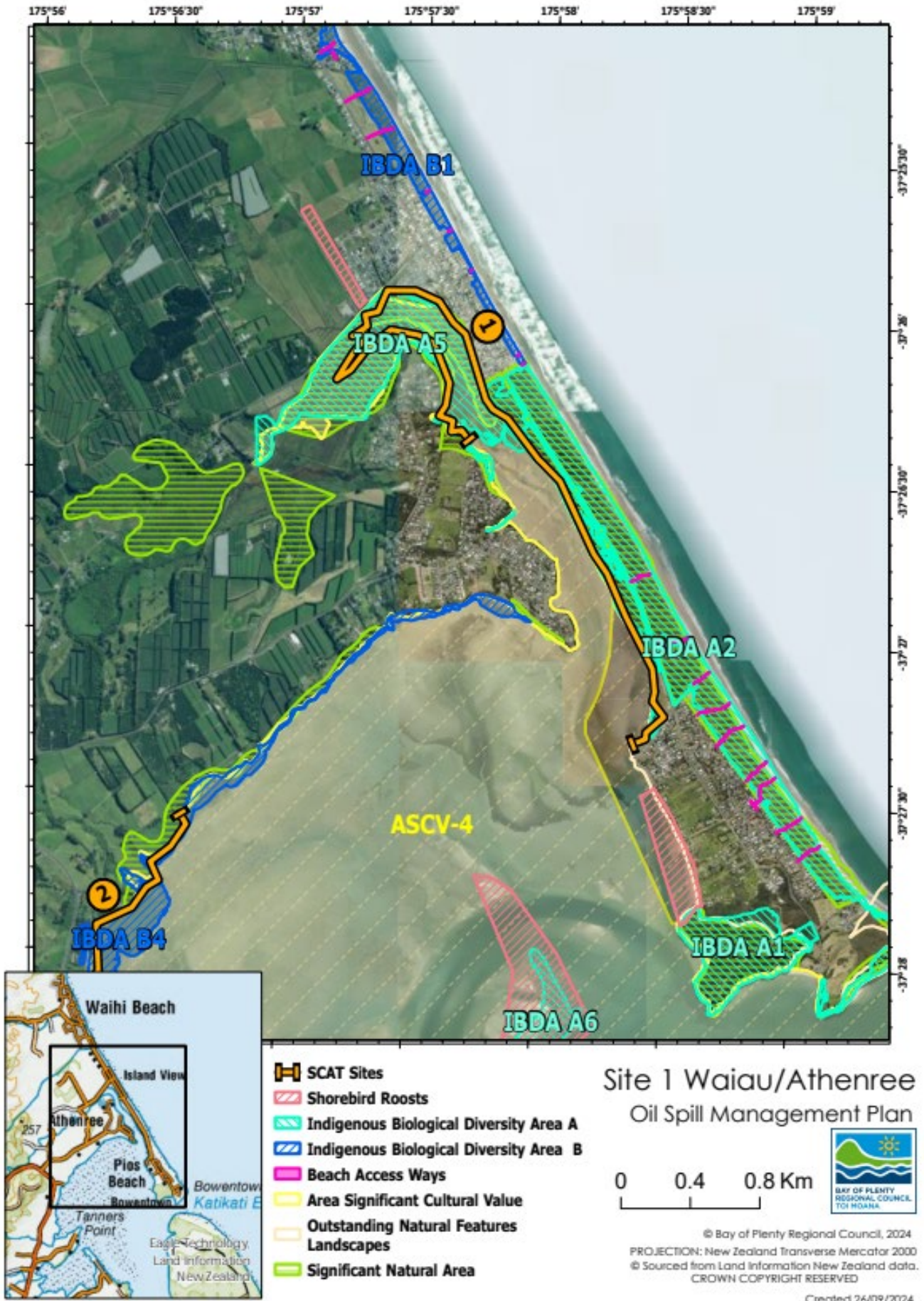
**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and recovery	Medium		Strong currents but possible to direct oil to collection areas
On water recovery	High		Possible with ORV or similar system, see above
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Best on strong tides
Shoreline clean-up	High		Numerous sandy beaches, good access
Natural Recovery	Low		High public access to beach areas

Site 01	Waiau/Athenree	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Athenree is a large nationally ranked wetland, much of which is relatively unmodified, comprising a representative example of the estuarine vegetation of Tauranga Harbour. Much of this site is in the Athenree Wildlife Management Reserve.</p> <p><b>This site has the highest ecological values of whole harbour and wildlife refuge.</b></p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal flats, saltmarsh, mangroves, seagrass</p> <p>All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4)</p> <p>Indigenous Biological Diversity Area A5</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BC36 Katikati</p>	<p><b>Chart number</b></p> <p>NZ541</p>
<p><b>Segments</b></p>	<p><b>TAU-00710 to TAU-00720</b></p>	
<p><b>At Risk resources</b></p> <ul style="list-style-type: none"> <li>• Wetland and intertidal habitat</li> <li>• Shellfish gathering site</li> <li>• Birds at risk include: Banded rail (kataitai), bittern (kataitai), spotless crake (pūweto), marsh crake (koitareke) and North Island fernbird (matata)</li> <li>• Cultural sites: U13/915 (Midden)</li> </ul>		
<p><b>Notes</b></p> <p>Operations should consider booming the mouth of this site as it is approximately 100 m wide</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>There is a low energy drain through middle of the wetland</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Clean sandy areas according to STM</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• If oil enters low energy, sensitive areas, clean-up to be informed by SCAT/Environment</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <p>Vehicle access off Emerton Road at Island View or Kautunui Road at Athenree</p> <p>Foot access through wetland</p>		

**Preferred Response Option Matrix**

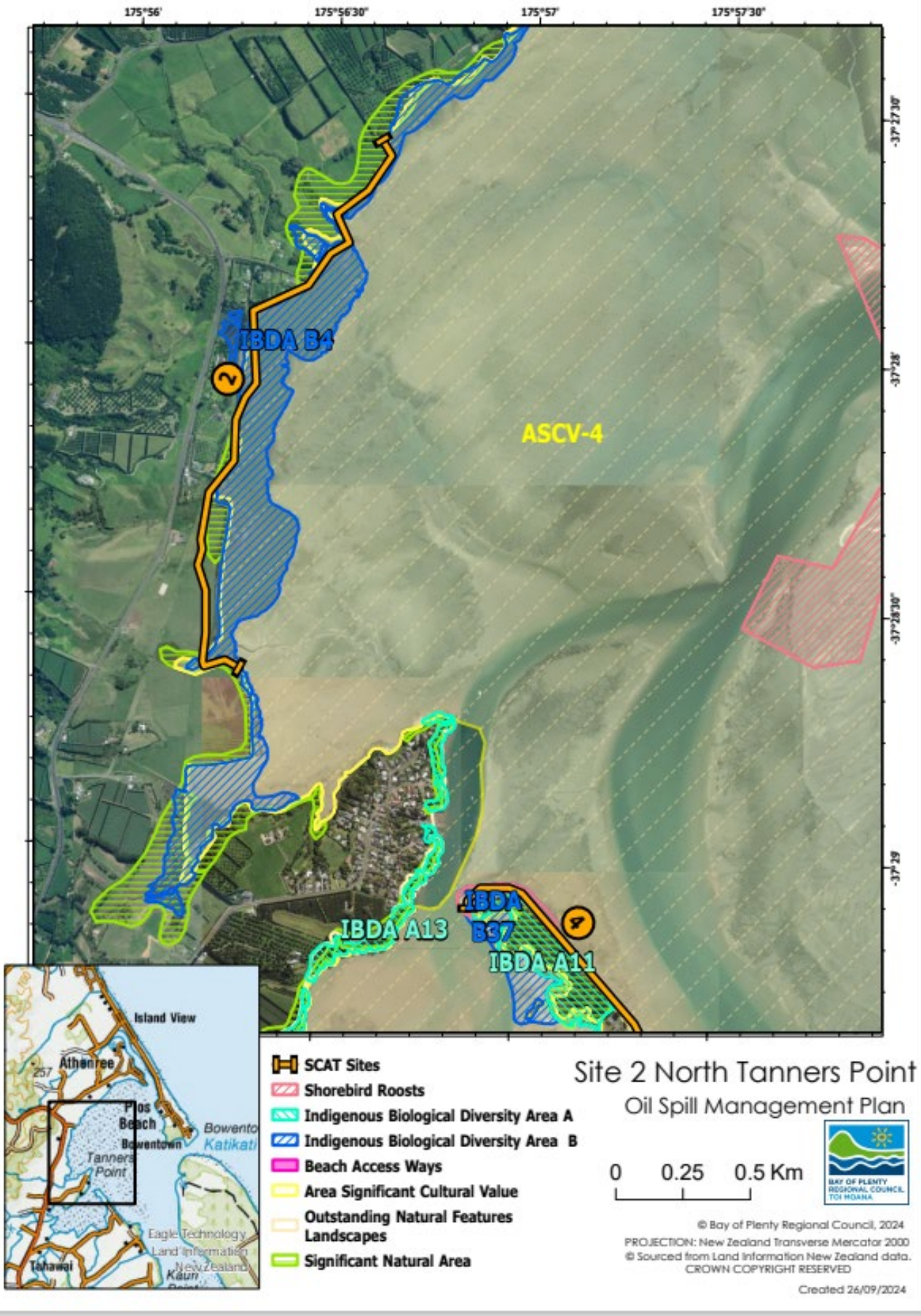
	Most preferred	Least preferred	Feasibility
Containment and recovery	High		Yes – can be boomed
On water recovery	Medium		Very shallow, dries out
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline clean-up	High		Good access to shoreline
Natural recovery	Low		High public access



Site 02	North Tanners Point	Risk ranking: 3
<b>DESCRIPTION</b> Site is 1.5 km Northwest of Tanners Point, narrow saltmarsh and mangrove strip. Low energy tidal flow.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B4	
<b>Map sheets</b>	<b>TOPO 50</b> BC36 Katikati	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00680</b>	
<b>At Risk resources</b> <ul style="list-style-type: none"> <li>• Fernbird (kataitai), Banded Rail (kataitai)</li> <li>• Cultural resources: mahinga kai (fishing)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• If oil enters low energy, sensitive areas, clean-up to be determined in consultation with environmental advisors</li> </ul>		
<b>Access</b> Foot access from SH 2 and Bridgeman Lane. Access may be difficult at low tide on soft mud and also at high tide		

**Preferred Response Option Matrix**

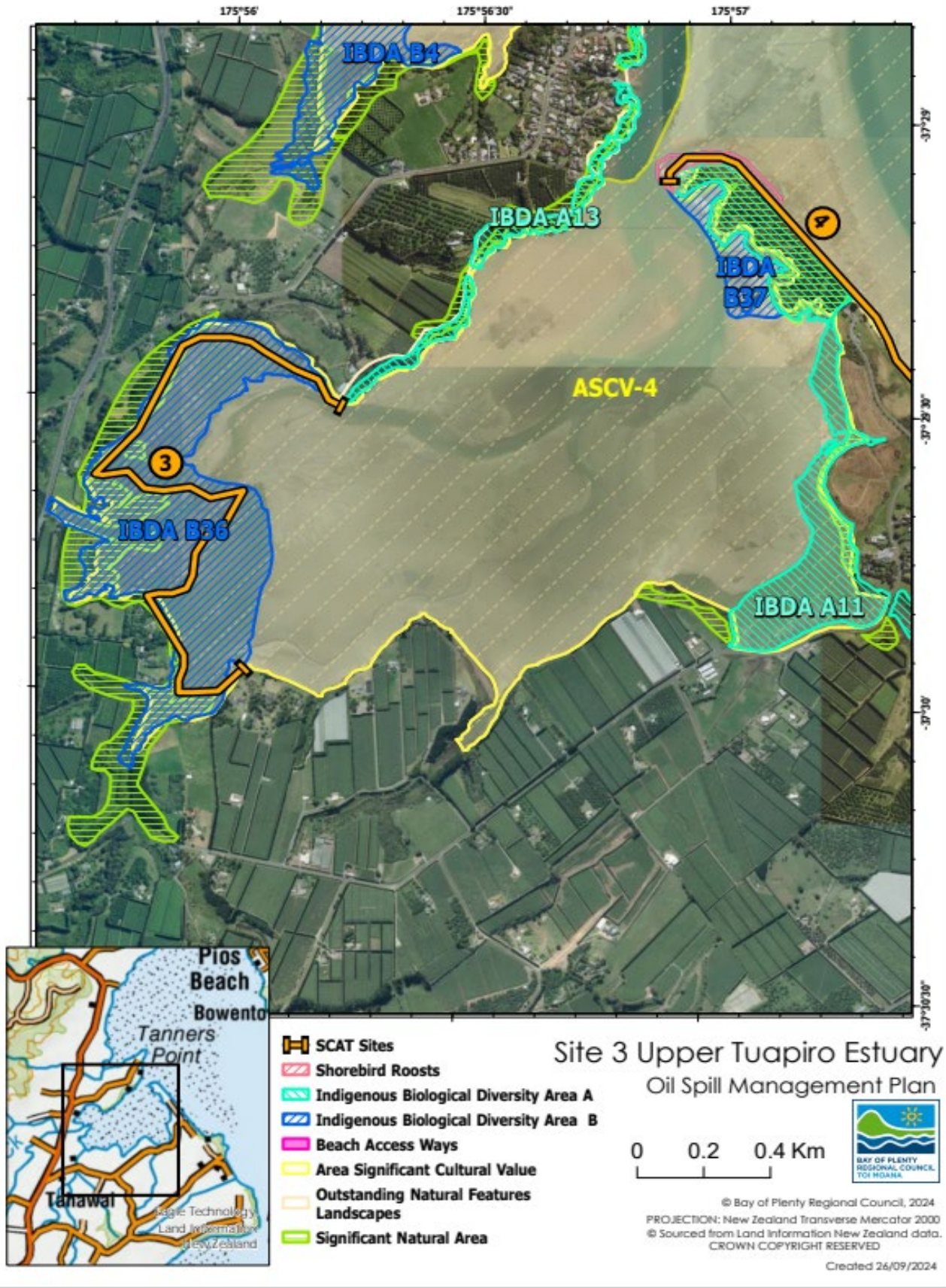
	Most preferred	Least preferred	Feasibility
Containment and recovery	Medium		Large area dries at low tide
On water recovery	Medium		Possible but only in channels
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline clean-up	Medium		NEBA – limited access – tidal/soft
Natural recovery	Medium		Ongoing monitoring



Site 03	Upper Tuapiro Estuary	Risk ranking: 2
<b>DESCRIPTION</b> This is a large, relatively good quality, diverse example of the estuarine vegetation of Tauranga Harbour. Saltmarsh with mangrove edge, there is a narrow fringe of freshwater wetland vegetation. Tuapiro Stream runs through middle of site. Intertidal shoreline dries below mid-tide.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves. All shore segments have "habitat value" All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B36	
<b>Map sheets</b>	<b>TOPO 50</b> BC36 Katikati	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00650</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>Banded rail (katakaitai), Marsh crake (koitareke), North Island fernbird (mātātā), wading birds, shags</li> <li>Shellfish gathering</li> <li>Whitebait (inanga) spawning habitat and migratory pathway</li> <li>Cultural sites: T13/657 (Midden - 3 x 7 m area of pipi; cockle (tuangi); mudsnail (Titiko); and turret shell)</li> </ul>		
<b>Notes</b> Booming may be effective in preventing oil ingress in intertidal area of Tuapiro Stream. Will need to be assessed by Ops		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Vehicle access SH 2 and Tanners Point Road.		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		The stream entrance can be effectively boomed
On water Recovery	Low		Shallow area
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Access via private property
Natural Recovery	High		Refer NEBA



Site 04	Tuapiro Estuary Spit	Risk ranking: 2
<b>DESCRIPTION</b> Sand spit with pasture/development and scrub/trees at the furthest extent. No wetland areas have been identified.		
<b>Foreshore type/environmental Value</b>	Intertidal sandflats, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A11	
<b>Map sheets</b>	<b>NZ Topo 50</b> BC36 Katikati	<b>Chart Number</b> NZ5411
<b>Segments</b>	<b>TAU-00620</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>Local birds include: godwit (kuaka), tern (taranui), white-faced heron (matuku-moana), oystercatcher (tōrea), shag (kawau), New Zealand dotterel (tuturiwhatu), australasian bittern (matuku hūrepo), North Island fernbird (mātātā), banded rail (kataitai).</li> <li>Cultural sites/resources: <ul style="list-style-type: none"> <li>There are several archaeological sites close to shore in this section. The following sites are described as Midden: U13/766, U13/770, U13/716, U13/770, U13/716, U13/691. Site U13/773 is described as “x7 flakes of obsidian found over 50 m of beach”</li> </ul> </li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>Where possible, oil should be prevented from entering Tauranga Harbour</li> </ul>		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>Clean-up of sensitive shorelines should be completed in line with the relevant Shoreline Treatment Methodology (See STMs for Sandy, saltmarsh and reeds clean-up)</li> <li>The requirement for shoreline clean-up in sensitive areas is to be determined in consultation with environmental advisor</li> </ul>		
<b>Access</b>		
<ul style="list-style-type: none"> <li>4WD Vehicle access via Ongare Point Road, foot access along spit</li> </ul>		

### Preferred Response Option Matrix

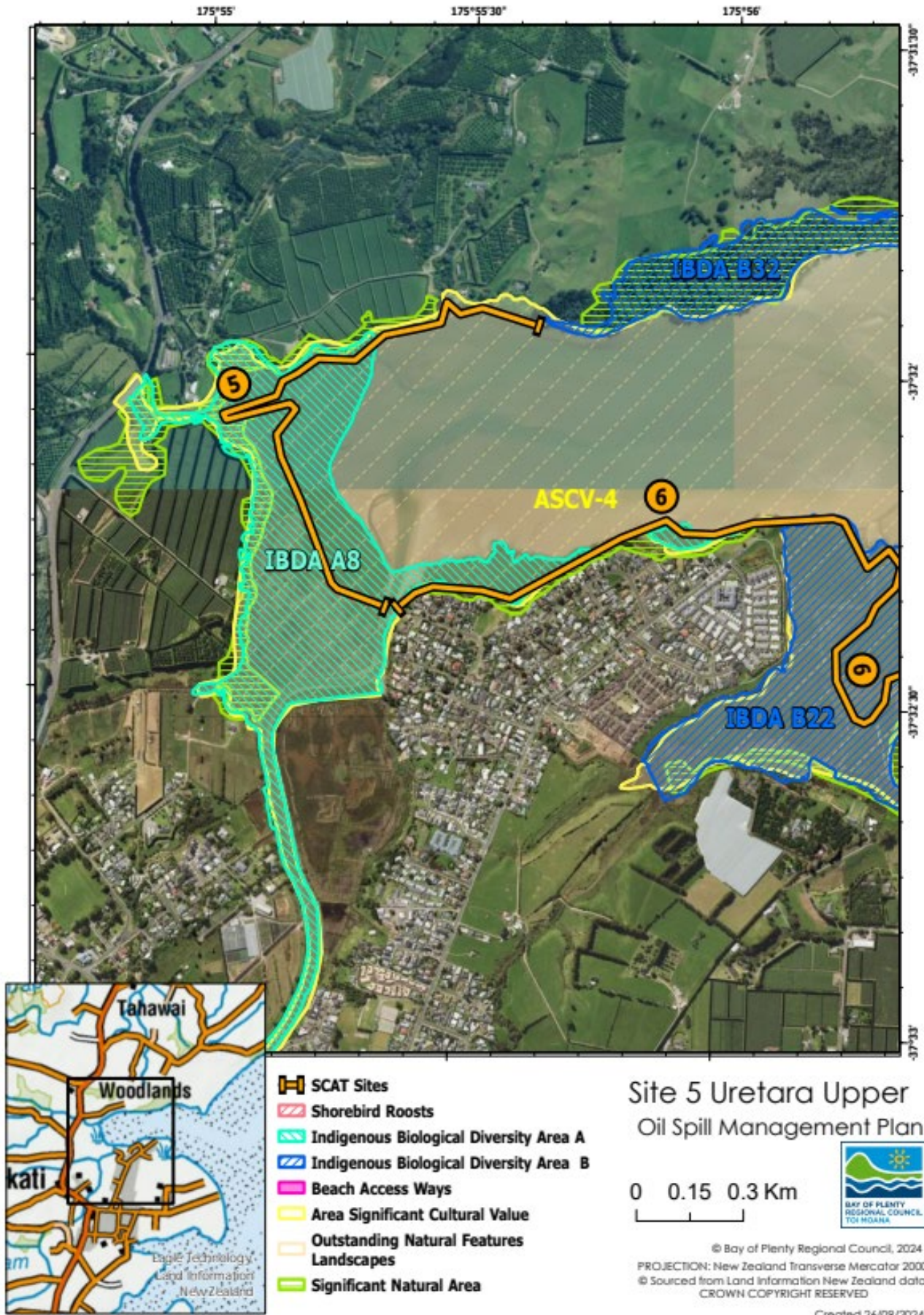
	Most preferred	Least preferred	Feasibility
Containment and recovery	High		Some deflection and entrance booming possible
On water recovery	High		Possible if ORV or similar available
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline clean-up	Medium		Limited access, large mangrove area
Natural recovery	Medium		Limited access



Site 05	Uretara Upper	Risk ranking: 1
<b>DESCRIPTION</b> Saltmarsh with mangrove edge, low energy, tidal up to Katikati. High quality example of estuarine and palustrine wetlands.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroveAll intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A8	
<b>Map sheets</b>	<b>NZMS 260 Series</b> BC36 Katikati	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-000570, part TAU-00560</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>Banded rail (kataitai), bittern (matuku hūrepo), spotless crake (pūweto), marsh crake (koitareke) and North Island fernbird (matata). Pateke (brown teal) and scaup (pāpango), black stilt (kakī), wrybill (ngutu pare), royal spoonbill (kōtuku ngutupapa), variable oystercatcher (tōrea pango), pied stilt (poaka).</li> <li>Whitebait (inanga) spawning areas</li> <li>Cultural sites: T13/528 (Midden – tuangi (cockle) and mudsnail (titiko)(crushed and whole; sparse concentration))</li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>Limited opportunity to protect the locality if oil threatens</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> <li>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal and sand flats habitat</li> </ul>		
<b>Access</b>		
<ul style="list-style-type: none"> <li>Good vehicle access from SH 2 downstream</li> <li>Foot access out into harbour</li> </ul>		

**Preferred Response Option Matrix**

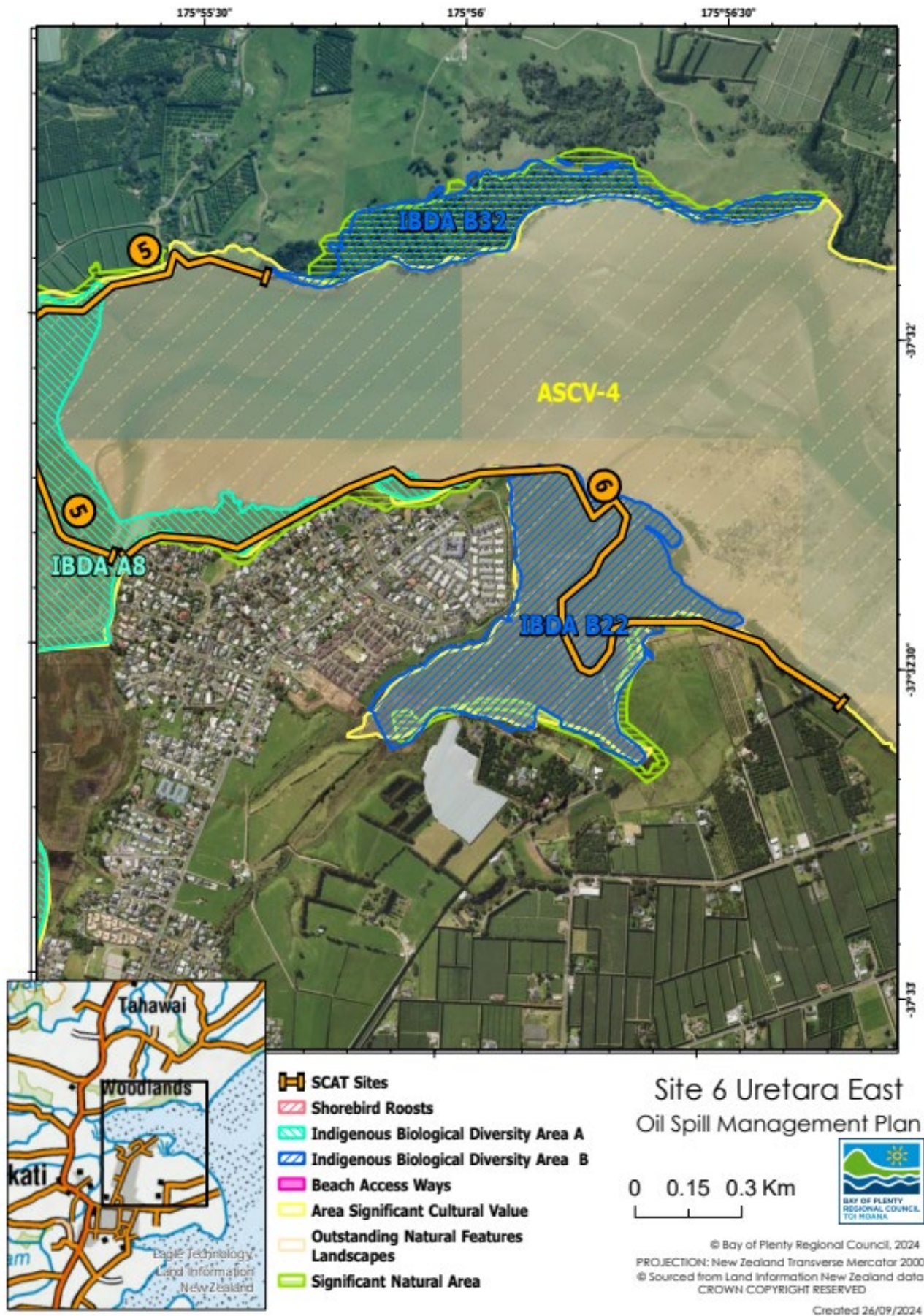
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Medium		Unlikely
On water Recovery	Low		Unlikely, too shallow
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Best access via private property
Natural Recovery	High		See NEBA



Site 06	Uretara East	Risk ranking: 2
<b>DESCRIPTION</b> The area to the east of Uretara Stream is a relatively large area of mangrove with small areas of saltmarsh. Sub-tidal low energy site.		
<b>Foreshore type/environmental Value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B22	
<b>Map sheets</b>	<b>NZ TOPO 50</b> BC36 Katikati	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00560</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Banded rail (katakaitai), North Island fernbird (mātātā)</li> <li>• Whitebait habitat</li> <li>• Cultural values: <ul style="list-style-type: none"> <li>▪ Whitebait (inanga) harvest</li> </ul> </li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot via Park Road, Katikati access. Access may be difficult or limited during high tide states.		

**Preferred Response Option Matrix**

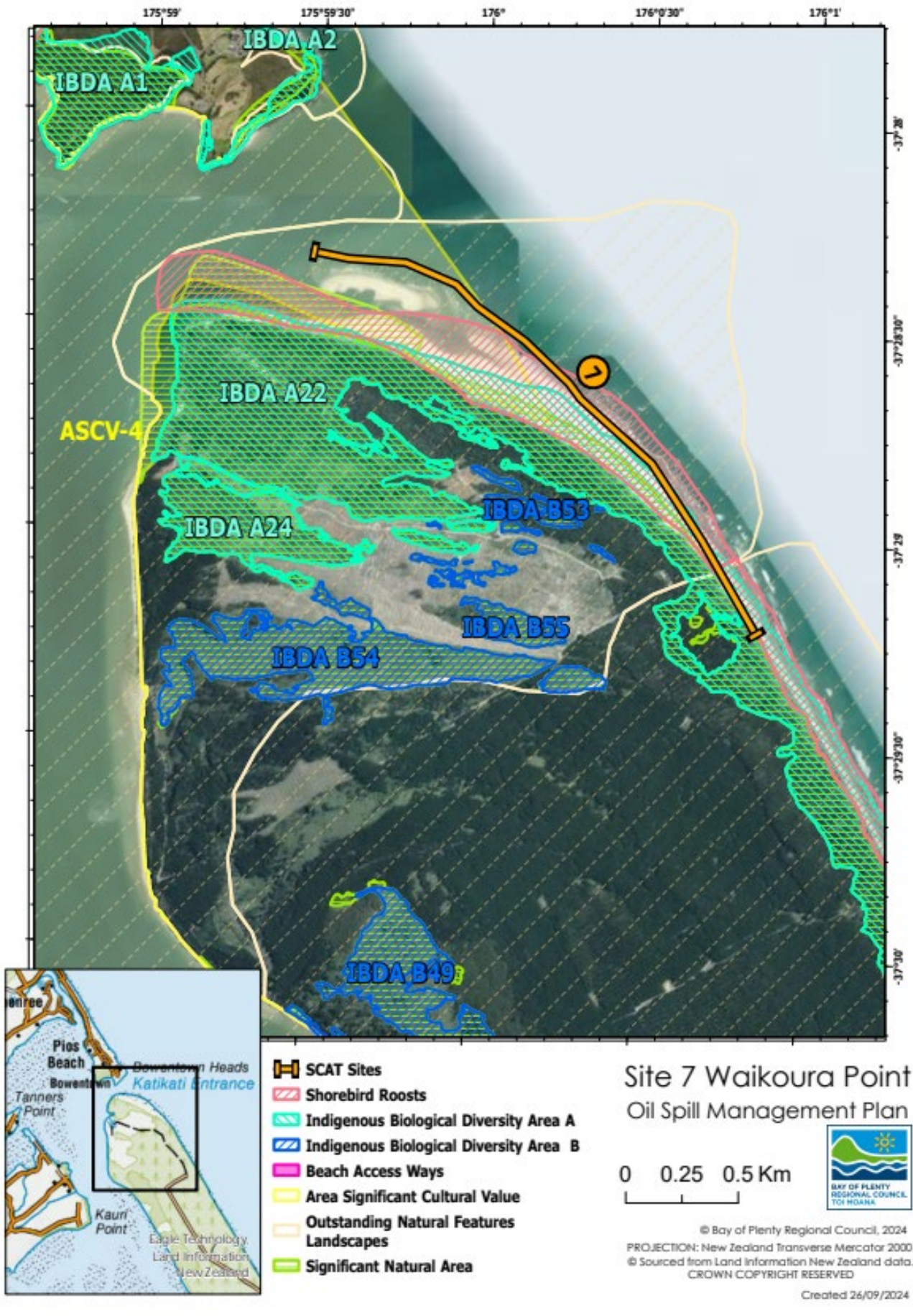
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Low		Challenging due to very shallow area
On water Recovery	Low		Restricted to the narrow channel
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Limited access but okay on southern side
Natural Recovery	High		Refer NEBA



Site 07	Waikoura Point		Risk ranking: 1
<b>DESCRIPTION</b> Northern end of Matakana Island			
<b>Foreshore type/environmental value</b>	Dunes, Sandy beach All shore segments have “habitat value” High quality examples of an intact foredune contiguous with a wetland and a small dune lake. Indigenous Biological Diversity Area A22		
<b>Map sheets</b>	<b>NZ Topo 50</b> BC 36 Katikati	<b>Chart Number</b> NZ 541	
<b>Segments</b>	<b>BOP-00260</b>		
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Wildlife refuge</li> <li>• Sand dune communities and wetland communities which are of national significance.</li> <li>• Waikoura Point Beach is the most important shorebird roost in Tauranga Harbour.</li> <li>• The major high tide roost for migratory wading birds, e.g. 6000+ godwit. 30-36 pair New Zealand dotterel nesting. Banded dotterel (tuturiwhatu), pied shag (karuhiruhi), Caspian tern (taranui), pied oystercatcher (tōrea), white fronted tern (tara), black shag (māpunga), and oystercatcher (tōrea) (a breeding site for variable oystercatcher).</li> <li>• Bird species of note include Banded rail (kataitai), North Island fernbird (matata), Australasian bittern (matuku hūrepo), Spotless crane (pūweto), grey duck (pāreera), marsh crane (koitareke), brown teal (pāteke); but are primarily in the wetlands and are therefore not a high risk.</li> </ul>			
<b>Notes/Response</b> <ul style="list-style-type: none"> <li>• Limited actions to protect sand spit</li> <li>• Beside northern harbour entrance high energy water flows</li> <li>• Debris on dunes and water edge</li> </ul> <b>Actions</b> <ul style="list-style-type: none"> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific- with wildlife teams</li> <li>• <b>Consider pre-emptive capture of New Zealand dotterel</b></li> <li>• No vehicles to access upper intertidal zone. Foot access along water edge only, keep out of bird nesting area on dunes</li> <li>• Clean shoreline if oiled (high priority for clean-up) (See STM for Sandy Beaches Shoreline clean-up)</li> <li>• Notify wildlife team of potential for oiling</li> </ul>			
<b>Access</b> Boat and 4wd vehicle access through Matakana Island.			

**Preferred Response Option Matrix**

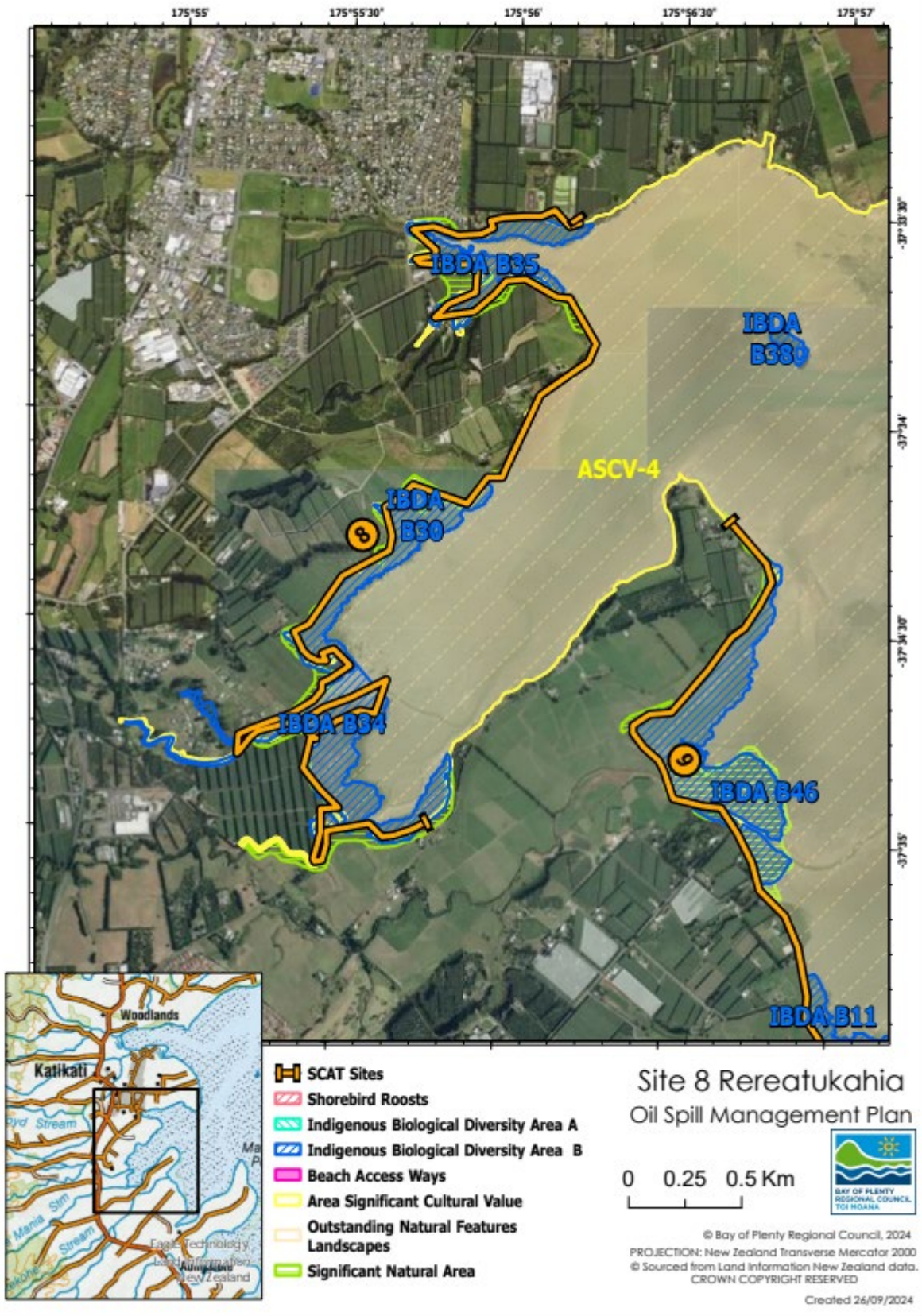
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Medium		Unlikely due to prevailing weather
On water Recovery	Medium		Possible with ORV or similar
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Most practical option, pre-clean
Natural Recovery	Low		Suitable for shoreline clean-up



Site 08	Rereatukahia	Risk ranking: 2
<b>DESCRIPTION</b> Saltmarsh with mangrove edge, Manuka behind. Rereatukahia Stream flows through middle of site. Intertidal mudflats exposed below mid-tide. Popular whitebaiting stream.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves. All shore segments have habitat value All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B35, B30, B34	
<b>Map sheets</b>	<b>NZ Topo 50</b> BC36 Katikati, BD36 Lower Kaimai	<b>Chart Number</b> NZ 542
<b>Segments</b>	<b>TAU-00540</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Banded rail (katakaitai), North Island fernbird (mātātā)</li> <li>• Whitebait (inanga) spawning habitat</li> <li>• Flounder (pātiki) habitat</li> <li>• Cultural values: <ul style="list-style-type: none"> <li>▪ Whitebait (inanga) harvest</li> <li>▪ Site below Te Rereatukahia Marae</li> </ul> </li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour.		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system. Booming may be effective at preventing oil from entering Rereatukahia Stream – will need to be assessed</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot via Marae, Rereatukahia Road, Sharp Road		

### Preferred Response Option Matrix

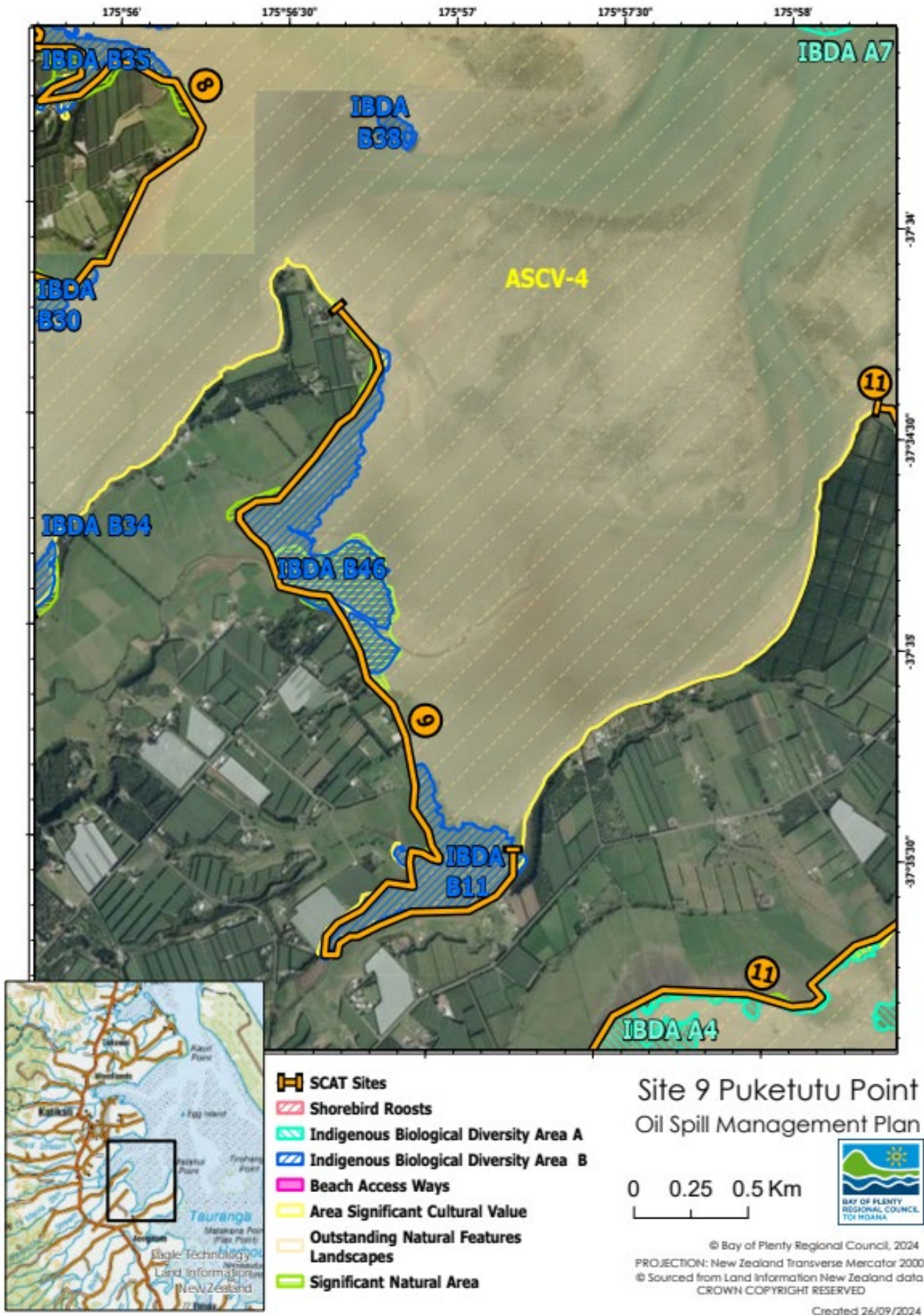
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		May be effectively boomed
On water Recovery	Medium		Not possible on lower half of tide
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Challenging water's edge
Natural Recovery	High		Refer NEBA



Site 09	Puketutu Point	Risk ranking: 2
<b>DESCRIPTION</b> Small areas of saltmarsh with mangrove edge and mānuka wetland. Low energy tidal flow, exposed intertidal sand flats below mid-tide in Matahui Estuary. Cliff/steep bank behind site.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. Habitat (intertidal) All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B45 and B11	
<b>Map sheets</b>	<b>TOPO 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00520</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Banded rail (katakaitai), North Island fernbird (mātātā)</li> <li>Whitebait (inanga) habitat</li> <li>Cultural sites/resources: <ul style="list-style-type: none"> <li>Whitebait (inanga) harvest</li> <li>U14/1174 (Midden), U14/1170 (Midden/pits)</li> </ul> </li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system. Booming may be useful to protect the intertidal area of Waitekohe Stream and will need to be assessed</li> <li>Clean shoreline according to relevant STM. (Sandy, saltmarsh and reeds clean-up)</li> <li>If oil enters low energy, sensitive areas, clean-up to determined in consultation with environmental advisor</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot <b>access</b> via Walker Road East. Access may be difficult at high tide, mud flats may be soft at low tide.		

**Preferred Response Option Matrix**

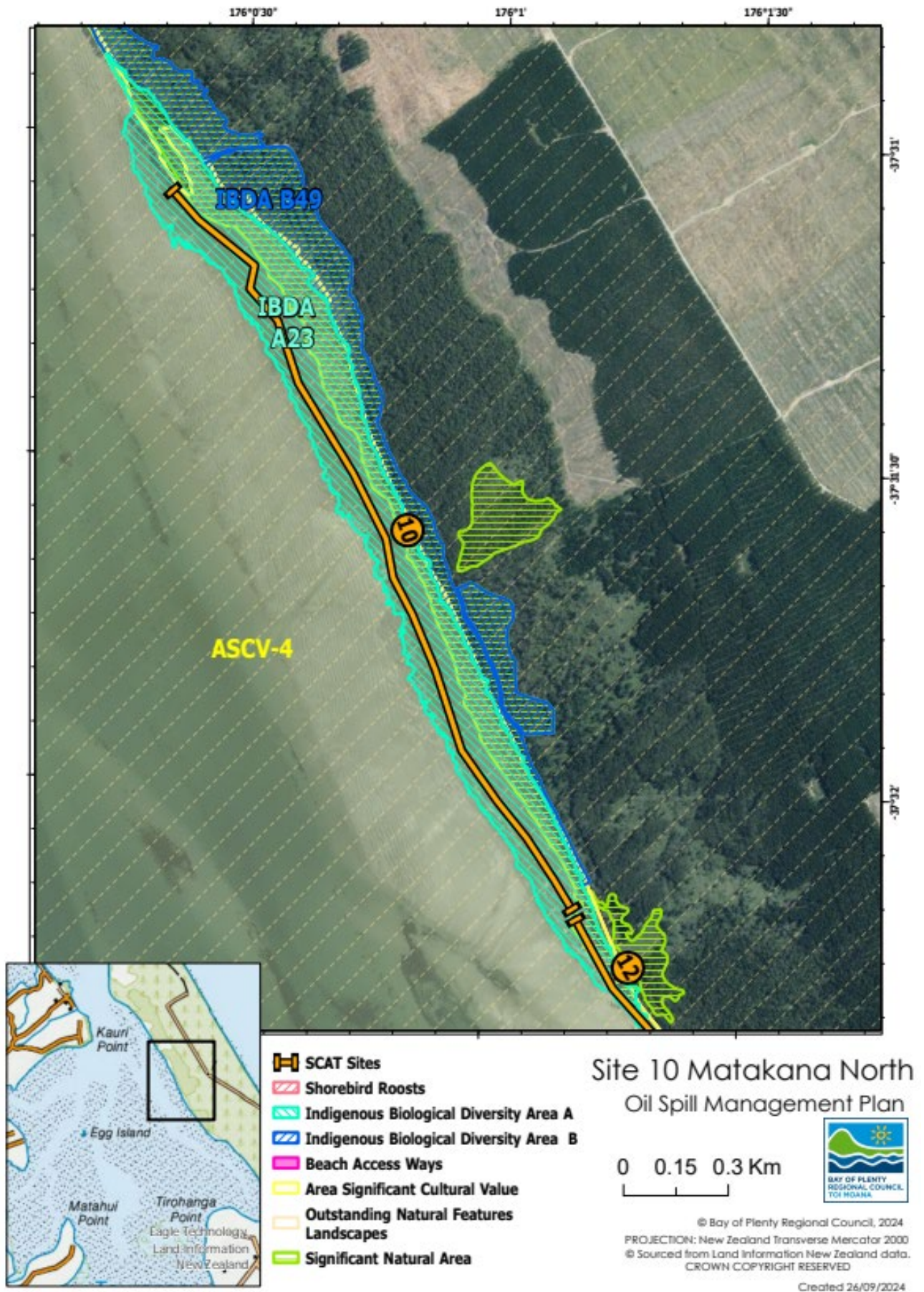
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Medium		Large area, access difficult
On water Recovery	High		Difficult due to shallow water
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Access difficult, mangroves
Natural Recovery	High		Ongoing monitoring



<b>Site 10</b>	<b>Matakana North</b>	<b>Risk ranking: 3</b>
<b>DESCRIPTION</b> The section of internal water on the western side of Matakana Island includes; saltmarsh, with narrow edge of mangrove in places, there is Manuka behind. Moderate tidal flow, with exposed sand flats below mid-tide.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A23 and B49	
<b>Map sheets</b>	<b>TOPO 50</b> BC36 Katikati	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00760</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Banded Rail (kataitai), Spotless Crake (pūweto), Marsh Crake (koitareke), Fernbird (mātātā)</li> <li>• Intertidal habitat</li> <li>• Cultural resources: Oysters (tio), fishing, mudsnail (titiko)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour. <b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Access through Matakana Island via 4WD and foot. Ensure permit arranged with forestry company.		

**Preferred Response Option Matrix**

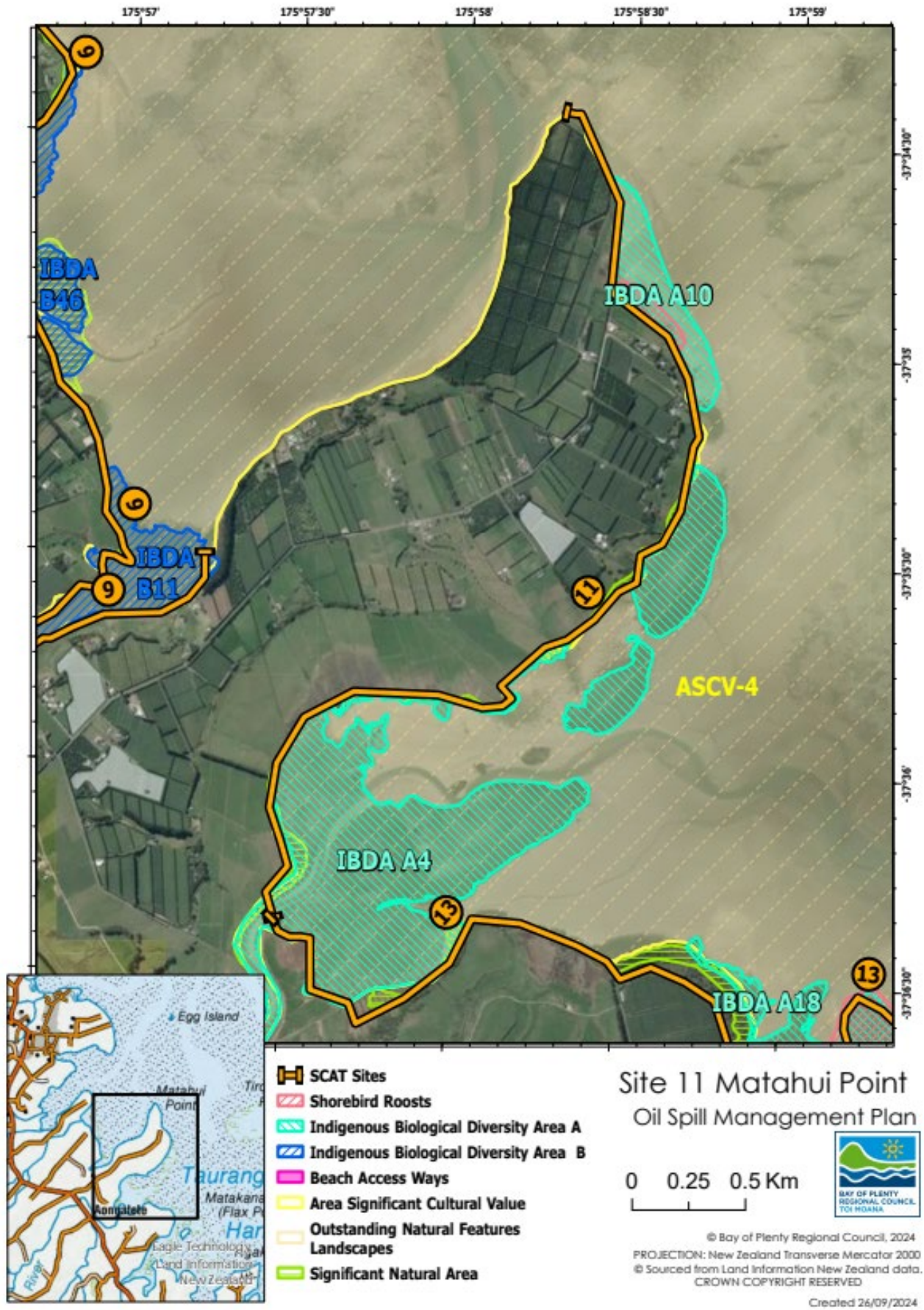
	<b>Most preferred</b>	<b>Least preferred</b>	<b>Feasibility</b>
Containment and Recovery	High		Possible using natural collection points
On water Recovery	High		Suitable if ORV or similar available
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Beach pre-clean required, prevailing weather on this coast
Natural Recovery	Medium		Limited public access



Site 11	Matahui Point	Risk ranking: 2
<b>DESCRIPTION</b>		
Sand spit, important high tide roost for migratory wading birds, e.g. 1000+ godwits. Includes narrow saltmarsh strip running to southeast.		
Foreshore type/environmental value	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value”  All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A10 and A4	
Map sheets	NZ Topo 50 BD36 Lower Kaimai	Chart Number NZ 541
Segments	TAU-00500	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• North Island fernbird (mātātā), banded rail (kataitai), migratory wading birds, New Zealand dotterel (tuturiwhatu), black stilt (kakī), wrybill (ngutu pare), Caspian tern (taranui), red-billed gulls (akiaki), pied oystercatcher (tōrea), pied stilt (poaka).</li> <li>• Whitebait (inanga)</li> <li>• Saltmarsh and mangrove</li> <li>• Cultural resources: <ul style="list-style-type: none"> <li>▪ Mahinga kai</li> </ul> </li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>• Where possible, oil should be prevented from entering the Tauranga Harbour</li> <li>• Moderate energy water flows, oil pooling may result behind spit</li> </ul>		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b>		
<ul style="list-style-type: none"> <li>• By boat or end of Matahui Road.</li> </ul>		

### Preferred Response Option Matrix

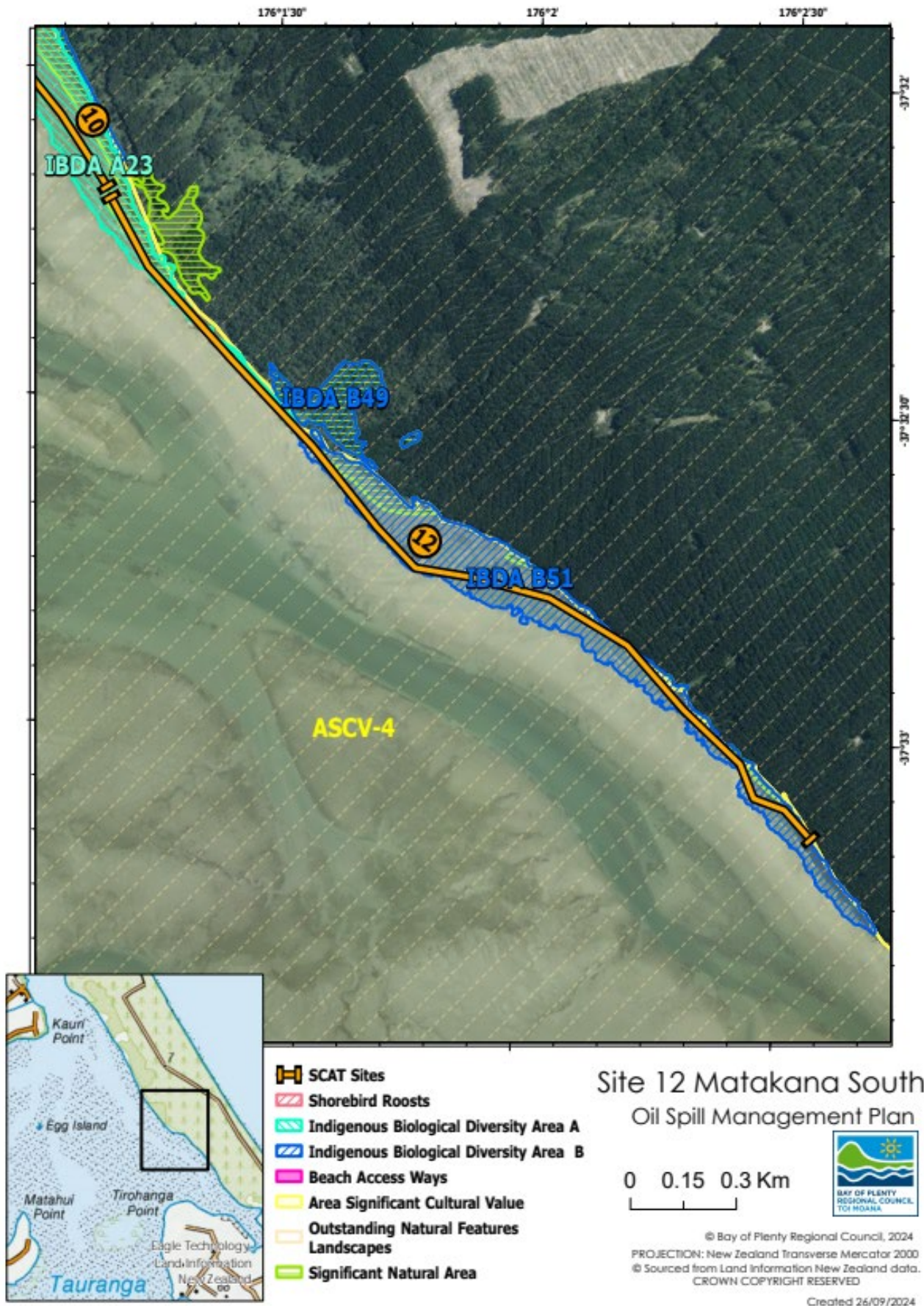
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Possible in area behind spit
On water Recovery	Low		Unlikely due to depth
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Limited and difficult access
Natural Recovery	Medium		On-going monitoring



Site 12	Matakana South	Risk ranking: 3
<b>DESCRIPTION</b> The section of internal water on the western side of Matakana Island includes; saltmarsh, with narrow edge of mangrove in places, there is Manuka behind. Moderate tidal flow, with exposed sand flats below mid-tide.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B49 and B51	
<b>Map sheets</b>	<b>TOPO 50</b> BC36 Katikati	<b>Chart Number</b> NZ541
<b>Segments</b>	<b>TAU-00770</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Banded Rail (katakaitai), Spotless Crake (pūweto), Marsh Crake (koitareke), Fernbird (mātātā), Godwit (kuaka)</li> <li>Intertidal habitat</li> <li>Sites have high shorebird concentrations at high tide</li> <li>Cultural resources: fishing, oysters (tio), mud snail (titiko)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour.		
<b>Actions</b> <ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Access through Matakana Island via 4WD and foot. Ensure permit arranged with forestry company. No 4WD access in tidal zone		

**Preferred Response Option Matrix**

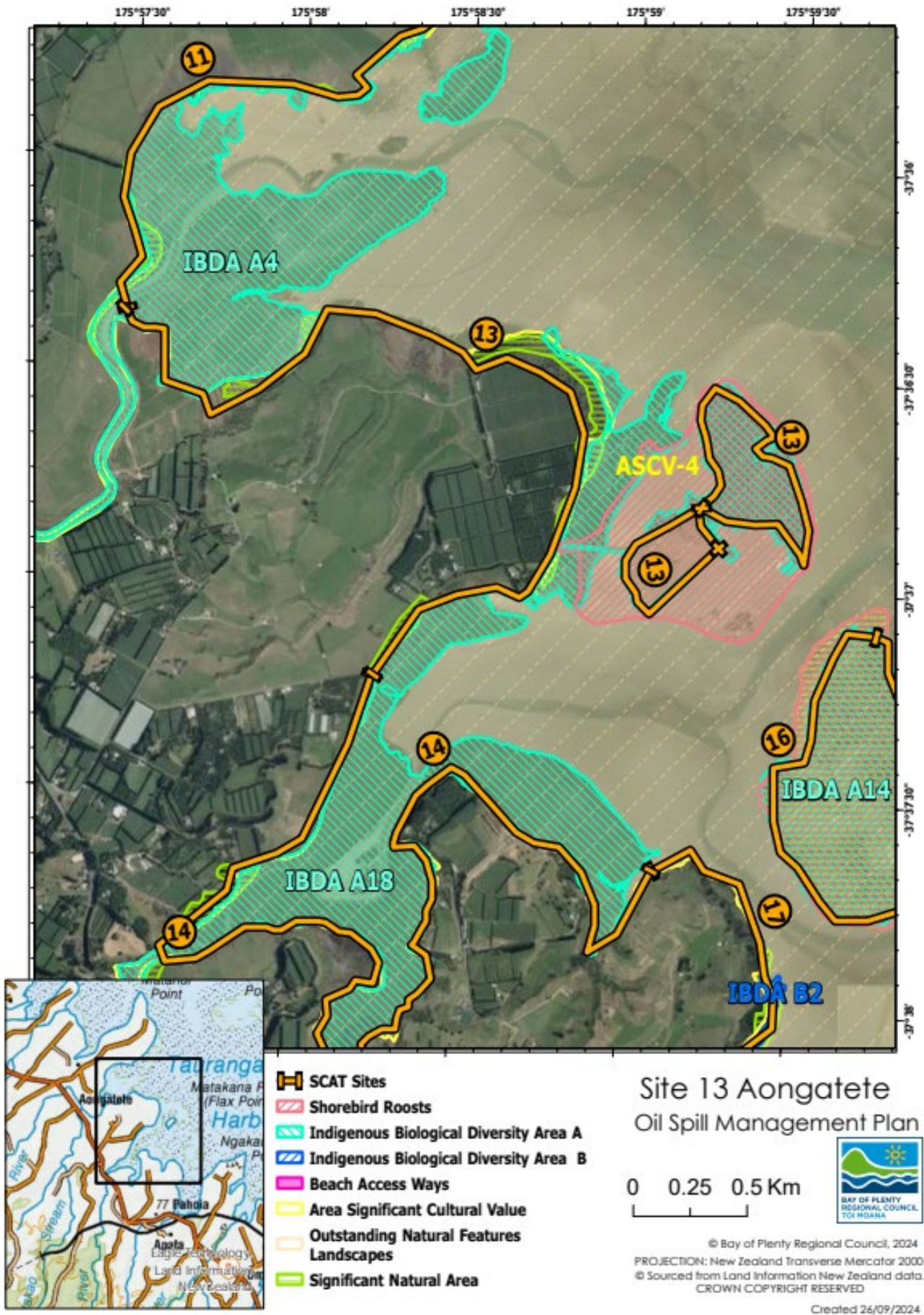
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Use natural collection points where possible
On water Recovery	High		If ORV or similar available
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Beach pre-clean required
Natural Recovery	Medium		Limited public access



Site 13	Aongatete	Risk ranking: 2
<b>DESCRIPTION</b>		
Low energy, saltmarsh and mangrove. Aongatete Estuary contains large areas of representative mangrove stands, which are diverse in stature and density. These stands are contiguous with saltmarsh of high quality characteristic of Tauranga Harbour.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves. All shore segments have “habitat value”  All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A4 and A18	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD 36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00480; 00470; 00490; 00491; 00461</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• Australasian bittern (matuku hūrepo), banded rail (kataitai), North Island fern bird (mātātā), black shag (māpunga), pied stilt (poaka), pukeko, spotless crane (pūweto), white-faced heron (matuku-moana), Caspian tern (taranui), pied oystercatcher (tōrea), little shag, white fronted tern (tara).</li> <li>• Whitebait (inanga)</li> <li>• Te Hopai Island and Prestige Island are bird roosting sites</li> </ul>		
<b>Notes</b>		
Where possible, oil should be prevented from entering the harbour. Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas on in the estuary		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b>		
Foot and boats		

**Preferred Response Option Matrix**

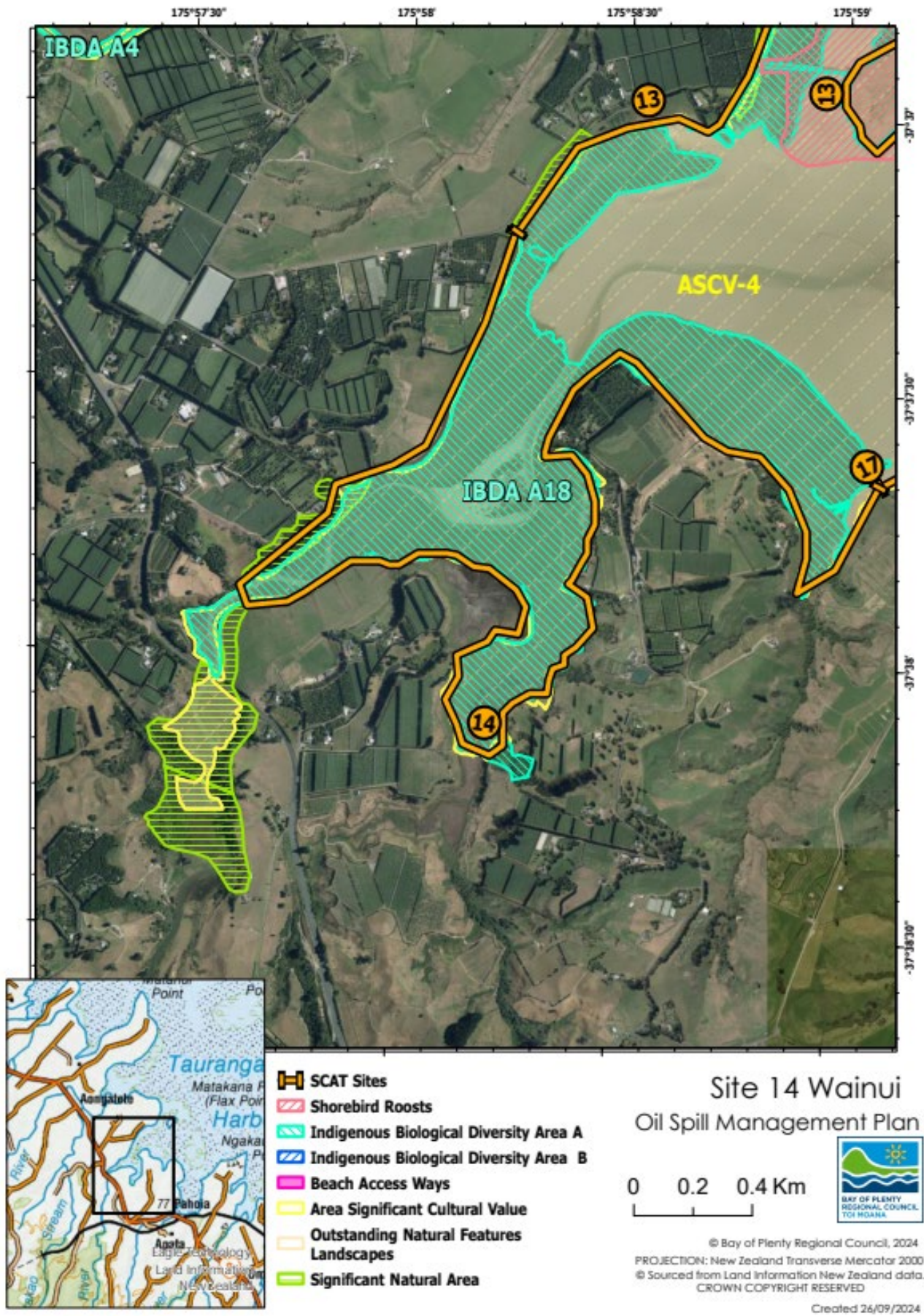
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		A very large area, not possible to boom
On water Recovery	High		Possible with ORV or similar but water depth a constraint
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Refer NEBA, limited access,
Natural Recovery	Medium		Limited public access, on-going monitoring



Site 14	Wainui	Risk ranking: 2
<b>DESCRIPTION</b> This area is a relatively large, good quality example of wetland vegetation types, which are characteristic of Tauranga Harbour. This site contains representative examples of oioi sedgeland inland from the main harbour adjacent to a tidal stream, and manuka-raupo-toetoe shrubland, characteristic of Tauranga Harbour.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves. All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A18	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00470</b>	
<b>At Risk Resources</b> Banded rail (katakaitai), North Island fernbird (mātātā), oystercatcher (tōrea), godwit (kuaka), knots, australasian bittern (matuku hūrepo), Caspian tern (taranui), wrybill (ngutu pare), pied stilt (poaka), little shag (kawau paka), white fronted tern (tara). <ul style="list-style-type: none"> <li>Whitebait (inanga)</li> </ul>		
<b>Notes</b> Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm whitebait spawning areas in the estuary. Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Access from Prestidge Road or SH 2 by foot.		

**Preferred Response Option Matrix**

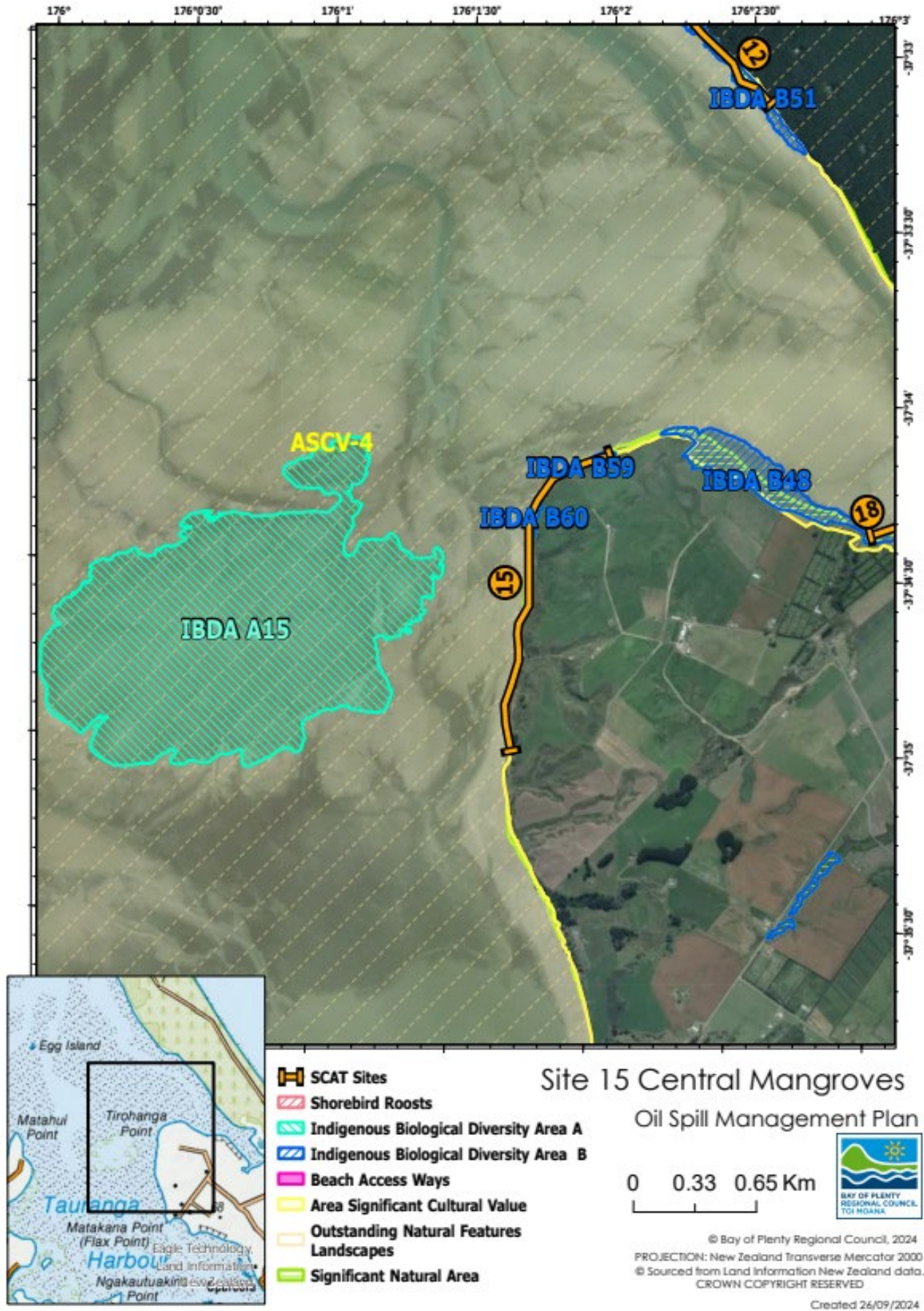
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Dries at low tide
On water Recovery	High		Only possible in narrow channel
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Refer NEBA – foot/quad access
Natural Recovery	Medium		Limited public access



Site 15	Central Mangroves	Risk ranking: 3
<b>DESCRIPTION</b> Largest area of mangroves in harbour, with some manuka shrublands in centre. Situated in central middle of harbour on western side of Matakana Island. Moderate energy tidal flow.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass transitional ecosystem (island in the making) All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A15, B59 and B60	
<b>Map sheets</b>	<b>TOPO 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ541
<b>Segments</b>	<b>TAU-00830</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Fernbird (kataitai), Banded Rail (kataitai),</li> <li>• Heron and pied shag (karuhiruhi), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka)</li> <li>• Canada goose (kuihi) and black swan (kakīānau) nesting area</li> <li>• High value transitional ecosystem with fish spawning and invertebrate values</li> <li>• Cultural values: Mahinga kai</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour <b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> By foot at low tide via Matahui Road		

### Preferred Response Option Matrix

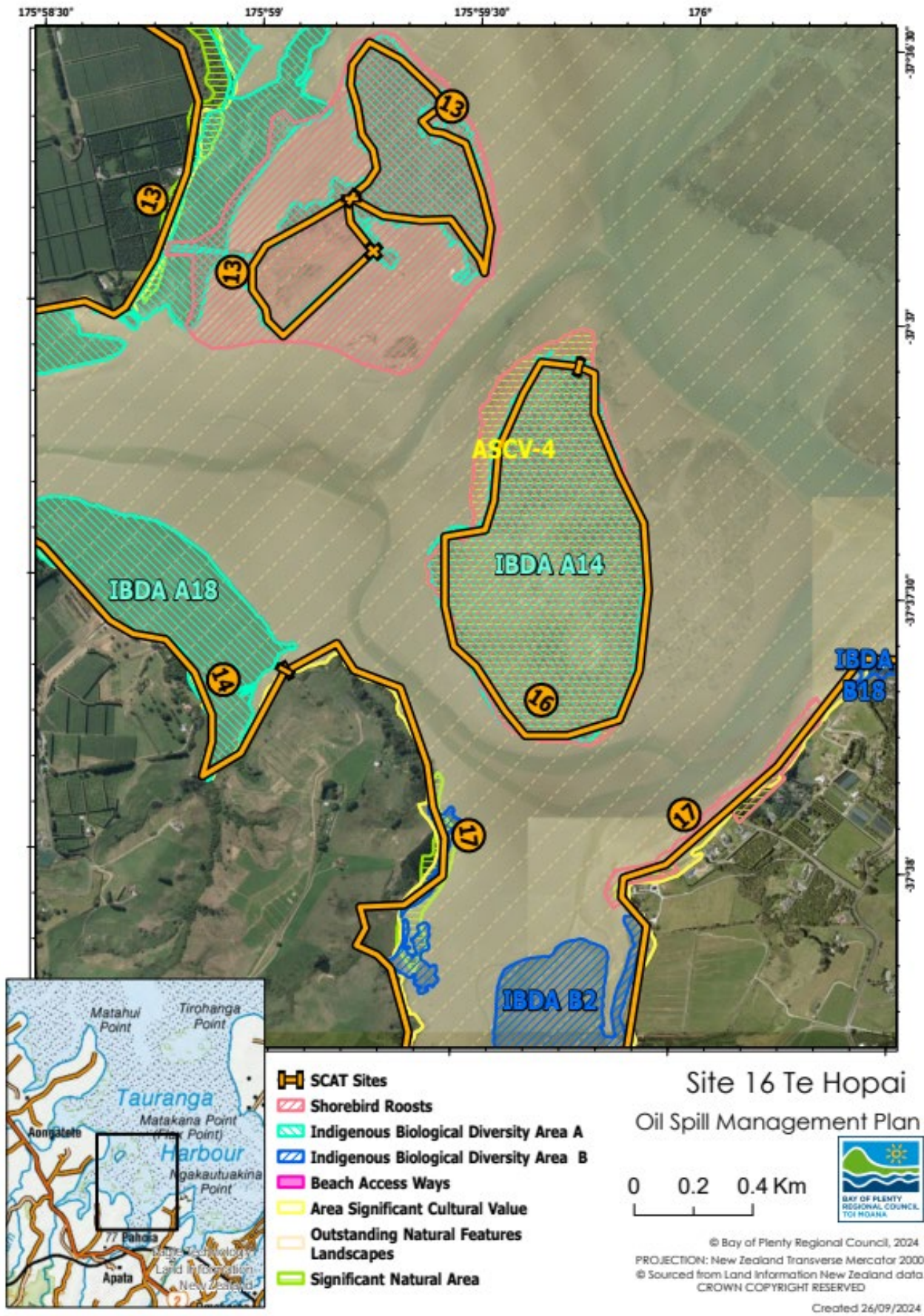
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Limited access and tidal
On water Recovery	High		Possible but only in channels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Limited access and time - tidal
Natural Recovery	Medium		On-going monitoring



Site 16	Te Hopai	Risk ranking: 3
<b>DESCRIPTION</b> Large area of saltmarsh and ribbon wood located approximately 1 km southeast of Te Hopai Island within the Tauranga Harbour.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A14	
<b>Map sheets</b>	<b>TOPO 50</b> BD 36	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00461</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Banded rail (kataitai), North Island fern bird (mātātā), variable oystercatcher (tōrea pango), white-faced heron (matuku-moana); southern black back gull (karoro) nesting colony – low priority</li> <li>Toetoe is at its northern limit of distribution.</li> <li>Cultural Values: Site of Significance</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Accessible by foot at low tide from Pahoia		

### Preferred Response Option Matrix

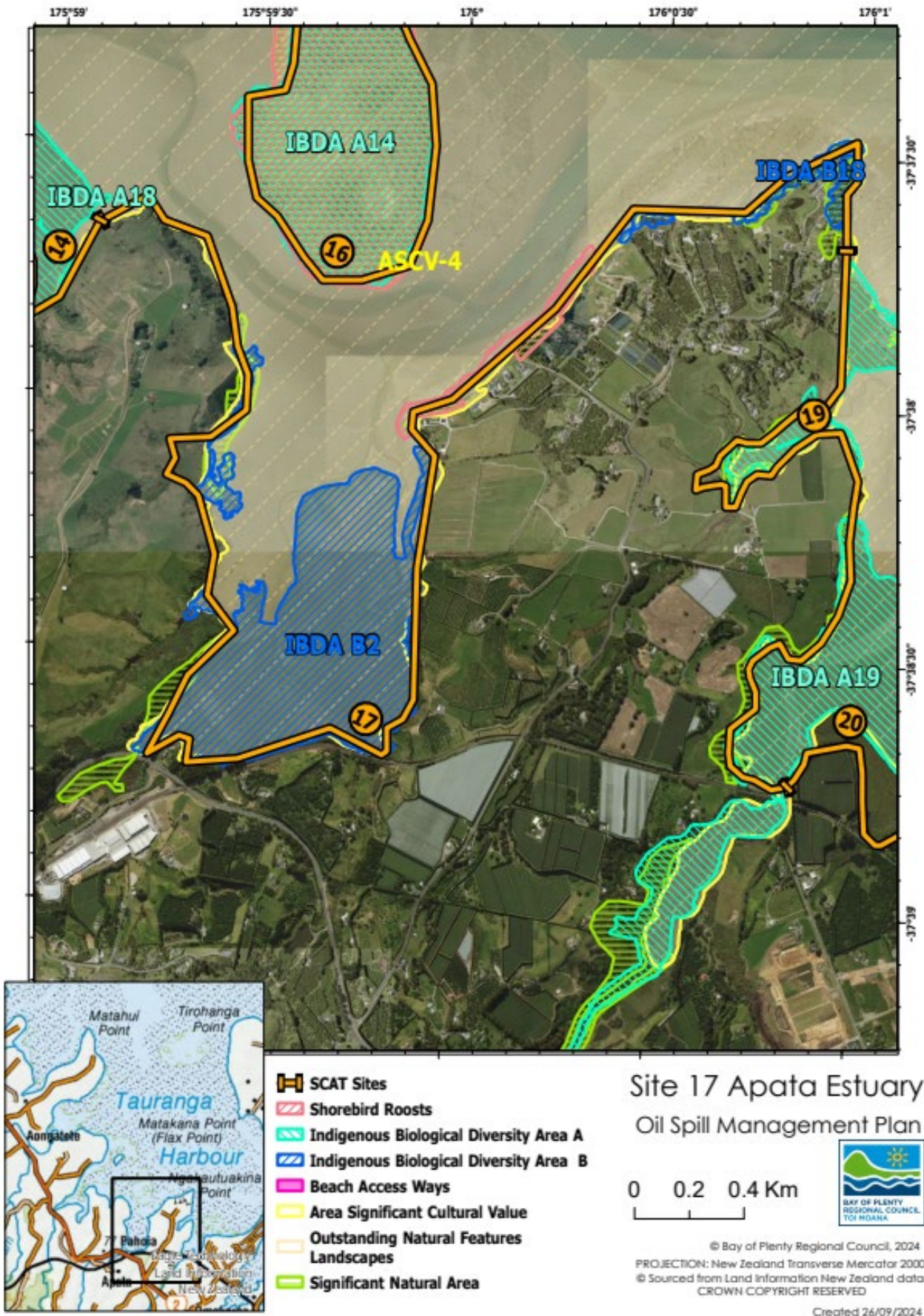
	Most preferred	Least preferred	Feasibility
Containment and recovery	High		Unlikely to work due to tidal movements
On water recovery	High		Possible with ORV or similar
Dispersant application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline clean-up	Medium		Only possible at low tide
Natural recovery	High		This area covers and uncovers with the tide.



Site 17	Apata Estuary	Risk ranking: 2
<b>DESCRIPTION</b> Contains a large, good quality stand of mangroves, with relatively narrow strips of saltmarsh along the margins. Ngakautuakina Point has a small area of Pohutukawa forest and Mamaku scrub.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangrove All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B2 and B18	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ541; NZ5411
<b>Segments</b>	<b>TAU-00450, TAU-00460</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Local birds include: Australasian bittern (matuku hūrepo), banded rail (kataitai), North Island fernbird (mātātā)</li> <li>Whitebait (inanga)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot and boats.		

### Preferred Response Option Matrix

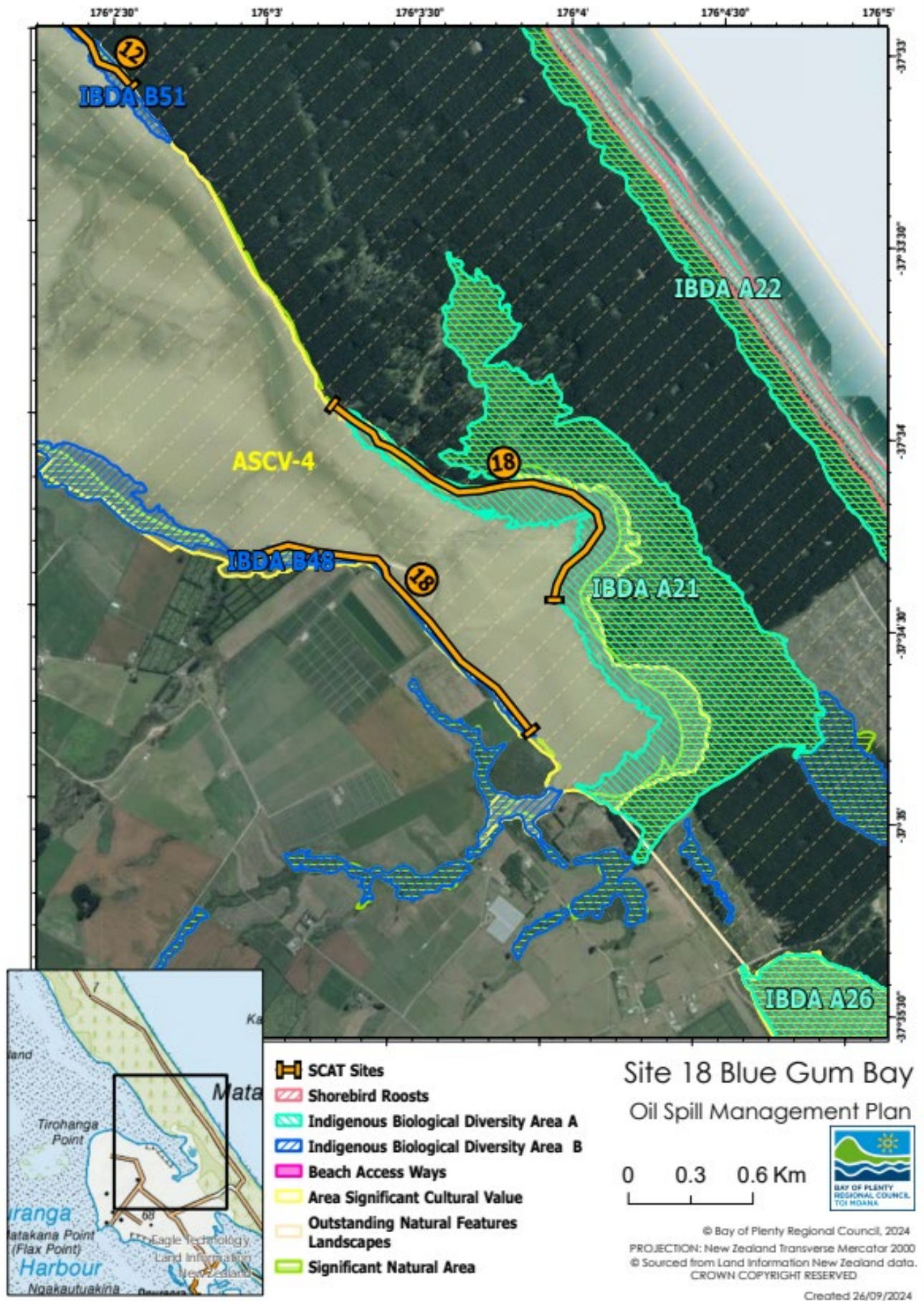
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Possible with use of natural collection points
On water Recovery	High		Possible in the channel areas
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Labour intensive
Natural Recovery	Medium		On-going monitoring



Site 18	Blue Gum Bay	Risk ranking: 1
<b>DESCRIPTION</b> Blue Gum Bay is an extensive wetland, much of which is a relatively unmodified, representative example of the estuarine and freshwater vegetation of Tauranga Harbour. Saltmarsh with mangrove edge, important feeding area for wide range of bird species.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A21 and B48	
<b>Map sheets</b>	<b>TOPO 50</b> BC36 Katikati BD36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00790, TAU-00810</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Banded rail (katakaitai), bittern (matuku hūrepo), spotless crake (pūweto), marsh crake (koitareke) and North Island fernbird (matata)</li> <li>• Range of duck species</li> <li>• Wetland margin, intertidal habitats, mudflats, saltmarsh</li> <li>• Flounder (Patiki) breeding</li> <li>• Mud snail (Titiko) and oysters (tio)</li> <li>• Cultural values: Mahinga Kai</li> </ul>		
<b>Notes</b> <b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system, locality could be protected by booming the local bay</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot access at low tide via Matakana Island.		

**Preferred Response Option Matrix**

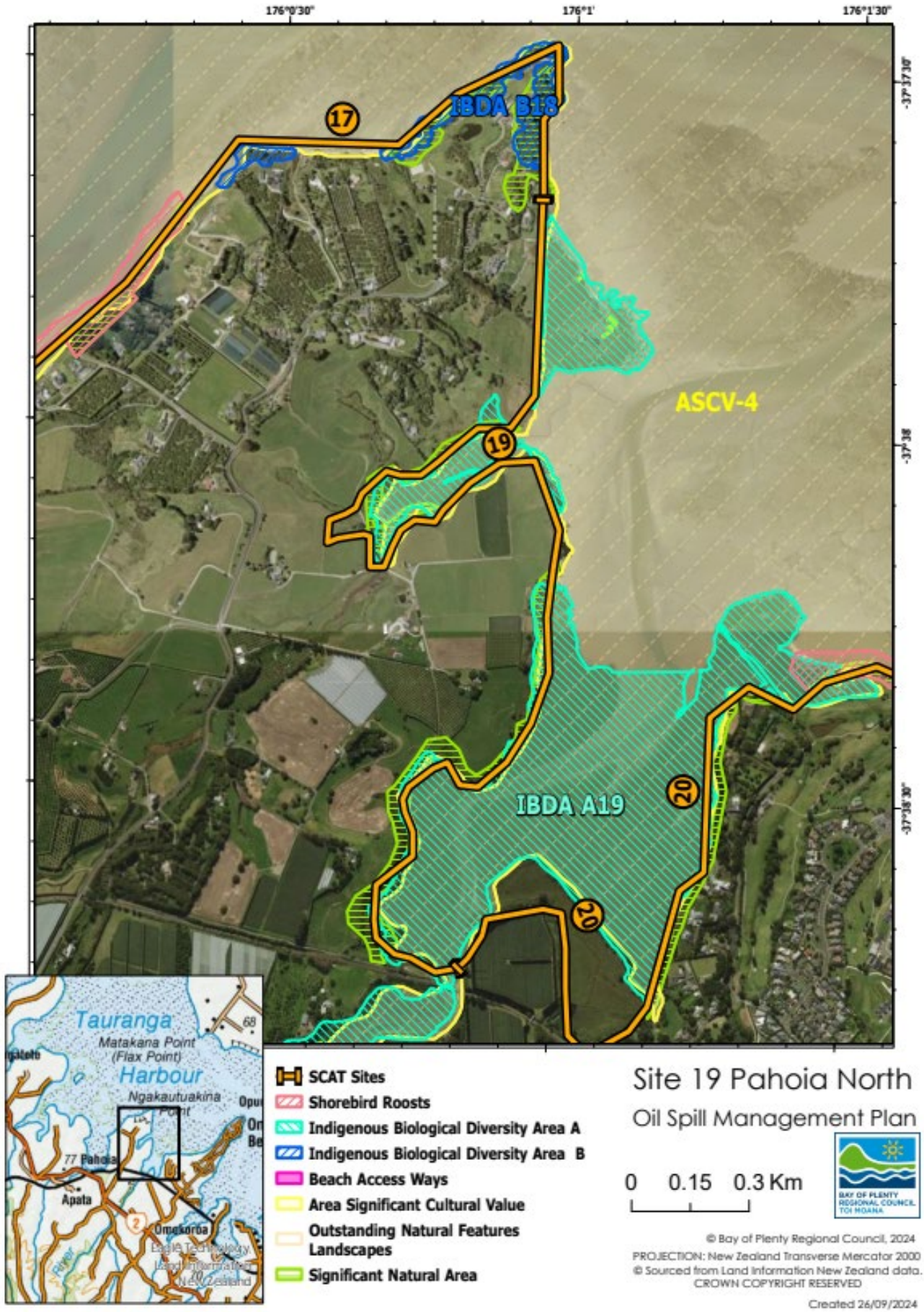
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Shallow but can be effectively boomed
On water Recovery	Medium		Only possible in narrow channel
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Likely to be best option
Natural Recovery	High		See NEBA



Site 19	Pahoia North	Risk ranking: 2
<b>DESCRIPTION</b> Low energy estuary tidal lower reaches, small area of saltmarsh with manuka in behind		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A19	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ541; NZ5411
<b>Segments</b>	<b>Northern part of TAU- 00440</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Local birds include: Australasian bittern (matuku hūrepo), banded rail (kataitai), North Island fernbird (mātātā), Caspian tern (taranui), pied shag (karuhiruhi), black stilt (kakī), pied oystercatcher (tōrea).</li> <li>Whitebait (inanga)</li> </ul> <b>Cultural Sites/Resources</b> U14/1206		
<b>Notes and preferred protection and clean-up options</b> Where possible, oil should be prevented from entering the Tauranga Harbour.		
<b>Actions</b> <ul style="list-style-type: none"> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Foot.		

### Preferred Response Option Matrix

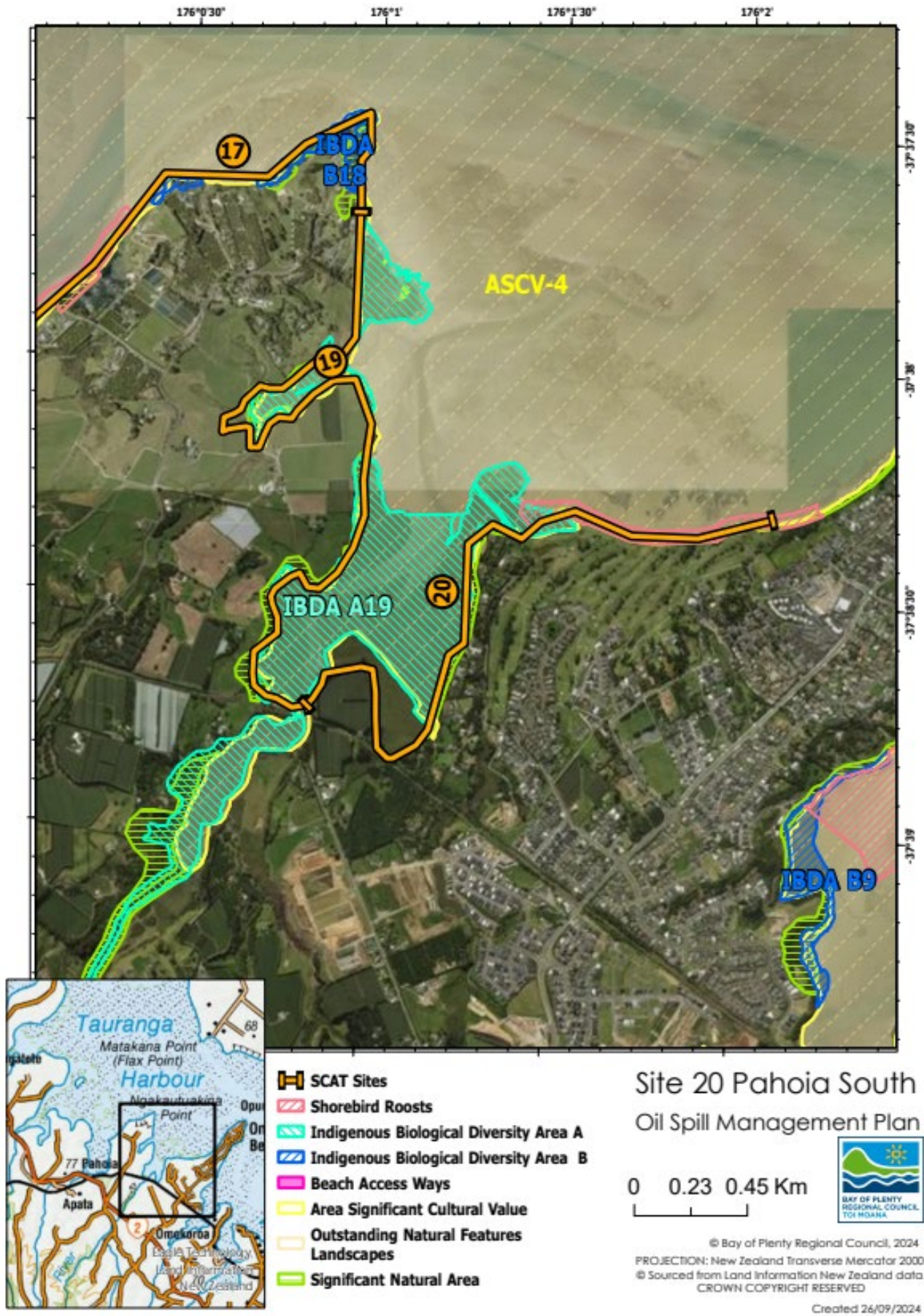
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Possible with use of natural collection points
On water Recovery	High		Possible in the channel areas
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Labour intensive
Natural Recovery	Medium		On-going monitoring



Site 20	Pahoia South	Risk ranking: 2
<b>DESCRIPTION</b> This site contains a representative, relatively large area of high quality oioi sedgeland inland from the main harbour adjacent to a tidal stream. Waipapa Estuary is a relatively large, high quality example of mangrove stands and saltmarsh. Mangrove scrub and shrublands form the cover over much of this area.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A19	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ541; NZ5411
<b>Segments</b>	<b>Southern part of TAU-00440</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Local birds include: Australasian bittern (matuku hūrepo), banded rail (kataitai), North Island fernbird (mātātā), Caspian tern (taranui), pied shag (karuhiruhi), black stilt (kakī), pied oystercatcher (tōrea).</li> <li>The sandspit to the northwest of Ōmokoroa golf course is a roosting site for shorebirds.</li> <li>Whitebait (inanga)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Via Omokoroa by foot.		

**Preferred Response Option Matrix**

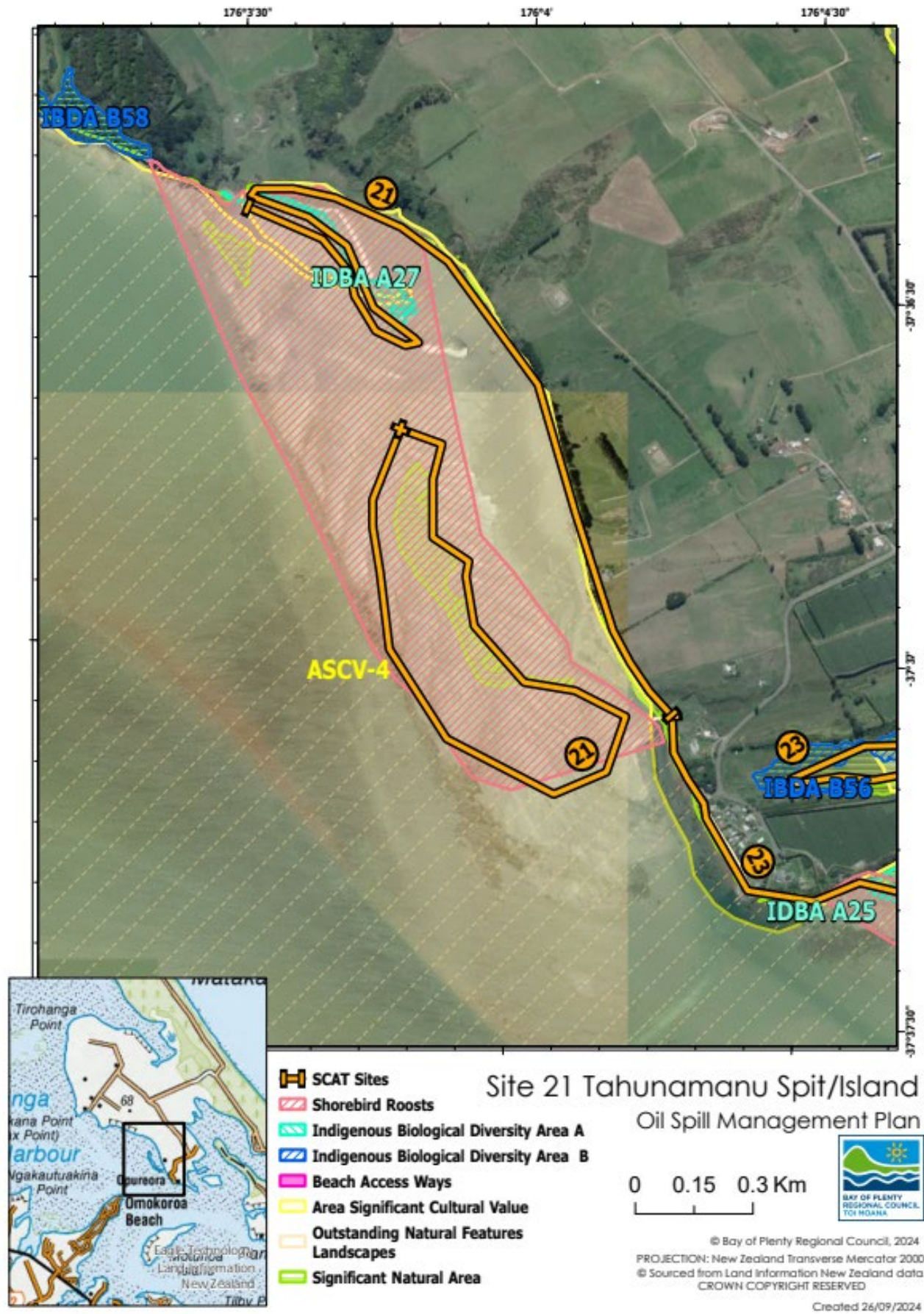
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Possible with use of natural collection points
On water Recovery	High		Possible in the channel areas
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Labour intensive
Natural Recovery	Medium		On-going monitoring



Site 21	Tahunamanu Spit/Island	Risk ranking: 1
<b>DESCRIPTION</b> Sand spit and sand island 1 km long, extensive tidal areas around island, tidal flows, low energy areas, wind predominantly westerly. Pampass and some other vegetation on island.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. Sand island exposed at high tide All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A27	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU – 00880 to TAU – 00900</b>	
<b>At Risk resources</b> <ul style="list-style-type: none"> <li>• Extensive shellfish beds, surrounding sand flats support a wide range of wading birds (e.g. knots and godwits (kuaka))</li> <li>• Nesting New Zealand dotterel (tuturiwhatu) and caspian tern (taranui) on island and spit banded dotterel (tuturiwhatu), red-billed gulls (akiaki), wrybill (ngutu pare), pied oystercatcher (tōrea), pied stilt (poaka), white fronted tern (tara), little black shag (kawau tūī), little shag (kawau paka), variable oystercatcher (tōrea pango).</li> <li>• Cultural resources: Mahinga kai</li> </ul>		
<b>Notes</b> Minimum public use. <b>Actions</b> <ul style="list-style-type: none"> <li>• Consider pre-emptive capture of New Zealand dotterels</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Shoreline clean-up – the spit with birds removed is a good location for shoreline clean-up and removal of repeated oiling will assist in the reduction of free oil in Tauranga Harbour (see STM for Sandy Beaches Shoreline Clean-up)</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Boat access to island, foot access to spit from Matakana Island.		

**Preferred Response Option Matrix**

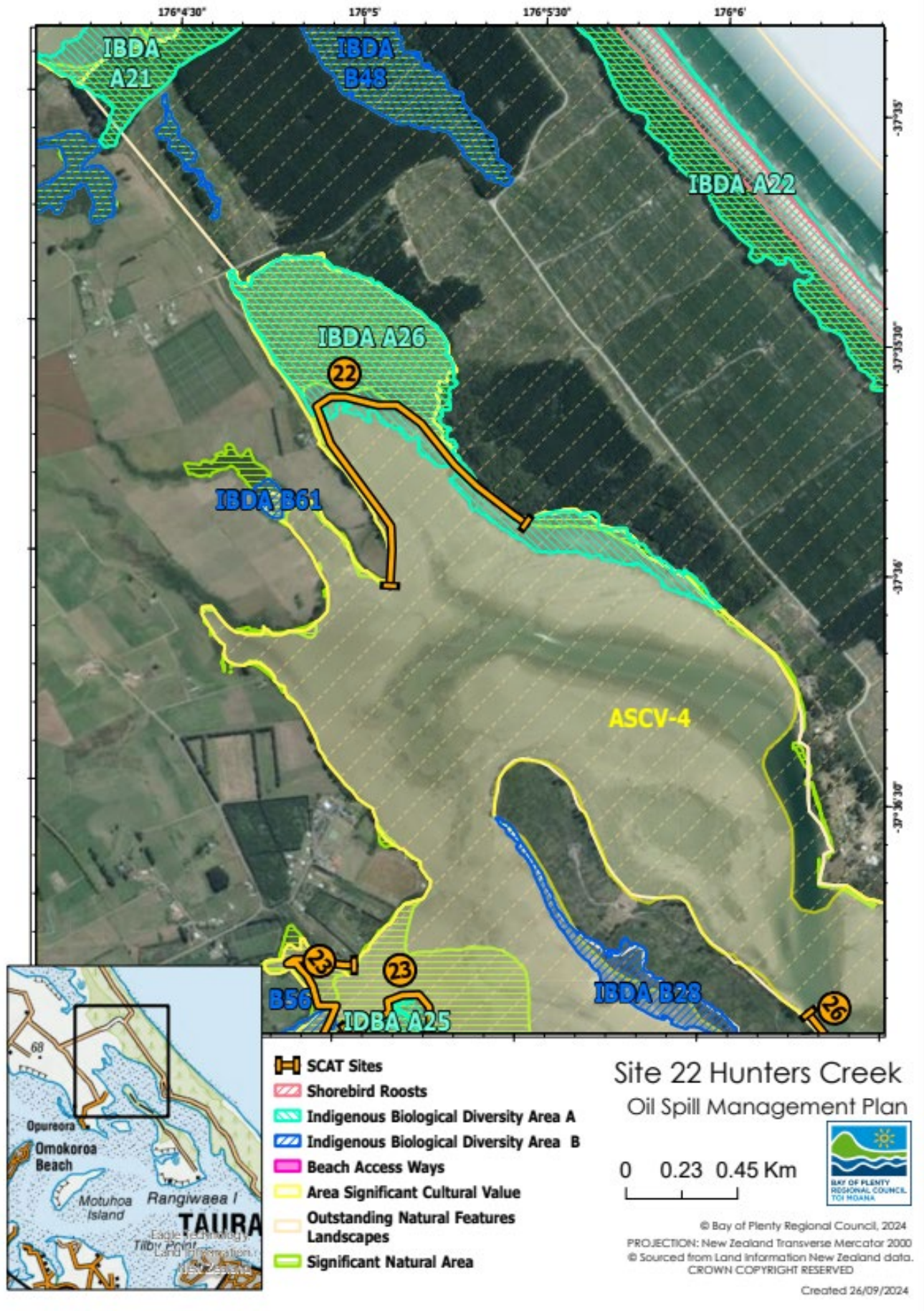
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Medium		Moderate tidal flow - possible
On water Recovery	High		Possible with ORV or similar system
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Good option, access by boats
Natural Recovery	Medium		Ongoing monitoring after initial clean



Site 22	Hunters Creek	Risk ranking: 1
<b>DESCRIPTION</b>		
Saltmarsh and mangrove edge, upper end Hunters Creek, shallow intertidal flats, low energy tidal movement.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A26, B61	
Map sheets	NZ Topo 50 BD36 Lower Kaimai	Chart Number NZ 541
Segments	TAU-00990	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>Wetland birds: fernbird (mātātā), banded rail (kataitai), pūkeko, australasian bittern (matuku hūrepo)</li> <li>Cultural site/values: Kaimoana collection, mahinga kai, flounder (pātiki)</li> <li>Culturally important fishing area</li> </ul>		
<b>Notes</b>		
Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal and sand flats habitat.		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>This area is a high priority for ongoing beach clean-up</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b>		
Vehicle and foot access off Hume Highway, Matakana Island.		

### Preferred Response Option Matrix

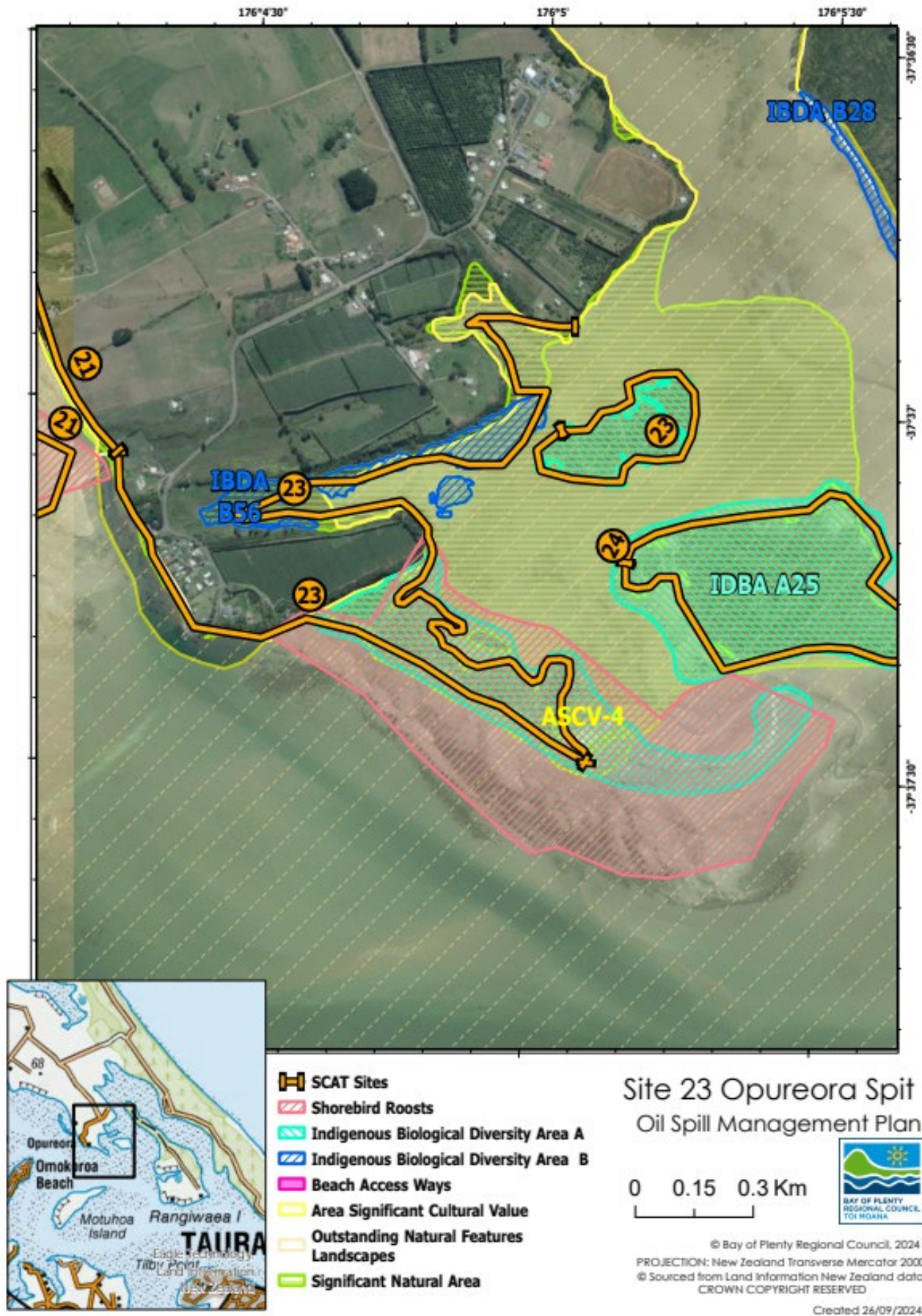
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection and containment booms possible
On water Recovery	High		Shallow and tidal, possible at entrance of creek
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Depth won't allow
Shoreline Clean-up	High		Good beach access
Natural Recovery	Medium		Ongoing monitoring



Site 23	Opureora Spit		Risk ranking: 1
<p><b>DESCRIPTION</b> Sand spit, saltmarsh and jointed rush, surrounded by intertidal sand flats.</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangroves, seagrass Sand spit All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A25 and B56</p>		
<p>Map sheets</p>	<p>NZ Topo 50 BD36 Lower Kaimai</p>	<p>Chart Number NZ 541</p>	
<p>Segments</p>	<p>TAU-00910 to TAU-000950</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Wading birds nesting and roosting site, including: variable oystercatcher (tōrea pango), godwit (kuaka), knots, white-faced heron (matuku-moana), New Zealand dotterel (tuturiwhatu), fern bird (mātātā), marsh crake (koitareke), spotless crake (pūweto), Caspian tern (taranui), pied oystercatcher (tōrea), spotless crake (pūweto).</li> <li>• Opureora is a principal shorebird roost site.</li> <li>• Mangroves</li> <li>• Jointed rush</li> <li>• Saltmarsh</li> <li>• Mud/sand flats</li> <li>• Fish habitat including: flounder (patiki)</li> <li>• Cultural resources: Mahinga kai</li> </ul>			
<p><b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Consider collection and recovery on sandy areas</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>			
<p><b>Access</b> On Matakana Island, access from Opureora boat ramp, walk east around harbour edge.</p>			

**Preferred Response Option Matrix**

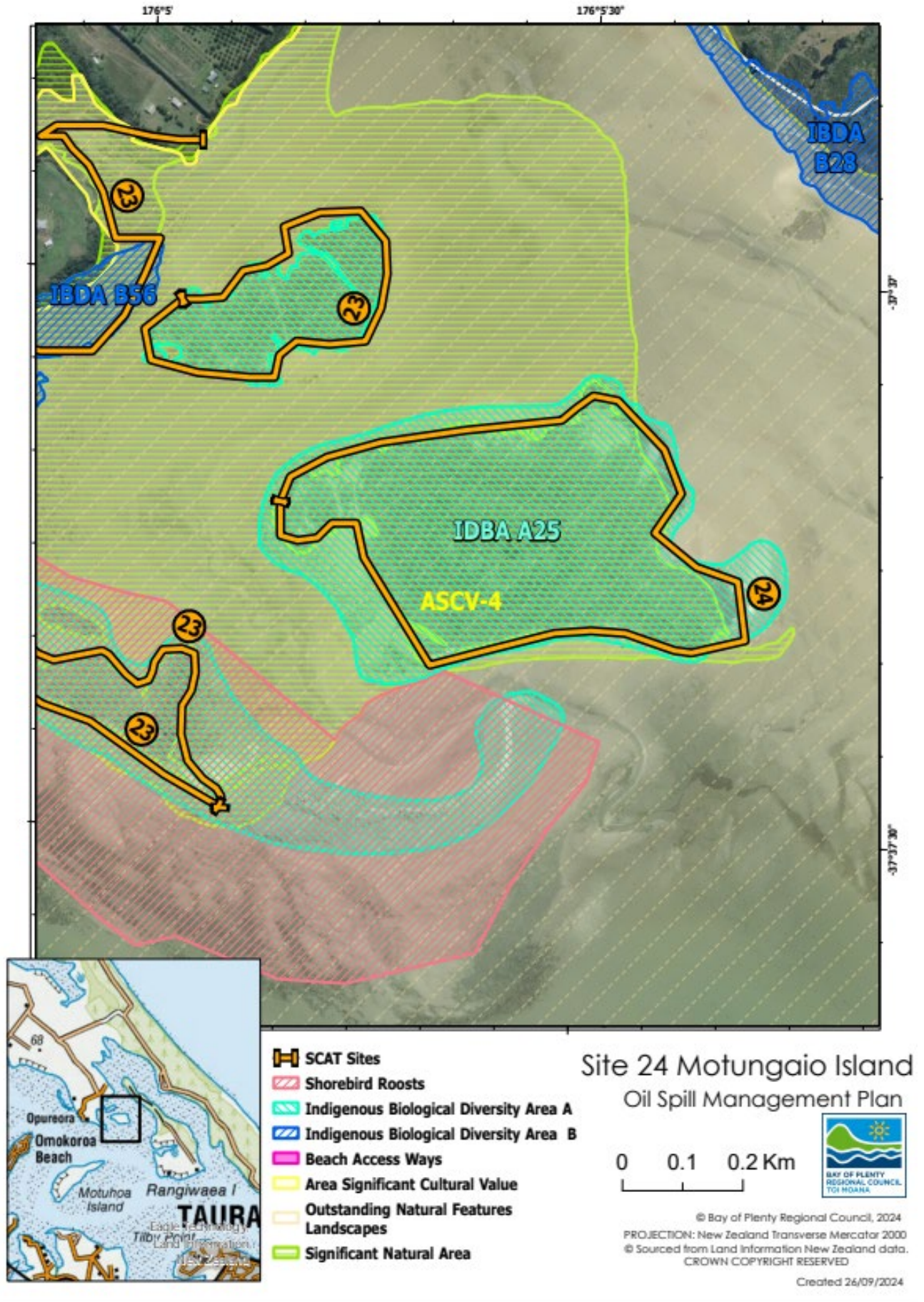
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Use natural collection points
On water Recovery	High		Shallow water
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow water
Shoreline Clean-up	Medium		Good
Natural Recovery	Medium		Ongoing monitoring



Site 24	Motungaio Island	Risk ranking: 3
<b>DESCRIPTION</b> Motungaio Island is a 20 ha island that is exposed at low tide within the Tauranga Harbour. It is located between Omokoroa and the southern end of Matakana Island. Motungaio is a good example of a vegetation sequence grading from saltmarsh to manuka scrub and forest.		
<b>Foreshore type/environmental value</b>	Sandy, muddy shores, riparian vegetation Habitat, shoreline, contact All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value Indigenous Biological Diversity Area A25	
<b>Map sheets</b>	<b>NZMS 260 Series</b> BD 36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00930</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>variable oystercatcher (tōrea pango), godwit (kuaka), knots, white-faced heron (matuku-moana), New Zealand dotterel (tuturiwhatu), fern bird (mātātā), marsh crake (koitareke), spotless crake (pūweto), Canada goose (kuihi), pied oystercatcher (tōrea), spotless crake (pūweto) Cultural Values: Mahinga kai, site of significance, flounder (pātiki)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> <ul style="list-style-type: none"> <li>Via boat at high tide</li> <li>Via foot from Opureroa on Matakana Island at low tide</li> </ul>		

**Preferred Response Option Matrix**

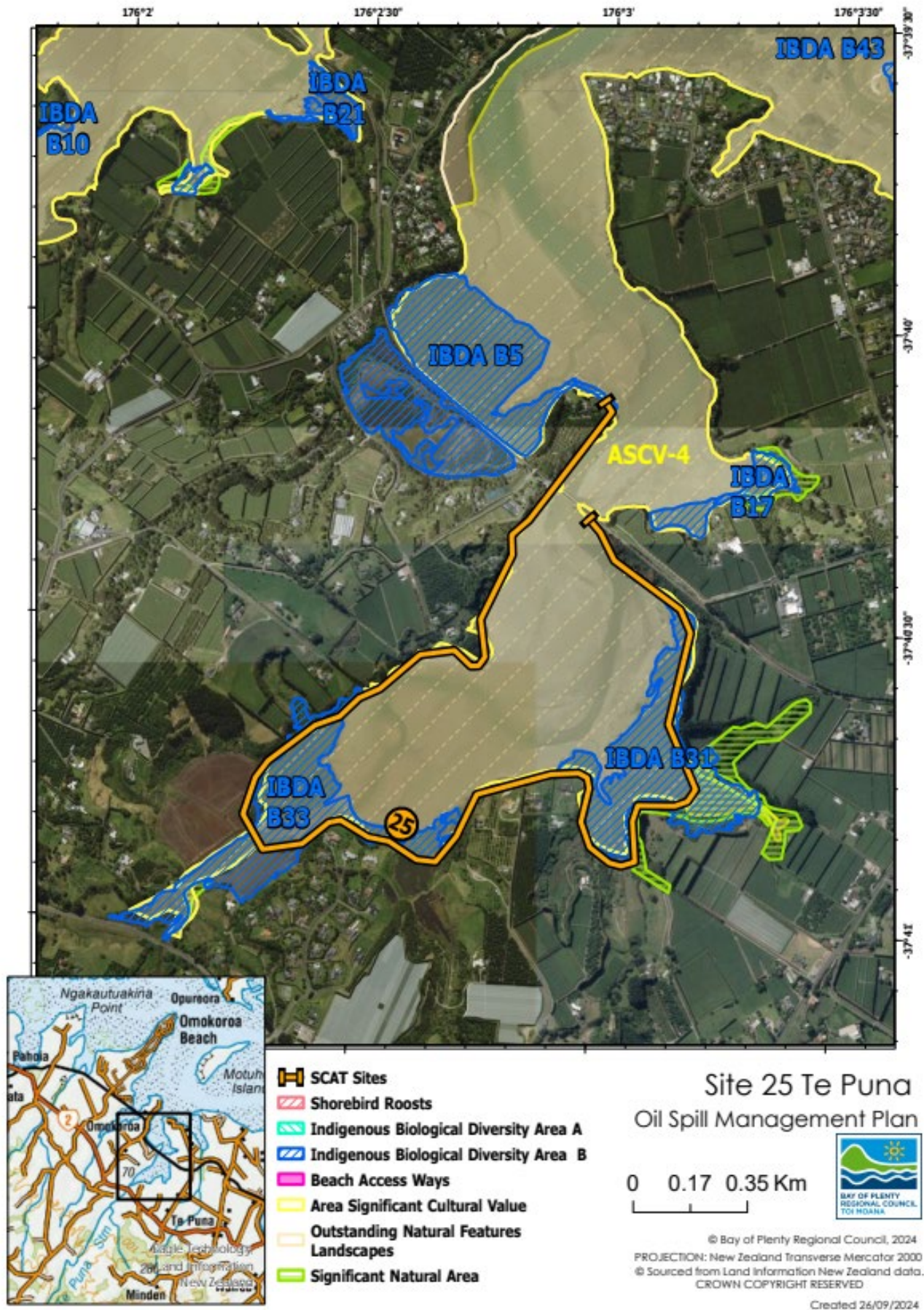
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Unlikely to work due to tidal movements
On water Recovery	High		Possible with ORV or similar
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Only possible at low tide
Natural Recovery	High		This area covers and uncovers with the tide.



Site 25	Te Puna		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Saltmarsh with strip of mangrove on harbour side, the manuka forest on the landward site is a good quality example of manuka forest. The intertidal shoreline is exposed from mid-tide.</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangroves. All shore segments have “habitat value”</p> <p>All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4)</p> <p>Indigenous Biological Diversity Area B33 and B31</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD36 Lower Kaimai</p>	<p><b>Chart Number</b></p> <p>NZ 541</p>	
<p><b>Segments</b></p>	<p><b>TAU-00390</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Bird species present include: banded rail (kataitai), fern bird (mātātā), New Zealand dotterel (tuturiwhatu)</li> <li>• Jess Road wildlife management reserve, saltmarsh</li> <li>• Te Puna stream is a pathway for migratory freshwater fish</li> <li>• Cultural resources: Pa sites</li> </ul> <div data-bbox="564 1025 1007 1368" data-label="Image"> </div>			
<p><b>Notes</b></p> <p>Where possible, oil should be prevented from entering the Tauranga Harbour</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> </ul>			
<p><b>Access</b></p> <p>Vehicle/foot access via Snodgrass Road or Jess Road. Note extremely deep mud in places.</p>			

**Preferred Response Option Matrix**

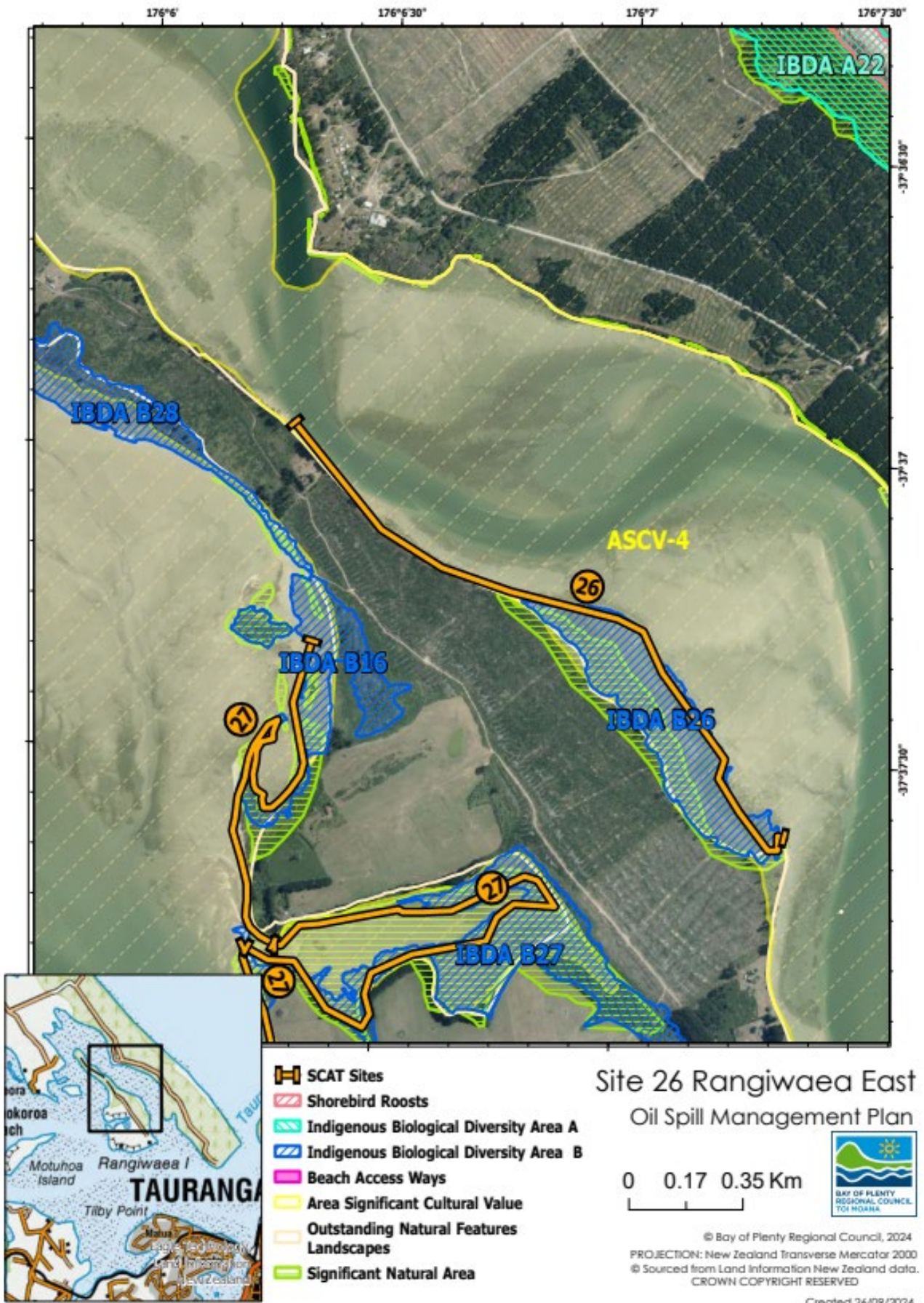
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booming at railway bridge possible
On water Recovery	Medium		Only possible at railway bridge if booming successful
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Low		Refer NEBA
Natural Recovery	Low		Cultural significance



Site 26	Rangiwaea East	Risk ranking: 2
<b>DESCRIPTION</b> Saltmarsh with mangrove edge, long narrow strip eastern side of Rangiwaea Island within Hunters Creek. Moderate energy tidal flows. Intertidal exposed below mid-tide.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B26	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD36 Lower Kaimai	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-001020</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Fern bird (mātātā), banded rail (kataitai), godwit (kuaka), knots (huahou), oystercatcher (tōrea)</li> <li>• Cultural resources: mahinga kai, crab fisheries (papaka), kanai (mullet), tuangi (cockle)</li> <li>• Boat access critical for islanders</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> <ul style="list-style-type: none"> <li>• Vehicle/Foot access via Jetty on Rangiwaea Island</li> <li>• Boat access up Hunters Creek</li> </ul>		

**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



Site 27	Rangiwaea West Estuary		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Saltmarsh and mangrove edge, upper end Hunters Creek, shallow intertidal flats, low energy tidal movement.</p>			
<p><b>Foreshore type/ environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value”</p> <p>All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4)</p> <p>Indigenous Biological Diversity Area B27</p>		
<p>Map sheets</p>	<p>NZ Topo 50 BD36 Lower Kaimai BD37 Tauranga</p>	<p>Chart Number NZ 541</p>	
<p>Segments</p>	<p>TAU-01070, TAU-01060, TAU-01050</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• North Island fern bird (mātātā), pukeko, white-faced heron (matuku moana), banded rail (kataitai), marsh crake (koitareke), herons, New Zealand dotterel (tuturiwhatu)</li> <li>• Breeding site of northern New Zealand dotterel (tuturiwhatu)</li> <li>• Foreshore vegetation</li> <li>• Saltmarsh and mangrove</li> <li>• Cultural sites: Mahinga kai, kaimoana</li> </ul>			
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Oil that enters the low energy systems of this estuary will remain for some time</li> <li>• Oil will harm saltmarsh and habitat and contaminate shorebirds</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Limit the amount of oil entering the estuary by placing protective boom across the entrance, with oil directed to either side for collection</li> <li>• Establish and maintain collection boom/skimming at estuary entrance</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• If protection is not effective for these areas within the estuary, the effort involved in cleaning will be extensive</li> </ul>			
<p><b>Access</b></p> <p>By boat or across private land via boat, access is via a wharf on the eastern end of Rangiwaea Island.</p>			

**Preferred Response Option Matrix**

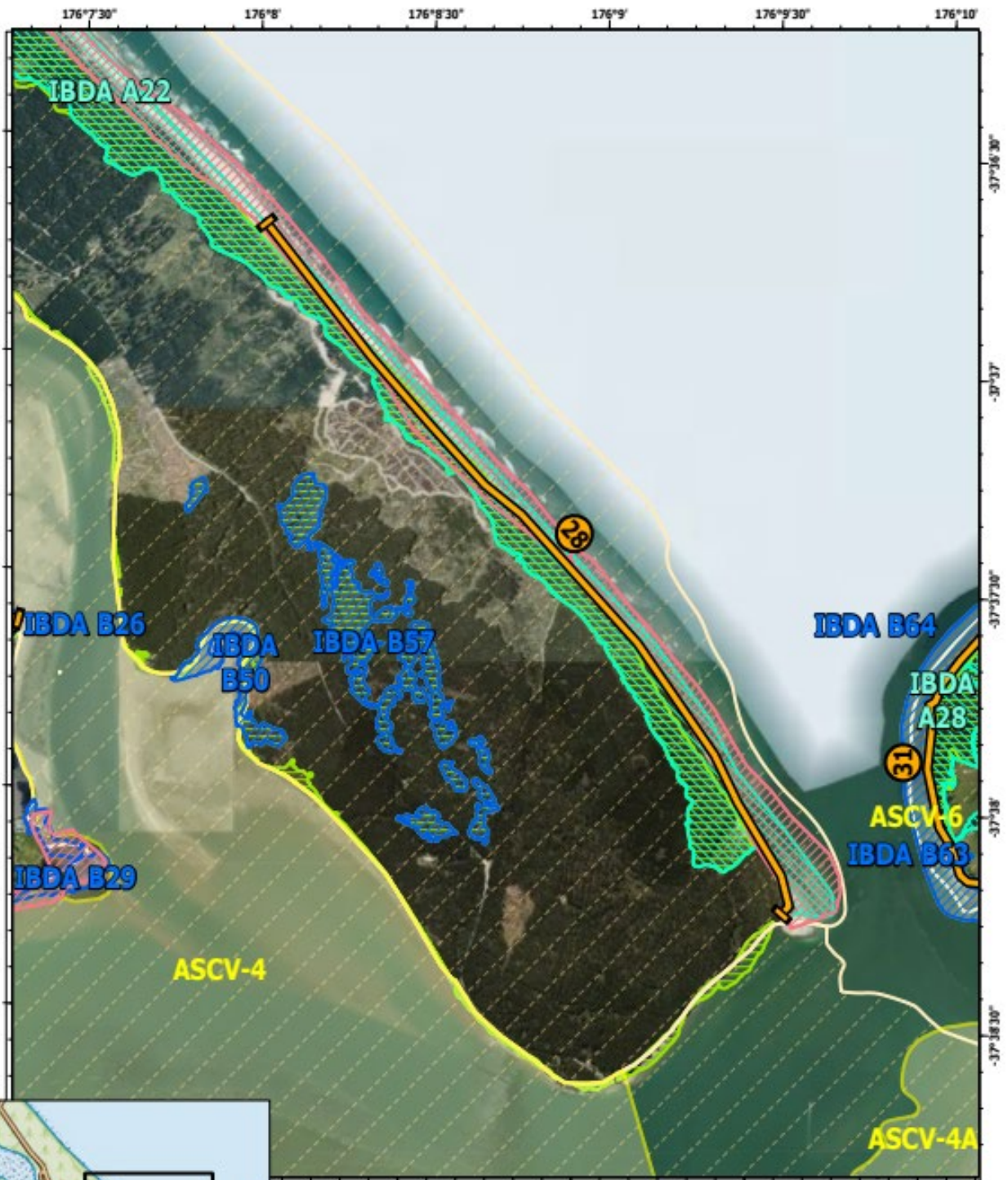
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Some deflection and booming possible
On water Recovery	High		Possible with ORV or similar prior to oil reaching island
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	If water depth allows
Shoreline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



Site 28	Panepane Point	Risk ranking: 1
<b>DESCRIPTION</b>		
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.		
<b>Foreshore type/environmental value</b>	Sandy beach, sandy point All shore segments have “habitat value” Indigenous Biological Diversity Area A22	
<b>Map sheets</b>	TOPO 50 BD37 Tauranga	Chart Number NZ 541
<b>Segments</b>	BOP-00180	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• Second largest breeding colony of New Zealand dotterel (tuturiwhatu) in the Bay of Plenty</li> <li>• Other birds including oystercatcher (tōrea), godwit (kuaka) and knots (huahou)</li> <li>• The seaward coast is a breeding site for variable oystercatcher (tōrea pango)</li> <li>• The sandy beach at Panepane Point is an important roost site for shorebirds</li> <li>• Cultural resources: Sites are highly culturally sensitive (waahi tapu), mahinga kai</li> </ul>		
<b>Notes</b>		
Minimum public use		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>• Consider Pre-emptive capture New Zealand dotterels</li> <li>• No vehicles to access upper intertidal zone</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b>		
<ul style="list-style-type: none"> <li>• Access to Matakana by barge, 15 minute walk or 5 minute 4WD from barge ramp. Access by boat to inner harbour corner if necessary</li> <li>• No vehicle access to intertidal zone within dotterel breeding site</li> <li>• Contact Opureora Marae</li> </ul>		

### 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



-  SCAT Sites
-  Shorebird Roosts
-  Indigenous Biological Diversity Area A
-  Indigenous Biological Diversity Area B
-  Beach Access Ways
-  Area Significant Cultural Value
-  Outstanding Natural Features Landscapes
-  Significant Natural Area

### Site 28 Panepane Point

#### Oil Spill Management Plan

0 0.3 0.6 Km



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Created 26/09/2024

Site 29	Wairoa River	Risk ranking: 1
<p><b>DESCRIPTION</b> Estuarine wetland, some saltmarsh, eastern side, Wairoa Rivermouth. Some drains and willows.</p>		
<p><b>Foreshore type/ environmental value</b></p>	<p>Riverbank, intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A20 and B20</p>	
<p><b>Map sheets</b></p>	<p><b>NEW ZEALAND Topo 50</b> BD36 Lower Kaimai</p>	<p><b>Chart Number</b> NZ 541</p>
<p><b>Segments</b></p>	<p><b>TAU – 00340, TAU - 00350</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• A range of wetland birds, fernbird (mātātā), bittern (matuku hūrepo), spotless crake (pūweto) and marsh crake (koitareke), banded rail (kataitai), white faced heron (kōtuku), a range of ducks and scarp (grey duck), red-billed gulls (akiaki)</li> <li>• Breeding site of New Zealand dotterel (tuturiwhatu)</li> <li>• The sandspit at Oikimoke Point and the shoreline to the south are roosting sites for shorebirds.</li> <li>• One of the highest quality examples of palustrine wetland next to a river in the Tauranga Ecological District.</li> <li>• Margaret Jackson Wildlife Management Reserve, Department of Conservation.</li> <li>• Whitebait (inanga) spawning habitat</li> <li>• Whitebait harvest</li> <li>• Cultural values: <ul style="list-style-type: none"> <li>▪ Site of significance, Waahi Tapu from Hangarau Marae to Oreanui Pa</li> </ul> </li> </ul>		

**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**

- Prevent/minimise oil ingress into this system
- This estuarine wetland fills from the rear and front and additional small areas of inflow along the riverbank. Limit the amount of oil entering and moving through the wetland by placing protective boom/snares across the rear and riverbank 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:
  - 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**

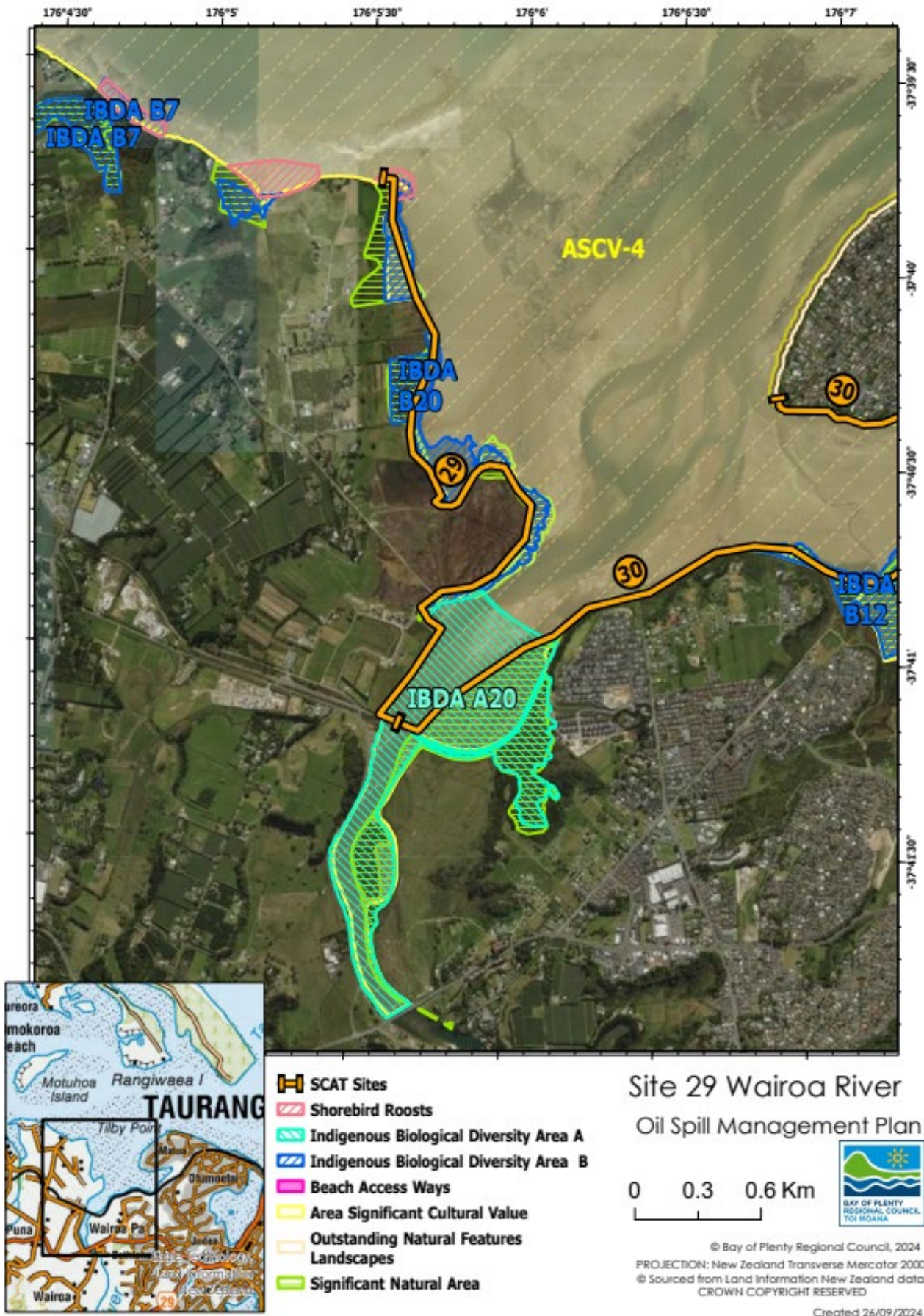
Land access is limited. Current access from Bethlehem Road and walk down railway line.


**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



<b>Site 30</b>	<b>Matua</b>	<b>Risk ranking: 1</b>
<b>DESCRIPTION</b>		
Saltmarsh near Matua in the Tauranga Harbour. Drains run through the system.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B12	
<b>Map sheets</b>	<b>NZ TOPO 50</b> BD37 Tauranga	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00340</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• A range of wetland birds, North Island fernbird (mātātā), transient bittern (matuku hūrepo), spotless crane (pūweto) and marsh crakes (koitareke), banded rail (kataitai), white faced heron (kōtuku)</li> <li>• Estuary habitat</li> <li>• Fish – flounder (patiki)</li> <li>• Oil that enters the low energy systems of this habitat will remain for some time</li> </ul>		
<b>Cultural Resources</b>		
Mahinga kai, waahi tapu from the Hangarau Marae to Oreanui Pa		
		

**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 flowpath 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

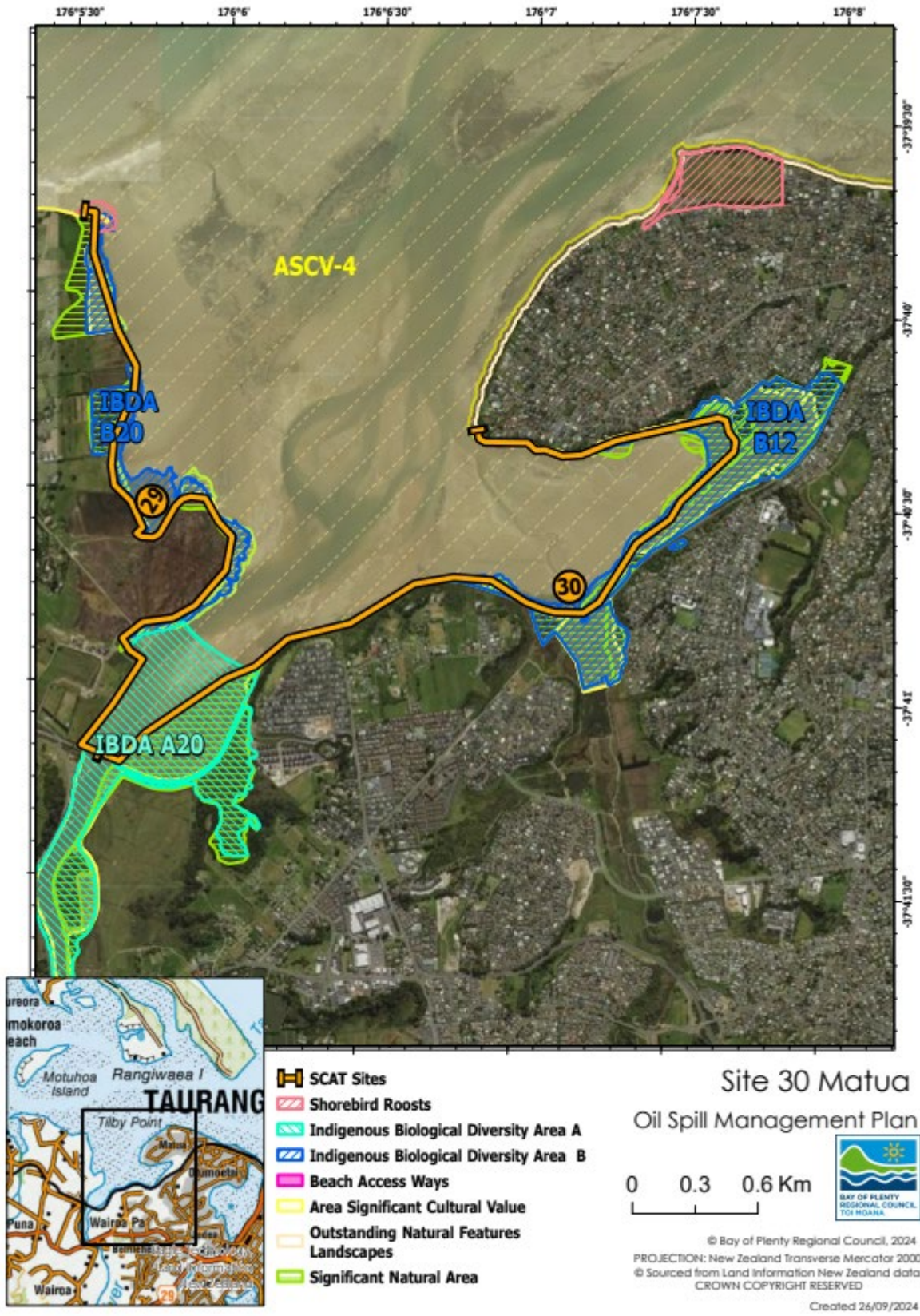
Alternatively, open channels could be boomed with sorbents. These will not stop oil entering mangroves and saltmarshes on edges of the estuary

**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		Ongoing monitoring



Site 31	<b>Mauao - Mount Maunganui</b>	<b>Risk ranking: 1</b>
<p><b>DESCRIPTION</b></p> <p>This site includes the intertidal zone surrounding a volcanic plug forming the south headland of Tauranga Harbour and the Mount Maunganui main beach. It is particularly important to Iwi for seafood collection and culturally.</p>		
<b>Foreshore type/environmental value</b>	<p>Mauao - Intertidal zone with a bedrock platform terrace and extensive boulders with steep terrestrial sediment banks in the Supratidal zone.</p> <p>Shell beaches at the eastern end</p> <p>Mount Maunganui main beach – sand beach</p> <p>Habitat-shoreline, intertidal/food/contact surfaces</p> <p>Indigenous Biological Diversity Area B63, B64 and A28</p>	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD37 Tauranga	<b>Chart Number</b> NZ5412
<b>Segments</b>	<b>BOP 00010+</b>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Site of cultural and spiritual significance to Iwi. This site is included in Te Maunga Mauao Mataitai (local kaimoana management) and is of special cultural significance as a food source</li> <li>• Significant breeding sites for little blue penguins (kororā) (breeding August–March) and grey-faced petrels (ōi) (breeding June–January) and feeding and roosting and nesting for, pied shag (karuhiruhi) (breeding September–February), feeding for reef heron (matuku moana)</li> <li>• Fur seal (kekeno) haul out all around the island</li> <li>• Extensive shellfish gathering</li> <li>• Reefs around the base of Mauao act as a settling area for juvenile crayfish, pāua and kina</li> <li>• Fishing takes place off most points where access is available</li> <li>• The site is a major tourist attraction with a public walkway all the way around the Mount</li> </ul>		
<p><b>Notes and preferred protection and clean-up options</b></p> <ul style="list-style-type: none"> <li>• Oil may be difficult to remove from the shoreline. Oil in rock crevices may be difficult to remove. High probability contact surfaces in the vicinity of known penguin runways and need to be cleaned to a high standard – removal of all oil. A range of techniques should be tested, note that aggressive techniques such as warm high-pressure water may be required. Due to potential impact on other organisms by aggressive techniques should only be used in well-defined high priority areas</li> <li>• Other parts of the Mount should be treated as habitat and oil removed by scraping and wiping (and hand picking on shell beaches) to remove the potential for secondary oiling</li> </ul>		
<p><b>Access</b></p> <p>Nearest boat ramp is Pilot Bay, Tauranga Harbour. Walkways around the mount provide easy access and can be used by light vehicles and ATV. Good road access to main beach.</p>		

**Preferred Response Option Matrix**

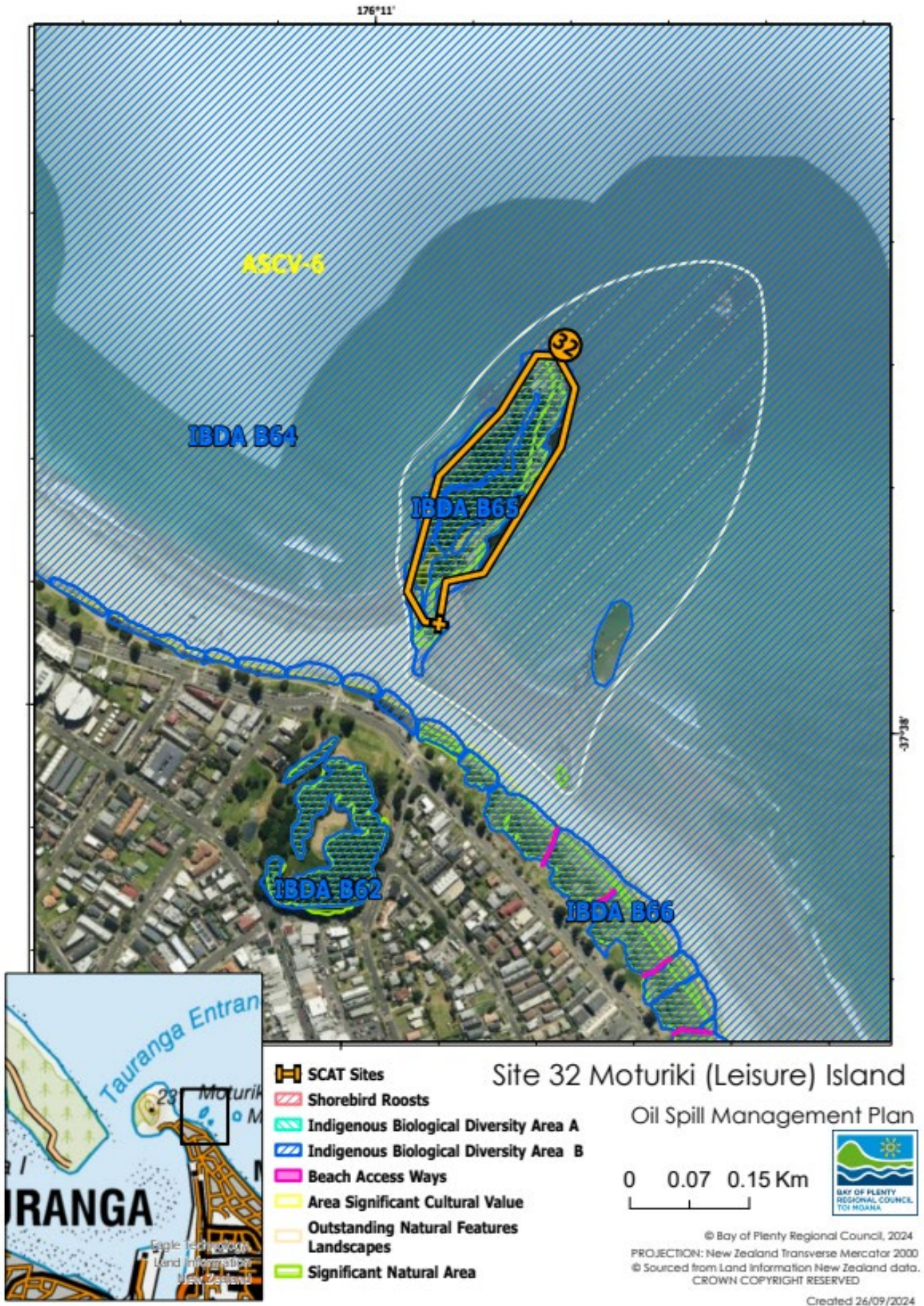
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Not possible in the high flow channel areas
On water Recovery	High		Possible with ORV or similar if conditions suitable
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Refer Dispersant Guidelines
Shoreline Clean-up	High		Penguin runways and all mobile oil, beaches
Natural Recovery	Low	Penguin runways	Inaccessible areas; non-mobile stain areas only



Site 32	Moturiki (Leisure) Island	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Moturiki (Leisure) Island is a 3.1 ha rocky outcrop connected to the east of Mount Maunganui Beach by a short sand spit. It is situated about 500 m from Motuotau (Rabbit) Island. The Island extends seaward with steep large boulder sides, becoming gradually steeper towards the northern end.</p> <p>The prevailing northerly winds expose the seaward end of the island. Reflection of waves from the Mount Maunganui beach on the west side of the island creates more turbulence.</p>		
<p><b>Foreshore type</b></p>	<p>Boulders, rock pools, exposed bedrock and cliffs</p> <p>All shore segments have “habitat value”</p> <p>Indigenous Biological Diversity Area B65</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ541; NZ5411</p>
<p><b>Segments</b></p>	<p><b>BOP-00025</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Little blue penguins (kororā), accessing on rocks</li> <li>• Red-billed gulls (akiaki) - nationally vulnerable</li> <li>• Common diving petrel and storm petrel breeding</li> <li>• Black-backed gull (karoro) - nationally vulnerable</li> <li>• Reefs surrounding the island are important for marine life</li> <li>• Fishing takes place off most points where access is available</li> <li>• Fur seal (kekeno) haul out</li> <li>• Cultural sites/resources: <ul style="list-style-type: none"> <li>▪ Waahi Tapu site covers the island</li> </ul> </li> </ul>		
<p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <p>Via sand spit on foot or boat.</p>		

**Preferred Response Option Matrix**

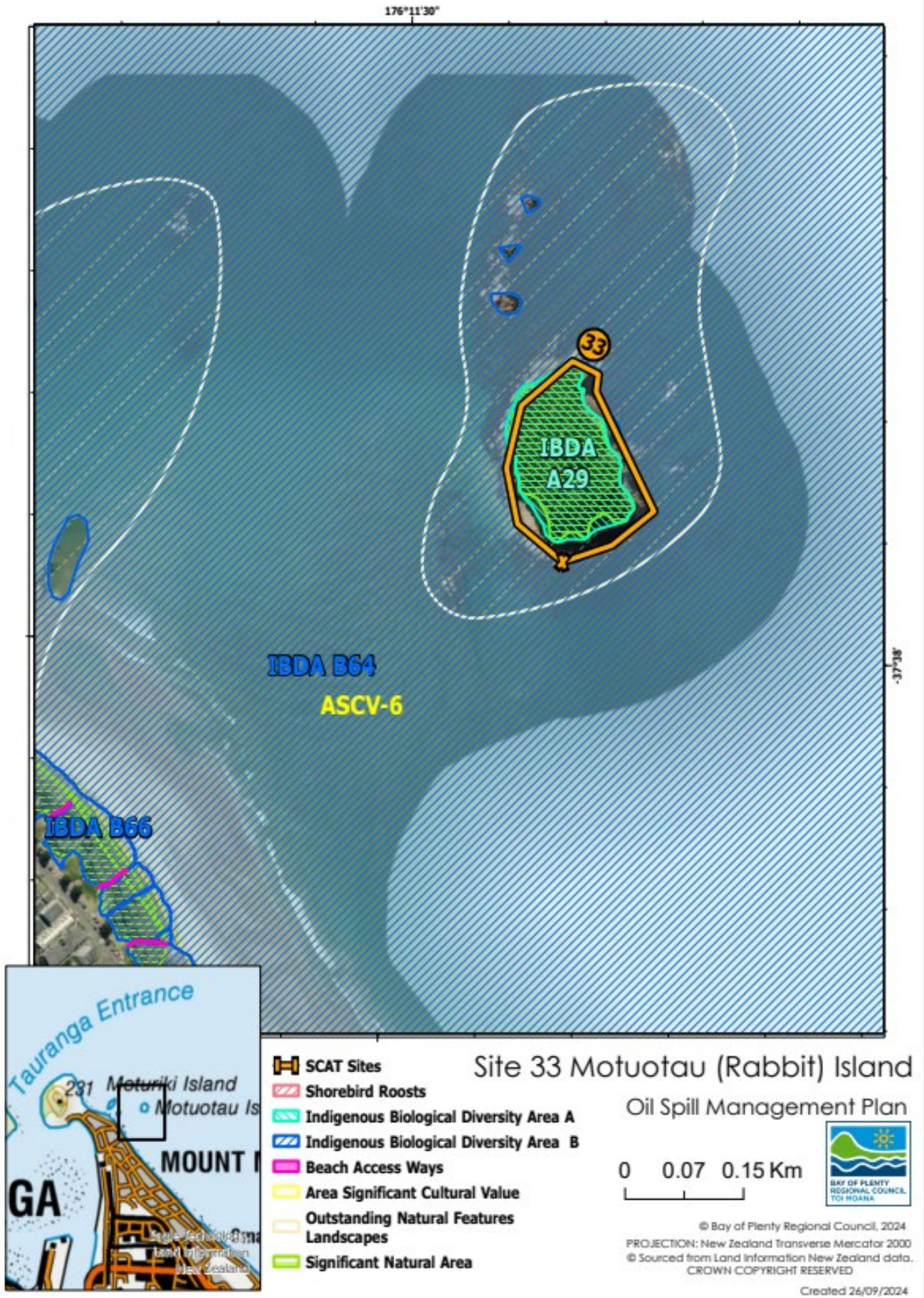
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms if weather allows
On water Recovery	High		ORV or similar vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Off-shore option
Shoreline Clean-up	High		Reasonable access to foreshore, especially penguin areas
Natural Recovery	Medium		Weather may lead to this as an end option



Site 33	Motuotau (Rabbit) Island	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Motuotau (Rabbit) Island is 3.1 ha and is located due west of Mount Maunganui and about 500 m west of Moturiki (Leisure) Island. The island is surrounded by fringing reef outcrops on the northern side and submerged reefs to the east, extending towards Motiti Island. On the northern, seaward end of the island, fringing rock outcrops occur and break the surface in places.</p>		
<p><b>Foreshore type</b></p>	<p>Boulders, rocky outcrops, rock pools, exposed bedrock and cliffs</p> <p>All shore segments have “habitat value”</p> <p>Indigenous Biological Diversity Area A29</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ541; NZ5411</p>
<p><b>Segments</b></p>	<p><b>BOP-00035</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Little blue penguins (kororā) at high density, access via rocky coast</li> <li>• Diving petrels at high density, breeding August-February</li> <li>• Grey-faced petrels (kuaka) (breeding June–January), access via rocky coast</li> <li>• Fluttering shearwater (pakahā)</li> <li>• red-billed gulls (akiaki), reef heron (matuku moana), white-faced storm petrel (takahikare)</li> <li>• Fur seal (kekeno) haul out</li> <li>• Motuotau Scenic Reserve (Department of Conservation)</li> <li>• Reefs surrounding the island are important for marine life</li> <li>• High use recreational fishing area</li> <li>• Cultural sites/resources: <ul style="list-style-type: none"> <li>▪ The entire island is a Waahi Tapu site</li> </ul> </li> </ul>		
<p><b>Notes</b></p> <p>Pest free scenic reserve managed by DOC. Biosecurity protocols prior to landing.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• Boat – small landing beach on south-west corner.</li> <li>• Island has many tern burrows – stick to marked trails, to minimise burrow collapse.</li> </ul>		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming may assist but weather dependent
On water Recovery	High		ORV or similar vessel, weather dependent
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Off-shore possible
Shoreline Clean-up	High		Large portions of the island not accessible
Natural Recovery	Medium		Some areas will require natural recovery



Site 34	Waikareao Estuary	Risk ranking: 1
<b>DESCRIPTION</b> Saltmarsh with extensive boardwalk through the middle, low energy tidal flow.		
<b>Foreshore type</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A16, B14, B41	
<b>Map sheets</b>	<b>NZ Top 50</b> BD37 Tauranga	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00300, TAU-00310</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• A range of wetland birds, fernbird (mātātā), transient bittern (matuku hūrepo), spotless crane (pūweto) and marsh crakes (koitareke), banded rail (kataitai), white faced heron (kōtuku), pūkeko, Caspian tern (taranui), pied stilt (poaka)</li> <li>• Areas at low tide for red-billed gulls (akiaki) and oystercatcher (tōrea)</li> <li>• Pipi bed near Chapel Street bridge</li> <li>• High quality example of palustrine and saline wetlands, including regionally uncommon plant species</li> <li>• Cultural resources: Mahinga kai, burial site on Motuopae Island</li> </ul>		
<b>Notes</b> <ul style="list-style-type: none"> <li>• High public use</li> <li>• Where possible, oil should be prevented from entering the Tauranga Harbour</li> </ul> <b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul> <p><b>Note the following notes re potential protection of the site made close to the time of the grounding of the Rena:</b></p> <ul style="list-style-type: none"> <li>• If Motuopae Island is affected by oil do not attempt to clean, contact Council Iwi Liaison</li> <li>• Investigate setting deflection boom in the vicinity of the Tauranga Underwater Club</li> <li>• Investigate setting corresponding collection boom with collection site on the sand between rail and road bridge, or at closest practical position</li> <li>• If oil accumulates at collection points, establish collection at low tide</li> </ul> <b>Tasks</b> <p>Set two booms using land sea boom, rapid deployment boom or harbor boom, with absorbent booms sections over rip rap</p> <b>Personnel</b> <ul style="list-style-type: none"> <li>• Trained oil spill responders to be deployed from vicinity of Shed 8, Port of Tauranga/equipment</li> <li>• Sorbent boom: eight times 3 m lengths</li> </ul>		

- Land sea boom one box: 80 m
- Harbour boom: four boxes (includes necessary anchors etc)

**Staff**

- Four trained equipment operators

**Vessels for boom deployment**

- Small power-driven vessel required, preferably with shallow water capability
- Skipper of vessel required

**Transport**

- Necessary for equipment handlers

**Access**

- Boardwalk and walking tracks, vehicle access from Pillans Point
- Note that access safety is an issue – if action undertaken, assess for safety plan - deep muddy substrate in estuary
- No access onto island- work around the outside, limit substrate disturbance

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Good access, use booms before rail and road bridges
On water Recovery	High		Good but tidal
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Low		Work with Iwi liaison
Natural Recovery	Medium		Work with Iwi liaison



Site 35	Waimapu –Yatton Park	Risk ranking: 3
<b>DESCRIPTION</b> Saltmarsh with mangrove around the perimeter and cliffs behind. There is a high energy river going through the middle of the site. The river is tidal up to the Oropi Golf Course.		
<b>Foreshore type/environmental value</b>	Riverbank, intertidal sandflats, saltmarsh, mangroves. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area A17 and B42	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD37 Tauranga	<b>Chart Number</b> NZ541
<b>Segments</b>	<b>TAU-00180</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Banded rail (kataitai); north island fern bird (mātātā), red-billed gulls (akiaki), pied stilt (poaka), white fronted tern (tara)</li> <li>High quality example continuous estuarine and palustrine wetlands</li> <li>Flounder (patiki); oysters (tio)</li> <li>Migratory freshwater fish (e.g. inanga)</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour.		
<b>Actions</b> <ul style="list-style-type: none"> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Via Yatton Park/Fraser Street or Windermere Drive, access via the Bay of Plenty Polytechnic. Note deep mud in upper estuary.		

**Preferred Response Option Matrix**

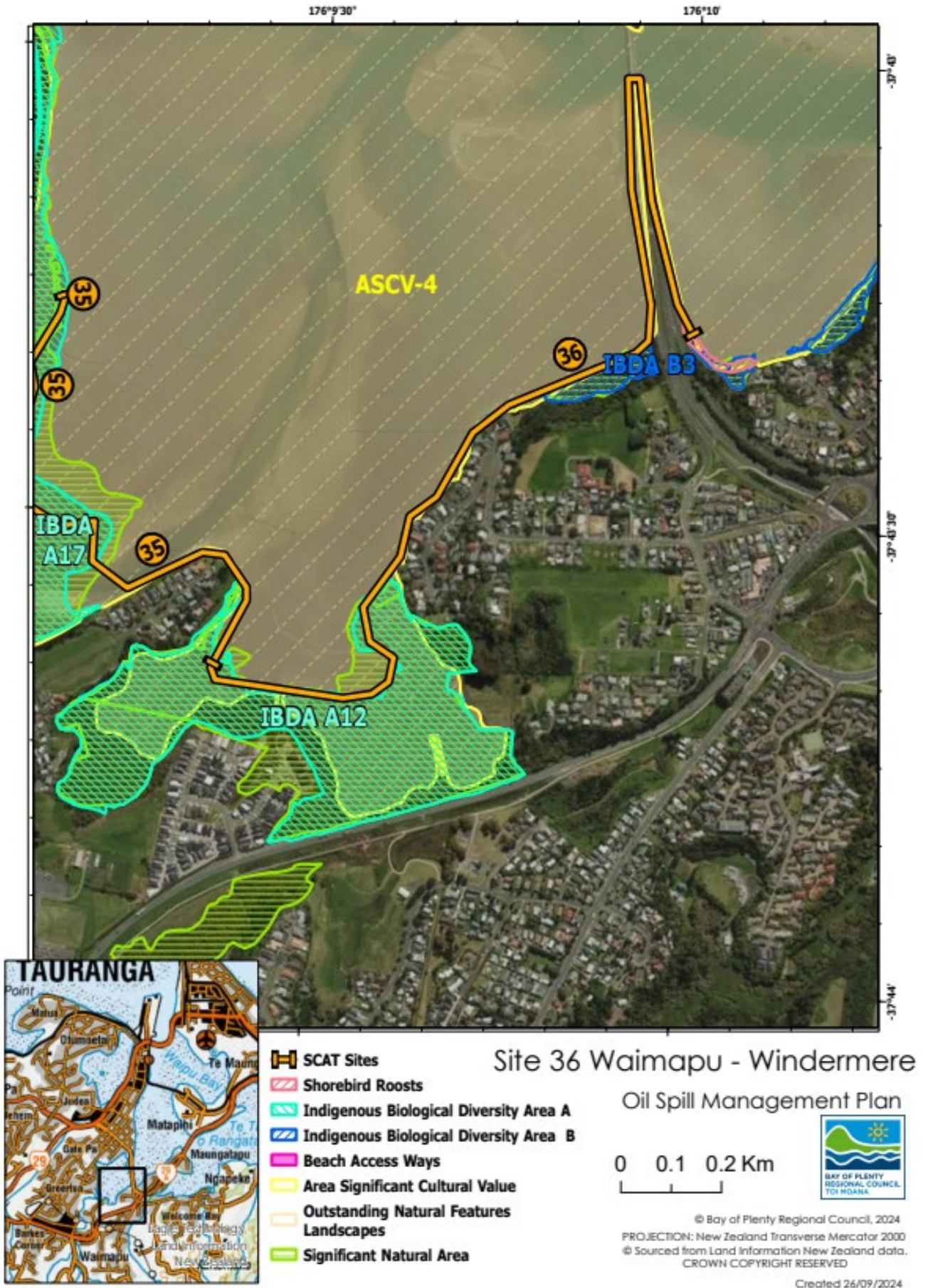
	Most preferred	Least preferred	Feasibility
Containment and Recovery	Medium		Booming of the stream possible, other areas shallow and tidal
On water Recovery	Medium		Shallow water, area dries
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Limited access
Natural Recovery	Medium		Limited public access



Site 36	Waimapu – Windermere	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Saltmarsh with mangrove edge. Grey willow forest with an indigenous understory. Low energy intertidal mudflat.</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangrovesl. Habitat (shoreline), contact</p> <p>All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/cultural value</p> <p>Indigenous Biological Diversity Area A12 and B3</p>	
<p><b>Map sheets</b></p>	<p><b>NZMS 260 Series</b></p> <p>BD 37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ 541</p>
<p><b>Segments</b></p>	<p><b>TAU-00180</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Banded rail (kataitai), North Island fern bird (mātātā), pūkeko, Australasian bittern (matuku hūrepo), white fronted tern (tara), spotless crane (pūweto)</li> <li>• Shoreline is a roosting site for shorebirds</li> <li>• High quality palustrine and estuarine wetlands that support the only known populations in Tauranga Ecological District of two At Risk species</li> <li>• Flounder (pātiki)</li> <li>• Cultural resources: mahinga kai</li> </ul>		
<p><b>Notes</b></p> <p>Where possible, oil should be prevented from entering the Tauranga Harbour</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Booming may be an effective option across the mouth of Waiorohi Stream</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <p>Via SH 29 through Sanctuary Point Motor Camp or via Turret Road through Silver Birch Motor Camp.</p>		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booming possible of the stream, deflection booming near bridge an option
On water Recovery	Medium		Area dries at low tide, muddy
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Limited access
Natural Recovery	Medium		Limited public access



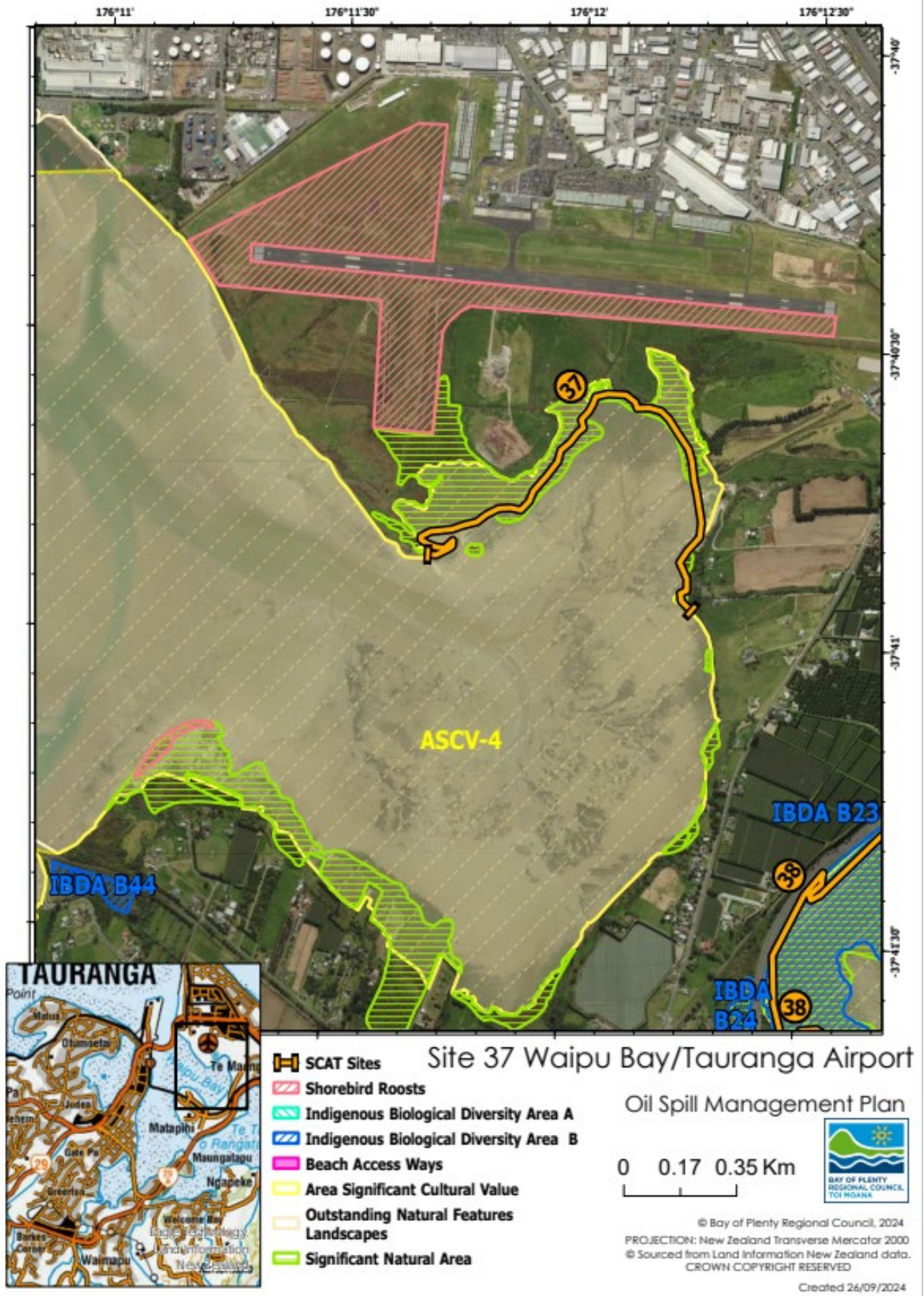
Site 37	Waipu Bay/Tauranga Airport		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Waipu Bay is adjacent to the Tauranga Airport. Habitats include mangroves, saltmarsh and seagrass</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangroves, seagrass All shore segments have “habitat value”</p> <p>All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4)</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ 541</p>	
<p><b>Segments</b></p>	<p><b>TAU-00050</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Birds on site include: banded rail (kataitai), North Island fern bird (mātātā), pukeko, variable oystercatcher (tōrea pango), turnstone, New Zealand dotterel (tuturiwhatu), migratory wader species</li> <li>• Fish include: flounder (patiki), stingray (whai)</li> <li>• Cultural resources: Whareroa Marae and boat ramp, important cockle bed in front of Marae</li> </ul> <div data-bbox="403 958 1110 1469" data-label="Image"> </div>			
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Where possible, oil should be prevented from entering the Tauranga Harbour</li> <li>• Booming possible from the boat ramp to the Tauranga Marina Bridge</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>			

**Access**

- Boat ramp, Whareoroa Marae
- No vehicles to enter tidal zone, foot access along water's edge only
- No access onto Tauranga Airport from the harbour, however the airport emergency service may allow vehicle access around airport perimeter if escorted

**Preferred Response Option Matrix**

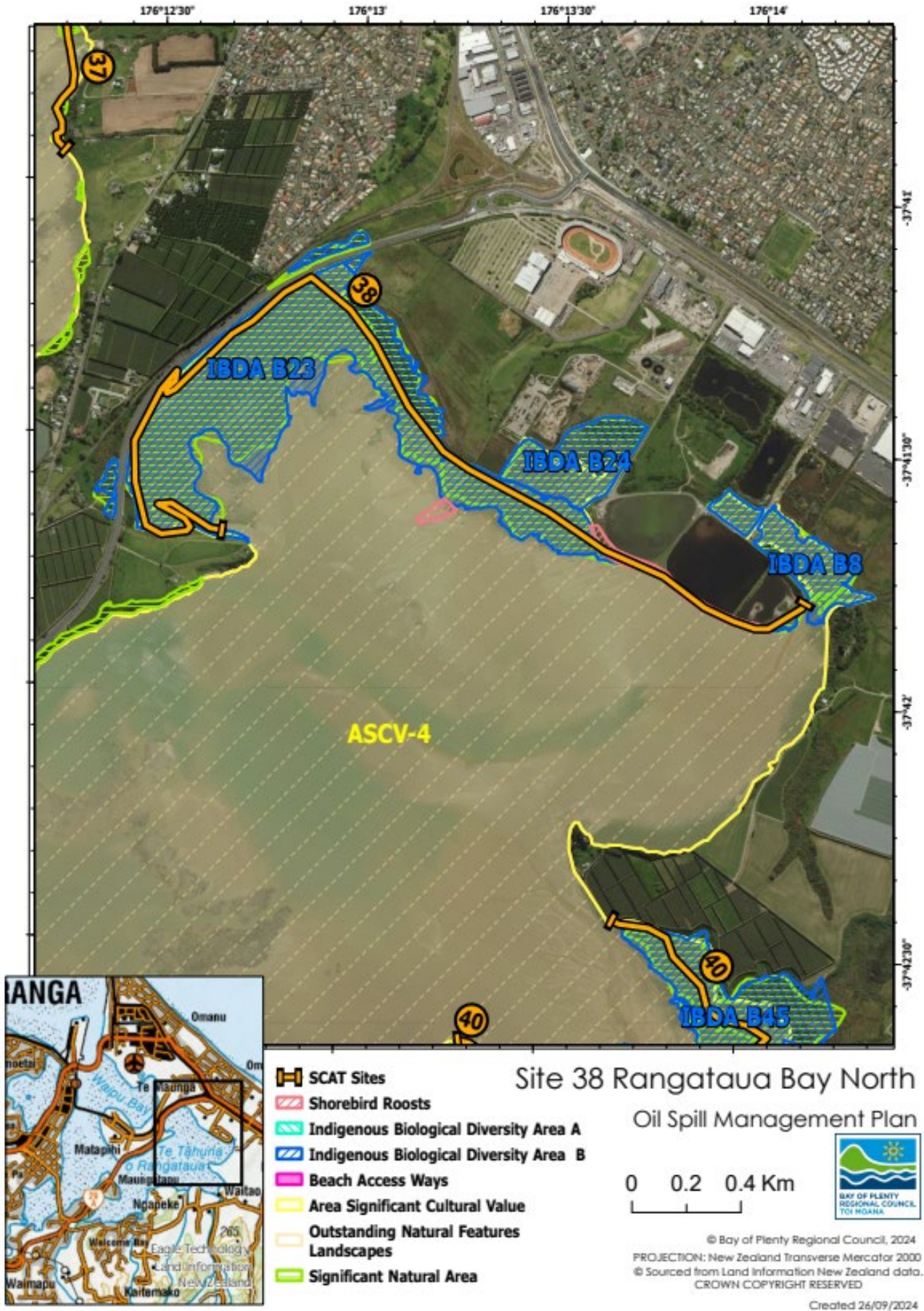
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booming of this area is possible but there are strong tidal flows
On water Recovery	High		Possible prior to entering bay area
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow in the bay area
Shoreline Clean-up	Medium		Sandy beach area at entrance easier to clean
Natural Recovery	Medium		No vehicle access along tidal area



Site 38	Rangataua Bay North	Risk ranking: 2
<b>DESCRIPTION</b>		
From Oruamatua Point north around to sewage treatment station, there is extensive saltmarsh with a mangrove edge and a low energy tidal wetland in behind to Bay Park.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have "habitat value" All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B23, B24, B8.	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD37 Tauranga	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00100</b>	
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>Bird species include: banded rail (kataitai), North Island fern (mātātā), bittern (matuku hūrepo), pūkeko</li> <li>Flounder (patiki), snapper (tamure), black bream (parore), mullet (aua), trevally (araara), pipi, cockle (tuangi)</li> <li>Mouth of Mangatawa Stream may be a migratory pathway for indigenous freshwater fish.</li> </ul>		
<b>Notes</b>		
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		
<b>Actions</b>		
<ul style="list-style-type: none"> <li>Prevent/minimise oil ingress into this system</li> <li>Notify wildlife team of potential for oiling</li> <li>Consider pre-emptive capture of wildlife generally</li> <li>Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b>		
<ul style="list-style-type: none"> <li>Via Tip Lane</li> <li>For safety, do not park on SH 2</li> </ul>		

### Preferred Response Option Matrix

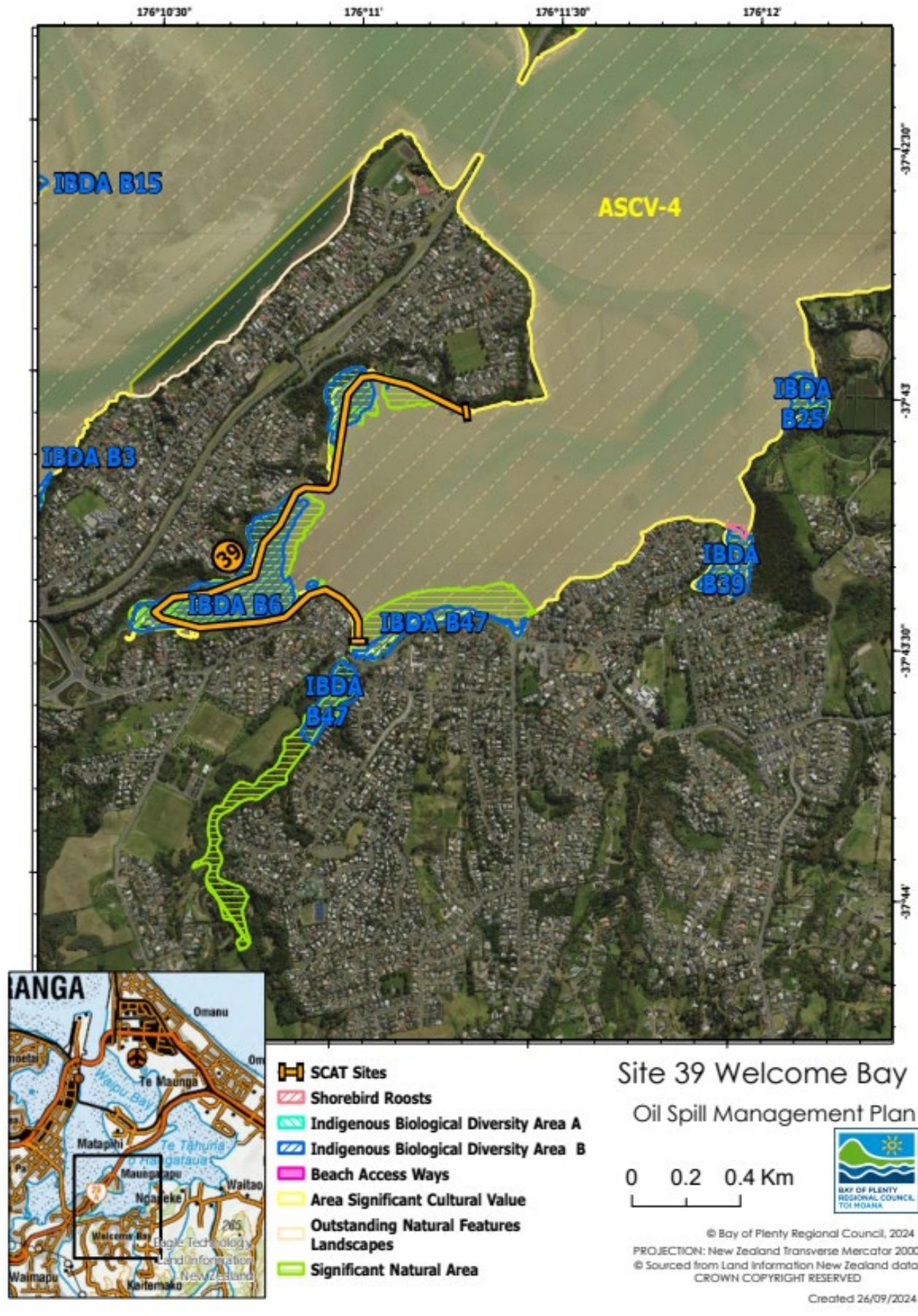
		Least preferred	Feasibility
Containment and Recovery	High		Deflection booming possible but large area
On water Recovery	High		Shallow area with minimal water flow and channelling
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Refer NEBA
Natural Recovery	Medium		Refer NEBA



Site 39	Welcome Bay	Risk ranking: 3
<b>DESCRIPTION</b> Saltmarsh with mangrove edge, surrounded by a good quality example of manuka forest.		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B6, B47	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD37 Tauranga	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00150</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Bird species include: banded rail (kataitai), North Island fern (mātātā), pūkeko</li> <li>• Cultural resource: kaimoana (titiko (mudsnail), patiki (flounder), tuna (inanga)</li> <li>• Kaitemako Stream mouth is a migratory pathway for freshwater fish</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Access via Welcome Bay Road and on foot.		

**Preferred Response Option Matrix**

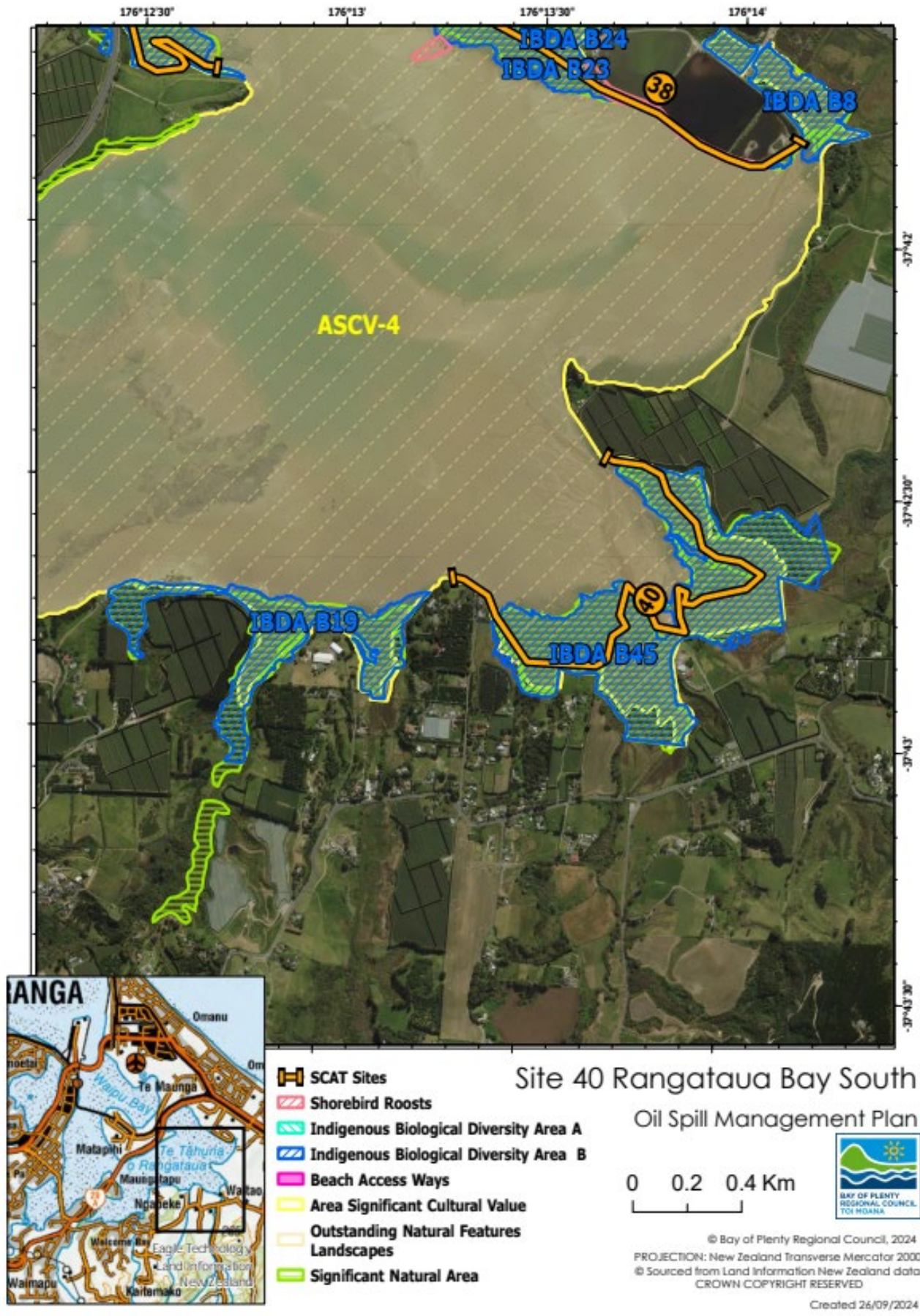
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming possible but large area
On water Recovery	High		Shallow area with minimal water flow and channelling
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Refer NEBA
Natural Recovery	Medium		Refer NEBA



Site 40	Rangataua Bay South	Risk ranking: 2
<b>DESCRIPTION</b> Saltmarsh with Mangrove edge and mānuka wetland. Low energy intertidal mudflats		
<b>Foreshore type/environmental value</b>	Intertidal sandflats, saltmarsh, mangroves, seagrass. All shore segments have “habitat value” All intertidal areas in Tauranga Harbour are identified as Areas of Significant Cultural Value (ASCV 4) Indigenous Biological Diversity Area B45 and B19	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD37 Tauranga	<b>Chart Number</b> NZ 541
<b>Segments</b>	<b>TAU-00120</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Bird species include: banded rail (kataitai), North Island fern (mātātā), bittern (matuku hūrepo); pūkeko</li> <li>• Fish include: flounder (patiki), mullet (kanae), crabs (papaka)</li> <li>• Waitao Stream is a migratory pathway for indigenous freshwater fish</li> </ul>		
<b>Notes</b> Where possible, oil should be prevented from entering the Tauranga Harbour		
<b>Actions</b> Prevent/minimise oil ingress into this system		
<b>Access</b> Via Asher Road off Welcome Bay Road.		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming possible but large area
On water Recovery	High		Shallow area with minimal water flow and channelling
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Refer NEBA
Natural Recovery	Medium		Refer NEBA

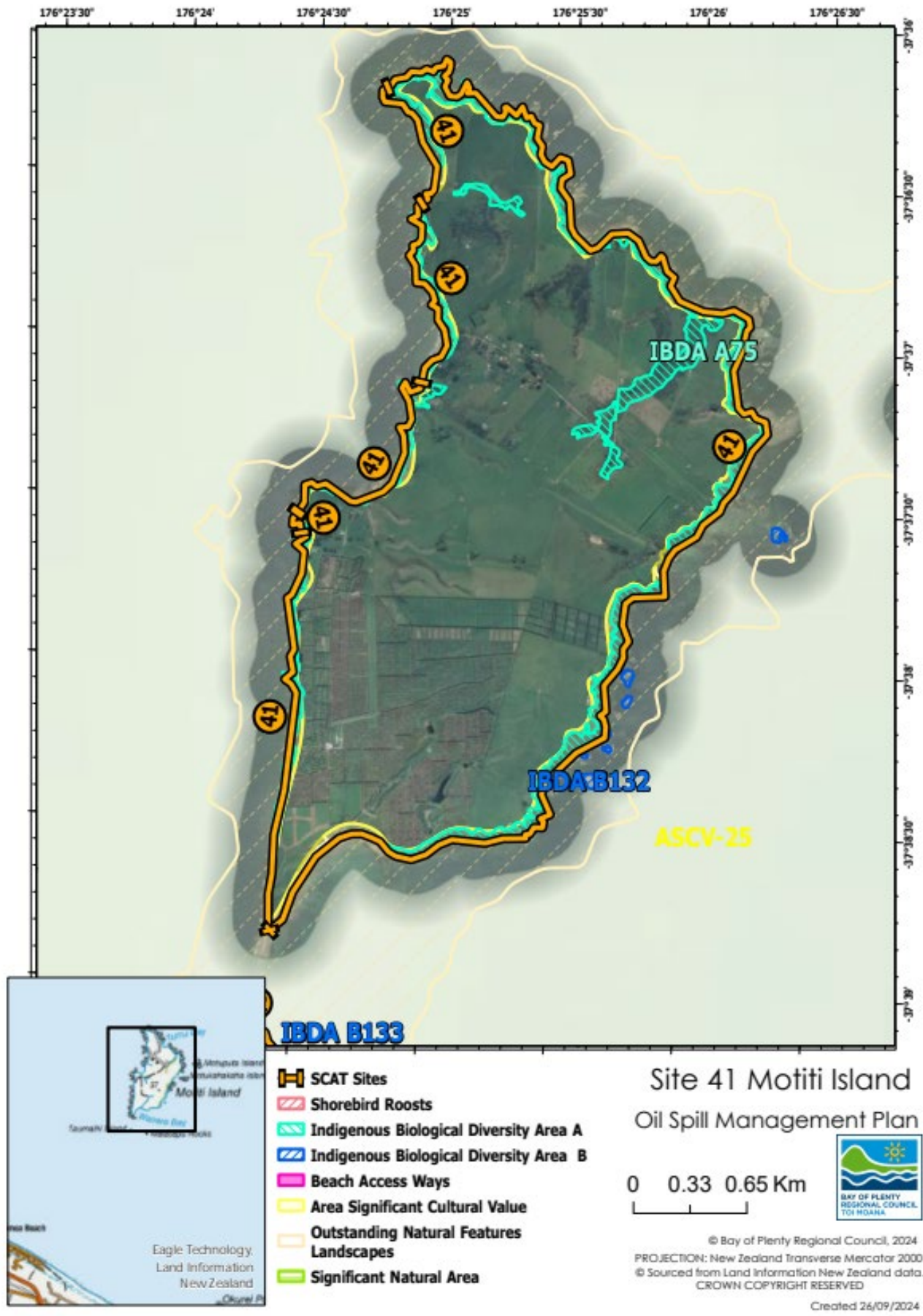


Site 41	Motiti Island		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Motiti Island is privately owned and approximately 10 km offshore of Papamoa Beach. Motiti is a relatively flat island covering approximately 10 km<sup>2</sup>. Motiti Island margin and associated islands, reefs and shoals are an Outstanding Natural Feature and Landscape (ONFL 44). Connects via shallow reefs to Motuputa Island on the northwest, and Taumaihi Island on the southern end of the island.</p>			
<p><b>Foreshore type</b></p>	<p>Primarily vertical and sloping bedrock with occasional sand beaches</p> <p>The relatively protected waters of Wairanaki Bay on the north-western tip of the island have a popular and prominent sand beach, with other beaches located in Orongatea and Wairere Bays</p> <p>The rest of the foreshore is rocky or cobble with offshore reefs and exposed rocks</p> <p>All shore segments have “habitat value”</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 25)</p> <p>Indigenous Biological Diversity Area A75, A79, B132</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ541; NZ542; NZ5413</p>	
<p><b>Segments</b></p>	<p>MOT-00010;MOT-00020;MOT-00030;MOT-00035;MOT-00040;MOT-00050;MOT-00060;MOT-00070;MOT-00080;MOT-00090;MOT-00100;MOT-00034;MOT-00032;MOT-00105</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Blue penguins (kororā) in rocky burrows and where cobbles and rocks occur on beaches</li> <li>• Red-billed gulls (akiaki)- nationally vulnerable, pied shag (kāruhiruhi) colonies all around coast</li> <li>• Reef herons (matuku-moana), variable oystercatcher (tōrea pango), Caspian tern (taranui), grey face petrel (Ōi) and common diving petrel (kuaka).</li> <li>• Motuputa Rock (Cave Rock) on the north-east corner of the island is recognised as a nesting area for fluttering shearwater (pakahā) (breeding September–February), fleshy footed shearwater (toanui) (breeding November–May) and diving petrels (kuaka)</li> <li>• Fur seals (kekeno), multiple haul-out locations along the west coast</li> <li>• Motukahakaha Rock on the eastern side of the island contains a population of Duvaucel geckos (mokomoko) and is the only known island in the Bay of Plenty containing this species</li> <li>• Abundant kaimoana on almost all rocky reefs (paua, kina, kōura)</li> <li>• The whole island is of historic cultural significance to iwi. The following archaeological sites have been identified along the coast: V14/42, V14/182, V14/43, V14/44, V14/45, V14/46, V14/47, V14/171, V14/48, V14/183, V14/49, V14/50, V14/51, V14/53, V14/54</li> <li>• Silent files</li> </ul>			

<p><b>Notes</b></p> <p>Cellphone coverage available. Landline on island</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>
<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• There are two small airstrips on the island with the main one located on the edge. There is a breakwater and mooring on the south-western side just south of Te Rotoharakeke Point</li> <li>• The rocky shoreline around the island is a navigational hazard</li> </ul>

### Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms may work in some locations but weather will dictate
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Possible off-shore
Shoreline Clean-up	High		Reasonable access to most areas at low tide
Natural Recovery	Medium		High energy coastline may lead to this option



Site 42	Taumaihi Island ('The Knoll')		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Taumaihi Island is a 2.3 ha island and is connected to the southern tip of Motiti Island by a sandbar. It is approximately 21 km north-east of Tauranga and approximately 10 km offshore of Papamoa Beach. Taumaihi Island is triangular in shape with gravel beach on the north-east and southern shores and with sand between rocky outcrops on the north-west shore.</p>			
<p><b>Foreshore type</b></p>	<p>Sand beaches, rocky outcrops, rock pools</p> <p>All shore segments have "habitat value"</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 25)</p> <p>Indigenous Biological Diversity Area B133</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD37 Tauranga</p>	<p><b>Chart Number</b></p> <p>NZ541; NZ542; NZ5413</p>	
<p><b>Segments</b></p>	<p><b>MOT-00110</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Various threatened and at-risk birds species can be found on the shores including: Little blue penguins (kororā), variable oyster catcher (tōrea pango), and red-billed gull (akiaki) colony – all breeding</li> <li>• New Zealand fur seal haul (kekeno) out area</li> <li>• Threatened coastal plants (<i>Euphorbia glauca</i>) on north-west shore</li> <li>• Kaimoana collection site around island (mainly sub-tidal fishing for kina, paua and kōura)</li> <li>• Large sort skink population in cobbles above mean high water</li> </ul>			
<p><b>Notes</b></p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>			
<p><b>Access</b></p> <p>Boat, or low tide access along natural causeway from Motiti Island</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms may work in some locations but weather will dictate
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Possible off-shore
Shoreline Clean-up	High		Reasonable access to most areas at low tide
Natural Recovery	Medium		High energy coastline may lead to this option



Site 43	Maketu Estuary, beach and spit		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises of a sand spit and large estuary with extensive saltmarsh vegetation and intertidal mudflats, with a branch of the Kaituna (Te Tumu) River entering through twelve control gates at the western end. Maketu Estuary and the barrier sand spit are identified as an Outstanding Natural Feature and Landscape (ONFL 11).</p> <p>Internationally protected migratory shore birds feeding – treaty obligations (JAMBA, CAMBA, ROKAMBA). Meets RAMSAR criteria for internationally significant wetland.</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal flats, open water in channel, foreshore vegetation, saltmarsh, riparian vegetation.</p> <p>Habitat (intertidal/shoreline).</p> <p>All shore segments have “habitat value”.</p> <p>The whole estuary, sandspit and coastal marine area is identified as an area of Significant Cultural Value (ASCV 7)</p> <p>Indigenous Biological Diversity Area A35, A32, A36, A33, B67, B68, B66</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD 38 Maketu</p>	<p><b>Chart Number</b></p> <p>NZ 541</p>	
<p><b>Segments</b></p>	<p><b>BOP 122, 123, 330, 340, 300, 350, 360, 370, 160, 1470, 1460</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Maketu Estuary is an important feeding and roosting area for migratory birds and waders of both national and international importance, including New Zealand dotterel (tuturiwhatu), NZ Fairy tern (tara iti)</li> <li>• The spit is a recreation reserve with New Zealand dotterels nesting on the tip</li> <li>• Greatest diversity of shorebirds in the Bay of Plenty. Few thousand birds</li> <li>• Large diversity of birds including at risk and threatened species, e.g.: New Zealand dotterel (tuturiwhatu), caspian tern (taranui), wrybill (ngutuparore), banded rail (kataitai), fern bird (kareni), bittern (matuku hūrepo), spotless crane (pūweto), white heron (kōtuku), banded dotterel (tuturiwhatu), Red-billed gulls (akiaki), white fronted tern (tara), black shag (māpunga), New Zealand dabchick (weweia), variable oystercatcher (tōrea pango), grey duck (pāpera), reef heron (matuku moana), New Zealand pipits (pīhoihoi), pied stilt (poaka), marsh crane (koitareke), little black shag (kawau tūi), little egret, New Zealand Fairy tern (tara iti), pied oystercatcher (tōrea), Little blue penguins (kororā). There is also a known royal spoonbill (kōtuku ngutupapa) population of 50.</li> <li>• Maketū spit hosts the Katipō spider</li> <li>• Kaimoana: fishery and shellfish gathering (pipi, tuangi, tītiko)</li> <li>• A suite of freshwater fish use Maketu Estuary as a migratory route and/or parts of their life cycle.</li> <li>• Cultural sites: taia pure and is of special cultural significance as a food source. Marae on shore</li> <li>• Arawa Wetland is of cultural significance, is a known burial site, and contains archaeological sites NZAA V14/21 (mission site) and NZAA V14/38 (dwelling site)</li> </ul>			
<p><b>Notes</b></p> <p>Kaituna River exits to the sea through a cut; a controlled flow enters the Maketū Estuary through control/sluice gates that can be closed to isolate the river from the estuary. Significant tidal inflow is expected with spring tides with increased likelihood of oil entry to the Maketu Estuary. Discuss options with Rivers and Drainage.</p> <p>Oil that enters the low energy systems of Maketu Estuary will remain for some time. Oil will harm saltmarsh habitat, biodiversity in intertidal flats and whitebait spawning areas in the estuary.</p> <p>Maketu Spit (WBORDC Reserve) is managed by local care group. This is currently Maketū</p>			

Ongatoro Wetlands Group on 07 5332040.

#### Actions

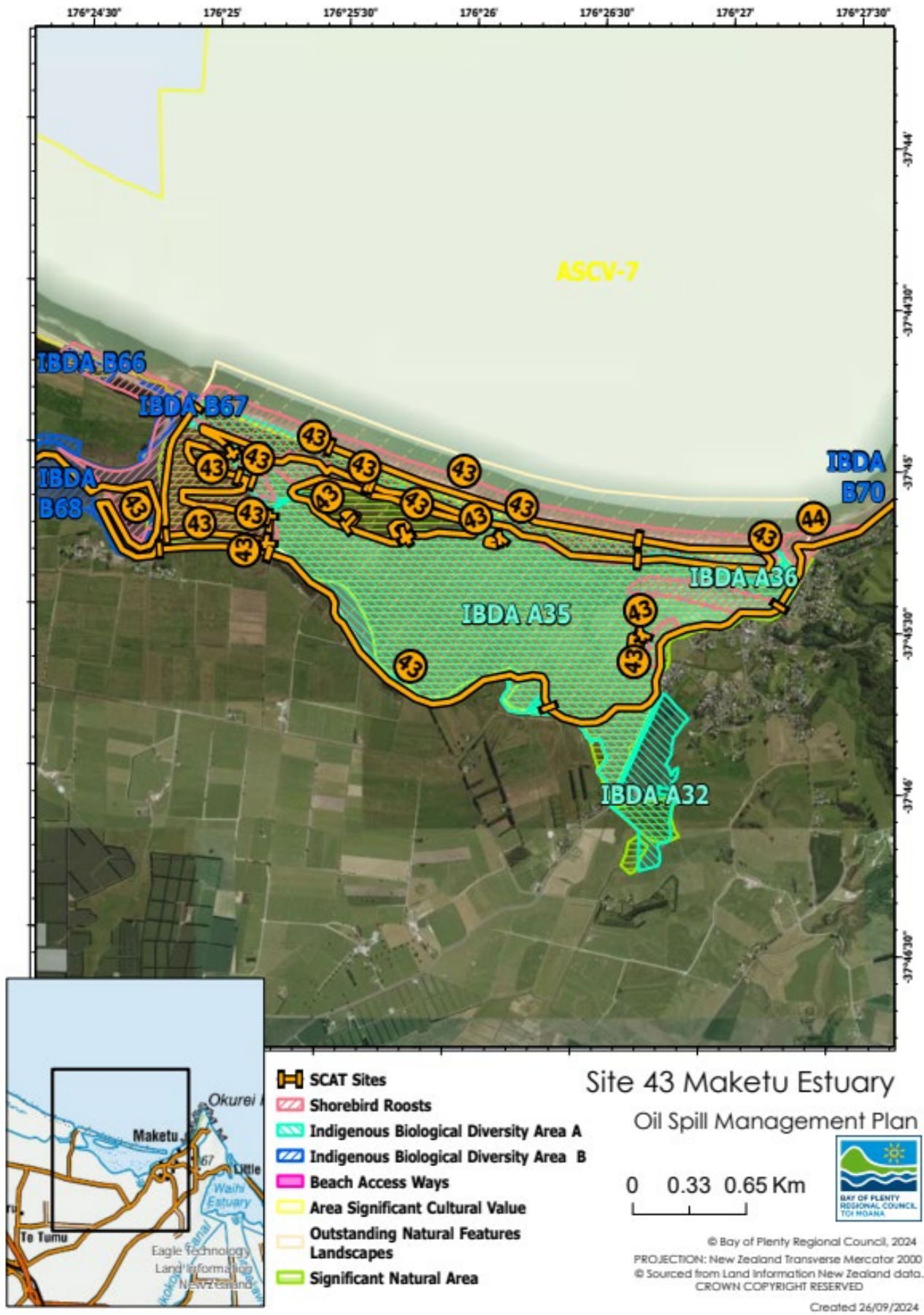
- Prevent/minimise oil ingress into this system
- Establish collection and recovery on sandy areas of the estuary mouth
- Pre-emptive closure of the Kaituna River gates (contact BOPRC Flood Manager, Rivers & Drainage Operations Manager or Area Engineer on 0800 844 880 – minimum of 30 minutes notice)
- If oil enters low energy, sensitive areas, clean-up to be assessed by NEBA
- Consider pre-emptive capture of New Zealand dotterels if present
- Notify wildlife team of potential for oiling
- 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 the east side of the entrance is via Maketu. From the west vehicle access along the beach is restricted to 4WD from the mouth of the Kaituna River. There is a boat launching ramp at Maketū.

#### Preferred Response Option Matrix

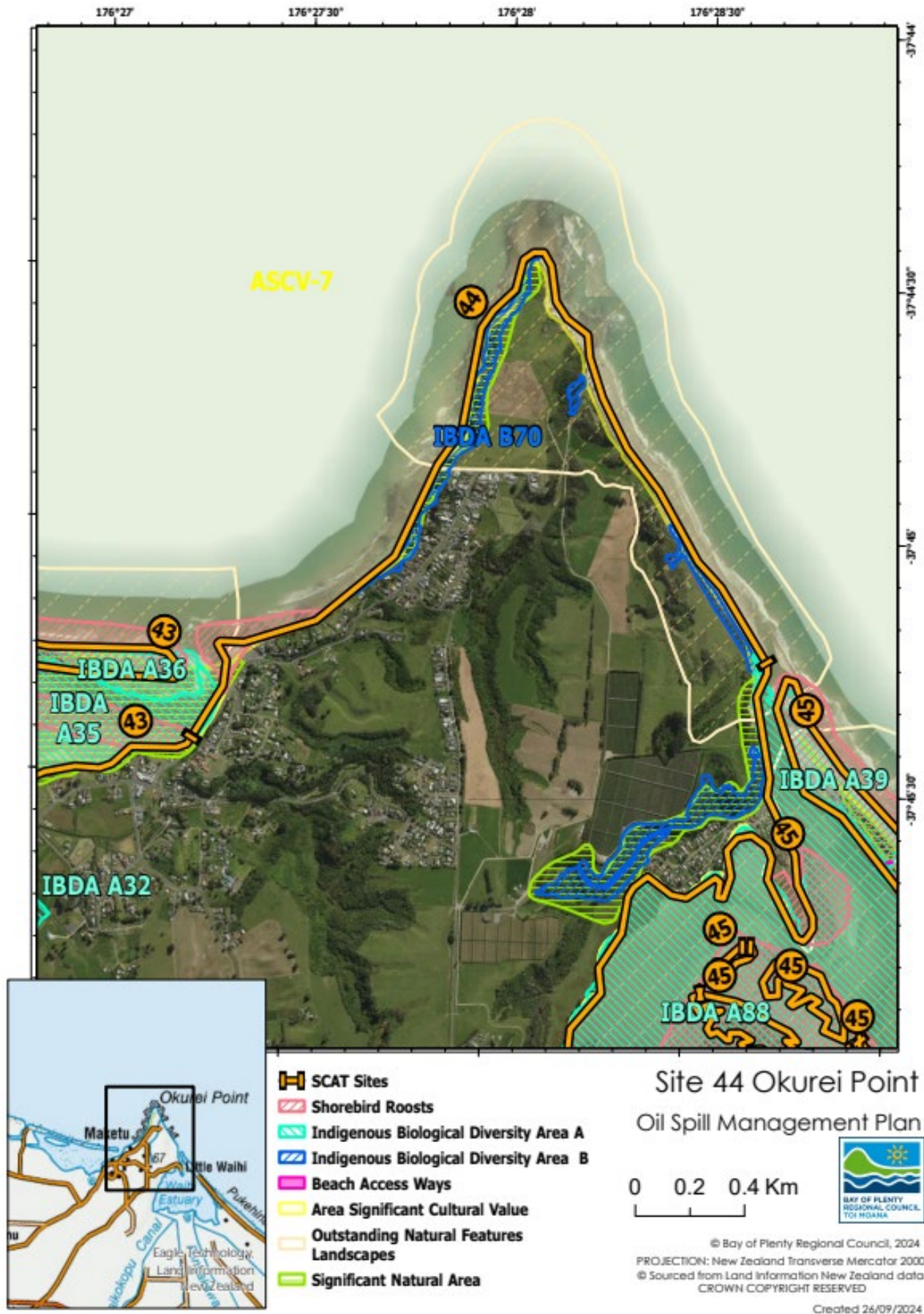
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booms may be effective but require significant amount of anchors
On water Recovery	High		Tidal conditions make this challenging
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Sandy shore areas good for cleaning, rocky shore areas more difficult
Natural Recovery	Medium		Ecological area, some natural recovery may be required



Site 44	Okurei Point		Risk ranking: 2
<p><b>DESCRIPTION</b></p> <p>This site is comprised of an intertidal zone consisting of a bedrock platform terrace and some boulders with cliff face in the Supratidal Zone. Okurei Point is a geomorphological phenomenon of converging littoral drift and is the only example found in New Zealand and one of two in Australia and New Zealand, as such it is of international importance (DOC ref: 04-010). Okurei Point is identified as an Outstanding Natural Feature and Landscape (ONFL 12).</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Bedrock including cracks and fissures, boulders, sea cliff Habitat (shoreline), contact All shore segments have “habitat value” The coastal marine area is identified as an area of Significant Cultural Value (ASCV 7) Indigenous Biological Diversity Area B70</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD 38 Maketu</p>	<p><b>Chart Number</b> NZ 541, 542</p>	
<p><b>Segments</b></p>	<p><b>BOP-00130, BOP-00140</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Bird species including: Little blue penguins (kororā), gulls, terns, shags (kawau)</li> <li>• Cultural sites/resources: kaimoana collection, taiapure. This area is a seafood collecting area and has cultural significance to iwi</li> <li>• The stream mouth at the northern end of Newdicks Beach is a migratory pathway and habitat of giant kōkopu</li> <li>• Subtidal reefs and associated marine life</li> <li>• NZAA V14/23 (Scarp/Pit), NZAA V14/31 (Pa), NZAA V14/64 (Midden)</li> </ul>			
<p><b>Notes</b></p> <p>Oil in rock crevices may be difficult to remove</p> <p>Shallow water close to shore restricts the use of dispersants and may limit navigation for larger vessels. The rocky shoreline around Town Point is a navigation hazard</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Shoreline clean-up when sea state and tide cycle allows access</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• Local current eddy moves in counter-clockwise direction and there is the possibility of oil being remobilised and carried into Maketu Estuary</li> </ul>			
<p><b>Access</b></p> <p>Access to the intertidal platforms and sea cliffs will be limited to low tide, possible access points include the Maketu Holiday Park.</p> <p>Private vehicle access to Newdicks Beach from the east side of the point, with foot access from Newdicks Beach around the point. Access from the west side is vehicular to the Maketu Surf Club and then foot access around the point (town point road is elevated). Access is indicated on the topographical map. There is a boat launching ramp at Maketū.</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Shoreline not conducive to containment, shallow, rocky
On water Recovery	High		If conditions allow and further offshore due to shallow areas
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	If applied in deeper water
Shoreline Clean-up	High		Due to limited access this may not be possible
Natural Recovery	Medium		May be required in inaccessible areas and rocky crevasses



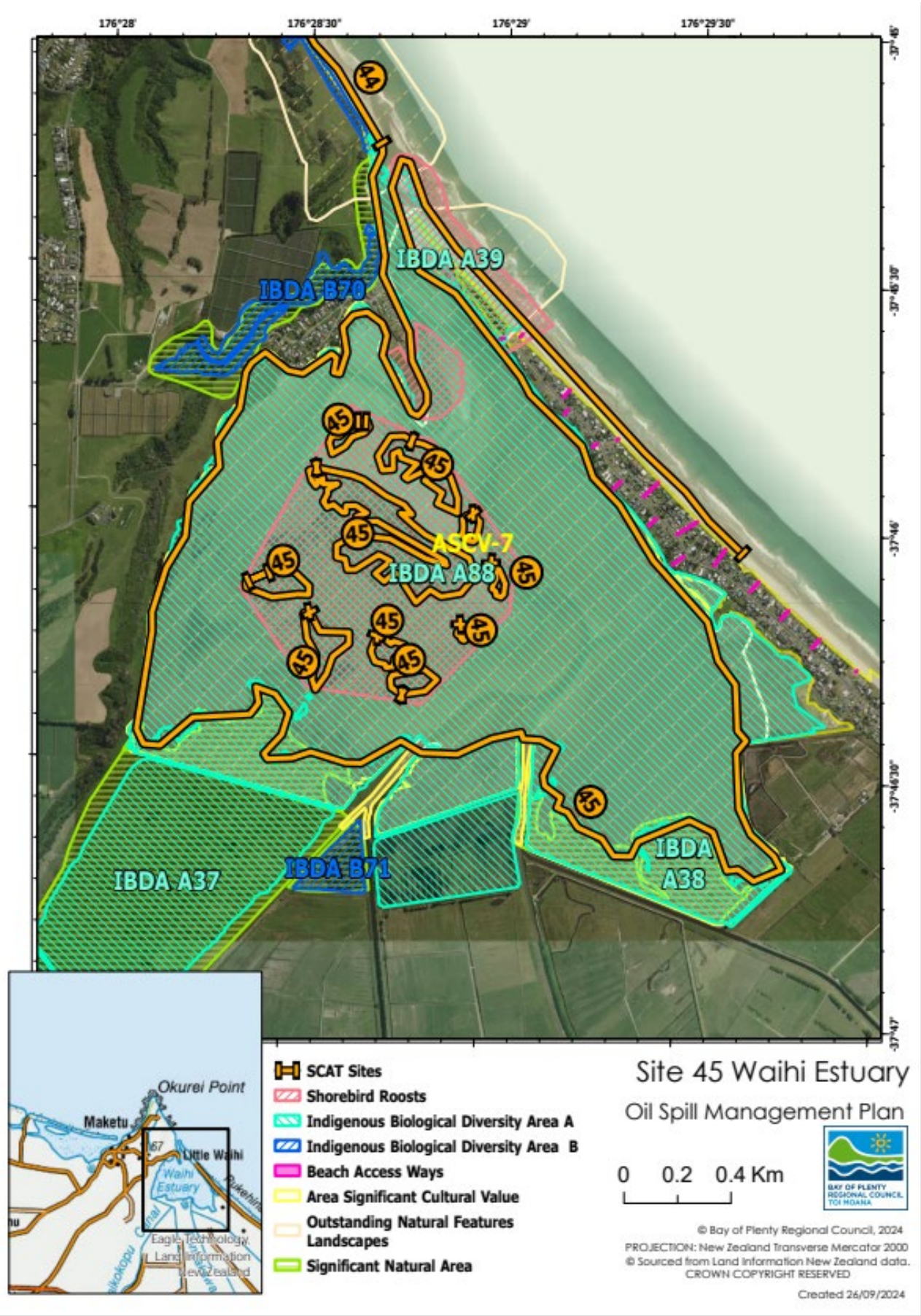
Site 45	Waihi Estuary	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises of a large estuary with extensive saltmarsh vegetation and intertidal mudflats, and diverse sub tidal habitat. There is multiple freshwater contributions the: Kaikokopu Canal; Wharere Canal; Pongakawa Canal; Pukehina Canal, all enter from the southern end. Island ecosystems in estuary.</p> <p>Internationally protected migratory shore birds feeding – treaty obligations (JAMBA, CAMBA, ROKAMBA). Meets RAMSAR criteria for an internationally significant wetland.</p> <p>Waihi Estuary is identified as an Outstanding Natural Feature and Landscape (ONFL 13).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Intertidal sandflats, saltmarsh, mangroves, seagrass Habitat (intertidal), all shore segments have “habitat value”</p> <p>The whole estuary, sand spit and coastal marine area are identified as an area of Significant Cultural Value (ASCV 7)</p> <p>Indigenous Biological Diversity Area A39, A88, A37, A38</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD 38 Maketu</p>	<p><b>Chart Number</b> NZ 541</p>
<p><b>Segments</b></p>	<p><b>BOP-00380 to 00420, BOP-00150, BOP-01350 to 01430</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Saltmarsh and mangroves, foreshore vegetation</li> <li>• Fish spawning nursery areas</li> <li>• There is a large diversity of birds including at risk and threatened species, e.g.: New Zealand dotterel (tuturiwhatu) (breeds on the spit), caspian tern (taranui), wrybill (ngutuparore), banded rail (kataitai), fern bird (matata), bittern (matuku hūrepo), spotless crane (pūweto), white heron (kōtuku), banded dotterel (tuturiwhatu), pied shag (karuhiruhi), reef heron (matuku moana), knots (huahou), eastern bar-tailed godwit (kuaka), pied stilt (poaka), pied oystercatcher (tōrea), variable oystercatcher (tōrea pango), white fronted tern (tara), little black shag (kawau tūī), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa).</li> <li>• Kaimoana: fishery and shellfish gathering (pipi and tuangi)</li> <li>• Cultural sites: taiapure and is of special cultural significance as a food source</li> <li>• NZAA V14/157 (Midden site), NZAA V14/2 (Pa site)</li> <li>• NZAA V14/18 (Occupation layer (10-30 cm thick). Covers an area c. 50 x 30 m)</li> </ul>		
<p><b>Notes</b></p> <p>The main priority area for protection is the estuarine margin wetlands towards the back of the estuary, which have high wildlife values. Oil that enters the low energy systems of Waihi Estuary will remain for some time. Oil will harm saltmarsh habitat, biodiversity in intertidal flats and whitebait spawning areas in the estuary.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Establish collection and recovery on sandy areas east of the estuary mouth</li> <li>• Establishing boom at estuary entrance difficult due to high currents</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		

**Access**

Vehicle access is via Pukehina Beach Road from the east and via Maketu to the west. The western side of the estuary can be accessed from Bledisloe Park Avenue. A boat ramp and jetty is located at the end of the peninsula that Bledisloe Park Avenue provides access to. There is also a boat launching ramp at the end of Pukehina Beach Road.

**Preferred Response Option Matrix**

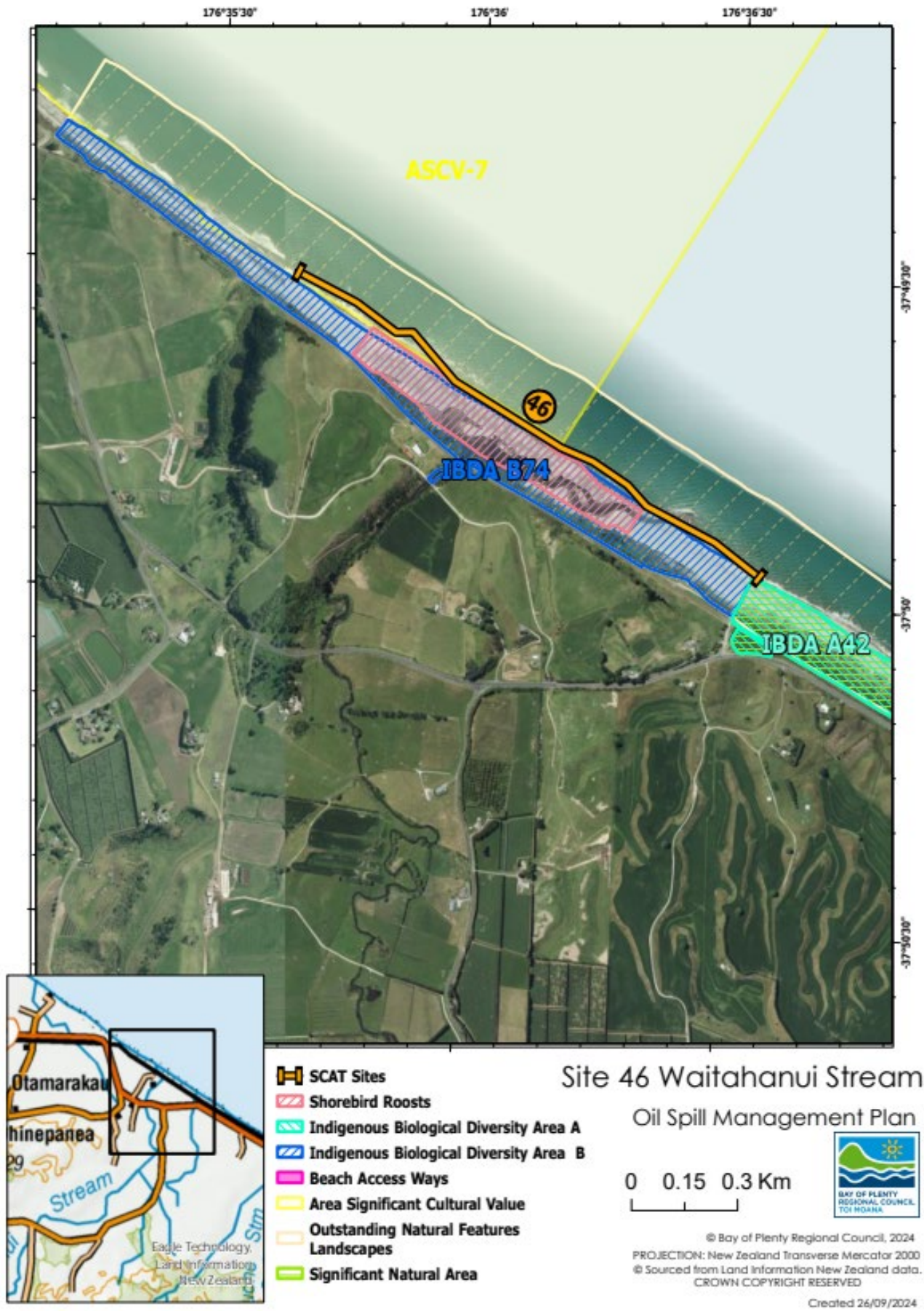
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Some deflection booming possible
On water Recovery	High		Strong tidal flows, not a good option
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	Medium		Sandy areas provide good clean-up options
Natural Recovery	Medium		Due to shallow and sensitive area, some natural recovery may be required



Site 46	Waitahanui Stream	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises the Waitahanui Stream mouth, tidal lagoon to the west on the shore side of the dunes. The tidal influence is 500 m up to SH 2.</p> <p>No major wetlands, small lagoon within dune system.</p> <p>The area falls within the Kohioawa Beach Dune Field and Wetlands, identified as an Outstanding Natural Feature and Landscape (ONFL 14).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Sand, lagoon, riparian vegetation</p> <p>All shore segments have “habitat value”</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 7)</p> <p>Indigenous Biological Diversity Area B74</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD 38 Maketu</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments</b></p>	<p><b>BOP-00299, BOP-00301</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Numerous at-risk birds, threatened species including: banded rail (kataitai), spotless crane (pūweto), bittern (matuku hūrepo), fernbird (kareni), New Zealand dotterel (tuturiwhatu)</li> <li>• Freshwater fish - whitebait (inanga)</li> <li>• Indigenous dune vegetation and raupo reedland.</li> <li>• Lagoon – aquatic vegetation present</li> <li>• Cultural sites/values: <ul style="list-style-type: none"> <li>▪ NZAA V15/719</li> </ul> </li> </ul>		
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Public use including fishermen and whitebaiters</li> <li>• Oil that enters the low energy systems of the estuary will remain for some time. Oil will harm intertidal and sand flats habitat</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Limit the amount of oil entering the estuary by putting protection or deflection booms in place</li> <li>• Alternatively, close the lagoon at high tide to prevent oil entering the low energy lagoon system, repair lagoon cut off at low tide (flow dependent)</li> <li>• Consider pre-emptive capture of New Zealand dotterels from the western spit</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• The size of the lagoon may vary from that in the map/photo</li> </ul>		
<p><b>Access</b></p> <p>Via SH 2, Otamarakau. Onto beach, will need to cross the estuary from the eastern side. Alternative access is across private farmland to the west of the lagoon and then by foot across the train tracks.</p> <p>Note that access is across a train line. Develop safety plan for safe access to this site, in conjunction with KiwiRail.</p>		

**Preferred Response Option Matrix**

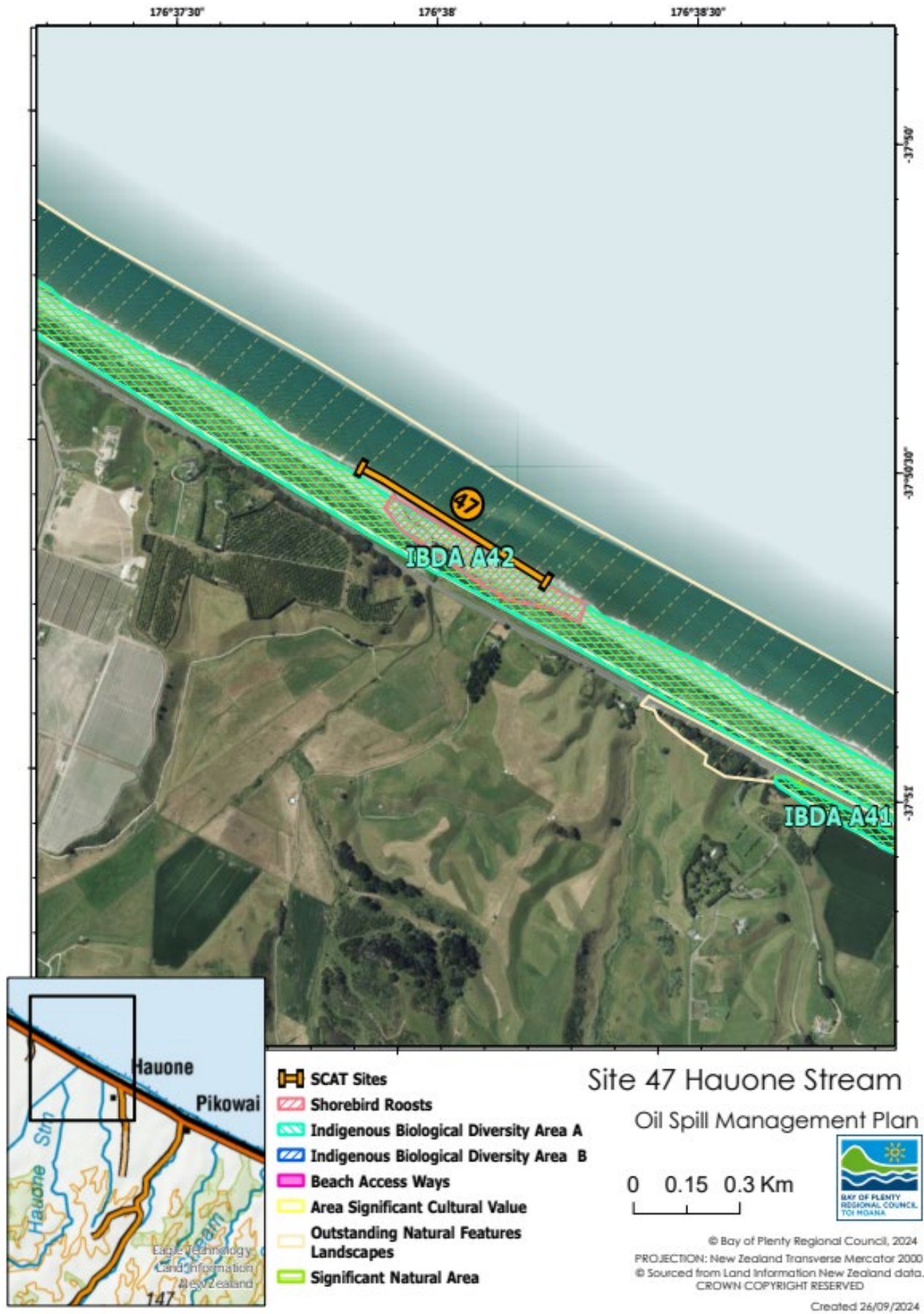
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Shallow coastal environment
On water Recovery	High		Prior to reaching shore with appropriate vessel
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow coastal environment
Shoreline Clean-up	High		Good access for beach teams, pre-clean required
Natural Recovery	Medium		May be required due to foreshore moments



Site 47	Hauone Stream	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site is comprised of a small freshwater stream that is tidal to SH 2. Although no wetlands, there is a 500 m long lagoon behind the dune system. The stream mouth is highly mobile and may not be connected in normal flow conditions to the sea.</p> <p>The area falls within the Kohioawa Beach Dune Field and Wetlands, identified as an Outstanding Natural Feature and Landscape (ONFL 14).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Sand, lagoon, steep beaches, stream</p> <p>All shore segments have “habitat value”</p> <p>Indigenous Biological Diversity Area A42</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD 38 Maketu</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments</b></p>	<p><b>BOP-00305</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• New Zealand dotterel (tuturiwhatu) nesting</li> <li>• Whitebait (inanga) and other native freshwater fish</li> <li>• Potential birds: white-faced heron (matuku-moana), grey duck (pāpera), australasian bittern (matuku hūrepo), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crake (koitareke), spotless crake (pūweto), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), North Island fernbird (mātātā), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango). Common gecko (mokomoko)</li> <li>• Lagoon behind vegetated supratidal area</li> <li>• Riparian vegetation</li> <li>• Moderate public use by fishermen and whitebaiters</li> </ul>		
<p><b>Notes</b></p> <p>Oil that enters the low energy system of this lagoon will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent oil from entering the side lagoon</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific (maintain gecko habitat)</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• Shoreline clean-up – remove cleaned material from beaches daily (do not allow to remain over any high tidal period) and place at staging location to be agreed</li> </ul>		
<p><b>Access</b></p> <p>Via SH 2, Hauone.</p> <p>Note that access is across a train line. Develop safety plan for safe access to this site, in conjunction with KiwiRail.</p>		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Sand boom across entrance
On water Recovery	High		Shallow coastal shoreline
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow coastal shoreline
Shoreline Clean-up	High		Access to stream area is over train line
Natural Recovery	Medium		High intensity coastline

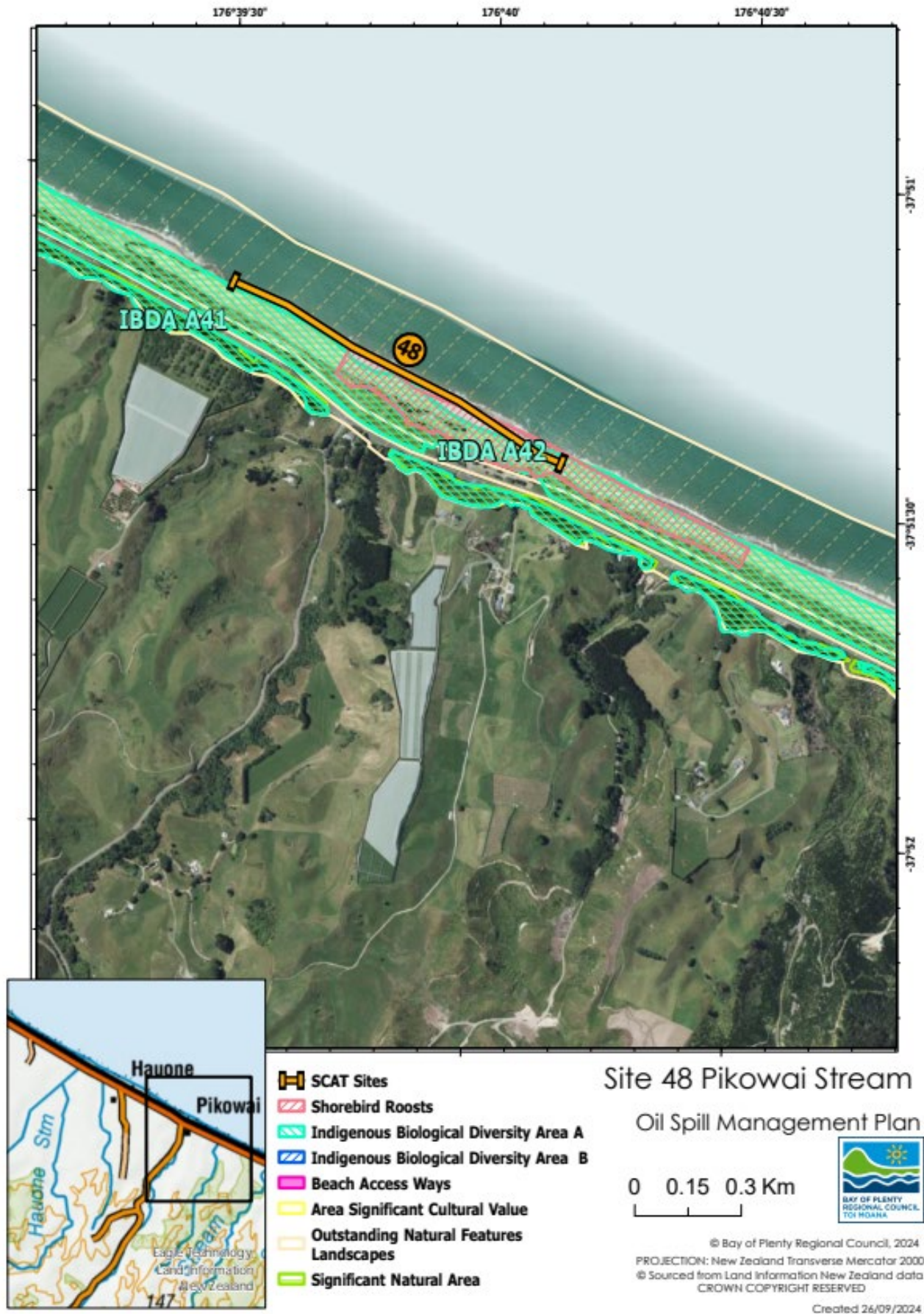


Site 48	Pikowai Stream	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site comprises a small fresh water stream that is tidal to where it is crossed by SH 2. A 500 m long lagoon sits behind the dune system. Stream may not be connected in normal flow conditions to the sea.</p> <p>The area falls within the Kohioawa Beach Dune Field and Wetlands, identified as an Outstanding Natural Feature and Landscape (ONFL 14).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Sand, lagoon, dunes, stream</p> <p>All shore segments have “habitat value”</p> <p>Indigenous Biological Diversity Area A42</p>	
<p><b>Map sheets</b></p>	<p><b>NZTopo50</b></p> <p>BD38 Maketu</p>	<p><b>Chart Number</b></p> <p>NZ542</p>
<p><b>Segments</b></p>	<p><b>BOP-00308</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• New Zealand dotterel (tuturiwhatu) nesting</li> </ul> <p>Potential birds: white-faced heron (matuku-moana), grey duck (pāreera), australasian bittern (matuku hūrepo), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crake (koitareke), spotless crake (pūweto), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), North Island fernbird (mātātā), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango).</p> <ul style="list-style-type: none"> <li>• Whitebait (inanga) and other native freshwater fish</li> <li>• Sand spit</li> <li>• Locally important recreational fisheries</li> <li>• Moderate public use by fishermen and whitebaiters. Pikowai Campground beside</li> </ul>		
<p><b>Notes</b></p> <p>Oil that enters this system will be able to be cleaned up as there is no natural vegetation in the riparian areas</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Limit the amount of oil entering and moving through the estuary by placing a barrier across the entrance as oil approaches and monitor</li> <li>• Release built-up stream water from sand barrier during low tides as required, but close before high tide returns</li> <li>• Sand may form an effective barrier, but only after local cultural liaison and/or supervision</li> <li>• Shoreline clean-up – remove cleaned material from beaches daily (do not allow to remain over any high tidal period) and place at staging location to be agreed</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre capture New Zealand dotterels from the western spit</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		

<p><b>Endpoint Criteria</b></p> <p>Clean segments to endpoint criteria (refer to endpoint clean-up criteria according to environmental value).</p>
<p><b>Access</b></p> <p>Via SH 2, Pikowai.</p> <p>Note that access is across a train line. Develop safety plan for safe access to this site in conjunction with KiwiRail.</p>

**Preferred Response Option Matrix**

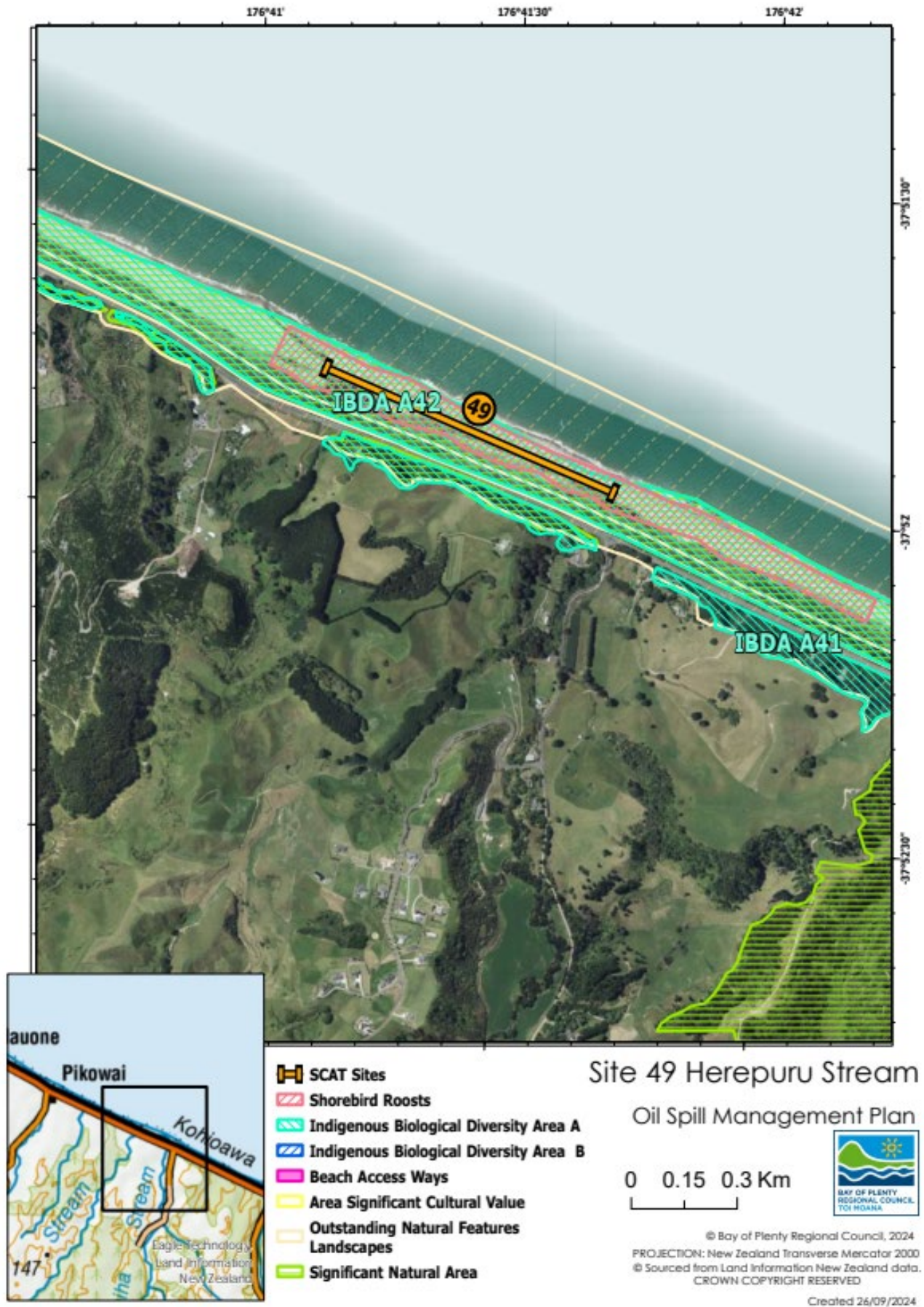
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Sand boom across entrance
On water Recovery	High		Shallow coastal shoreline
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow coastal shoreline
Shoreline Clean-up	High		Access to stream area is over trainline
Natural Recovery	Medium		High intensity coastline



Site 49	Herepuru Stream		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site includes a small freshwater stream with a tidal lagoon area enclosed behind the sand-spit. The stream may not be connected in normal flow conditions to the sea and the mouth is highly mobile.</p> <p>The area falls within the Kohioawa Beach Dune Field and Wetlands, identified as an Outstanding Natural Feature and Landscape (ONFL 14).</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Sand, riparian vegetation, saltmarsh, steep beaches</p> <p>All shore segments have “habitat value</p> <p>Indigenous Biological Diversity Area A42</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE39 Edgecumbe</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>	
<p><b>Segments</b></p>	<p><b>BOP-00310</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• New Zealand dotterel (tuturiwhatu) nesting</li> </ul> <p>Potential birds: white-faced heron (matuku-moana), grey duck (pārera), australasian bittern (matuku hūrepo), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crake (koitareke), spotless crake (pūweto), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūi), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), North Island fernbird (mātātā), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango).</p> <ul style="list-style-type: none"> <li>• Whitebait (inanga) and other native freshwater fish</li> <li>• Lagoon</li> <li>• Riparian vegetation</li> </ul>			
<p><b>Notes</b></p> <p>Moderate public use: fishermen and whitebaiters</p> <p>Oil that enters the low energy system of this lagoon will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – to maintain gecko habitat</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• Prevent/minimise oil ingress into this system</li> <li>• Consider collection and recovery on sandy areas</li> <li>• Bulldoze entrance closed at high tides and release river water when required (see STM for small estuaries – feasibility dependent on river flow)</li> </ul>			
<p><b>Access</b></p> <p>Via SH 2, note that access is across a train line. Develop safety plan for safe access to this site.</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Sand boom across entrance
On water Recovery	High		Shallow coastal shoreline
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow coastal shoreline
Shoreline Clean-up	High		Good access along this coastline
Natural Recovery	Medium		High intensity coastline

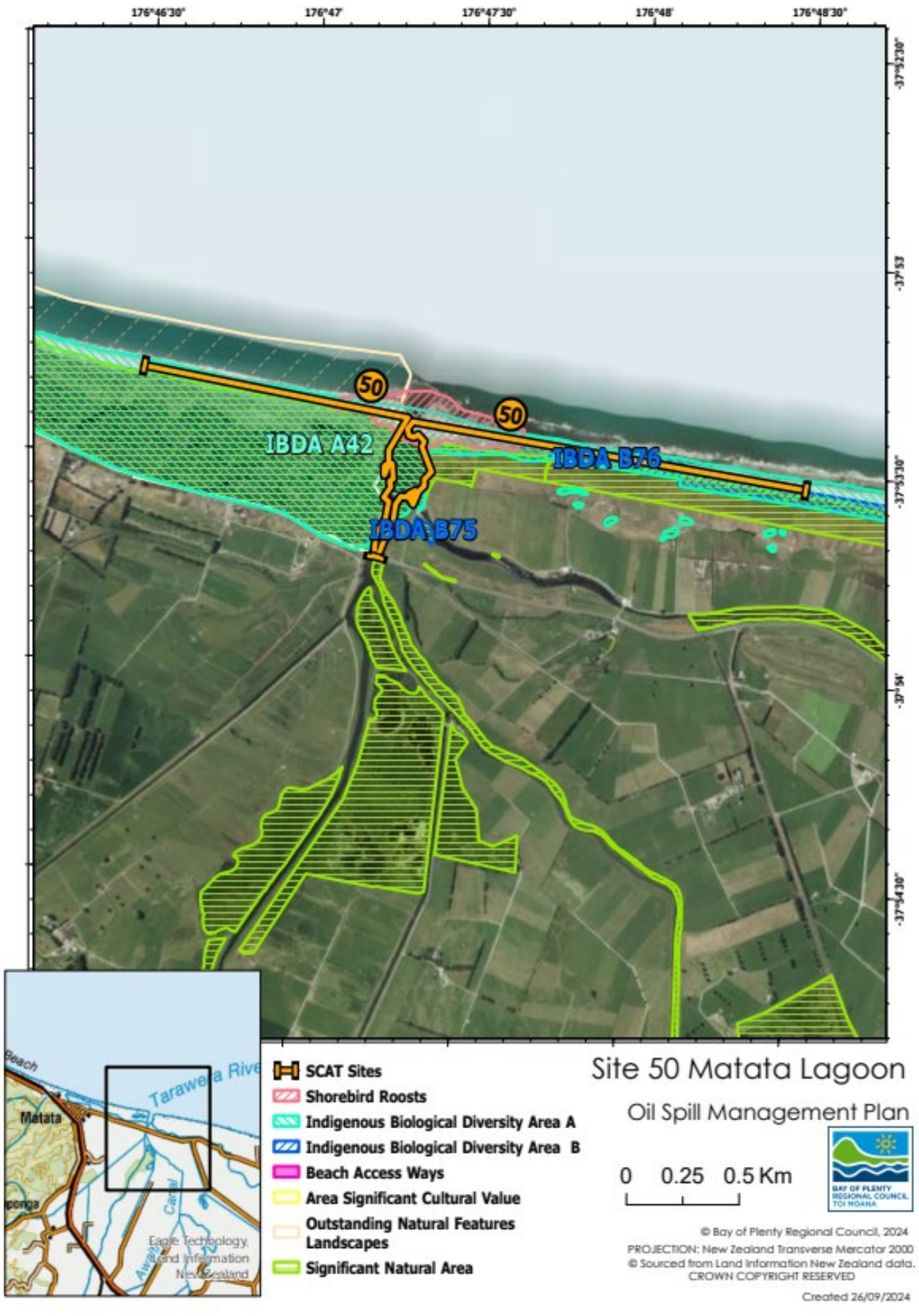


Site 50	Matatā Lagoon		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises of the Matatā River with associated wetland and stream confluence. A western freshwater side lagoon/wetland is connected only at high spring tides; the eastern side stream is connected through a flood gate.</p> <p>The area falls within the Kohioawa Beach Dune Field and Wetlands, identified as an Outstanding Natural Feature and Landscape (ONFL 14).</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>High dune protected from coastline, mud substrate, lagoon/wetland, saltmarsh</p> <p>Riparian vegetation</p> <p>All shore segments have “habitat value”</p> <p>Indigenous Biological Diversity Area A42</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 39 Edgecumbe</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>	
<p><b>Segments</b></p>	<p><b>BOP-00490, BOP-00650, BOP- 00660, BOP- 00500</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Fresh water wetland lagoon, control by weir and one way flap gate. Raupo predominant</li> <li>• Recovering ecosystem</li> <li>• Channels and islands within the lagoon, although this is not directly connected to the sea</li> <li>• Numerous bird species including at risk and threatened bird species, Potential birds: white-faced heron (matuku-moana), grey duck (pārera), australasian bittern (matuku hūrepo), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crake (koitareke), spotless crake (pūweto), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), North Island fernbird (mātātā), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango).</li> <li>• Whitebait (inanga) and other native freshwater fish</li> <li>• Very high cultural values</li> <li>• Motor camp beside, high amenity use</li> </ul>			
<p><b>Notes</b></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><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Establish collection and recovery on sandy areas on eastern side of estuary mouth</li> <li>• Lagoon will only receive water from the river estuary on an extreme spring tide through overtopping of the one way weir. Very minimal risk of oil reaching the lagoon</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of New Zealand dotterels if present</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>			

<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• Via SH 2, Matatà</li> <li>• Access track to eastern side arm</li> <li>• Locked gate access to western wetland weir (BOPRC have key)</li> </ul>
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**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Sandy coastal area, unlikely
On water Recovery	High		Prior to reaching shore with appropriate vessel
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Proximity to shore, water depth
Shoreline Clean-up	High		Sandy shoreline, pre-clean required
Natural Recovery	Medium		Some natural recovery may be required due to foreshore moments



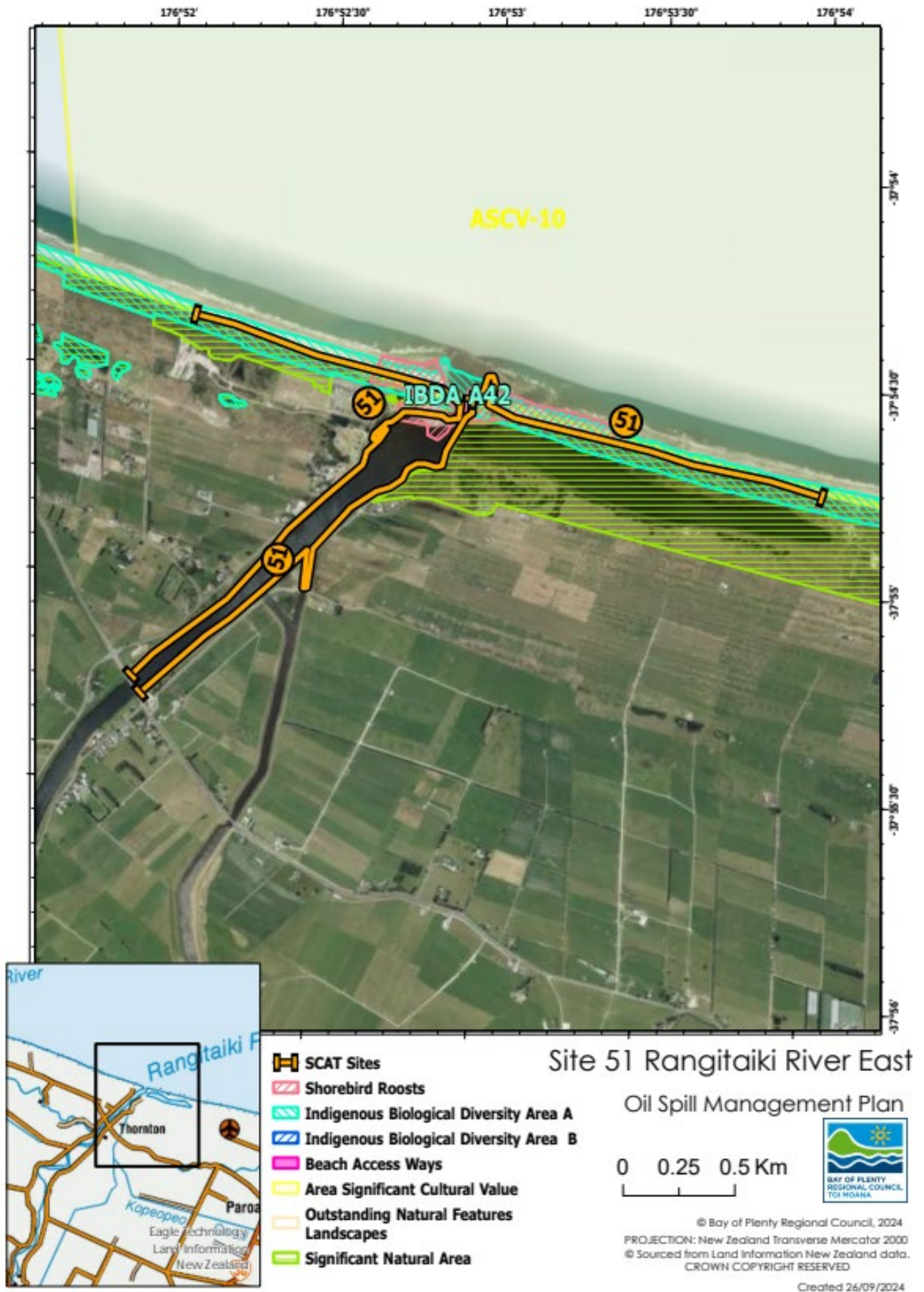
Site 51	Rangitaiki River East	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises the Rangitaiki River with a lagoon branching off to the east behind the dunes. This lagoon is connected to the river by a collapsed culvert with no floodgate protection, and is known as Thornton Wildlife Management Reserve.</p> <p>Within the gazetted rohe moana (area) of Ngāti Awa.</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Sand, riparian vegetation, saltmarsh, lagoon</p> <p>All shore segments have “habitat value</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 10)</p> <p>Indigenous Biological Diversity Area A42</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 39 Edgecumbe</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments</b></p>	<p><b>BOP – 00550, 01480, 01490, 00580</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>Numerous at risk bird species including: banded rail (kataitai), spotless crane (pūweto), bittern (matuku hūrepo), and fern bird (kareni). Also New Zealand dotterel (tuturiwhatu).</li> <li>Potential birds: white-faced heron (matuku-moana), grey duck (pāpera), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crane (koitareke), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango). Freshwater fish - Whitebait (inanga)</li> <li>Lagoon - Raupo dominant, predominantly fresh water wetland</li> <li>Cultural sites: Nohonga (settlement) beside reserve</li> <li>There are two archaeological sites in proximity to the river banks, W15/356 (Midden - lens of crushed tuatua) and W15/335 (no information). These should be noted when considering response options and avoided if possible or discussed with Iwi</li> <li>Moderate public use including fishermen and whitebaiters</li> </ul>		
<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time</p> <p>Oil will harm intertidal and sand flats habitat</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>Limit the amount of oil entering and moving through the estuary by placing protection across the entrance culvert. Repair or fill collapsed culvert to prevent oil entering lagoon/wetland – reopen when possible</li> <li>Establish and maintain protective oil deflection at estuary entrance. Booming may be of assistance with oil directed to the SANDY western side for collection or snares may be sufficient. Note that current velocities on incoming tide may be over 2 kts</li> <li>Notify wildlife team of potential for oiling</li> <li>Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>Consider pre-emptive Capture of New Zealand dotterels</li> <li>Consider pre-emptive capture of wildlife generally</li> </ul>		

**Access**

Via Thornton Hall Road, accessed from Thornton Road on the south-east side of road bridge.

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Booming may work
On water Recovery	High		Shallow coastal area
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Shallow coastal area
Shoreline Clean-up	High		Good access for beach teams, per-clean required
Natural Recovery	Medium		May be required due to foreshore moments



Site 52	Whakatāne River/Estuary		Risk ranking: 2
<p><b>DESCRIPTION</b></p> <p>This site comprises bar-built river mouth with tidal influence up to 5 km inland. A sandbar encloses small areas of saltmarsh and tidal open water lagoon. River is used for recreational and commercial boat access. The area is of significant spiritual significance to Ngāti Awa.</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Lagoon, intertidal sandflats, saltmarsh</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 12)</p> <p>Indigenous Biological Diversity Area A42, A44, A45</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE40 Whakatāne</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>	
<p><b>Segments</b></p>	<p><b>BOP-00640, BOP-00670, BOP-00680, BOP-00690, BOP-00710, BOP-00720, BOP-01300, BOP-01330, BOP-01290</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Sand spit has nesting New Zealand dotterels (tuturiwhatu) (number fluctuates)</li> <li>• Fernbird (mātātā) reported</li> <li>• Potential birds: white-faced heron (matuku-moana), grey duck (pāpera), australasian bittern (matuku hūrepo), black-billed gull (tarāpuka), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dabchick (weweia), pied shag (karuhiruhi), red-billed gulls (akiaki), reef heron (matuku moana), marsh crake (koitareke), spotless crake (pūweto), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūi), little shag (kawau paka), royal spoonbill (kōtuku ngutupapa), pied stilt (poaka), white fronted tern (tara), variable oystercatcher (tōrea pango). Whitebait (inanga) spawning areas</li> <li>• Other wetland bird species present</li> <li>• Saltmarsh south of the sand spit in the lower estuary</li> <li>• Freshwater wetlands further upstream raupo dominated (Orini Wetlands)</li> <li>• Used extensively for recreational and commercial fishing and boating activity. Heavy fishing activity from groynes</li> <li>• Areas of moorings and marina</li> <li>• Amenity: Seawalls/ groynes of large boulders either side of river mouth</li> <li>• Cultural site: Within the gazetted rohe of Ngati Awa</li> <li>• There are archaeological sites in the vicinity, NZAA ID W15/1060 (Sub-surface midden exposed in pipe trench. Two pieces of obsidian also recovered) is located on the shore near the river mouth</li> <li>• Pulp and paper processing plant has water intake above road bridge</li> </ul>			
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• An oil spill out to sea is unlikely to enter the Whakatāne River because of the net outflow of water from the river</li> <li>• The strong current in the river prevents boom deployment and it is likely that a spill from the wharf area will move out to sea before a boom could be deployed</li> <li>• The Regional Council office may be used as an On Scene Headquarters</li> </ul>			

**Actions**

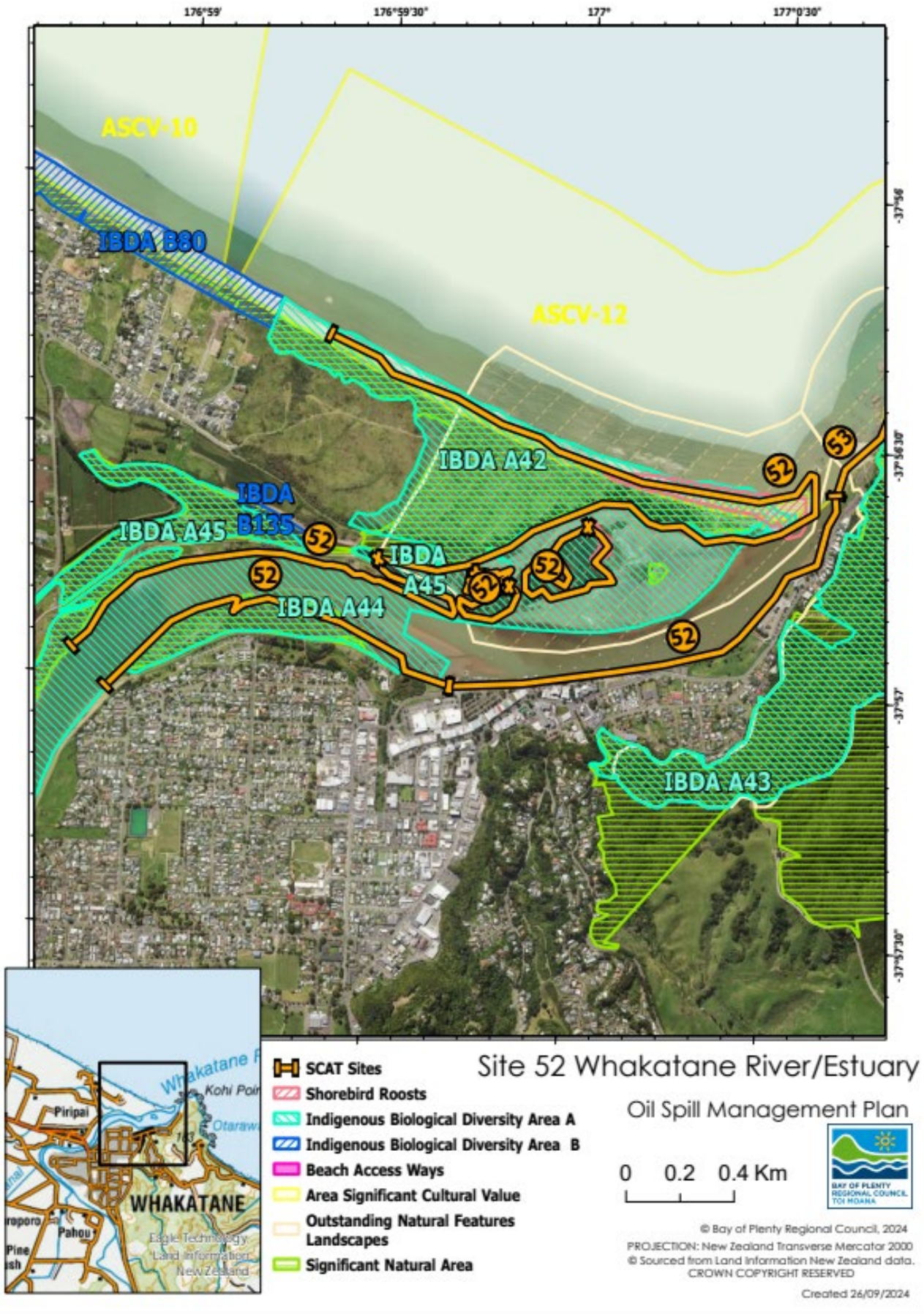
- Limit the oil entering the saltmarsh habitat and lagoon to the south of the sand spit
- Investigate the flood control gate in lower reaches of the river and the feasibility of wedging shut the flap to prevent oil travelling up the Orini Canal on the tide
- Close floodgates and release water on out-going tide to help keep oil from moving up estuary, but close on incoming tide
- Foreshore cleaning on eastern shore to reduce remobilization of oil into river
- Decide on pre-emptive removal of beach branch debris at spit entrance. Note that access is problematic
- Notify wildlife team
- Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife
- Consider pre-emptive capture of New Zealand dotterel
- Consider pre-emptive capture of wildlife generally
- Activation of oiled wildlife response collection teams if required
- Investigate protecting paper mill intake

**Access**

- Southern saltmarsh can be accessed through town centre
- Northern areas (beaches, wetlands and sand spit) can be accessed via Keepa Road and Bunyan Road (locked gate, contact WDC for key/access)
- Coastal beaches and sand spit access via beach. Coastlands, Whakatāne
- There is a boat launching ramp and commercial wharf in the Whakatāne River adjacent to the Whakatāne township

**Preferred Response Option Matrix**

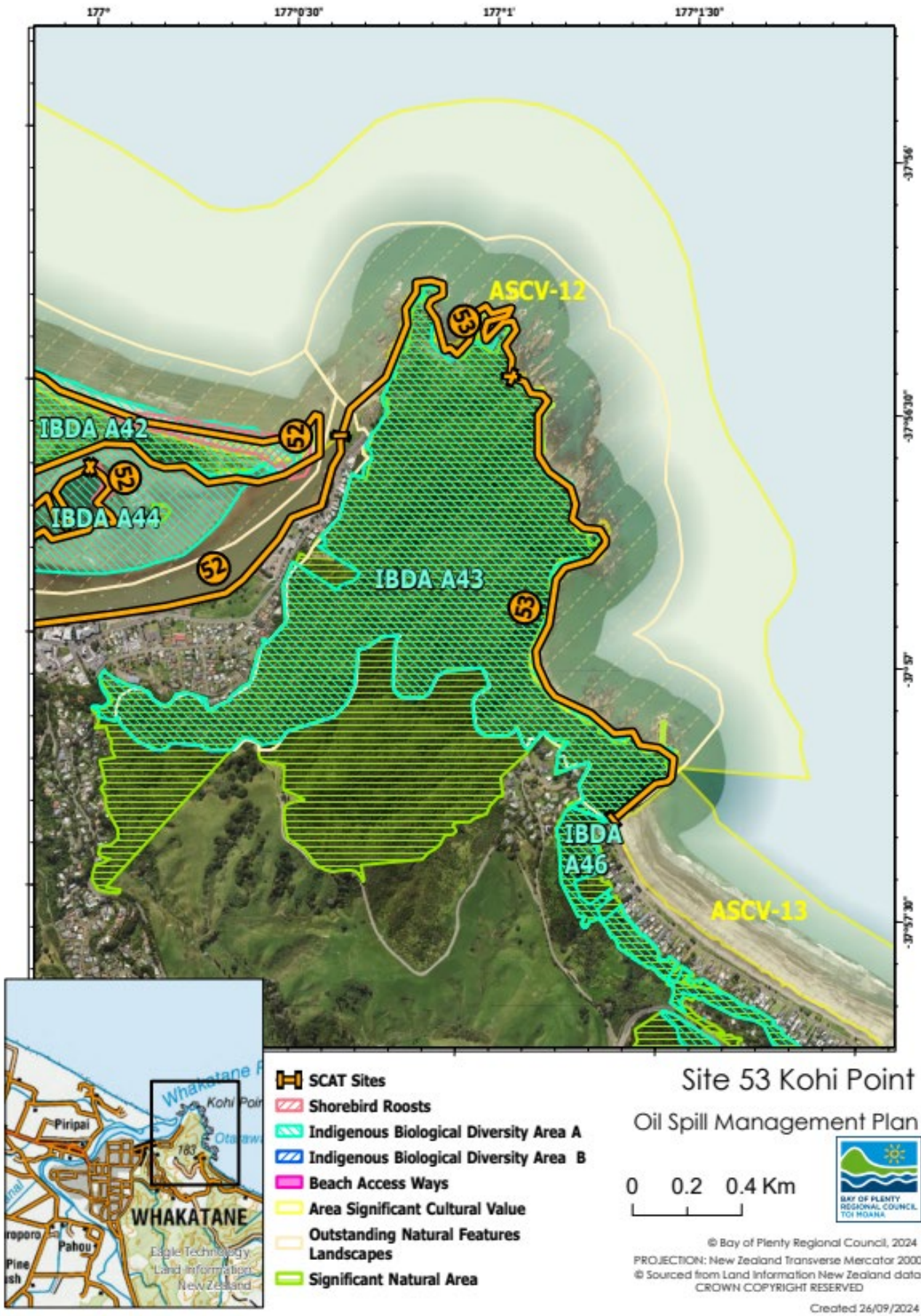
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Strong tide currents may prohibit this
On water Recovery	High		Strong tide currents may prohibit this
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water depth won't allow
Shoreline Clean-up	High		Requires a pre-clean
Natural Recovery	Medium		Can be a high intensity coastline



Site 53	Kohi Point	Risk ranking: 2
<p><b>DESCRIPTION</b></p> <p>Kohi Point is a prominent rocky point south of Whakatāne harbour comprising of a bedrock platform with extensive intertidal terracing leading up to the cliff face. This site includes Otarawairere Bay.</p> <p>Rohemoana site, area gazetted by Iwi Ngāti Awa.</p> <p>Kohi Point and Otarawaiere Bay are identified as an Outstanding Natural Feature and Landscape (ONFL 18).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Rock intertidal platform and shore</p> <p>Shore segments have “habitat value” and “cultural value”</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 12)</p> <p>Indigenous Biological Diversity Area A43</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 40 Whakatāne</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments</b></p>	<p><b>BOP-00720, BOP-00730, BOP-00740</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• High amenity value</li> <li>• The area is of major spiritual value to Iwi</li> <li>• There are shellfish around the hard rock shore and tuatua on the beach</li> <li>• Cultural sites: Kaimoana site</li> <li>• There are archaeological sites in the vicinity, NZAA ID W15/1060 (Sub-surface midden exposed in pipe trench. Two pieces of obsidian also recovered.) is located on the shore near the river mouth and NZAA W15/19 (Pa site) is located on an eastern rocky outcrop</li> </ul>		
<p><b>Notes</b></p> <p>Oil may be difficult to remove from the shoreline especially in rock crevices.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Shoreline clean-up when sea state and tidal cycle allows access</li> <li>• Notify wildlife team of potential oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• Access to Kohi Point by boat from Whakatāne or Ohiwa harbours</li> <li>• Walking tracks from west end of Otarawairere Bay. There is no foot access past Otarawairere Bay. There is a boat launching ramp and commercial wharf in the Whakatāne River. The rocky shoreline around Kohi Point is a navigation hazard</li> </ul>		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Access may prohibit this option
On water Recovery	High		Weather may prohibit this option
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Off-shore application to be considered
Shoreline Clean-up	High		Rocky foreshore with limited access
Natural Recovery	Medium		Some natural recovery may be required due to foreshore type

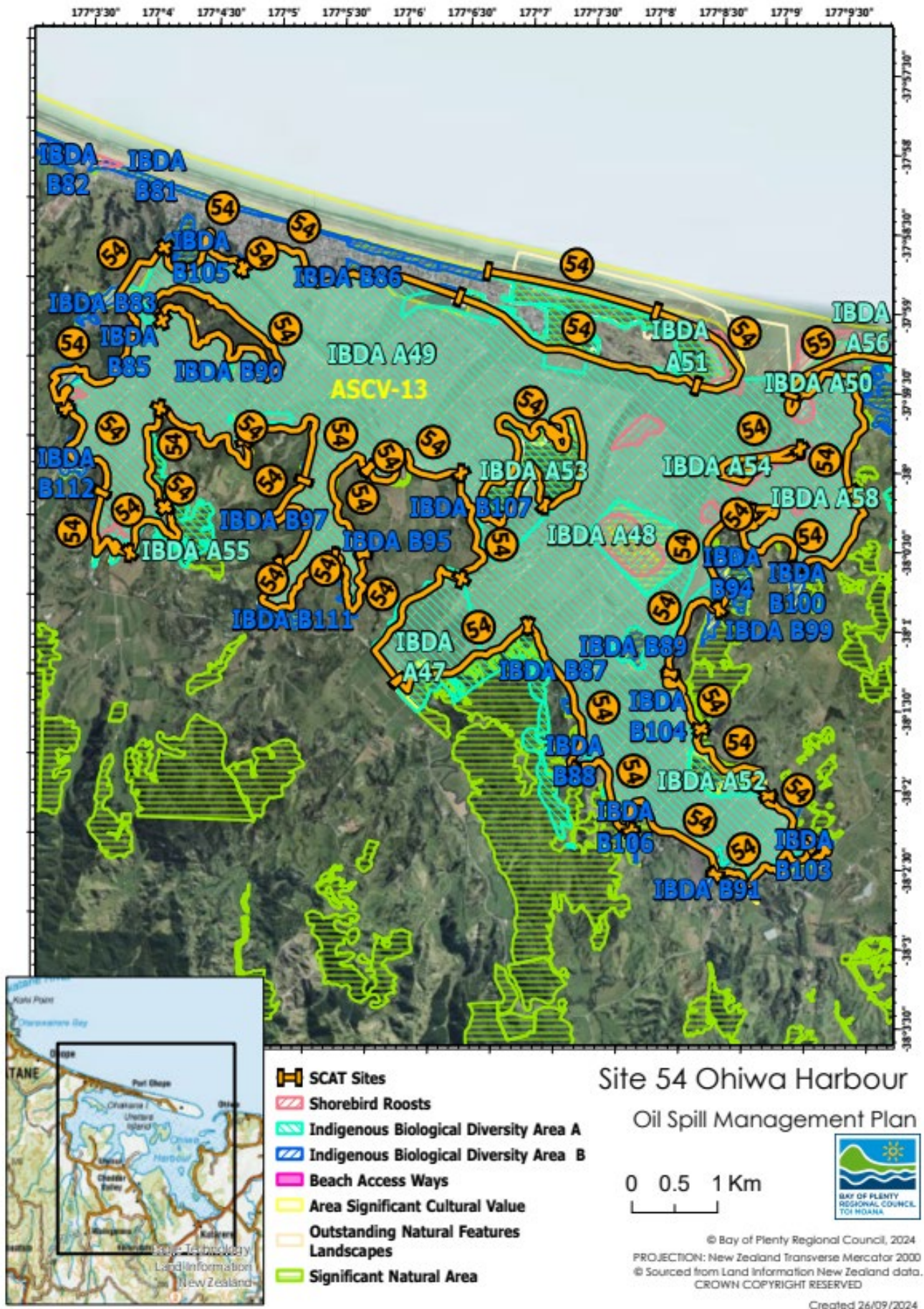


Site 54	Ohiwa Harbour/Estuary		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>A spit encloses a large and complex estuary/ harbour (~27 km<sup>2</sup>) with multiple sensitive ecological areas. The entrance is narrow resulting in high peak current velocities.</p> <p>Ohiwa Harbour and its associated islands are identified as an Outstanding Natural Feature and Landscapes (ONFL 20, 21, 22)</p>			
<b>Foreshore type</b>	<p>Intertidal sandflats, saltmarsh, mangroves, seagrass. The coastal marine area is identified as an area of Significant Cultural Value (ASCV 13)</p> <p>Indigenous Biological Diversity Area A49, A53, A54, A55, B83–B112</p>		
<b>Map sheets</b>	<b>NZ Topo 50</b> BE 40 Whakatàne	<b>Chart Number</b> NZ 542	
<b>Segments:</b> BOP 00820 to BOP01220, EBOP 00010			
<p><b>At Risk Resources</b></p> <p>Ohiwa is of high importance for estuarine birds including:</p> <ul style="list-style-type: none"> <li>• New Zealand dotterel (tuturiwhatu) (25 as of 3 Nov 2011) found over the whole harbour including spits (population likely to fluctuate)</li> <li>• Whangakopikopiko (BOP – 01180) (Tern) Island (within mouth of harbour) New Zealand dotterel (4 pairs)</li> <li>• 4-5,000 godwit (kuaka) and other wader species (present in summer only)</li> <li>• Range of other shorebird (500+ birds), gulls, shags, terns, caspian tern (taranui) colony (few)</li> <li>• White-fronted tern (tara) (at risk/declining) breeding colony (variable location)</li> <li>• Black-backed gull (karoro) (c50 pairs) breeding (nationally vulnerable)</li> <li>• Red-billed gulls (akiaki) (nationally vulnerable)</li> <li>• Bittern (matuku hūrepo) (nationally endangered)</li> <li>• Nukuhou River wetland in south-eastern portion (around the river) (BOP – 01040, 01050) Most extensive saltmarsh/mangrove areas in harbour – bittern/banded rail/NI fernbird (kareni)</li> <li>• Ohope Beach (BOP – 00810, 00820) amenity values</li> <li>• Uretara Shellbank, to east of Uretara island is the most important bird roosting site in Ohiwa Harbour.</li> <li>• Important mahinga kai location (pipi, mussel, tuangi)</li> <li>• All freshwater rivers are potentially migratory pathways for indigenous freshwater fish</li> <li>• Cultural sites</li> <li>• Has a commercial oyster farm adjacent Wainui Road</li> </ul>			

<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas on in the estuary.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Preferred response option is interception of oil inside of the estuary entrance</li> <li>• Deflection booming and skimming is likely to be ineffective owing to the high current velocities (over 2 knots) in any of the navigable channels</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>
<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• Road access to the entrance of the Ohiwa Estuary is from the east as indicated on the topographical map. However, a dune system at the end of the road restricts access to 4WD</li> <li>• Access is available along the beach from the east and west side</li> <li>• There is good vehicle access to the Ohope Beach dune systems. However, vehicle access is restricted across the dunes</li> <li>• There are two boat launching ramps in the Ohiwa Harbour located at the Port Ohope Wharf and adjacent to the Golf Club and two boat launching ramps located adjacent to Hokianga Island (preferred option is Pukeruru Point)</li> </ul>

### Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Although challenging, some deflection booming may be considered. Strong tidal currents.
On water Recovery	High		Possible with ORV or similar but strong tidal currents, limited ability
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Water shallows
Shoreline Clean-up	High		Mostly by foot access with 4WD support
Natural Recovery	Low		Sandy ecological area,

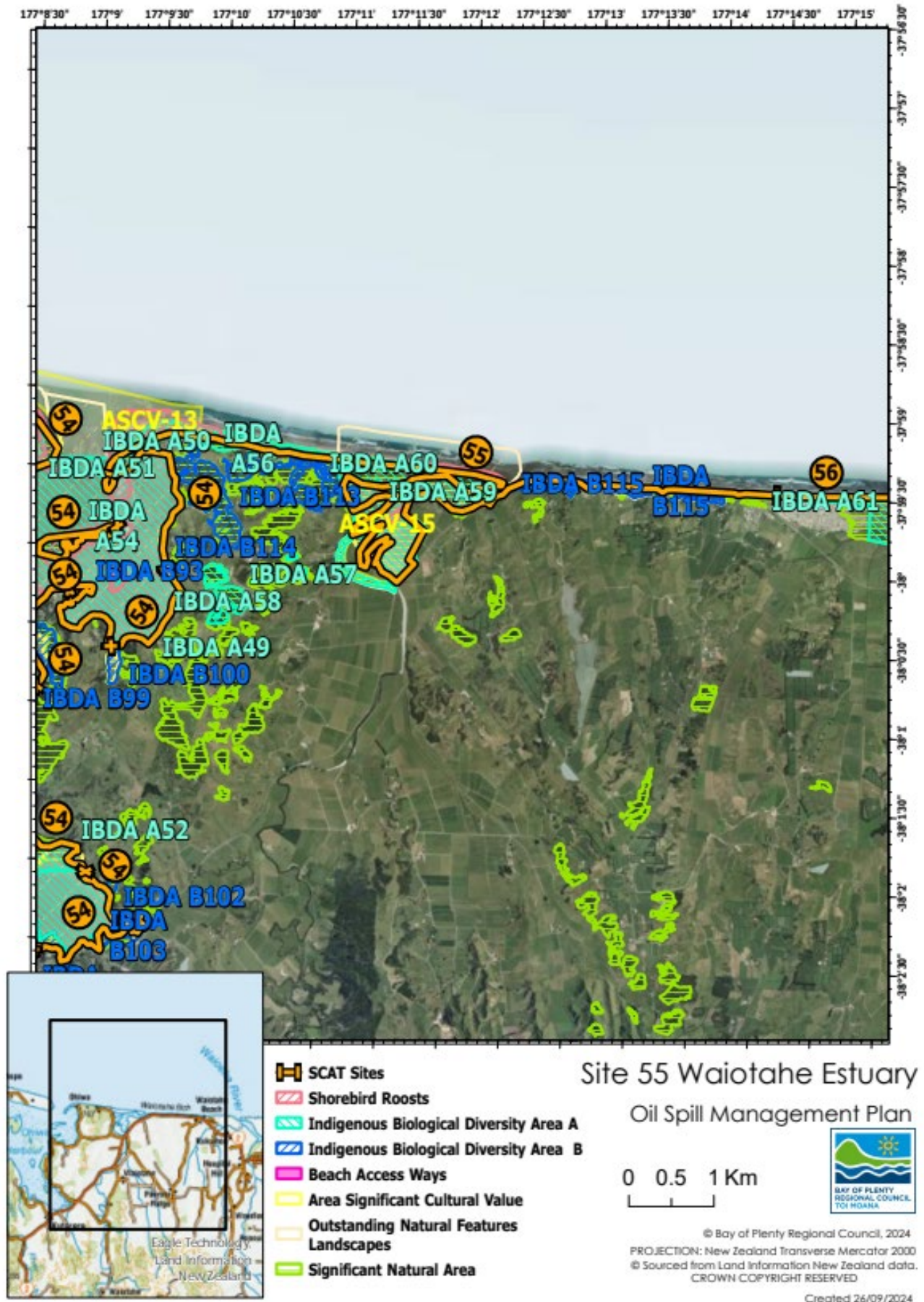


## Ōpōtiki to East Cape

Site 55	Waiōtahe Estuary	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises the 100 ha bar-built estuary at the mouth of the Waiōtahe River. The site has significant habitat and flora and fauna values. Estuary includes inter tidal mudflats, saltmarsh and mangroves.</p> <p>Waiōtahe Spit and Estuary mouth are identified as an Outstanding Natural Feature and Landscapes (ONFL 24)</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Open water in channel, Foreshore vegetation, saltmarsh, riparian Vegetation</p> <p>All shore segments have “habitat value”</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 15)</p> <p>Indigenous Biological Diversity Area A59, A60, B115</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 40 Whakatāne</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments:</b> EBOP 00010, EBOP 00020, EBOP R 00010</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Sand spit has nesting New Zealand dotterels (tuturiwhatu) (4-5 pairs) and nesting pied oyster catchers (tōrea) (c4-6 pairs) and other estuarine birds: pied shag, reef heron, fern bird, banded rail, black shag, little shag, variable oystercatcher, north island weka.</li> <li>• Major kaimoana site – very important (pipis/cockles) and Whitebaiting (inanga) and inanga (spawning March-April) Urupa on sand spit</li> <li>• Eastern Marine Farms (mussel farm) 4-5 km offshore</li> <li>• Cultural sites – some very significant</li> </ul>		
<p><b>Notes</b></p> <p>Oil will harm saltmarsh habitat and whitebait spawning areas on the western side of the estuary. Oil may wash over into the estuary during a storm but is unlikely to move up with the tide due to the net outflow of water from the river.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Prevent/minimise oil ingress into this system</li> <li>• Establish and maintain effective oil deflection at estuary entrance. Booming may be able to deflect oil to the sandy Eastern side for collection</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <p>Access to the entrance of the estuary is via SH 35 and turning off at the rest area adjacent to the mouth of the estuary. It would be relatively easy to launch a dinghy from this area. The nearest boat launching ramp is Ohiwa Harbour.</p>		

**Preferred Response Option Matrix**

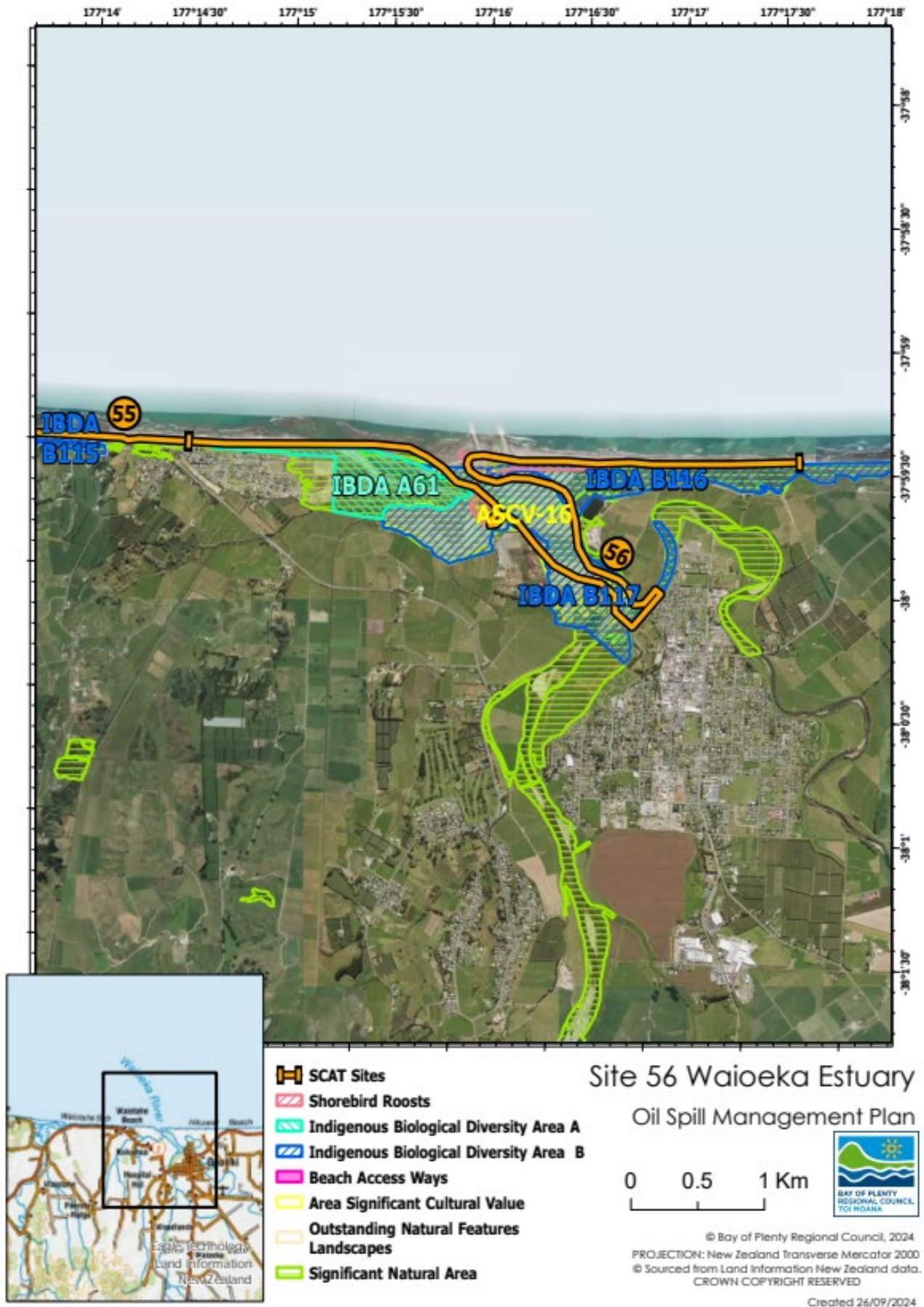
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up
On water Recovery	Medium		Possible off-shore with ORV or similar but weather may prohibit
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider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



Site 56	Waioeka Estuary (Opotiki Harbour)		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises of a riverine estuary at the mouth of the Waioeka and Otara Rivers, which has recently undergone development with a new entrance between two sea walls allowing larger ship access to the Opotiki wharfs. The site has significant salt-marsh habitat partially protected by a flood gate.</p>			
<p><b>Foreshore type/environmental value</b></p>	<p>Open water in channel, foreshore vegetation, saltmarsh, mud and sand flats</p> <p>The coastal marine area is identified as an area of Significant Cultural Value (ASCV 16)</p> <p>Indigenous Biological Diversity Area A61, B117, B116</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 41 Opotiki</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>	
<p>Segments: EBOP 00030, EBOP 00040, EBOP R 00030</p>			
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Sand spit has nesting New Zealand dotterels (tuturiwhatu) (4-5 pairs)</li> <li>• Huntress Creek birds reported: australasian bittern (matuku hūrepo), banded dotterel (tuturiwhatu), pied shag (karuhiruhi), North Island fernbird (mātātā), variable oystercatcher (tōrea pango), marsh crake (koitareke), banded rail (kataitai), black shag (māpunga), little black shag (kawau tūī), little shag (kawau paka), north island weka.</li> <li>• Usually strong outflow of water from the river</li> <li>• The estuary is a migratory pathway for indigenous freshwater fish</li> <li>• Whitebaiting (spawning March-April)</li> <li>• Cultural sites: Urupa in sand dunes on western side of mouth</li> </ul>			
<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• A boom may be erected at the entrance of the estuary away from rough seas in order to contain the oil and prevent it spreading throughout the estuary. This could be constructed between the two harbour entrance groynes. Booms may have to be set to account for any current at the entrance of the estuary.</li> <li>• Limit oil entering the western lagoon through protective barrier and blocking holes in floodgate</li> <li>• Capture oil on the south-western intertidal and clean this area to limit the volume of oil in the estuary</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>			
<p><b>Access</b></p> <p>Access to the entrance of the estuary is via SH 35. Good access on eastern side through locked gate to sewerage treatment plant (contact ODC for access).</p> <p>Access to the wharf area is indicated on the topographical map at the end of Wharf Street. There is a boat launching ramp at the wharf. Access to the entrance of the estuary is via 4WD along the beach from Snells Road on the east side of the river.</p>			

**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 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.



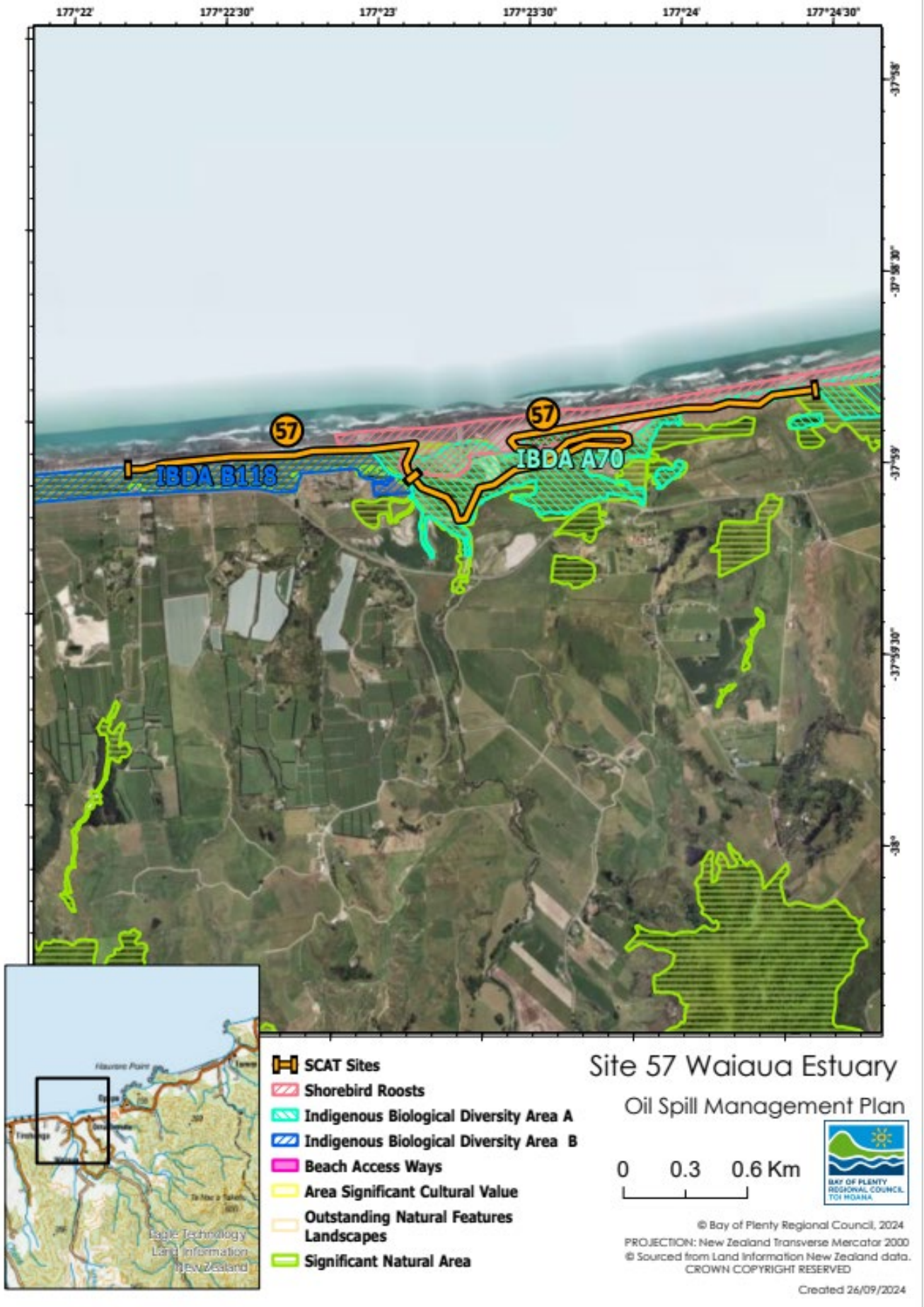
Site 57	Waiaua Estuary	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>This site comprises bar-built estuary with a highly mobile mouth at Omarumutu. A sandbar encloses the areas of significant salt-marsh habitat - Tirohanga Dunes and wetland.</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Lagoon, Shorebird feeding areas, Open water in channel, saltmarsh Fish spawning Indigenous Biological Diversity Area A70, B118</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BE 41 Ōpōtiki</p>	<p><b>Chart Number</b> NZ 542</p>
<p><b>Segments:</b> EBOP 00080, EBOP 00090</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Sand spit has nesting New Zealand dotterels (tuturiwhatu) (12) and nesting variable oystercatcher (tōrea pango)</li> <li>• Australasian bittern (matuku hūrepo), weka, white-faced heron (matuku-moana), banded dotterel (tuturiwhatu), bush falcon (karearea), Caspian tern (taranui), reef heron (matuku moana), North Island fernbird (mātātā), pied stilt (poaka).</li> <li>• Feeding estuarine birds</li> <li>• Usually strong outflow of water from the river</li> <li>• White baiting (spawning March-April)</li> <li>• Migratory pathway and habitat for native freshwater fish</li> <li>• Lagoon behind spit to east</li> <li>• Saltmarsh vegetation in lagoon</li> <li>• Bird sanctuary on ocean side of spit for shore nesting birds</li> <li>• Beach has gravel sized particles</li> <li>• Cultural sites: Urupa in sand dunes on western side of mouth</li> </ul>		
<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat and whitebait spawning areas.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Limit oil entering the eastern lagoon through protective barrier/booming</li> <li>• Capture oil on the north-western sandy intertidal and clean this area to limit the volume of oil in the estuary</li> <li>• Shoreline clean-up along the ocean beach on both sides of the mouth of the estuary</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• Priority clean-up of spit entrances to limit remobilisation of oil into estuary (See STM for Sandy Beaches Shoreline Clean-up)</li> </ul>		

**Access**

Access to the entrance of the estuary is via SH 35: track access to the west; beach access from Opape to the east.

**Preferred Response Option Matrix**

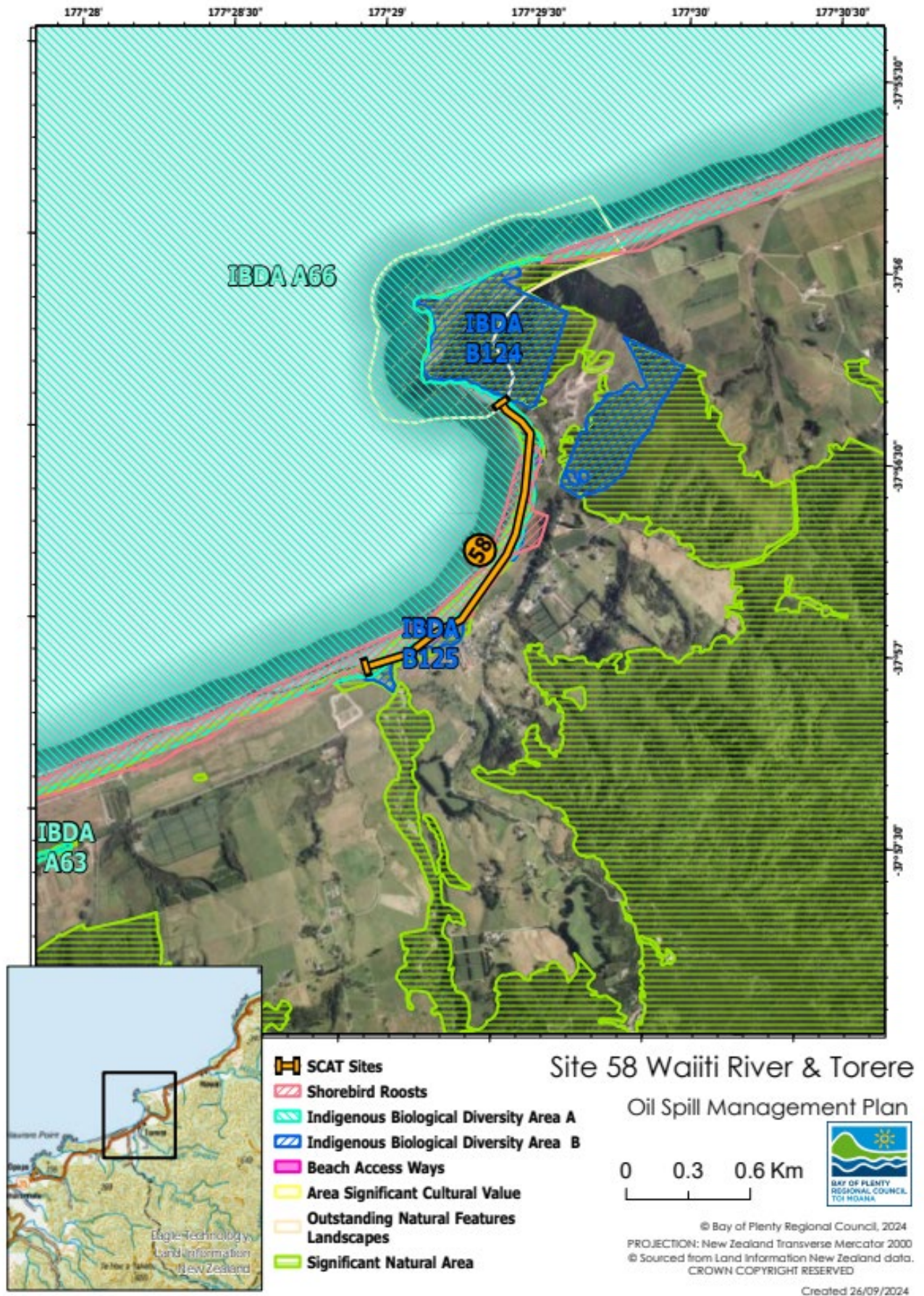
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up
On water Recovery	Medium		Possible off-shore with ORV or similar but weather and location may prohibit
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	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.



Site 58	Waiiti River and Tōrere		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site includes two river mouths, one either side of Tōrere township with water crossing the ocean beach into estuary at higher tidal states. This region of coastline is highly mobile.</p> <p>1 To the south-west: Waiiti is a small river that joins at the mouth of the Tōrere Stream usually cut off from the beach at low tide forming a small lagoon behind the spit.</p> <p>2 To the north-east: Tōrere lagoon exits at small river mouth at the eastern end of the beach, with the narrow lagoon extending west towards Tōrere.</p> <p>Pehitairi Point is identified as an Outstanding Natural Feature and Landscapes (ONFL 28)</p>			
<b>Foreshore type</b>	Steep pebble/cobble beach, Lagoon, riparian vegetation, river Indigenous Biological Diversity Area A66, B125		
<b>Map sheets</b>	<b>NZ Topo 50</b> BD 43 Ruakokore	<b>Chart Number</b> NZ 542	
<b>Segments: EBOP 00150</b>			
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Tōrere Rivermouth: Shore birds including New Zealand dotterel (tuturiwhatu)</li> <li>• Tōrere lagoon: Amenity value</li> <li>• Open marine area only snapper spawning ground in Bay of Plenty region. 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</li> <li>• Tōrere rivermouth is a habitat and migratory pathway for indigenous freshwater fish</li> </ul> <p><b>Both Waiiti and Torere lagoon:</b></p> <ul style="list-style-type: none"> <li>• Kahawai fishery</li> <li>• Cultural sites: including kaimoana</li> </ul>			
<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal habitat.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Consider entrance closure at incoming tides and release river water when required (feasibility dependent on river flow)</li> <li>• Consider collection and recovery near river mouth</li> <li>• Booming near each mouth to prevent oil entering connecting channel</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection team</li> </ul>			
<p><b>Access</b></p> <p>1 Tōrere River: Beach access is from state Highway 35 south-west of Tōrere township</p> <p>2 Torere Lagoon: Access road just north-east of Tōrere township</p>			

**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



Site 59	Motu River	Risk ranking: 2
<p><b>DESCRIPTION</b></p> <p>Site of tidal braided river mouth. Highly active river mouth with sand bar enclosing lagoon and saltmarsh.</p> <p>Motu River mouth is identified as an Outstanding Natural Feature and Landscapes (ONFL 32).</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>River mouth, saltmarsh, Fishery, Lagoon.</p> <p>All shore segments have “habitat value”.</p> <p>Indigenous Biological Diversity Area A66</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BE 42 Houputu</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments: EBOP R 00200</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• New Zealand dotterel (tuturiwhatu) (non 2011-11-05)</li> <li>• Some gulls, oystercatchers breeding on beach at mouth</li> <li>• Fish breeding location – nationally significant snapper spawning area. 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</li> <li>• Kaimoana</li> </ul> <p>Cultural sites:</p> <ul style="list-style-type: none"> <li>• Culturally significant kahawai fishery (December)</li> </ul>		
<p><b>Notes</b></p> <p>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.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Limit oil entering the southern lagoon and saltmarsh through protective barrier/booming</li> <li>• 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</li> <li>• Notify wildlife team</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		

**Limited Communications**

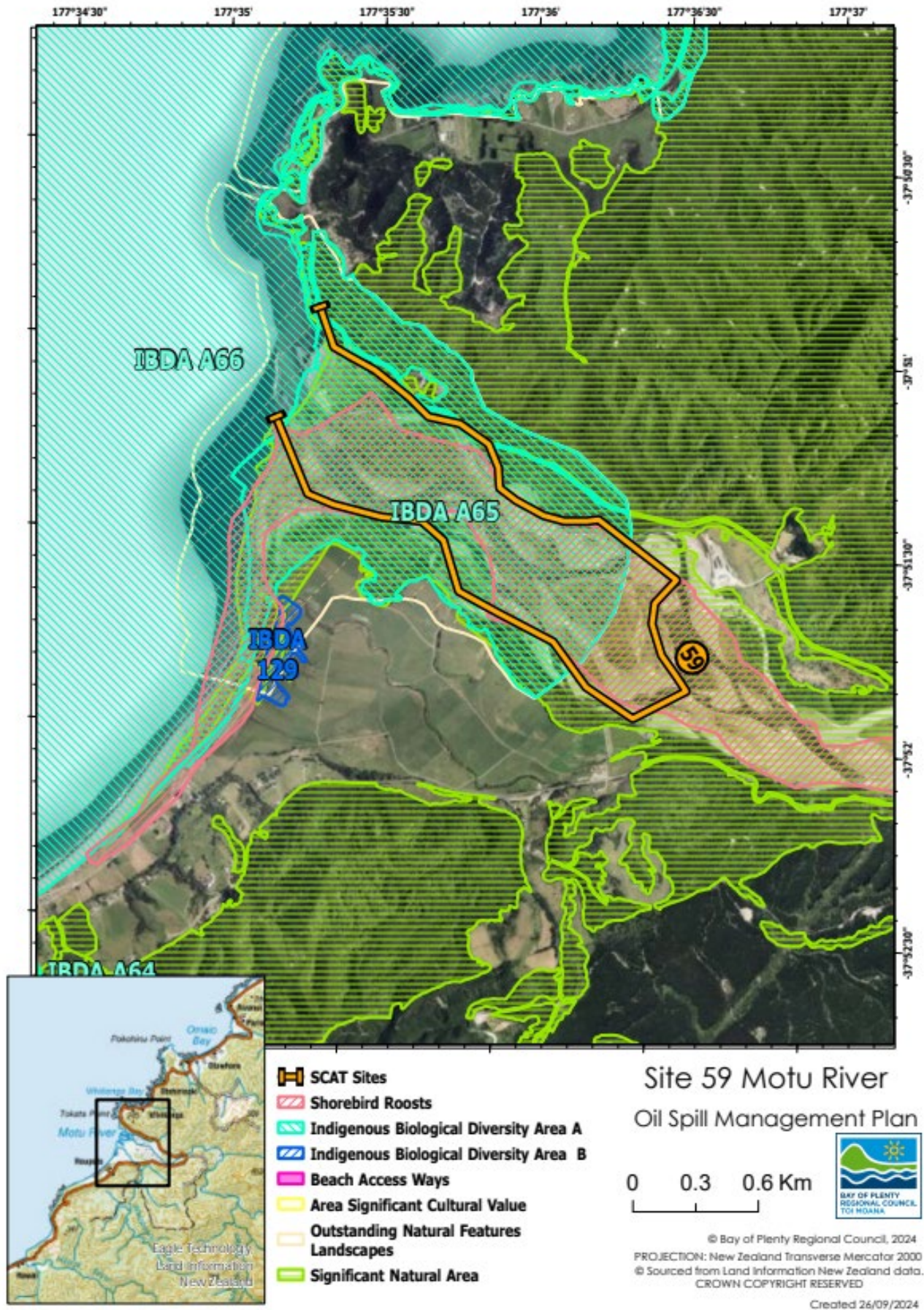
Council R.T may be patchy in the Motu Valley but good west of this area, no Marine VHF close to shore unless the On Scene Commander operates a handheld marine set, telephone from local residents, cell phone from SH 35 high up on the east side from the lookout at the top of the road.

**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**

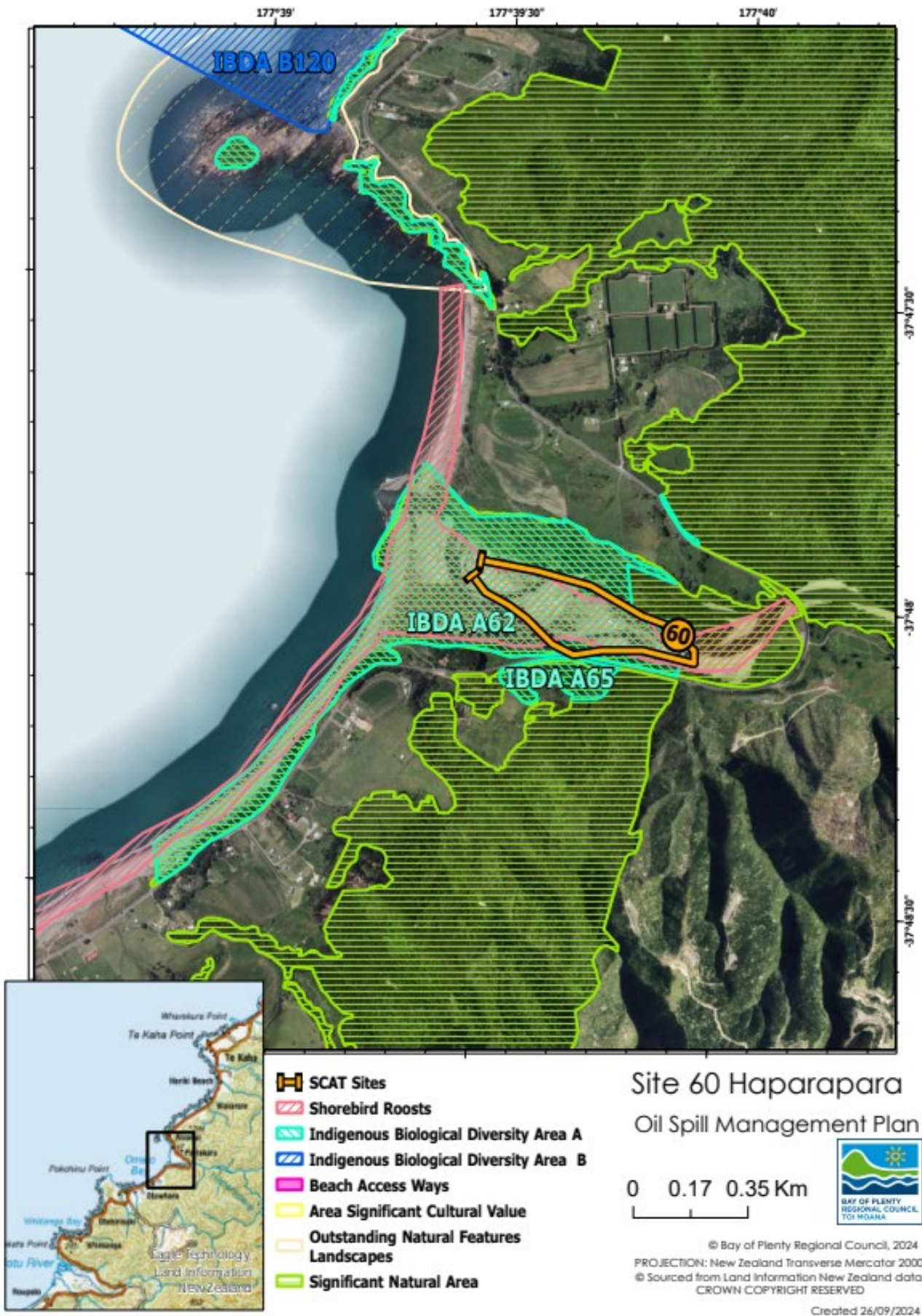
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up
On water Recovery	Medium		Possible off-shore with ORV or similar but weather and location may prohibit
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	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.



Site 60	Haparapara	Risk ranking: 3
<p><b>DESCRIPTION</b></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>		
<p><b>Foreshore type</b></p>	<p>Lagoon, Open water in channel, saltmarsh Indigenous Biological Diversity Area A62</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD 42 Te Kaha</p>	<p><b>Chart Number</b> NZ 542</p>
<p><b>Segments:</b> EBOP R 00230</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Potential for: banded dotterel (tuturiwhatu), New Zealand dotterel (tuturiwhatu), weka, pied shag (karuhiruhi), variable oystercatcher (tōrea pango), banded rail (kataitai).</li> <li>• Shorebird feeding areas</li> <li>• Possible shell collecting sites</li> <li>• Migratory pathway and habitat for native freshwater fish</li> <li>• Cultural sites</li> </ul>		
<p><b>Notes</b></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><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Consider containment and recovery system as close as possible to the mouth, with deflection away from saltmarsh areas</li> <li>• OR bulldoze entrance closed at high tides and release river water when required to refresh water</li> <li>• Notify wildlife team</li> <li>• Discuss pre-cleanup of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <p>State Highway 35. Access possible from tracks to north and south of estuary</p>		

**Preferred Response Option Matrix**

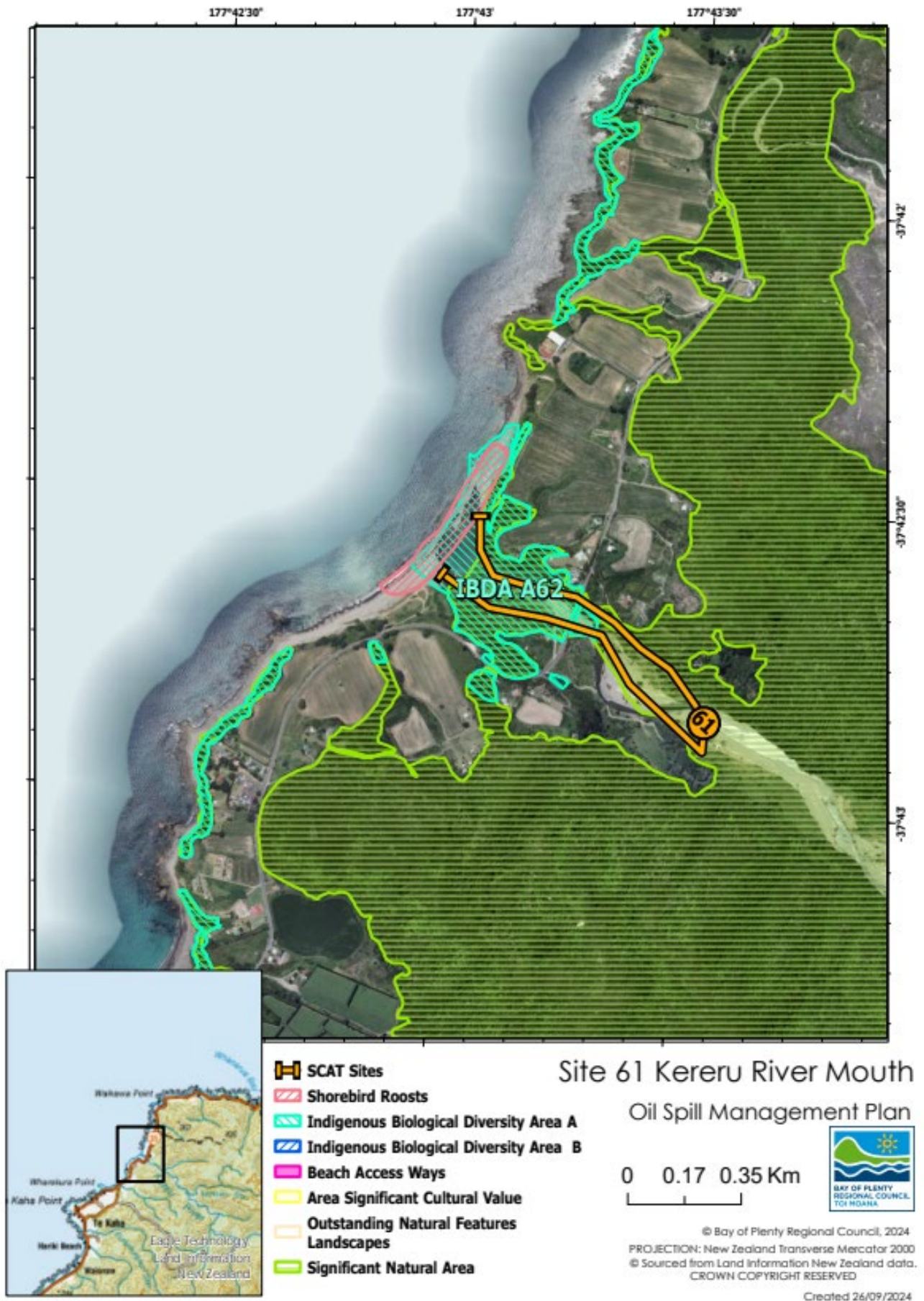
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up. Bulldoze entrance
On water Recovery	Medium		Logistics an issue
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for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



Site 61	Kereu Rivermouth	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site is a sand spit enclosed estuary of the Kereu River; generally a low flow river with a small mouth/entrance that is open at higher tide states, forming a lagoon behind the spit.</p> <p>Sand spits and beaches are pebble/cobble.</p>		
<p><b>Foreshore type</b></p>	<p>Lagoon, pebble/cobble sand spit and beaches, riparian vegetation Indigenous Biological Diversity Area 62</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD 42 Te Kaha</p>	<p><b>Chart Number</b> NZ 542</p>
<p><b>Segments:</b> EBOP R 00280</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• A lagoon area is enclosed behind the sand-spit</li> <li>• Potential for: banded dotterel (tuturiwhatu), New Zealand dotterel (tuturiwhatu), weka, pied shag (karuhiruhi), variable oystercatcher (tōrea pango), banded rail (kataitai).</li> <li>• Migratory pathway and habitat for native freshwater fish</li> </ul>		
<p><b>Notes</b></p> <p>Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm intertidal habitat</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Consider collection and recovery on sandy areas (near road bridge or southern side of mouth)</li> <li>• Bulldoze entrance closed at high tides and release river water when required (feasibility dependent on river flow)</li> <li>• Clean-up of shore on north side of lagoon</li> <li>• Priority clean-up of entrance sides to limit remobilisation of oil into estuary</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></p> <ul style="list-style-type: none"> <li>• State Highway 35</li> <li>• Access from the north is across farmland</li> <li>• Access from the south is by access roads, one next to road bridge</li> </ul>		

**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.



Site 62	Raukokore River	Risk ranking: 3
<p><b>DESCRIPTION</b></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. This site forms part of the Raukōkore Mataitai reserve in the coastal marine area, and the Raukokore River mouth is identified as an Outstanding Natural Feature and Landscape (ONFL 36).</p> <p>Sand spits and beaches are pebble/cobble.</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Saltmarsh, Lagoon, All shore segments have “habitat value”</p> <p>The Raukōkore marine area is part of the Mataitai reserve, and an Area of Significant Cultural Value (ASCV 17)</p> <p>Indigenous Biological Diversity Area A67</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD 43 Ruakokore</p>	<p><b>Chart Number</b> NZ 542</p>
<p><b>Segments:</b> EBOP R 00320</p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Banded dotterel (pohowera) on river flats, Caspian tern (taranui), New Zealand dotterel (tuturiwhatu), pied stilt (poaka), variable oystercatcher (tōrea pango).</li> <li>• Shorebird feeding areas</li> <li>• River is habitat and migratory pathway for indigenous freshwater fish</li> <li>• Saltmarsh and reeds</li> <li>• Braided riverbed</li> <li>• Cultural sites</li> </ul>		
<p><b>Notes</b></p> <p>The estuary at the mouth of the river is a sensitive area, particularly the north-eastern lagoon. Oil that does enter the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat.</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Consider protective booming of north-eastern saltmarsh and lagoon</li> <li>• Bulldoze entrance closed at high tides and release river water when required to refresh water.</li> <li>• Shoreline clean-up along the ocean beach</li> <li>• Notify wildlife team</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<p><b>Access</b></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**

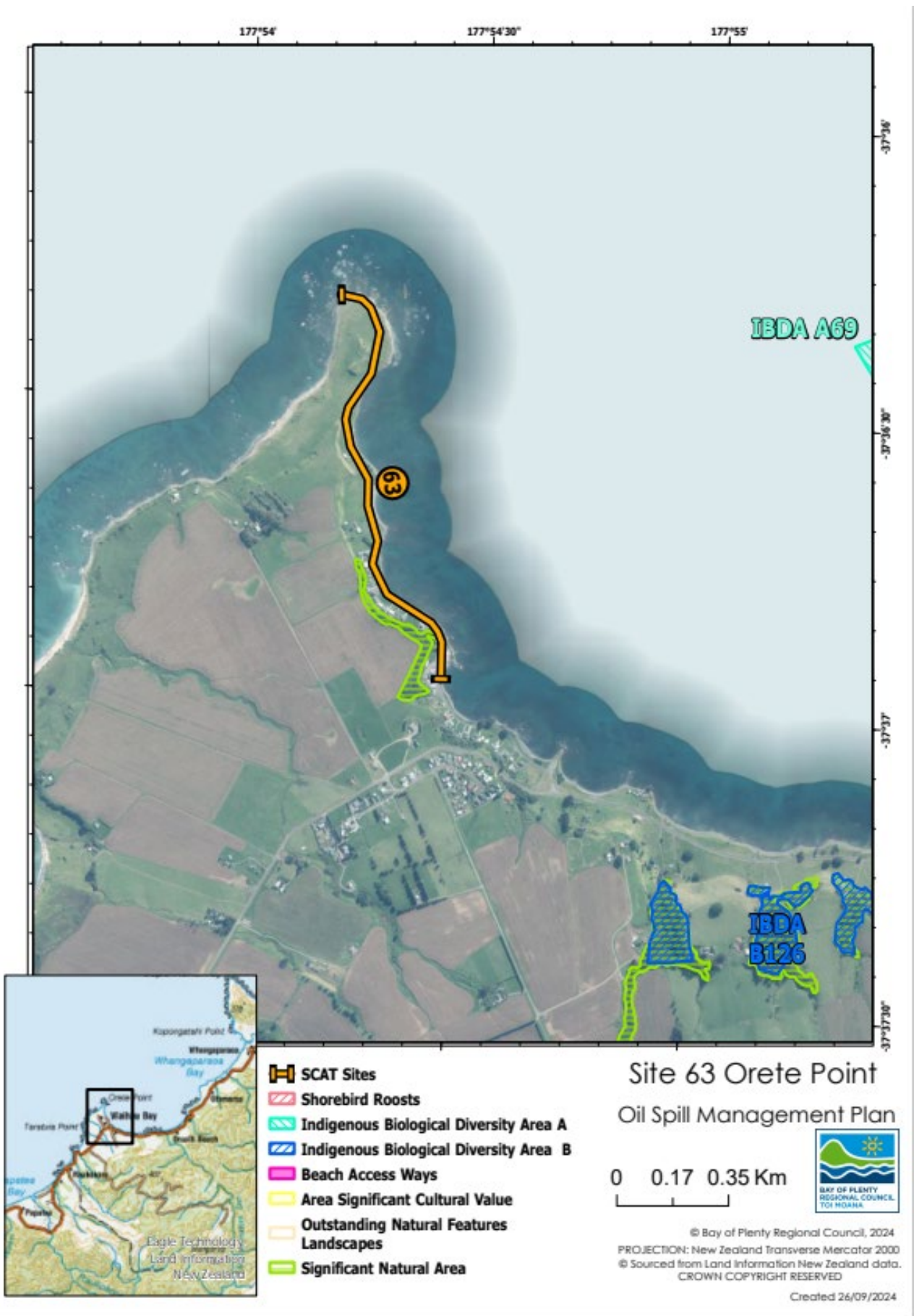
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booms possible to enhance shoreline clean-up. Bulldoze entrance
On water Recovery	Medium		Logistics an issue
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Consider dispersant guidelines for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



Site 63	Orete Point	Risk ranking: 3
<b>DESCRIPTION</b> The site is located between the Waihou Bay Wharf and Orete Point. The site comprises the inter-tidal platform which has been identified as a significant geological feature.		
<b>Foreshore type/environmental value</b>	Intertidal rock platform Important habitat for flora and fauna	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD 43 Ruakokore	<b>Chart Number</b> NZ 542
<b>Segments:</b>		
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>Cultural sites – Kaimoana</li> </ul>		
<b>Notes</b> <ul style="list-style-type: none"> <li>Where possible, oil should be prevented entering the sensitive areas. Prevention of oil reaching the platforms may best be achieved by the use of dispersants offshore</li> <li>Limited communication</li> </ul>		
<b>Access</b> Road access is via SH 35. The nearest boat launching ramp is Waihou Bay adjacent to the Post Office Vehicle access to the point is restricted to private access. Permission from the owner would be required to obtain access to the Point		

**Preferred Response Option Matrix**

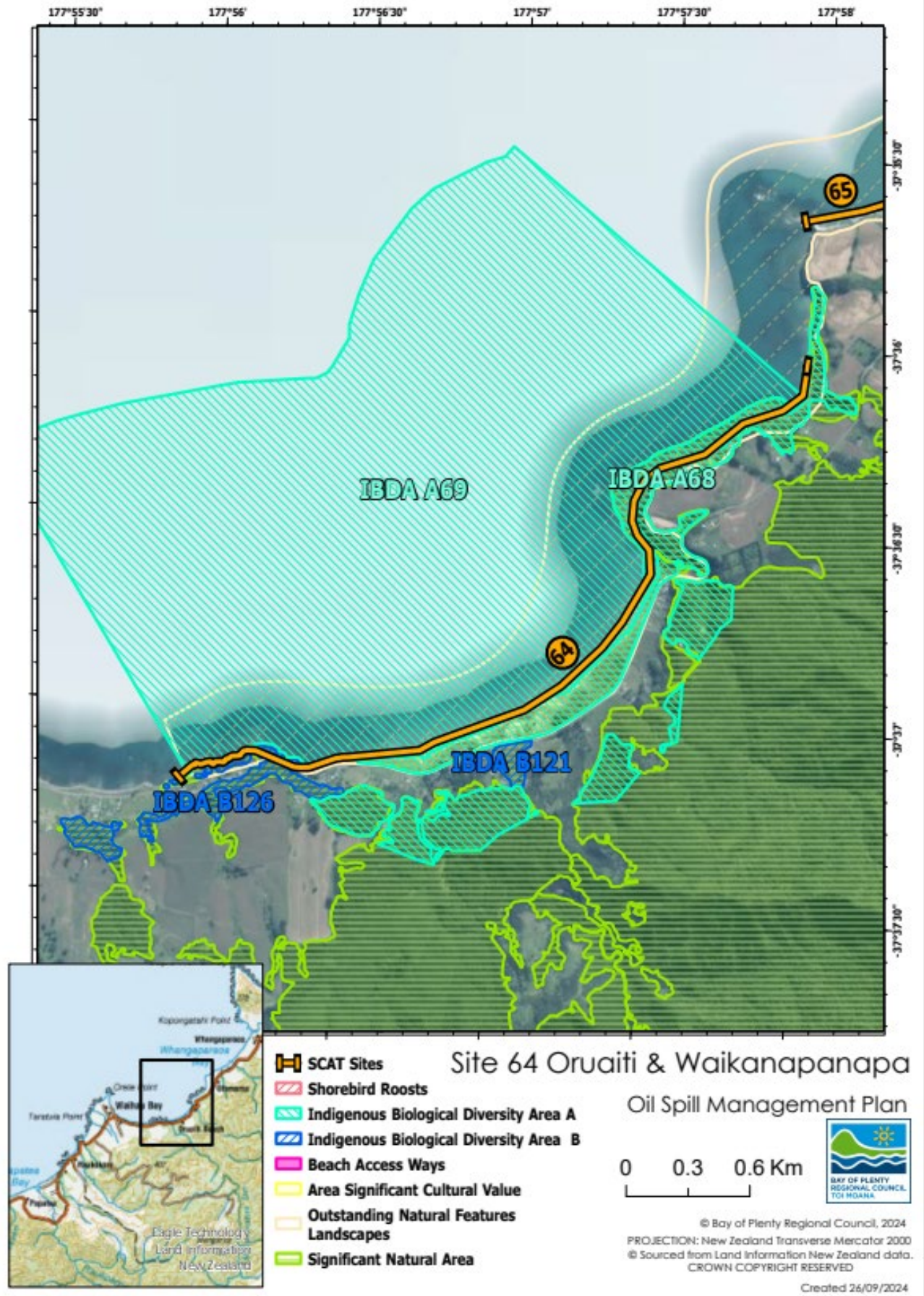
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Shoreline not conducive to this
On water Recovery	Medium		Logistics an issue
Dispersant Application	High	Requires escalation to Tier 3 and MNZ approval	Off-shore use good option
Shoreline Clean-up	High		Rocky tidal foreshore area
Natural Recovery	Medium		Natural recovery may be required due to high intensity coastline



Site 64	Oruatiti and Waikanapanapa	Risk ranking: 3
<b>DESCRIPTION</b>		
The site is located to the east of Waihou Bay. The site comprises of wave cut platforms which have significant coastal landscape values. Oruaiti Beach the offshore rocks and Waikanapanapa cliffs are identified as an Outstanding Natural Feature and Landscape (ONFL 37). It is the only example of intertidal and subtidal area on a Miocene age soft rock substrate in the Bay of Plenty.		
<b>Foreshore type/environmental value</b>	Intertidal and subtidal rock platform important habitat for flora and fauna Indigenous Biological Diversity Area A69, A68	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD 43 Ruakokore	<b>Chart Number</b> NZ 542
<b>Segments:</b>		
<b>At Risk Resources</b>		
<ul style="list-style-type: none"> <li>• banded dotterel (tuturiwhatu) New Zealand dotterel (tuturiwhatu), pied shag (karuhiruhi)</li> <li>• The soft rock golden limpet in the intertidal area is at its northern limit.</li> <li>• Intertidal and subtidal rocky shore species support important (and unique) marine communities.</li> <li>• Cultural sites – Kaimoana</li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>• Where possible, oil should be prevented entering the sensitive areas. Prevention of oil reaching the platforms may best be achieved by the use of dispersants offshore</li> <li>• These platforms would trap any oil that is washed onto them in the pools formed by the platforms</li> <li>• Limited communications</li> </ul>		
<b>Access</b>		
Road access to the sites is via SH 35 as indicated on the topographical map. The nearest boat launching ramp is Waihou Bay.		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Shoreline not conducive to this
On water Recovery	Medium		Logistics an issue
Dispersant Application	High	Requires escalation to Tier 3 and MNZ approval	Off-shore use good option
Shoreline Clean-up	High		Rocky tidal foreshore area
Natural Recovery	Medium		Natural recovery may be required due to high intensity coastline



Site 65	Whangaparaoa River	Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>This site comprises bar-built estuary with a mobile mouth. A sandbar encloses areas of significant saltmarsh and open water lagoon.</p> <p>The Whangaparaoa Dunefields and wetlands are also an Outstanding Natural Feature and Landscape (ONFL 38).</p>		
<p><b>Foreshore type</b></p>	<p>Lagoon, shorebird feeding areas, saltmarsh, open water in channel, exposed rocky foreshore.</p> <p>Indigenous Biological Diversity Area A73</p>	
<p><b>Map sheets</b></p>	<p><b>NZTopo 50</b></p> <p>BD 43 Ruakokore</p>	<p><b>Chart Number</b></p> <p>NZ 542</p>
<p><b>Segments: EBOP-00360, EBOPR-00360</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Numerous at risk and threatened bird species including: New Zealand dotterels (tuturiwhatu, banded dotterel (pohowera), australasian bittern (matuku hūrepo), North Island fernbird (mātātā), pied stilt (poaka), variable oystercatcher (tōrea pango), spotless crane (pūweto), black shag (māpunga) and pied cormorant (kāruhiruhi) colony nesting at river mouth in trees</li> <li>• Lagoon behind spit may be disconnected from river</li> <li>• Usually good outflow of water from the river</li> <li>• River provides habitat and migratory pathways for indigenous freshwater fish</li> <li>• Saltmarsh vegetation along river</li> <li>• Saltmarsh vegetation in lagoon and tidal areas behind spit</li> <li>• Beach has pebble - cobble sized particles</li> <li>• Mussel gathering on exposed rocky outcrop east of spit</li> <li>• Cultural sites</li> </ul>		
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Oil that enters the low energy systems of this estuary will remain for some time. Oil will harm saltmarsh habitat and New Zealand and banded dotterel feeding areas</li> <li>• Oil may wash over into the estuary during a storm but is unlikely to move up with the tide due to the net outflow of water from the river</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Limit the oil entering the saltmarsh habitat and lagoon to the south through protective barrier/booming</li> <li>• Consider pre-clean-up of intertidal debris - tidal range specific</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• Pre-emptive clean-up of log debris (if deemed necessary) in intertidal area of southern spit</li> <li>• Priority clean-up of spit entrances to limit remobilisation of oil into estuary</li> </ul>		

**Access**

Access to the entrance of the estuary is via SH 35: track access to the south from post office on track through sand dunes: access to the north through private farmland (Jim Kemp).

Vehicle access from the end of the public road around to the mouth of the estuary is restricted to 4WD only.

**Preferred Response Option Matrix**

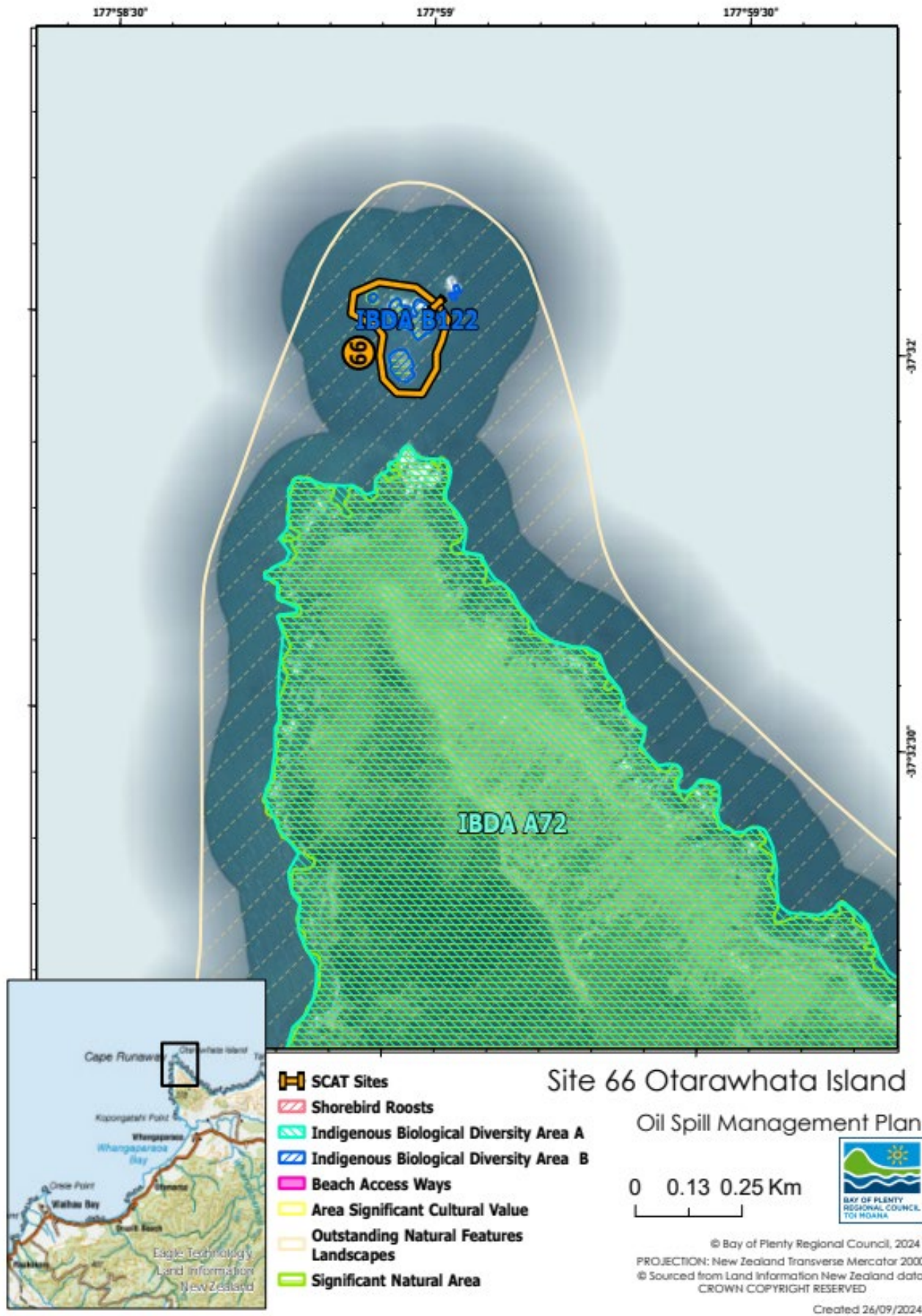
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming an option, possible closure of river mouth depending on river flows
On water Recovery	High		Logistics and weather may prohibit this
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	Off-shore use of dispersants may be considered
Shoreline Clean-up	High		Reasonable cleanup options but labour intensive, pre-clean required
Natural Recovery	Medium		Can be a high intensive coastline, suitable to some natural recovery



Site 66	Otarawhata Island	Risk ranking: 3
<b>DESCRIPTION</b> This small island is located just off the tip of Cape Runaway.		
<b>Foreshore type</b>	Exposed rocky foreshore Indigenous Biological Diversity Area B122	
<b>Map sheets</b>	<b>NZTopo 50</b> BD 43 Ruakokore	<b>Chart Number</b> NZ 542
<b>Segments:</b>		
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>• Special wildlife values</li> <li>• White fronted tern (tara) nesting season, which is from August to January</li> </ul>		
<b>Notes</b> <ul style="list-style-type: none"> <li>• Limited communications</li> </ul>		
<b>Actions</b> <ul style="list-style-type: none"> <li>• Activation of oiled wildlife response collection teams if required</li> </ul>		
<b>Access</b> Via boat. There are boat launching facilities at Waihau Bay		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	Low		Not possible due to location
On water Recovery	Low		Logistic and weather a negative
Dispersant Application	High	Requires escalation to Tier 3 and MNZ approval	Use dispersant guidelines but good possibilities for this option
Shoreline Clean-up	Low		Logistically challenging
Natural Recovery	Medium		High intensive coastal area



Site 67	Whakaari (White Island)/ Volkner Rocks		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>White Island/Whakaari is an active and privately owned volcano that lies 48 km off New Zealand's Bay of Plenty coastline. It is very exposed to ocean and weather conditions but small boats can obtain reasonable shelter in the lee of the island. The shoreline is mostly rocky and access from the sea is easy only at the south-southeast point. Due to the risk of volcanic eruption and the nature of the shoreline the preferred response action is natural recovery. A primary consideration of all operations within the vicinity of the island will be the alert level at the time. Following the 2019 eruption of the crater all access to the island is tightly restricted with onshore commercial tourist visits suspended indefinitely. Oil spill response operations, including oiled wildlife response, on the island or its near vicinity will require a high level of cross agency cooperation, co-ordination and permission, as well as detailed operational, health and safety planning, monitoring and evacuation procedures. Proposed oil spill response operations will therefore draw on the experience and support of Civil Defence Emergency Management (CDEM) and specialist advice to help ensure that this work can be undertaken as safely as possible. It will also be necessary to sensitively manage responder welfare and anxiety given the active status of the volcano and tragic events of 2019.</p> <p>Whakaari and the associated subtidal and surface island are identified as Outstanding Natural Feature and Landscapes (ONFL 46)</p>			
<b>Foreshore type/environmental value</b>	<p>Exposed rocky foreshore, exposed bedrock cliffs, bedrock platforms, boulder beaches</p> <p>Mix fine grained/gravel/boulder beaches (south-east)</p> <p>Whakaari and Te Paepae Aotea is identified as an Area of Significant Cultural Value (ASCV 14)</p> <p>Te Paepae Aotea is a Department of Conservation marine reserve</p> <p>Indigenous Biological Diversity Area A85, A86, A82</p>		
<b>Map sheet</b>	<b>NZ Topo 50</b> BC40 Whakaari/White Island	<b>Chart Number</b> NZ5423	
<b>Segments</b>	<b>TAU-00641, TAU-00611</b>		
<p><b>At Risk Resources</b></p> <p><b>White Island</b></p> <ul style="list-style-type: none"> <li>• Australasian gannet (tākapu) (breeding Jul–Jan), grey-faced petrel (ōi) (breeding Jun–Jan), Little blue penguins (kororā) and possibly other sea bird species nest on the island</li> <li>• The island gannet population is one of the largest colonies in New Zealand. Colonies form from late July and the breeding population steadily increases reaching a peak by mid-November</li> <li>• Other bird species noted include: white-fronted terns (tara)</li> <li>• Fur seals (kekeno), common (aihe) and bottlenose (terehu) dolphins, orca (kera wēra) and other whale species are present in the waters around the island</li> </ul> <p><b>Volkner</b></p> <ul style="list-style-type: none"> <li>• The Volkner Rock is one of three breeding areas in New Zealand for the grey ternlet (breeding Aug–Feb), white fronted tern (tara), short-tailed shearwaters and Buller's shearwaters (tītī), Black-backed gull (karoro).</li> <li>• Any responders attending on the island must be aware of other culturally important terrestrial species</li> <li>• Unique geothermal ecosystems and species assemblages in the marine area.</li> </ul>			
<p><b>Notes</b></p> <p>Oil that enters the high energy systems of this Island will naturally weather. Oil will harm sea birds</p>			

entering and exiting the sea.

#### Actions

- Containment and recovery of oil at sea to reduce amount that could impact the shoreline
- Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas. In addition, any contaminated cleaning equipment, water, solvents, etc. should be removed from the Island
- Shoreline clean-up along beaches south and east to be informed by SCAT/aerial observations
- Shoreline clean-up when sea state and tidal cycle allows access
- Notify wildlife team of potential for oiling
- Consider pre-emptive capture of wildlife generally
- Activation of oiled wildlife response collection teams if required
- The island is privately owned
- Marine radio channel 18 or 60 and cell phones provide communication to the mainland.

#### For current Volcano Status contact GNS:

- Duty Scientist (for volcano status) 07 374 8211

#### Access

The Buttle family own the island but access permission will require the involvement of multiple agencies.

The main landing is at Crater (Awapuia) Bay on the SSE coast where there is an old wharf. Around Troup Head to the east are two more small gravelly beaches where landings are straight forward during normal westerly seas. Other beaches exist on the northwest, southwest and east coasts but waves and swells normally make landings difficult and rock-fall hazards exist above them.

Access other than by boat is via helicopter that lands inside the crater near the old factory at the southeast end. GNS Science sometimes land near their monitoring sites on the crater rim. There are many other helicopter landing possibilities although some are near gannet colonies posing risks to the aircraft and the birds.

It is generally not easy to walk around between flat areas on the outer slopes of the island. The terrain has many step sided gullies, some very exposed to rock-falls. Generally, depending on the alert level, the risk increases closer to the vent.

*The main hazards are coastal-marine landings and operations, steep cliffy coastline and gullies, and rock-fall. Many of the cliffs at shoreline would be extremely difficult to climb. Terrain on the outer slopes of the volcano is generally steep, although people who are competent and experienced on their feet will be able to traverse many areas, or ascend and descend these slopes ok.*

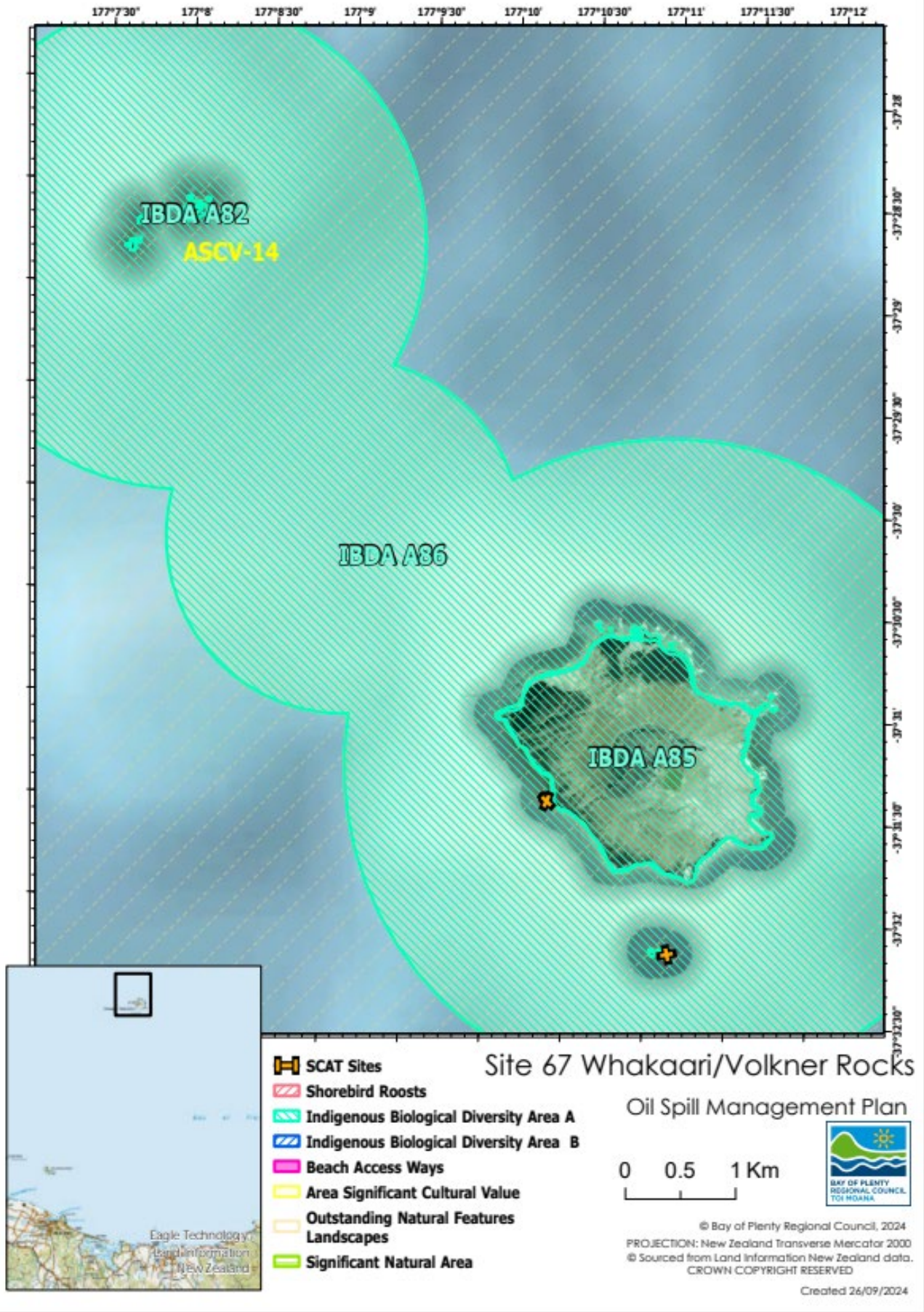
*There will be no need to enter the general crater area of the volcano for this operation unless camping is required (see below).*

*Despite being an active volcano, White Island volcanic hazards need to be mitigated only within a few hundred metres of the lake in its active crater, **unless the volcano status changes** from Level 1. Inside the crater, active fumaroles and other hot and soft areas, crater walls and an acid stream are the main volcanic hazards. Gas is a hazard only within 200 m of the crater or at fumaroles. GNS Science monitor the volcano and may change the Alert Level or issue an Alert Bulletin if seismic or other activity changes significantly.*

*The DOC Safety Plan "Island Management" ID 1083 provides a good guide for risk management. I have marked a hard copy with the main hazards relevant to White Island and emphasised those needing most attention on land. In Hazard 891 Geothermal, I have noted the acid stream in the crater and caution regarding gas when downwind inside the crater. The Duty Scientist at GNS Science (07 374 8211) should be contacted before activities are carried out on shore. More information including up-to-date images of the island can be viewed hourly at [www.geonet.org.nz](http://www.geonet.org.nz). (<http://www.geonet.org.nz/volcano/activity/white-island/>).*

**Preferred Response Option Matrix**

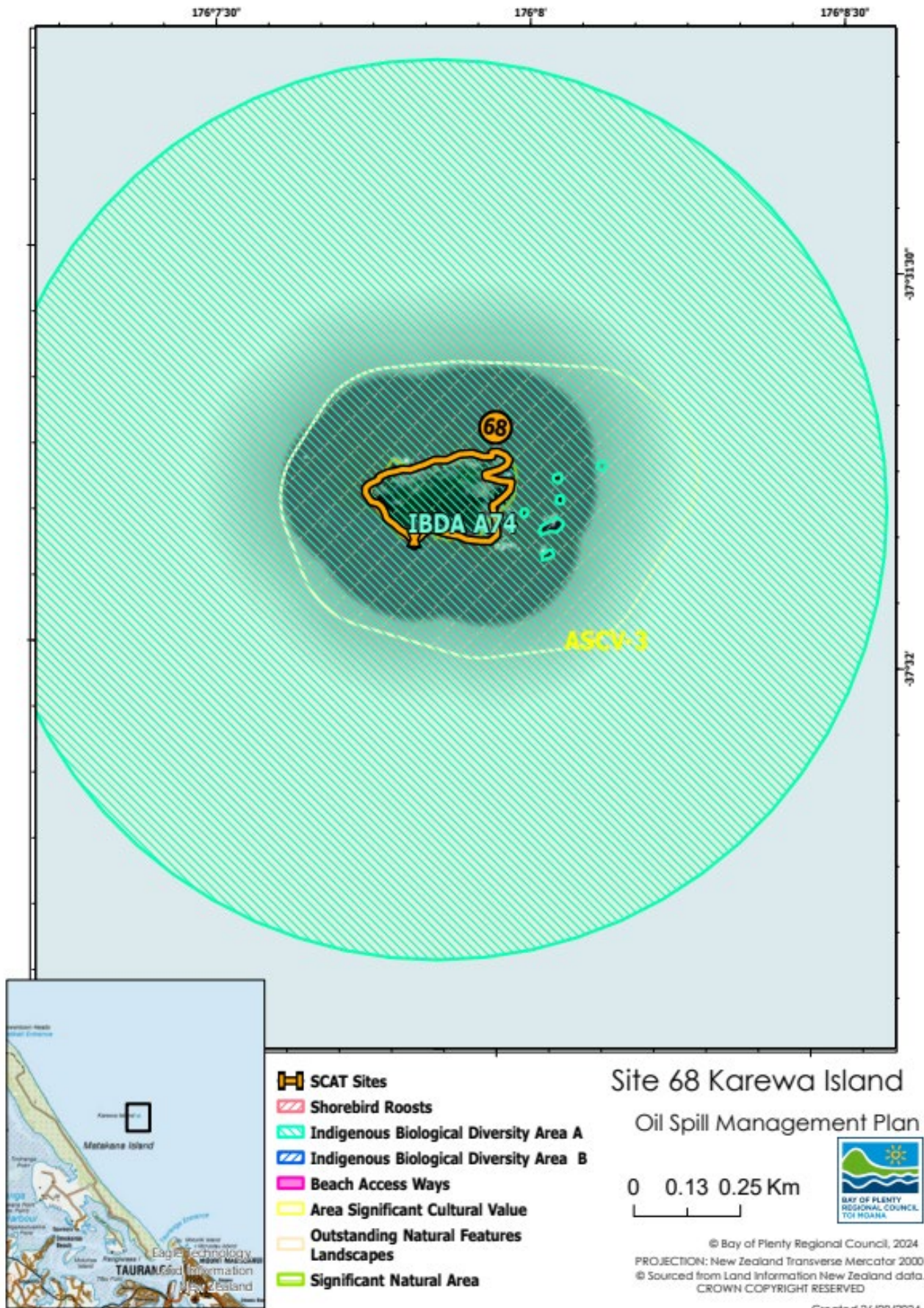
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Requires appropriate large vessels
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Off-shore this may be possible
Shoreline Clean-up	Medium/low		Limited access and steep rocky shores
Natural Recovery	High		High energy coastal environment but refer NEBA



Site 68	Karewa Island	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Karewa Island is a small 3.5 ha island situated approximately 6 km off the coast of Matakana Island. It is covered in Taupata Forest. The island is administered by the Department of Conservation (DoC) in close co-operation with tangata whenua, in recognition of its important cultural values. It is a pest free Wildlife Sanctuary, landing is prohibited without DoC permit.</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>Primarily vertical and sloping bedrock, rocky reef, rock pools, sandy beaches</p> <p>Habitat (shoreline), contact, amenity (dive site).</p> <p>All shore segments have “habitat value”.</p> <p>Karewa Island is identified as an Area of Significant Cultural Value (ASCV 3)</p> <p>Indigenous Biological Diversity Area A74</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BD37 Tauranga</p>	<p><b>Chart Number</b> NZ541; NZ542</p>
<p><b>Segments</b></p>	<p><b>KARE-00010, KARE-00020, KARE-00030</b></p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• High densities of Tuatara that are dependent on the continued productivity of the surrounding marine ecosystems especially the wellbeing of petrels and shearwaters which co-exist with the tuatara</li> <li>• The island is also home to fur seals (kekeno)</li> <li>• The Island is an important breeding area for northern diving petrel (kuaka) (Aug–Feb), flesh-footed shearwaters (toanui) (breeding Nov–May) and grey-faced petrels (ōi)</li> <li>• The island was traditionally a harvest site for tītī (mutton birds) and kai moana, which is abundant on almost all rocky reefs (paua, cray and kina)</li> <li>• It is a very popular dive site and known for the variety of fish that are encountered. In November 1878, the steamer 'Taranaki' ran into Karewa Island. There are remains of the wreck on the northern side of the island, mainly the body of a large boiler from the ship's engine.</li> <li>• There are designated ships anchorages within close proximity of Karewa Island on about the 30 m depth contour line. In event of an unsourced oil spill in the area ships at anchor should not be ruled out as potential sources.</li> </ul>		
<p><b>Notes</b></p> <p>Oil may be difficult to remove from the shoreline especially in rock crevices</p> <p><b>Actions</b></p> <p>Containment and recovery of oil at sea to reduce the amount that could impact the shoreline. Shoreline clean-up when sea state and tidal cycle allows access</p>		
<p><b>Access</b></p> <p>Access by boat, visitors must be accompanied by DoC staff and go through biosecurity checks.</p>		

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		If weather conditions allow
On water Recovery	High		ORV or similar if weather conditions allow
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Off-shore dispersant use possible
Shoreline Clean-up	Medium		Requires permission (DoC)
Natural Recovery	Medium		Due to weather conditions this may become a possibility

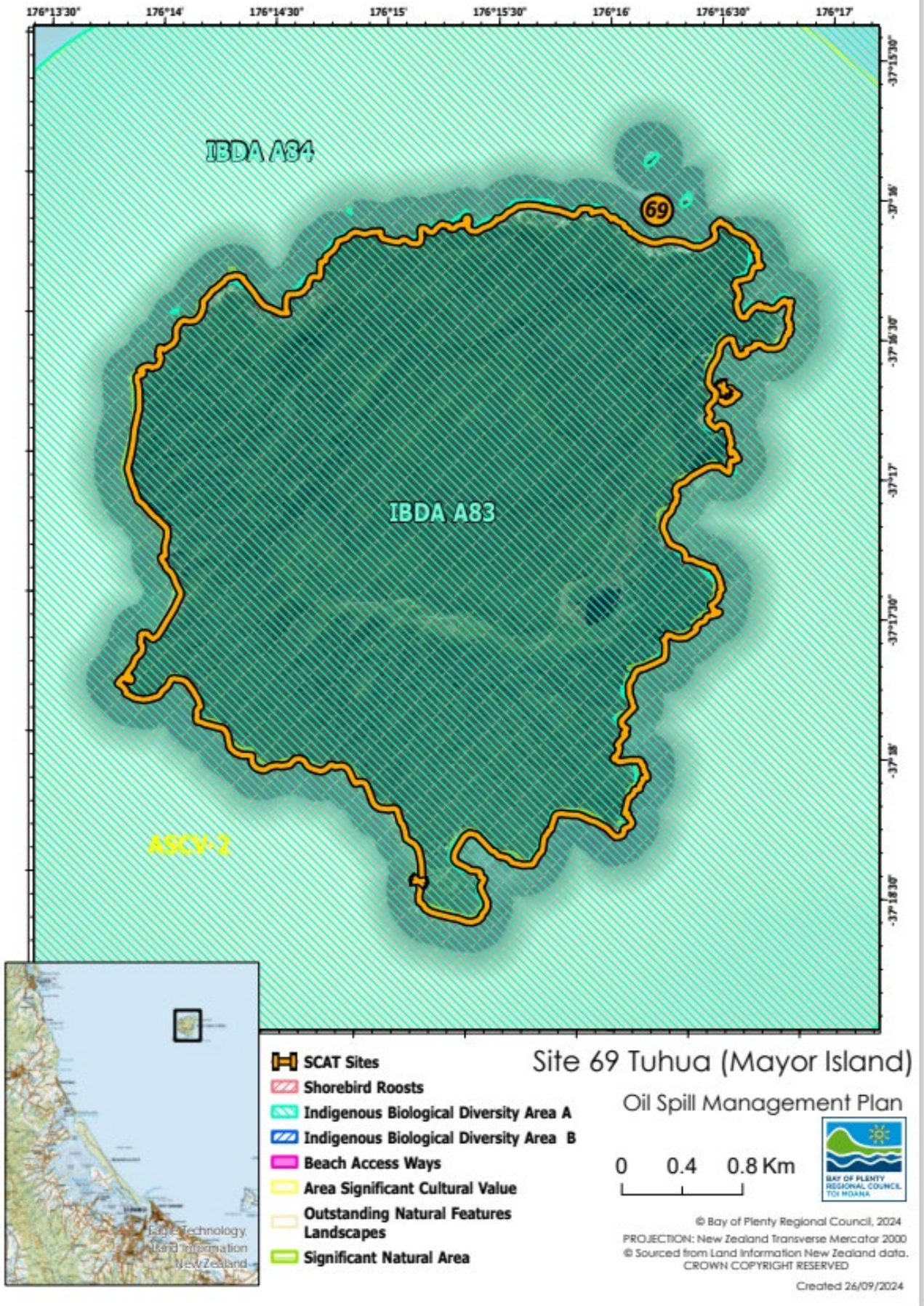


Site 69	Tūhua (Mayor Island)	Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>The island includes a marine reserve at the northern end with regionally significant marine ecosystems in the intertidal and sub tidal habitats. See map attached. These include diverse rocky reef habitats. Large populations of seabirds, mostly threatened or at risk. Marine mammal (fur seal) resting sites.</p> <p>Tūhua including the subtidal landscape features is identified as an Outstanding Natural Feature and Landscape (ONFL 43)</p>		
<p><b>Foreshore type/environmental value</b></p>	<p>The coast of this Island is predominantly cliff face or high relief rocky reef. There are five sandy shores displayed in the attached map marked in blue in South East Bay, Western Bay, North West Bay and Moewai Bay.</p> <p>All shore segments have habitat value.</p> <p>Tūhua is identified as an Area of Significant Cultural Value (ASCV 2) Indigenous Biological Diversity Area A83, A84</p>	
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b> BC37 Mayor Island (Tūhua)</p>	<p><b>Chart Number</b> NZ 541</p>
<p><b>Segments</b></p>	<p><b>MAYO-</b> 00010, 20, by 10s to 180, 185, 190, 200, 210, 220, 230, 240 <b>SANDY BEACHES MAYO-</b>00230 (SE Bay), 10, 40, 70, 90</p>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>Numerous sea birds including: diving petrels, sooty shearwaters (tītī), fluttering shearwaters (pakahā); Red-billed gulls (akiaki), nationally vulnerable, currently nesting on north side of SE Bay (laying, no chicks yet); blue penguins (kororā) in rocky burrows SE Bay and where cobbles and rocks occur on beaches</li> <li>Fur seals (kekeno), three primary locations MAYO-00060, 240, 110, breeding site</li> <li>Tuatara Paretau Point South side</li> <li>Culturally significant geology in the form of obsidian deposits. The whole island is of historic cultural significance to iwi who are the landowners</li> <li>Kaimoana collection site around island (mainly sub tidal fishing for kina, paua and crayfish) and diverse marine ecosystem</li> </ul>		
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>Pest free island, Biosecurity protocols for all visitors.</li> <li>Landing only permitted at Southeast Bay.</li> <li>Southeast Bay is significant in that there is a camping ground there and this is the logistical hub for all operations on the Island</li> <li>Requires consultation with the Department of Conservation and iwi prior to conducting high impact operations in the Marine Reserve Area</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>Due to the high priority of the entire island an immediate on-water response should be activated to reduce the amount of oil that will reach the vicinity of the island. This should be run according to the On-Water Operations Plan</li> <li>Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas. In addition, any contaminated cleaning equipment, water, solvents, etc. should be removed from the Island</li> <li>Any rocky shorelines that can be accessed should be treated as soon as is possible to remove bulk oil (see STM Rocky Shorelines). Once bulk oil is removed shorelines should be left for natural recovery with continual monitoring to ensure progress</li> </ul>		

<ul style="list-style-type: none"> <li>• Bays should be cleaned according to the STM for sandy beaches</li> <li>• Wildlife should respond to collect and treat wildlife according to the Wildlife Plan</li> <li>• Notify wildlife team of potential for oiling</li> <li>• Discuss pre-clean-up of intertidal debris - tidal range specific – with wildlife team</li> <li>• Consider pre-emptive capture of New Zealand dotterel</li> <li>• Consider pre-emptive capture of wildlife generally</li> <li>• Activation of oiled wildlife response collection teams if required</li> <li>• In 2020 a spill kit in a wheelie bin was stationed in South East Bay as a first strike response for a spill from recreational vessels in South East Bay.</li> </ul> <p><b>Iwi contacts for Tūhua</b></p> <ul style="list-style-type: none"> <li>• Tūhua Trust Board Chairperson</li> <li>• Tūhua-based Kaitiaki : 07 579 0580</li> </ul>
<p><b>Access</b></p> <p>Via boat. There are numerous boat launching facilities in the Tauranga Harbour. Southeast Bay is sheltered from most sea conditions except from the south east. DOC local office+64 7 578 7677 has a suitable boat and local knowledge for landing in this area.</p>

**Preferred Response Option Matrix**

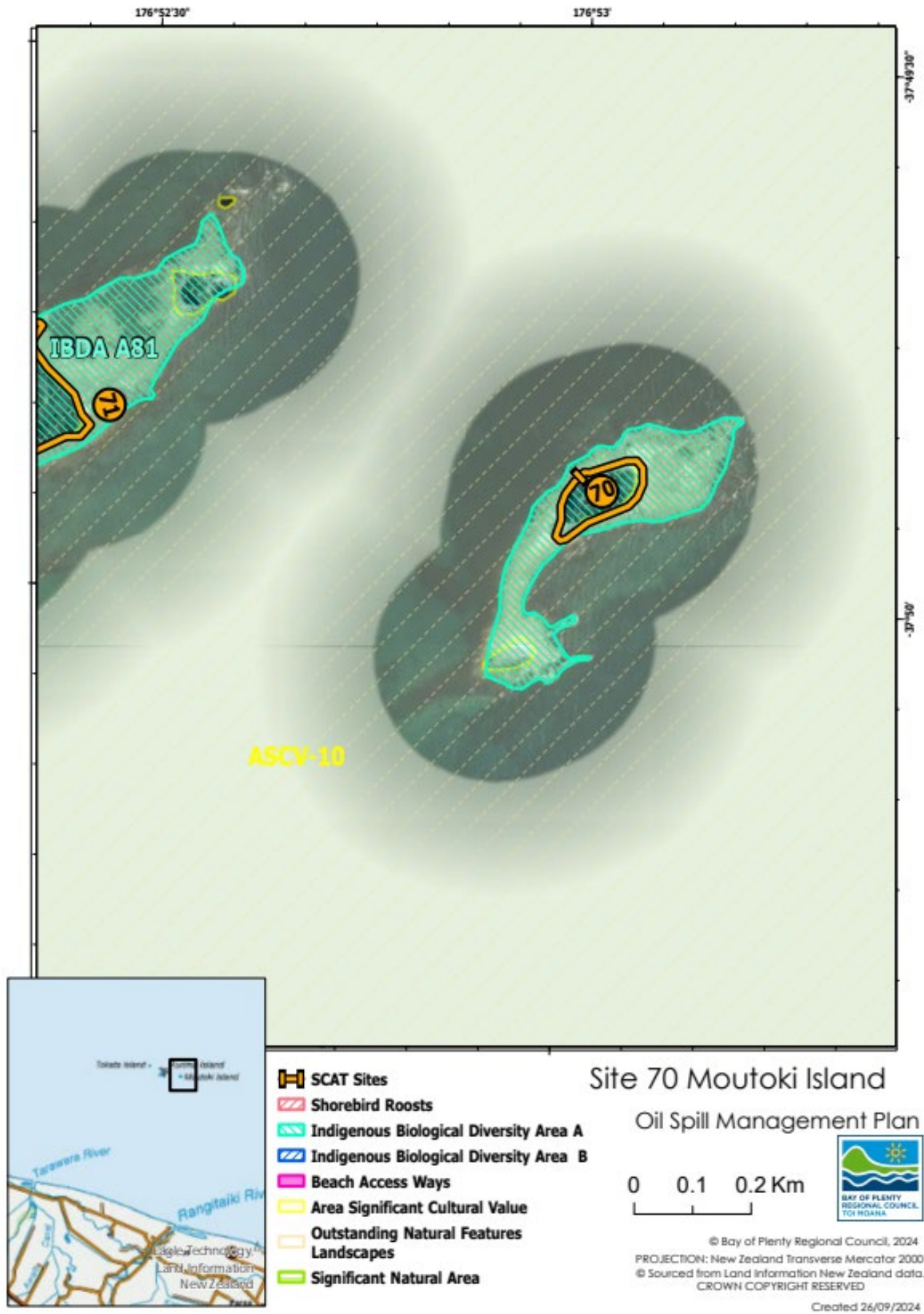
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Due to steep cliffs this isn't a good option but snares on lines may be possible
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	Marine reserve
Shoreline Clean-up	High		Possible in some bays
Natural Recovery	Medium		Require ongoing monitoring



Site 70	Moutoki Island		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Moutoki Island lies approximately 9 km north of the Rangitaiki Rivermouth. The island is the second largest of the Rurima Rocks, with the largest, Rurima Island, lying about 1 km west. It is covered in Pohutukawa forest.</p> <p>The Rūrima Islets and Moutuhorā are identified as an Outstanding Natural Feature and Landscape (ONFL 45)</p>			
<b>Foreshore type</b>	<p>Rocky reef and spit.</p> <p>All shore segments have “habitat value” and “contact value”.</p> <p>Moutoki Island is identified as an Area of Significant Cultural Value (ASCV 10)</p> <p>Indigenous Biological Diversity Area A81</p>		
<b>Map sheets</b>	<p><b>NZ Topo 50</b></p> <p>BD39 part BE39 Matatā</p>	<p><b>Chart Number</b></p> <p>NZ542</p>	
<b>Segments</b>	<b>No segment assigned</b>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Various nesting petrel species</li> <li>• Blue penguin (kororā)</li> <li>• Fur seal (kekeno)</li> <li>• Large population of Tuatara</li> <li>• High cultural values</li> <li>• High value subtidal rocky reef ecosystems</li> </ul>			
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• The island is a wildlife refuge that is pest and mammal free, and is privately owned by the Rūrima Trust c/- Ngāti Awa, Whakatāne</li> <li>• Biosecurity protocols apply.</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Any bulk oil should be removed as a priority to prevent re-mobilisation to cleaner areas.</li> </ul>			
<p><b>Access</b></p> <p>Note by boat: The island is surrounded by extensive rocky reefs. Visitors must contact Ngāti Awa (07 307 0760) prior to visiting and go through biosecurity checks.</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming may be possible but weather dependent
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	May be possible off-shore, see dispersant guidelines
Shoreline Clean-up	Medium		Boat access required
Natural Recovery	Low		Dynamic coastal area, suitable for some natural recovery



Site 71	Rurima Island		Risk ranking: 3
<p><b>DESCRIPTION</b></p> <p>Rurima Island lies approximately 9 km north of the Rangitaiki Rivermouth. The island is the largest of the Rurima Rocks, with the smaller Moutoki and Tokata islands lying about 1 km east and west respectively. Rurima Island is about 500 m long, with two bays and sandy beaches on the northwest side. A wide shallow reef, almost a lagoon, stretches north from the Pohutukawa-covered island.</p> <p>The Rūrīma Islets and Moutuhorā are identified as an Outstanding Natural Feature and Landscape (ONFL 45)</p>			
<p><b>Foreshore type</b></p>	<p>Sandy beaches, rock pools, small dune system.</p> <p>All shore segments have “habitat value” and “contact value”.</p> <p>All intertidal areas are identified in the Regional Coastal Plan as areas of significant conservation/ cultural value.</p> <p>Rūrīma Island is identified as an Area of Significant Cultural Value (ASCV 10)</p> <p>Indigenous Biological Diversity Area A81</p>		
<p><b>Map sheets</b></p>	<p><b>NZ Topo 50</b></p> <p>BD39 part BE39 Matatā</p>	<p><b>Chart Number</b></p> <p>NZ542</p>	
<p><b>Segments</b></p>	<p><b>No segment assigned</b></p>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Various petrel species (diving petrels breeding Aug–Feb), blue penguin (kororā), pied shag (kāruhiruhi) colony</li> <li>• New Zealand fur seal (kekeno)</li> <li>• Lizards</li> <li>• High cultural value</li> <li>• High value subtidal rocky reef ecosystems</li> </ul>			
<p><b>Notes</b></p> <p>The island is a wildlife refuge that is pest mammal free. Visitors will have to go through biosecurity checks. The island is privately owned by the Rurima Trust (c/- Ngāti Awa, Whakatāne</p> <p><b>Actions</b></p> <p>Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas.</p>			
<p><b>Access</b></p> <p>Note by boat: The island is surrounded by extensive rocky reefs. Visitors must contact Ngāti Awa (07 307 0760) prior to visiting and go through biosecurity checks.</p>			

**Preferred Response Option Matrix**

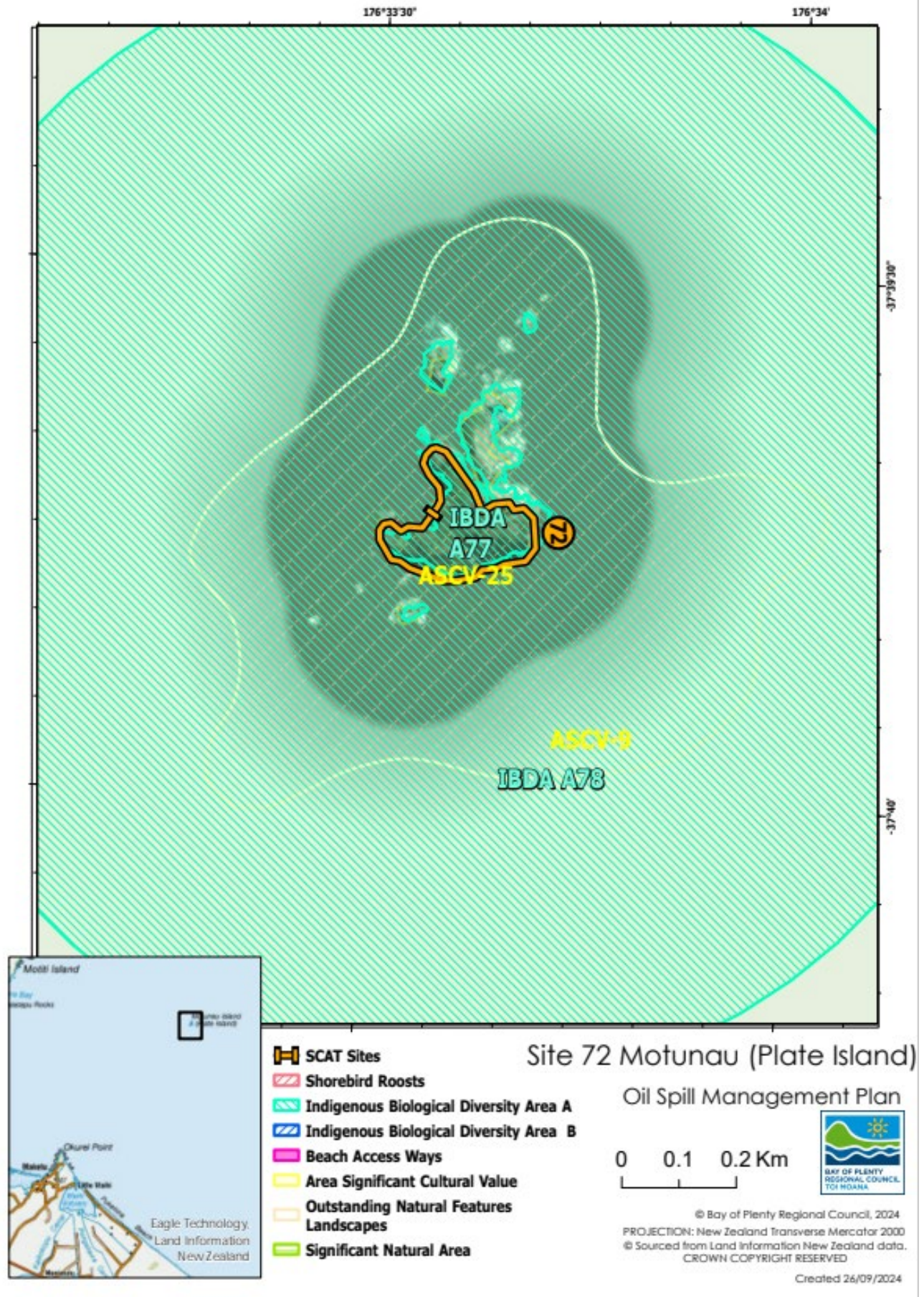
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming possible but weather dependent
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	May be possible off-shore, see dispersant guidelines
Shoreline Clean-up	Medium		Boat access required, rocky reefs but two good
Natural Recovery	Low		Dynamic coastal area, suitable for some natural recovery



Site 72	Motunau (Plate) Island		Risk ranking: 1
<p><b>DESCRIPTION</b></p> <p>Motunau (Plate) Island lies approximately 13 km north-east of Maketu. The island is split in two by a narrow channel running east-west in a V shape. The northern island is about 0.8 ha, and the southern island is about 2.8 ha. Six outlying rock stacks occur &lt;100 m from the main islands as well as scattering of small rocks.</p> <p>The island is of volcanic origin and a coarse rock is exposed around the shoreline.</p> <p>Motunau is a Maori owned wildlife sanctuary protected under the Wildlife Act owned by Ngāti Whakahemo. The waters surrounding Motunau are a Marine Protected Area under the Regional Environment Coastal Plan. Motunau is included within the Motiti Island and associated islands and reefs Outstanding Natural Feature and Landscape (ONFL 44)</p>			
<b>Foreshore type</b>	<p>Rocky cliffs, intertidal platform.</p> <p>All shore segments have “habitat value” and “contact value”</p> <p>Motunau is identified as an Area of Significant Cultural Value as its own location (ACSV 9), as well in conjunction with the broader Motiti area (ASCV 25)</p> <p>Indigenous Biological Diversity Area A77, A78</p>		
<b>Map sheets</b>	<p><b>NZ Topo 50</b></p> <p>BD38 Maketu</p>	<p><b>Chart Number</b></p> <p>NZ541; NZ542; NZ5413</p>	
<b>Segments</b>	<b>No segment assigned</b>		
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Large bird populations, including: diving petrels (kuaka)(breeding Aug–Feb), flesh-footed shearwaters (toanui), fluttering shearwaters (breeding Sep–Feb), white-faced storm petrels (takahikare) (breeding Oct–Mar) and grey-faced petrels (ōi) (breeding Jun–Jan), reef heron (matuku moana), pied shag (karuhiruhi), red-billed gulls (akiaki), Little blue penguins (kororā), white fronted tern (tara), fluttering shearwater (pakahā).</li> <li>• Tuatara that co-exist with bird populations</li> <li>• Fur seal (kekeno) haul-out (approximately 200 individuals), breeding site.</li> <li>• Seasonal kaimoana take including kina</li> <li>• Of cultural importance as a historic navigational marker and of cultural significance to Motiti Iwi</li> <li>• Significant coastal rocky reefs including schooling fish and a range of deep water species in shallow water (less than 5 m) including cup sponges, hydroids and bryozoans</li> </ul>			
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• The island is pest free so any visits are to be supervised by DoC.</li> <li>• Biosecurity protocols apply.</li> </ul> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Natural cleaning may be most likely due to nature of the shoreline</li> <li>• Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</li> <li>• Notify wildlife of potential oiling, potential concern for many seals present</li> </ul>			
<p><b>Access</b></p> <p>Must be supervised by DoC. Access via boat launched from Tauranga Harbour, Maketu Estuary or Ohiwa Harbour. Landing sites are found on the north-west corner of the southern island and the eastern bay of the northern island.</p>			

**Preferred Response Option Matrix**

	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Off-shore island, containment unlikely
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	May be appropriate off-shore, see dispersant guidelines
Shoreline Clean-up	High		Requires input from DOC
Natural Recovery	Medium		Logistics/location may lead to this as a last option



<b>Site 73</b>	<b>Moutohorā (Whale) Island</b>	<b>Risk ranking: 3</b>
<p><b>DESCRIPTION</b></p> <p>Moutohorā (Whale) Island lies approximately 10 km northeast of the Rangitaiki Rivermouth and 6 km northwest of Whakatāne. The island is covered with Pohutukawa forest and a small dune system. It is in an area of frequent volcanic activity.</p> <p>Moutohorā is a wildlife management reserve/wildlife refuge, it is rodent and predator free.</p> <p>Joint Management Committee (Ngāti Awa and DoC).</p> <p>The Rūrima Islets and Moutohorā are identified as an Outstanding Natural Feature and Landscape (ONFL 45)</p>		
<b>Foreshore type</b>	<p>Sand and rocky beaches.</p> <p>All shore segments have “habitat value” and “contact value”.</p> <p>Moutohorā Island is identified as an Area of Significant Cultural Value (ASCV 10)</p> <p>Indigenous Biological Diversity Area A80</p>	
<b>Map sheets</b>	<p><b>NZ Topo 50</b></p> <p>BD40 part BE40 Moutohorā Island</p>	<p><b>Chart Number</b></p> <p>NZ542</p>
<b>Segments</b>	<b>No segment assigned</b>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>Breeding colony of grey-faced petrels (ōi) (breeding Jun–Jan), which number in the tens of thousands</li> <li>Common diving petrels (kuaka) breeding Aug-Feb</li> </ul> <p>Sooty shearwaters (tītī), little blue penguins (kororā), New Zealand dotterel (tuturiwhatu), Variable oystercatcher (tōrea pango), banded dotterel (tuturiwhatu), Caspian tern (taranui), New Zealand dotterel (tuturiwhatu), north island kaka, red-billed gulls (akiaki), reef heron (matuku moana), white fronted tern (tara).</p> <ul style="list-style-type: none"> <li>North Island brown kiwi</li> <li>Tuatara/lizards</li> <li>Fur seal (kekeno), breeding site</li> <li>Cultural sites: <ul style="list-style-type: none"> <li>High cultural values with a number of archaeological sites, including Urupa (burial site), just above mean high water mark</li> </ul> </li> </ul>		
<p><b>Notes</b></p> <p>Pest free, biosecurity protocols apply.</p> <p><b>Actions</b></p> <p>Any bulk oil should be removed as a priority to prevent remobilisation to cleaner areas</p>		
<p><b>Access</b></p> <p>By boat, contact DoC or Ngati Awa prior to visit.</p>		

**Preferred Response Option Matrix**

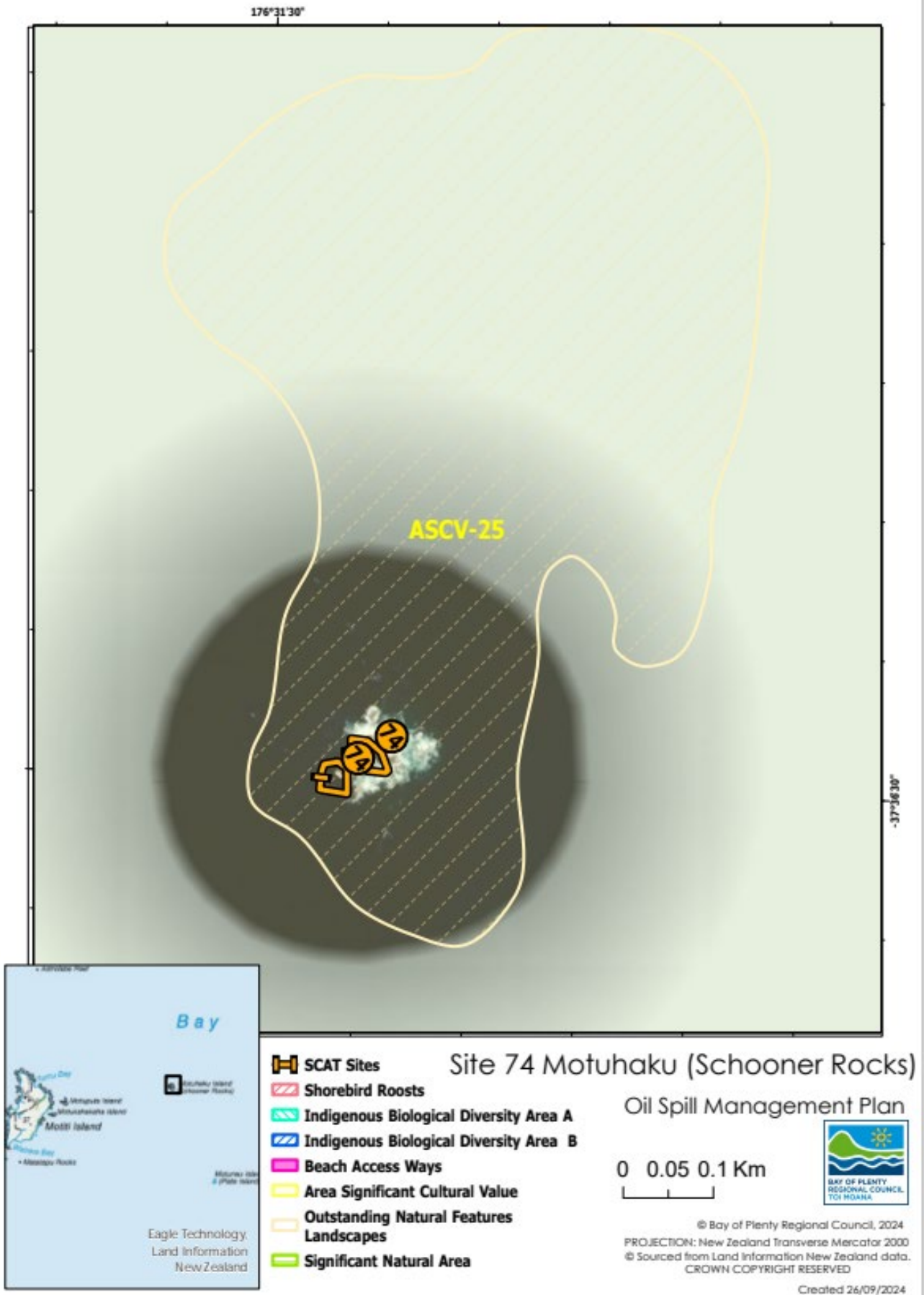
	Most preferred	Least preferred	Feasibility
Containment and Recovery	High		Deflection booming possible into a few bays but weather dependent
On water Recovery	High		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	May be possible off-shore, see dispersant guidelines
Shoreline Clean-up	Medium		Boat access required, good access to most parts of island
Natural Recovery	Low		Dynamic coastal area, suitable for ongoing natural recovery



Site 74	Motuhaku (Schooner Rocks)	Risk ranking 2
<p><b>DESCRIPTION</b></p> <p>Motuhaku is a rocky outcrop to the north-east of Motiti Island. Schooner Rocks has a shallow rock shelf that breaks the water then drops steeply away to about 70 m to the sandy sea floor.</p> <p>The waters surrounding Motuhaku are a Marine Protected Area under the Regional Environment Coastal Plan. Motuhaku is included within the Motiti Island and associated islands and reefs Outstanding Natural Feature and Landscape (ONFL 44).</p>		
<b>Foreshore type/environmental value</b>	<p>Rocky cliffs, intertidal platform.</p> <p>Shore segments have “contact value” and “cultural value”.</p> <p>Motuhaku is identified as an Area of Significant Cultural Value in conjunction with the broader Motiti area (ASCV 25)</p>	
<b>Map sheets</b>	<b>NZ Topo 50</b> BD38 Maketu	<b>Chart Number</b> NZ541; NZ5413
<b>Segments</b>	<b>No segments assigned</b>	
<p><b>At Risk Resources</b></p> <ul style="list-style-type: none"> <li>• Of cultural importance as a fishing area</li> <li>• Of cultural importance as a historic navigational marker and of cultural significance to Motiti Island Iwi</li> <li>• Numerous fur seals – haul out and feeding area.</li> <li>• High biodiversity marine ecosystem</li> </ul>		
<p><b>Notes</b></p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>• Natural cleaning may be most likely option due to nature of the shoreline</li> <li>• Notify wildlife of potential oiling for their independent planning for wildlife assessments</li> </ul>		
<p><b>Access</b></p> <p>Access will be via boat launched from Tauranga Harbour, Maketu Estuary or Ohiwa Harbour.</p>		

### Preferred Response Option Matrix

	Most preferred	Least preferred	Feasibility
Containment and Recovery	Low		Requires appropriate large vessels
On water Recovery	Medium		Requires appropriate large vessels
Dispersant Application	Medium	Requires escalation to Tier 3 and MNZ approval	Most likely option, see dispersant guidelines
Shoreline Clean-up	Low		Not possible
Natural Recovery	High		Dynamic sea area



<b>Site 75</b>	<b>Whakatōhea Mussels (Opotiki) Limited</b>	<b>Risk ranking 1</b>
<b>DESCRIPTION</b> A group of aquaculture mussel farms located ~6 km offshore between Ohiwa Harbour and Opotiki.		
<b>Foreshore type/environmental value</b>	Private mussel farm	
<b>Map sheets</b>	<b>NZ Topo 50</b> BE 41	<b>Chart Number</b> NZ541; NZ5413
<b>Segments</b>	<b>No segments assigned</b>	
<b>At Risk Resources</b> <ul style="list-style-type: none"> <li>The mussel farm contributes significantly to the local economy and hydro-carbons are toxic for Green Lipped Mussels and even trace amounts can also taint mussels making them a total commercial loss.</li> </ul>		
<b>Notes:</b> For your information, follow this link to the website <a href="http://www.whakatōhea.co.nz/moana.html">http://www.whakatōhea.co.nz/moana.html</a>		
<b>Actions</b> <ul style="list-style-type: none"> <li>Support Whakatōhea Managers to avoid and minimize impact of oil on Mussel Farm Operations</li> </ul>		
<b>Access:</b> By arrangement with Whakatōhea Managers and suitably capable vessels.		

**Preferred Response Option Matrix**

	<b>Most preferred</b>	<b>Least preferred</b>	<b>Feasibility</b>
Containment and Recovery	Med		Requires appropriate large vessels
On water Recovery	Med		Requires appropriate large vessels
Dispersant Application	Low	Requires escalation to Tier 3 and MNZ approval	
Shoreline Clean-up	Med		Structures may require cleaning or replacement depending on oiling
Natural Recovery	Med		An open ocean environment with high levels of water exchange

## Oil Transfer Sites Bay of Plenty

The following oil transfer sites, types of oil, and orders of magnitude are considered to be representative of the risk within the Bay of Plenty region.

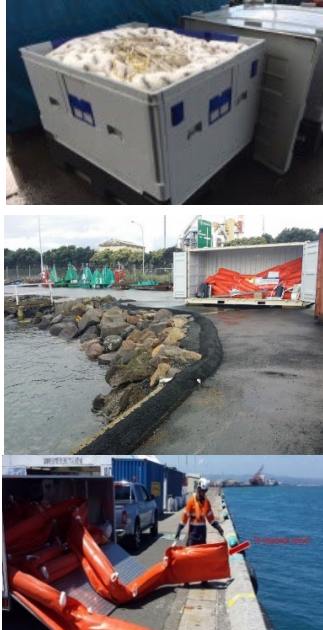

Table 1 Tier 1 Transfer Sites in Bay of Plenty

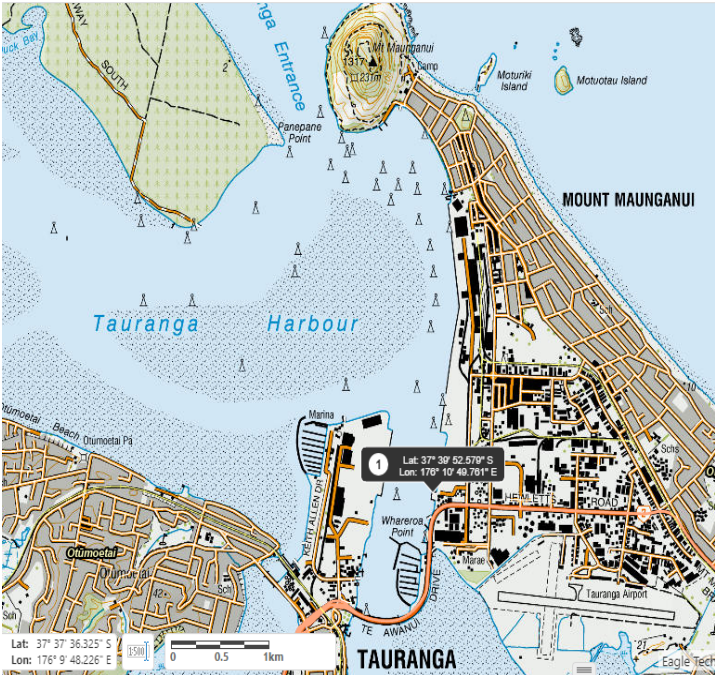


Strike through = Site blocked off

Location	Transfer type	Oil type	Expected order of magnitude
Mount Maunganui Wharf: Berths 1-11	Bunkering (Vehicle tanker and Koromako) Discharge / Slops Transfer	MDO/ VLSFO (HFO) / Lube Oil	3 tonnes
Berth 16 Tanker/Cement berth	Discharge / Bunkering (Vehicle tanker and Koromako)	VLSFO (HFO) Petrol / Diesel / Bitumen/Edible oils	30 tonnes
Sulphur Point Container Terminal: Berths 23-25	Discharge / Bunkering (Tanker and Koromako) / Slops Transfer	MDO/ VLSFO (HFO) / Lube Oil	3 tonnes
Tug berth	Bunkering	Diesel / Lube oil	500 litres
Tauranga Marina Society (Sulphur Point)	Bunkering/Fixed	Diesel / Petrol	200 litres/min
Bridge Marina refuelling jetty	Bunkering/Fixed	Diesel / Petrol	200 litres/min
Vessel Works / Moana Fisheries	Bunkering/Fixed and Vehicle tanker	Diesel	200 litres/min
Nautilus refuelling jetty	Bunkering/Fixed	Diesel / Petrol	200 litres/min
Kaituna refuelling jetty (Waterhouse)	Bunkering/Fixed	Diesel	100 litres
Whakatane refuelling jetty	Bunkering/Fixed and Vehicle tanker	Diesel /Petrol	200 litres/min
Opotiki Wharf	Bunkering/Vehicle tanker	Diesel	200 litres/min
Omokoroa Boat Ramp	Bunkering Vehicle tanker	Diesel/Lube Oil	200 litres/min
Sandfords Fisheries	Bunkering Vehicle tanker	Diesel /Lube Oils	500 litres

Current OTSMP holder plans are in WEB-EOC 9.18

### Berth 16 Tanker/Cement Berth

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>All types of oil from light, edible to heavy persistent fuel oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS available at tanker hut for product being transferred.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Main berth for all oil in Bay of Plenty. Significant volume risk with pipeline pumping moving up to 1 million litres an hour to terminal.</li> <li>Bunkering berth for Bunker Barge Koromako HFO is loaded onto this vessel from Stolthaven Terminal via pipeline and flexible hose.</li> <li>Infrequent bunkering from mobile tanker trucks via pump trailer to vessels via flexible 3-inch hose.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 30 tonnes of oil to water with a 116 m cube bund on wharf.</li> </ul>
<b>Site contacts</b>	<p>CSC POT (07) 572 8888 Channel 12 VHF</p> <p>Port Security (07) 5728 7003</p> <p>Port of Tauranga (07) 572 7543</p> <p>FENZ Mount Maunganui station (07) 574 8953</p>	<p>SGS Ops Manager (Wharf Attendants) 027 577 1027</p> <p>Harbourmaster 0800 55 66 87</p>
<b>Spill Resources on site</b>	<ul style="list-style-type: none"> <li>Fuel Industry First Strike Absorbent Boom approximately 100 m split north and south of berth.</li> <li>Fuel Industry Southern Containment Boom Butters Landing.</li> <li>Multiple spill kits on wharf for spills to hard and with pads for water deployment.</li> <li>Fuel Terminal Tier 1 response stock (booms, pumps skimmers available on request from ROSC).</li> <li>Wharf attendants will deploy First Strike Absorbents from shore to ship.</li> <li>During transfers, two wharf attendants and two terminal staff will be available.</li> </ul>	
<b>Health &amp; Safety</b>		<p><a href="#">Tanker-Berth-Emergency-Response-Plan.pdf (port-tauranga.co.nz)</a></p> <p><a href="#">Documents: Bay of Plenty Civil Defence (bopcivildefence.govt.nz)</a></p> <p><a href="#">Port inductions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>

<p><b>Location</b></p>	<p><b>Latitude 37° 39' 53.344" S</b>  <b>Longitude 176° 10' 49.207" E</b></p> 	<ul style="list-style-type: none"> <li>• Access to the site can be gained from Tasman Quay, either via the SH 2 entrance or other security access points from Totara Street that link to Tasman Quay.</li> <li>• Emergency access can be gained from the Butters Landing area south of the berth. (Directed by Emergency Services only).</li> </ul>  
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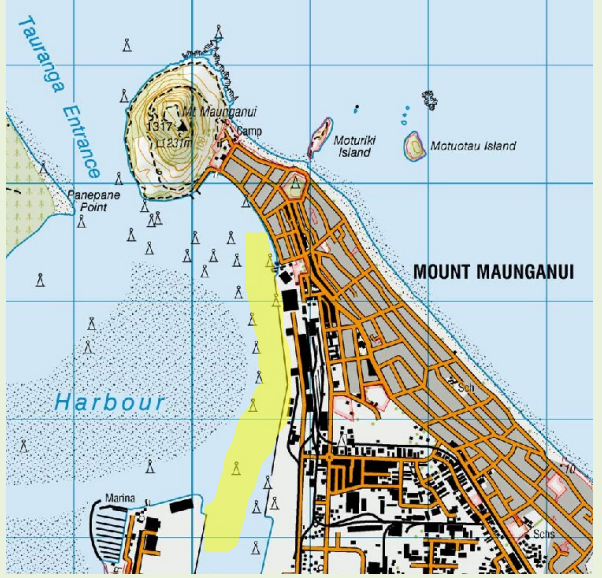
<p><b>Site Map</b></p>		<p>Tanker Berth position and industry location</p> <p> Logistic transport area</p> <p>Access induction and swipe card is required.</p> <p> Wharf Hut</p> <p> First strike booms.</p> <p> Security Hut</p>
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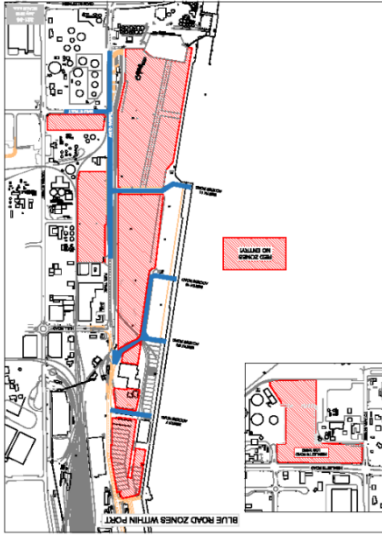

<p><b>Fuel Industry Users contacts</b></p>	<p>Bay Marine Works 027 295 0070 Industry Response</p>	<p>Mobil Oil (07) 834 9522 (Spill equipment maintenance)</p>
	<p>SGS 027 250 06671</p>	<p>Stolthaven 027 428 112</p>
	<p>Road Science 027 392 602</p>	<p>Z Energy South (07) 574 4372 Z Energy North (07) 574 4372</p>
	<p>Mt Bunkering Services (Korimako) 021 734 346</p>	<p>Quantem (07) 575 2019</p>
	<p>NZOSL (BP) (07) 574 2073</p>	<p>Fulton Hogan (07) 575 6157</p>
	<p>Terminals NZ (07) 572 3806</p>	<p>Ixom (07) 572 6827</p>



<p><b>Associated links</b></p>	<p><a href="http://port-tauranga.co.nz">Berth information   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Operations   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">POTL Berth 16 (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Shipping schedules   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Web cams   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="#">WEBEOC (OTSMPs)</a></p>	<p><a href="#">Check Oil Transfer Spill Management Plans on WEBEOC</a></p> <p>Port of Tauranga updated stormwater lines for Mount Maunganui 337-05 (ID 70066) Model (1) – 2020-12-12</p> <p><b>Objective ID: A3703051</b></p> <p>Notated Bunker Line lateral layout Mount Maunganui – 2020-12-15</p> <p><b>Objective ID: A3703087</b></p>
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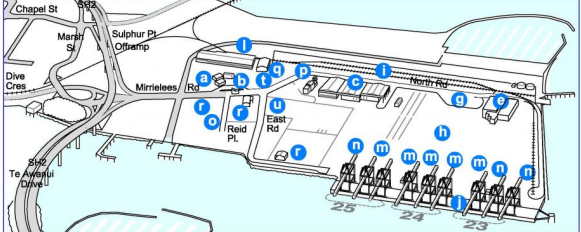
### Berth 1-11 Mount Port of Tauranga

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>All types of oil from light, edible to heavy persistent fuel oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Significant volume risk with Mobil lateral pipeline pumping MDO from Terminal to vessels via Bunker truck.</li> <li>Bunker Barge Korimako Berth 5. VLSFO is stored on board this vessel.</li> <li>Frequent MDO bunkering from mobile tanker trucks via pump trailer to vessels via flexible 3-inch hose and pump trailer.</li> <li>Frequent small MDO transfers from mobile tankers to fishing vessels.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 3 tonnes of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Significant potential for vessel discharge during loading and unloading procedures.</li> <li>Terrestrial operations at Port may cause significant oil loss to hard or water.</li> </ul>
<b>Site Contacts</b>	<p>Port Security (07) 5728 7003</p> <p>Port Emergency (07) 572 8888</p> <p>Tauranga Port Radio VHF 12</p> <p>FENZ Mount Maunganui station (07) 574 8953</p>	<p>Port of Tauranga (07) 572 7543</p> <p>Port Environmental Team (07) 572 7544</p> <p>KiwiRail 0800 808 400 (emergencies)</p> <p>C3 Logging (07) 572 8972</p> <p>Harbourmaster 0800 55 66 87</p>
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>Port of Tauranga is a significant hazard area and a custom controlled area.</li> <li>Access for responders is restricted.</li> <li>Berths 9-11 are classed as Log marshalling areas.</li> <li>Minimum PPE required for site access.</li> </ul>	<p><a href="http://port-tauranga.co.nz">Port inductions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Port shipping   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Port Users' Forum – Health, Safety &amp; Environment (port-tauranga.co.nz)</a></p>
<b>Location</b>	<p>37.6406° S, 176.1821° E</p> <p><a href="http://port-tauranga.co.nz">Port Information Manual (port-tauranga.co.nz)</a></p>	


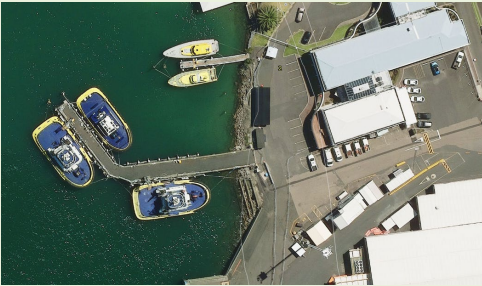
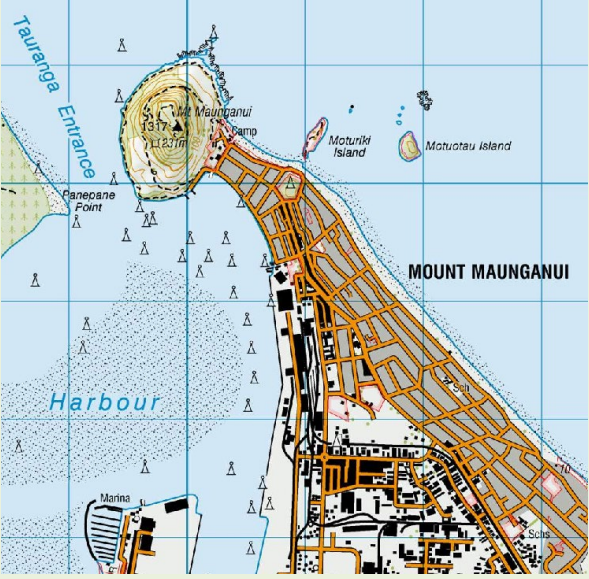
<p><b>Site Map</b></p>	<p><a href="#">Port maps   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> 	
<p><b>Fuel Industry Users contacts</b></p>	<p>Mc Falls Fuels 0800 623 255</p> <p>Mobil Oil (07) 834 9523</p> <p>Mt Bunkering Services (Korimako) 021 734 346</p> <p>Go Fuels (04) 233 6180</p> <p>Mini Tankers 027 755 972</p>	<p>Waste Management Oil Recovery (07) 575 3806</p> <p>Allied Petroleum Ltd (Mobile) (09) 252 0400</p> <p>Gull Mobile 021 920 622</p> <p>SGS (07) 547 4564</p>
<p><b>Associated links</b></p>	<p><a href="#">Web cams   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>	<p><a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>

## Container Terminal Port of Tauranga Berth 23-25

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>All types of oil from light, edible to heavy persistent fuel oils, cargo oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Significant volume risk with Korimako Bunkering LSFO to vessels.</li> <li>Infrequent MDO bunkering from mobile tanker trucks via pump trailer to vessels via flexible 3-inch hose and pump trailer.</li> <li>Frequent sludge waste oil recovery operations via mobile tankers from Waste Management.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 3 tonnes of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Terrestrial operations at Port may cause significant oil loss to hard or water.</li> <li>Ballasting operations may result in oily discharges from container vessels.</li> </ul>
<b>Site Contacts</b>	Port Security (07) 5728 7003	Port of Tauranga (07) 572 8761
	Port Emergency (07) 572 8888	Port Environmental Team (07) 572 7544
	Tauranga Port Radio VHF 12	KiwiRail 0800 808 400 (emergencies)
	FENZ, Cameron Road Station (07) 578 7099	Stevedore services C3 (07) 572 8448 SSA (07) 574 6931
	Mt Bunkering Services (Korimako) (021) 734 346	Harbourmaster Team 0800 55 66 87
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>Port of Tauranga is a significant hazard area and a custom controlled area.</li> <li>Access for responders is restricted.</li> <li>Minimum PPE required.</li> <li>This is an active container port with all associated risks operations may need to be suspended for safe oil recovery.</li> </ul>	<p><a href="#">Procedures and compliance   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="#">Port inductions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="#">Port shipping   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="#">Port Users' Forum – Health, Safety &amp; Environment (port-tauranga.co.nz)</a></p>


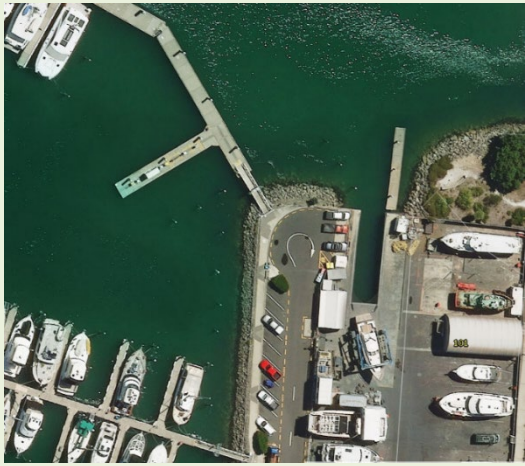
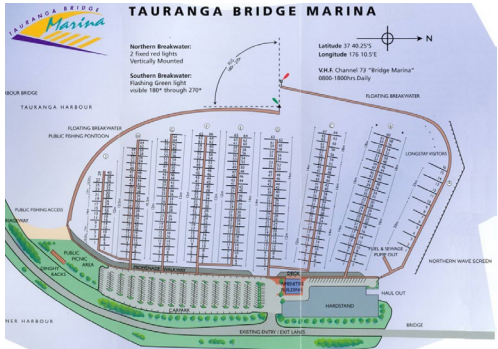

<p><b>Location</b></p>	<p><b>Latitude:</b> -37° 39' 40.98" S <b>Longitude:</b> 176° 10' 21.57" E</p> <p><a href="http://port-tauranga.co.nz">Port Information Manual (port-tauranga.co.nz)</a></p> 	
<p><b>Site Map</b></p>	<p><a href="http://port-tauranga.co.nz">Port maps   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>	 <ul style="list-style-type: none"> <li>a Tauranga Terminal - R&amp;D and Admin</li> <li>b Sulphur Point Wharf Gate</li> <li>c Fonterra - Sheds 13,14,15</li> <li>e Cold Storage Nelson - Coldstore</li> <li>g Terminal Truck Exchange</li> <li>h Container Yard</li> <li>i Rail Slidings</li> <li>j Sulphur Point Wharf (770m) Berths 23,24,25</li> <li>l OJl - Shed 16</li> <li>m Cranes 3,4,5,6,7,8 Liebherr Super Post Panamax</li> <li>n Cranes 1,2,9 Liebherr Post Panamax</li> <li>o Customs</li> <li>p Straddle workshop</li> <li>q C3 Shed 20</li> <li>r SCS Yard</li> <li>t QM CT Site</li> <li>u NZL Yard</li> </ul>
<p><b>Fuel Industry Users contacts</b></p>	<p>Mc Falls Fuels 0800 623 255</p> <p>Mobil Oil (07) 834 9523</p> <p>Mt Bunkering Services (Korimako) (021) 734 346</p> <p>Go Fuels (04) 233 6180</p> <p>Mini Tankers 027 755 972</p>	<p>Waste Management Oil Recovery (07) 575 3806</p> <p>Allied Petroleum Ltd (Mobile) (09) 252 0400</p> <p>Gull Fuels Mobile 021 920 622</p> <p>SGS Bunker Services (07) 547 4564</p> <p>Bay Marine Works 027 295 0070</p>
<p><b>Associated links</b></p>	<p><a href="http://port-tauranga.co.nz">Web cams   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>	<p><a href="http://port-tauranga.co.nz">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>

### Tug Berth Salisbury Wharf

<p><b>Oil type at site</b></p>	<ul style="list-style-type: none"> <li>• Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>• Persistent oils: Lube oils.</li> </ul>	<ul style="list-style-type: none"> <li>• MSDS held on Site: Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>• UN number 1202.</li> <li>• UN number 3082.</li> </ul>
<p><b>Potential volume risk</b></p>	<ul style="list-style-type: none"> <li>• Some volume risk during transfer operations to Pilot Vessels and Tugs.</li> <li>• Sludge waste oil recovery operations via mobile tankers from Waste Management.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss potential &gt; 500 litres of oil to water.</li> <li>• Significant runoff through stormwater outlets which can discharge in to harbour from Terrestrial Spill.</li> <li>• Terrestrial operations at Port may cause significant oil loss to hard or water.</li> <li>• Ballasting operations may result in oily discharges from bulk carriers may impact area due to tide flow.</li> </ul>
<p><b>Site Contacts</b></p>	<p>Port Security (07) 5728 7003</p> <p>Port Emergency (07) 572 8888</p> <p>Tauranga Port Radio VHF 12</p> <p>Harbourmaster Team 0800 55 66 87</p>	<p>Port of Tauranga (07) 572 8761</p> <p>Port Environmental Team (07) 572 7544</p> <p>FENZ Mount Maunganui station (07) 574 8953</p>
<p><b>Health &amp; Safety</b></p>	<ul style="list-style-type: none"> <li>• Port of Tauranga is a significant hazard area and a custom controlled area.</li> <li>• Access for responders is restricted.</li> <li>• Minimum PPE required.</li> <li>• This area is an operational port with 24-hour ship movements requiring Tugs and Pilot vessels.</li> </ul>	<p><a href="http://port-tauranga.co.nz">Procedures and compliance   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Port inductions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Port shipping   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="http://port-tauranga.co.nz">Port Users' Forum – Health, Safety &amp; Environment (port-tauranga.co.nz)</a></p>
<p><b>Location</b></p>	<p><a href="http://port-tauranga.co.nz">Port Information Manual (port-tauranga.co.nz)</a></p>  	




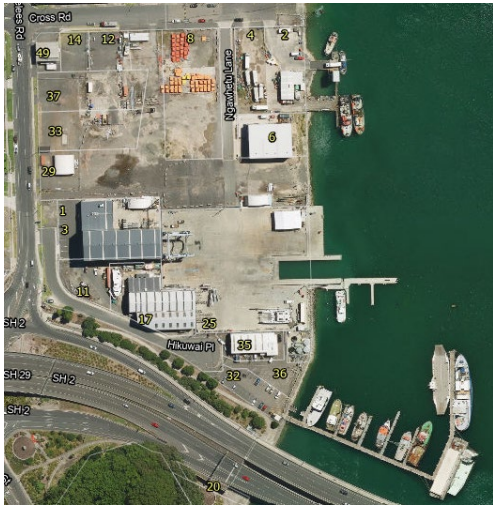

## Tauranga Bridge Marina

<p><b>Oil type at site</b></p>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>Persistent oils: Lube oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site:</li> <li>Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>UN number 1202 • UN number 3082.</li> <li>30,000 litres Diesel tank.</li> <li>20,000 lt Petrol tank.</li> </ul>
<p><b>Potential volume risk</b></p>	<ul style="list-style-type: none"> <li>Some small volume risk during transfer operations to vessels by mobile mini tanker.</li> <li>Self Service fuel dock operator error may cause fuel spill to water.</li> <li>Bilge pumping of vessels in Marina may result in spill.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 600 litres of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Terrestrial operations at hard stand may cause significant oil loss to hard or water.</li> <li>Due to tidal flow Oil from Tanker Berth may impact this site.</li> </ul>
<p><b>Site Contacts</b></p>	<p>Marina Office 575 8264</p>	<p>VHF Ch 73</p>
	<p>Travel Lift (07) 574 7166</p>	<p>FENZ Cameron Road Station (07) 578 7099</p>
	<p>Harbourmaster Team 0800 55 66 87</p>	
<p><b>Health &amp; Safety</b></p>	<ul style="list-style-type: none"> <li>Sign-in sheet at Marina Office.</li> <li>Limited Parking at fuel berth access.</li> </ul>	<ul style="list-style-type: none"> <li>Significant tidal flows. PPE required if working around water.</li> <li>Operations around Travel Lift and hard stand may be hazardous.</li> </ul>
<p><b>Location</b></p>	<p>Latitude 37° 40.25 'South - Longitude 176° 10.5 'East</p> <p>101 Awanui Drive Tauranga SH 2</p> 	
<p><b>Site Map</b></p>		



<b>Fuel Industry Users contacts</b>	Mc Falls Fuels 0800 623 255	Go Fuel Petroleum 0800 428 383
<b>Associated links</b>	<a href="#">Tauranga Bridge Marina Home : Bay of Plenty : NZ Port of Entry - rental marina berths, travelift, haulout, hardstand, refuelling, yacht services, marine brokers</a>	<a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a> WEBEOC GO fuels Tauranga Bridge Marina

**Vessel Works/Moana Ice Fuel Berth**

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>Persistent oils: Lube oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site:</li> <li>Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>UN number 1202.</li> <li>UN number 3082.</li> <li>20,000 litres diesel tank above ground.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Some small volume risk during transfer operations to vessels by mobile mini tanker.</li> <li>Bilge pumping of vessels in result in spill very high tide flow area.</li> <li>Commercial vessel cleaning operations may spill to water.</li> <li>Operations at travel lift could provide significant spill risk.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 600 litres of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Terrestrial operations at hard stand may cause significant oil loss to hard or water.</li> <li>Lube oil or waste oil transfers to vessels may require significant length of delivery hose increasing potential loss.</li> <li>Self Service fuel dock operator error could create spill to water.</li> </ul>
<b>Site Contacts</b>	Vessel Works (07) 577 7270	FENZ Cameron Road Station (07) 578 7099
	Moana Fisheries (07)578 0498	Harbourmaster Team 0800 55 66 87
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>Sign-in sheet at Vessel Works Office.</li> <li>Limited Parking locked gates access required from office.</li> </ul> <a href="#">Resources - Vessel Works</a>	<ul style="list-style-type: none"> <li>Significant tidal flows PPE required if working around water.</li> <li>Operations around Travel lift and hard stand may be hazardous induction required.</li> <li>Moana Fisheries is an operational commercial jetty with vessel loads and unloads which creates site risk.</li> </ul>


<p><b>Location</b></p>	<p>Latitude  <b>37° 40' 24" South 176° 10' 17" East</b>                  6 Hikuwai Road, Tauranga</p>	
<p><b>Site Map</b></p>		 <p style="text-align: center;">Dispenser and OPT</p>
<p><b>Fuel Industry Users contacts</b></p>	<p>Mc Falls Fuels 0800 623 255</p>	<p>Go Fuel Petroleum 0800 428 383</p>
<p><b>Associated links</b></p>	<p><a href="#">WEBEOC OTSMP</a> <a href="#">Go fuels</a> <a href="#">Moana</a></p>	<p><a href="#">Harbour conditions</a>   <a href="#">Port of Tauranga</a>   <a href="#">New Zealand (port-tauranga.co.nz)</a></p>



## Nautilus Fuel Berth

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site:</li> <li>Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>22,000 litres diesel underground tank.</li> <li>33,000 litres petrol underground tank.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Recreational boat launching ramp and Dry Stack facility.</li> <li>Go Fuels fixed refuelling facility with pipes to floating dock.</li> <li>Could be impacted by rail traffic incident.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 600 litres of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Self Service fuel dock operator error could create spill to water.</li> </ul>
<b>Site Contacts</b>	Go Fuels Petroleum 0800 428 383	FENZ Cameron Road Station (07) 578 7099
	Fort Nautilus Dry Stack 0800 379 7822	Nautilus Apartment (07) 578 8253
	Site contractor ECL 0800 830 831	Harbourmaster Team 0800 55 66 87
	Tauranga City Council (07) 577 7000	
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>Based on maximum spill of 600 litres, Fort Nautilus restaurant and other neighbours will be notified to evacuate and assemble at the carpark next to the boat ramp.</li> <li>Significant traffic area for boat trailers.</li> </ul>	<ul style="list-style-type: none"> <li>Significant tidal flows. PPE required if working around water.</li> <li>Access to fuel dock via water only or access key required.</li> </ul>
<b>Location</b>	<p> <b>Lat:</b> 37° 40' 14.43" S  <b>Lon:</b> 176° 9' 53.128" E                 </p>  <p>58 Cross Road, Tauranga</p>	


<p><b>Site Map</b></p>		<p>Diesel Dispenser</p> <p>Petrol Dispenser</p> <p>Signage on Dispenser post</p> <p>Sign on Booth</p>
<p><b>Fuel Industry Users contacts</b></p>	<p>Go Fuel Petroleum 0800 42 8383</p>	<p>ECL 24 hr contractor 0800 830 831</p>
<p><b>Associated links</b></p>	<p><a href="#">WEBEOC OTSMP Go fuels Fort Nautilus</a></p>	<p><a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p> <p><a href="#">Fort Nautilus Dry Stack   Boat Storage   Tauranga</a></p>

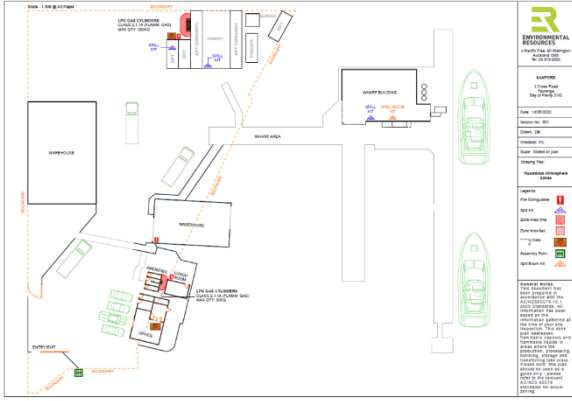
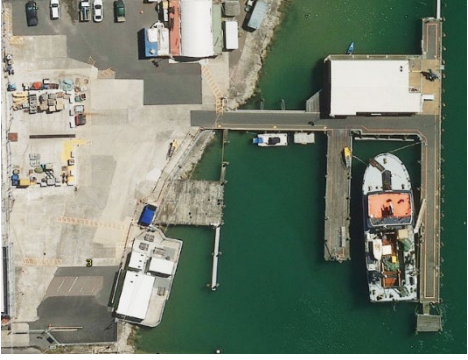
## Tauranga Marina Society Sulphur Point

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site:</li> <li>Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>20,000 litres diesel above ground tank.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Fixed refuelling facility with pipes to floating dock two delivery hoses.</li> <li>Marina with permanently moored vessels up to 560 berths.</li> <li>Haul out facility operations may cause risk.</li> </ul>	<ul style="list-style-type: none"> <li>Loss potential &gt; 600 litres of oil to water.</li> <li>Significant runoff through stormwater outlets which can discharge into harbour from Terrestrial Spill.</li> <li>Self Service fuel dock operator error could create spill to water.</li> </ul>
<b>Site Contacts</b>	Go Fuels Petroleum 0800 428 383	FENZ Cameron Road Station (07) 578 7099
	Site Contractor: ECL 0800 830 831	Marina Manager (07) 578 8747 Hard Stand Manager 021 882 549
	Tauranga Sports Fishing club (07) 578 6203	Harbourmaster Team 0800 55 66 87
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>For site access coordinate with Marina Management and Go Fuels.</li> </ul>	<ul style="list-style-type: none"> <li>Toilets and café on site.</li> </ul>
<b>Location</b>	Tauranga Marina/Coordinates 37.6616° S, 176.1680° E 45 Keith Allen Drive, Tauranga	

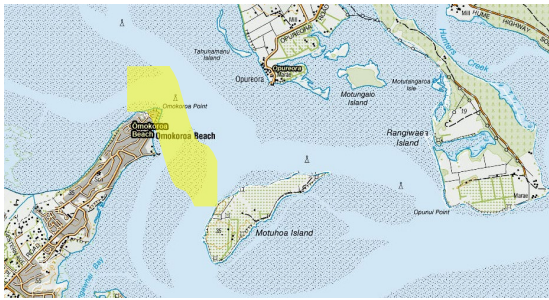

<p><b>Site Map</b></p>	<p>Site Images</p> 	
<p><b>Fuel Industry Users contacts</b></p>	<p>Go Fuel Petroleum 0800 428 383</p>	<p>ECL 24 hr contractor 0800 830 831</p>
<p><b>Associated links</b></p>	<p><a href="#">WEBEOC OTSMP Go fuels Tauranga Marina Society</a> <a href="#">Tauranga Marina</a></p>	<p><a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a> <a href="#">SITE-VIEW-OF-MARINA-2.pdf (taurangamarina.co.nz)</a></p>

**Sandford’s Wharf**



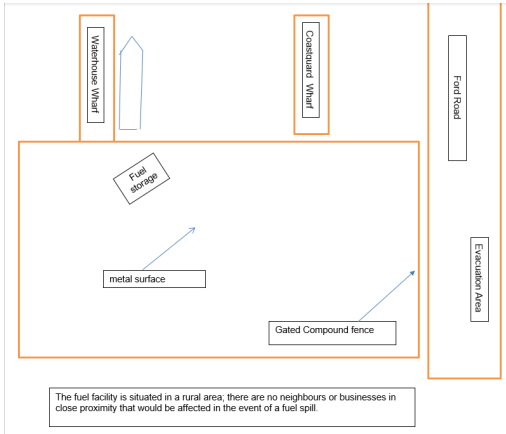
<p><b>Oil type at site</b></p>	<ul style="list-style-type: none"> <li>• Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>• Persistent oils: Lube oils, Hydraulic oils.</li> </ul>	<ul style="list-style-type: none"> <li>• MSDS held on site:</li> <li>• Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>• 3000 litre banded 20 ft storage container for oils (drums)</li> </ul>
<p><b>Potential volume risk</b></p>	<ul style="list-style-type: none"> <li>• Oil transfers are waste oil off and new oil on via forklift and pallet.</li> <li>• Transfer for total lubricants onboard do not exceed 800 litres.</li> <li>• Mini tanker delivery of diesel from wharf to vessel 9000 litre tanker controlled by OTSMP operator.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss potential &gt; 800 litres of oil to water.</li> <li>• Transfers for Lube Oil and waste into IBC containers.</li> <li>• Fishing vessels hold significant MDO.</li> <li>• Wharf is protected by absorbents during lube transfers.</li> <li>• Site has significant first strike capability with small vessel and absorbent booms and pads.</li> <li>• Mix of persistent oil and non-persistent oil transfers.</li> </ul>
<p><b>Site Contacts</b></p>	<p>Site Manager (027) 600 9180</p> <p>Harbourmaster Team 0800 55 66 87</p>	<p>FENZ Cameron Road Station (07) 578 7099</p>
<p><b>Health &amp; Safety</b></p>	<ul style="list-style-type: none"> <li>• Minimum PPE required for site.</li> <li>• Sign-in required for site at main office.</li> <li>• Working commercial fish wharf with multiple associated hazards including forklifts.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant tidal flows. PPE required if working around water.</li> <li>• Access to dock restricted to site manager opening gate.</li> </ul>
<p><b>Location</b></p>	<p>Lat: 37° 40' 14.43" S</p> <p>Lon: 176° 9' 53.128" E</p>  <p>58 Cross Road, Tauranga</p>	

<p><b>Site Map</b></p>		
<p><b>Fuel Industry Users contacts</b></p>	<p>Go Fuel Petroleum 0800 428 383</p> <p>Mc Falls Fuels 0800 623 255</p>	<p>Mini Tankers 027 755 972</p> <p>Fern Fuels 0800 666 626</p>
<p><b>Associated links</b></p>	<p><a href="#">WEBEOC OTSMP Sandford Wharf</a></p> <p><a href="#">WEBEOC OTSMP fuel transfer company (Fern, McFalls, Go Fuels)</a></p>	<p><a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a></p>




## Omokoroa Wharf

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>Persistent oils: Lube oils, Hydraulic oils (on vessels).</li> </ul>	<ul style="list-style-type: none"> <li>18,000 litres in tanker truck during transfer.</li> <li>Estimation 20 litre loss during transfer operation controlled by operator.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Terrestrial spills to drains may accumulate in this area.</li> <li>Omokoroa Ferry fuelled here via road tanker OTSMP Fern Fuels WEBEOC.</li> </ul>	<ul style="list-style-type: none"> <li>Bilge pumping of upstream vessels may result in oil residue.</li> <li>Vessels being refuelled by owners may create spills.</li> <li>Derelict moored vessels may create spill risk.</li> </ul>
<b>Site Contact</b>	Omokoroa Ferry 027 492 7251 Western BOP District Council 0800 926 732	Omokoroa Boat Club (07) 548 0960 Harbourmaster 0800 55 66 87
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>Large tidal flows around port structures.</li> <li>PPE required around water.</li> <li>Swimmers around wharf.</li> <li>Vehicle traffic roll on roll off ferry.</li> </ul>	<ul style="list-style-type: none"> <li>Vessels berthed here permanently. This is a working commercial jetty with associated hazards.</li> <li>Popular destination - large volumes of pedestrians in summer.</li> </ul>
<b>Location</b>	<p>Lat: 37° 37.974' S Lon: 176° 3.220' E</p> 	
<b>Fuel Industry Contacts</b>	Fern Energy 0800 999 989	Carlyon Response for spills 0800 243 864
<b>Associated links</b>	<p><a href="#">WEBEOC Fern Fuels OTSMP</a>  <a href="#">Omokoroa Tide Forecast - The latest tide information for the next 30 days (metservice.com)</a></p>	<a href="#">Omokoroa Boat Club</a>

### Kaituna Refuelling Jetty (Waterhouse)

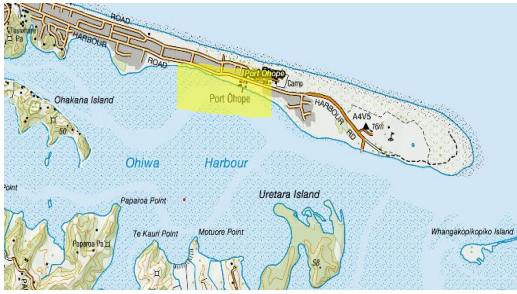

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>Persistent oils: Lube oils, Hydraulic oils.</li> </ul>	<ul style="list-style-type: none"> <li>MSDS held on site: Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>1,900 litre diesel tank stored in locked container with bund capacity 2,399 litres.</li> <li>Vessel grounding on bar creates potential spill risk.</li> </ul>	<ul style="list-style-type: none"> <li>OTSMP identifies approx 15 litres max spill during transfer operations.</li> </ul>
<b>Site contact</b>	Site owner 027 479 1520	FENZ Maketu (07) 533 2160
	Direct Fuels (McFalls) 0800 623 255	Harbourmaster Team 0800 55 66 87
		Coastguard Maketu 027 539 2930
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>This site is locked. No access from road without supervisor contact.</li> <li>Spill equipment stored on site for first strike.</li> </ul>	<ul style="list-style-type: none"> <li>Vessels berthed here permanently; this is a working commercial jetty with associated hazards.</li> </ul>
<b>Location</b>	<p>Lat: 37° 45.335' S Lon: 176° 24.787' E</p>  	 <p>The fuel facility is situated in a rural area, there are no neighbours or businesses in close proximity that would be affected in the event of a fuel spill.</p>
<b>Associated links</b>	<a href="#">WEBEOC Kaituna- Refuelling OTSMP</a>	<a href="#">Kaituna River Entrance Tide Forecast - The latest tide information for the next 30 days (metSERVICE.com)</a>

### Whakatane Wharf

<p><b>Oil type at site</b></p>	<ul style="list-style-type: none"> <li>• Non-persistent oils: Gas oil (Diesel or AGO)</li> <li>• Persistent oils: Lube oils, Hydraulic oils, (on vessels).</li> <li>• Significant risk from internal tanks of commercial and recreational vessels moored on Whakatane Wharf and river moorings.</li> </ul>	<ul style="list-style-type: none"> <li>• Hazard Class 3.1D, 6.1E, 6.3B, 9.1B.</li> <li>• Fixed Fuelling Facility (GoFuels).</li> <li>• 50,000 litre diesel underground tank.</li> <li>• 20,000 litre petrol tank.</li> <li>• Go Fuels and McFalls hold OTSMP for this area.</li> </ul>
<p><b>Potential volume risk</b></p>	<ul style="list-style-type: none"> <li>• Refuelling fixed tanks, 30,000 litres transfer via tanker truck.</li> <li>• Self-serve fixed refuelling operator error may cause spill to water.</li> <li>• Terrestrial spills to drains may accumulate in this area.</li> <li>• Derelict vessels may create spill risk.</li> </ul>	<ul style="list-style-type: none"> <li>• OTSMP identifies possible 600 litre loss to water.</li> <li>• Nearby hard stand operations may cause spill to water.</li> <li>• Bilge pumping of upstream vessels may result in oil residue.</li> </ul>
<p><b>Site Contact</b></p>	<p>Whakatane Sport Fishing Club (07) 307 0334</p>	<p>FENZ Whakatane Station (07) 308 6545</p>
<p><b>Health &amp; Safety</b></p>	<ul style="list-style-type: none"> <li>• Significant Petrol stored in tank causes explosion risk if spilt.</li> <li>• Spill equipment stored on site for first strike.</li> <li>• PPE required for working around water.</li> </ul>	<ul style="list-style-type: none"> <li>• Vessels berthed here permanently; this is a working commercial jetty with associated hazards.</li> <li>• Vehicle traffic for this site can be heavy.</li> <li>• Transfer to vessels occurs here via mini tanker.</li> </ul>
<p><b>Location</b></p>	<p>Latitude <b>37° 56.713' S</b> Longitude <b>177° 0.561' E</b>  Muriwai Drive, Whakatane</p>	
<p><b>Site Map</b></p>		<p>Whakatane Wharf:</p> 



<b>Fuel Industry contacts</b>	Go Fuel Petroleum 0800 42 83 83 027 807 0723 (on-water response Go Fuels)	ECL 0800 83 08 31 Fuel site contractor
	McFalls 0800 623 255 Bay Marine Works On water response McFalls	
<b>Associated links</b>	<a href="#">WEBEOC OTSMP Go Fuels/ Mc Falls Fuels (Whakatane)</a> <a href="#">Whakatane Tide Forecast - The latest tide information for the next 30 days (metservice.com)</a>	<a href="#">Home - Coastguard Whakatane</a> <a href="#">Multi-View Coastguard Cam - Coastguard Whakatane</a>

### Ohope Wharf Ohiwa Harbour


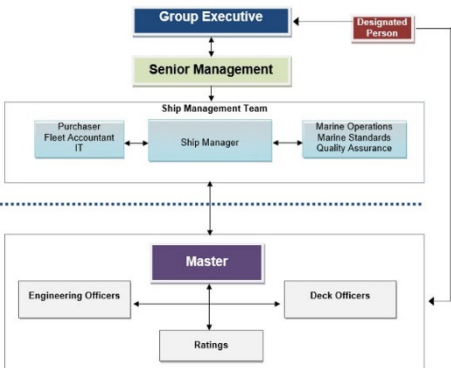
<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>• Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>• Persistent oils: lube oils, hydraulic oils (on vessels).</li> </ul>	<ul style="list-style-type: none"> <li>• No certified OTSMP for this area.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>• Terrestrial spills to drains may accumulate in this area.</li> <li>• Spill volumes expected to not exceed 100lts.</li> <li>• Vessel groundings on Bar crossing may create spill risk.</li> </ul>	<ul style="list-style-type: none"> <li>• Bilge pumping of upstream vessels may result in oil residue.</li> <li>• Vessels being refuelled by owners may create spills.</li> <li>• Derelict moored vessels may create spill risk</li> </ul>
<b>Site Contact</b>	Whakatane District Council (027) 204 5243                      (07) 306 0500  Harbourmaster Team 0800 55 66 87  Cougar Fishing Charter 021 252 6710	FENZ Ohope Station (07) 312 4472  Tio Ohiwa Oyster Farm (07) 312 4565  Coastguard Opotiki/Whakatane Ch 18,60,16  Ohope Sailing Club 027 654 1927
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>• Large tidal flows around port structures.</li> <li>• PPE required around water.</li> <li>• Swimmers around wharf.</li> </ul>	<ul style="list-style-type: none"> <li>• Vessels berthed here permanently; this is a working commercial jetty with associated hazards.</li> <li>• Popular destination large volumes of pedestrians in summer.</li> </ul>
<b>Location</b>	Lat: 37° 59.029' S Lon: 177° 6.504' E  	
<b>Associated links</b>	<a href="#">Port Ohope Wharf Tide Forecast - The latest tide information for the next 30 days (metSERVICE.com)</a>  <a href="#">Ports and Harbours   Whakatāne District Council (whakatane.govt.nz)</a>	<a href="#">Home - Coastguard Whakatane</a> <a href="#">Coastguard Opotiki   Coastguard Tautiaki Moana</a>



## Waihou Bay

<b>Oil type at site</b>	<ul style="list-style-type: none"> <li>Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>Persistent oils: Lube oils, Hydraulic oils (on vessels).</li> </ul>	<ul style="list-style-type: none"> <li>No OTSMP operations in this area.</li> </ul>
<b>Potential volume risk</b>	<ul style="list-style-type: none"> <li>Spill volumes expected to not exceed 100 litres.</li> <li>Vessel groundings may create spill.</li> <li>Large transit vessels around East Cape may create spill potential.</li> </ul>	<ul style="list-style-type: none"> <li>Vessels being refuelled by owners may create spills.</li> <li>Terrestrial service station used by recreational boaties over filling, may create spill risk.</li> <li>Seasonal Tuna operations significantly increase vessel movements.</li> </ul>
<b>Site Contact</b>	Opotiki District Council (07) 315 3030	FENZ Waihou Bay (07) 325 3619
	Allied Petroleum 0800 383 566	Coastguard Waihou Bay VHF 65
	Waihou Bay Sport Fishing Club 021 108 8817	
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>PPE required around water.</li> <li>Swimmers around wharf.</li> <li>Road from Opotiki is narrow - slips and road closures common.</li> </ul>	<ul style="list-style-type: none"> <li>Popular destination, large volumes of pedestrians in summer.</li> <li>Fatigue due to distance to travel could be a factor in driving.</li> </ul>
<b>Location</b>	<p><b>Lat:</b> 37.616° S <b>Lon:</b> 177.908° E</p>  <p>47 Oretu Point Road, Waihou Bay</p>	
<b>Associated links</b>	<a href="#">NEW Channels A4 Map Flyer.indd</a> <a href="http://coastguard.nz">coastguard.nz</a>	<a href="http://odc.govt.nz">Ōpōtiki District Council (odc.govt.nz)</a>

### Bunker Barge M.V. Korimako Transfers

<p><b>Oil type at site</b></p>	<ul style="list-style-type: none"> <li>• Non-persistent oils: Gas oil (Diesel or AGO).</li> <li>• Persistent Oils: Lube Oils, Hydraulic Oils (on vessels) significant amount of LSFO stored on board.</li> </ul> 	<ul style="list-style-type: none"> <li>• No OTSMP held by this vessel. Transfers are undertaken under SOPEP vessel operated with NZ flag and under MARPOL regulations.</li> <li>• 1600 Mt of fuel oil cargo approx.</li> <li>• Vessel transfers LSFO and MDO to vessels at berths in Port of Tauranga.</li> </ul>										
<p><b>Potential volume risk</b></p>	<ul style="list-style-type: none"> <li>• SOPEP identifies most likely spills as pipeline leakages including transfer hose.</li> </ul>	<ul style="list-style-type: none"> <li>• Cargo Tank or Bunker tank overflows.</li> <li>• Hull leak.</li> <li>• Spills could result from vessel casualty.</li> </ul>										
<p><b>Site Contact</b></p>	<ul style="list-style-type: none"> <li>• Call Sign ZMA 4567.</li> <li>• Master – <i>MT Korimako</i>.</li> <li>• 022 648 6100 or +64 27 256 2290 Email: <a href="mailto:master.korimako@sfsl.co.nz">master.korimako@sfsl.co.nz</a></li> <li>• Tauranga Port Emergency 07 572 8888.</li> <li>• VHF 12.</li> </ul>	<ul style="list-style-type: none"> <li>• Owner Svitzer Australia PTY. Ltd.</li> <li>• Phone 61 (02) 9818 9400.</li> <li>• Manager Silver Fern Shipping Ltd.</li> <li>• 64 (3) 900 1524</li> <li>• 027 452 4744</li> </ul>										
<p><b>Oil Prevention Roles on board</b></p>	<table border="1" data-bbox="347 1122 890 1496"> <thead> <tr> <th>Ranking</th> <th>Duties</th> </tr> </thead> <tbody> <tr> <td>Master</td> <td>In overall command of the onboard response to the spill                             <ul style="list-style-type: none"> <li>• Reporting to National and Local authorities</li> <li>• Keep log off all events and progress of actions</li> </ul> </td> </tr> <tr> <td>Chief Officer</td> <td>In charge of deck/cargo operation to stop/minimize any overflow                             <ul style="list-style-type: none"> <li>• Keep informed to the Master on the situation</li> <li>• Organise onboard deployment of spill equipment, spill containment and clean-up.</li> </ul> </td> </tr> <tr> <td>Chief Engineer</td> <td>In charge of bunker operation to limit oil overflow                             <ul style="list-style-type: none"> <li>• Keep informed to the Master on the situation</li> <li>• Prepare fire fighting</li> <li>• Ensure power and water on deck</li> </ul> </td> </tr> <tr> <td>All Ranks Ratings</td> <td>If any leakage is detected alert immediately by all means                             <ul style="list-style-type: none"> <li>• Inform officers on Duty immediately</li> <li>• Position sorbent material as directed by C/O</li> <li>• Clean-up material to prevent any escaped fluid from reaching the railing</li> <li>• Commence clean-up by using as far as available on board</li> <li>• Care for personal protection material</li> </ul> </td> </tr> </tbody> </table>	Ranking	Duties	Master	In overall command of the onboard response to the spill <ul style="list-style-type: none"> <li>• Reporting to National and Local authorities</li> <li>• Keep log off all events and progress of actions</li> </ul>	Chief Officer	In charge of deck/cargo operation to stop/minimize any overflow <ul style="list-style-type: none"> <li>• Keep informed to the Master on the situation</li> <li>• Organise onboard deployment of spill equipment, spill containment and clean-up.</li> </ul>	Chief Engineer	In charge of bunker operation to limit oil overflow <ul style="list-style-type: none"> <li>• Keep informed to the Master on the situation</li> <li>• Prepare fire fighting</li> <li>• Ensure power and water on deck</li> </ul>	All Ranks Ratings	If any leakage is detected alert immediately by all means <ul style="list-style-type: none"> <li>• Inform officers on Duty immediately</li> <li>• Position sorbent material as directed by C/O</li> <li>• Clean-up material to prevent any escaped fluid from reaching the railing</li> <li>• Commence clean-up by using as far as available on board</li> <li>• Care for personal protection material</li> </ul>	
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<p><b>Health &amp; Safety</b></p>	<ul style="list-style-type: none"> <li>• Significant Health and Safety concerns.</li> <li>• Access to vessel restricted induction and sign in required at vessel.</li> <li>• Intrinsic electronic restrictions on cell phones, radios, electric keys etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Hazardous substances on board (MDO VLSFO).</li> <li>• Crane operations.</li> <li>• Port induction required for port access.</li> <li>• Snap back zones.</li> </ul>										

SHIP'S PARTICULARS		MV KORIMAKO	
Gross Tonnage:	1,531		
Ships type:	Products Tanker		
International Call Sign:	TBC		
I M O number:	9557161		
Flag:	New Zealand		
Port of registry:	Wellington		
Previous names:	Anatoma		
Builder:	Pioneer Smith		
Date of delivery:	January 20 2012		
Length overall:	65 m		
Breadth overall:	15 m		
Summer draft:	3.5 m		
Deadweight:	1,422		
Propeller pitch is:	Fixed		
Vessel operates UMS at sea:	Y		
Any major modification or rebuilding	No		

EQUIPMENT DESCRIPTION	CAPACITY	QUANTITY
A OIL ABSORBENT BOOMS	50 m	4
B OIL ABSORBENT (KITTY LITTER)	20 kg Bags	10
C APPROVED OIL DESPERSANT (I)	20 litre Drums	5
D ABSORBENT MATS		100
E COTTON MOP	600 gms	4
F GAL STEEL MOP BUCKET	14 Litres	2
G BROOMS	600 mm	4
H SOUEEGEES	600 mm	4
I SHOVELS		4
J PANS		4

PERFORMANCE	
Maximum speed	10 Knots
Bollard pull ahead	n/a metric tonnes
Bollard pull astern	n/a metric tonnes

CAPACITIES	
Accommodation	6 cabins
Freshwater	89 Cubic metres
Fuel	206 Cubic metres
Ballast water	1000 Cubic metres
Foam	1.5 Cubic metres
Dispersant	n/a

### Vessel Drawing

**PRINCIPAL PARTICULARS**

LENGTH O.A \_\_\_\_\_ 65.00m  
 LENGTH W.L \_\_\_\_\_ 62.00m  
 BEAM MLD. \_\_\_\_\_ 15.00m  
 DEPTH MLD. \_\_\_\_\_ 5.20m  
 DRAFT DESIGNED \_\_\_\_\_ 3.50m  
 COMPLEMENT \_\_\_\_\_ 6 MEN (6x1-MAN CABIN)  
 F.W \_\_\_\_\_ 89m³ approx.  
 M.D.C \_\_\_\_\_ 206m³ approx.  
 CARGO OIL (INCLUDING SLOP) \_\_\_\_\_ 1600m³ approx.  
 SLOP \_\_\_\_\_ 50m³ approx.  
 S.W.BALLAST \_\_\_\_\_ 1000m³ approx.

22.04.09	RE-LOCATED THE FLOW BOOM CRANE	J	POH KIM
03.04.09	SLOP TANK BRG SHIFTED 800MM FWD	N	LIJA
10.03.09	RE-DESIGN THE DOUBLE-BTM TANKS IN ENGINE ROOM	G	POH KIM
29.07.08	ENLARGE ENGINE ROOM TO FIT BOILER & CHANGE FL18-20 DET FROM LUB OIL TO SEWAGE HOLDING TANK	F	WANG LI
22.07.08	UPDATE MOORING & RESCUE BOAT DAVIT ARRANGEMENT	E	WANG LI
03.07.08	AMENDED AS PER OWNER'S COMMENTS	C	Z.X.
27.06.08	AMENDED AS PER OWNER'S COMMENTS	D	BEEP
23.05.08	AMENDED AS PER OWNER'S COMMENTS	B	POH KIM
20.05.08	AMENDED AS PER OWNER'S COMMENTS	A	POH KIM

SHIP: 1500t Fuel Oil Carrier

TITLE: GENERAL ARRANGEMENT

OWNER	SVITZER AUSTRALIA PTY LTD	YARD NO.	
BUILDER	PIONEER SMITH (M) SDN. BHD.		
CLASS	ABS #A1, #AMS, (E) #ADCU, FUEL OIL CARRIER, HARBOUR & RIVER SERVICES		H3017

CONAN WU & ASSOCIATES  
 NAVAL ARCHITECTS  
 MENAR BUILDING, LEVEL 3, 5 INTERNATIONAL BUSINESS PARK, JURONG EAST, SINGAPORE 609914.  
 TEL: (65) 562-1138, FAX: (65) 562-1238, (65) 562-0123, E-MAIL: cwan@pdsigast.com.sg

DRAWN	CHECKED	APPROVED	SCALE	DRAWING NO.	REV
CW/SH			1:150	C4515/G-1	J

THE ENCLOSURE NOT BE USED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITING OF CONAN WU & ASSOCIATES

**SECTION IN WAY OF HOLD**

**PRINCIPAL PARTICULARS**

LENGTH O.A \_\_\_\_\_ 65.00m  
 LENGTH W.L \_\_\_\_\_ 62.00m  
 BEAM MLD. \_\_\_\_\_ 15.00m  
 DEPTH MLD. \_\_\_\_\_ 5.20m  
 DRAFT DESIGNED \_\_\_\_\_ 3.50m  
 COMPLEMENT \_\_\_\_\_ 6 MEN (6x1-MAN CABIN)

<b>Location</b>	Home Berth 5-7 Port of Tauranga. <a href="#">Port shipping   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a>	Operates throughout Port of Tauranga Berths.
<b>Associated links</b>	Web: <a href="http://www.sfsi.co.nz">http://www.sfsi.co.nz</a> & <a href="http://www.aspships.com">http://www.aspships.com</a> <a href="#">Harbour conditions   Port of Tauranga   New Zealand (port-tauranga.co.nz)</a>	BOPRC oil transfer notifications WEBEOC Silver Fern Shipping WEBEOC Stolthaven OTSMP <a href="#">Dashboard - Objective ECM (envbop.net)</a>

## Stormwater plans and terrestrial oil spill response

Either call the Pollution Hotline (0800 884 883) or contact the relevant local Council for up-to-date stormwater plans and shore-side spill response, in relation to discharges occurring from stormwater outlets. Fixed oil transfer sites are required to provide stormwater site layout plans as part of OTS Plan requirements.

## Shipping routes

Maritime New Zealand has initiated a voluntary navigation guideline, recommending that ships stay at least five (5) nautical miles away from any coastline. This guideline is targeted towards vessels laden with oil or other harmful liquid substances in bulk. Ships pose a risk of oil spill with low probability of occurrence but high potential effects on the environment.

[Ship routeing - Maritime NZ](#)

## Places of refuge

A place of refuge is a place where a ship in need of assistance can take action to enable it to stabilise its condition and reduce the hazards to navigation, and to protect human life and the environment. It may include a port, a place of shelter near the coast, an inlet, a lee shore, a cove, a bay or any part of the coast. Because of the many variable factors involved, and the variety of risks, a decision to grant access to a place of refuge can only be taken on a case-by-case basis.

Because of the nature of the coastline and the sensitive nature of the environment, Vessels must coordinate with the Bay of Plenty Region Harbourmaster in relation to this event 0800 5KNOTS.

## Guide for the collection of oiled wildlife for evidence

**Objective link: A3718750 - [Guide for the collection of oiled wildlife for evidence](#)**

## End-point criteria for bulk oil removal and site sign-off procedures

**Objective link: ID A3752596 - [End-point criteria for bulk oil removal and site sign-off procedures](#)**

## Procedures for managing Archaeological Sites

Regionally, there are many archaeological sites that could be conceivably discovered during an oil spill response. The following document provides a link to a procedure for managing such sites.

**Objective link: A3816904 - [Procedure for managing archaeological sites](#)**

## Other potentially oiled marine wildlife

The populations of some species, such as New Zealand Fur Seals for example, are rapidly recovering. Other species normally found in warmer waters, such as sea turtles for example, may also be becoming more prevalent in the region. Some of these species may also be declining or under threat.

In case of a marine oil spill affecting other marine wildlife, seek immediate advice from NOWRT, DOC and Iwi specialists. All available measures to protect marine wildlife from exposure to oil spills is a first priority. This may include hazing and/or pre-emptive capture where that is practical. Where oiling has already occurred, work through practical options with all interested parties on a species and location-specific basis.

## Process for Environmental Monitoring of Oil Spill

### Phase 1 Initial spill discovery and escalation

Once a Tier 2 response has been declared, an environmental monitoring programme should be initiated as soon as possible. The objective of this monitoring is to collect environmental data to provide a baseline assessment of condition before any impacts from the oil spill occur. The number and location of sites included in a baseline monitoring programme will depend on the size and likely impact of the spill, and the sensitive sites present in the potential zone of impact (Annex 4). However, at a minimum, monitoring should occur at multiple sites in intertidal and shoreline areas likely to be impacted by the oil spill. Where possible, monitoring should also occur at sites in other areas that are not expected to be impacted by the oil spill so that these areas can act as “control” sites and provide some context to any subsequent impacts from the spill.

<b>Baseline monitoring at each site should include the following components:</b>		
<ul style="list-style-type: none"> <li>• Photographs of representative habitats in each site to document pre-spill condition. These habitats could include intertidal flats, seagrass beds, shellfish beds, mangrove stands and saltmarsh and wetland vegetation.</li> <li>• At a minimum, general photographs with a consistent reference item (e.g. trowel, ruler) for scale should be taken in each habitat at each site.</li> <li>• The use of photo quadrats to provide baseline data on vegetation condition, composition and coverage should be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediment samples analysed for TOC, PAHs, TPHs and heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn). Samples should be collected at high, mid and low tide zones at each site.</li> <li>• Samples from each tidal zone should be analysed separately.</li> </ul>	
All sample collection should be undertaken following standard BOPRC procedures and protocols.		
<ul style="list-style-type: none"> <li>• All samples should be analysed by an IANZ accredited laboratory, design and subsequent costs. A baseline/“pre-spill” cultural health assessment of sites should also be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• All samples submitted to the laboratory should be accompanied by Chain of Custody forms.</li> </ul>	<ul style="list-style-type: none"> <li>• Thought should be given to the number of sampling sites, number of replicates at each site and analyses conducted to ensure that the monitoring programme is reasonable and appropriate in its scope.</li> </ul>
If initiated, this work should be undertaken by relevant iwi representatives.		

## Phase 2 – Development of an Incident Action Plan (IAP)

Development of an IAP should include the formulation of a plan for a short-term environmental monitoring programme.

The plan for the short-term environmental monitoring programme should state clear aims and objectives for the programme. The overall objective should be to gain an understanding of the contamination levels and the extent of areas impacted by the spill. Specific objectives of the programme will be situation specific but should also be defined in the plan.

Note that a short-term environmental monitoring programme developed as part of an IAP is quite distinct, and has a different purpose, to a long-term environmental monitoring programme. A short-term monitoring programme is focused on determining the immediate and short term impacts of an oil spill on the marine and coastal environment. In contrast, a long-term monitoring programme is focused on determining the persistence of oil in the environment and assessing the longer-term environmental damage from an oil spill.

<b>The plan for a short-term environmental monitoring programme should include the following components:</b>	
<ul style="list-style-type: none"> <li>• Clear aims and objectives, as outlined above.</li> </ul>	<ul style="list-style-type: none"> <li>• A list of sites to be sampled, number of replicates to be sampled at each site and parameters to be analysed.</li> </ul>
<ul style="list-style-type: none"> <li>• A timeframe for when sites are to be sampled, including detail on how often each site will be sampled and the interval between each sampling point.</li> </ul>	<ul style="list-style-type: none"> <li>• A cost estimate for the proposed sampling.</li> </ul>
<ul style="list-style-type: none"> <li>• Expected timeframe for results of sample analyses to be available.</li> </ul>	<ul style="list-style-type: none"> <li>• Expected timeframe for delivery of progress reports and updates.</li> </ul>
<ul style="list-style-type: none"> <li>• Identification of endpoints for the monitoring programme.</li> </ul>	<ul style="list-style-type: none"> <li>• Information contained in the plan for a short-term environmental monitoring programme should be incorporated into IAP. This may be achieved through the Environmental Science Advisor providing input into planning meetings, daily briefings, and assorted meetings with the spiller or other interested parties.</li> </ul>
<p>The plan for a short-term environmental monitoring programme should be developed in consultation with relevant researchers at the University of Waikato, such as Chris Battershill (BOPRC Chair in Coastal Science), and iwi representatives. Where appropriate, monitoring of cultural health should be undertaken at relevant sampling sites by, relevant iwi representatives.</p>	

## Phase 3 – Response termination and demobilisation

Upon termination of the oil spill response, a report summarising the findings of the short-term environmental monitoring programme should be provided to the ROSC.

Depending on the scale and extent of the oil spill, the end points identified for the short-term environmental monitoring programme may be different to the agreed end points for the response as a whole. Therefore, the short-term monitoring programme may extend beyond Phase 4 (Response termination and demobilisation) of the oil spill response. If this is the case, then an interim report outlining the results to date of the short-term environmental monitoring programme should be provided to the ROSC, with a final report provided at a later date upon completion of the monitoring programme.

**Phase 4 – Post operations, documentation of costs, litigation**

If required, a plan for a long-term environmental monitoring programme should be developed and implemented as part of Phase 5. The long-term monitoring programme should be focused on determining the persistence of oil in the environment and assessing the longer-term environmental damage from an oil spill.

<b>The plan for a long-term environmental monitoring programme should include the following components:</b>	
<ul style="list-style-type: none"> <li>• Clear aims and objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• A list of sites to be sampled, number of replicates to be sampled at each site and parameters to be analysed.</li> </ul>
<ul style="list-style-type: none"> <li>• A timeframe for when sites are to be sampled, including detail on how often each site will be sampled and the interval between each sampling point.</li> </ul>	<ul style="list-style-type: none"> <li>• A cost estimate for the proposed sampling.</li> </ul>
<ul style="list-style-type: none"> <li>• Identification of end points for the monitoring programme</li> </ul>	<ul style="list-style-type: none"> <li>• A report assessing the long-term impact of the oil spill on the environment should be compiled and provided to the ROSC and other appropriate persons, upon completion of the long-term environmental monitoring programme.</li> </ul>
<p>The plan for a long-term environmental monitoring programme should be developed in in consultation with relevant researchers at the University of Waikato, such as Chris Battershill (BOPRC Chair in Coastal Science), and iwi representatives. Where appropriate, monitoring of cultural health should be undertaken at relevant sampling sites by relevant iwi representatives as part of the programme. Learnings from previous oil spill monitoring programmes in Tauranga Harbour can be used as a guide to support the development of any long-term plan (Mobil Oil Spill, Rena Oil Spill).</p>	

### Indicative cost guide

A cost guide for analyses commonly undertaken as part of an oil spill environmental monitoring programme is provided in Table 1. This information is current as of October 2024 but should be checked and updated regularly.

Prices have been provided by Hill Laboratories. Our primary contact at Hills is Ara Heron - Client Services Manager – Environmental; Ph: (07) 858 2895; email: [ara.heron@hill-labs.co.nz](mailto:ara.heron@hill-labs.co.nz).

A purchase order and sample submission form is saved in Objective folder fA1686251.

Sample type	Analysis	Cost per sample
Sediment	Environmental Solids Sample Preparation	\$9.52
	Polycyclic Aromatic Hydrocarbons Trace in Soil	\$232.05
	Total Petroleum Hydrocarbons in Soil	\$74.12
	Total Organic Carbon	\$36.89
	Heavy metals trace (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)	\$77.69
	Total recoverable digestion	\$15.81
	<b>Total cost per sample</b>	<b>\$446.08</b>
Shellfish	Lipid content	\$47.34
	Sample processing	\$21.34
	Polycyclic Aromatic Hydrocarbons in Biomatter	\$295.80
	Total Petroleum Hydrocarbons in Biota	\$210.80
	<b>Total cost per sample</b>	<b>\$575.28</b>
Water	Polycyclic Aromatic Hydrocarbons Trace in Water	\$232.05
	Total Petroleum Hydrocarbons in Water	\$74.12
	<b>Total cost per sample</b>	<b>\$306.17</b>



# Wildlife response information

## Wildlife likely to be threatened by an oil spill

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
1A	Grey duck	C	Nationally critical	LC	N	Y	Aug-Feb Peaking Oct-Nov	Year round
1A	White heron	A	Nationally critical	Not listed	N	N	n/a	Sp, A, W
1A	Black stilt	A	Nationally critical	CR	E	N	n/a	Year round
1A	NZ fairy tern	A	Nationally critical	LC	E	N	n/a	A, W, Sp
1B	Australasian bittern	B	Nationally endangered	EN	N	Y	Jul-Feb	Year round
1B	Black-fronted tern	C	Nationally endangered	EN	E	N	n/a	A, W
1B	Black billed gull	E	Nationally endangered	EN	E	Y	Sep-Feb	Year round
1C	Wrybill	C	Nationally vulnerable	VU	E	N	n/a	Sp, A, W
1C	Northern NZ dotterel	B	Nationally vulnerable	EN	E	Y	Aug-Feb	Year round

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
1C	Banded dotterel	D	Nationally vulnerable	Not listed	E	Y	Jul-Feb	Year round
1C	Reef heron	B	Nationally endangered	LC	N	Y	Sep-Feb	Year round
1C	Caspian tern	B	Nationally vulnerable	LC	N	Y	Sep-Feb	Year round
1C	Red billed gull	E	Declining	LC	E	Y	Oct-Feb	Year round
1C	Pied shag	C	Recovering	LC	N	Y	Aug/feb	Year round
1C	NZ dabchick	B	Nationally vulnerable	VU	E	Y	Sep - Mar	Year round
1C	Black petrel	B	Nationally vulnerable	VU	E	N	n/a	Year round
2A	NZ pipit	C	Declining	LC	E	Y	Aug-Feb	Year round
2A	Little blue penguin	A	Declining	LC	N	Y	Jul -Feb	Year round
2A	NZ pied oystercatcher	B	Declining	LC	E	Y	Sep - Feb	Year round
2A	Sooty shearwater	C	Declining	NT	N	Y?	Nov-May	Year round
2A	Pied stilt	B	Not threatened	LC	N	Y	Jul-Jan	Year round
2A	Flesh-footed shearwater	B	Nationally Vulnerable	LC	N	Y	Nov-May	Year round
2A	White fronted tern	B	Declining	LC	N	Y	Aug-Feb	Year round
2B	Variable oystercatcher	A	Recovering	LC	E	Y	Sep-Feb	Year round
2B	Brown teal	A	Recovering	EN	E	Y	Jun-Feb	Year round

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
2C	Red crowned parakeet	B	Relict	VU	E	Y	Aug-Mar	Year round
2C	Fairy prion	B	Relict	LC	E	N	Nov-Feb	Year round
2C	Broad billed prion	B	Relict	LC	E	Y	Aug-Jan	Year round
2C	Common diving petrel	B	Relict	LC	N	Y	Aug-Dec	Year round
2C	Marsh crake	A	Declining	LC	N	Y	Sep-Feb	Year round
2C	Spotless crake	A	Declining	LC	N	Y	Sep-Feb	Year round
2C	Cook's petrel	B	Relict	EN	N	Y	Oct-May	Year round
2C	Fluttering shearwater	B	Relict	LC	E	Y	Sep-Feb	Year round
2D	Royal spoonbill		Naturally uncommon	LC	N	N	n/a	Year round
2D	Black shag		Naturally uncommon	LC	N	Y	Apr-Jan	Year round
2D	Little shag		Naturally uncommon	LC	E	Y	Aug-Feb	year round
2D	Little black shag		Naturally uncommon	LC	N	N	n/a	Year round
2D	Wandering albatross		Naturally uncommon	VU	E	N	n/a	Year round
2D	Royal albatross		Naturally uncommon	VU	E	N	n/a	Year round
2D	Banded rail		Naturally uncommon	LC	N	Y	Sep-Mar	Year round
2D	Giant petrel		Naturally uncommon	LC	N	N	n/a	Year round

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
2D	Buller's shearwater		Naturally uncommon	VU	E	N	n/a	Year round
2D	Bullers mollymawk		Naturally uncommon	NT	E	N	n/a	Year round
3	NZ Shoveler		Not threatened	LC	E	Y	Oct-Feb	Year round
3	NZ scaup		Not threatened	LC	E	Y	Oct-Apr	Year round
3	Grey faced petrel		Not threatened	LC	E	Y	Jun-Jan	Year round
3	Spotted shag		Not threatened	LC	E	N	n/a	W
3	Paradise shelduck		Not threatened	LC	E	Y	Aug-Jan	Year round
4	Australasian little grebe		Coloniser	LC	N	Y	Dec-Apr	Year round
4	Turnstone		Migrant	LC	M	N	n/a	Sp, S, A
4	Cattle egret		Migrant	LC	M	N	n/a	Sp
4	Sharp-tailed sandpiper		Migrant	LC	M	N	n/a	Sp, S, A
4	Lesser knot (red knot)		Migrant	LC	M	N	n/a	Sp, S, A
4	Red-necked stint		Migrant	LC	M	N	n/a	Sp, S, A
4	Black fronted dotterel		Coloniser	LC	N	N	n/a	Sp, S, A
4	Mongolian dotterel	A	Vagrant	LC	S	N	n/a	S
4	Cape pigeon		Migrant	Not listed	E	N	n/a	Year round
4	Australian coot		Coloniser	Not listed	N	Y	Aug-Mar	Year round
4	Eastern bar-tailed godwit		Migrant	LC	M	N	n/a	Year round

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
4	Far eastern curlew		Migrant	LC	M	N	n/a	Sp, S, A
4	Whimbrel - Asiatic/American		Migrant/Vagrant	LC	M	N	n/a	Sp, S, A
4	Pacific golden plover		Migrant	LC	M	N	n/a	Sp, S, A
4	Skua		Migrant	LC	M	N	n/a	S
4	Eastern little tern		Migrant	LC	M	N	n/a	S
4	Black-browed mollymawk		Coloniser	EN	E	N	n/a	Year round
4	Siberian tattler	A	Vagrant	LC	S	N	n/a	S
5	NZ kingfisher		Not threatened	Not listed	N	Y	Aug-Feb	Year round
5	Grey teal		Not threatened	LC	N	Y	Sept-Jan	Year round
5	White faced heron		Not threatened	LC	N	Y	Aug-Jan	Year round
5	Australasian hawk		Not threatened	LC	N	Y	Sep-Mar	Year round
5	Black swan		Not threatened	LC	I	Y	Year round	Year round
5	Southern black-backed gull		Not threatened	LC	N	Y	Oct-Feb	Year round
5	Australasian gannet		Not threatened	LC	N	Y	Jul-Dec	Year round
5	Pukeko		Not threatened	LC	N	Y	Year round	Year round
5	Spur winged plover		Not threatened	LC	N	Y	June-Jan	Year round
6	Rock pigeon		Introduced and naturalised	LC	I	Y	Sept-Jan	Year round
6	Mallard		Introduced and naturalised	LC	I	Y	Aug-Feb	Year round
6	Feral goose		Introduced and naturalised	LC	I	Y	Sep-Jan	Year round

Priority category	Species common name	Regional priority code	NZ threat classification	IUCN category	Status code	Breeds in BOP	Breeding season	Seasonal distribution
6	Canada goose		Introduced and naturalised	LC	I	Y	Sep-Jan	Year round
6	Mute swan		Introduced and naturalised	LC	I	N	n/a	Year round
6	Blackbird		Introduced and naturalised	LC	I	Y	Jul-Mar	Year round
6	Yellowhammer		Introduced and naturalised	LC	I	Y	Jul-Mar	Year round
6	Chaffinch		Introduced and naturalised	LC	I	Y	Jul-Mar	Year round
-	Muscovy duck		Not listed	LC	I	Y	Sep-Mar	Year round

**Key****Status Code:**

<i>E</i>	<i>Endemic</i>	<i>Breeds only in New Zealand territories</i>
<i>N</i>	<i>Native</i>	<i>Breeds in New Zealand territories and elsewhere</i>
<i>M</i>	<i>Migrant</i>	<i>A reasonable number migrate to New Zealand territories but do not breed</i>
<i>S</i>	<i>Straggler/vagrant</i>	<i>Not a regular migrant or few migrate to New Zealand territories but do not breed</i>
<i>I</i>	<i>Introduced</i>	<i>Introduced by humans</i>

**IUCN Classification scheme**

<i>CR</i>	<i>Critically Endangered</i>
<i>EN</i>	<i>Endangered</i>
<i>VU</i>	<i>Vulnerable</i>
<i>NT</i>	<i>Near Threatened</i>
<i>LC</i>	<i>Least Concern</i>

(<http://www.iucnredlist.org>)

**Seasons**

<i>Sp</i>	<i>Spring</i>
<i>S</i>	<i>Summer</i>
<i>A</i>	<i>Autumn</i>
<i>W</i>	<i>Winter</i>

**Priority Category**Category 1: First priority for deterrence, rescue and/or rehabilitation

Species with a New Zealand Threat Classification of 'Threatened' and/or IUCN Red-list classification ([www.iucnredlist.org](http://www.iucnredlist.org)) of critically endangered (CR), endangered (EN) or vulnerable (VU). These are ranked from 1A to 1c for further prioritization using the New Zealand Threat Classification system.

- 1A Nationally critical
- 1B Nationally endangered
- 1C Nationally vulnerable

Category 2: Second priority for deterrence, rescue and rehabilitation

Species with a New Zealand Threat Classification of 'At Risk' and/or IUCN Red-list classification ([www.iucnredlist.org](http://www.iucnredlist.org)) of critically endangered (CR), endangered (EN) or vulnerable (VU). These are ranked from 2A to 2D for further prioritisation using the New Zealand Threat Classification system.

- 2A Declining
- 2B Recovering
- 2C Relict
- 2D Naturally uncommon

Category 3: Third priority for deterrence, rescue and rehabilitation

Species which are endemic to New Zealand and are considered to be 'Not Threatened' under the NZ Threat Classification System, and with an IUCN Red-list classification of lower risk (LR) or not listed.

Category 4: Fourth priority for deterrence, rescue and rehabilitation

Species considered as migrants, vagrants or colonizers under the NZ Threat Classification System, and with an IUCN Red-list classification of lower risk (LR) or not listed.

Category 5: Fifth priority for deterrence, rescue and rehabilitation

Species which are native to New Zealand and are considered to be 'Not Threatened' under the NZ Threat Classification System, and with an IUCN Red-list classification of lower risk (LR) or not listed.

Category 6: Sixth priority for deterrence, rescue and rehabilitation

Species considered to be 'Introduced and Naturalised' under the NZ Threat Classification System, and with an IUCN Red-list classification of lower risk (LR) or not listed.

For more information about all birds and their threat status go to:

<http://www.nzbirdsonline.org.nz/>



# Priority areas for protection

This section contains site sheets and maps that show the priority areas for protection inside the Tauranga Harbour and within the remainder of the Bay of Plenty Coastal Marine Area. Also included is a description of the areas, information on access, possible response options and restrictions on options.

## Tauranga Harbour

Tauranga Harbour is a large tidal estuary covering an area of 218 km<sup>2</sup>. The name 'Tauranga' means 'landing place.'

The surrounding land from which water runs into the harbour is used extensively for urban, horticultural and agricultural purposes. At the eastern end of the harbour are the landmark Mauao or Mount Maunganui and the city of Tauranga. This entrance is deeper and allows for a large amount of cargo ships to enter and leave the Port of Tauranga. At the western end is the small coastal settlement of Otawhiwhi or Bowentown. This entrance is shallower but is often used by recreational boaties.

Largely covered by pine plantations, Matakana Island forms a natural barrier between the harbour and the Pacific Ocean. Matakana Island is also home to a number of people who live in the island's settlement. The island is largely covered in plantation pines for forestry. Many beaches are littered with fallen logs and debris which could become oiled in event of a spill landing on the shoreline. Consider beach pre-cleans to reduce secondary contamination of shoreline debris. The sheltered side of the island has inlets and lagoons and the ocean side of the island is popular with local surfers.

The harbour waters are mostly shallow. At low tide, more than 60% of the harbour bed is exposed. The estuaries of Tauranga Harbour are home to many kinds of wildlife. Young fish spawn in the shallow waters and many birds nest on the harbour margins. A large volume of water enters and leaves the harbour with each tide.

The harbour has long been an important resource for the people of the Bay of Plenty. For Maori, the harbour has strong spiritual significance and is a traditional source of food. Flounder, kahawai, mussels and cockles are some of the kaimoana (seafood) that can be collected from the harbour. There are often limits as to how much can be collected and where they can be collected from.

Economic activity revolves around the Port of Tauranga, which operates several kilometres of wharves on land, which has been reclaimed from the harbour at Sulphur Point and at Mount Maunganui. Established in 1873, the port handles more export cargo than any other port in the country. The port also transfers large volumes of a wide variety of oils, including persistent oils and waste oil slops.