

Hawke's Bay Marine Oil Spill Contingency Plan

Annex 4 Sensitive Areas and Coastal Information



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Annex 4 - Sensitive areas and Coastal Information

1. Oil Spill Risk

1.1 Overview

Historical spill records show that most Hawke's Bay spills occur during bunkering operations in the Napier Inner Harbour which, in the majority of cases, have proved minor and required little or no clean up action. Spills in the Napier Port have mostly been a result of hydraulic hose failures rather than fuel oils. Some spills also originate from land sources via storm water outlets. However, a significant increase in shipping over recent years has increased the potential for a large spill.

Hawke's Bay is provided with sufficient equipment, training and other resources to allow it to effectively respond to most of the minor operational spills likely to occur within the port and along its coastline. At any time, but more especially in the event of a larger or more catastrophic spill, the Hawke's Bay Regional Council can expect the support of the Maritime New Zealand. This support could range from providing advice, resources or support personnel to assist the regional (Tier 2) response to escalating the response to a national (Tier 3) response.

1.2 Vessel Movements

The Hawke's Bay coastline sees a range of vessel movements in both the north and south of the region. The majority of vessel movements are larger vessels operating between the ports of NZ and overseas. This includes bulk carriers and logging vessels, cargo vessels and cruise ships. The area around the Port of Napier and within the Port itself are the highest risk areas for a major oil spill.

In addition, there are a number of larger fishing vessels operating from the Napier Inner Harbour. This has historically seen a number of large diesel spills within the port as a result of these operations.

1.3 Bunkering and Bulk Transfer Risk

The following oil transfer sites, types of oil, and expected order of spill magnitude are considered to be representative of the threat posed within the bunkering and bulk transfer stations in Hawke's Bay (Refer to the following Diagram of Napier Terminal Oil Pipeline and Transfer Points with Wharf Locations):

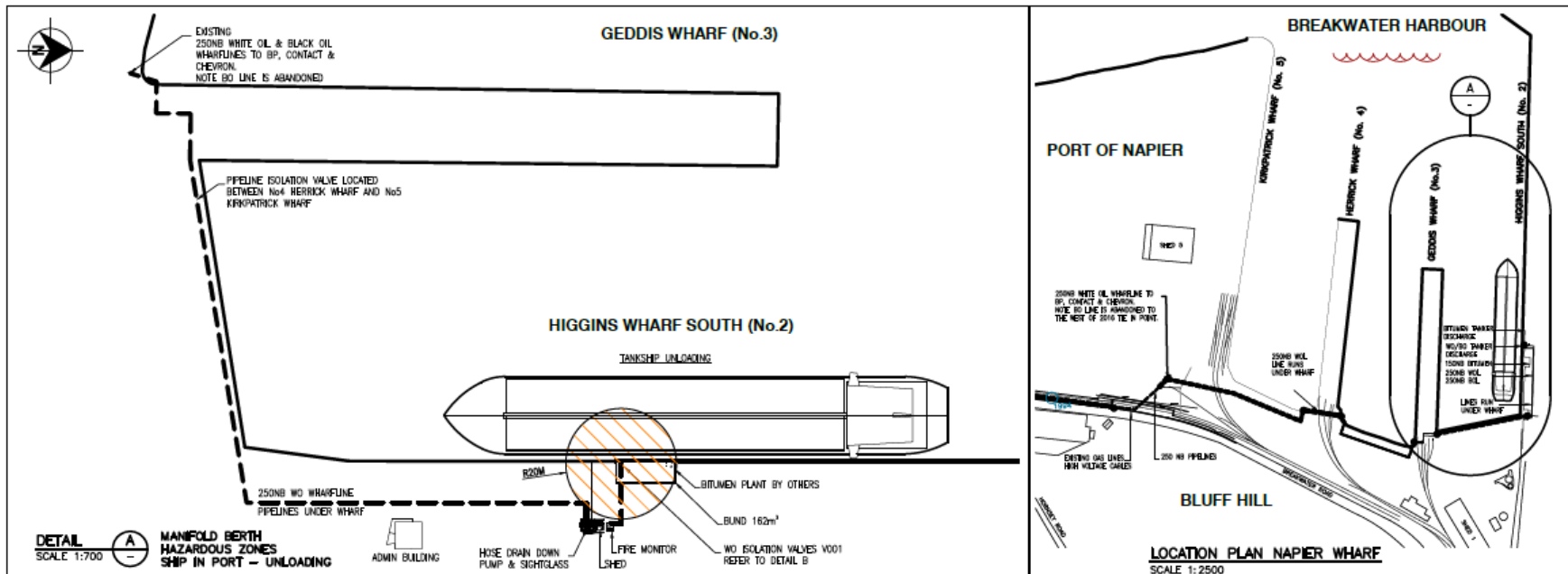
Location	Transfer Type	Oil Type	Tonnage
Wharf N° A	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 1	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 2	Discharge Tanker to Pipeline	Diesel, Kerosene, Petrol, Bitumen	7 + Tonnes
Wharf N° 2	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 3	Discharge Tanker to Pipeline	Bitumen, Tallow, Caustic Soda	1 – 4 Tonne
Wharf N° 3	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 4	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 5	Bunker by Road Tanker (and Trailer unit)	Diesel and Lube Oil	1 Tonne
Wharf N° 6	N/A Subject to subject to risk assessment	TBC	TBC
Inner Harbour West Quay	Bunkering	Diesel + Lube Oil	1 Tonne

Mobile plant refuelling also takes place around the Napier Port wharf from mobile refuelling tankers (diesel oil and waste recovery only).

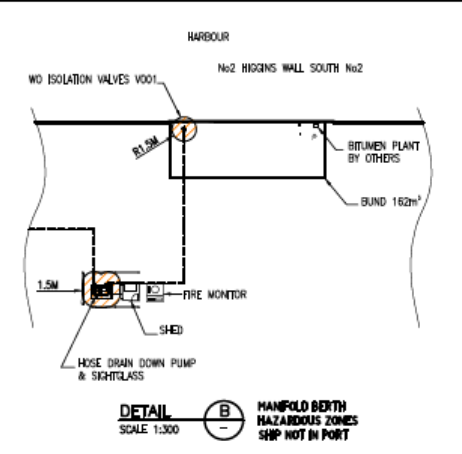
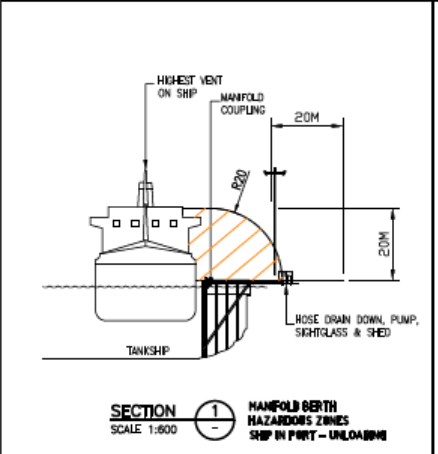
The locations of transfer points and the oil pipeline within Napier Port are shown on the next three pages.







DETAIL A
SCALE 1:700
MANIFOLD BERTH HAZARDOUS ZONES SHIP IN PORT - UNLOADING



LEGEND

- HAZARDOUS AREA, ZONE 0 ALWAYS OR FREQUENT
- HAZARDOUS AREA, ZONE 1 CAN OCCUR NORMALLY
- HAZARDOUS AREA, ZONE 2 VERY INFREQUENTLY

HAZARDOUS ZONING AS PER AS/NZS 60079.10.1:2009 & IP CODE PART 15. FOR DETAILS REFER TO NZOSL STANDARD HAZARDOUS AREA DRAWINGS STDD10276, STDD10286 & STDD10296.

NOTES

- THE HAZARDOUS AREA FOR EACH PIECE OF EQUIPMENT ON THE JETTY SHOULD BE EVALUATED.
- IF NON-SEGREGATED BALLASTING OR GAS FRIEDING IS CARRIED OUT, THEN THE JETTY MUST BE CLASSIFIED AS FOR LOADING.
- FOR CATEGORY A FLUIDS, REFERENCE SHOULD BE MADE TO THE METHODOLOGY GIVEN IN CHAPTER 5.
- THE HEIGHT OF THE HAZARDOUS AREA SHOULD BE 20m ABOVE THE COUPLING POINT. FOR A CATEGORY C MATERIAL, THIS IS EQUIVALENT TO A 5mm DIA. HOLE IN THE COUPLING. IF LARGER HOLE SIZES ARE POSSIBLE REFERENCE SHOULD BE MADE TO TABLE C9(a) FOR THE EQUIVALENT HAZARD RADIUS.
- HAZARDOUS AREAS ON WHARF PIPEWORK ARE OVER-RIDDEN BY HAZARDOUS AREAS DUE TO TANKSHIP WHEN SHIP IS IN PORT.
- REFER TO DRAWING NAJ/VAZ02 FOR SHIP LOADING PORT SITUATION.

HAZARDOUS ZONES - TANKER SHIP UNLOADING			
AREA	ZONE	DETAILS OF ZONE	REF
ALL VALVES & FITTINGS	ZONE 2	WITHIN 1.5M IN ALL DIRECTIONS OF VALVES & FITTINGS TO WHARF LEVEL	AS/NZS 60079.10.1
PRODUCT SAMPLE POINT	ZONE 1	1.5M ABOVE SAMPLING POINT & 3M LATERALLY	AS/NZS 60079.10.1
	ZONE 2	OUTSIDE ZONE 1, 1.5M ABOVE & 8M LATERALLY	AS/NZS 60079.10.1
TANKSHIP	ZONE 2	20M HORIZONTALLY FROM & TO A HEIGHT OF 20M ABOVE COUPLING POINTS	IP CODE PART 15 2005, PARA 3.6.

Rev	Description	Date	By	Check
E	REVISION UNDER MINOR DIMENSIONS (REVISED) - 0 BALLAST	22/09/13	SNL	
D	AS BUILT FOR NO.4 AND NO.5 WHARFLINE REVISION	19/08/13	SNL	TW
C	ZONE 1 RADIUS CHANGED TO MATCH STANDARD	11/01/13	SNL	
B	NZOSL HAZ ZONE REVIEW NEW DIMENSIONS REVISIONS HEFT	26/09/14	SNL	
A	ISSUED FOR INFORMATION	07/07/11	SNL	END

Design	Stage	Date
EA0	Stage	16/07/12
CR0	Stage	16/07/12
CR1	Stage	16/07/12
APPROVED	Stage	16/07/12



NAPIER TERMINAL
WHARF LAYOUT
HAZARDOUS AREA LOCATION PLAN
SHIPS IN PORT - UNLOADING

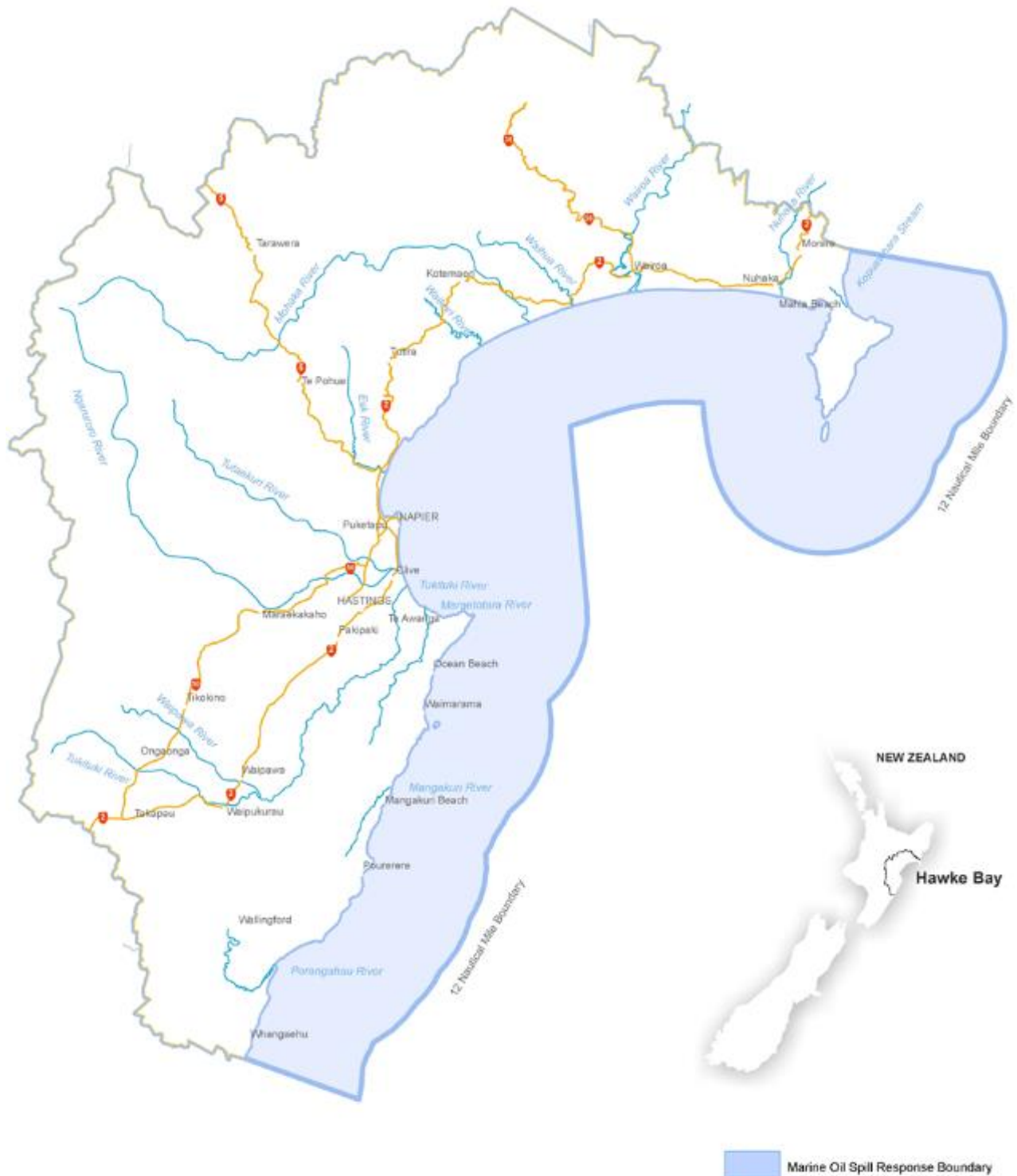
ISSUED FOR INFORMATION ONLY - NOT FOR CONSTRUCTION

Rev	AS SHOWN
Sheet No	A1 SHEET
Drawing Number	NAJV1174W
Rev	E

EMERGENCY DRAWINGS PORTFOLIO

2. Coastal Information

2.1 Hawke's Bay Coastal Marine Area



Hawke's Bay Region & 12 Nautical Mile
Oil Spill Response Boundary

2.2 Places of Refuge

In situations where an oil spill is likely to arise from damage sustained by a vessel it may be necessary for the ship to use an appropriate Place of Refuge. Because of the nature of the coastline, the Hawke's Bay region has only one designated Place of refuge which is the Napier Breakwater Harbour (Napier Port). Also see "Guidelines on Places of Refuge for Ships in need of Assistance" (IMO Resolution A. 949(23)) at www.imo.org and Chapter 13 of this plan.

2.3 Safe Anchorage

During a southerly wind ships may find safe anchorage in the lee of Cape Kidnappers (Anchorage A), whilst during an easterly wind ships may find safe anchorage in the lee of Mahia Peninsula (Anchorage B). These anchorages are shown on hydrographic charts in Annex 5 of this plan.

2.4 Alternative Places of Refuge / safe anchorages

The Manawatu-Wanganui Region has no safe haven/anchorage on the East Coast to the south of Hawke's Bay and the nearest safe haven to the north is the Port of Gisborne.

The designated position of the Places of refuge/Safe anchorage is only to be made by the Harbour Master. If the Harbour Master assesses that there will be a risk of pollution from the vessel at its designated Place of Refuge then he/she is to ensure that sufficient oil spill response equipment can be immediately deployed at, or near, the Place of Refuge to deal with the potential spill. Where possible, this capability is to be in place before the vessel arrives at the Place of Refuge.

As a general comment, provided weather permits, it is the intention to boom around a damaged vessel in order to reduce the effects of escaping oil. This will be carried out as soon as possible.

2.5 Shipping Routes & Hydrographic charts

Shipping routes into and out of the Napier Port are shown on the hydrographic charts for the region.

Outside of these routes into and out of the Port, the Maritime New Zealand has initiated a voluntary navigation guideline, recommending that ships stay at least 5 nautical miles away from any coastline. This guideline is targeted towards vessels laden with oil or other harmful liquid substances in bulk. Coastal tankers and other shipping pose a threat of oil spill with low probability of occurrence but high potential effects on the environment.

Copies of the following charts are available on the LINZ website.

- NZ 56 <http://www.linz.govt.nz/sea/charts/paper-charts/nz202-chart-catalogue/nz56>
- NZ 57 <http://www.linz.govt.nz/sea/charts/paper-charts/nz202-chart-catalogue/nz57>
- NZ 561 <http://www.linz.govt.nz/sea/charts/paper-charts/nz202-chart-catalogue/nz561>
- NZ 5612 <http://www.linz.govt.nz/sea/charts/paper-charts/nz202-chart-catalogue/nz5612>

Copies of these Hydrographic charts are located in the HBRC Emergency Operations Centre, Harbourmaster's office, Napier Port Limited and the Ministry of Fisheries, Napier.

Chart No NZ	Title	Scale 1:	Published	New Edition	Reprinted
56	Table Cape to Blackhead Point	200 000	10/1989	9/2001	4/2002
57	Blackhead Point to Castle Point	200 000	10/1989	9/2001	
561	Approaches to Napier	75 000	10/2006	10/2006	

Chart No NZ	Title	Scale 1:	Published	New Edition	Reprinted
5612	Napier Roads: Napier Harbour		10/2006	10/2006	
	Napier Roads	25 000			
	Napier Harbour	7 500			

2.6 GIS Mapping Application

All data contained within this plan is also accessible via the online GIS application.

To access the 'Oil Spill Response Application' go to <https://hbmaps.hbrc.govt.nz/hbrcmaps/> and then click on the 'Oil Spill Response Application' tile.

The 'Oil Spill Response Application' includes shoreline assessment beach access points, priority protection areas, shore segments and incident data during an oil spill response event. It also includes links to site sheets, shoreline assessment sheets and photos.

2.7 Hawke's Bay Rohe Moana

The Map on the next page shows the coastal and marine area over which iwi or a hapū exercises its mana and its kaitiakitanga, referenced from the National Aquatic Biodiversity Information System (NABIS) Dataset administered by the Ministry of Primary Industries.

Also, mapping layers are available within the HBRC GIS system that show all areas where Tangata Whenua interests are held.

Layers include among others:

Marae location and contact details

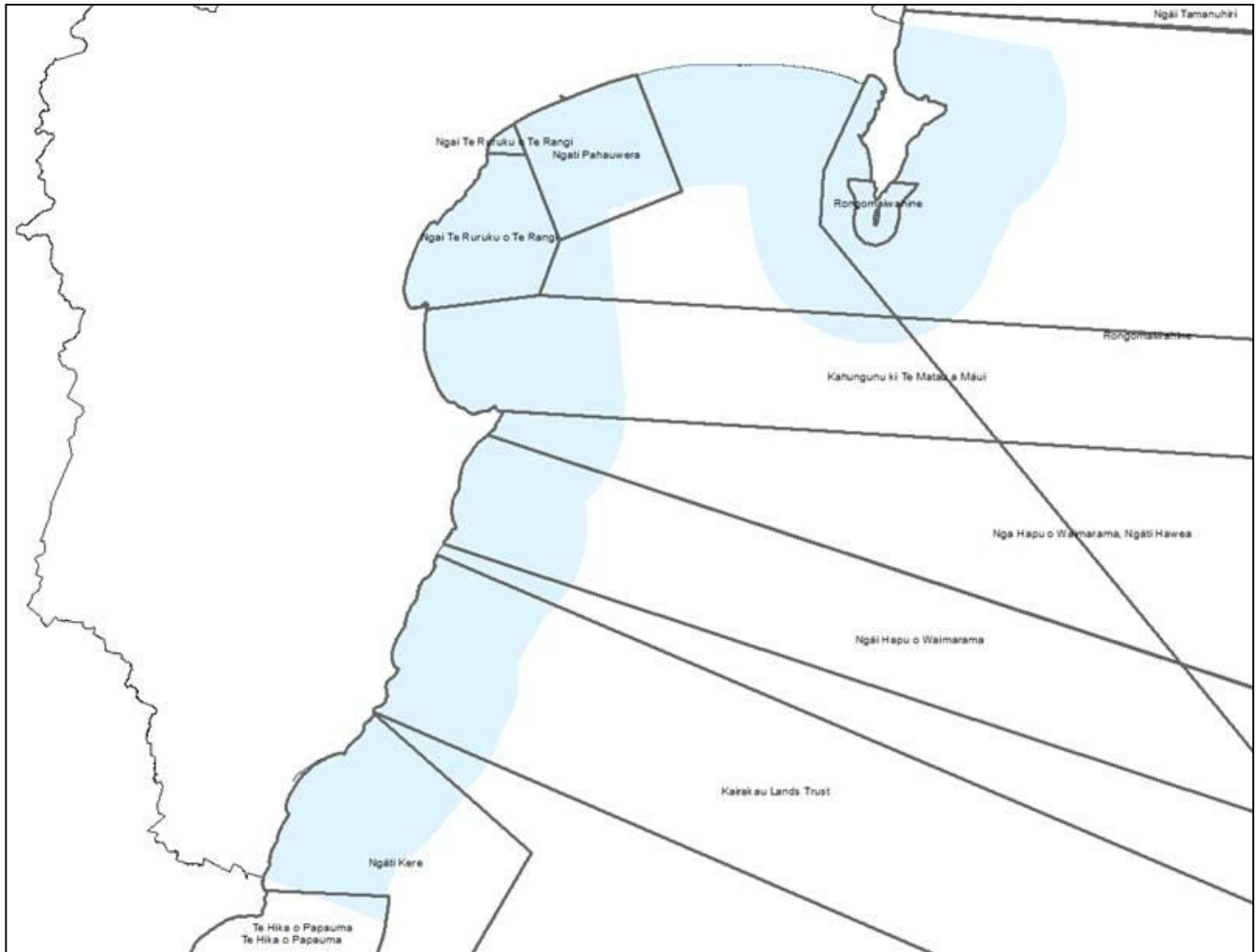
<https://maraewaakainga.com/Marae>

Maori Administrative Boundaries

Rohe Boundaries

Statutory Acknowledgements

Hapū Management Plans



Map showing the location and extent of "Rohe Moana" within Hawke's Bay

3. General Environmental Information

When evaluating the spill incident and developing an incident action plan, the Team needs to be aware of Sensitive Areas and other environmental Information. Principal resources at risk are summarised below and much of this material was derived from both the Regional Coastal Plan and from the Department of Conservation “Special Sites of Biological Interest (SSBI)” which includes the Departments Coastal Resources Inventory. This, or the contributors to these databases, should be consulted if necessary. Department of Conservation staff will assist with further information regarding this subject.

In addition, this section outlines areas recommended for protection, along with procedures on how to deter wildlife from the oil spill area together with rescue & rehabilitation requirements.

3.1 Coastal description

Hawke’s Bay has a varied mix of shoreline types that support a wide variety of habitats and uses.

In the south of the region the coastline consists predominantly of sand beaches, dune systems and rock platforms backed by steep cliffs. Some areas of the coast are largely inaccessible at high tide. The rock platforms and dune systems support a large variety of inter-tidal species and bird life.

The coast between Cape Kidnappers and Tangoio is predominantly made up of steep black gravel beaches that are fed from the three main rivers within the region. This area of coastline is the closest to the two main centres of Hastings and Napier and sees high levels of public use and supports the main economic activities at the Napier Port and Inner Harbour of Ahuriri.

To the north of the region the coast again turns from steep gravel beaches to predominantly sand and rock platforms backed by steep cliffs. At the northern end of the region lies the Wairoa coast and Mahia Peninsula, which both support environmentally and geologically renowned coastal features, including the Whakamahi and Whakaki Lagoons and the rock platforms found on the eastern side of the Peninsula. This is also an important summer tourism spot for both regional and national travellers.

3.2 Key Economic areas

The main areas of economic activity surround the city of Napier. The most important of the coastal economic assets is the Napier Port, which supports international transportation of several key exports from the region and the growing international cruise ship industry.

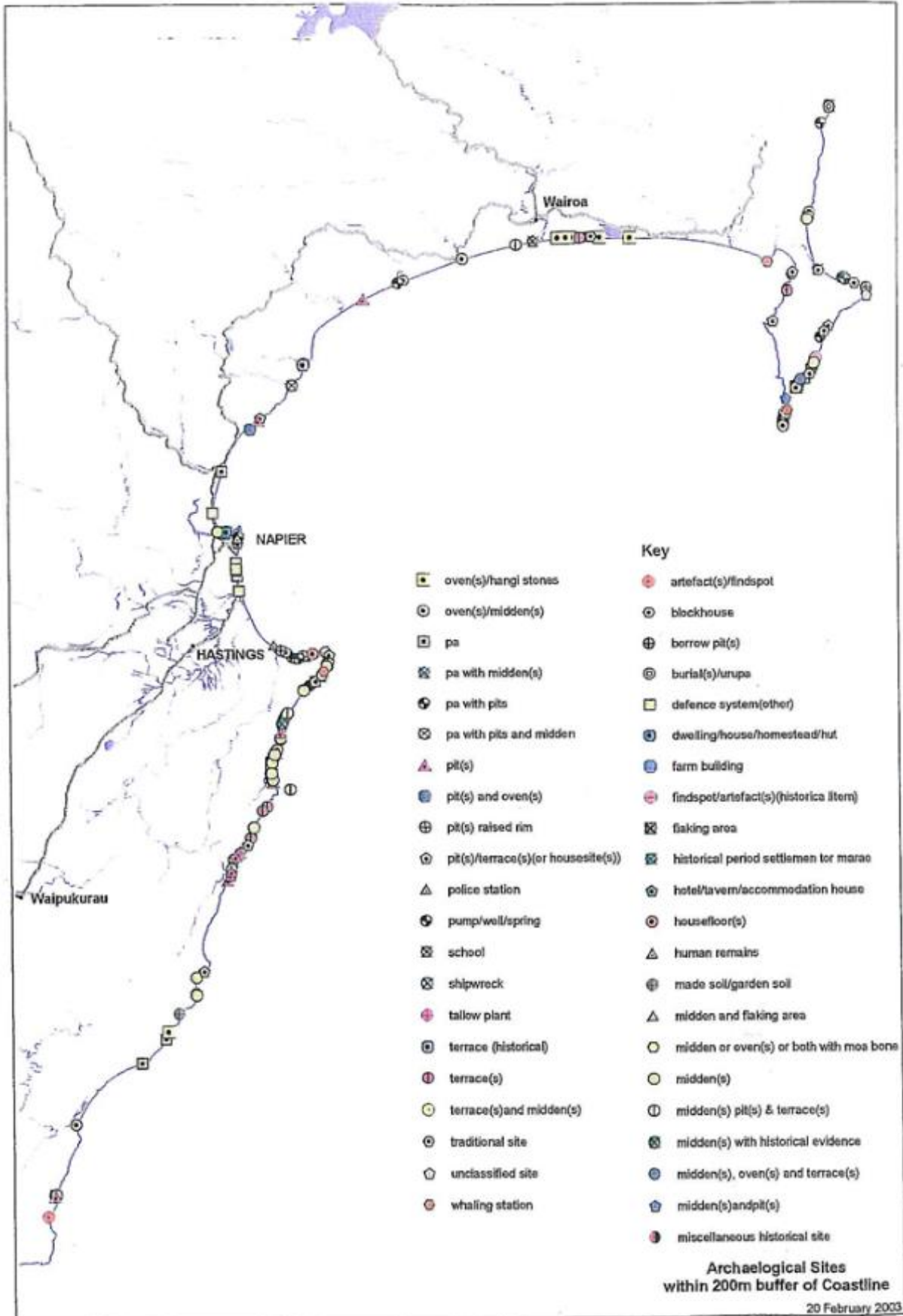
In addition, the Inner Harbour of Ahuriri supports both commercial and recreational activities.

3.3 Areas of cultural and historical significance

Hawke’s Bay has a large number of sites of both cultural and historical significance to both the Hawke’s Bay Community and Tangata Whenua and these are shown on the map on the next page.

The historical sites identified on the map of the Hawke’s Bay Coast have been identified by Heritage New Zealand/ Pouhere Taonga as significant value to the Hawke’s Bay community and some are also of national significance. The Heritage Schedules from District Plans should be referenced for up-to-date information, along with the NZ Archaeological Associations site recording scheme which contains the most up to date recorded or known archaeological sites. www.archsite.org.nz

The areas identified on the map include historic pa sites, ovens with hangi stones, shipwreck sites, historic European schools, and whaling stations sites, etc.



Map showing the key cultural and Historical sites on the Hawke's Bay coastline

3.4 Regional Wildlife overview

The Hawke's Bay coast supports a wide variety of both marine and terrestrial species and has populations of both nationally and internationally significant bird species. Table 1 on page... of this annex details the known bird species within the region and provides details regarding their seasonal distribution.

Additional information regarding wildlife found within the region can be sourced from the Hawke's Bay Regional Council and Department of Conservation, including specific sites containing sensitive wildlife.

3.5 Wildlife Risk Assessment

A basic risk assessment was carried out for the Hawke's Bay coastline which analysed the sites in Hawke's Bay likely to incur a marine oil spill (risk sites) and the wildlife likely to be affected in the event of a spill from these risk sites, which are described in detail in this annex. It is anticipated that most spills will occur in the Napier Port or the Inner Harbour during oil transfers.

However, a significant increase in shipping over recent years and the potential introduction of oil exploration test wells into the area has increased the potential for a large spill outside the Port or Inner Harbour.

Risk Sites

a) Spills in the Inner Harbour or Napier Port (Highest Probability)

Depending on the state of the tides and wind direction, spills in the Inner Harbour or Napier Port may impact on: the Little Blue Penguin Colony at East Pier, along Hardinge Road and the Port breakwater; or on the following bird species in the Ahuriri Estuary:

- Waders and waterfowl;
- Reef and White-face herons, Australian Bittern, Royal Spoonbill;
- Shags;
- Terns and Gulls;
- Pukeko, Marsh Crake (mainly confined to the upper estuary).

Wading species are likely to be impacted indirectly through interruption of the food chain. Other species such as waterfowl, herons, shags, gulls and terns are likely to be directly impacted through contact with the oil.

b) Coastal Shipping Spills (Low probability)

The following species are likely to be threatened in the event of an oil spill in the locations specified. These species and habitats have been selected on the basis of their importance within the region and due to their vulnerability to spilled oil.

Location	Species
• General Coast:	Shearwaters, petrels, gannets, terns, gulls & northern blue penguins
• Porangahau Estuary	Waders, terns, gulls, & shags
• Te Angiangi (Aramoana- Blackhead)	Waders, terns, herons & shags, penguins
• Motu O Kura (Bare Island)	Penguins, shearwaters, NZ fur seals, terns, shags, & gulls
• Hinemahanga Rocks	NZ fur seals

Location	Species
• Cape Kidnappers	Gannets, terns, shags, oystercatchers & gulls
• Waitangi Estuary	Waders, white fronted terns (nesting), shags, herons, gulls and waterfowl.
• Ahuriri Estuary	Waders, shags, gulls, terns and waterfowl
• Wairoa River Estuary and coastal lagoons	Waterfowl, waders, gulls, terns, herons, bittern, NZ dabchick, fernbird, rails
• Mahia Peninsula	30 species of coastal birds. NZ fur seals, whales, dolphins.
• Portland Island	NZ dotterel, shore plover, white fronted terns, black winged petrels, NZ fur seals, whales, dolphins.
• Maungawhio Lagoon	Waders, waterfowl, and other wetland birds.

3.6 Limits On Local Response Expectations

Taking into account the type and number of species likely to be impacted in the event of an oil spill, and the limitations with respect to the Temporary Holding Centres, Temporary Rehabilitation Centres, equipment and trained personnel in the region, the regional response expectations are:

- 50 birds; and
- 5 NZ fur seals.

For safety reasons it is recommended that no attempts be made to capture NZ sea lion, southern elephant seal, leopard seal or full-grown NZ fur seals (over eighteen months)¹. This includes physical injury from handling the animals and risk of infection from bites. Even with sub-adult NZ fur seals, any person handling these animals should be experienced in seal handling.

3.7 Procedures for wildlife Deterrence, Rescue and Rehabilitation in Hawke's Bay

The National Oiled Wildlife Response Team (NOWRT) members in Hawke's Bay will coordinate the deterrence, rescue and rehabilitation of wildlife in accordance with the Incident Action Plan developed by the Incident Command Team (Refer Annex 2). The Massey University NOWRT members are also available to help with this co-ordination.

Priority Ranking

In some circumstances (e.g. where there are a large number of species impacted by an oil spill) it may be necessary for the NOWRT members in Hawke's Bay to establish priorities for deterrence, rescue and rehabilitation of wildlife.

The following categories will provide some assistance when prioritising wildlife for rescue and rehabilitation².

Category 1: First priority for deterrence, rescue and rehabilitation

¹ Other response options could apply, including hazing, and euthanasia where required.

² References

Bell, B.D. (1986): The Conservation Status of New Zealand Wildlife. Occasional Publication No. 12. New Zealand Wildlife Service, Department of Internal Affairs, Wellington.

Department of Conservation (1994): Setting priorities for the conservation of New Zealand's threatened plants and animals. Second Edition. Department of Conservation, Wellington.

This includes species classified as endangered by Bell (1986) and/or Category A species by Department of Conservation (1994), and the Ornithological Society of New Zealand, Inc.

Conservation status of New Zealand birds, 2008, this identifies protected species breeding in Hawke's Bay that would have a significant proportion of their regional population threatened by a major oil spill.

- Marine turtles (all species)
- Refer to Table 1 at the back of this annex for categories of coastal birds

Category 2: Second priority for deterrence, rescue and rehabilitation

This includes species classified as threatened (including regionally threatened) by Bell (1986) and/or Category B, I and O species by Department of Conservation (1994), and the Ornithological Society of New Zealand, Inc. Conservation status of New Zealand birds, 2008, this identifies locally common protected species that would not have a significant proportion of their population threatened by a major oil spill.

- New Zealand fur seal (Arctocephalus forsteri)
- Hooker's sealion (Phocarctos hookeri)
- Southern elephant seal (Mirounga leonina)
- Refer to Table 1 at the back of this annex for categories of coastal birds

NB. Any interventions attempted on pinnipeds must be cognizant of the extreme safety risks of approaching animals larger than approximately 25 kg. Only specifically trained, experienced marine mammal handlers should be involved in any such work.

Category 3: Third priority for deterrence, rescue and rehabilitation

Any fully protected species not listed in the above categories and any species listed in the First Schedule (Wildlife declared to be Game) and Second Schedule (Partially Protected Wildlife) of the Wildlife Act 1953.

- Refer to Table 1 at the back of this annex for categories of coastal birds

Category 4: Fourth priority for deterrence, rescue and rehabilitation

- Refer to Table 1 at the back of this annex for categories of coastal birds
- Unprotected species including the southern black-backed gull (*Larus dominicanus*).

NB. In areas where southern black backed gulls are subject to population control measures, that is gulls are killed deliberately for human health reasons or as part of conservation-directed predator control programmes, it would be inappropriate to rehabilitate individuals except under unusual circumstances. It is the intention of this Tier 2 plan that individual oiled southern black-backed gulls only be captured where to not do so would be unnecessarily cruel. Further, in these specific areas where southern black backed gulls are controlled, the On-Scene Commander may issue a directive that captured oiled southern black backed gulls are humanely killed. This policy should be assessed and either confirmed or abrogated on a response-by-response basis.

4. Priority areas for Protection

The maps, site information and response guides showing the amenity areas, commercial and recommended areas for protection within Hawke's Bay have been prepared by the Hawke's Bay Regional Council in consultation with the Department of Conservation and interested parties of the Hawke's Bay region. Many of these areas are "Significant Areas" as defined in the Regional Coastal Plan. Hence, the Regional Coastal Plan and the Coastal Monitoring Strategy should also be referred to when developing the Incident Action Plan.

In the event of a spill affecting coastal areas of the region the maps and site information must be considered in consultation with the appropriate interested parties as identified in Annex 2.

NB: TOPOGRAPHICAL MAPS REPRODUCED WITH THE PERMISSION OF LINZ

4.1 Regional Risk Assessment

A region wide risk assessment and ranking was undertaken based on guidance from MNZ.

The process has been applied to existing high priority sites. Some high priority sites were split into areas to have specific risk assessments and subsequent rankings applied. Where this has occurred, the site (as shown in the blue boxes) shows two discreet rating/rankings to assist with prioritisation.

Additional lower priority sites have been added to this plan, reviewed and ranked to assist decision making when resources/time constraints are limited. In addition, overtime the Hawke's Bay Regional Council will undertake to increase cultural significance information of our high priority sites to assist in response planning.

Risk Assessment Process and Assumptions

The process followed the specified process as outlined in the Maritime New Zealand guidance document "*New Zealand Prioritisation Process – NEBA*"

The key assumptions to complete the MNZ process are that HFO impacts the site for 24 hours and there is no human assisted clean-up, i.e. nature is left to itself.

Some specific assumptions made for this specific risk assessment for Hawke's Bay include:

- Due to declining habit and pollution, the estuaries that specifically mention important whitebait and fish spawning habit, it is assumed the site is regionally important.
- If oil is present for less than 1 year and 25% of an endangered species is killed by oil, then it would take at least 5-10 years for population to recover i.e. NZ Dotterel.
- If buried oil is present for more than 1 year and 25% of an endangered species is killed by oil, then it would take at least 10-20 years for population to recover i.e. NZ Dotterel.
- If HFO in estuary not cleaned, effects last for 10-20 years) buried hydrocarbon effect on benthic fauna (food source for birds). Oiling ongoing periodically as oil re-exposed. (Ref: Leigh Stevens - Wriggle - Aug 2013).
- There will be no long-term significant effects on ocean food chain in parts of Hawke's Bay that are a high energy environment. Effects generally food safety while significant oil in water column. Assume minimal effects of shellfish/finfish etc from use of dispersant. (Ref: Leigh Stevens - Wriggle - Aug 2013).
- Seal winter haul outs are not something that need priority unless plenty of resources available. Responders limited ability to manage seals and increasing population around NZ mean one severely impacted colony would not be able to be prioritised when resources are stretched. (Ref: John Adams - HB Oiled Wildlife Expert- Aug 2013)
- In terms of conservation impact, equal weight has been given to Reef Heron and White Heron, despite White Heron being rarer. White Heron doesn't breed in HB and occur in smaller numbers at each site. Reef Heron's breed in HB and are slightly higher in numbers so oil is

likely to have more impact on their long term national and regional population than that of the white Heron. (Ref: John Adams - HB Oiled Wildlife Expert- Aug 2013).

- When making an Impact Assessment choice, based on oil not being cleaned up, the severity of effect has been averaged over the length of the effect rather than the maximum severity of effect that may only occur over a short period at the start of a spill. Example, Recreation at Tukituki. For a short period of time, 100% of the area will be off limits for recreation, but over the course of the year about 30% of recreation activities would be prevented from occurring for the year. Relatively inconsequential in the overall weighting for sites.
- No feasibility has been indicated where it may be suitable to use dispersants. This is due the predictability of dispersant effectiveness depends on too many factors to be able to make a general statement.

4.2 Priority site information sheets

The 22 selected sites have been given a risk rating from Very High through to Low depending upon the overall score of the site in the risk assessment process. A summary of the priority areas for protection is shown in the table on the next page. This includes the risk ratings that were given to each site to determine their priority.

Details for each of the priority sites are shown in the site information sheets contained in this annex. These sheets include the following information:

- A description of the site
- Access information
- Predominant weather and sea conditions / tidal information
- Resources at risk including important wildlife
- Operational considerations
- Logistical requirements
- Key contacts for notification
- Site map and aerial photograph

4.3 Summary of Regional Prioritisation

Site No	Name	Risk Rating	Overall Ranking	Protection Possibilities	Clean Up Options
1	Whangaehu	Medium	18	Protection not possible. Open ocean beach.	Sandy beaches, intertidal platforms and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
2	Porangahau Estuary	Very High	5	Potential to boom inside the estuary mouth.	Shoreline clean-up on the beaches. Booming may enable some recovery within the estuary depending upon oil type.
3	Blackhead to Paoanui Point	High	9	Protection not possible. Open ocean beach.	Sandy beaches, intertidal platforms and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
4	Mangakuri Beach	High	13	Protection not possible. Open ocean beach.	Sandy beaches, intertidal platforms and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
5	Kairakau Beach	High	10	Booming in some areas potentially possible, but mostly open ocean beach where protection not possible.	Sandy beaches, intertidal platforms and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
6	Waimarama to Ocean Beach Inc. Bare Island	High	11	Protection not possible. Open ocean beach and island in unprotected open ocean.	Sandy beaches. Both natural recovery and shoreline clean-up may be effective in this area.
7	Cape Kidnappers / Ragaiika	Very High	4	Protection not possible. Open ocean beach.	Sandy beaches, intertidal platforms and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
8	Tukituki River Mouth (Clifton to Haumoana)	High	8	Potential booming inside estuary or closing river mouth mechanically. Open ocean beaches either side of estuary cannot be protected.	Booming inside the estuary may enable some protection of shorelines and collection. Steep gravel beaches are subject to high wave energy, so natural recovery may be most effective option.
9	Waitangi Estuary	Very High	7	Potential booming inside estuary or closing river mouth mechanically. Open ocean beaches either side of estuary cannot be protected.	Booming inside the estuary may enable some protection of shorelines and collection. Steep gravel beaches are subject to high wave energy, so natural recovery may be most effective option.
10	Marine Parade (Napier Seafront)	Low	20	Protection not possible. Open ocean beach.	Steep gravel beaches are subject to high wave energy, so natural recovery may be most effective option.
11	Napier Port & Town Reef	High	14	Booming of the port possible to contain spills.	On-water recovery and shoreline clean-up are both highly viable options.
12	Pania Reef	Low	22	Protection not possible.	On-water recovery may only be possible in very calm conditions.
13	Hardinge Road	Low	21	Potential to boom eastern and western ends to protect beaches.	Sandy beaches and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.

Site No	Name	Risk Rating	Overall Ranking	Protection Possibilities	Clean Up Options
14	Ahuriri Estuary & Inner Harbour	Very High	3	Booming of entrance possible to prevent oil movement into the inner harbour and within the harbour to prevent oil movement into the estuary.	On-water recovery and shoreline clean-up are both highly viable options.
15	Westshore to Tangoio Bluff inc. Esk River Mouth	Low	19	Mechanically closing the river mouth may be possible. Protection of the open ocean beaches not possible.	Steep gravel beaches are subject to high wave energy, so natural recovery may be most effective option.
16	Waipatiki to Taits Beach	Medium	16	Protection not possible. Open ocean beaches.	Sandy beaches and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
17	Whakamahi Lagoon to Whakaki Lagoon	Very High	1	Potential to boom inside the Wairoa River estuary. Mechanically closing lagoon entrances may also be possible.	Booming inside the estuary may enable some protection of shorelines and collection. Steep gravel beaches are subject to high wave energy, so natural recovery may be most effective option.
18	Opoutama to Taylors Bay	Medium	15	Protection not possible. Open ocean beaches.	Sandy beaches and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
19	Western Mahia Peninsula	Medium	17	Protection not possible. Open ocean rocky coastline.	Natural Recovery main option due to high wave energy and difficult accessibility.
20	Waikawa (Portland) Island	Very High	6	Protection not possible. Open ocean rocky coastline.	Natural Recovery main option due to high wave energy and difficult accessibility.
21	Ahuriri Point to Oraka (Eastern Mahia Peninsula)	High	12	Protection not possible. Open ocean beaches and rocky coastline.	Sandy beaches and rocky shorelines. Both natural recovery and shoreline clean-up may be effective in this area.
22	Maungawhio Lagoon (Pukenui Beach to Mahunga)	Very High	2	Potential to boom inside the lagoon entrance. Beaches are open ocean and protection not possible.	Booming inside the lagoon may enable some protection of shorelines and collection. Sandy beaches may enable shoreline clean up. Beaches are subject to high wave energy, so natural recovery may also be an option.

Priority Site Information Sheets



Hawke's Bay Marine Oil Spill Contingency Plan
Annex 7: Priority Areas for Protection

Map Location

Site 1	Whangaehu	Risk Rating	Medium
Site Description	Whangaehu is a small coastal settlement situated in the South of Hawke's Bay. The Coastline in this area consists of steep hills and rocky shorelines to the north and eroding cliffs to the south creating a mixture of sand and rocky foreshore. Immediately in front of the settlement there is a small sand beach with inter-tidal platforms and sand dunes that are regionally significant. There is a small stream flowing out to sea from the settlement.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 57	BM 38	125	
Segments			
Site Access / Control measures	<ul style="list-style-type: none"> • Site access is via the beach entrance from the gravel parking area at the Whangaehu Road end. Access along the shoreline is by foot only. • No vehicle access north or south of the beach. • Local advice should be sought for any boating activities. • Beach launching area at the southern end of the beach (fishing boats operate from this area). A tractor would be required. • The water that spreads across the beach from the small stream at times is not deep and does not impose significant restrictions to 4WD / tractor traffic. • The nearest airstrip is located on Cooks Tooth Road. • Access to the beach can easily be controlled at the beach entrance with space to setup a decontamination zone. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock • Dunes 	<ul style="list-style-type: none"> • Sand • Wave cut platforms 	
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S57, S58, S59, S60 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	Not regionally significant. One Crayfish business in the area		

Tourism	Not regionally significant. Seasonal with one eco-tourism operator in the area and holiday homes.			
Recreation	Not regionally significant.			
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
At risk Wildlife				
Birds	The areas support a colony of white fronted terns & red billed gulls, together with northern blue penguins. NZ Dotterel are likely to visit along with other shorebirds.			
Marine Life	The inter-tidal platforms support mussels, paua, rock lobster and kina, pupus (Catseyes), chitons limpets and Karengo (Porphyra).			
Operations				
Response Matrix	Options	Response option	Preferred option	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	Yes	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	High
Response priority	Protection of the inter-tidal platforms should take priority over protection of the beach			
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water over the platforms may reduce the ability to utilise dispersants.</p> <p>Some protection of inter-tidal areas may be possible, but this will be limited by the availability of equipment and sea conditions.</p> <p>Where oil cannot be prevented from impacting the coast shoreline clean-up is the main response option. The use of booms for deflection and containment is not possible. Some pre-clean activities can be conducted to reduce the collection of oil on debris.</p> <p>Some areas of the coast are fairly inaccessible and natural recovery is the best option given the high energy of wave action on the coastline.</p>			
Wildlife Recovery	<p>Wildlife will need to be stabilised on-site and transported to Waipukurau or Massey for full treatment.</p> <p>There is space at the beach access point to create a wildlife collection / stabilisation point.</p>			

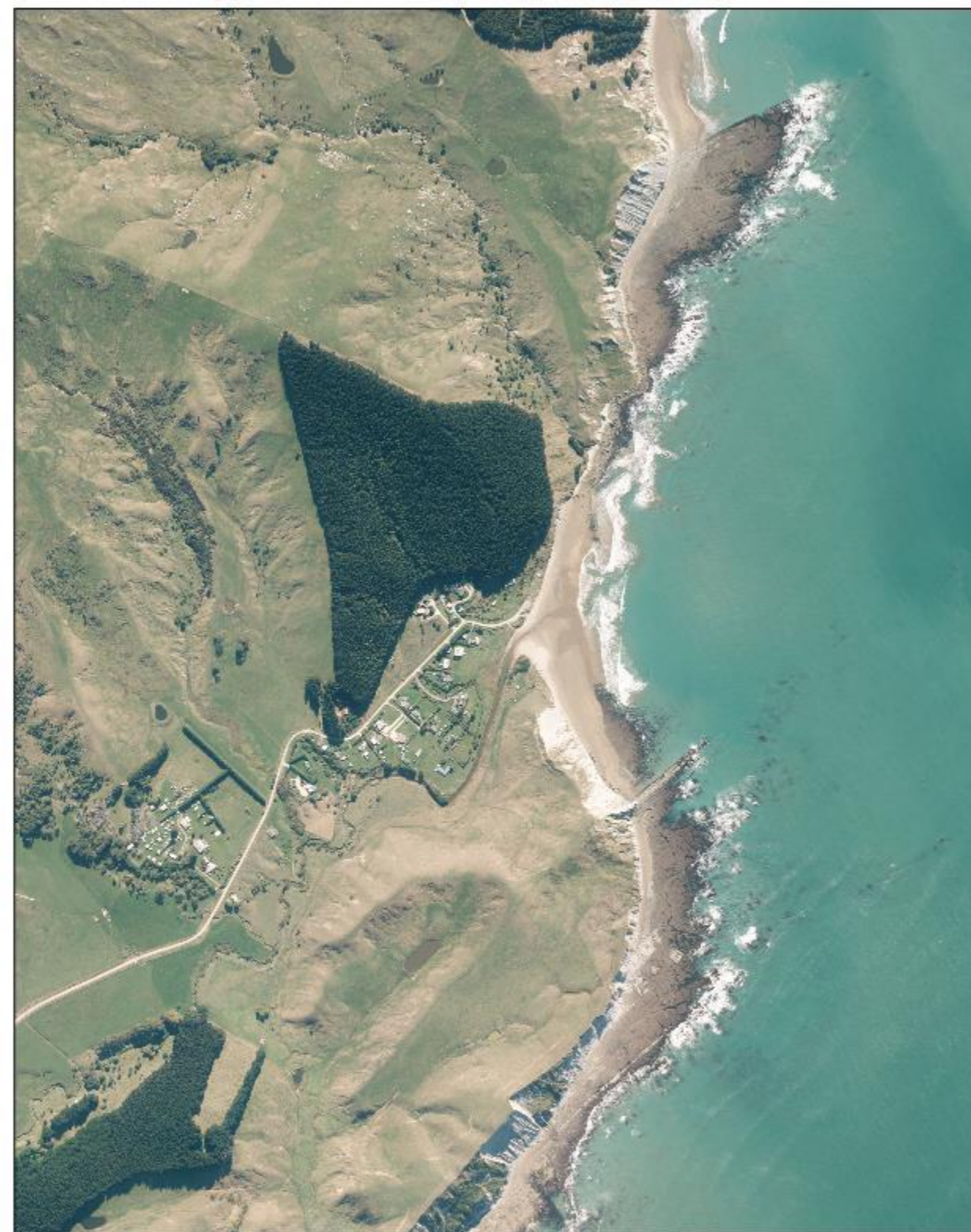
Safety		
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Booms (rapid deployment, sorbent) for shoreline protection if conditions allow • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV 's for access to areas further from beach access • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilets, water station, Gazebo etc 	
Transportation	<p>The site is accessed via gravel roads. Most equipment can be transported by Ute and trailer to the site.</p> <p>Clean-up staff can be transported to the site via minibus or car / Ute.</p>	
Waste Collection	<p>Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.</p>	
Communications	<p>Communications are poor in the area with no mobile coverage available.</p> <p>VHF Communications will only work on handhelds within line of sight. There are no repeaters in the area, so a portable repeater would need to be used to enable VHF communications.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Whangaehu Beach House – Sleeps up to 8 people with kitchen facilities – Contact via AirBnB.</p> <p>The Porangahau Beach Road Holiday Park is 15 minutes' drive from Whangaehu and can accommodate responders in cabins with kitchen and ablution facilities available on-site.</p> <p>Catering would need to be brought in. The Duke of Edinburgh Hotel may be able to provide catering. The closest supermarket is in Waipukurau. Other businesses in Waipukurau may be able to provide catering requirements.</p>	
Public Information		
Resources for PIM Activities	<p>There are no halls in close proximity to the site. Any community meetings regarding spills would need to be conducted in Porangahau at the hall, or Marae.</p>	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Central Hawke's Bay District Council	Local Authority	06 857 8060

Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Horizons Regional Council	Regional boundary / equipment and personnel support	0508 800 800

NB: For additional notification contacts see Annex 2, section 3.3



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Whangaehu

Site 2	Porangahau Estuary & Beach		Risk Rating	Very High
Site Description	<p>The Porangahau Estuary is situated at the mouth of the Porangahau River, Central Hawke's Bay. It is a long, narrow estuary formed behind a low, largely unvegetated longshore bar (see attached topographical map and photos of the area). It encloses a variety of estuarine habitats ranging from saltmarsh to inter-tidal sand and mudflats, and shallow tidal channels. It is a nationally significant wildlife and fisheries habitat and supports nationally significant dune vegetation types. The estuary, adjacent dune systems and wetlands have been identified as a recommended area for protection within the Eastern Hawke's Bay Ecological District.</p>			
Chart Number	NZ Topographic Map No.	Coastal Plan Map		
NZ 57	BM 38	124, 123		
Segments	Porangahau Estuary / Porangahau Beach South / Porangahau Beach North			
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the area is via public road (see topographical map). • Tractor and 4WD access across the beach to the south side of the estuary from the Holiday Park. • Access to the North side of the estuary is across Taikura Station. Limited 4WD access along the beach from the south side. • Beach launching area directly off the beach and a tractor may be available, but local advice should be sought for any boating activities. • Boat access to the mouth may be possible from the bridge. Depth of estuary near the river mouth restricts boat access from the bridge especially during low tide. • The nearest airstrips are located on MaCauley Lane and Hunter Road. • Beach Access can be controlled at beach entry points, however, there are other smaller routes across dunes that will need to be controlled in addition. 			
Intelligence				
Foreshore Types	<ul style="list-style-type: none"> • Sand • Mudflats • Shallow tidal channels 			
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S61,62,63,64,65,66,67 			
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>			
Sea Conditions	<p>This is an area of exposed coast and is often subjected to large swells from offshore systems.</p>			
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>			
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>			

At risk Resources				
Commercial	Not regionally significant.			
Tourism	Not regionally significant. Seasonal with one campground in the area and holiday homes.			
Recreation	There is a small-moderate use of the estuary for recreational water skiing and wakeboarding in the upper section below the main bridge, plus fishing at the lower end of estuary.			
Cultural	<p>This area is a traditional Maori fishing area (cockles, Rock lobster, non-salmonid wetfish).</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>			
At risk Wildlife				
Birds	<ul style="list-style-type: none"> • This is an important area for birdlife, including some nesting colonies (white fronted terns, Caspian terns, black billed gulls and variable oystercatchers) in spring-summer, and both NZ and international migratory waders. Breeding royal spoonbill and feeding area for NZ Dotterel. • Department of Conservation includes the full area of Porangahau in its Natural areas protection programme. • Species diversity and bird numbers are highest in summer. Significant numbers of waterfowl also use the area. 			
Marine Life	<ul style="list-style-type: none"> • The inter-tidal platforms support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra). 			
Operations				
Response Matrix	Options	Response option	Preferred option	Feasibility
		Containment and recovery	Yes	Medium
		On-water recovery	No	Low
		Dispersant Application	No	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	No	Low
Response priority	To prevent oil from entering the estuary			
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ.</p> <p>A boom should be placed across the entrance of the estuary- upstream of the area subject to wave action, and estuary entrance is prone to shifting. Deflection booms are unlikely to be effective due to the general sea conditions in the area.</p>			

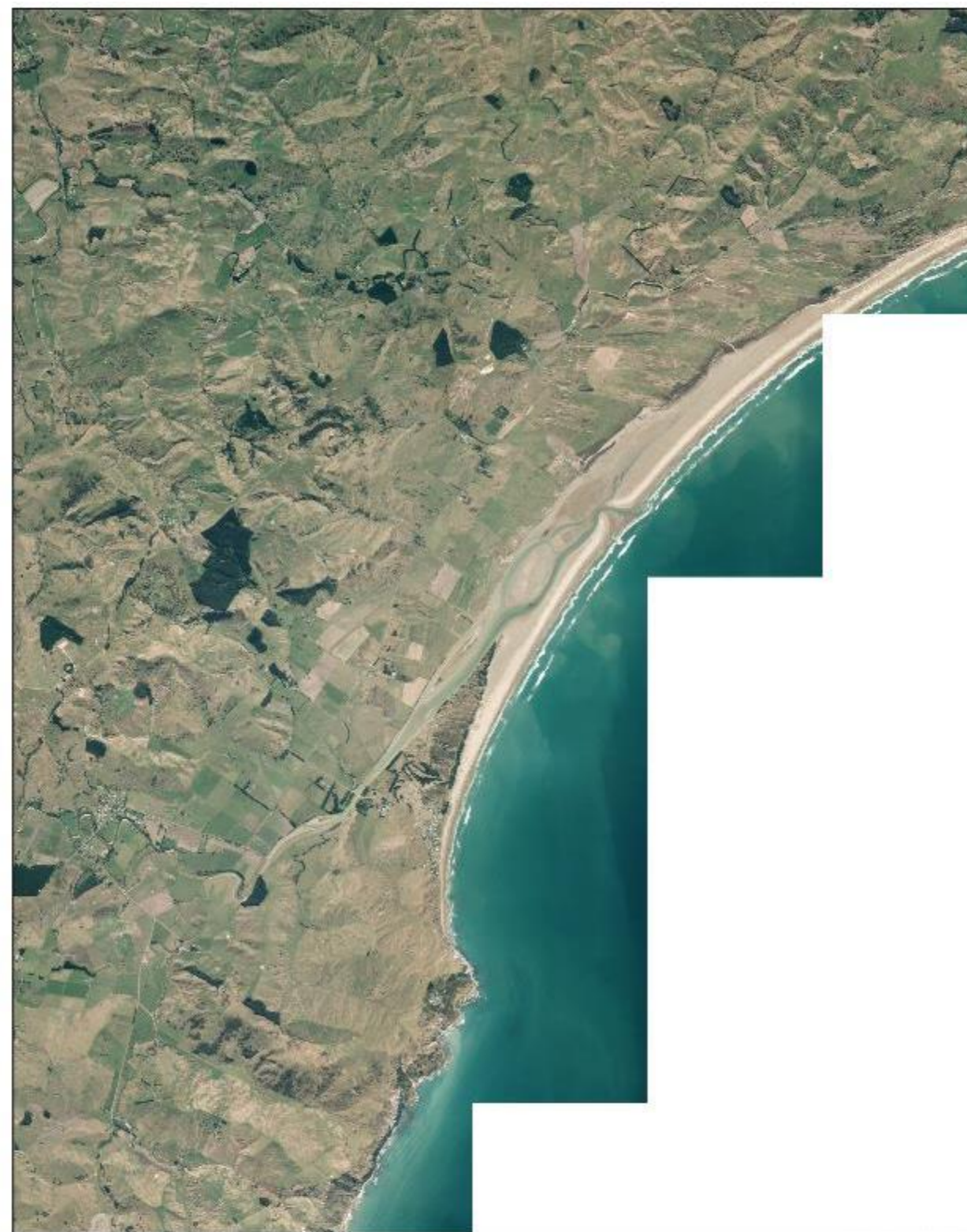
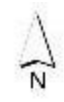
	<p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p> <p>Shoreline clean-up activities are the main option for the beach areas, with the ability to utilise machinery for recovery due to the nature of the beach.</p>
Wildlife Recovery	<p>Wildlife will need to be stabilised on-site and transported to Waipukurau or Massey for full treatment.</p> <p>There is space at the beach access point to create a wildlife collection / stabilisation point.</p>
Safety	
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are underneath cliffs prone to erosion and slips
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Booms (Land/sea boom, rapid deployment, sorbent boom) for estuary protection • Flatbed truck for transportation of equipment to site • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilets, water station, Gazebo etc
Transportation	<p>The site is accessed. Most equipment can be transported by flatbed truck to the site.</p> <p>Clean-up staff can be transported to the site via minibus, car or ute.</p>
Waste Collection	<p>Waste collection can be performed by waste contractor (skip bins) or by ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.</p>
Communications	<p>Mobile communications are possible in the area with good 3G coverage and fair 4G coverage available on both networks.</p> <p>VHF communication is possible via HBRC Fleet link, or the CDEM ES1 Channel.</p> <p>Marine VHF communication is possible with Napier on Channel 82 using a 25watt system.</p> <p>Satellite communications would work in the area.</p>
Accommodation and catering	<p>The Porangahau Beach Road Holiday Park is located close to the site and can accommodate responders in cabins with kitchen and ablution facilities available on-site.</p> <p>Catering may be possible from the Duke of Edinburgh Hotel located in Porangahau. The closest supermarket is in Waipukurau. Other businesses in Waipukurau may be able to provide catering requirements.</p>
Public Information	
Resources for PIM Activities	<p>The Porangahau Memorial Hall would provide a suitable location to hold community meetings, or to meet other media requirements such as briefings.</p>

Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedures
Porangahau Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Central Hawke's Bay District Council	Local Authority	06 857 8060
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065

NB: For additional notification contacts see Annex 2, section 3.3



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Porangahau

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Site 3	Blackhead to Paoanui Point	Risk Rating	High
Site Description	<p>Exposed coastline interspersed with broad intertidal platforms and sandy beaches which are shown on the attached topographical maps of the area. Many of the smaller beaches have streams with small estuaries that are not regionally significant, but can be protected if higher priority sites are not taking up resources.</p> <p>The Te Angiangi Marine Reserve covers an area of about 1.3 square nautical miles (446 hectares), extending one nautical mile offshore from mean high water mark between Blackhead and Aramoana beaches. It includes a broad rock platform.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 57	BM 39	122, 123, 92 - 97	
Segments	3a – Blackhead, 3b – Aramoana, 3c – Pourere, 3d - Te Angiangi Marine Reserve		
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the area is via public roads (see topographical map). • 4X4 from Blackhead along the coast to Paoanui Point during most stages of the tide (note: driving on intertidal platforms is prohibited in normal conditions). • Access south of Blackhead is prevented by rocky beach beginning approximately 200m south of Pohatupapa Point. • Boat launching directly off the beaches. Local advice should be sought for any boating activities. Within the marine reserve launching possible within Stoney Bay and at the southern end of Shoal Bay. Boat ramp at Pourerere. • The nearest airstrip is located on Long Range Road. • Beach Access can be controlled at beach entry points, however, there are other smaller routes across dunes that will need to be controlled in addition. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand 	<ul style="list-style-type: none"> • bedrock Platforms 	
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S68, S69, S70, S71, S72 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly subjected to strong winds during winter months.</p>		
Sea Conditions	<p>This is an area of exposed coast and is often subjected to large swells from offshore systems.</p>		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	<p>There is a commercial Rock Lobster fishery in the area, with approximately 35 % of the catch taken on Charity Reef in Pourerere Bay</p>		
Tourism	<p>Not regionally significant, although popular in summer months.</p>		

Recreation	This site is important regionally with the Marine Reserve (No.1 dive site)			
Cultural	Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
At risk Wildlife				
Birds	Key bird species include the eastern bar-tailed godwit, variable oystercatcher, white fronted tern, black shags, northern blue penguins and the threatened reef heron. NZ Dotterel primarily at Aramoana but they use the entire coastline.			
Marine Life	<p>The platforms support biologically diverse intertidal communities and are regionally significant wildlife habitats. Te Angiangi is considered of national importance based on habitats.</p> <p>The intertidal area supports mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra).</p> <p>Between 85-100 species of plants, macroinvertebrates and fish have been recorded from each platform.</p> <p>The rock platform supports diverse species such as the golden limpet, large beds of Neptune's necklace, pink coralline seaweed and eel grass. Small fish, crabs, juvenile paua and kina inhabit the rock pools.</p>			
Operations				
Response Matrix	Options	Response option	Preferred option	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	Yes	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	Medium
Response priority	Protection of the intertidal platforms will take priority over protection of beaches			
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water over the platforms may reduce the ability to utilise dispersants.</p> <p>Deflection booms are unlikely to be effective due to the general sea conditions in the area. If there is the possibility of oil entering the creek at Aramoana then a boom may be placed across upstream of the entrance.</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p> <p>Shoreline clean-up activities are the main option for the beach areas, with the ability to utilise machinery for recovery in some areas due to the nature of the beach.</p>			

	Some low-pressure washing may be possible on bedrock platforms, although natural recovery may work for most areas.	
Wildlife Recovery	Wildlife will need to be stabilised on-site and transported to Waipukurau or Massey for full treatment. There is space at the beach access point to create a wildlife collection / stabilisation point.	
Safety		
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessel with booms and recovery equipment if at sea recovery is possible • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilets, water station, Gazebo etc 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	Communications are poor in the area with no mobile coverage available. VHF Communications will only work on handhelds within line of sight. There are no repeaters in the area, so a portable repeater would need to be used to enable VHF communications. Satellite communications would work in the area.	
Accommodation and catering	A campground exists in Blackhead (14 McHardy Place, T:06 857 7335). In addition, there are several lodges including Blackhead Station (Long Range Road, accommodation for 20 T:06 857 7833), Punawaitai Station Holiday accommodation (3339 Pourere Rd, accommodation for 22 T:06 857 3721) and numerous Air BnB rentals in the area.	
Public Information		
Resources for PIM Activities	The Porangahau Memorial Hall would provide a suitable location to hold community meetings, or to meet other media requirements such as briefings.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Porangahau Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333

Central Hawke's Bay District Council	Local Authority	06 857 8060
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Rod and Karen Hansen (Aramoana)	Police / Fire Radio at Shoal Bay	E: rodhansen@xtra.co.nz
John McKee (Blackhead)	VHF Radio in boat & house	E: mckiwicharture@xtra.co.nz Address: Blackhead Station, Longrange Road
Max and Sue Nathan		E: m.s.nathan@xtra.co.nz Address: 3382/4 Pourerere Beach Road RD1 Waipawa 4271

NB: For additional notification contacts see Annex 2, section 3.3



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Aramoana

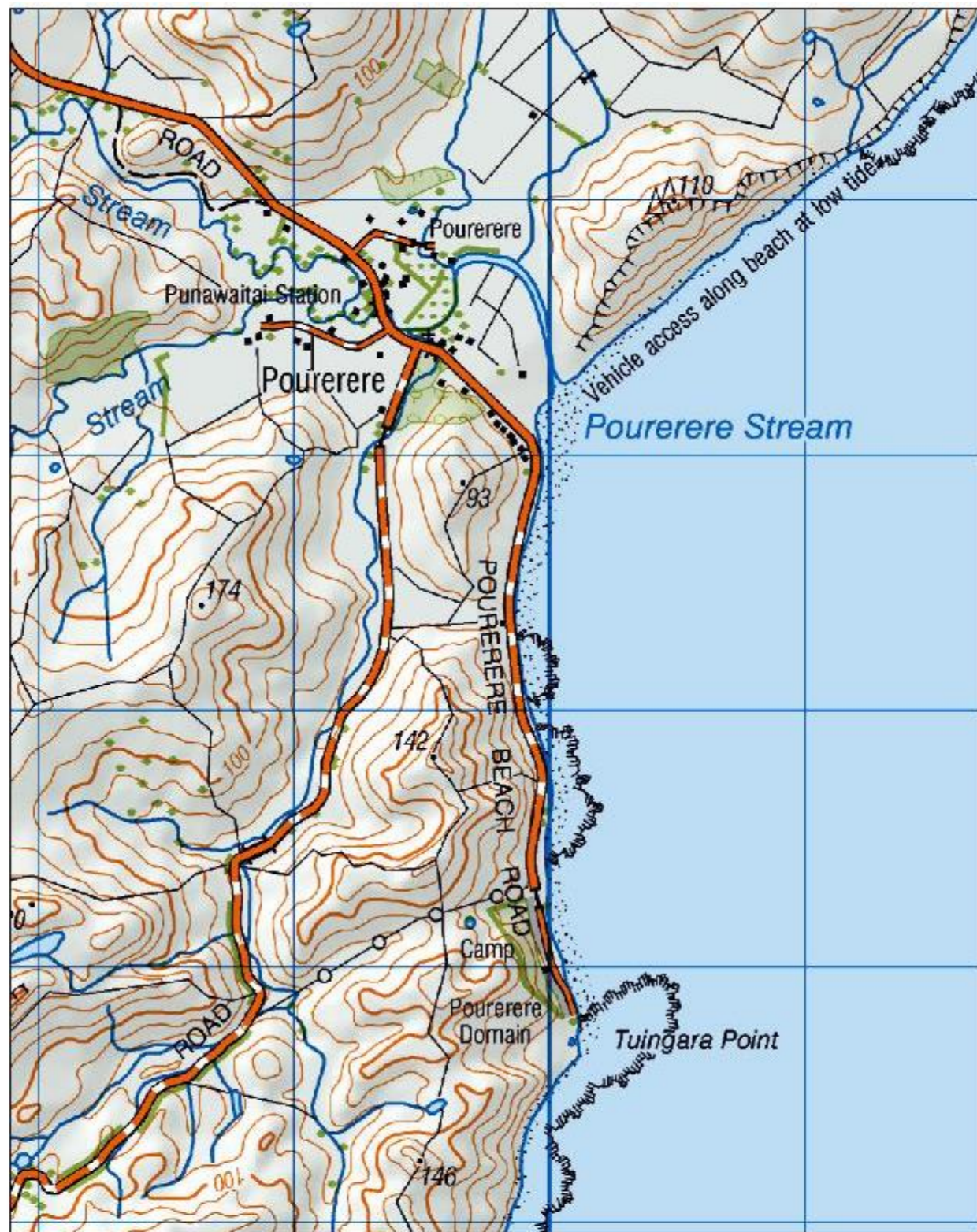


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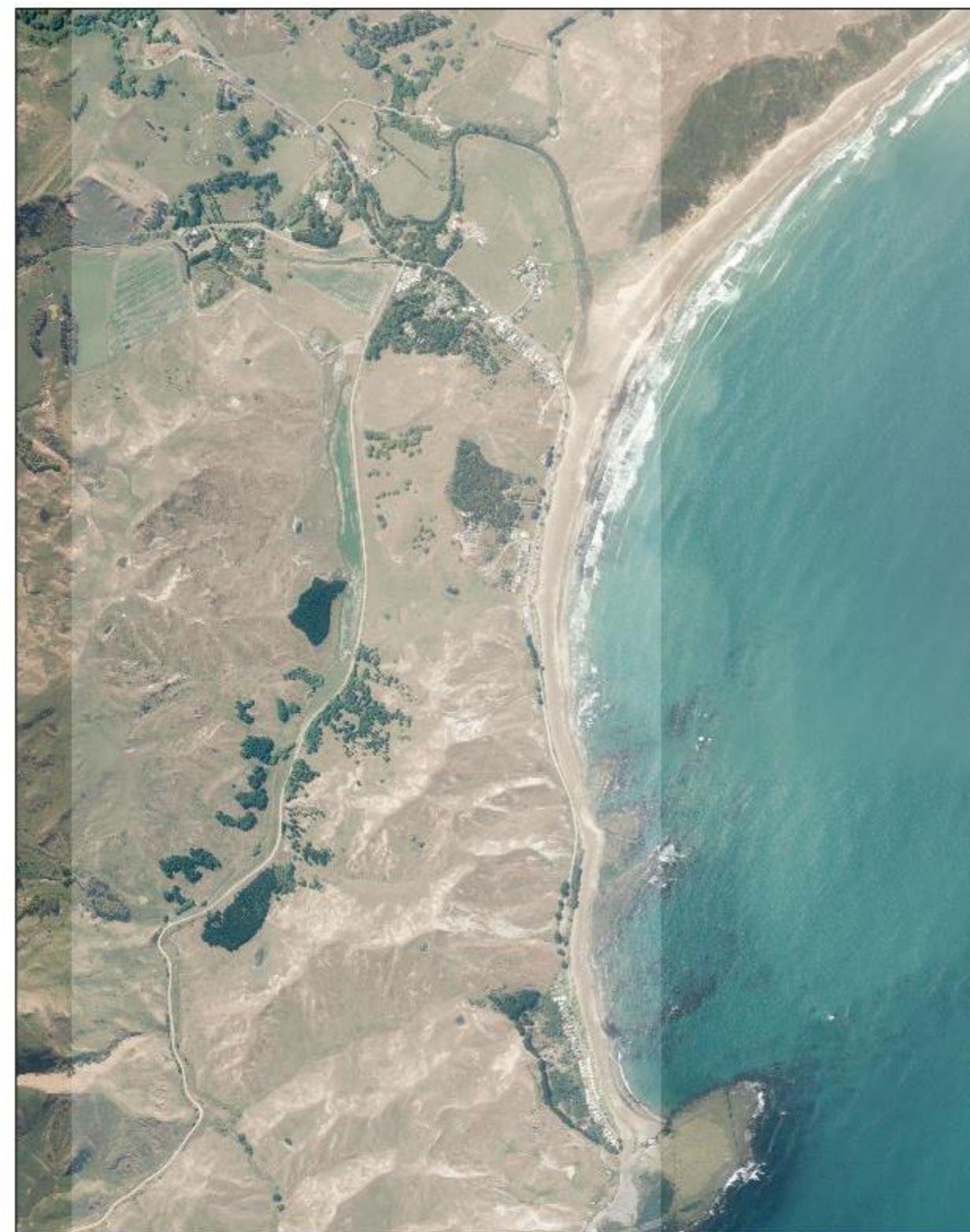


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Blackhead



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Pourerere

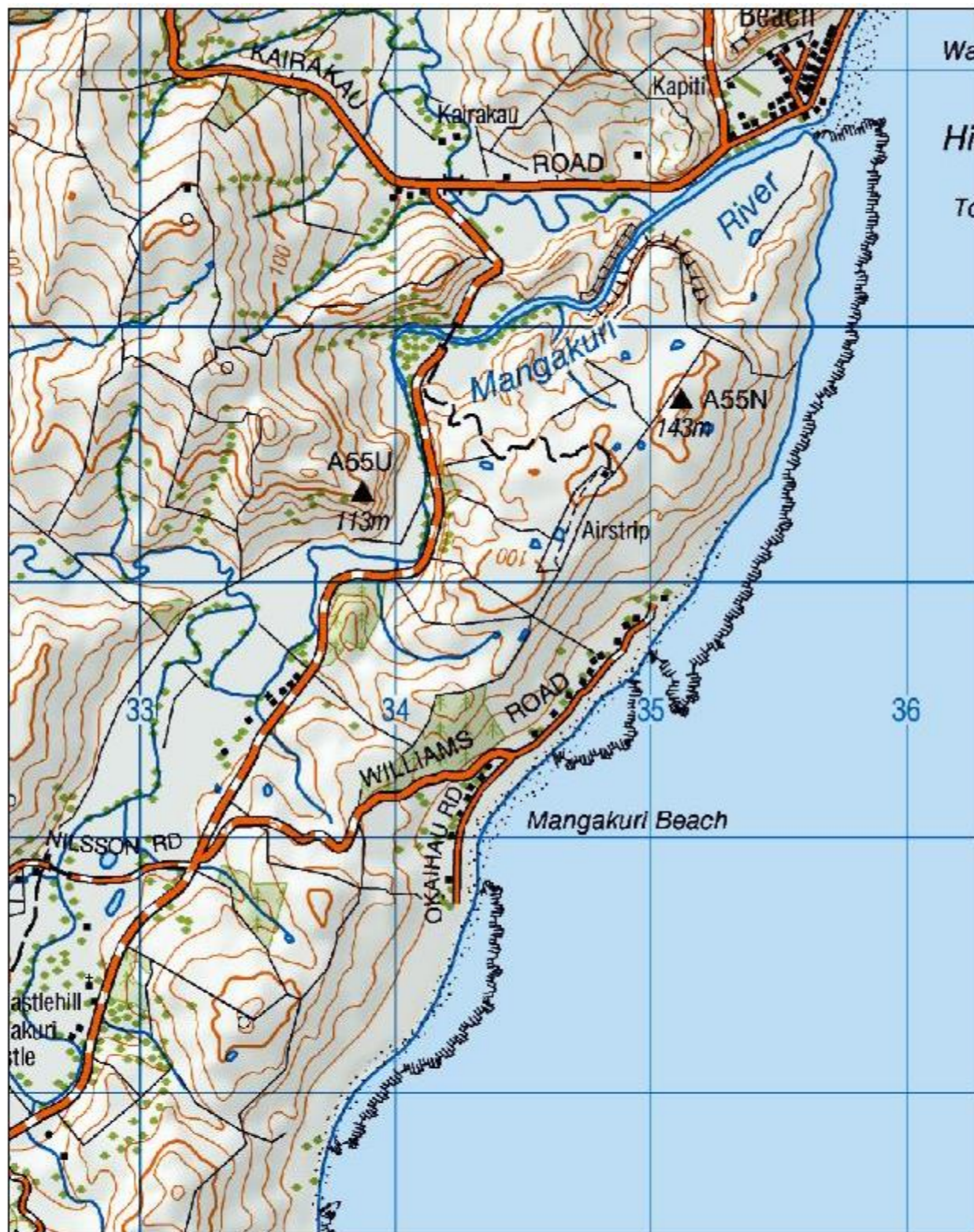
Site 4	Mangakuri Beach	Risk Rating	High
Site Description	Exposed coastline with sandy beach bounded in the north and south by rocky beach and intertidal platforms.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ56	BL39	120, 89	
Segments	Mangakuri Beach		
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the area is via public road (Williams Rd off Mangakuri Rd, see topographical map). • Access along the beach is confined by the rocky shoreline and the intertidal platforms and driving on these platforms is prohibited in normal conditions. • The nearest airstrip is located on Te Apiti Road. • No access along the coast. • Beach access can be controlled at the main access points, although there are other access points through the dunes along the entire beach. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand and wave cut platforms 	<ul style="list-style-type: none"> • Rock 	
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S73, S74 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There are no significant commercial resources at risk from a regional perspective		
Tourism	Not regionally significant, although popular in summer months		
Recreation	Not regionally significant, although popular in summer months		
Cultural	<p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>		

At risk Wildlife				
Birds	Key bird species include the eastern bar-tailed godwit, variable oystercatcher, white fronted tern, black shag, northern blue penguin (colony at north end of beach) and the threatened reef heron. NZ Dotterel			
Marine Life	<p>All of the platforms support biologically diverse intertidal communities and are regionally significant wildlife habitats.</p> <p>The inter-tidal platforms may support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra).</p> <p>Between 85-100 species of plants, macroinvertebrates and fish have been recorded from each platform.</p>			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	Medium
Response priority	Protection of the intertidal platforms should take priority over protection of beaches			
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water over the platforms may reduce the ability to utilise dispersants.</p> <p>Deflection booms are unlikely to be effective due to the general sea conditions in the area.</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p> <p>Shoreline clean-up activities are the main option for the beach areas, with the ability to utilise machinery for recovery in some areas due to the nature of the beach.</p> <p>Some low-pressure washing may be possible on bedrock platforms, although natural recovery may work for most areas.</p>			
Wildlife Recovery	<p>Wildlife will need to be stabilised on-site and transported to Waipukurau or Massey for full treatment.</p> <p>There is space at the beach access point to create a wildlife collection / stabilisation point.</p>			

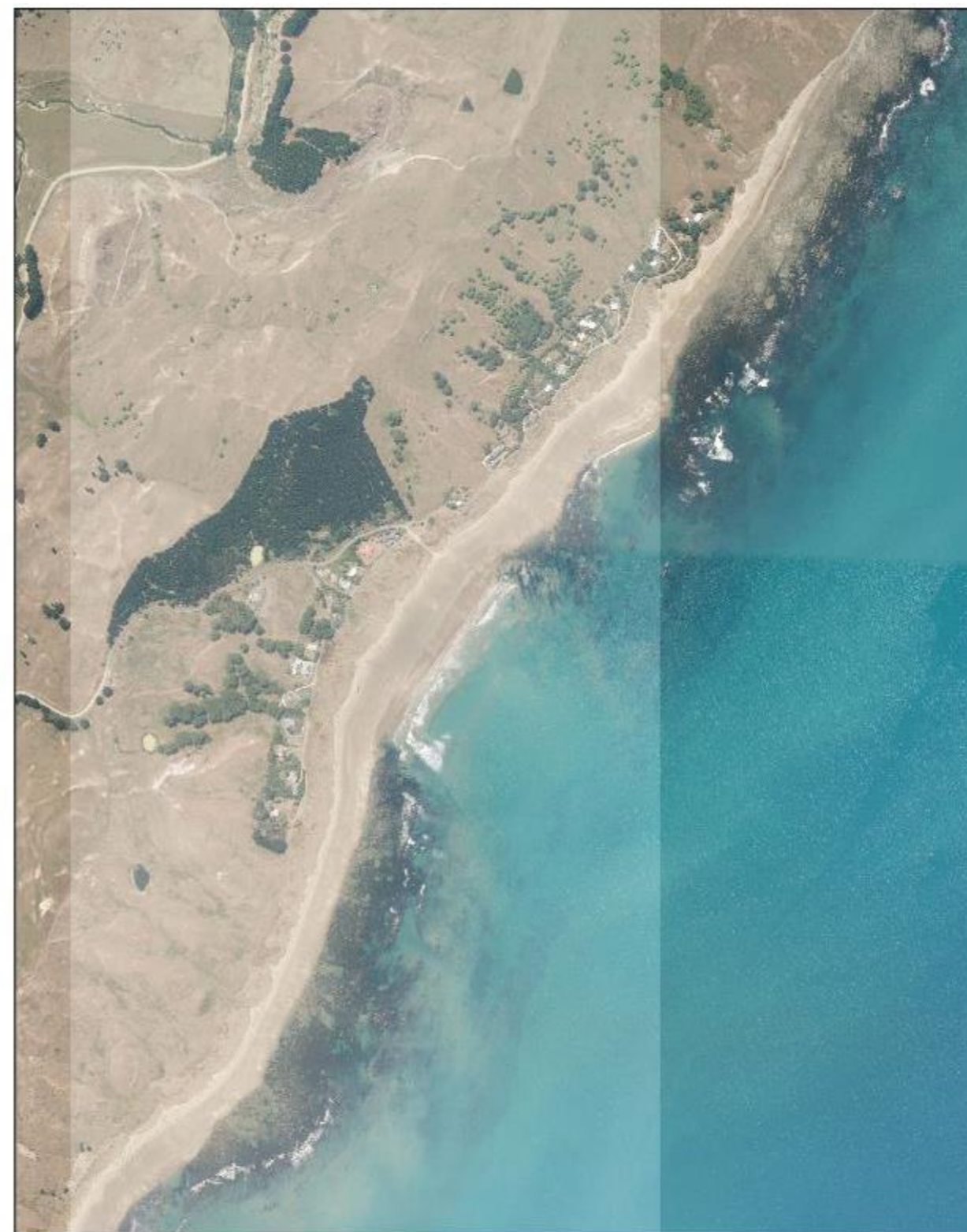
Safety		
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessel with booms and recovery equipment if at sea recovery is possible • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilets, water station, Gazebo etc 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	<p>Communications are poor in the area with no mobile coverage available.</p> <p>VHF Communications will only work on handhelds within line of sight. There are no repeaters in the area, so a portable repeater would need to be used to enable VHF communications.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Accommodation is available in holiday lets in the area. Otherwise responders will need to be accommodated elsewhere and transported in.</p> <p>Catering will need to be brought in from Waipukurau or Waipawa.</p>	
Public Information		
Resources for PIM Activities	The nearest locations for PIM activities such as media briefings are located in Elsthorpe at the Community Hall.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Central Hawke's Bay District Council	Local Authority	06 857 8060
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065

Mark and Vicky Williams	Local Resilience Team and CD Radio location & satellite internet connection	Blackdog Cottage, Mangakuri Beach RD 14 Havelock North 4295
Bruce D'Ath	Accommodation at beach - sleeps approx. 9, toilets, showers available, cooking facilities.	
Joanne & Max Chatfield	Marine VHF at house / boat	

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:20,000 @ A3



Scale: 1:10,000 @ A3



DATA SOURCE: Cadastral information derived from the Land Information New Zealand Core Record System (CRS) CROWN COPYRIGHT RESERVED.
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Mangakuri

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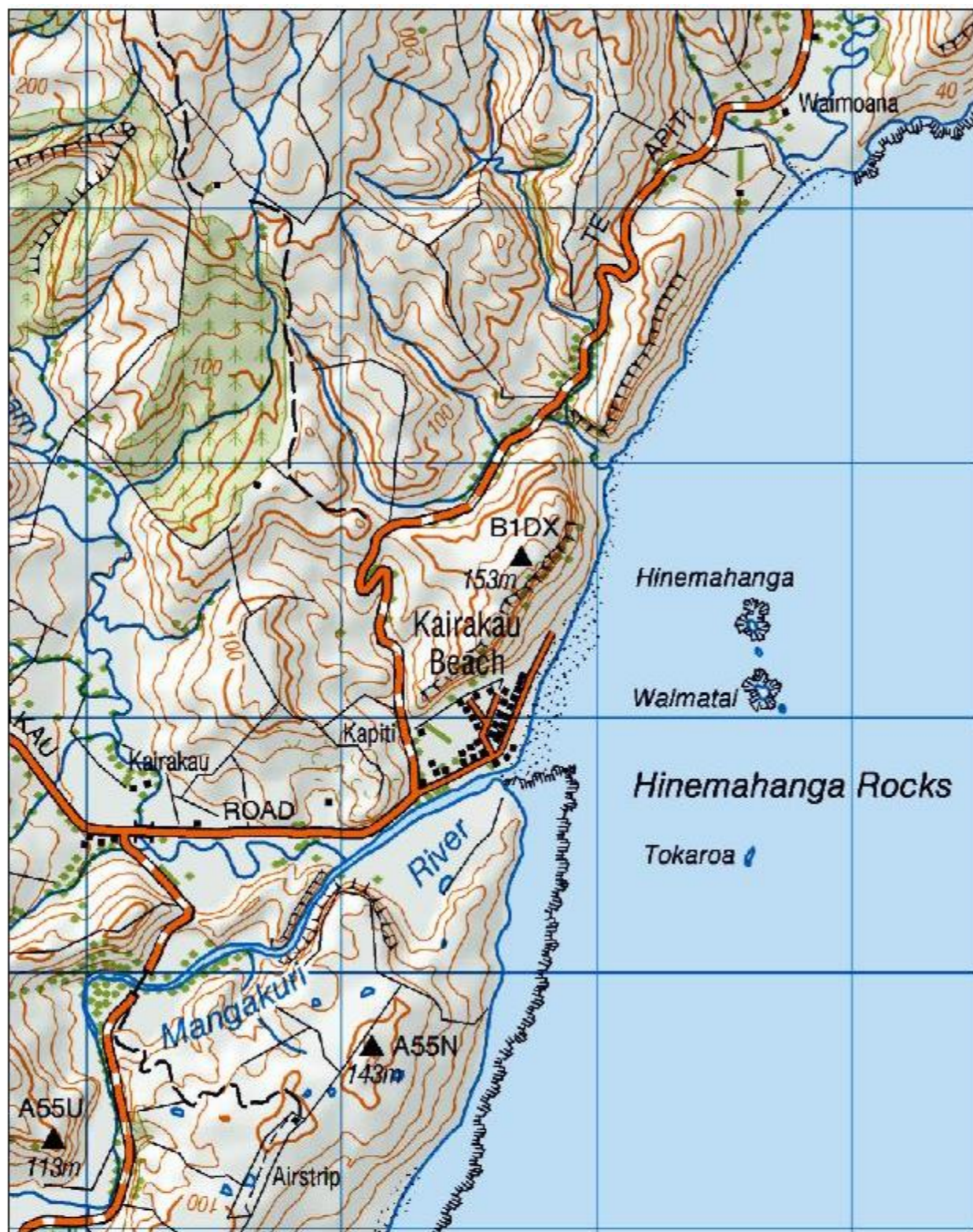
Site 5	Kairakau Beach	Risk Rating	High
Site Description	Exposed coastline with sandy beach adjacent to Kairakau baches. The Kairakau intertidal platform begins immediately south of the mouth of the Mangakuri River and extends 2.5 km south along the coast to Mangakuri. Included in this area are offshore the Hinemahanga Rocks including Karamea (Red) Island which is a nationally significant geological site. The island is privately owned.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ56	BL39	120, 88	
Segments	Kairakau Beach		
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the area is via Elsthorpe and Kairakau Road (see topographical map). • Access along the coast to the north and south of the beach is prevented by rocky platforms and cliffs on the high tide (see attached photos). • Local advice should be sought for any boating activities. • Access may be possible through farm land if permissions are gained. • There is a beach launching area directly in front of the motorcamp (if a tractor is available). • The nearest airstrips is located on Te Apiti Rd. • Beach Access can be controlled at beach entry points, however, there are other smaller routes across dunes that will need to be controlled in addition. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Pebble and rock 	<ul style="list-style-type: none"> • Wave cut platforms 	
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S75, S76, S77 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There are no regionally significant commercial resources at risk		
Tourism	Not regionally significant, although popular in summer months		
Recreation	Recreational fishing, Paua and Crayfish diving		

Cultural	Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
At risk Wildlife				
Birds	Key bird species include the eastern bar-tailed godwit, variable oystercatcher, white fronted tern, black shag, northern blue penguin and the threatened reef heron. NZ Dotterel are also found in this location.			
Marine Life	<p>All of the platforms support biologically diverse intertidal communities and are regionally significant wildlife habitats. To date, 89 species of plants, macroinvertebrates and fish have been recorded in this area.</p> <p>Off the coast the Hinemahanga rocks are part of a reef system that forms a chain of small islets between the mouth of the Mangakuri River and the mouth of the Te Apiti stream. The rocks are a nationally significant geological site. Red Island has a few seals and penguins only.</p> <p>The inter-tidal platforms may support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra).</p> <p>In winter (April – Sept) the offshore rocky stacks provide a haul-out area for NZ fur seals.</p>			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	Medium
Response priority	Protection of the intertidal platforms should take priority over protection of the Hinemahanga rocks or the beach			
Preferred Options	response	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast or the Hinemahanga rocks. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water over the platforms may reduce the ability to utilise dispersants.</p> <p>Deflection booms are unlikely to be effective due to the general sea conditions in the area. Booming of the Mangakuri River may be necessary depending on flow rates and sea conditions (tidal height or large swell).</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p>		

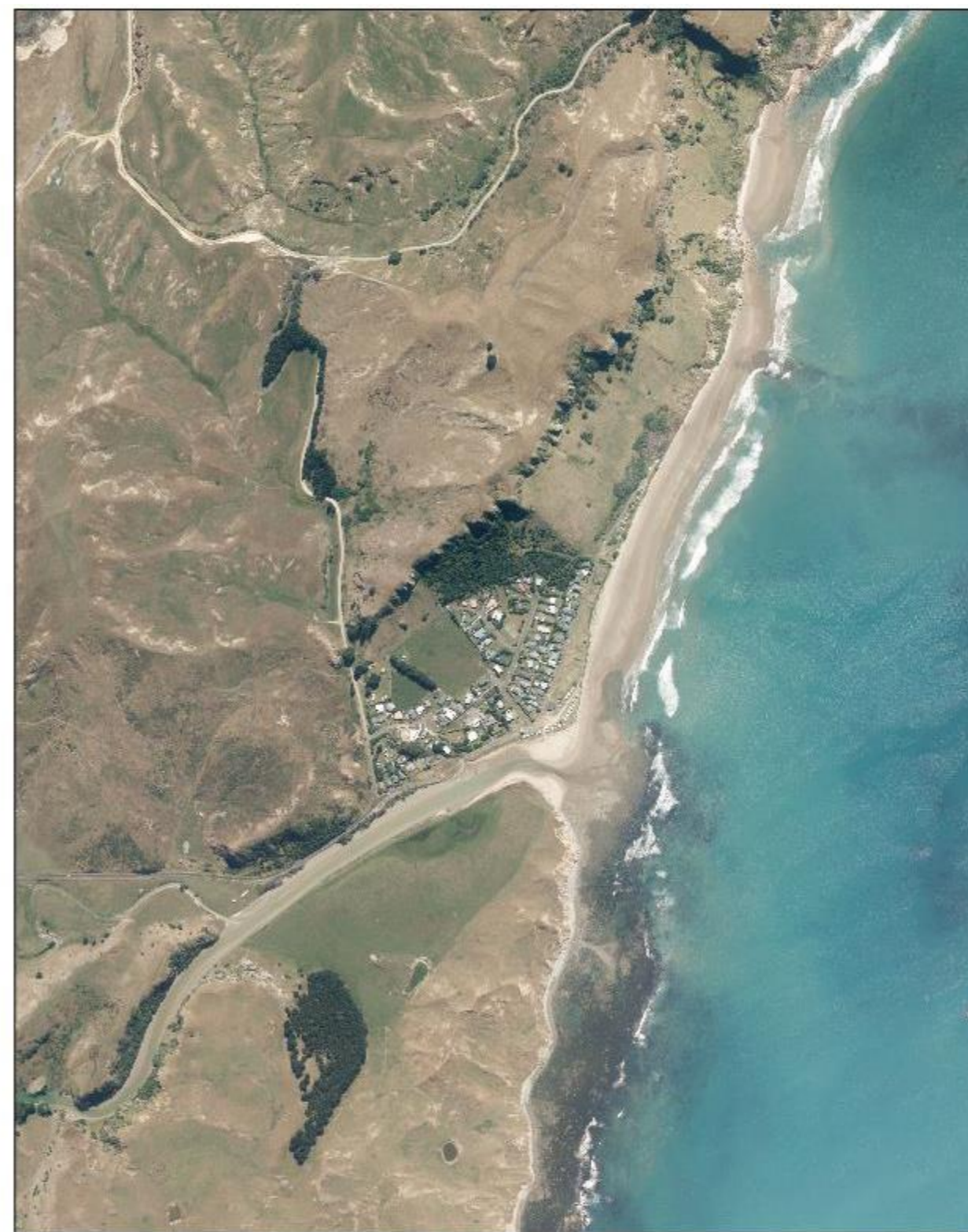
	Shoreline clean-up activities are the main option for the beach areas, with the ability to utilise machinery for recovery in some areas due to the nature of the beach. Some low-pressure washing may be possible on bedrock platforms, although natural recovery may work for most areas.
Wildlife Recovery	Wildlife will need to be stabilised on-site and transported to Waipukurau or Massey for full treatment. There is space at the beach access point to create a wildlife collection / stabilisation point.
Safety	
Safety Considerations	<ul style="list-style-type: none"> • This is a very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessel with booms and recovery equipment if at sea recovery is possible • Booms for protection of the Mangakuri River entry if necessary • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – water station, Gazebo etc. Toilets available at the campground.
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.
Communications	<p>Communications are poor in the area with no mobile coverage available.</p> <p>VHF Communications will only work on handhelds within line of sight. There are no repeaters in the area, so a portable repeater would need to be used to enable VHF communications.</p> <p>Council Fleetlink will work from high vantage points to connect to the HBRC reception. This could be utilised to relay messages from the Beach to the EOC.</p> <p>Satellite communications would work in the area.</p>
Accommodation and catering	<p>Kairakau is a popular area with bach owners and there are many available on accommodation sites. There is also a campground, however, this only has tent and campervan sites.</p> <p>Catering would need to be brought in from Waipukurau or Waipawa.</p>
Public Information	
Resources for PIM Activities	The nearest locations for PIM activities such as media briefings are located in Elsthorpe at the Community Hall.

Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Central Hawke's Bay District Council	Local Authority	06 857 8060
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Mo and Viv Pearse	Radio location	clareview@xtra.co.nz 1229 Kairakau Road, Elsthorpe 4295

NB: For additional notification contacts see Annex 2, section 3.3



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Kairakau

Site 6	Waimarama to Ocean Beach Inc. Motu O Kura (Bare Island)	Risk Rating	High
Site Description	<p>A long sandy beach & dune system runs south from Cape Kidnappers to Waimarama, and large areas of sandy seafloor occur between the coast and Motu O Kura (Bare Island) which is situated 1.5 km off the coast.</p> <p>The coastal platform south of Waimarama, Cray Boulders (which cover the beach between Te Wainohu and the sandy beach of Cray Bay) are nationally significant geological sites. Island is privately owned and is Maori burial site.</p> <p>Small isolated reefs are found off the beach. South of Waimarama an inter-tidal rocky shore of irregular width runs along the base of coastal cliffs. The entire area is an important Maori traditional fishery.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ57	BL39	119, 80-87	
Segments	6a Waimarama Beach, 6b Ocean Beach, 6c Motu O Kura		
Site Access / Control measures	<p>Vehicle:</p> <ul style="list-style-type: none"> • Access to the area is via Ocean Beach Road to Ocean Beach and Waimarama Road to Waimarama (see topographical map). • Access along the beach is good for 4WD vehicles at low tide. • Access to northern Ocean Beach via Haupouri Station and farm tracks give access to rear dunes at northern Ocean Beach. <p>Boats:</p> <ul style="list-style-type: none"> • Boat access via two launching ramps at Waimarama and off beach at Ocean Beach. • Small boat access only to Bare Island in calm conditions, and the Island is very rocky. Karamea (Red Island) can be accessed at low tide on foot, although access to that part of the coastline is difficult. <p>The nearest airstrip to Ocean Beach is located beside Ocean Beach Rd in Taurapa. There is also an airstrip located within the nature reserve at the northern end of the beach.</p> <p>The nearest airstrip to Waimarama is located on Okaihau Rd.</p> <p>Beach Access can be controlled at beach entry points, however, there are other smaller routes across dunes that will need to be controlled in addition at both sites.</p>		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Rock platforms 		
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> • S51, S52, S53, S54, S55, S56 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		

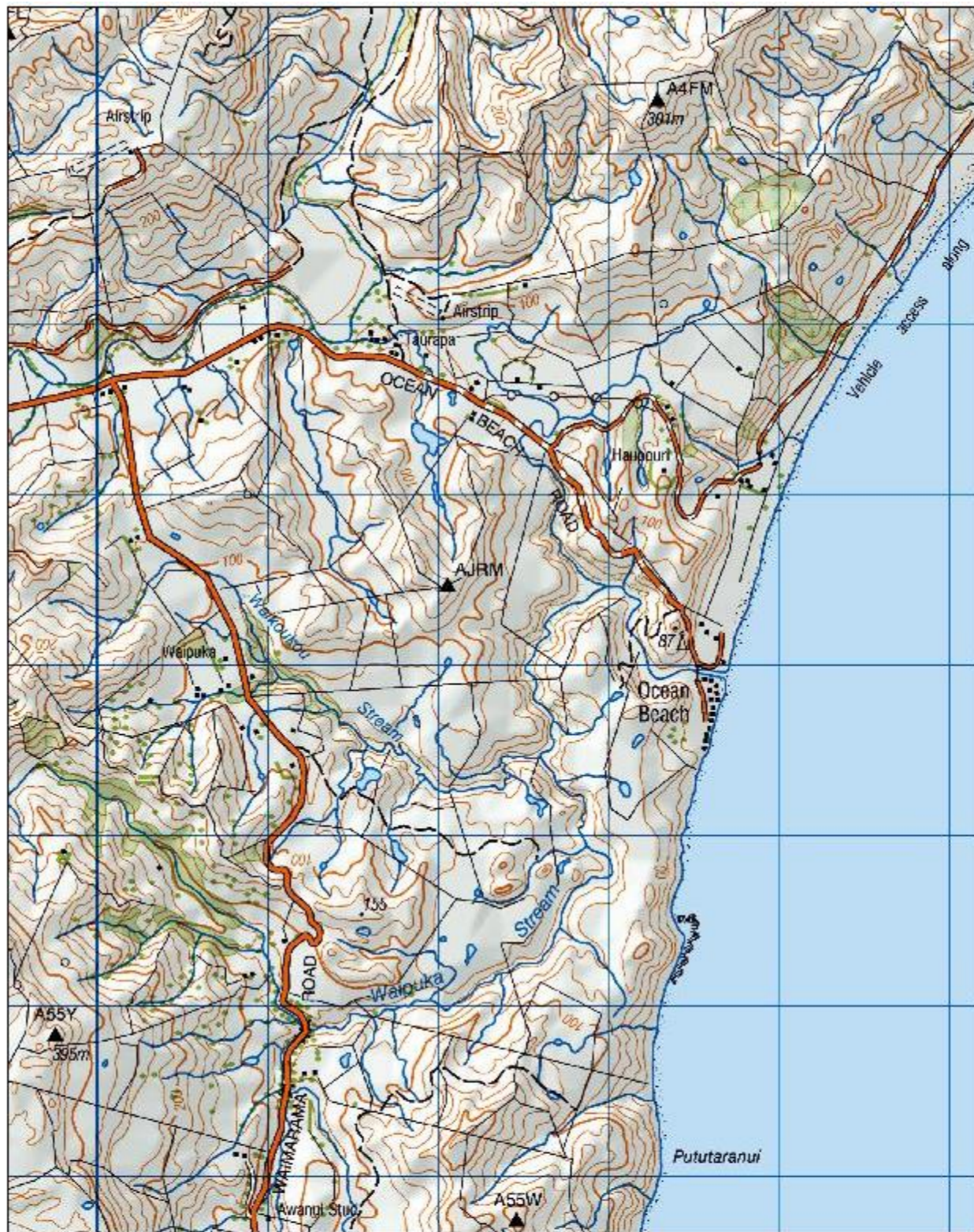
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.
Tides and Currents	The tidal range in this area averages 1.7 metres. Currents tend to move in a predominantly northern direction near to shore.
Iwi	This area is part of the Ngāti Kahungunu Iwi. Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.
At risk Resources	
Commercial	There are no significant commercial resources at risk from a regional perspective
Tourism	Minor tourism venture operates in this area
Recreation	Waimarama is the most significant recreational beach in Hawkes Bay, used for launching boats, fishing, surfing, swimming etc. Motu o Kura attracts significant paua, rock lobster and spear divers throughout the year. Ocean Beach is a popular surfing beach and is very busy during summer months.
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.
At risk Wildlife	
Birds	Motu O Kura supports nesting colonies of seabirds (spring-summer), including a nationally significant breeding population of northern blue penguin (750-1000 pairs recorded in 1988) and 10-20 pairs of sooty shearwaters. Moderate numbers of gulls, shags and oystercatchers use the beach areas.
Marine Life	Motu O Kura is an NZ fur seal winter haulout area (April to Sept). <ul style="list-style-type: none"> The inter-tidal rocky shore may support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra).

Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High

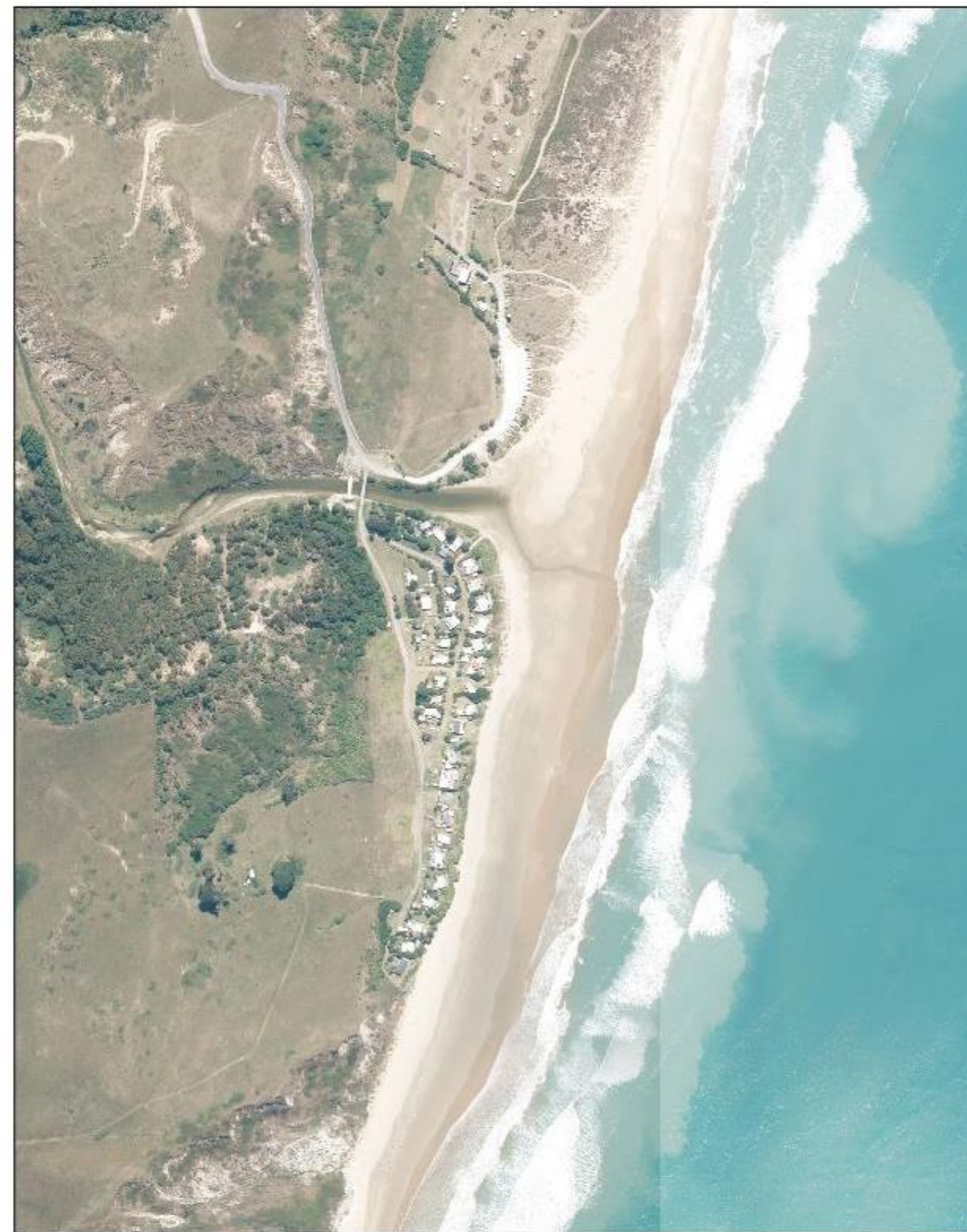
	Shoreline Clean-up	Yes	High
	Natural Recovery	Yes	Medium
Response priority	Protection of Motu O Kura and inter-tidal platforms should take priority over the other areas		
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast or Motu O Kura Island. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water between the shore and Motu O Kura may reduce the ability to utilise dispersants.</p> <p>Deflection booms are unlikely to be effective due to the general sea conditions in the area.</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p> <p>Shoreline clean-up activities are the main option for the beach areas, with the ability to utilise machinery for recovery in some areas due to the nature of the beach.</p> <p>Some low-pressure washing may be possible on bedrock platforms, although natural recovery may work for most areas.</p>		
Wildlife Recovery	<p>Wildlife will need to be stabilised on-site and transported to Hastings or Napier for full treatment.</p> <p>There is space at the beach access point to create a wildlife collection / stabilisation point.</p>		
Safety			
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips 		
Logistics			
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessel with booms and recovery equipment if at sea recovery is possible and to access Motu O Kura Island • Booms (rapid deployment, sorbent) for shoreline protection of Motu O Kura Island if conditions allow • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Toilets are available at both sites besides the Surf Lifesaving buildings. These can also be utilised as Forward Operating Bases 		
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.		
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.		

Communications	<p>3G Mobile communications are possible in Waimarama on all major networks. 3G Mobile communications at Ocean Beach are only possible on the Spark network.</p> <p>VHF Handhelds will work using CD ES1, M62, M82. Regional Fleetlink will operate from Waimarama.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Waimarama has plenty of baches that are available for rent through accommodation websites. Ocean Beach has limited accommodation nearby. Given the proximity to Havelock North, Hastings and Napier responders could be accommodated elsewhere and transported in to site each day.</p> <p>There is a small shop in Waimarama that can supply limited amounts of hot food and a café that can also supply hot food. There are no catering facilities at Ocean Beach, so catering would need to be brought in from Havelock North or Hastings.</p>	
Public Information		
Resources for PIM Activities	<p>There is a Surf Life Saving Club building at both Waimarama and Ocean Beach that could be utilised for media briefings etc. In addition, there is a school and hall that could also be utilised if required.</p>	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Hastings District Council	Local Authority	06 871 5000
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Waimarama Surf Life Saving Club		06 874 6601
Ocean Beach Surf Life Saving Club		06 874 7875

NB: For additional notification contacts see Annex 2, section 3.3

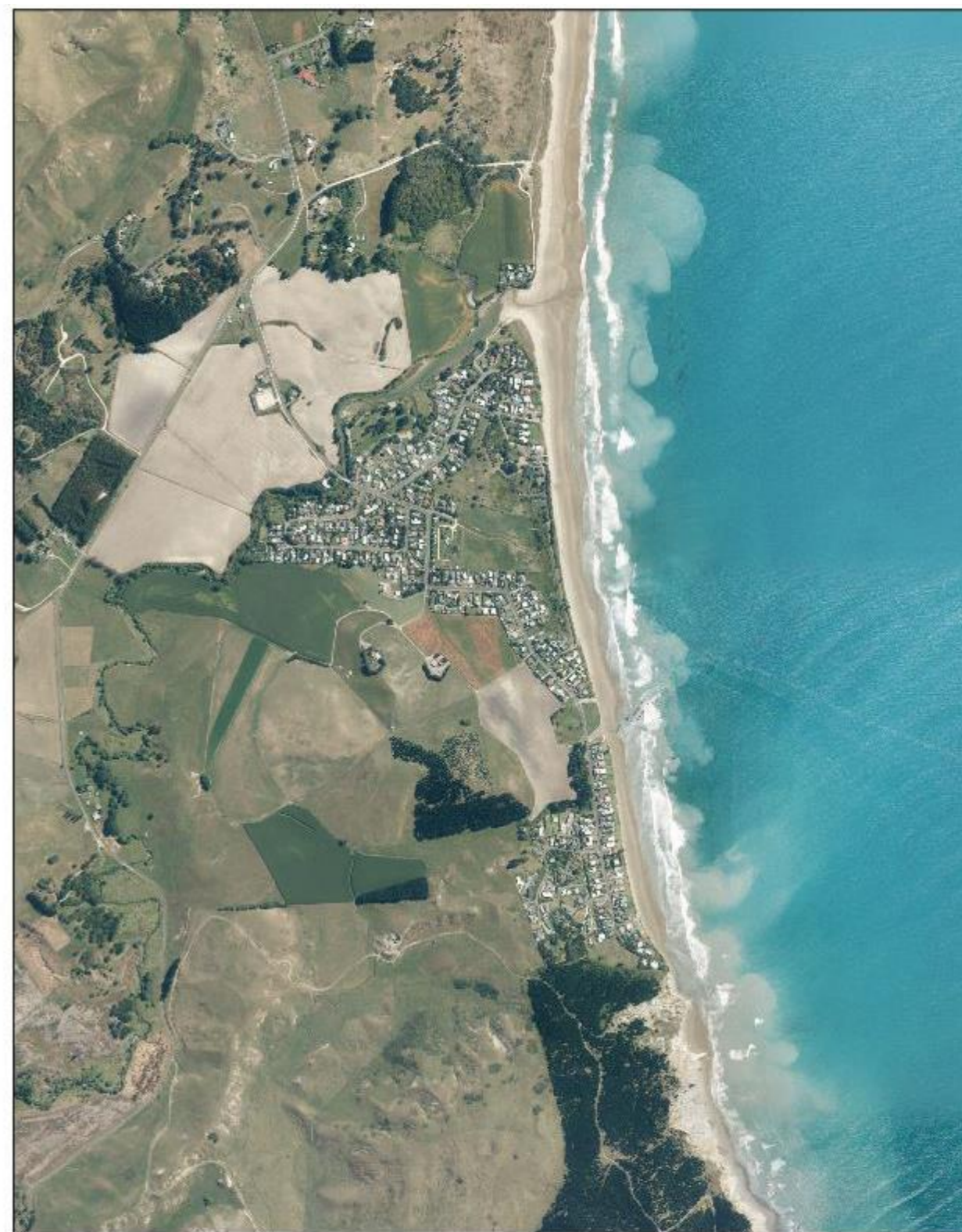
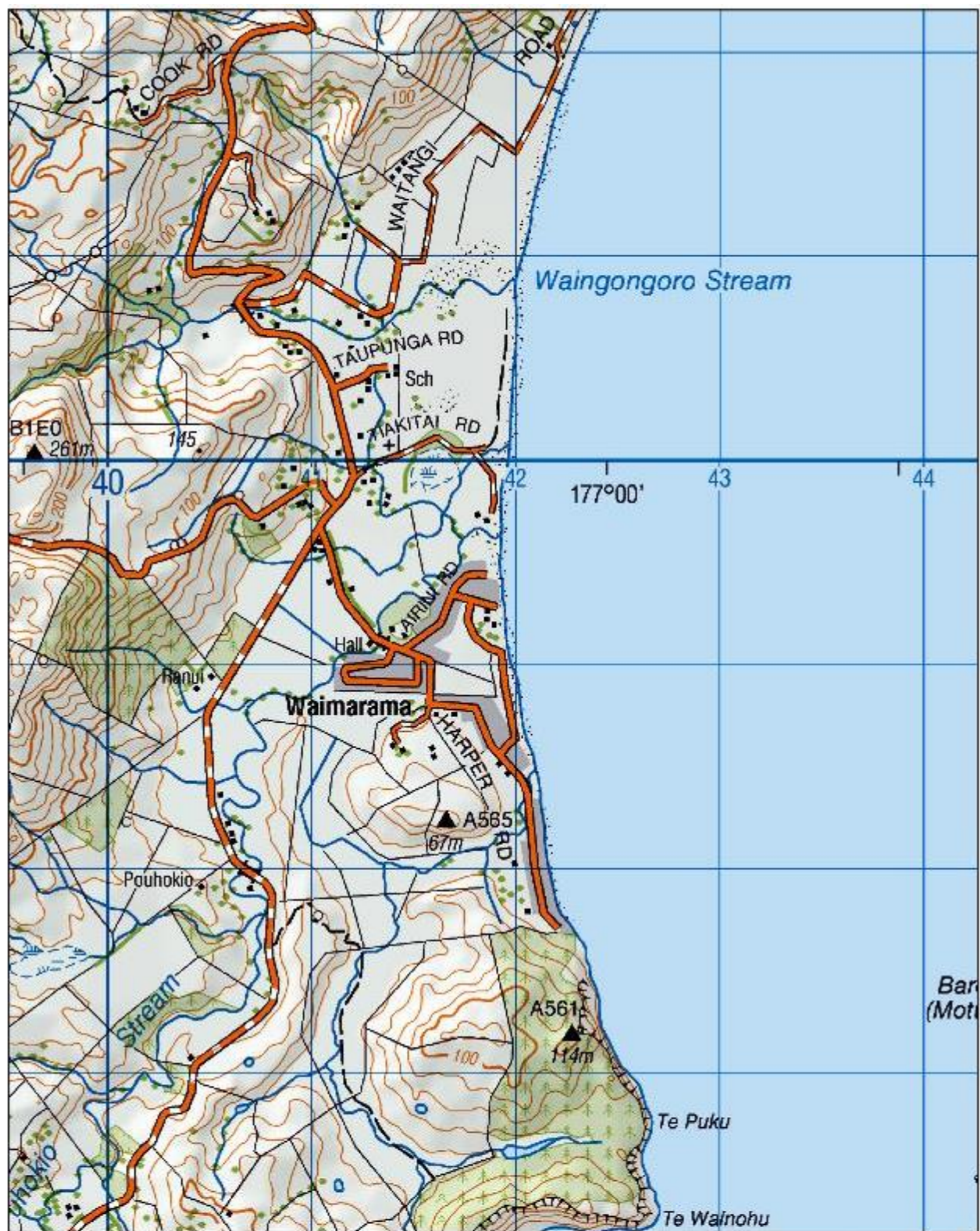


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Scale: 1:5,000 @ A3

Ocean Beach



Waimarama

Site 7	Cape Kidnappers and Rangaiika		Risk Rating	Very High
Site Description	<p>Between Clifton and the Cape the coast is backed by almost vertical cliffs. South of the Cape to Flatrock the coast is backed by steep hills that descend to gravel beaches. Rangaiika is a predominantly sandy beach 4.25 km long, with a sand dune hinterland, backed by high cliffs. This dune system has been identified as a recommended area for protection under the Protected Natural Areas Programme (RAP 2; Maxwell et al., 1993). The intertidal area is composed of boulder fields resting on siltstone platforms.</p>			
Chart Number	NZ Topographic Map No.	Coastal Plan Map		
NZ57 & NZ561	BK40	118,79		
Segments	7a Cape Kidnappers, 7b Rangaiika			
Site Access / Control measures	<p>Vehicle:</p> <ul style="list-style-type: none"> • Access along beach from Clifton to the Cape is restricted to 4WD at low tide (dependant on slips and sand movement) or via the inland private road through Cape Kidnappers Station which is controlled by a locked gate - security code has to be obtained before entry. • Gannet Beach Adventures (commercial tractor-trailer tours) would also be able to provide access along the beach noting it will take 1½ hours from Clifton to Black Reef on a good day (contact details in local phone book). Consider using inflatables to get teams to spot quicker as well as the overland teams. • Access down onto the beach from this road is limited to 4WD or quad bikes at two points only, which are Flat Rock and DOC visitor shelter (rest hut). • Gannet Safaris (commercial tours) can transport teams through the farm. • Note not all 4WD access tracks are well maintained. Care will be required if tracks are used and may be weather dependant. • At the southern end of the beach access from Ocean Beach is impeded by a bluff – can only be passed at low tide with flat seas in n/westerly weather is best – only on foot. <p>Boats:</p> <ul style="list-style-type: none"> • Small boats, with floating trailers, may be able to be launched from Clifton Marine Club, but this ramp may be not available in the future due to erosion. Otherwise vessels will need to depart from Napier. • Consider using beach launched inflatables to get teams to area to do surveys quicker or at higher tides. <p>Aircraft:</p> <ul style="list-style-type: none"> • A minimum flying level of 600m (2000 ft) above mean sea level, established to prevent disturbance to the gannets, covers the reserve (Department of Lands and Survey, 1984; Department of Conservation, 1993). DoC can have this uplifted temporarily through CAA at short notice. • The nearest airstrip is located at the Cape Kidnappers Station. There may be difficulty viewing the oil spill and assessing the whereabouts of birds, numbers of seals etc on the first flight due to the flying restrictions. • Consider using drones to aid surveys. 			

	<ul style="list-style-type: none"> Site access can be easily controlled due to the lack of entry points. Access to the site can be controlled at the Clifton entry point, using the campground barrier.
Intelligence	
Foreshore Types	<ul style="list-style-type: none"> Cliffs Wave cut platforms Sand dunes Sand
Shoreline Survey Sheet numbers	<ul style="list-style-type: none"> S81, S82, S83, S84, S85
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>
Sea Conditions	<p>This is an area of exposed coast and is often subjected to large swells from offshore systems.</p>
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly north / northwest direction near to shore.</p>
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>
At risk Resources	
Commercial	<p>There is a moderate rock lobster fishery in the area that contributes to the HB economy</p>
Tourism	<p>There are two main tourist operators who takes many thousands of tourists to visit this site every year. If a spill response needs to stop tourist ventures to this area, strong consideration should be given to using these operators to transport responders and equipment to the operational area. Their staff have good local knowledge.</p>
Recreation	<p>Most recreation is linked to the Tourism aspect of the site.</p>
Cultural	<p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>
At risk Wildlife	
Birds	<p>The waters surrounding the Cape are important preening and washing areas for gannets from the internationally significant Black Reef and Cape Kidnappers colonies.</p> <p>The Black Reef and Saddle gannet colonies are Nature Reserves, and the Plateau colony is a Government Purpose Reserve (Protection of Gannets).</p> <p>In addition to the Black Reef, Saddle and Plateau gannet colonies, a fourth colony has established just above the beach on the southern side of the Cape. These</p>

	represent some of the world's most accessible gannet colonies, and each year the Black Reef and Plateau colonies are visited by thousands of people (Department of Conservation, 1993). There are minimal gannets in the area over winter (May to August). Terns, shags, gulls and oystercatchers are also present and blue penguins breed along some parts of the coast. Recently the New Zealand dotterel have been recorded breeding near Rangaiika as a result of the predator control at the Cape Sanctuary.			
Marine Life	The inter-tidal rocky shoreline may support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra). There is a NZ fur seal haul-out area at the tip of the mainland Cape occupied all year round.			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	Only on Eastern / southern side where there is deeper water
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	Medium
Response priority	Protection of the Gannet Colony, in particular the preening and washing areas			
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water between Clifton and the Cape may reduce the ability to utilise dispersants.</p> <p>Deflection booms are unlikely to be effective due to the general sea conditions in the area.</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil.</p> <p>Shoreline clean-up activities are the main option for the beach areas, but will require all activities to be undertaken by hand, as machinery access is not possible.</p> <p>Some low-pressure washing may be possible on bedrock platforms and rocks, although natural recovery may work for most areas.</p> <p>An option to protect the gannet colonies is to use water-based hazing techniques on off-shore feeding areas of water threatened by the oil slick. This is best done using boats travelling away from the spill to corral birds/gannets away from the oil. Birdfrite shots and loud speakers have been trialled and are deemed as ineffective. Depending on the time of the year, there are a number of different factors involved; an appropriate response strategy will need to be developed with DOC at the time.</p>			

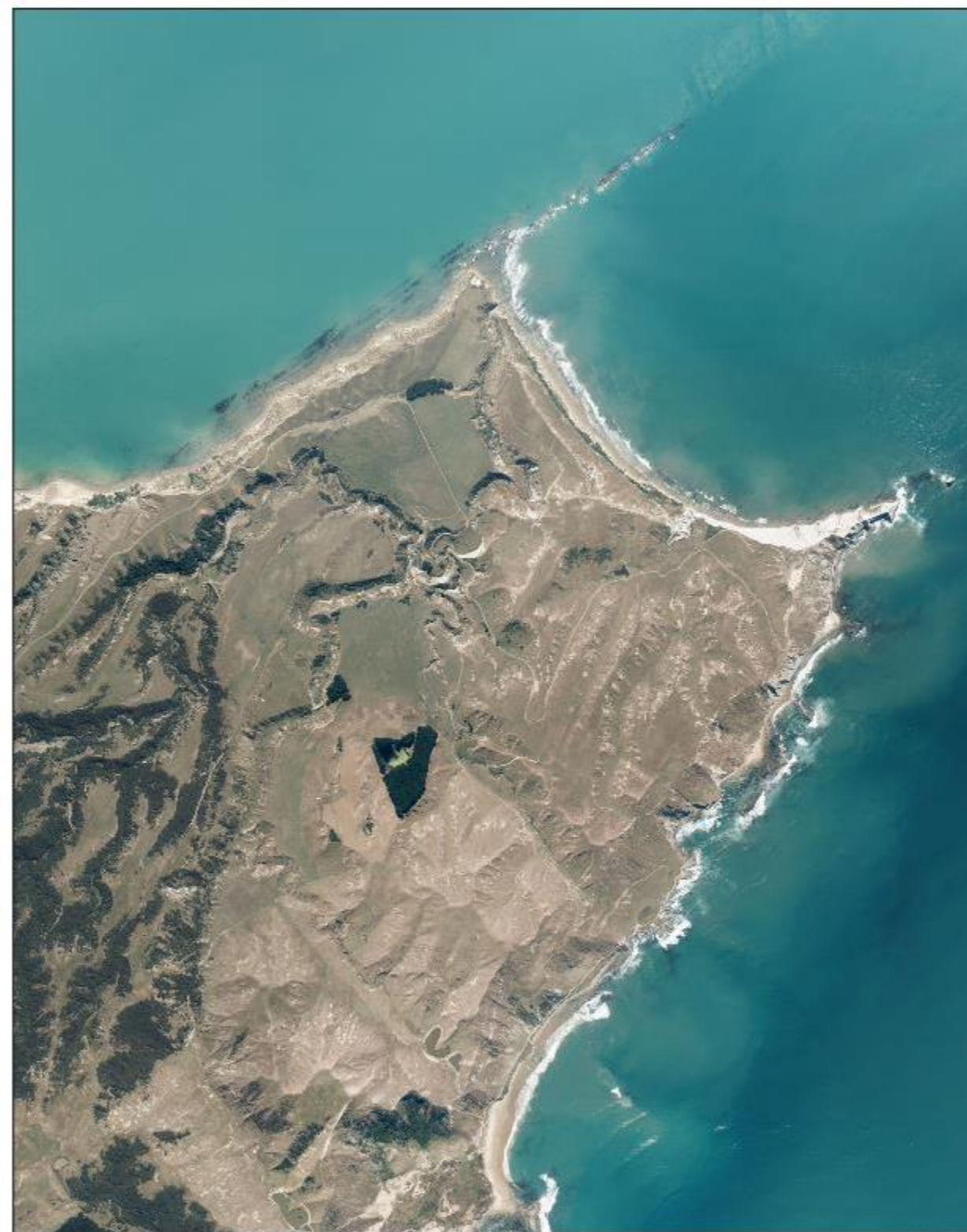
	<p>Whilst protection of seals is a lower priority due to difficulties in managing them, consideration could be made to fencing in some seals that are in discrete areas that can be easily contained. These opportunities will be limited and use much needed resources.</p>
Wildlife Recovery	<p>The DoC shelter on the beach at the Cape is a preferred field stabilization site, although there is limited water supply and no power, but these are not crucial at a stabilization site. Following capture oiled wildlife needs to be stabilized within an hour of capture to maximize survival before then travelling to the holding facility in Hastings or Napier. Access to the DoC shelter could be with Quad and trailer via the track that leads up to the DoC Rangers cottage.</p> <p>Several large heavy-duty tarpaulins would make the field stabilization site better in bad weather and should be rapidly deployed with the MNZ Blue Box to the site.</p>
Safety	
Safety Considerations	<ul style="list-style-type: none"> • Very exposed coastline • Some areas are cut-off at high tide • Some areas are underneath cliffs prone to erosion and slips • Gannets and Seals
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Equipment required to establish a forward operating base at the Clifton Marine Club or on land near the Café (Whiteboards, computers etc) • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessel with booms and recovery equipment if at sea recovery is possible • Bird Hazing equipment • Wildlife Response Kit (Blue box) • Beach clean-up equipment – Shovels, PPE, Bags etc • ATV for access further away from main beach • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilets, water station, Gazebo etc
Transportation	<p>Response personnel and equipment will need to be transported to Clifton for onward movement to the site via Quad bike, gannet Safaris vehicles or by small boat.</p>
Waste Collection	<p>All waste collected on site will need to be transported back for collection at Clifton. Depending upon sea conditions it may be possible to utilise a barge to collect waste and return it for pick. Otherwise waste will need to be transported back using 4x4 with trailer through the Station, Gannet Beach Adventures or Quad with trailer.</p>
Communications	<p>Communications are poor in the area with mobile coverage available on the northern side of the Cape, or at high points.</p> <p>VHF Communications will only work on handhelds within line of sight. There are no repeaters in the area, so a portable repeater would need to be used to enable VHF communications to the EOC. This has been trialled and when placed on a high point above Black Reef provided better communications to the EOC in Napier. Some marine channels will work in the area, but can be affected by the shadow of the cliffs.</p>

	<p>Regional Council Fleetlink will work if positioned on high points.</p> <p>The DoC Rangers Cottage has telephone and good VHF radio coverage.</p> <p>Satellite communications would work in the area, but may be impacted when trying to use below the cliffs.</p>	
Accommodation and catering	<p>Accommodation is available at the Clifton Camp, however, given the close proximity of the site to Hastings and Napier responders could be housed elsewhere.</p> <p>There is a Café at Clifton that would be able to provide hot meals. On-site catering would need to be brought in from Havelock North, Hastings or Napier.</p>	
Public Information		
Resources for PIM Activities	There are a number of resources that could be used for media activities, including the Clifton Marine Club building, or the Te Awanaga Community Hall.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Hastings District Council	Local Authority	06 871 5000
Cape Coast Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Department of Conservation	Management of the Gannet colony	06 834 3111
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Cape Kidnappers Station	Access to site	
Gannet Beach Adventures	Tour operator / potential transportation of response personnel	0800 426 638
Gannet Safaris	Tour operator / potential transportation of response personnel	06 875 0888
Clifton Motor Camp / Clifton Marine Club	Access to site / Forward Operating Base	06 875 0263

NB: For additional notification contacts see Annex 2, section 3.3



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Cape Kidnappers

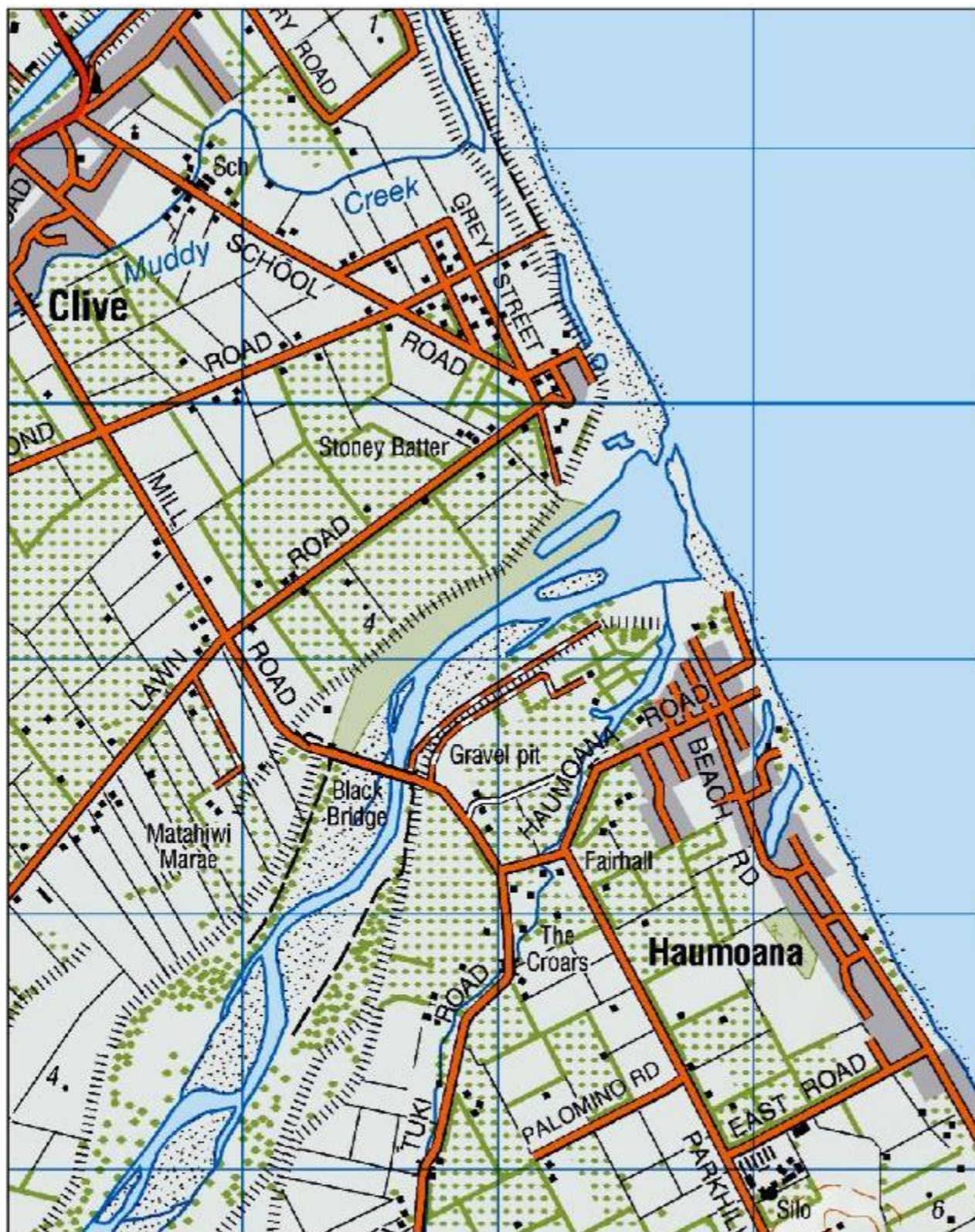
Site 8	Tukituki River mouth (Clifton to Haumoana)	Risk Rating	High
Site Description	<p>The Tukituki River mouth has a small estuary of approximately 43 ha formed behind an unstable shingle river mouth bar, and surrounded by flat, low-lying alluvial plain.</p> <p>The coast from Clifton to Haumoana consists of steep shingle beaches. There is a rocky shoreline at Te Awanaga and rock sea defences at Clifton.</p> <p>There is a reef system close to the shore at Te Awanaga.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BK 39		
Segments	8a Tukituki River mouth and Estuary, 8b Haumoana to Clifton		
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the southern side of the estuary can be made from the beach and via the Gravel extraction works adjacent to the Mill Road Bridge. A HBRC key will be required. • Access from the North is via Lawn Road. • Vehicle access along the beach is possible for quads and motorbikes. • The depth of water in the estuary limits range of boats that may be used. • Access to the estuary can be controlled at the Haumoana side by closing off the carpark. However, access to the remainder of the coast will be difficult due to the numerous access points. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Gravel / Shingle 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S78, S79, S80 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is subject to large northerly and easterly swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly north / northwest direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There is minimal commercial activity on this part of coastline		

Tourism	There is minimal tourism on this part of the coastline, although there is a freedom camping site on the coast at Haumoana and a motor camp at Clifton. There are also a number of wineries in the area that form part of the Hawke's Bay wine cycle trail.		
Recreation	<p>The Tukituki lagoon and river mouth are popular recreational fishing spots. In addition, the reef at Te Awanga is also a popular spot for kayak fishing.</p> <p>Both the Tukituki river mouth and the Te Awanga reef are popular surfing spots when there is an easterly or northerly swell.</p> <p>The area is used by cyclists and walkers all year round due to the cycle path that runs along the river and the coast.</p>		
Cultural	<p>This is a recreational / traditional Maori fishery, including mussels beds and flounder, in gravel zone (Clive Hard) off Maraetotara.</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Wildlife			
Birds	The estuary contains large numbers of gulls, terns and shags, with smaller numbers of wading birds, and the occasional white heron roosts here during winter. Spotless crane and the endangered Australasian bittern reside in the estuary's backwaters and Grange Creek. White fronted terns and black-bill gulls nesting site. NZ Dab chick feed in the estuary (nationally vulnerable species).		
Marine Life	<p>The estuary and offshore area continue to support important traditional fisheries for kahawai, flatfish, whitebait and smelt. Important inanga spawning sites are situated within the coastal marine area at the mouth of Grange Creek (see photo on topo map), and in a drain on the true left bank of the river (Rook, 1993).</p> <p>The river mouth and estuary are vital for the passage of native diadromous fish between the sea and freshwater habitats higher in the catchment.</p>		
Operations			
Response Options Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	Yes	High
	On-water recovery	No	Medium
	Dispersant Application	No	
	Shoreline Protection	Yes	Medium
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	Medium
	Natural Recovery	No	Medium
Response priority	Protection of the estuary should take priority.		

<p>Preferred Options response</p>	<p>If possible, oil should be prevented from washing into the estuary formed behind the shingle river mouth bar. Oil may over top the bar during stormy conditions or may enter via the mouth on the incoming tide.</p> <p>A deflection boom is unlikely to be effective along the coastline, unless the sea is calm, as the area is exposed and subject to rough seas. However, a boom would be effective inside the estuary as the bar absorbs wave energy from the sea and conditions are generally calm. Watch for strong currents on an ebb tide.</p> <p>Dispersants cannot be used in the Estuary. Prevention of oil reaching the mouth may best be achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ.</p> <p>Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland.</p> <p>Shoreline Clean-up will be difficult due to the predominant gravel substrate found on these beaches. This may require gravel washing to take place.</p>
<p>Wildlife Recovery</p>	<p>Wildlife can be transported quickly to either Hastings or Napier (20 mins) for stabilization and treatment.</p>
<p>Safety</p>	
<p>Safety Considerations</p>	<ul style="list-style-type: none"> • River can flow fast during winter months or following heavy rain • Beaches can be dangerous during large swells
<p>Logistics</p>	
<p>Equipment requirements</p>	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Booms (rapid deployment, sorbent) for shoreline protection if conditions allow • Small vessel for boom deployment in the estuary • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilet and other facilities (kitchen) located at the Haumoana and Te Awanga Halls
<p>Transportation</p>	<p>Clean-up staff can be transported to the site via minibus or car / Ute.</p>
<p>Waste Collection</p>	<p>Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.</p>
<p>Communications</p>	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p> <p>A Civil Defence VHF unit is available at the Haumoana School.</p>
<p>Accommodation and catering</p>	<p>Responders can be accommodated in Hastings or Napier and transported to site.</p> <p>Catering will need to be brought in from Hastings or Napier.</p>

Public Information		
Resources for PIM Activities	The Haumoana or Te Awanga Halls would provide a good location for media activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Hastings District Council	Local Authority	06 871 5000
Cape Coast Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Clifton Motor Camp / Clifton Marine Club	Access to site / Forward Operating Base	06 875 0263
Haumoana Hall	Forward Operating Base	
Te Awanga Hall	Forward Operating Base	

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:20,000 @ A3



Scale: 1:5,000 @ A3

Tukituki River Mouth

Site 9	Waitangi Estuary	Risk Rating	Very High
Site Description	This is a large tidal area formed at the confluence of the Clive, Ngaruroro and Tutaekuri Rivers, and enclosed by an unstable shingle river mouth bar.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BK 39		
Segments	Waitangi Estuary		
Site Access / Control measures	<ul style="list-style-type: none"> • Access to the Estuary is via the Waitangi Reserve (northern side) or via Ferry Rd (south side) • A key may be required from the Hawke's Bay Regional Council (phone 0-6-835 9200) to unlock some of the gates on the road adjacent to the south side of the Clive River or for access along the top of the stop banks. • Vehicle access along the beach is possible for 4WD vehicles and quads / motorcycles. • Depth of water in parts of the estuary limits the use of large vessels. • Site access can be easily controlled at the Waitangi Reserve and at the southern entry point at the end of Ferry Rd. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Gravel / shingle 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • N/A 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There is no regionally significant commercial activity in the area		
Tourism	There is no regionally significant tourism activity in the area		
Recreation	The estuary is used by fishermen, whitebaiters, and for other recreational water sports. The estuary mouth is popular surf break on east or northeast swells. The Clive River is used for both rowing and jet skiing.		

Cultural	<p>This area was an early arrival site for both Māori and Pākehā. The star compass, Ātea a Rangi, is located within the reserve, close to the main carpark. This site is used by the Iwi for Mataariki celebrations.</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>		
Birds	<p>The estuary, bar and associated wetlands are important nesting, roosting and feeding areas for many species of wetland and coastal birds. White fronted terns and black billed gulls nest on the bar. Spotless crane and the endangered Australasian bittern occur in marginal rush and adjoining wetland habitats. Migrant waders occur in small numbers.</p> <p>Muddy Creek is a small tributary of the estuary. Its lower reaches, including those adjoining the coastal marine area, are a designated Wildlife Refuge. This area contains important coastal wetland habitat and supports a small population of Australasian bittern.</p>		
Marine Life	<p>The Estuary contains small areas of mudflat, saltmarsh, reed and succulent herb swamp. The estuary, including the Clive River, have been classified as a nationally important fisheries habitat.</p> <p>One of the largest inanga spawning sites so far identified in Hawke's Bay is situated in the Clive River, just above the coastal marine area boundary (Rook, 1993). Man-made spawning areas have recently been created on the western side of the lagoon. Larvae hatching from these sites are dependent on the estuary for access to and from the sea. Many other species of diadromous native freshwater fish are dependent on the estuary for access to Lake Poukawa, and the Ngaruroro and Tutaekuri River catchments.</p>		
Operations			
Response Options Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	Yes	High
	On-water recovery	No	High
	Dispersant Application	No	
	Shoreline Protection	Yes	Medium
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	Medium
	Natural Recovery	No	Medium
Response priority	The Priority is to protect the upper estuary		
Preferred response Options	If possible, oil should be prevented from washing into the estuary formed behind the shingle river mouth bar. Oil may over top the bar during stormy conditions or may enter		

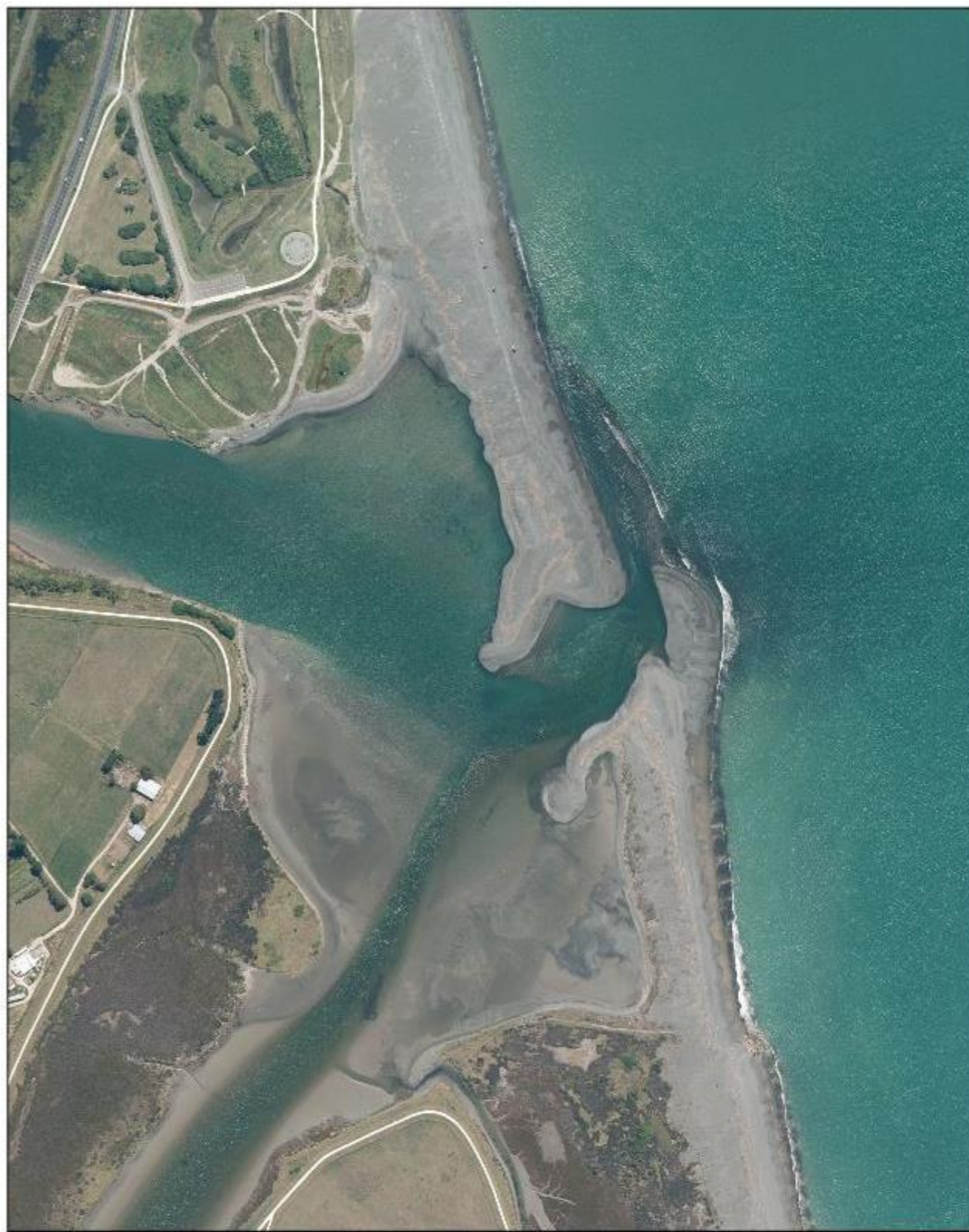
	<p>via the mouth on the incoming tide. One potential option would be to block the entry completely with shingle, but only in appropriate conditions.</p> <p>A deflection boom is unlikely to be effective along the coastline, unless the sea is calm, as the area is exposed and subject to rough seas. However, a boom would be effective inside the estuary as the bar absorbs wave energy from the sea and conditions are generally calm. Watch for strong currents on an ebb tide, or when the rivers are at increased flow.</p> <p>It may also be possible to place booms along the shoreline of the estuary to protect areas, depending upon the conditions at the time.</p> <p>Dispersants cannot be used in the Estuary. Prevention of oil reaching the mouth may best be achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ.</p> <p>Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland. Shoreline Clean-up will be difficult due to the predominant gravel substrate found on these beaches. This may require gravel washing to take place.</p>
Wildlife Recovery	Wildlife can be transported quickly to Napier (10 mins) for stabilization and treatment.
Safety	
Safety Considerations	<ul style="list-style-type: none"> • Rivers can flow fast during winter months or following heavy rain • Beaches can be dangerous during large swells
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Booms (rapid deployment, sorbent) for containment and shoreline protection if conditions allow • Small vessel for boom deployment in the estuary • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities – toilet, water station, Gazebo etc
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>
Accommodation and catering	Responders can be accommodated in Hastings or Napier and transported to site.

	Catering will need to be brought in from Hastings or Napier.	
Public Information		
Resources for PIM Activities	Given the close proximity of the site to Napier all media requirements could be met at the HBRC offices or other facilities within the town.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Hastings District Council	Local Authority	06 871 5000
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:30,000 @ A3



Scale: 1:5,000 @ A3

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Waitangi Estuary

Site 10	Marine Parade (Napier seafront)	Risk Rating	Low
Site Description	Marine Parade runs from the Waitangi Estuary in Awatoto through to the Napier CBD. The seafront is a popular location for recreation and tourism and has direct access from the Napier CBD and seafront premises such as hotels and motels. The National Aquarium is also located on Marine Parade and there is a seawater intake located in front of the building. The beach is steep shingle and gravel.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ 39		
Segments	Marine Parade		
Site Access / Control measures	<ul style="list-style-type: none"> • The site can be accessed by vehicle along its entire length and is backed by grassland which can be driven on • 4X4 and quads can drive along the beach itself • The closest airfield is Napier Airport • The site is accessible to the public along its entire length and would be very difficult to restrict access 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Shingle / Gravel 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S86 		
Weather conditions	During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places. This area of coastline can be regularly be subjected to strong winds during winter months.		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	The tidal range in this area averages 1.7 metres. Currents tend to move in a predominantly northern direction near to shore.		
Iwi	This area is part of the Ngāti Kahungunu Iwi. Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.		
At risk Resources			
Commercial	This area of coastline is adjacent to the CBD of Napier and is home to many of the accommodation providers within Napier.		
Tourism	This is a popular area for tourism, especially near to the Napier CBD where there is world class Art Deco architecture on the beachfront. The close proximity to the port means it is a popular area for visitors from cruise ships.		

Recreation	The cycleway that runs along the entire length of Marine Parade is a popular area for walkers and cyclists.			
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
Birds	Marine parade is visited by terns, black billed gulls and dotterels (tbc)			
Marine Life	There are occasional seal haul outs along this section of coast during the winter months			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	Medium
		Natural Recovery	Yes	Medium
Response priority	Clean-up of areas in front of the CBD and national Aquarium			
Preferred response Options	<p>This section of coastline has limited options for clean-up due to the nature of the foreshore and generally high wave activity. However, given its close proximity to the town all efforts should be made to reduce the impact in areas of high use such as near to the Sound Shell and National Aquarium.</p> <p>The National Aquarium must be notified as soon as possible if a spill occurs in this area so they can cease their saltwater intake.</p> <p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ.</p> <p>Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland. Shoreline Clean-up will be difficult due to the predominant gravel substrate found on these beaches. This may require gravel washing to take place.</p> <p>Due to the high wave activity in the area natural recovery may be the best option for the areas further from the CBD and National Aquarium.</p>			
Wildlife Recovery	Wildlife can be transported quickly to Napier (5 - 10 mins) for stabilization and treatment.			
Safety				
Safety Considerations	<ul style="list-style-type: none"> • Close proximity to the city and potential need for control of local population • Beaches can be dangerous during large swells 			

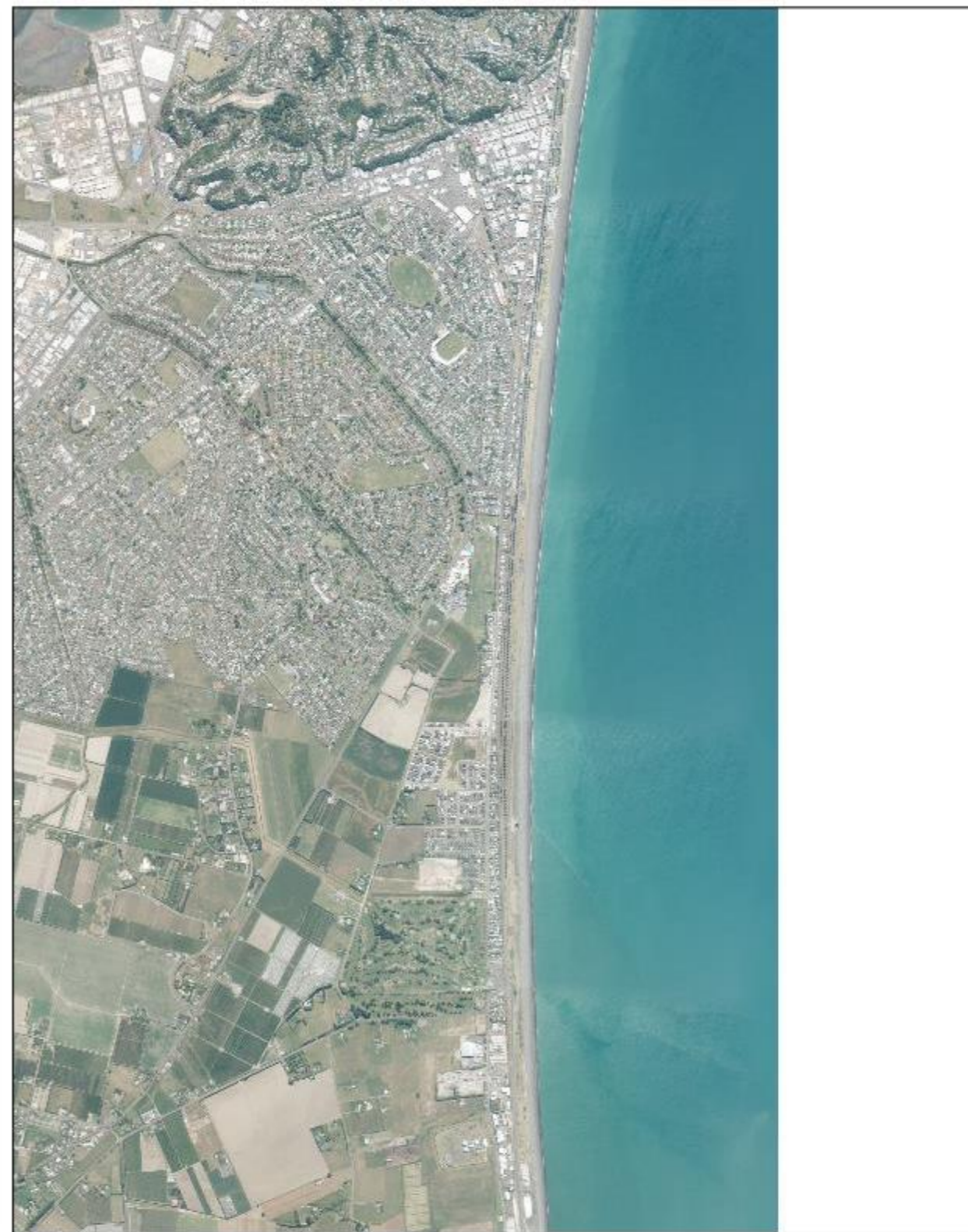
Logistics		
Equipment requirements	<ul style="list-style-type: none"> Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) Beach clean-up equipment – Shovels, PPE, Bags etc Beach Head storage – Lined skip bins / trailers Decontamination equipment at beach access point Access control equipment (fencing, tape, warratahs etc) Welfare facilities water station, Gazebo etc – toilets are available in several places along marine parade 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Responders can be accommodated in Napier and transported to site.</p> <p>Catering will need to be brought in from Napier.</p>	
Public Information		
Resources for PIM Activities	Given the close proximity of the site to Napier all media requirements could be met at the HBRC offices or other facilities within the town.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Napier City Council	Local Authority	06 835 7579
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
The National Aquarium of New Zealand	Water intake	06 834 1404
Pacific Surf Lifesaving Club		06 835 3821
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065

Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911

NB: For additional notification contacts see Annex 2, section 3.3



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Marine Parade

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Site 11	Napier Port / Town Reef	Risk Rating	High
Site Description	<p>The Napier Port is situated adjacent to the base of Bluff Hill. The Port offers worldwide shipping links and is served by a range of liner services and charter vessels. The Port area is the main oil spill threat site in Hawke's Bay and for this reason the Regional Council has chosen to locate the region's oil spill response equipment at the Port. The attached topographical map and photos outline the position of the Port and visually describe the Port. See Section 4.1 for descriptions and diagrams of the oil transfer sites at the Port, and a map of the Port.</p> <p>The Town Reef lies just offshore to the east of the Port.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ 39		
Segments	11a – Napier Port, 11b – Town Reef		
Site Access / Control measures	<ul style="list-style-type: none"> • The Port can only be accessed via the Main Gate. All personnel must have undertaken the PortPass safety induction and have proof of ID to enter the site. • There is good access around the Port. However, access from the wharfs/reclamations down to the water does impose some restrictions, with up to 4m between the water surface and wharf surface at low tide. • The port can be accessed by any size of vessel. • Pile wharves restrict boom deployment by boat. • A smaller vessel is required to access under the wharves. • The closest airfield is Napier Airport. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock • Man-made structures 		
Shoreline Survey sheet numbers	N/A		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds from the northwest during spring and from the south during winter months.</p>		
Sea Conditions	<p>The most significant wind waves at the Port entrance are generated by winds in the north west quadrant. They would render boom deployment in the harbour entrance extremely difficult but possibly unnecessary as they would hold the surface water in the harbour. A sea breeze on the other hand would very rapidly push the surface water from the harbour. However, given the short fetch of the Swinging Basin wave height would be minimal, allowing boom deployment.</p> <p>Surge at the entrance is directly proportional to the "lift" on swell height particularly swell from north-east to south-east. Recordings show that 50 percent of the time the swell height is 0.5 metres or less. Surge in the basin would be a significant factor on the comparatively short period of time that it is present. Records indicate that there is little correlation between surge/swell and the prevailing wind.</p>		

Tides and Currents	<p>Tidal streams are, at the port entrance, northeast on flood and southwest on ebb up to a maximum rate of 1.5 knots. However, observations over the years show the prevailing wind to be a dominant factor over this flow, completely masking it at times. A persistent easterly wind will create a surface water circulation anticlockwise off East Pier resulting in a strong set across the breakwater harbour channel against the wind.</p> <p>Tidal streams in the Swinging Basin are minimal, hence the dominant factors for this area are wind and surge.</p> <p>There is a north moving current on Town Reef, which in some weather conditions splits with the main flow heading past the port breakwater and the smaller current moving northwards up the outside of Pania Reef.</p>			
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>			
At risk Resources				
Commercial	<p>The Napier Port is one of the region's most important commercial assets and the most threatened by any oil spill.</p>			
Tourism	<p>The Napier Port is a stopover for cruise ships circumnavigating New Zealand. The cruise industry has become an important part of the local economy.</p>			
Recreation	<p>South of the Port main gate is a recreational area known as Town Reef used for harvesting of mussels, and also targeted by recreational and commercial rock lobster fisheries.</p>			
Cultural	<p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	Yes	High
		On-water recovery	Yes	High
		Dispersant Application	No	Medium
Birds	<p>The Napier Port provides a habitat and nesting area for 100+ northern Blue Penguins, including an on-Port sanctuary. Terns and Shags roost along the Port breakwater, in addition to a large Black Bill Gull colony located at the Northern end of 1 Wharf.</p>			
Marine Life	<p>The Port breakwater supports a colony of Fur Seals.</p> <p>The Town Reef supports populations of mussels and rock lobsters and reef fish, along with a range of reef sponges and plants.</p>			

	Shoreline Protection	No	Low
	Shoreline pre-clean	No	Low
	Shoreline Clean-up	Yes	High
	Natural Recovery	No	Medium
Response priority	Oil should be prevented from leaving the port and entering the sea		
Preferred response Options	<p>Any spill event over 100 litres, will automatically generate a full response from the Incident Management Team, Pollution Response van and trailer and the Coastguard vessel CK Rescue. The response team can then be sized appropriately after proper assessment and development of an Incident Action Response Plan.</p> <p>If possible, oil should be prevented from leaving the Swinging Basin and Berths area:</p> <ul style="list-style-type: none"> • There is 300m of rapid deployment boom stored on the end of No. 4 wharf to be used to close the port entrance. This boom can be successfully deployed using the Napier Port Survey boat. • If a lot of oil is within the port, the breakwater channel that begins at the corner between the tugboat wharf and No. 2 Wharf South (See photo) should be protected, depending upon conditions and the size of the event options are; <ul style="list-style-type: none"> ▪ a truck load or two of straight haul gravel being tipped into the drain. This is able to be delivered to the port within half an hour, then as clean up is finished it can be dug out. ▪ lengths of sorbent booms can be placed at intervals along the drain, but these can be difficult to set if the tide is in, or with sea water surge during tide change.  <ul style="list-style-type: none"> • It is possible to use dispersants in the area given the depth of water in the port, however, this is not a preferred option and requires prior approval from the NOSC and MNZ. • Any oil contained by booms should be collected and stored awaiting disposal for recycling. • Check for oil that is trapped under the wharves before terminating a response operation. Jet boat propulsion can be used to move oil from under exposed piled wharves. This technique has been successfully tested in an exercise. • Prevailing weather conditions, quick response required to prevent oil leaving the Port and pile wharves which restrict boom deployment by boat. <p>If significant amounts of oil are outside the port, but not in the port yet, the entrance to the port can be boomed off to reduce the impact of the oil.</p> <p>Note this action shall not take priority over protecting and booming the Napier Inner Harbour/Estuary. Protection of the International Significant Wetland takes priority over the commercial interests of the port. The 300m of rapid deployment should be used to protect the Napier Inner Harbour if timing doesn't allow for 'boxed' booms to be transported to the inner harbour in time.</p> <p>The preferred response option (and natural collection point) in the Napier Port for collection of spilt oil is the corner of No. 2 Wharf (as shown in the site photos). The</p>		

	booms should be set appropriately to protection the breakwater channel and the rock nests under the wharf, and the collection point should be placed approximately at the point of the orange dot. This may require berthing the tugs elsewhere.
Wildlife Recovery	Wildlife can be transported quickly to Napier (10 mins) for stabilization and treatment.
Safety	
Safety Considerations	<ul style="list-style-type: none"> • The Napier Port is a very active site with a number of risks. These include: <ul style="list-style-type: none"> ○ Moving forklifts and container lifts ○ Port cranes ○ Mooring lines under tension ○ High wharf edges ○ Traffic movements ○ Dust ○ Rail movements ○ Noise • All responders must wear a life jacket when working within 1m of the wharf edge
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Vessel for boom deployment (CK Rescue) • Rapid deployment booms & sorbent booms • Skimmer and oil recovery devices • Sucker trucks • Small vessel for access under wharfs • Oily water storage – Frame tanks • Decontamination equipment at beach access point • Welfare facilities – toilet, water station, Gazebo etc
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications can be used. Use CD ES 133 in port to communicate back to EOC and other work sites.</p> <p>The hill blocks the marine VHF and CD ES1 so Handheld radios do not generally trip the repeaters for these. Therefore, use simplex channels within the port.</p> <p>Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>
Accommodation and catering	<p>Responders can be accommodated in Napier and transported to site.</p> <p>Catering will need to be brought in from Napier.</p>

Public Information		
Resources for PIM Activities	The Port Central Building (PCB) located at the Western entrance can be used for media activities. Access can be gained via the Duty Safety Advisor +64 6 833 4317 or Communications Manager +64 6 833 4521	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Napier City Council	Local Authority	06 835 7579
Napier Port Security	Port Operations / Equipment Access	06 833 4400
Napier Port Duty Safety Advisor	Operations / Equipment Access	06 833 4317
Harbourmaster		
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911
Pacific Surf Lifesaving Club		06 835 3821
Useful links for response		
Port Emergency Fire Plan https://gis.napierport.co.nz/NapierPortViewer/?map=02fd0bc7650744e895976b2bec56dbe2 https://experience.arcgis.com/experience/04b9cf475fd6477c9402de221b5263cd/page/page_1/?views=view_4		

NB: For additional notification contacts see Annex 2, section 3.3



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Port of Napier

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Suggested boom locations to close off wharfs to sea (Approx. 290m)



Suggested location for containment and recovery at No. 2 Wharf

Site 11 – Napier Port and Town Reef
Site Photos

Site 12	Pania Reef	Risk Rating	Medium
Site Description	<p>Pania Reef is the most significant sea bed feature in southern Hawke Bay. It is situated approximately 800 m north of the Napier Port breakwater, and consists of a broken linear series of banks and pinnacles extending 1.73 nm in a north easterly direction. Depth of the surrounding sea floor ranges from 13 m at its southern end, to 19 m at the northern end. Pania Rock itself rises to within 1.6 m of the surface, and is situated approximately halfway along the reef.</p> <p><u>Boundary of Significant Area:</u></p> <p>Significant Area extends 2.59 nm SW from North Pania buoy and is 0.54nm wide. Boundaries of the area are shown on the accompanying chart.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ 39		
Segments	Pania Reef		
Site Access / Control measures	<ul style="list-style-type: none"> • Can only be accessed by boat from Napier Port or Inner Harbour. • May require Harbourmaster to place access restrictions around area to prevent recreational activities 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • N/A 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places. This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	<p>This area is exposed and is often subjected to large swells from offshore systems. The reef will break on low water when there is swell and on all tides in larger swells.</p>		
Tides and Currents	<p><u>Local Environmental Conditions:</u></p> <p>Tidal streams running NW on Flood and SE on Ebb are weak and may be masked by meteorological influences.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	This reef is fished by commercial rock lobster fisherman		
Tourism	There is no tourism at this site		
Recreation	This reef is regularly used by recreational fishermen and divers		

Cultural	<p>Pania Reef is an important source of kaimoana (Pene, 1989). It is also waahi tapu, as the dwelling place of Moremore, the kaitiaki of this part of Hawke Bay (Pischief, pers.comm.).</p> <p>Recognised customary gazetted area as per Customary Fishing Regulations 1998.</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>		
Birds	The site is a popular feeding spot for a variety of seabirds including terns, gannets and gulls.		
Marine Life	<p>Pania Reef is the only significant offshore reef system inside Hawke Bay.</p> <p>Habitats present on the reef system include the low reef crest, dominated by dense beds of mussels (<i>Perna canaliculus</i>) urchin-grazed barren; Ecklonia forest; and deep reef areas dominated by sponges, hydroid trees and large colonies of jewel anemones (<i>Corynactis haddoni</i>). All sections of the reef support large populations of reef fish and reef-associated planktivorous fish. Large schools of parore (<i>Girella tricuspidata</i>) are commonly seen on the shallow sections of Pania Reef.</p>		
Operations			
Response Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	No	Low
	On-water recovery	Yes	Low
	Dispersant Application	No	
	Shoreline Protection	N/A	
	Shoreline pre-clean	N/A	
	Shoreline Clean-up	N/A	
	Natural Recovery	Yes	High
Response priority	Protection of reef system		
Preferred response Options	<p>This site cannot be boomed unless there is a grounded vessel. The preferred response would be on-water recovery, although this may be difficult if any swell is present. Dispersant use would not be recommended due to the shallow nature of the site.</p> <p>The site is subject to high wave energy and strong currents and may be best left to recover naturally.</p>		
Wildlife Recovery	Any oiled birds or wildlife can be transported to Napier by Boat / vehicle for stabilization and recovery.		
Safety			
Safety Considerations	<ul style="list-style-type: none"> • This site is at sea, therefore all normal precautions for working at sea should be taken including: <ul style="list-style-type: none"> ○ Lifejackets 		

	<ul style="list-style-type: none"> ○ VHF Radio ○ Secondary means of communication ○ Alternate source of propulsion (for single engine craft) 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> ● Vessels for on-water recovery ● Booms if vessel aground ● Storage (tote tanks) and pumps for fuel removal from grounded vessel 	
Transportation	Response personnel would need to be transported to the site by boat from either Napier Port or the Inner Harbour.	
Waste Collection	Waste would need to be stored onboard the recovery vessels and transported to shore for disposal.	
Communications	<p>Mobile communications will work at this site, including 4G.</p> <p>Marine VHF is the preferred method of communications. VHF will work via handhelds to the main CD channels.</p>	
Accommodation and catering	<p>Personnel can be accommodated in Napier.</p> <p>Catering will need to be brought in from Napier and taken out onboard the vessels.</p>	
Public Information		
Resources for PIM Activities	The Port Central Building (PCB) located at the Western entrance can be used for media activities. Access can be gained via the Duty Safety Advisor +64 6 833 4317 or Communications Manager +64 6 833 4521.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Napier Port Duty Safety Advisor	Operations / Equipment Access	06 833 4317
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911

NB: For additional notification contacts see Annex 2, section 3.3

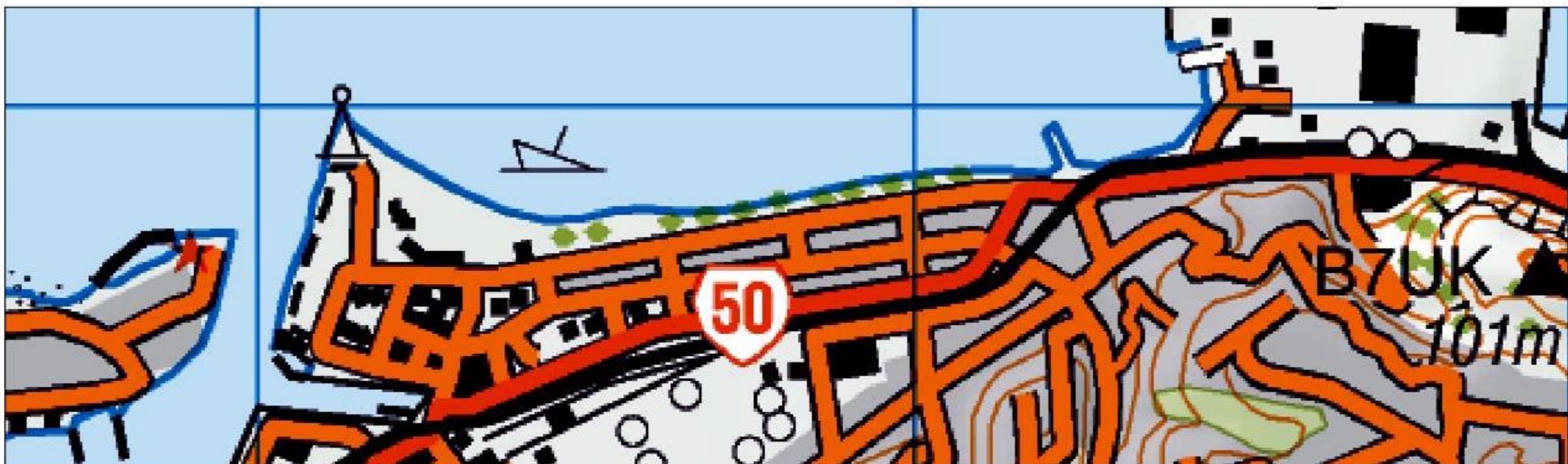
Site 13	Hardinge Road	Risk Rating	Low
Site Description	<p>Hardinge Road runs from the Western side of Napier Port to Perfume Port at the entrance of the Inner Harbour. The beach is a mix of sand, Gravel and man-made structures.</p> <p>This is also a popular recreational spot for fishing and surfing and a popular walking, running and cycling route.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ 39		
Segments	Hardinge Rd		
Site Access / Control measures	<ul style="list-style-type: none"> • The site can be easily accessed by vehicle along the entire length. • Boats can be launched from the small slipway beside the Napier Port, or from the Inner Harbour. • This is an open access site bordering a road and walkway. Access to the area would be difficult to control without fencing the entire length. • The closest airfield is Napier Airport. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Manmade structures 	<ul style="list-style-type: none"> • Gravel 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S7, S8, S10, S11, S12, S13 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day from the east; however this area is protected by the port and Napier Hill from most winds. Winds from a northerly direction will tend to impact the area the most.</p>		
Sea Conditions	<p>This area is largely protected from southerly and northerly swells. On occasion there can be waves with swell from the east and north east.</p>		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly east – west direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	<p>This area of coastline has a number of businesses operating in close proximity to the shoreline at the western end, however it is not a significant commercial area.</p>		
Tourism	<p>This area is close to Ahuriri that is popular with tourists during the summer months.</p>		
Recreation	<p>The cycleway that runs along the entire length of Hardinge Rd is a popular area for walkers and cyclists and occasionally surfers.</p>		

Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.		
Birds	There are small groups of Little Blue Penguins found along this stretch of coastline. This area is visited by terns, black billed gulls and dotterels (tbc)		
Marine Life	There are occasional seal haul outs along this section of coast during the winter months. The rock armouring along Hardinge Rd supports a variety of macro-invertebrates and fish. There are also small reef structures offshore from the remains of concrete structures that support small populations of fish.		
Operations			
Response Options Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	Yes	Medium
	On-water recovery	No	Low
	Dispersant Application	No	
	Shoreline Protection	Yes	Medium
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	High
	Natural Recovery	Yes	Low
Response priority	Protection and clean-up of the beaches at either end of Hardinge Road		
Preferred response Options	<p>Due to the high recreational use of the area the focus of response should be the protection and clean-up of the beaches.</p> <p>Booming is possible at the eastern end to protect the small bay and beach area. In the right conditions it may also be possible to boom the beach at the western end from perfume point to the carpark.</p> <p>Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland. Shoreline Clean-up is possible due to the predominantly sandy substrate found on these beaches.</p> <p>The area of rock armouring that runs the length of Hardinge Rd potentially be left for natural recovery, although the accessibility of the area may prioritise the use of hot and cold washing.</p>		
Wildlife Recovery	Wildlife can be transported quickly to Napier (5 - 10 mins) for stabilization and treatment.		

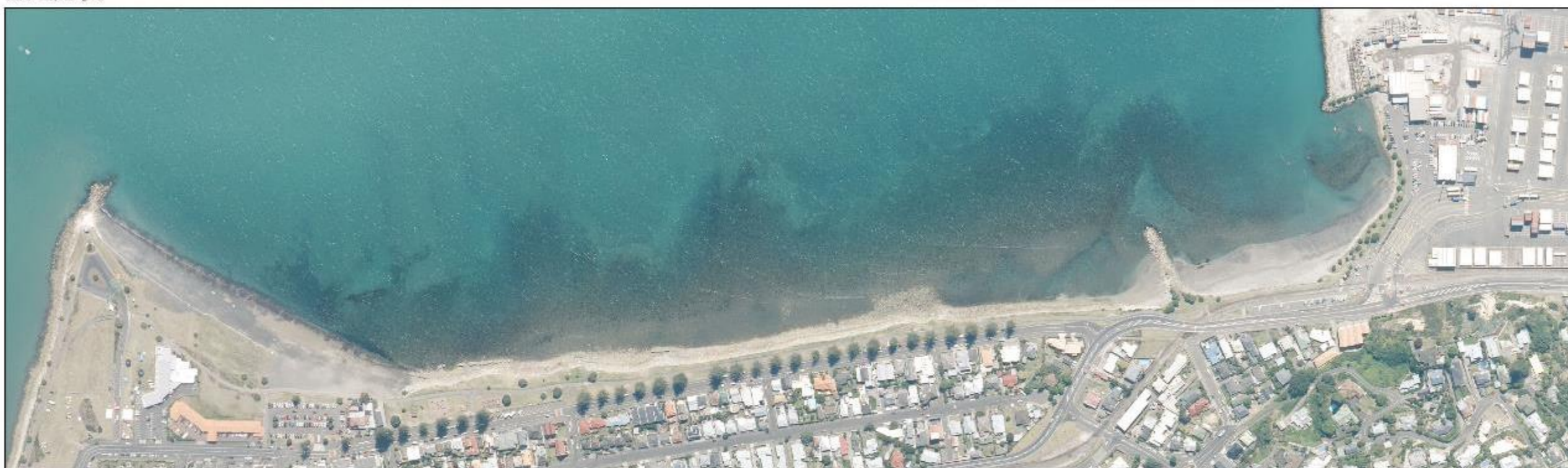
Safety		
Safety Considerations	<ul style="list-style-type: none"> • Close proximity to the city and potential need for control of local population • Some areas require access on slippery rocks 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Rapid deployment boom for protection of beaches • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Access control equipment (fencing, tape, warratahs etc) • Welfare facilities water station, Gazebo etc – toilets are available in several places along marine parade 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Responders can be accommodated in Napier and transported to site.</p> <p>Catering is available from cafés close to the response site.</p>	
Public Information		
Resources for PIM Activities	Given the close proximity of the site to Napier all media requirements could be met at the HBRC offices or at the Napier Port offices.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Napier Port Duty Safety Advisor	Operations / Equipment Access	06 833 4317
Napier City Council	Local Authority	06 835 7579
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333

Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Westshore Surf Life Saving Club		06 835 9553
Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911

NB: For additional notification contacts see Annex 2, section 3.3



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Hardinge Road

Site 14	Inner Harbour / Ahuriri Estuary	Risk Rating	Very High
Site Description	<p>A major mooring area for recreational boating and smaller commercial fishing vessels in Hawke's Bay which is located between Westshore, Pandora Pond Road Bridge and Ahuriri. A visual description of the area is shown on the attached topographical map. Currents in the harbour are strongly influenced by the ebb tide and a lesser extent the flood tide. During stormy seas a strong surge may move through the entrance and up the harbour.</p> <p>The Ahuriri Estuary is situated adjacent to the city of Napier, and represents the remnants of the former Te Whanganui a Orotu lagoon. Despite extensive modification the estuary continues to have high wildlife and fisheries values. This site covers all of the estuary from Pandora Bridge to the upper limit of the Coastal Marine Area. A Wildlife Refuge covers the Southern Marsh, Westshore Lagoon and the estuary from the low-level bridge to Pandora Bridge.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ 39		
Segments	14a Inner Harbour, 14b Ahuriri Estuary		
Site Access / Control measures	<p>Inner harbour:</p> <ul style="list-style-type: none"> • There are a number of ramps in the inner harbour that may be used to launch vessels and to provide vacuum trucks with access to the water's edge. • There are good launching areas and facilities at the HB Sports fishing club. Refer to photos and attached map of the area. • The Hawke's Bay Coastguard building could be used as a forward staging area for a response. It has showers, toilets etc, concrete floors and kitchen. The Club also has two VHF base sets and handhelds. <p>Ahuriri Estuary:</p> <ul style="list-style-type: none"> • As above, considering it is possible only for smaller vessels to navigate under Pandora Bridge. • The state highway provides access adjacent to the eastern banks of the Estuary. • There are pedestrian walkways and boardwalks present around the estuary. • This is an open access area and as such access will be difficult to control. Where possible site entry points should be established and fenced off to prevent access by non-response personnel • The nearest airport is Napier Airport. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock • Sand / mud / shell 	<ul style="list-style-type: none"> • Man Made structures • Mixed sand and gravel 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S13, S14 		

Weather conditions	During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day , but the inner harbour is generally protected from all directions, apart from westerlies.
Sea Conditions	This is a protected area and is not exposed to swells.
Tides and Currents	The tidal range in this area averages 1.7 metres. Oil will enter the Ahuriri Estuary via Pandora Road Bridge on a flood tide or during a strong north east wind. Tidal flow under the Pandora Bridge is very strong at times (even turbulent).
Iwi	This area is part of the Ngāti Kahungunu Iwi. Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.
At risk Resources	
Commercial	The Napier Inner Harbour is home to the majority of the East Coast fishing fleet, which contributes to the economy. Consideration should be made where possible that booming operations for smaller sized spills should be configured to allow fishing vessel access where possible.
Tourism	There are a small number of small-medium tourism ventures that use the Napier Inner Harbour. In a spill event they are unlikely to be able to operate in the area. The wharf at Ahuriri is also a popular location for dining with a number of seafront bars and restaurants.
Recreation	This is a highly utilised area for recreation. The pathways that surround the estuary form part of the Hawke's Bay cycleways and are used by walkers, runners and cyclists. The estuary and inner harbour are also popular for shore fishing. In addition, the area is also popular for sailing, swimming and kayaking. There are a number of recreational boat launch sites and also a number of moored boats in marinas on both sides of the inner harbour.
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.
At risk Resources	
Birds	The estuary, Outfall Channel (see map) and associated wetlands are important breeding and feeding areas for a wide variety of bird life. Significant numbers of both NZ and international waders use the area along with shags, gulls, tern and waterfowl.
Marine Life	The estuary is classified as a nationally significant fisheries habitat. Within Hawke Bay, the Ahuriri Estuary is the most important estuary in terms of fisheries production. It provides nursery and spawning habitat, feeding areas and is passed through by species migrating between freshwater and the sea.

Operations					
Response Matrix	Options	Response option	Preferred Option?	Feasibility	
		Containment and recovery	Yes		Medium
		On-water recovery	Yes		Low
		Dispersant Application	No		
		Shoreline Protection	Yes		Low
		Shoreline pre-clean	Yes		Low
		Shoreline Clean-up	Yes		High
		Natural Recovery	Yes		Medium
Response priority	Prevent oil from entering into the Ahuriri estuary and Lagoon				
Preferred response Options	<p>Any spill event over 100 litres, will automatically generate a full response from the Incident Management Team, Pollution Response van and trailer and CK Rescue. The response team can then be sized appropriately after proper assessment and development of an Incident Action Response Plan.</p> <p>14a Inner harbour:</p> <p>An oil spill outside of the harbour should be prevented from washing into the harbour by using dispersants in the open coast and/or placing a containment booms across the entrance of the inner harbour.</p> <p>Option A - Place the rapid deployment (RD) boom directly across the channel, with secondary booms to protect boat ramps from being oiled. Both crates of RD boom are required, a total 198m to make the setting shown. This is shown in the booming plans at the end of this site sheet. For a quick deployment, use 200 m of the rapid deployment boom located at the end of No. 4, Herrick Wharf Container towing it to position.</p> <p>Option B - Alternatively RD boom may be placed from the eastern side, directing any oil to the 2nd RD boom deployed from the western side where oil can be collected.</p> <p>Sorbent booms can also be used to prevent oil escaping between the rocks.</p> <p>Should a spill occur in the harbour it should not be prevented from leaving the inner harbour on the outgoing tide as any spill that occur in this area are likely to be light fuel oil which will quickly evaporate and the spills are likely to be small. In the event that a spill originating from the inner harbour is large and/ or is a heavy fuel oil then containment is the best option. In all cases oil should be prevented from entering Ahuriri Estuary. Boom deployment to prevent oil entering the Estuary is described in in the booming plans at the end of this site sheet.</p> <p>Dispersants cannot be used within the inner harbour.</p> <p>14b Ahuriri Estuary:</p> <ul style="list-style-type: none"> • If oil is in the Napier Inner Harbour, the oil should be prevented from entering the estuary by placing a containment or deflection boom across the entrance of the Estuary downstream (North) of Pandora Bridge. 				

	<ul style="list-style-type: none"> • The ramps downstream on either side of the Bridge may be used to launch a boom and to collect any incoming oil. • The use of dispersants in the inner harbour is not recommended. • Tidal flow on an ebb tide may restrict the use of a boom. • Use of powered vessels are prohibited in the Estuary (Sect 12:4.2 HBRC Coastal Plan), but this can be overruled by the OSC during an emergency. <p>NB: Exercises have shown it is not possible to deploy a backup deflection boom upstream of Pandora Bridge given the flow velocities.</p> <p>NB: Use of the city stormwater outfalls have been considered as part of a response options but would be impractical. Although the storm water flows into the channel and it might serve to assist in flushing oil out of the estuary this would only occur on an outgoing tide. The stormwater gates automatically shut on incoming tide and opening on outgoing tide.</p>
Wildlife Recovery	Wildlife can be transported for stabilization and recovery in Napier (approx. 10 mins)
Safety	
Safety Considerations	<ul style="list-style-type: none"> • Rocky areas around the inner harbour can be slippery and unstable. • Lifejackets should be worn when working on any rocks or on the wharf edge. • Boat ramps are very slippery. • The area is popular for recreation and will require controls to ensure that members of the public remain safe. • Some parts of the site are in close proximity to roads and traffic management may be required if operating equipment near to the Pandora Bridge or State highway.
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Booms (rapid deployment, sorbent) for containment and shoreline protection • Vessel for deployment of boom in Inner Harbour and a small vessel for access in the estuary • On-water recovery equipment (skimmer) • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at access points • Welfare facilities – water station, Gazebo etc • Equipment to establish EOC at the Coastguard building (computers etc)
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.
Communications	<p>Communications are good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Wi-Fi and Marine VHF is available at the Coastguard building.</p>

Accommodation and catering	Responders can be accommodated in Napier and transported to site. Catering will need to be brought in from Napier.	
Public Information		
Resources for PIM Activities	The Coastguard building could be used for any media activities. Alternatively, the Napier Sailing Club could be used for media and community activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Napier City Council	Marina Operator / Local Authority	06 835 7579
Coastguard Hawke's Bay	Maritime Radio / Forward Operating Base	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Westshore Surf Life Saving Club		06 835 9553
Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911

NB: For additional notification contacts see Annex 2, section 3.3



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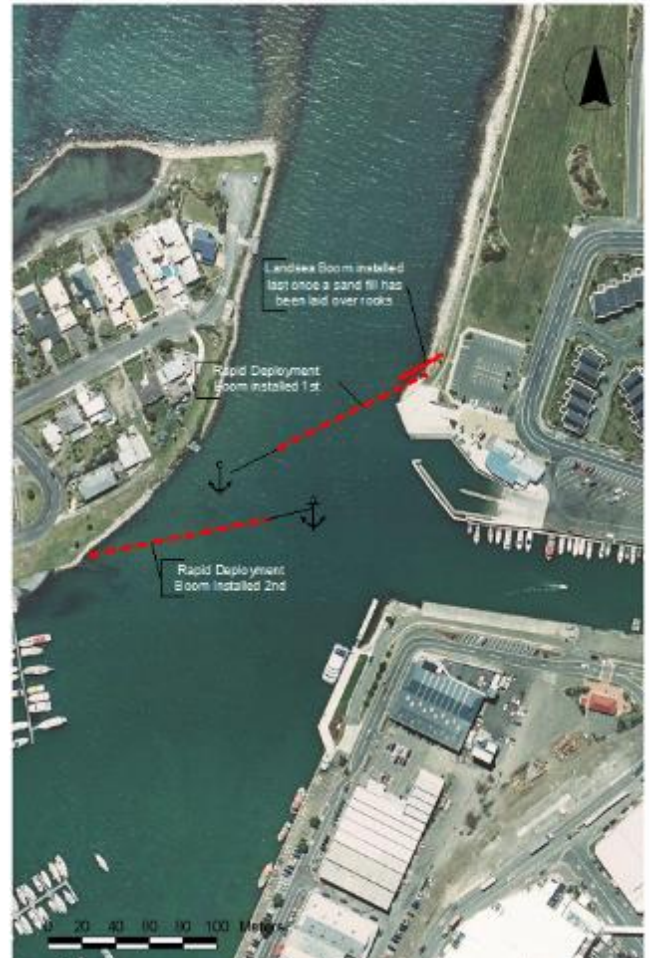
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Inner Harbour- Ahuriri Estuary

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Inner Harbour booming Option A



Inner Harbour booming option B

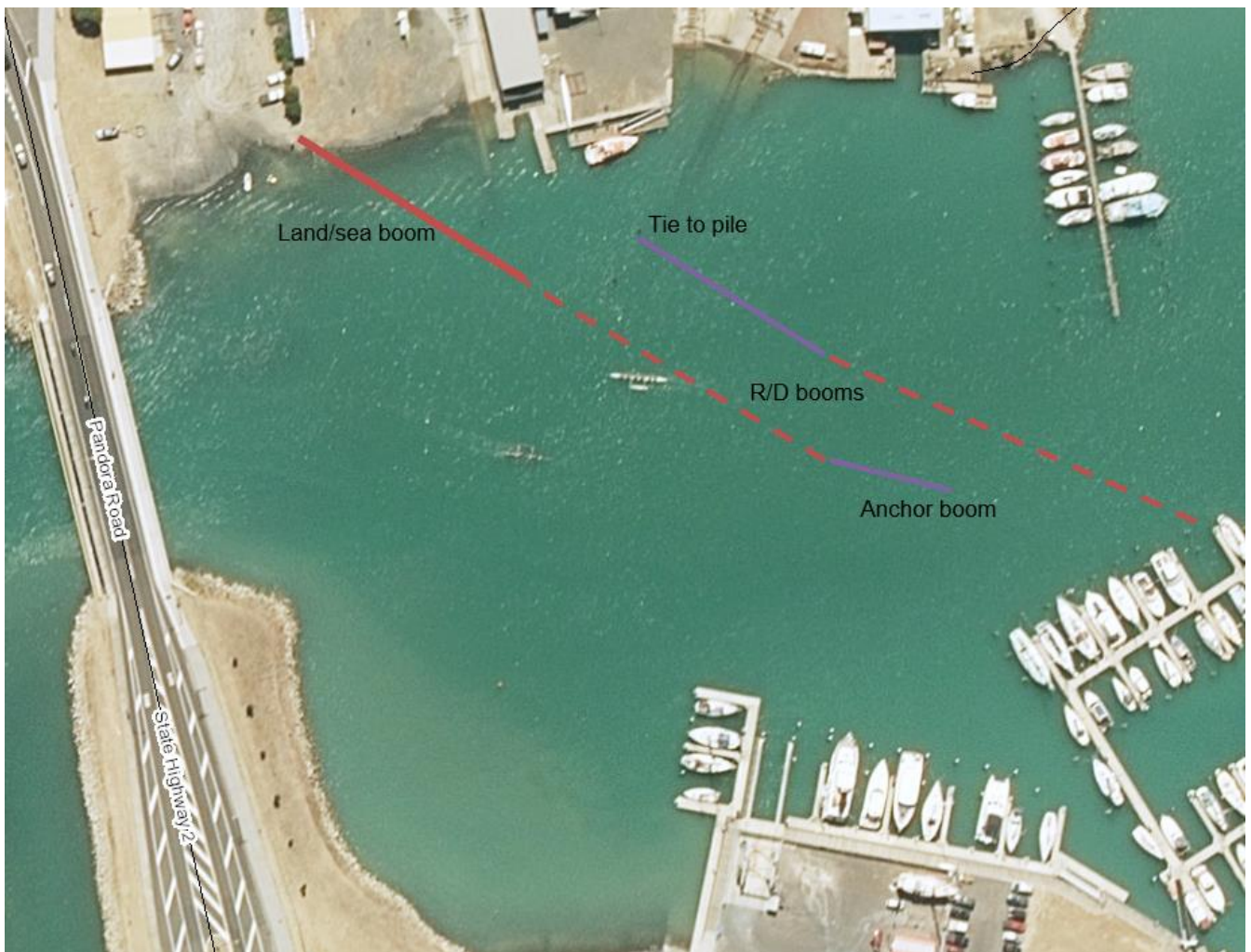


The V in the rapid deployment boom provides the ideal spot for recover close to the quay. NB: The boom should be fixed low on the pylons.

Restrictions on Options: Shallow area prohibits the use of dispersants, storm surge, moored boats, and tidal flow may limit boom deployment. This harbour is the only sheltered harbour for vessels maximum draft of 2.8 metres and length up to 25 metres between Wellington and Gisborne. This is also the main launching area for recreational fishers, and security on boat ramps should be considered.

Booming on an ebb tide is not necessary, or possible due to current flow. Booms should be placed during low/slack water.

Site 14a – Inner Harbour Booming Plans



- Tidal flow on an ebb tide may restrict the use of a boom. Ebb tide is strong at this location and booming during an ebb tide will not be necessary, or achievable.
- On the flood tide, currents into the estuary are minor at the boom locations (above) but increase near the Pandora Bridge, particularly after half tide.
- Use of powered vessels are prohibited in the Estuary (Sect 12:4.2 HBRC Coastal Plan).

Site 14b – Ahuriri Estuary Booming Plan

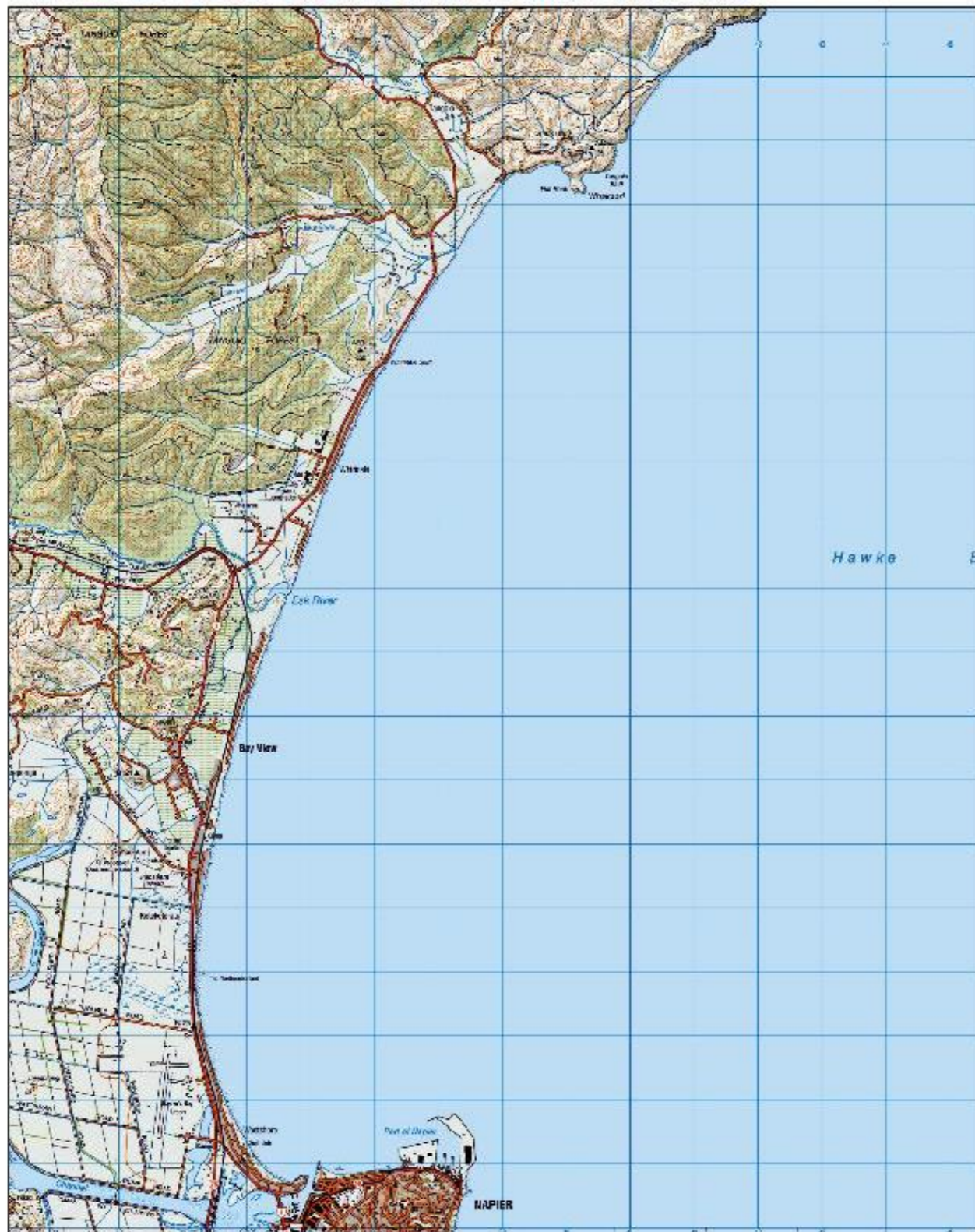
Site 15	Westshore to Tangoio Bluff inc. Esk River mouth		Risk Rating	Low
Site Description	<p>This site runs from Westshore in the south to Tangoio in the north. It is largely exposed coastline made up of steep black gravel beaches. There are a number of shorefront dwellings in Westshore, Bayview and Whirinaki. These beaches are popular for recreational fishing, particularly between Westshore and Bayview and at the northern end of Whirinaki.</p> <p>The Esk River mouth lies between the settlements of Bayview and Whirinaki north of Napier. The river is often open to the sea in winter, but during times of low rainfall will be enclosed by a shingle bank.</p>			
Chart Number	NZ Topographic Map No.	Coastal Plan Map		
Segments	15a – Westshore to Tangoio 15b – Flat Rock and Stingray Bay			
Site Access / Control measures	<ul style="list-style-type: none"> • The beaches from Westshore to Tangoio can be accessed from multiple points along the coast. Flat Rock and Stingray Bay can only be accessed by walking track from the Tangoio settlement or by farm track. • The river mouth is accessed through private land to the north and south of the river, or via quad and motorbike along the beach from Rogers Rd (Bayview) and Northshore Rd (Whirinaki) • 4x4 quads and motorbikes can drive along the beach. The beach is not suitable for 4x4 motor vehicles. • The closest airfield is located at Napier Airport. • The site is accessible to the public along its entire length and would be very difficult to restrict access. The river mouth would be more easily restricted, as access is only possible along the beach. 			
Intelligence				
Foreshore Types	<ul style="list-style-type: none"> • Sand • Shingle / Gravel 	<ul style="list-style-type: none"> • Cliffs and Rocky foreshore 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S15,16, 17,18,19,20,21,22,23,24 			
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>			
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.			
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>			
Iwi	This area is part of the Ngāti Kahungunu Iwi.			

	Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.		
At risk Resources			
Commercial	There is some commercial fishing along the coast, however this is not significant		
Tourism	This area is not regionally significant for tourism		
Recreation	This stretch of coastline is popular for recreational fishing. The Esk River mouth and Pakuratahi River mouth are both popular whitebaiting spots.		
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.		
Operations			
Response Options Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	No	Low
	On-water recovery	No	Low
	Dispersant Application	Yes	
	Shoreline Protection	No	Low
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	Medium
	Natural Recovery	Yes	High
Response priority	Clean-up of beaches adjacent to residential areas		
Preferred response Options	<p>This section of coastline has limited options for clean-up due to the nature of the foreshore and generally high wave activity. However, given its close proximity to residential homes all efforts should be made to reduce the impact in areas of high use such as Westshore, Bayview and Whirinaki.</p> <p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland.</p> <p>Shoreline Clean-up will be difficult due to the predominant gravel substrate found on these beaches. This may require gravel washing to take place.</p>		

	Due to the high wave activity in the area natural recovery may be the best option for the majority of this coastline, in particular the rocky foreshores in the north and south of this sector.	
Wildlife Recovery	Wildlife can be transported quickly to Napier (15 - 20 mins) for stabilization and treatment.	
Safety		
Safety Considerations	<ul style="list-style-type: none"> • Close proximity to residential areas and potential need for control of local population • Beaches can be dangerous during large swells 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Access control equipment (fencing, tape, warratahs etc) • Welfare facilities water station, Gazebo etc – toilets are available in several places along the coast (Westshore Domain, Bayview Snapper Holiday Park, Whirinaki Rd) 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Responders can be accommodated in Napier and transported to site.</p> <p>Catering will need to be brought in from Napier.</p>	
Public Information		
Resources for PIM Activities	Given the close proximity of the site to Napier all media requirements could be met at the HBRC offices or other facilities within the town.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Napier City Council	Local Authority	06 835 7579
Hastings District Council	Local Authority	06 871 5000
Tangitu Baywatch Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333

Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Westshore Surf Life Saving Club		06 835 9553
Napier Sailing Club	Marina Operator	06 835 3811
Hawke's Bay Sports Fishing Club		06 835 8911

NB: For additional notification contacts see Annex 2, section 3.3



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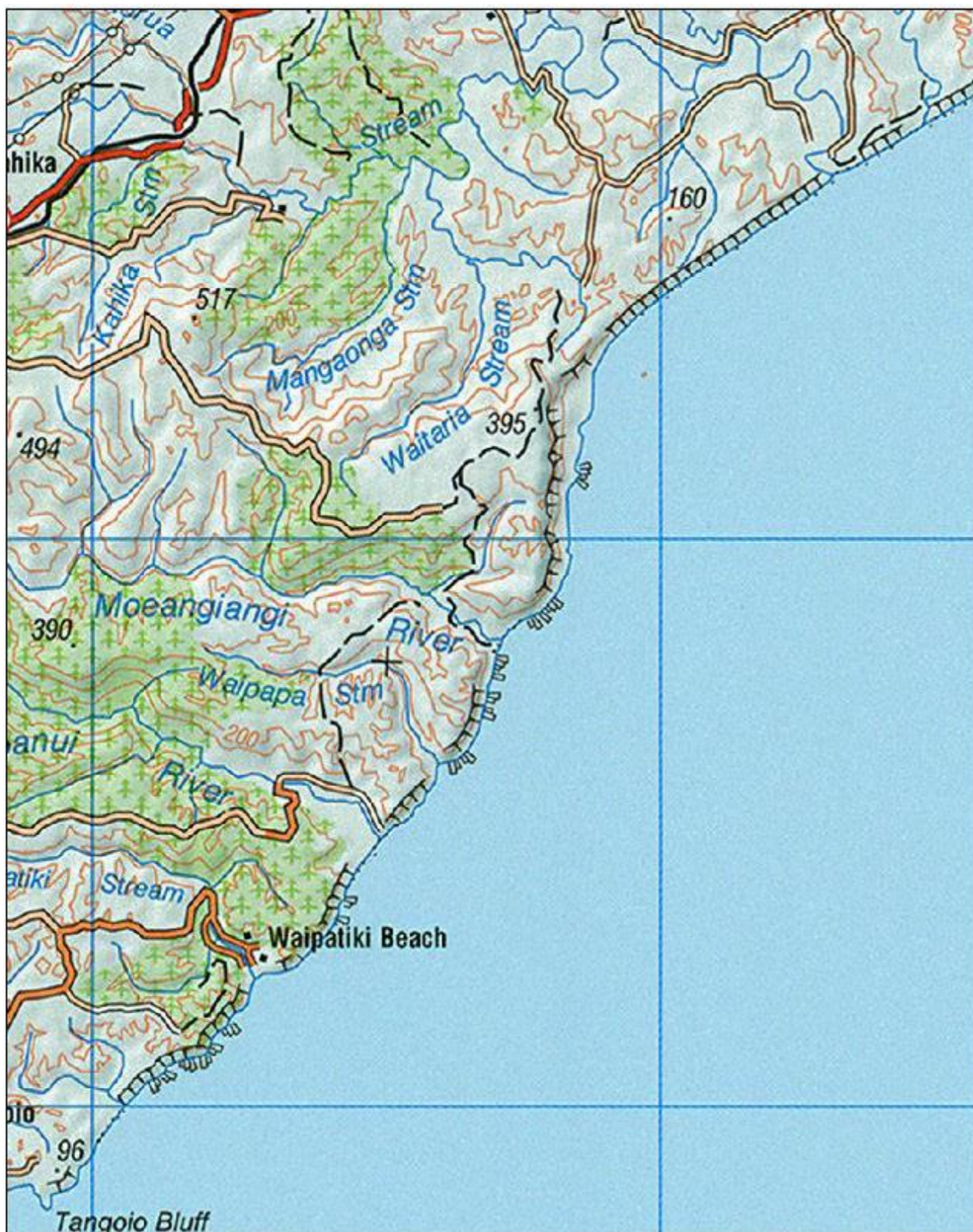
Westshore to Tangoio Bluff

Site 16	Tangoio Bluff to Taits Beach	Risk Rating	Medium
Site Description	<p>There are two accessible sandy beaches along this stretch of coastline with high amenity values, in particular Waipatiki Beach which is a popular summer beach.</p> <p>The remainder of the coast between Tangoio Bluff and Taits Beach is predominantly cliff backed coastline with rocky foreshores and is largely inaccessible other than by foot.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ56	BJ39, BJ40, BH40		
Segments	17a – Waipatiki Beach, 17b Taits Beach		
Site Access / Control measures	<ul style="list-style-type: none"> • The majority of this coastline is only accessible by foot. Both Waipatiki and Taits Beach are accessible to the public on foot from carparks / road ends. • Access to both beaches can be controlled at the carparks / road ends. • The closest airfield is Napier Airport 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock • Gravel 	<ul style="list-style-type: none"> • Sand 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S25, S29 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	This is an area of exposed coast and is often subjected to large swells from offshore systems.		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There is a campground at Waipatiki Beach that is very popular during summer months		
Tourism	This is a popular area for summer holidays, but is not regionally significant		
Recreation	This is a popular summer recreation spot for swimming, diving, fishing and surfing		
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in		

	planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.		
Birds	NZ Dotterels are located on Taits Beach		
Marine Life	This is an occasional spot for seal haul out in winter months.		
Operations			
Response Matrix Options	Response option	Preferred Option?	Feasibility
	Containment and recovery	No	Low
	On-water recovery	No	Low
	Dispersant Application	Yes	
	Shoreline Protection	No	Low
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	High
	Natural Recovery	Yes	High
Response priority	Clean up of Waipatiki Beach		
Preferred response Options	<p>Where conditions allow the preference is to disperse the oil at sea to prevent impact on the coast. This must be done with the agreement of the NOSC and arranged through MNZ. Shallow water over the platforms may reduce the ability to utilise dispersants. Deflection booms are unlikely to be effective due to the general sea conditions in the area. Rivers in the area may only be affected in times of low flow.</p> <p>Some beach pre-cleaning may be possible to reduce the amount of debris impacted by oil, particularly around Taits Beach.</p> <p>Shoreline clean-up activities are the main option for the beach areas. Machinery may be used in some areas, although the soft nature of the beach substrate may make this difficult.</p> <p>Some low-pressure washing may be possible on rocky areas near to Waipatiki Beach, although natural recovery may work for most areas along this stretch of coast due to the limited public access.</p>		
Wildlife Recovery	Wildlife can be stabilised on site and transported to Napier for full treatment (35 – 40mins)		
Safety			
Safety Considerations	<ul style="list-style-type: none"> • This is a high energy coastline with strong currents around the beaches and rock areas. • Some areas are underneath cliffs prone to erosion and slips. • This is an area of isolated coastline and medical support is some distance from the site. 		

Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Access control equipment (fencing, tape, warratahs etc) • Welfare facilities – water station, cooking, toilets and showers available at the campground. 	
Transportation	Clean-up staff can be transported to the site via minibus or car / Ute.	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken to the Fernhill landfill.	
Communications	<p>There is limited mobile connectivity in the area.</p> <p>VHF Communications are good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	<p>Responders can be accommodated in the Waipatiki Beach Campground, or in Napier and transported to site.</p> <p>Catering will need to be brought in from Napier.</p>	
Public Information		
Resources for PIM Activities	The Waipatiki Beach Campground could be utilised for media briefings	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Hastings District Council	Local Authority	06 871 5000
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Waipatiki Beach Campground	<p>Commercial operator / Accommodation / Landline and CD Radio</p> <p>Accommodation for 30, cooking facilities for 150, toilets and showers</p>	<p>P: 06 836 6075</p> <p>E: camp@waipatikibeach.co.nz</p> <p>Address: Waipatiki Beach Motor Camp, 498 Waipatiki Road, RD1 Napier</p>

NB: For additional notification contacts see Annex 2, section 3.3

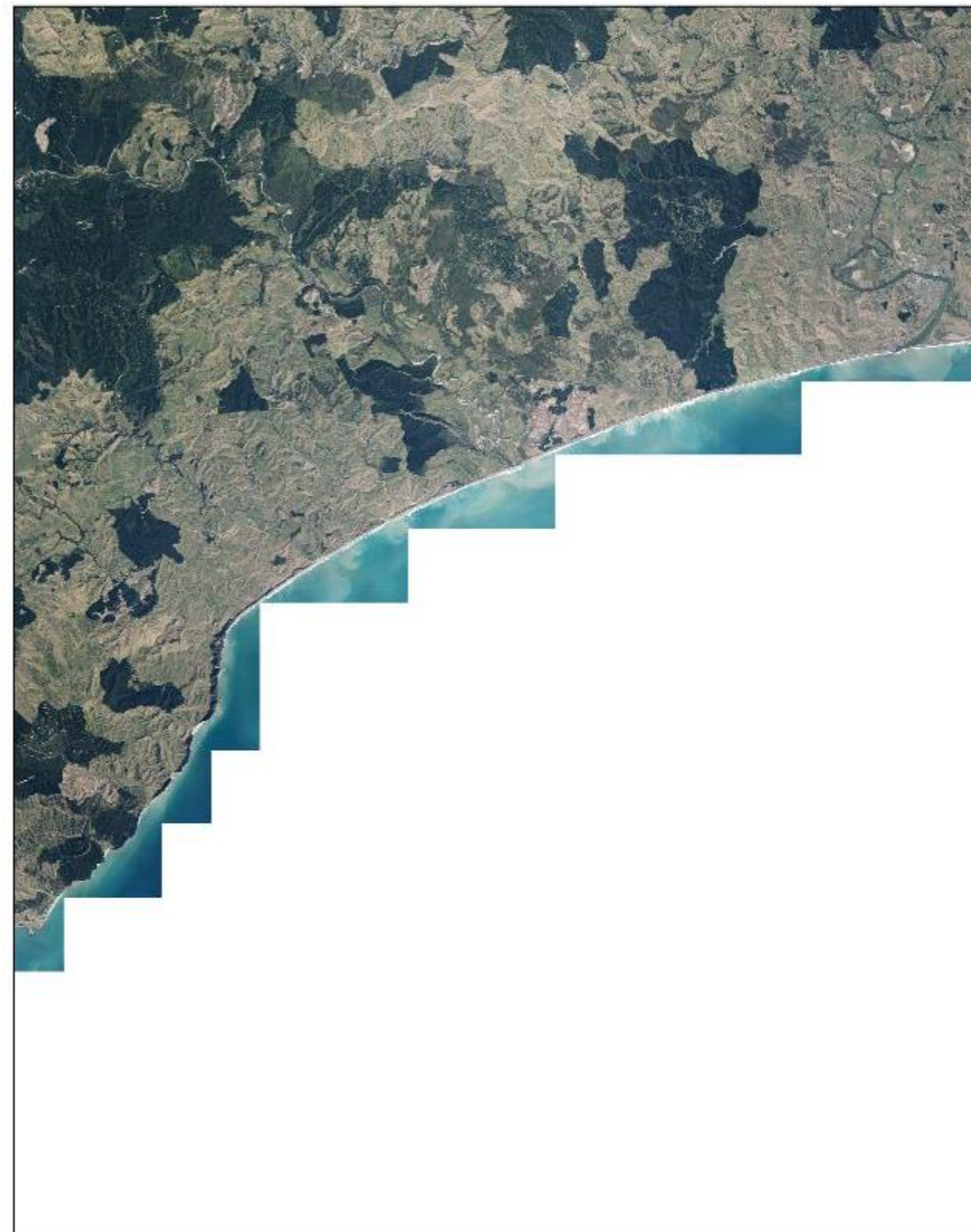
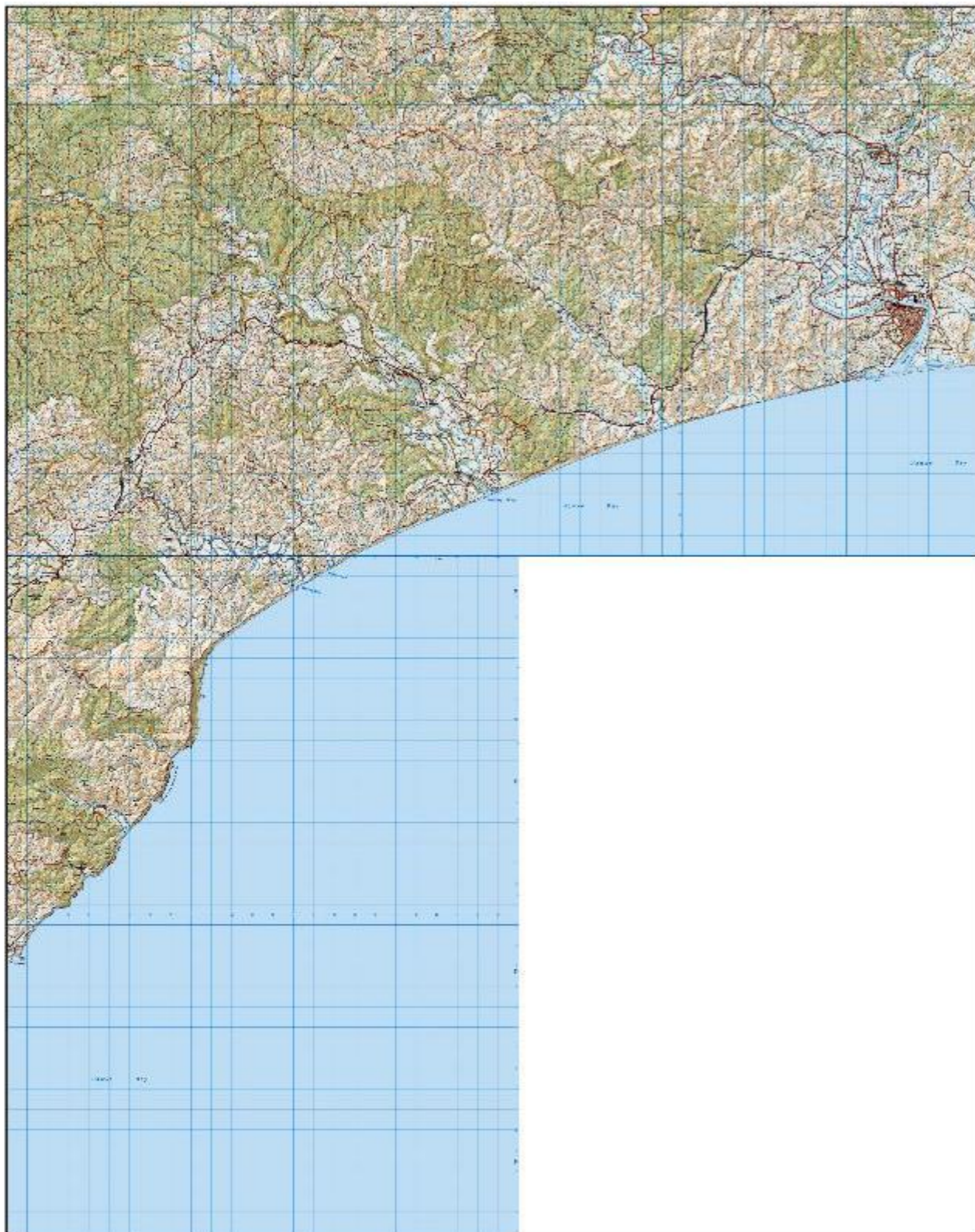


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Waipatiki Beach to Tait's Beach



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Tangoio-Mohaka-Wairoa River

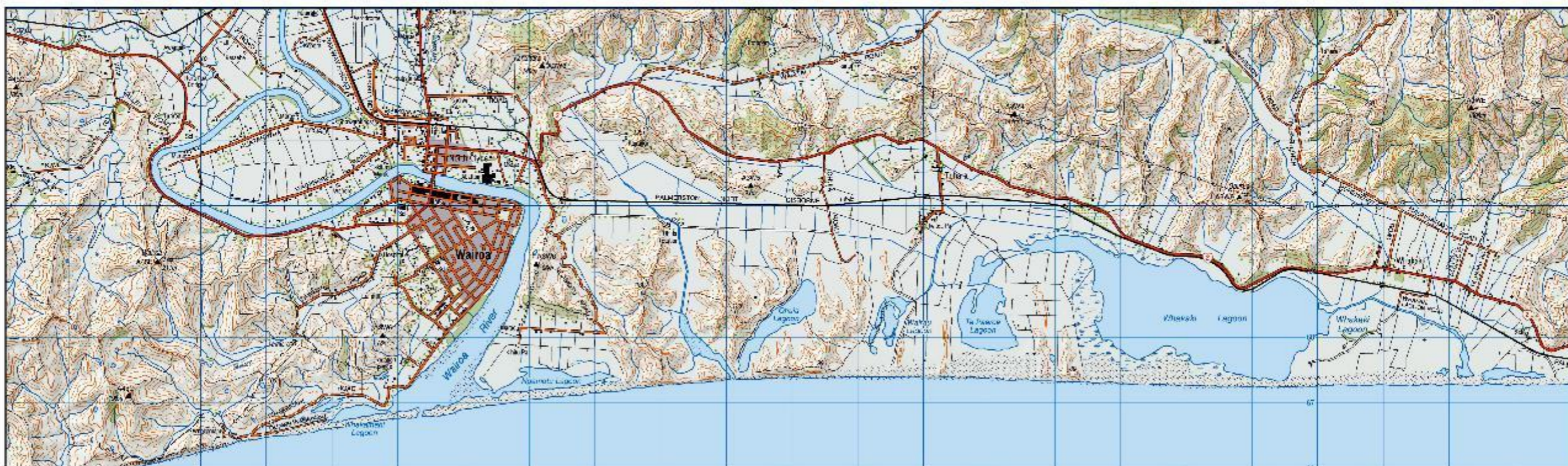
Site 17	Wairoa River – Whakamahi Lagoon to Whakaki Lagoon	Risk Rating	V. High
Site Description	<p>This site comprises the Wairoa River Estuary, Ngamotu Lagoon, Whakamahi Lagoon and the adjacent open coastal area. It forms part of a chain of coastal wetlands that also includes the Ohuia, Wairau, Te Paeroa and Whakaki Lagoons.</p> <p>These wetlands have been assessed as Hawke's Bay's highest risk sites.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ56	BH41, BH42		
Segments			
Site Access / Control measures	<ul style="list-style-type: none"> • There is access via public road most of the way to the east and west end of the River mouth. However, it may be necessary to offload equipment onto 4WD quads (4WD vehicles will get stuck) to reach a suitable deployment site. • There are two ramps along the River that may be used to launch vessels. • Water depth may restrict the navigation of some vessels in the Wairoa River estuary. • Access along the beach is possible with caution. • The nearest Airstrip is the Wairoa Aerodrome. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Rock • Sand • Gravel 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S45, S46, S47 		
Weather conditions	<p>During summer months weather conditions tend to be stable. Afternoon sea breezes generally develop each day and can gust up to 20 knots from the South east in exposed places.</p> <p>This area of coastline can be regularly be subjected to strong winds during winter months.</p>		
Sea Conditions	<p>This is an area of exposed coast and is often subjected to large swells from offshore systems.</p>		
Tides and Currents	<p>The tidal range in this area averages 1.7 metres.</p> <p>Currents tend to move in a predominantly northern direction near to shore.</p>		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There are no regionally significant commercial resources at risk		
Tourism	Not regionally significant		
Recreation	The sites have regionally significant flora, fishery and landscape values that attract recreational users		
Cultural	These wetlands traditionally have been very important source of kai and wellbeing for the Maori communities in the area. In recent years significant effort has been put into		

	restoring the natural features of these wetland systems. It is of utmost importance that any response involving these lagoons involves early input from affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi and should be prioritised to ensure all cultural considerations are included in planning. Refer to Annex 10 for information regarding Māori engagement.		
Birds	<p>Collectively these wetlands constitute the largest such system on the east coast of the North Island, and are recognised as a nationally significant wildlife habitat due to the presence of significant populations of both threatened and common coastal bird species (including NZ and international migratory waders, gulls, terns and shags), and a large waterfowl population.</p> <p>Threatened species include the Australasian bittern, white heron, NZ dabchick and fernbird.</p> <p>The Ngamotu Lagoon and Whakamahi Lagoon are Government Purpose Administration Reserves and gazetted Wildlife Management Reserves. They are saline lagoons with saltmarsh communities and waterfowl and waders present. Both areas are managed by Department of Conservation.</p>		
Marine Life	The Wairoa River estuary and its associated coastal wetlands provide regionally important whitebait spawning habitat and fishery. The estuary and coastal lagoons provide important habitat for indigenous fish species.		
Operations			
Response Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	Yes	Low
	On-water recovery	Yes	Low
	Dispersant Application	No	
	Shoreline Protection	Yes	Low
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	Medium
	Natural Recovery	No	Low
Response priority	Prevention of oil entering the Wairoa River Estuary		
Preferred response Options	<p>If possible, oil should be prevented from entering the Wairoa River estuary. This may be best achieved by booming within the estuary due to the high energy of the coastline. This may also be achieved by closing the gravel bar at the river mouth.</p> <p>Dispersants may be used offshore to prevent oil reaching the coast, however, these cannot be used in the estuary.</p> <p>Collection of oil in the estuary may be difficult due to the size and limited road access. This may be best achieved using a shallow draft vessel on water.</p> <p>Clean up on the coastline may be difficult due to the predominantly gravel substrate. Beach pre-clean to remove debris may be effective in reducing oiling.</p>		

	This is a very high energy area of coastline with regular large swells. The most effective method of cleaning on the coast is likely to be natural recovery.	
Wildlife Recovery	Wildlife may be taken to the HBRC Depot for stabilisation and treatment, or transferred to Napier once stabilised (2hrs)	
Safety		
Safety Considerations	<ul style="list-style-type: none"> • High energy coastline with potential large swells • Occasionally fast flowing river during times of prolonged or heavy rain. 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Rapid deployment boom or earth moving equipment for protection of the river mouth • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Access control equipment (fencing, tape, warratahs etc) • Welfare facilities water station, Gazebo etc • 4WD Quad and trailer for access along the beach • If required a Forward Operating Base or Coordination Centre can be established at the HBRC Depot or the Wairoa District Council 	
Transportation	Responders can be transported to the site via vehicle / minibus. Some areas may require responders to access on foot or with 4WD quad bike	
Waste Collection	Waste collection can be performed by waste contractor (skip bins) or by Ute with a lined trailer. Waste will need to be taken by road to the Fernhill landfill.	
Communications	<p>Communications are good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception.</p> <p>Satellite communications would work in the area.</p>	
Accommodation and catering	Accommodation is available in Wairoa at the Ferry Hotel, Riverside Motor Camp and the Vista Motor Lodge.	
Public Information		
Resources for PIM Activities	There are a range of sites available for PIM activities including the Wairoa District Council Chambers and the Wairoa War Memorial Hall.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Wairoa District Council	Access to Wairoa DC site and resources to support response activities	06 838 7309
Coastguard Hawke's Bay	Maritime Radio	06 834 1345

Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:60,000 @ A3



Scale: 1:40,000 @ A3



Wairoa River -Whakaki Lagoon

Site 18	Waikokopu to Taylors Bay	Risk Rating	Medium
Site Description	<p>This is a regionally significant amenity area with some of the best and most popular summer beaches in Hawke's Bay. This area attracts many out of region visitors throughout the year.</p> <p>There is also an important rock lobster fishery that is based in the Mahia Township and launch from the Opoutama Beach.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ43		
Segments	19a Waikokopu, 19b Opoutama Beach, 19c Taylors Bay		
Site Access / Control measures	<ul style="list-style-type: none"> • Waikokopu access can be controlled at the road end. • Opoutama Beach and Taylors Bay are both accessible along their entire length and public access would be difficult to restrict access • All sites can be accessed by vehicle and 4x4 vehicles and machinery could be used on all beaches. • There are boat ramps at Waikokopu and Opoutama. Tractors are also available locally to assist with launching. • Small airfields are located on Lane Road, Mahia or Tunanui Station, Tunanui Rd. Wairoa Aerodrome is 45mins from the site for larger aircraft. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Rock 		
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • S30, S31, S35, S37 		
Weather conditions	Winds in this area can be confused due to the high surrounding land to the south and north and low-lying land between.		
Sea Conditions	This area can be subjected to large swells from the south, but is generally protected from easterly and northerly swells.		
Tides and Currents	The tidal range in this area is 1.1m. Currents move in a predominantly south east direction along the shore.		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	The area has two commercial at risk resources; Tourism / holiday accommodation and the rock lobster fishery, due to the inability to launch vessels.		
Tourism	This is a popular summer area for bach owners and out of region visitors to the holiday parks. This provides a significant part of the local economy and the loss of tourism revenue would have a significant impact locally when compared to other parts of the region.		

Recreation	During the summer this area is one of the Hawke's Bays highest recreational hubs. There is a large amount of diving, fishing, water sports and beach use that will be impacted by an oil spill.			
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
Birds	Opoutama provides a nesting ground for several bird species, including variable oystercatcher and the threatened banded dotterel.			
Marine Life	<p>A significant pipi and tuatua population (kaimoana) is present at Opoutama.</p> <p>The inter-tidal zone may support mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra). This is also a significant commercial and recreational rock lobster fishery.</p>			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	Medium
Response priority	To prevent oil from impacting the beaches			
Preferred Options	<p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. The bay is shallow, so this option will only be possible if the oil is a significant distance offshore.</p> <p>Deflection booms may be effective along the beaches in calm conditions. The entry to the Waikokopu River could be boomed to prevent the ingress of oil into the small beach and estuary behind.</p> <p>Pre-cleaning the beach may be effective in reducing the amount of oily waste, as these beaches generally have a lot of wood debris build up from forestry operations inland.</p> <p>Shoreline clean-up operations are likely to be very effective along this part of the coast due to the hard-packed sand that is present. Machinery can be utilised to conduct clean-up.</p>			

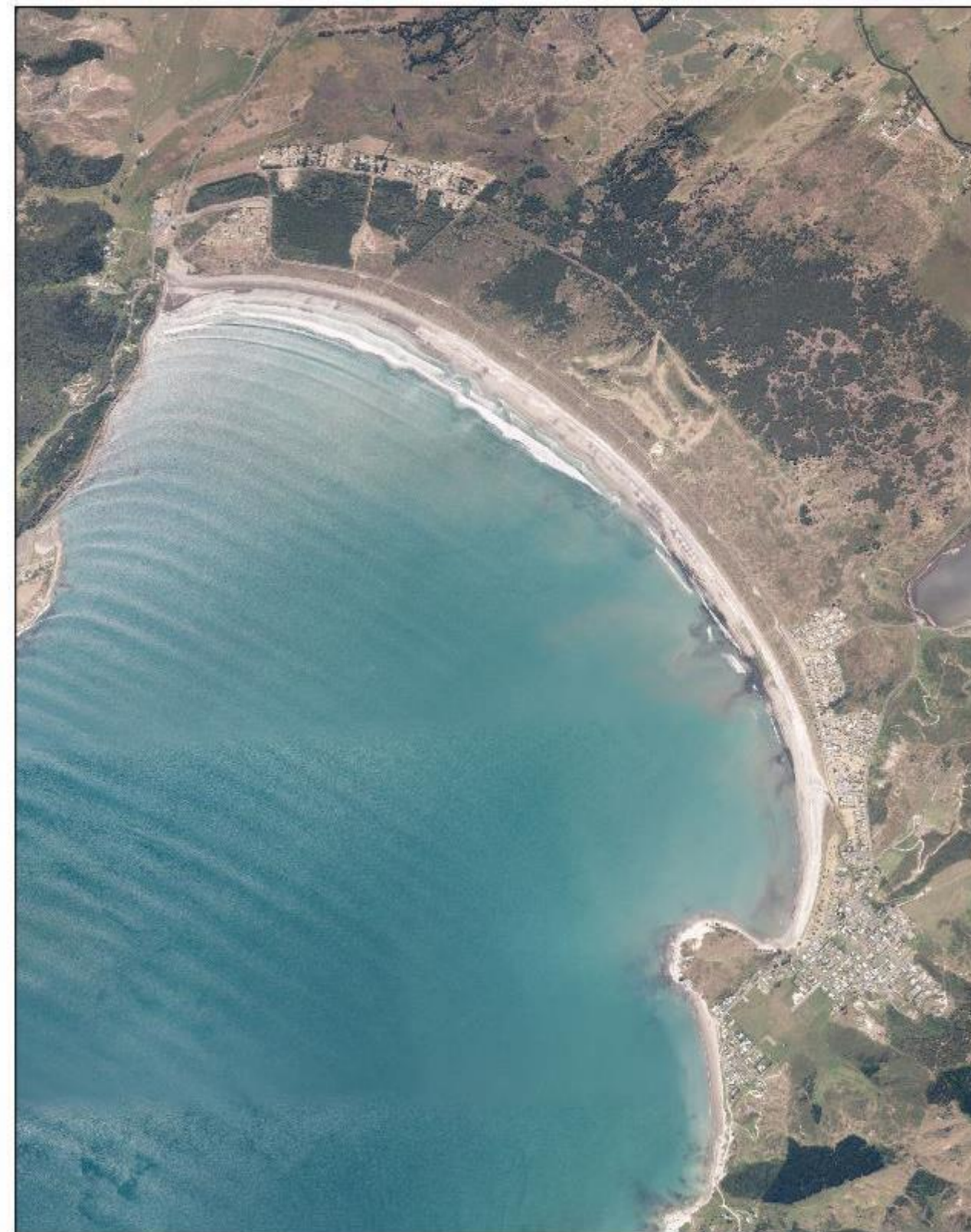
	In the rocky areas between the sectors the best option is likely to be natural recovery due to the high energy of the coast in this area.
Wildlife Recovery	Wildlife can be stabilised on-site before transfer to the HBRC Depot in Wairoa (45mins)
Safety	
Safety Considerations	<ul style="list-style-type: none"> • Potential need to control access of local population • Very exposed area of coastline subject to large swells, particularly in winter months
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Rapid deployment boom to close the Waikokopu River mouth • Sorbent boom and rapid deployment boom for deflection / collection if conditions permit • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Access control equipment (fencing, tape, warratahs etc) • Welfare facilities water station, Gazebo etc – these are available at the fishing club (Mahia Beach end of Opoutama beach)
Transportation	Responders can access Opoutama beach on foot near to the Mahia Beach end. Vehicles may be required to transport responders from Mahia Beach to the other sectors (Far end of Opoutama beach, Taylors Bay and Waikokopu).
Waste Collection	Beach head storage will need to be established at sites using lined skip bins or trailers. Collection and disposal can be arranged with local contractors. All oily waste will need to be transported to the Fernhill Landfill.
Communications	<p>Communications good in the area with mobile coverage available on all networks and 4G available.</p> <p>VHF Communications are also good in this area and Regional Council Fleetlink will work to contact reception in Mahia Beach. DoC also has good VHF communications in this area.</p> <p>Satellite communications would be an effective option in this area.</p>
Accommodation and catering	<p>The Mahia Beach Motorcamp can accommodate 45 personnel in the motel and 68 in the cabins. There are also toilet, shower and cooking facilities.</p> <p>Catering would have to be brought in from Wairoa, or setup on-site. Catering supplies would need to be brought in from Wairoa.</p>
Public Information	
Resources for PIM Activities	The Mahia Beach Fishing Club would provide a good location for PIM activities.

Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Wairoa District Council	Local Authority	06 838 7309
Mahia Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Mahia Beach Motorcamp	Mahia Beach Motorcamp	P: 06 837 5830 F: 06 837 5831 E: mahiabeach.motels@xtra.co.nz Address: Mahia Beach Motor Camp, 43 Moana Drive
Mahia Beach Fishing Club	Potential to use facility as ECC / Forward Operating Base and for PIM activities	(Boating club & Fire Service) P: 06 837 5031 (Boating club) P: 06 837 5920 or 06 837 5981

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:70,000 @ A3



Scale: 1:25,000 @ A3

Waikokopu-Opoutama-Taylor's Bay

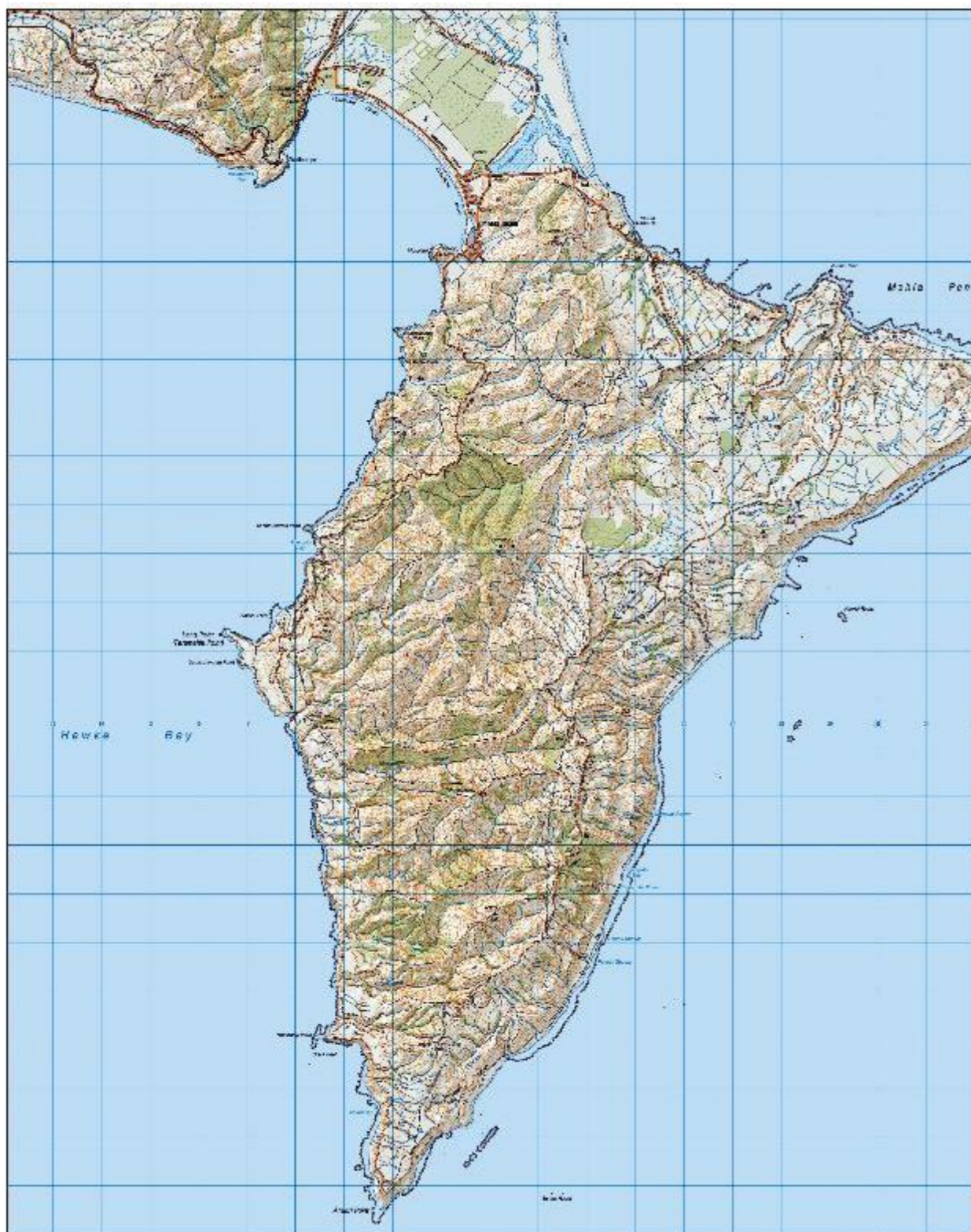
Site 19	Western Mahia Peninsula	Risk Rating	Medium
Site Description	The site runs along the western side of the Peninsula from Taylors Bay to Ahuriri Point. This site has significant ecological flora and fauna and wildlife values, the subtidal area contains spectacular underwater scenery and the coastal landscape is outstanding. The coastline at Long Point is a designated Marginal Strip held for conservation purposes under Section 24 (2)(a) of the Conservation Act 1987. It is held for the conservation of its natural and historical resources and those of the adjacent water.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ43 (BJ42, BH42)		
Segments			
Site Access / Control measures	<ul style="list-style-type: none"> • Vehicle access to coast shoreline is restricted. • Getting down onto the platforms may be possible by 4WD through farm tracks in the area. • Vehicle access around the platforms is very limited. • Boat Access to these platforms is possible. However, water depth and the rocks may restrict the navigation of some vessels. • Public access along this stretch of coastline is restricted largely to access by boat. • A small airfield is located on Lane Road, Mahia. Wairoa Aerodrome is 45mins – 1hr from the site for larger aircraft. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Rock Platforms 	<ul style="list-style-type: none"> • Gravel • Boulders / Rocks 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • N/A 		
Weather conditions	This stretch of coastline can be subjected to strong winds from the north west in spring / summer and from the south and south west in winter months.		
Sea Conditions	This is an area of very exposed high energy coastline exposed to large swells to the south. It is largely protected from all easterly and northerly swells.		
Tides and Currents	The tidal range is 1.1m. Currents generally run in a southerly direction along the shore before meeting the main current offshore that runs in a south west direction.		
Iwi	This area is part of the Ngāti Kahungunu Iwi. Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.		
At risk Resources			
Commercial	This area supports a Rock Lobster fishery		
Tourism	This is a popular tourism spot for holiday home owners and out-of-region travellers		

Recreation	There is a large amount of both shore based and boat based diving, fishing in this area and a recreational rock lobster fishery.		
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.		
Birds	The inter-tidal marine platforms around Long Point support a significant population of coastal bird species, including variable oystercatcher, white fronted terns, cormorants, and the reef heron.		
Marine Life	The inter-tidal zone has mussels (limited), paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra). Black Reef and Long Point are seal haul out sites.		
Operations			
Response Matrix Options	Response option	Preferred Option?	Feasibility
	Containment and recovery	No	Low
	On-water recovery	No	Medium
	Dispersant Application	Yes	
	Shoreline Protection	No	Low
	Shoreline pre-clean	Yes	Medium
	Shoreline Clean-up	Yes	Medium
	Natural Recovery	Yes	High
Response priority	Protection of the inter-tidal platforms		
Preferred response Options	<p>The response options along this coast are limited due to the difficult access to most of the shoreline.</p> <p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. The bay is shallow, so this option will only be possible if the oil is a significant distance offshore.</p> <p>Booming is not possible due to the strong currents and wave action.</p> <p>In some of the more accessible areas shoreline pre-cleaning may be feasible to reduce the amounts of oily waste.</p> <p>Shoreline clean-up may be possible in some of the accessible areas.</p> <p>Due to the largely inaccessible nature of the coast to the public other than by boat the most effective response option may be natural recovery.</p>		
Wildlife Recovery	Wildlife can be stabilised on site then transported to the HBRC Depot in Wairoa for treatment (1hr)		

Safety		
Safety Considerations	<ul style="list-style-type: none"> • This is a very exposed and rocky coastline. There is often high wave energy and numerous slip / trip hazards present. • Most of the area within this site is very isolated with limited medical care in close proximity. 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessels for access via water • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities water station, Gazebo etc 	
Transportation	Personnel would need to be transported to the response sites via vehicles or water in small vessels.	
Waste Collection	Beach head storage will need to be established at sites using lined skip bins or trailers. Some waste may need to be taken from sites via boat. Collection and disposal can be arranged with local contractors. All oily waste will need to be transported to the Fernhill Landfill.	
Communications	<p>There is some mobile reception in the area and 3G coverage.</p> <p>VHF is available, although a repeater may be required to create a VHF link to some of the remote work sites. DoC has a good VHF network in the area.</p> <p>Fleetlink is available at the northern end of the site to provide a link to HBRC reception.</p> <p>Satellite communications would be effective in this area.</p>	
Accommodation and catering	<p>The Mahia Beach Motorcamp can accommodate 45 personnel in the motel and 68 in the cabins. There are also toilet, shower and cooking facilities.</p> <p>Catering would have to be brought in from Wairoa, or setup on-site. Catering supplies would need to be brought in from Wairoa.</p>	
Public Information		
Resources for PIM Activities	The Mahia Beach Fishing Club would provide a good location for PIM activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Wairoa District Council	Local Authority	06 838 7309

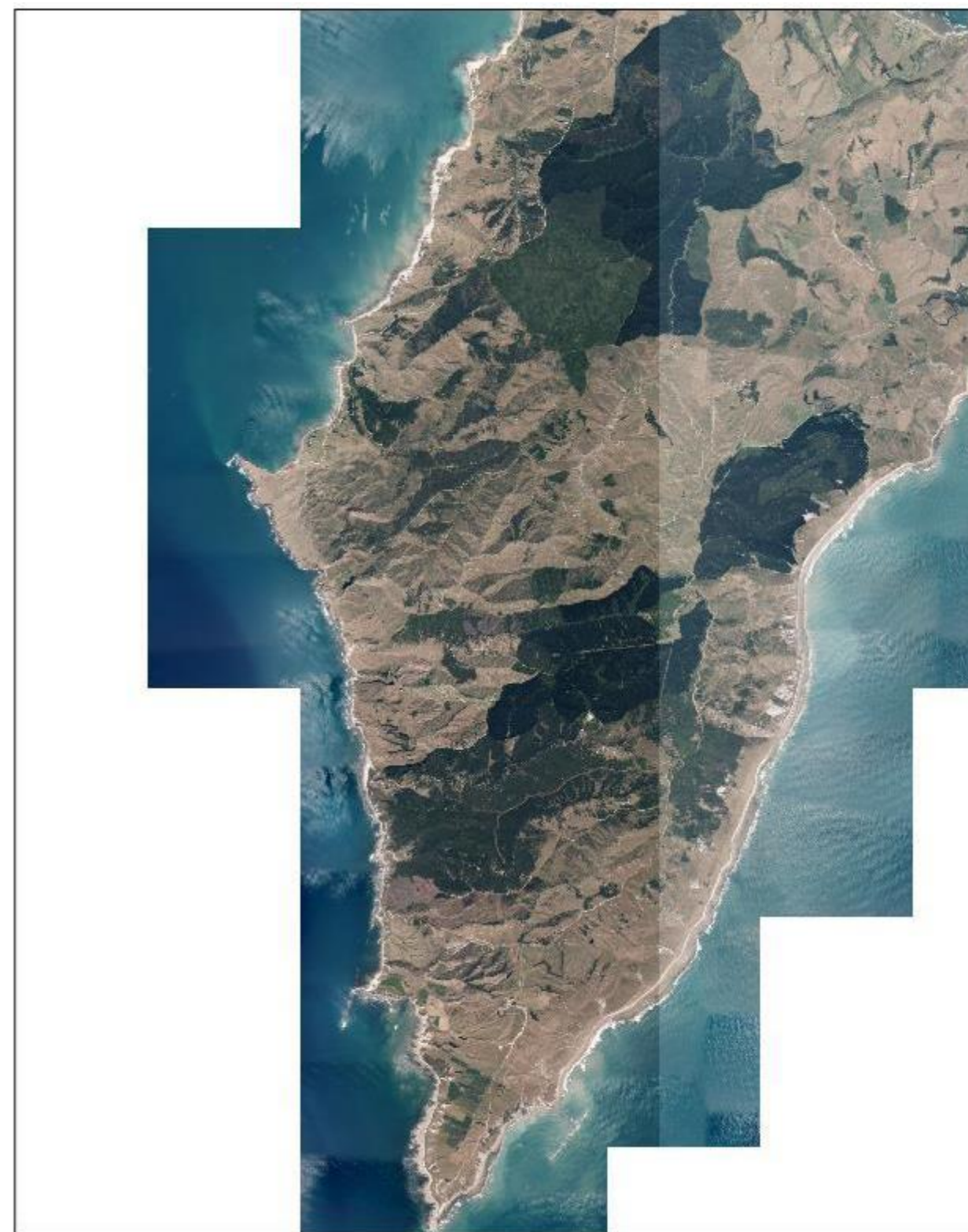
Mahia Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Mahia Beach Motorcamp	Mahia Beach Motorcamp	P: 06 837 5830 F: 06 837 5831 E: mahiabeach.motels@xtra.co.nz Address: Mahia Beach Motor Camp, 43 Moana Drive
Mahia Beach Fishing Club	Potential to use facility as ECC / Forward Operating Base and for PIM activities	(Boating club & Fire Service) P: 06 837 5031 (Boating club) P: 06 837 5920 or 06 837 5981

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:105,000 @ A3

DATA SOURCE: Coastal information derived from the Land Information New Zealand Core Record System (CRS) CROWN COPYRIGHT RESERVED
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Scale: 1:80,000 @ A3

Western Mahia Peninsula

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Site 20	Waikawa (Portland Island)	Risk Rating	Very High
Site Description	The most significant island on the Hawke's Bay Coast, Waikawa (Portland) Island is located at the southern end of the Mahia Peninsula. The site has significant ecological, fauna and flora and wildlife values, and is a significant coastal landscape feature.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ43		
Segments			
Site Access / Control measures	<ul style="list-style-type: none"> • The island is remote, access is by boat from Mahia or helicopter • The Island is privately owned, and DoC should be contacted to gain access. • Boat access to the island but it is limited to good weather. • Access to the Island is via boat from Mahia Beach (15 nm - estimated travel time 30-40 minutes at 25knots). • Boat landing on the island may be treacherous (particularly from seas from the east and west) due to the exposed nature of the coast, so helicopter access is preferred. • Operators need to be aware of rope and float hazards. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Rock 	<ul style="list-style-type: none"> • Gravel 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • N/A 		
Weather conditions	The island is subject to winds from all directions. In spring / summer the strongest winds come from the Northwest and in autumn / winter from the South.		
Sea Conditions	This is an area of very exposed high energy coastline and is exposed to large swells from the north, south and east.		
Tides and Currents	The tidal range is 1.1m. Currents generally run in a southerly direction along the shore before meeting the main current offshore that runs in a south west direction.		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	This area supports an important Rock Lobster fishery		
Tourism	This is an important area for regional tourism		
Recreation	There is a large amount of both shore based and boat-based diving, fishing in this area and a recreational rock lobster fishery		
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in		

	planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.		
Birds	The island supports a range of breeding bird colonies, some of which are nationally important. Breeding colonies of redbilled and blackbilled gulls, variable oystercatcher, blackwinged petrel, white fronted storm petrel, grey faced petrel, white fronted tern and the threatened NZ dotterel all nest on the island.		
Marine Life	The inter-tidal zone has mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra). The extensive subtidal reef systems offshore are known to support a diverse marine ecosystem but have not been studied in detail. Haul out site for seals are located at the south-western end of Waikawa Island.		
Flora	The coastal dune lands support populations of the threatened endemic sand binding plant pingao and sand tussock.		
Operations			
Response Matrix	Response option	Preferred Option?	Feasibility
	Containment and recovery	No	Low
	On-water recovery	No	Low
	Dispersant Application	Yes	
	Shoreline Protection	No	Low
	Shoreline pre-clean	Yes	High
	Shoreline Clean-up	Yes	High
	Natural Recovery	Yes	High
Response priority	Prevention of oil washing onto the island / Protection of wildlife		
Preferred response Options	<p>The response options on the island are limited due to the difficult access to the island and most of the shoreline.</p> <p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. The bay is shallow, so this option will only be possible if the oil is a significant distance offshore in deeper water.</p> <p>Booming is not possible due to the strong currents and wave action.</p> <p>In some of the more accessible areas shoreline pre-cleaning may be feasible to reduce the amounts of oily waste.</p> <p>Shoreline clean-up may be possible in some of the accessible areas including low pressure washing of rocky foreshores.</p> <p>Due to the largely inaccessible nature of the coast to the public other than by boat the most effective response option may be natural recovery.</p> <p>Protection of nesting birds may require capture and relocation.</p>		

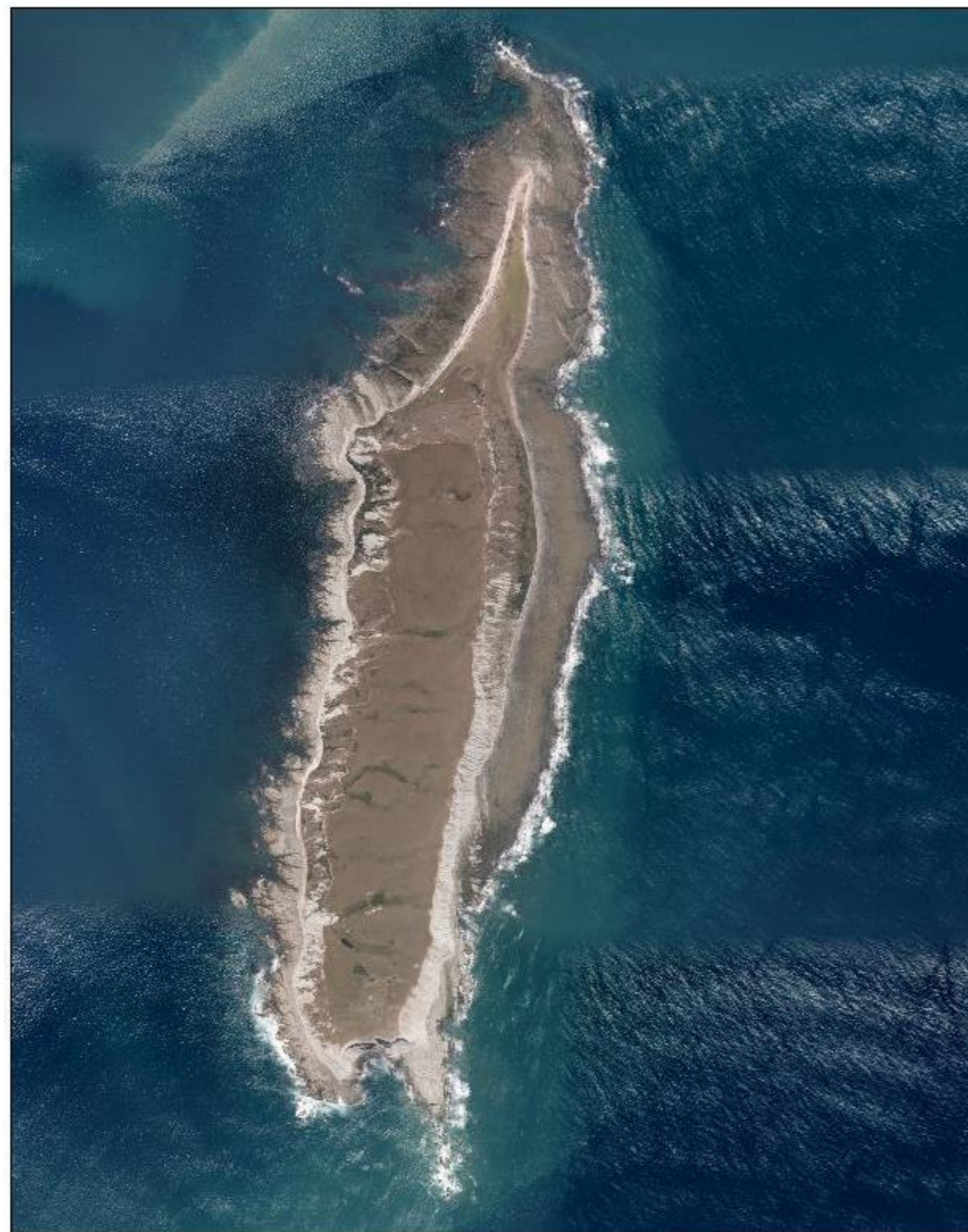
Wildlife Recovery	Wildlife can be stabilised on site then transported to the HBRC Depot in Wairoa for treatment. This may take several hours by boat / vehicle, so helicopter is the preferred method.	
Safety		
Safety Considerations	<ul style="list-style-type: none"> • This is a very exposed and rocky coastline. There is often high wave energy and numerous slip / trip hazards present. • This site is isolated from the mainland with limited medical care in close proximity. 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessels for access via water • Helicopter for access to the island • Beach clean-up equipment – Shovels, PPE, Bags etc • Decontamination equipment at beach access point • Welfare facilities water station, Gazebo etc 	
Transportation	Personnel would need to be transported to the response sites via helicopter or water in small vessels.	
Waste Collection	Waste will need to be bagged and taken from the site via boat or helicopter. Collection and disposal on the mainland can be arranged with local contractors. All oily waste will need to be transported to the Fernhill Landfill.	
Communications	<p>There is some mobile reception on the island based on coverage maps.</p> <p>VHF is available, although a repeater may be required to create a VHF link to the mainland. DoC has a good VHF network in the area.</p> <p>Satellite communications would be effective in this area.</p>	
Accommodation and catering	<p>The Mahia Beach Motorcamp can accommodate 45 personnel in the motel and 68 in the cabins. There are also toilet, shower and cooking facilities.</p> <p>Catering would have to be taken to the site due to the remote access.</p>	
Public Information		
Resources for PIM Activities	The Mahia Beach Fishing Club would provide a good location for PIM activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi		See Annex 10 for procedure
Wairoa District Council	Local Authority	06 838 7309
Mahia Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333

Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Department of Conservation	Site Access / Wildlife advice	See annex 3 - Communications
Mahia Beach Motorcamp	Mahia Beach Motorcamp	<p>P: 06 837 5830</p> <p>F: 06 837 5831</p> <p>E: mahiabeach.motels@xtra.co.nz</p> <p>Address: Mahia Beach Motor Camp, 43 Moana Drive</p>
Mahia Beach Fishing Club	Potential to use facility as ECC / Forward Operating Base and for PIM activities	<p>(Boating club & Fire Service)</p> <p>P: 06 837 5031</p> <p>(Boating club)</p> <p>P: 06 837 5920 or 06 837 5981</p>

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:80,000 @ A3



Scale: 1:15,000 @ A3

Portland Island

Date updated: 2/12/2020 14:03 AM. Title: SENSITIVE SITES AND COASTAL INFORMATION - Portland Island

Site 21	Ahuriri Point to Oraka (Eastern Mahia Peninsula)	Risk Rating	High
Site Description	<p>This site comprises the eastern most part of the Mahia Peninsula and contains significant ecological, fauna, flora and wildlife values, and is a coastal landform and landscape of international significance.</p> <p>Due to the length of this site the coast has been divided into three segments; Oraka to Whangawehi, Table Cape (Auroa Point to Taiporutu Stream) and Taiporutu Stream to Ahuriri Point.</p>		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ43, BH43		
Segments	<p>22a – Oraka Beach to Whangawehi Predominantly sandy shore with inter-tidal rock platforms)</p> <p>22b – Table Cape (Auroa Point to Taiporuru Stream) Predominantly intertidal rock platforms and rocky foreshore</p> <p>22c - Taiporutu Stream to Ahuriri Point Predominantly rocky shoreline with some inter-tidal platforms</p>		
Site Access / Control measures	<ul style="list-style-type: none"> Sites from Oraka Beach to Table Cape are accessible by vehicle and on foot from the road which runs along the coast. Table Cape is accessible by vehicle at low tide, or via a number of farm tracks. The shoreline south of Table Cape is accessible via Wainuiorangi Road and a number of farm tracks. Access at Ahuriri Point is limited due to the rocket launching site. Public access will be difficult to control between Oraka Beach and Whangawehi due to the multiple access points along the coast. Whangawehi Harbour is the closest boat launching facility, but is limited to mid to high tide usage. There are a number of small airstrips along the Mahia East coast Road. Wairoa Aerodrome is 45mins – 1hr from the site for larger aircraft. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> Sand Rock Platforms 	<ul style="list-style-type: none"> Gravel Boulders / Rocks 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> 22a Oraka Beach to Whangawehi - S32, S33, S34, S42, S43 	<ul style="list-style-type: none"> 22b Table Cape – S39, S40, S41 	
Weather conditions	<p>This site is largely protected from north westerly and south / south westerly winds, which tend to be the strongest. It is very exposed to winds from the north / north east and east / south east.</p>		
Sea Conditions	<p>This is an area of very exposed high energy coastline exposed to large swells from the north, east and south.</p>		

Tides and Currents	The tidal range is 1.1m. Currents generally run in a southerly direction along the shore before meeting the main current offshore that runs in a south west direction.			
Iwi	This area is part of the Ngāti Kahungunu Iwi. Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.			
At risk Resources				
Commercial	This area supports a Rock Lobster fishery			
Tourism	This is a popular tourism spot for holiday home owners and out-of-region travellers			
Recreation	There is a large amount of both shore based and boat-based diving, fishing in this area and a recreational rock lobster fishery.			
Cultural	Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.			
Birds				
Birds	The extensive intertidal rock platform supports a diverse population of coastal birds, including golden plover, variable oystercatcher, shags, turnstones and reef herons, the threatened Caspian tern and migratory bar-tailed godwit.			
Marine Life	Subtidal habitats have not been studied in detail but are reputed to support a diverse range of species typical of similar habitat types found elsewhere on the east coast of the Mahia Peninsula. The inter-tidal zone has mussels, paua, rock lobster and kina, pupus (catseyes), chitons limpets and Karengo (Porphyra).			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	No	Low
		On-water recovery	No	Low
		Dispersant Application	Yes	
		Shoreline Protection	No	Low
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	Yes	High
Response priority	Protection of the inter-tidal platforms is the priority			
Preferred Options	response	Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. The bay is shallow, so this option will only be possible if the oil is a significant distance offshore.		

	<p>Booming is not possible due to the strong currents and wave action.</p> <p>In some of the more accessible areas shoreline pre-cleaning may be feasible to reduce the amounts of oily waste.</p> <p>Shoreline clean-up may be possible in some of the accessible areas. This may include low pressure washing of the inter-tidal platforms.</p> <p>Due to the largely inaccessible nature of the coast to the public at the southern end of the site (Table Cape to Ahuriri Point) other than by boat the most effective response option may be natural recovery.</p>
Wildlife Recovery	Wildlife can be stabilised on site then transported to the HBRC Depot in Wairoa for treatment (1hr)
Safety	
Safety Considerations	<ul style="list-style-type: none"> • This is a very exposed and rocky coastline. There is often high wave energy and numerous slip / trip hazards present. Some areas are cut off at high tide or by large swells. • Most of the area within this site is very isolated with limited medical care in close proximity.
Logistics	
Equipment requirements	<ul style="list-style-type: none"> • Aircraft for dispersant application (Contact MNZ to arrange if approval given by NOSC) • Vessels for access via water • Beach clean-up equipment – Shovels, PPE, Bags etc • Beach Head storage – Lined skip bins / trailers • Decontamination equipment at beach access point • Welfare facilities water station, Gazebo etc
Transportation	Personnel would need to be transported to the response sites via vehicles or water in small vessels.
Waste Collection	Beach head storage will need to be established at sites using lined skip bins or trailers. Some waste may need to be taken from sites via boat. Collection and disposal can be arranged with local contractors. All oily waste will need to be transported to the Fernhill Landfill.
Communications	<p>There is some mobile reception in the area and 3G coverage.</p> <p>VHF is available, although a repeater may be required to create a VHF link to some of the remote work sites. DoC has a good VHF network in the area.</p> <p>Fleetlink is available at the northern end of the site to provide a link to HBRC reception.</p> <p>Satellite communications would be effective in this area.</p>
Accommodation and catering	The Mahia Beach Motorcamp can accommodate 45 personnel in the motel and 68 in the cabins. There are also toilet, shower and cooking facilities.

	Catering would have to be brought in from Wairoa, or setup on-site. Catering supplies would need to be brought in from Wairoa.	
Public Information		
Resources for PIM Activities	The Mahia Beach Fishing Club would provide a good location for PIM activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure
Wairoa District Council	Local Authority	06 838 7309
Mahia Community Resilience Team	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Mahia Beach Motorcamp	Mahia Beach Motorcamp	P: 06 837 5830 F: 06 837 5831 E: mahiabeach.motels@xtra.co.nz Address: Mahia Beach Motor Camp, 43 Moana Drive
Mahia Beach Fishing Club	Potential to use facility as ECC / Forward Operating Base and for PIM activities	(Boating club & Fire Service) P: 06 837 5031 (Boating club) P: 06 837 5920 or 06 837 5981

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:70,000 @ A3



Scale: 1:35,000 @ A3



Ahuriri Point to Oraka

Site 22	Maungawhio Lagoon	Risk Rating	Very High
Site Description	Maungawhio Lagoon is a Wildlife Management Reserve which has significant ecological, fauna, and flora values. The site is located on the western side of the Mahia tombolo, a nationally significant geological feature. Pukenui Beach comprises part of the sediment source for the tombolo and the intertidal beach is a feeding area for many of the estuary's wildlife species.		
Chart Number	NZ Topographic Map No.	Coastal Plan Map	
NZ 56	BJ43, BH43		
Segments	23a Maungawhio Lagoon, 23b Pukenui Beach		
Site Access / Control measures	<ul style="list-style-type: none"> • Access via public road from the south & along the beach from the north at Mahanga. • Whangawehi Harbour is the closest boat launching facility, but is limited to mid to high tide usage. • The Maungawhio Lagoon itself is very shallow and options may be restricted by depth of water for vessels/access, etc. • At Maungawhio Lagoon and Oraka there is a vehicle restriction by-law. • 4X4 Quad bikes could be utilised to access site to the south of Mahunga on Pukenui Beach. • There are a number of small airstrips along the Mahia East coast Road. Wairoa Aerodrome is 45mins – 1hr from the site for larger aircraft. 		
Intelligence			
Foreshore Types	<ul style="list-style-type: none"> • Sand • Rock 	<ul style="list-style-type: none"> • Inter-tidal platforms 	
Shoreline Survey sheet numbers	<ul style="list-style-type: none"> • N/A 		
Weather conditions	This area is exposed to winds from all directions. In spring / summer the strongest winds are from the northwest and in autumn / winter from the south and south west.		
Sea Conditions	This is an area of very exposed high energy coastline exposed to large swells from the north, east and south.		
Tides and Currents	The tidal range is 1.1m. Currents generally run in a southerly direction along the shore before meeting the main current offshore that runs in a south west direction.		
Iwi	<p>This area is part of the Ngāti Kahungunu Iwi.</p> <p>Early engagement with affected Iwi and Hapū through the Pouaraahi should be prioritised. Refer to Annex 10 for information regarding Māori engagement.</p>		
At risk Resources			
Commercial	There are no regionally significant commercial risks.		
Tourism	This is a popular summer tourism area and attracts high numbers of visitors from outside the region.		
Recreation	Pukenui Beach is a popular summer recreation beach.		

Cultural	<p>Pipi beds at Oraka Estuary are an important local source of kaimoana.</p> <p>Early engagement with affected Iwi and Hapū through the Te Pou Whakarae and Pouaraahi should be prioritised to ensure all cultural considerations are included in planning the response to any spill. Refer to Annex 10 for information regarding Māori engagement.</p>			
Birds	<p>The Maungawhio Lagoon is rated of national importance due to the quality of its estuarine habitat.</p> <p>It is also an important habitat for a range of international and NZ migratory waders, including bar-tailed godwit, Asiatic whimbrel, white heron, Royal spoonbill, as well as wetland species such as fernbird, spotless crane, banded rail and the endangered Australasian bittern.</p> <p>The intertidal zone of Pukenui Beach is a feeding area for small numbers of coastal birds, such as variable oystercatcher, banded dotterel and the threatened NZ dotterel.</p>			
Marine Life	<p>The site supports regionally important shellfish and whitebait fisheries.</p>			
Operations				
Response Matrix	Options	Response option	Preferred Option?	Feasibility
		Containment and recovery	Yes	High
		On-water recovery	Yes	Low
		Dispersant Application	No	
		Shoreline Protection	Yes	High
		Shoreline pre-clean	Yes	High
		Shoreline Clean-up	Yes	High
		Natural Recovery	No	Low
Response priority	<p>The protection of the Maungawhio Lagoon will take priority over the protection of the beaches at Pukenui and Oraka.</p>			
Preferred response Options	<p>Prevention of oil reaching the shore may be best achieved by the use of dispersants offshore. This must be done with the agreement of the NOSC and arranged through MNZ. The lagoon is shallow, so this option will only be possible if the oil is a significant distance offshore.</p> <p>Booming of the Maungawhio Lagoon entrance may be possible if the conditions permit. This may need to be placed further inside the lagoon to prevent impacts from rough seas. There is potential to collect oil at the road end in Oraka. A suggested boom setup is shown in the pictures on the next page.</p>			



Consideration should be given to bringing in booming equipment from Gisborne, as this may be quicker to deploy.

In some of the more accessible areas shoreline pre-cleaning may be feasible to reduce the amounts of oily waste.

Given the sandy substrate of the beach shoreline clean-up may be very effective along this site. Machinery may also be able to be used in some areas to support beach clean-up.

Wildlife Recovery

Wildlife can be stabilised on site then transported to the HBRC Depot in Wairoa for treatment (1hr)

Safety

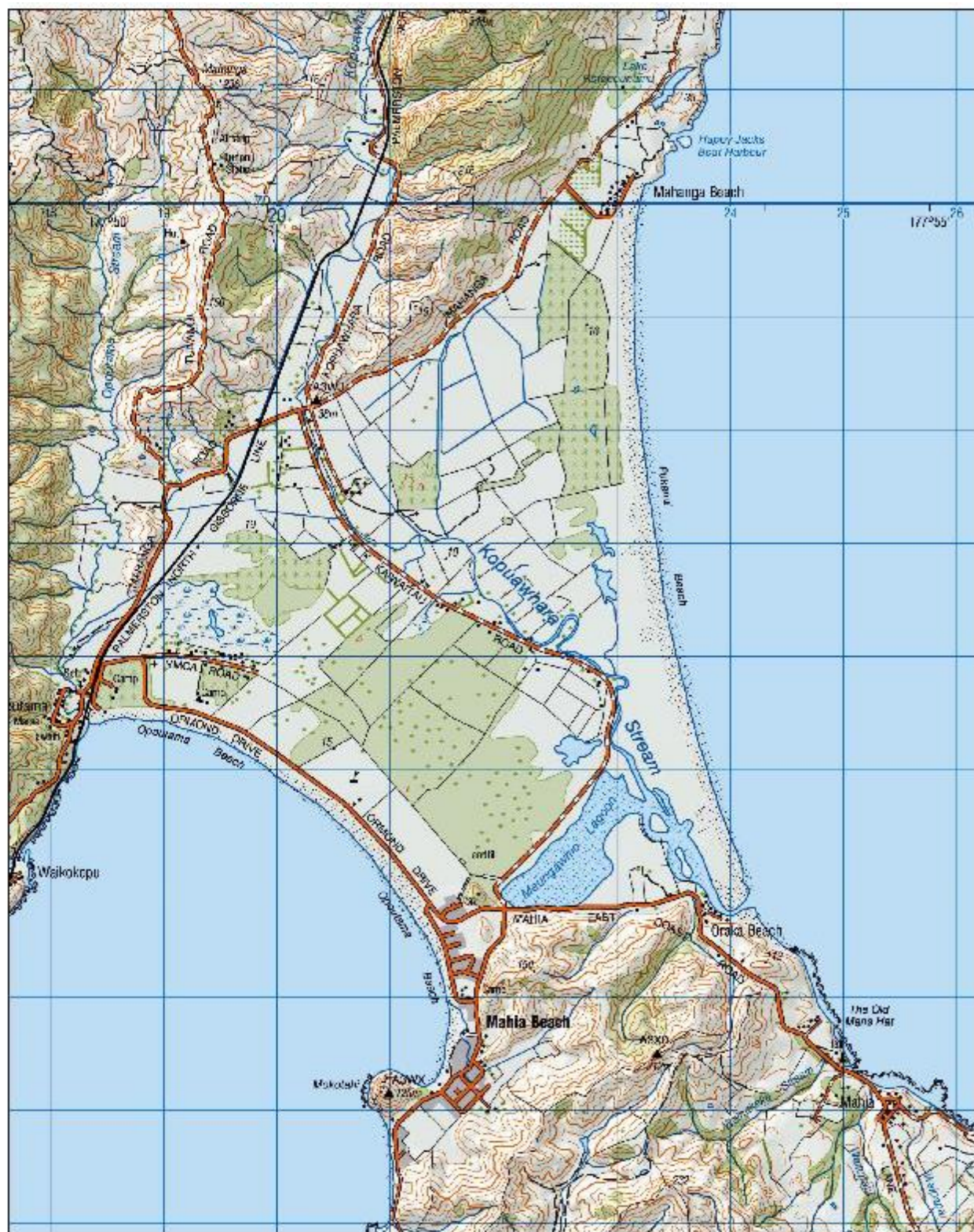
Safety Considerations

- This area can be subject to large swells and strong currents within the lagoon entrance.

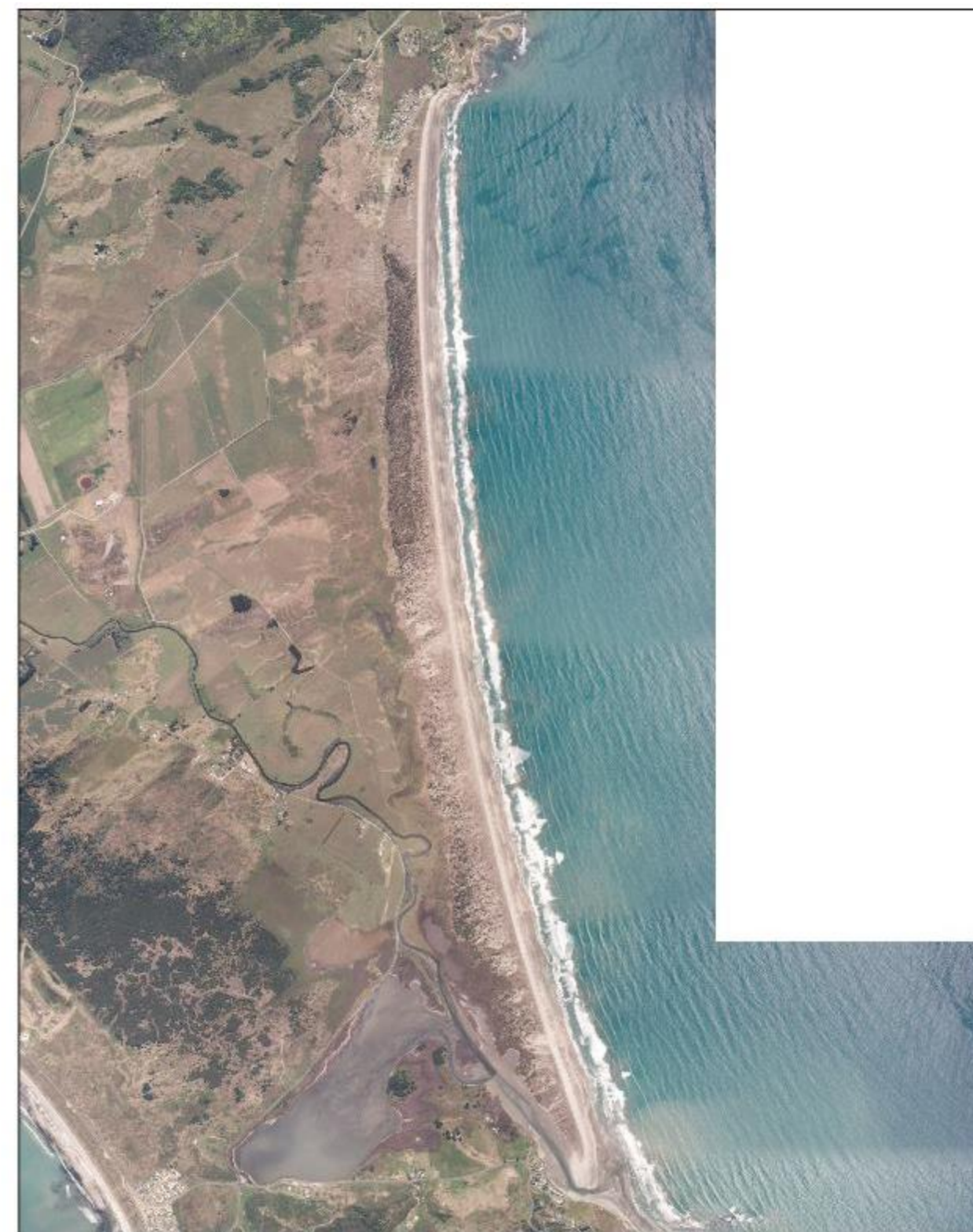
	<ul style="list-style-type: none"> The deployment of booms will require the use of shallow draft small boats. All precautions should be taken to ensure the safety of those onboard including life jackets. 	
Logistics		
Equipment requirements	<ul style="list-style-type: none"> Land / sea boom and Rapid deployment boom On-water recovery equipment (skimmers) Sorbent booms Frame tanks for oily water storage Sucker truck for collection of oily waste Vessels for boom deployment Beach clean-up equipment – Shovels, PPE, Bags etc Beach Head storage – Lined skip bins / trailers Decontamination equipment at beach access point Welfare facilities water station, Gazebo etc 	
Transportation	Personnel would need to be transported to the response sites via vehicles or 4x4 quad bikes.	
Waste Collection	Beach head storage will need to be established at sites along Pukenui beach using lined skip bins or trailers. Oil collected by booming the Maungawhio Lagoon entrance will need to be taken from sites via sucker truck. Collection and disposal can be arranged with local contractors. All oily waste will need to be transported to the Fernhill Landfill.	
Communications	<p>There is some mobile reception in the area and 3G coverage.</p> <p>VHF is available, although a repeater may be required to create a VHF link to some of the remote work sites. DoC has a good VHF network in the area.</p> <p>Fleetlink is available to provide a link to HBRC reception.</p> <p>Satellite communications would be effective in this area.</p>	
Accommodation and catering	<p>The Mahia Beach Motorcamp can accommodate 45 personnel in the motel and 68 in the cabins. There are also toilet, shower and cooking facilities.</p> <p>Catering would have to be brought in from Wairoa, or setup on-site. Catering supplies would need to be brought in from Wairoa.</p>	
Public Information		
Resources for PIM Activities	The Mahia Beach Fishing Club would provide a good location for PIM activities.	
Interested Parties for notification		
Name	Interest	Contact details
Ngāti Kahungunu Iwi	Iwi	See Annex 10 for procedure

Wairoa District Council	Local Authority	06 838 7309
Mahia / Mahunga Community Resilience Teams	Local community response	Via HB CDEM Group Duty Officer 0508 442 333
Fisheries NZ Napier Office	Fisheries Management	0800 008 333
Ministry of Primary Industries Napier Office	Fisheries management	06 835 1065
Coastguard Hawke's Bay	Maritime Radio	06 834 1345
Gisborne District Council	Personnel / Boom resources	06 867 2049

NB: For additional notification contacts see Annex 2, section 3.3



Scale: 1:45,000 @ A3



Scale: 1:30,000 @ A3

Pukenui Beach, Oraka, Maungawhio Lagoon

Date/Expiry: 1/12/2020 + 27 PM Name: Pukenui Oraka Maungawhio Title: M764/10/0 Emergency Management/21 Spill out

Table 1: Coastal bird species present in Hawke's Bay

Priority	Species Scientific Name	Species Common Name	IUCN category	Status Code	Breeds in Hawkes Bay	Breeding Season	Seasonal Distribution
1st	<i>Charadrius obscurus</i>	NZ Dotterel	EN	E	y	Aug-Feb	year round
1st	<i>Egretta alba modesta</i>	White Heron	Not listed	N	n	n/a	year round
1st	<i>Himantopus novaeseelandiae</i>	Black Stilt	CR	E	n	n/a	Sp
1st	<i>Thinornis novaeseelandiae</i>	Shore plover	EN	E	n	n/a	W, Sp, S
1st	<i>Anas superciliosa superciliosa</i>	Grey Duck	LC	N	y	Aug-Feb (Peaking Oct-Nov)	year round
1st	<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	N	n	n/a	year round
1st	<i>Puffinus huttoni</i>	Hutton's shearwater	EN	N	n	n/a	S, Sp
1st	<i>Sterna albostrata</i>	Black-fronted tern	EN	E	n	n/a	A, W, Sp
1st	<i>Anarhynchus frontalis</i>	Wrybill	VU	E	n	n/a	year round
1st	<i>Thalassarche salvini</i>	Salvin's mollymawk	VU	N	n	n/a	Sp
1st	<i>Egretta sacra</i>	Reef Heron	LC	N	y	Sep - Feb	year round
1st	<i>Sterna caspia</i>	Caspian Tern	LC	N	y	Sep - Feb	year round
1st	<i>Larus bulleri</i>	Black Billed Gull	EN	E	y	Sep - Feb	year round
1st	<i>Charadrius bicinctus</i>	Banded Dotterel	Not listed	E	y	Jul - Feb	year round
1st	<i>Eudyptula minor</i>	Little Blue Penguin	LC	N	y	Jul - Feb	year round
1st	<i>Larus novaehollandiae scopulinus</i>	Red Billed Gull	LC	E	y	All Year	year round
1st	<i>Puffinus carneipes</i>	Flesh-footed Shearwater	LC	N	n	n/a	S, Sp
1st	<i>Puffinus griseus</i>	Sooty Shearwater	NT	N	n	n/a	Sp, S
1st	<i>Sterna striata</i>	White Fronted Tern	LC	N	y	Aug-Feb	year round
1st	<i>Thalassarche bulleri</i>	Southern Buller's mollymawk	NT	E	n	n/a	S
1st	<i>Macronectes spp.</i>	Giant petrel	NT	N	n	n/a	year round
1st	<i>Polyocephalus rufopectus</i>	NZ Dabchick	VU	E	y	Sep - Mar	year round
1st	<i>Porzana tabuensis</i>	Spotless Crake	LC	N	n	n/a	A, W, Sp
1st	<i>Phalacrocorax sulcirostris</i>	Little Black Shag	LC	N	y	Nov - Mar	year round
1st	<i>Puffinus bulleri</i>	Buller's Shearwater	VU	E	n	n/a	Sp, S, A
1st	<i>Diomedea exulans</i>	Wandering albatross	VU	N	n	n/a	A, Sp
1st	<i>Diomedea melanophrys impavida</i>	NZ black browed mollymawk	EN	N	n	n/a	year round
1st	<i>Haematopus unicolor</i>	Variable Oystercatcher	LC	E	y	Sep - Mar	year round
1st	<i>Pterodroma macroptera gouldi</i>	Grey Faced Petrel	LC	E	y	Jun - Jan	Sp, S, A
1st	<i>Strictorcaro punctatus</i>	Spotted Shag	LC	E	n	n/a	year round
1st	<i>Sterna albifrons</i>	Eastern Little Tern	LC	M	n	n/a	Sp, S
1st	<i>Charadrius melanops</i>	Black Fronted Dotterel	LC	N	y	Sep - Mar	year round
1st	<i>Diomedea cauta steadi</i>	NZ white capped mollymawk	NT	N	n	n/a	Sp
1st	<i>Egretta garzetta</i>	Little Egret	LC	N	n	n/a	A, W
1st	<i>Himantopus himantopus leucocephalus</i>	Australasian Pied Stilt	LC	N	y	Jul-Jan	year round
1st	<i>Morus serrator</i>	Australasian Gannet	LC	N	y	Sep - Feb	year round
1st	<i>Pachyptila turtur</i>	Fairy Prion	LC	N	n	n/a	Sp
1st	<i>Pelagodroma marina</i>	NZ white-faced storm petrel	LC	N	y	Oct - Mar	S
1st	<i>Pelecanoides urinatrix</i>	Common Diving Petrel	LC	N	n	n/a	S
1st	<i>Platalea regia</i>	Royal Spoonbill	LC	N	n	n/a	year round
1st	<i>Tachybaptus novaehollandiae</i>	Australasian little grebe	LC	N	n	n/a	Sp
2nd	<i>Phalacrocorax carbo</i>	Black Shag	LC	N	y	All Year	year round
2nd	<i>Porzana pusilla affinis</i>	Marsh Crake	LC	N	n	n/a	W
2nd	<i>Anas rhynchotis variegata</i>	NZ shoveler	LC	E	y	Oct - Feb	year round
2nd	<i>Aythya novaeseelandiae</i>	NZ Scaup	LC	E	y	Oct - Apr	year round
2nd	<i>Haematopus ostralegus</i>	Pied Oystercatcher	LC	E	y	Oct-Mar	year round
2nd	<i>Phalacrocorax melanoleucos</i>	Little Shag	LC	E	y	Aug - Feb	year round
2nd	<i>Puffinus gavius</i>	Fluttering Shearwater	LC	E	n	n/a	year round
2nd	<i>Arenaria interpres</i>	Turnstone	LC	M	n	n/a	year round
2nd	<i>Bubulcus ibis</i>	Cattle Egret	LC	M	n	n/a	year round
2nd	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	LC	M	n	n/a	Sp, S
2nd	<i>Calidris canutus</i>	Lesser Knot (red knot)	LC	M	n	n/a	Sp, S
2nd	<i>Calidris ferruginea</i>	Curlew Sandpiper	LC	M	n	n/a	S
2nd	<i>Calidris ruficollis</i>	Red-necked Stint	LC	M	n	n/a	W, Sp, S
2nd	<i>Limosa lapponica</i>	Eastern Bar-tailed Godwit	LC	M	n	n/a	year round
2nd	<i>Numenius madagascariensis</i>	Eastern Curlew	LC	M	n	n/a	S

Priority	Species Scientific Name	Species Common Name	IUCN category	Status Code	Breeds in Hawkes Bay	Breeding Season	Seasonal Distribution
2nd	<i>Numenius phaeopus</i> spp.	Whimbrel - Asiatic, American	LC	M	n	n/a	year round
2nd	<i>Pluvialis fulva</i>	Pacific Golden Plover	LC	M	n	n/a	year round
2nd	<i>Stercorarius</i> spp.	Skua	LC	M	n	n/a	W, Sp, S
2nd	<i>Calidris melanotos</i>	Pectoral Sandpiper	LC	S	n	n/a	Sp, S
2nd	<i>Charadrius mongolus</i>	Mongolian Dotterel	LC	S	n	n/a	W
2nd	<i>Chlidonias leucopterus</i>	White winged black tern	LC	S	n	n/a	S, A
2nd	<i>Ardea novaehollandiae</i>	White Faced Heron	LC	N	y	Jun - Dec	year round
2nd	<i>Daption capense</i>	Cape pigeon	LC	N	n	n/a	W, Sp
2nd	<i>Phalacrocorax varius</i>	Pied Shag	LC	N	n	n/a	year round
3rd	<i>Tadorna variegata</i>	Paradise Shelduck	LC	E	y	Aug-Jan	year round
3rd	<i>Anas gracilis</i>	Grey Teal	LC	N	y	Sept-Jan	year round
3rd	<i>Fulica atra australis</i>	Australian Coot	Not listed	N	y	Aug - Mar	year round
3rd	<i>Cygnus olor</i>	Mute swan	LC	I	y	Sep - Jan	year round
4th	<i>Larus dominicanus dominicanus</i>	Southern Black-backed Gull	LC	N	y	All Year	year round
4th	<i>Porphyrio porphyria</i>	Pukeko	LC	N	y	variable	year round
4th	<i>Vanelus miles novaehollandiae</i>	Spur Winged Plover	LC	N	y	June-Jan	year round
4th	<i>Anas platyrhynchos</i>	Mallard	LC	I	y	Aug-Feb	year round
4th	<i>Anser anser</i>	Feral Goose	LC	I	y	Sep - Jan	year round
4th	<i>Branta Canadensis</i>	Canada Goose	LC	I	y	Sep - Jan	year round
4th	<i>Cairina moschata</i>	Muscovy Duck	LC	I	n	n/a	W
4th	<i>Cygnus atratus</i>	Black Swan	LC	I	y	variable	year round

Key
Status Code:

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

Seasons

Sp	Spring
S	Summer
A	Autumn
W	Winter

IUCN Classification scheme (<http://www.iucnredlist.org>)

CR	Critically Endangered	NT	Near Threatened
EN	Endangered	LC	Least Concern
VU	Vulnerable		