

OIL SPILL PLAN

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4.1 Purpose and policy

The purpose of this document is to describe in detail the systems for a planned response in case of an emergency that relates to spillage of oils and hydrocarbons from the site/operation of the seafarms: Otanerau Bay, Ruakaka Bay, Waihinu Bay, Forsyth Bay, Crail Bay, Waitata, Richmond, Te Pangu Bay, Clay Point, and Ngamahau, that is liable to pollute the marine environment.

The sea farm sites are subject to the provisions of the Maritime Transport Act 1994 and Marine Protection Rule 130B and 132 for the Site Marine Oil Spill Contingency Plans. NZKS is therefore obliged to have in place a site plan for each farm for response to any spill which occurs on or from these sites, to the extent that the spilled material can be immediately and effectively contained within a defined boundary.

By definition, a Tier 1 response and the scope of this plan centres on spills that occur and are within the ability of NZKS to respond to. As an example, a small spill that occurs and drifts some distance from the source does not necessarily become a Tier 2 response if staff on site can effectively deal with such a spill. For example, in the case of a diesel spill - running a boat through the slick may assist in natural dispersion and evaporation. Defining boundaries is therefore not appropriate for the purposes of this plan.

To meet its responsibilities NZKS has prepared this site procedure Oil Spill Plan.

4.2 Title

This document may be cited as The New Zealand King Salmon Co. Limited - Seafarm Oil Spill Plan.

4.3 Safety

The safety of people overrides all other considerations

In the event of a spillage of flammable or explosive hydrocarbons, all sources of ignition must be shut down and the area assessed for likely flammable vapours before deploying any machinery in the area. It is dangerous to rely on the sense of smell to identify flammable vapours and is not indicative of flammable/explosive mixtures. Adequate ventilation to disperse the vapour is necessary where the spill has occurred in a confined area. A full understanding of the characteristics of flammable vapours potentially occurring on the site is necessary. Operations in conditions, which endanger personnel, must be suspended until conditions improve. No clean up of any spill or area is to commence until it has been determined safe to do so.

"Safe to do so" means each person must make a judgement based on his/her training and experience in coping with the situation faced.

Personnel involved in a clean up must be appropriately trained and issued with the appropriate protective clothing and safety equipment – relevant safety equipment is specified in the Safety Data Sheets, stored on sites.

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Employees are to protect themselves at any spill site and be aware of the dangers posed by the spill. Care is to be taken not to inhale toxic fumes (wear facemasks) and handle materials in a manner so as not to endanger oneself or other personnel (use overalls, gloves, eye goggles or other protection).

4.4 Responsibilities

The following positions within NZKS have the responsibilities for putting the Seafarm Oil Spill Plan into action as and when required, as noted.

All personnel have a duty to respond initially to a spill by raising the alarm, warning other personnel on site, and standing by in a safe location until instructed to take part in the clean-up exercise if needed.

Company members involved in the response structure:

Queen Charlotte Farms Regional Manager	Salvador Delgado	029 733 1842
Pelorus Sounds Farms Regional Manager	Damian Cotton	029 232 8953
Tory Channel Farms Regional Manager	Charlie Park	029 284 4373
Chief Operating Officer	Ruben Alvarez	021 556 566
Seawater Manager	Grant Lovell	021 246 0858
Seawater Operations Manager	Baz Henare	029 223 3671
Fish Health & Technical Strategy Manager	Mark Preece	029 248 9440

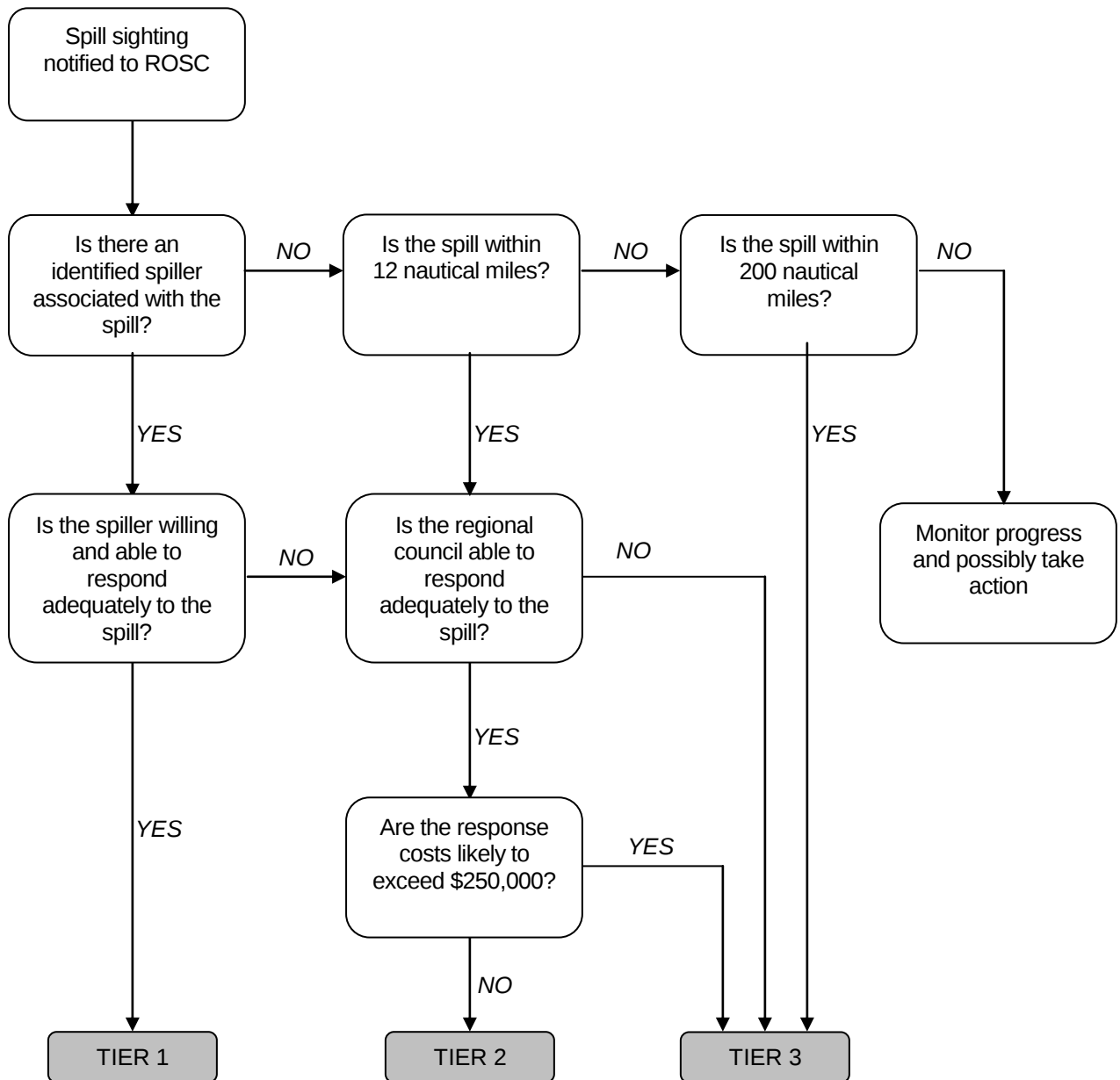
Marlborough District Council Regional On Scene Commander (ROSC) on (03) 520 7400 (24 hours).

The Seawater Manager is responsible (if the relevant Farm Regional Managers cannot be contacted any available/contactable manager may take on his/her responsibilities) for all activities on each farm site or in his/her absence one of the Supervisors. In the event of a spill that endangers human health the Seawater Manager will ensure the necessary accident / incident forms are completed (refer to H&S manuals).

Please refer to **Spill Response Organisation** for details of responsibilities.

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Tier 1 / Tier 2 / Tier 3 Marine Oil Spill Response Interface



This flowchart outlines basic operation criteria for determining incident response responsibility. Other criteria related to the capacity of a lower tier to adequately conduct the response to the incident may also apply.

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4.5 Description of the Company's sites

Otanerau Bay

Otanerau Seafarm Licence (Marine Farm Licence No. 8396). The total licence area is 10.8ha with a maximum area of 2ha for surface structures. The site currently consists of square pens and feed / accommodation barges all moored to the seafloor using screw anchors or concrete blocks. Refer to SPM/11.3 Otanerau pen layout. Transfer and storage of diesel oils occurs at the barge sites.

Access points to the Otanerau Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Otanerau Salmon Farm are wind driven (predominantly SE, N and NW) with a slight tidal flushing effect (N and S).

Ruakaka Bay

Ruakaka Seafarm Licence (Marine Farm Licence No. 8274). The total licence area is 11.3ha with a maximum area of 2ha for surface structures. The site currently consists of square pens and feed/accommodation barges all moored to the seafloor using screw anchors or concrete blocks. Please refer to SPM/11.3 Ruakaka pen layout. Transfer and storage of diesel oils occurs at the barge sites. Drainage from the barges ultimately ends in the surrounding seawater.

Access points to the Ruakaka Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Ruakaka Salmon Farm are wind driven (predominantly SE and NW) with a slight tidal flushing effect (NW and SE).

Te Pangu Bay

Te Pangu Seafarm Licence (Marine Farm Licence No. 8408). The total licence area is 13.75ha with a maximum area of 1.5ha for surface structures. The site currently consists of square pens and feed / accommodation barges all moored to the seafloor using screw anchors. Please refer to SPM/11.4 Te Pangu pen layout. Transfer and storage of diesel oils occurs at the barge sites. Drainage from the barges ultimately ends in the surrounding seawater.

Access points to the Te Pangu Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Te Pangu Salmon Farm are tidal driven (running E or W).

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Clay Point

Clay Point Seafarm Licence (Marine Farm Licence No. 8407). The total licence area is 19.66ha with a maximum area of 2ha for surface structures. The site currently consists of square pens and feed/accommodation barges all moored to the seafloor using screw anchors. Please refer to SPM/11.4 Clay Point pen layout. Transfer and storage of diesel oils occurs at the barge sites. Drainage from the barges ultimately ends in the surrounding seawater.

Access points to the Clay Point Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Clay Point Salmon Farm are tidal driven (running E or W).

Waihinu Bay

Waihinu Bay Seafarm Licence (Marine Farm Licence No. 8085). The total licence area is 8ha with a maximum area of 2ha for surface structures. The site currently consists of square pens and feed/accommodation barges all moored to the seafloor using screw anchors. Please refer to SPM/11.3 Waihinu Bay pen layout. Transfer and storage of diesel oils occurs at the barge sites. Drainage from the barges ultimately ends in the surrounding seawater.

Access points to the Waihinu Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Waihinu Salmon Farm are wind driven (predominantly SE and N) with a slight tidal flushing effect (NE and SW).

Forsyth Bay

Forsyth Bay Seafarm Licence (Marine Farm Licence No. 8110). The total licence area is 6ha with a maximum area of 2ha for surface structures. The site consists of square pens and feed/accommodation barges all moored to the seafloor using screw anchors. Please refer to SPM/11.3 Forsyth Bay pen layout. Transfer and storage of diesel oils occurs at the barge sites. Drainage from the barges ultimately ends in the surrounding seawater.

Access points to the Forsyth Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Forsyth Salmon Farm are wind driven (predominantly SE and N) with a slight tidal flushing effect (NE and SW).

Crail Bay

Crail Bay Seafarm Licence (Marine Farm Licence No. 32 & 48). The total licence area is 5ha with a maximum area of 2ha for surface structures. The site currently followed.

Access points to the Crail Bay Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Crail Salmon Farm are wind driven (predominantly SE and N) with a slight tidal flushing effect (NE and SW).

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Waitata

Waitata Seafarm Licence (Marine Farm Licence No 8632). – Operational in late 2015 – The total licence area is 16.5ha with a maximum area of 1.5ha for surface structures. Waitata consists of square wavemaster style pens and a feed/accommodation barge that all moored to the seafloor using screw anchors. Please refer to [SPM/11.4](#) Waitata pen layout. Transfer and storage of diesel oils occurs at the barge sites.

Access points to the Waitata Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Waitata Salmon Farm are created by tidal flushing effect (NE and SW).

Ngamahau

Ngamahau Seafarm Licence (Marine Farm Licence No 8634) – Operational in late 2015 – The total licence area is 16.5ha with a maximum area of 1.5ha for surface structures. Ngamahau consists of square pens and a feed/accommodation barge that all moored to the seafloor using screw anchors. Please refer to SPM/11.4 Ngamahau pen layout. Transfer and storage of diesel oils occurs at the barge sites.

Access points to the Ngamahau Salmon Farm are limited to helicopter and boat.

The main currents at the water surface at the Ngamahau Salmon Farm are created by tidal flushing effect (E and W).

Richmond

Richmond Seafarm Licence (Marine Farm Licence No 8633) – details will be updated when confirmed.

4.6 Sensitive environments

Adjacent to all eight salmon farm sites, the shoreline is characteristic of a significant amount of the shoreline of the Marlborough Sounds. It is recognised that the marine environment is sensitive to pollution and all adjacent shorelines and outlying islands should however be made as safe as possible by good management of any spill. The business of the company is farming salmon; the salmon are potentially at the most immediate and highest risk from a spill, especially if it is within the confines of the pens.

4.6.1 King Shag – Buffer Area

There is potential for King Shags to be disturbed from roosting areas. This has been addressed for the Waitata and Richmond salmon farms by requiring the establishment of a buffer zone around Boat Rock Point where King Shags may sometimes be seen. **See section 4.28**

In accordance with requirements of the consent condition 10 below, the consent holder will not operate any vessel associated with the marine farm within 100m of Boat Rock Point **Error! Reference source not found.** unless in the case of emergency work arising from the need to protect life or limb or prevent loss or serious damage to property or minimise or prevent environmental damage.

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4.7 Characteristics of oils and hydrocarbons stored or used on site

- **Diesel:** Liquid phase, less dense than seawater, significant amounts can evaporate naturally from the sea surface. Avoid contact with skin.
- **Petrol:** Liquid and gas phase, less dense than seawater, quickly evaporates into atmosphere. Avoid inhaling petrol fumes, as these are intoxicating. Avoid contact with skin.
- **Engine oil:** Liquid phase, less dense than seawater, very little evaporation into atmosphere.
- **LPG:** Gas phase, denser than air. Avoid inhaling, as LPG can be intoxicating. LPG falls outside the scope of this plan but for emergency reference purposes is retained within this document.

4.8 Potential spill sources and risks

- The initial potential source of spillage of hydrocarbons (diesel) is during the transfer from the supplier (Johnsons Barge Services or OPBL Barge Services) to the receiver (NZKS) at a rate of 100 litres per minute. Fuel is transferred by pump from storage tanks contained within the supply barge. Fuel transfer is visually monitored and any spillage will be picked up immediately. Spillage's here are likely to be less than 10 litres given the flow rate and monitoring. It is possible that any spillage will run off the barge deck into the sea. This is to be prevented through staff training and an increased awareness of the risk factors. Small spills will be cleaned up off the deck with suitable sorbent material from the oil spill kit detailed in 4.17.
- Small spillages may occur when transferring hydrocarbons (both diesel and petrol) from their respective double skinned storage containers within the confines of the barge to smaller containers for use in machinery around the site. These spills are unlikely to be of any significant volume (< 0.5 litres) and can be cleaned up with a suitable sorbent material from the oil spill kit detailed in 4.17.
- Leakages from any of the fuel tanks on company machinery will be a maximum of 5 litres for petrol and 20 litres for diesel. This is the maximum size of any of the company's fuel tanks. A leakage here is likely to be small and will probably be seen before the whole container empties. Much of the company's smaller machinery such as waterblasters are transportable although the bulk of the storage is within the hull confines of the barge and supplies fuel to machinery within the barge confines also. Drip trays are not practical for transportable equipment and the barge hull will confine spillage should it eventuate from within that source.
- Although not specifically covered under this plan it is worthwhile noting that faulty regulators and gas lines on LPG bottles pose a risk of leakage. Any leakage can be detected by smell and will probably be small enough so as not to cause a fire hazard. Most of the lengths of gas lines are situated externally so any escaping gas will quickly be diluted.

4.9 Preventative measures in place

- **Diesel:** Second skins on all storage containers. If the primary container bursts the secondary containment structure has sufficient volume to hold any spillage from the primary container.
- **Petrol:** Drums in use to have drip trays fitted. Full drums not in use are stored in Picton until required.

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- During the transfer of hydrocarbons a person is to be stationed beside the fuel delivery inlet of the receiving tank or beside the transfer pump on the delivery vessel. In this way if any spillage is detected, transferring of fuel can be shut off.
- Although not specifically covered under this plan it is worthwhile noting: All LPG containers placed outside in well-ventilated areas. Any leakage will quickly dissipate into the atmosphere in harmless concentrations. All LPG regulators are replaced on an annual basis. Gas lines are also checked for any visual impairment during monthly farm hazard audits.
- Engine oil: Only small amounts of engine oil are to be stored (less than 60 litres) often in many small containers thus limiting the possibility of a large oil spill. All containers to be contained within a larger container catching any spillage.
- Drip trays are provided in areas where hydrocarbons are drawn from their respective storage containers. In this way small leakages are contained.

4.10 Training

Queen Charlotte Sound - Staff structure as at July 2015

Otanerau Bay & Ruakaka Bay

Regional Manager

Aqua Supervisor x 2 per shift

Aqua Technician x 4 per shift

Tory Channel - Staff structure as at July 2015

Te Pangu & Clay Point

Regional Manager

Aqua Supervisor x 2 per shift

Aqua Technician x 4 per shift

Ngamahau

Regional Manager

Aqua Technician x 2 per shift

Pelorus - Staff structure as at July 2015

Waihinu Bay

Regional Manager

Aqua Technician x 2 per shift

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Pelorus - Staff structure as at July 2015

Forsyth Bay

Regional Manager

Aqua Technician x 2 per shift

Waitata

Regional Manager

Aqua Technician x 2 per shift

Richmond - Will be advised in due course.

Crail Bay – Fallowed

Staff required to clean up a spill will be on site 24hrs each day, except in the case of Ruakaka. Training is to be renewed every 2 years. Courses will include:

- Clean up of spills,
- Handling chemicals (Course Facilitator: FETs).

Each Farms Regional Manager is responsible for staff training.

Not all staff are on site at any one time, generally there are 2-6 plus the Farms Regional Manager the site is operated. In the absence of the Farms Regional Manager, a supervisor is responsible for the daily activities on the farm site.

4.11 Spill response organisation

In the event of an oil spill contact:

- Any staff member discovering a spill that cannot be safely and satisfactorily cleaned up by that person discovering the spill should:
- Inform their Supervisor and in his/her absence the senior farm worker.
- The Supervisor will assess the situation and contact the Farms Regional Manager. If unable to contact the Farms Regional Manager then the Seawater Manager, if still unable to make contact then Fish Health & Technical Strategy Manager.
- The Farms Regional Manager will contact the Seawater Manager or in his absence the Fish Health & Technical Strategy Manager. One of the above managers will contact NZKSC insurance agent.
- The Farms Regional Manager or deputy will be responsible for contacting the Marlborough District Council Regional On Scene Commander (ROSC) - on (03) 520 7400 (24 hours).

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4.12 Spill classification

ALL SPILLS, NO MATTER HOW SMALL, ARE TO BE IMMEDIATELY REPORTED TO THE MARLBOROUGH DISTRICT COUNCIL REGIONAL ON SCENE COMMANDER (ROSC)

The person who discovers the spill will assess if the situation is safe.

Briefly and if it is safe to do so:

- Raise the alarm
- Telephone as in 4.4 the Spill Response Organisation.

The Farms Regional Manager or his/her deputy will report the incident to the Marlborough District council ROSC by telephoning initial notification and then filling out the Initial Notification of Marine Oil Spill to Marlborough District Council form.

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INITIAL NOTIFICATION OF MARINE OIL SPILL			
TO MARLBOROUGH DISTRICT COUNCIL			
Please fill in as much information as possible. Do not delay initial notification in order to complete all sections. Updates can be emailed to MDC later. If you are in the process of obtaining information, please indicate this on the form			
Telephone initial notification to:	Regional On Scene Commander	Tel: (03) 520 7400	
Immediately follow your telephone notification with the scanned copy to the Regional On Scene Commander		mdc@marlborough.govt.nz Alex.VanWijngaarden@marlborough.govt.nz	
The Regional On Scene Commander may notify a number of emergency response personnel within the Marlborough District Council, who may establish a link with the person controlling the clean-up operation			
<u>OIL SPILL NOTIFICATION CHECK LIST</u>			
Name of the person responsible for cleaning up this spill:			
Date	Time		of making this report
Date	Time		of detection of spill
Organisation			
Name of person making this report if different from above			Contact phone no.
Contact email			
Size of response initially	<i>Tier 1</i>		
	<i>Tier 2 (possibly regional)</i>		
Situation Report - give details of spill location, apparent source and cause, any action taken			
Is this a minor spill?		YES/NO	
If ' YES ' stop and email notification to the Regional On Scene Commander – MDC Harbour Master If ' NO ' please indicate what immediate assistance is required.			

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4.13 Category of spills

All spills will be evaluated as soon as possible by the spiller and Tier 1 spill will be categorised in the following manner:

- Type A** A spill which can be contained before it reaches the water and can be cleaned up by the company or its contractors, within the scope of this plan.
- Type B** A spill which reaches water, but can still be contained and cleaned up, by the company or its contractors, within the scope of this plan.

Regional response

A spill which cannot be contained and reaches the water, or threatens to do so, and cannot be cleaned up by NZKS and its contractors.

The response to this type of incident falls outside the scope of this plan. The Marlborough District Council ROSC needs to be requested to escalate this to a Tier 2 response.

Note: *until the regional response can be mounted, Tier 1 response staff will continue the response as may be directed by the ROSC and until the regional response team arrives on site. Site responders will be incorporated within the regional team.*

4.14 Procedure following spill evaluation

In the event of a Type A or Type B spill, the spiller may then or subsequently request the ROSC to escalate the incident to a Tier 2 level.

The ROSC can escalate the response at any time.

4.15 Procedures for responding to a spill

Once a spill has been categorised Type A or Type B, the following procedure should be carried out:

1. Be aware of safety, your own and that of others, at all times. If appropriate, evacuate the area and follow Company procedures in calling for assistance.
2. Take any safe steps to prevent further discharge from occurring.
3. Commence containment and clean up procedures using equipment on site.
4. Keep ROSC advised of developments throughout the process.
5. Clean-up operations should be taken in such a manner as to limit environmental damage. This will normally be mopping up product. Sorbent materials may be used to clean up traces or to clean up minor spills. The use of dispersants is not approved under this plan
6. Clean-up should be completed so that the affected area is returned to as near as possible to its natural state prior to the spillage.

The Marlborough District Council may attend the event, monitor the cleanup and ensure the environment is protected as much as possible.

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4.16 Procedures for a spill requiring a regional response

The ROSC can take control of the response if he/she considers that the spill is beyond the capability of the Tier 1 response team or if the response, in his/her opinion is being inadequately managed.

If the spiller considers that the clean up operation is beyond the control of the site response system, they may ask the Marlborough District Council to escalate the incident to a regional (Tier 2) response.

Note: ROSC may classify any spill as requiring a regional response, and take control of the clean up.)

Once the spill has been categorised as requiring regional response, NZKS will continue to assist with the clean up operation under direction of the ROSC.

The ROSC will supervise the clean up operation using all personnel and equipment at his/her disposal.

4.17 Equipment on site

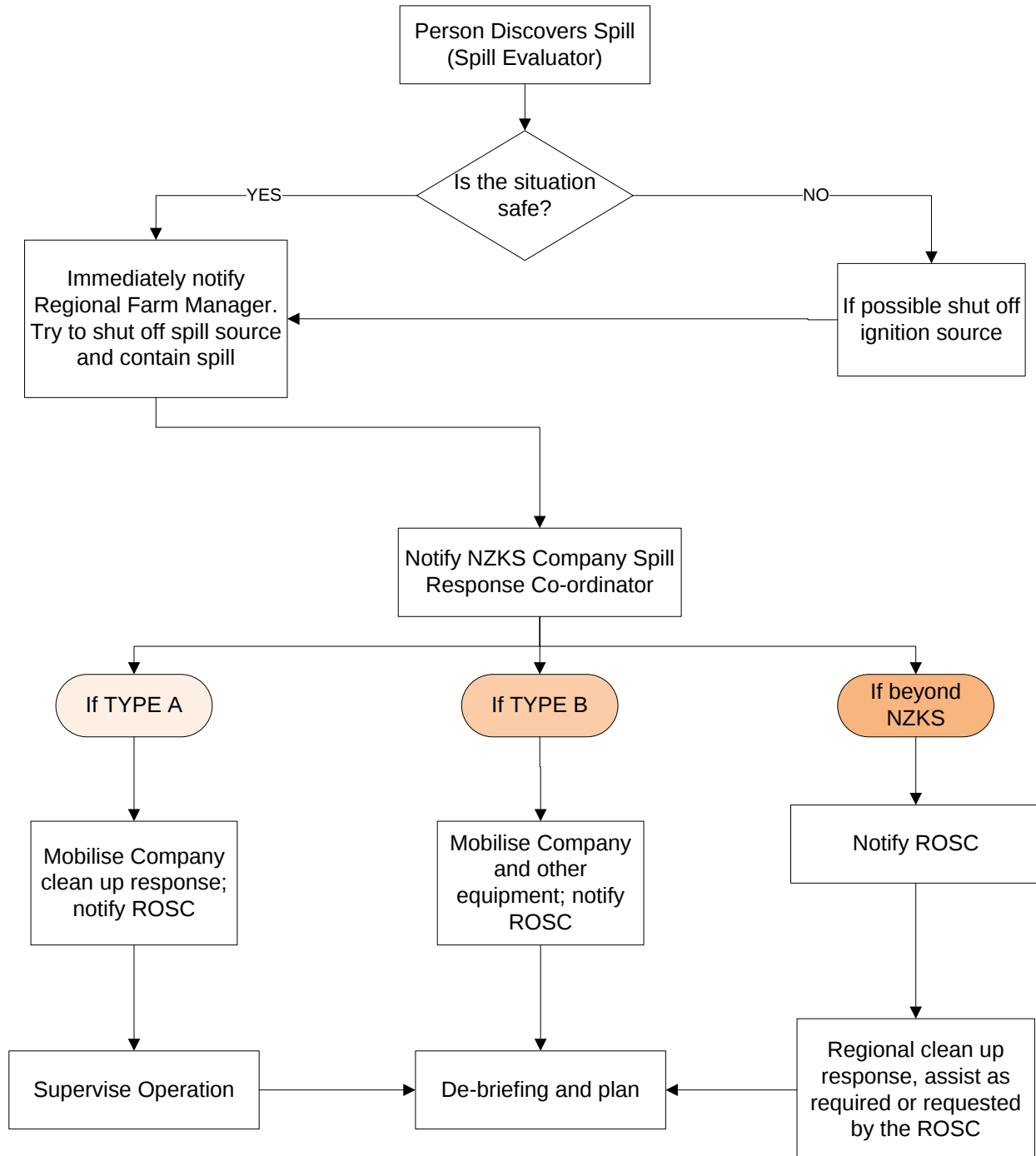
NZKSC has on site, waterblasters that could be used to assist cleaning. NZKSC also carry a spill kit capable of cleaning spills up to 80 litres (spill kit contents below) – these are located in the feed storage barges. A surface oil skimmer is stored in Picton and maybe available within several hours – please call the Seawater Operations Manager. Care should be taken not to mix spills through the water column so as to reduce risk to fish health.

Spill Kit contents (150lt Marine Spill Kit):

- 1 x 240 litre wheelie Bin (with signage)
- 2 x 3.0 metre long x 12.5cm Floating Marine Boom
- 30 Oil Only Double Weight Absorbent Pads
- 8 Large Oil Only double Weight Pads
- 4 Large Oil Only Absorbent Pillows
- 8 Waste Disposal Bags and Ties
- 2 Pairs of Nitrile Gloves
- 2 Pairs Disposable Goggles
- 1 Instruction sheet
- 1 Reorder form

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4.18 Oil spill response plan



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4.19 Media releases

It is company policy that all contact with the media is through the CEO or GM Marketing of NZKS.

4.20 Debriefing

In the unlikely event of a spill having occurred, there will be as soon as practically possible after the completion of clean up, a debriefing session involving all participants. Findings from this debriefing session will be distributed to the other seafarm sites and changes to this Spill Plan initiated where necessary. A copy of this report must be sent to the ROSC.

4.21 Plan review

This plan will be reviewed and updated at least yearly. Any event will be de-briefed so learning's may be added to this policy.

4.22 Other agencies

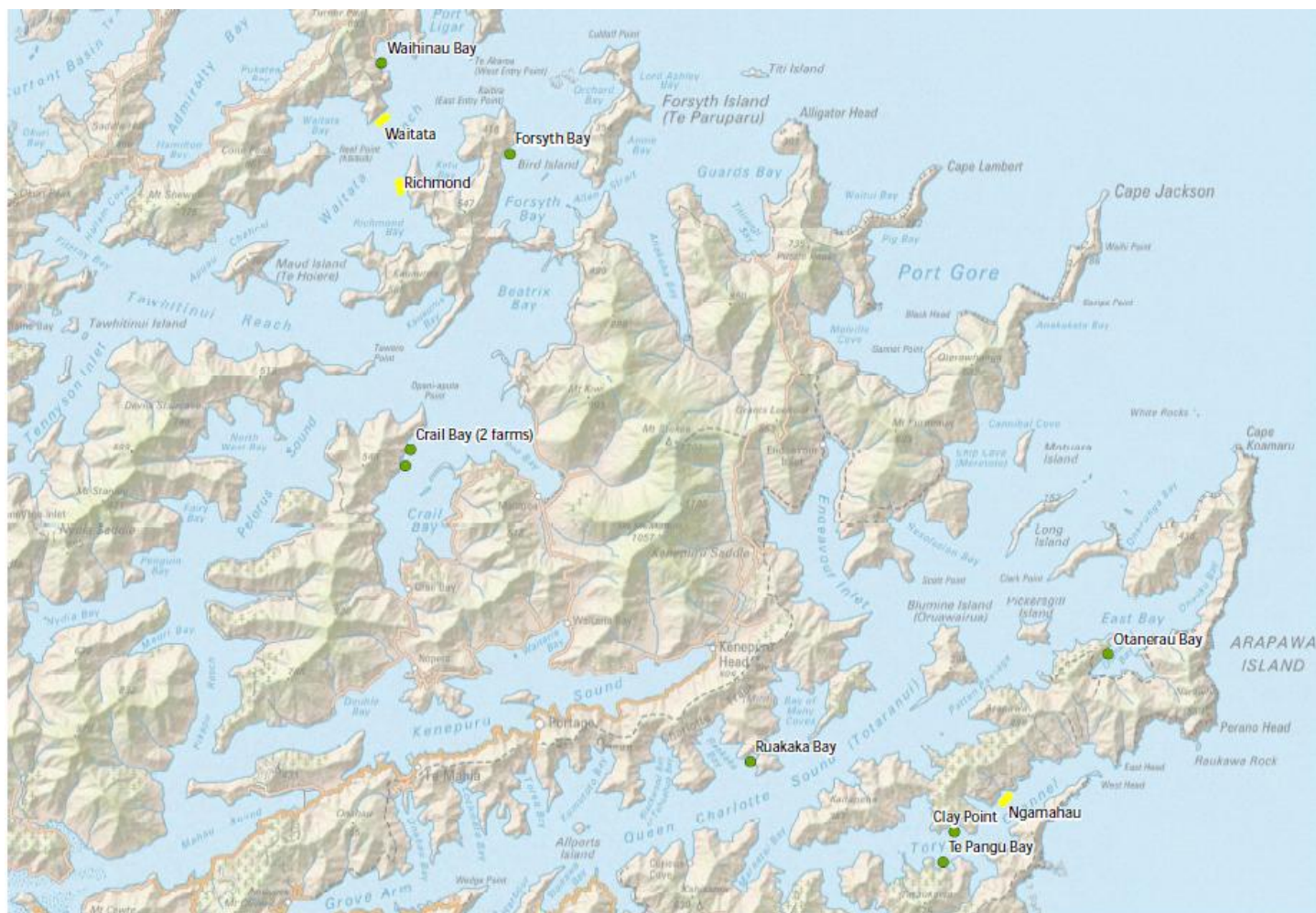
It is recognised that the spillage may be part of a fire or similar emergency and that the Fire Service or Police would supervise the event, probably by appointing a commander. In this case, any clean up operation undertaken would be subordinate to that agency.

Plan exercises

Given the potential for a major spill is limited and that the highest risk is for small easily contained spills it is not considered necessary to carry out practical exercises in addition to creating a continued staff awareness as to their responsibilities and options under this plan. This training is the responsibility of the Farms Regional Manager. Rule 130B.10 states that the operator must test the contingency plan not less than once every 12 months, review the effectiveness of the plan after such a test or following an actual spill. A record of each test will be recorded in the farm diary and stored for audit purposes.

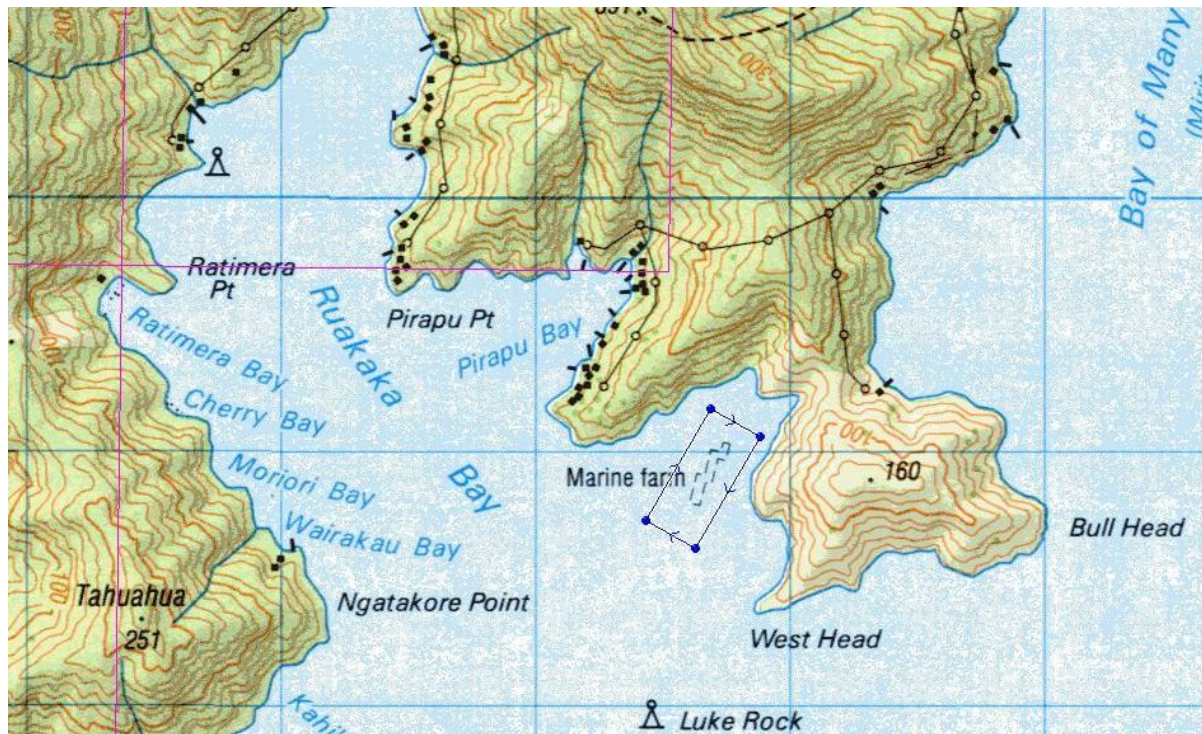
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4.23 Farm locations

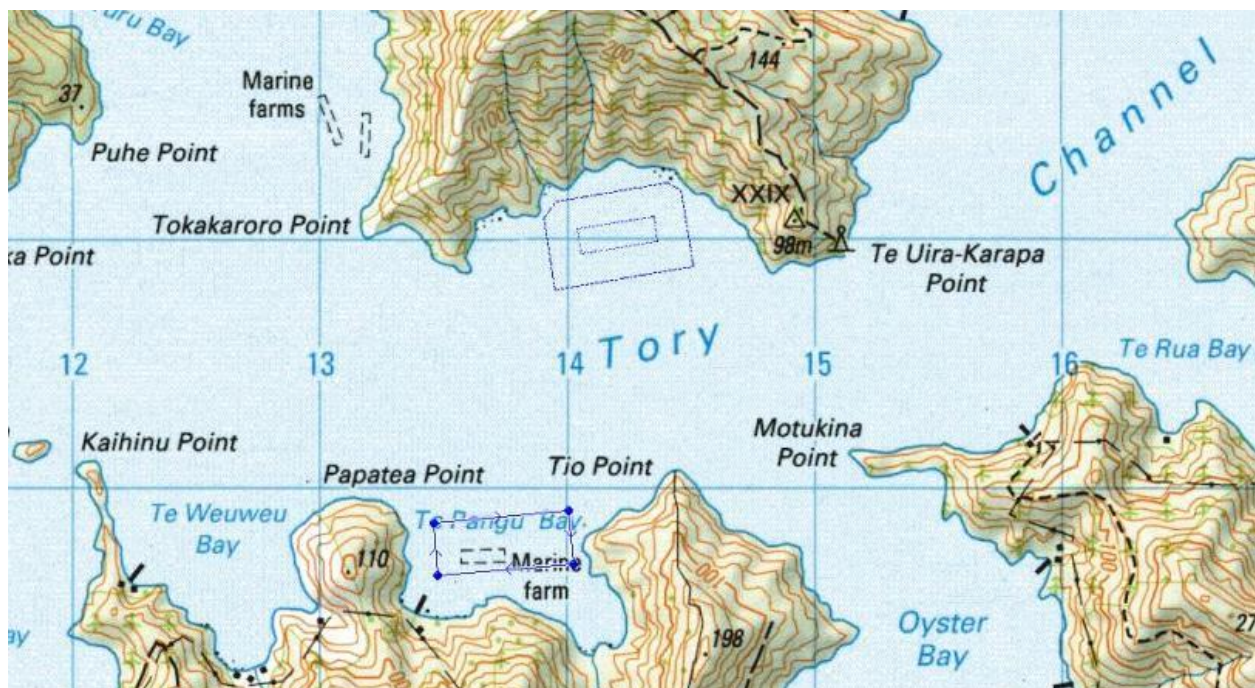


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4.24 Ruakaka Bay farm – Mooring zone



4.25 Te Pangu Bay and Clay Point farms – Mooring zones



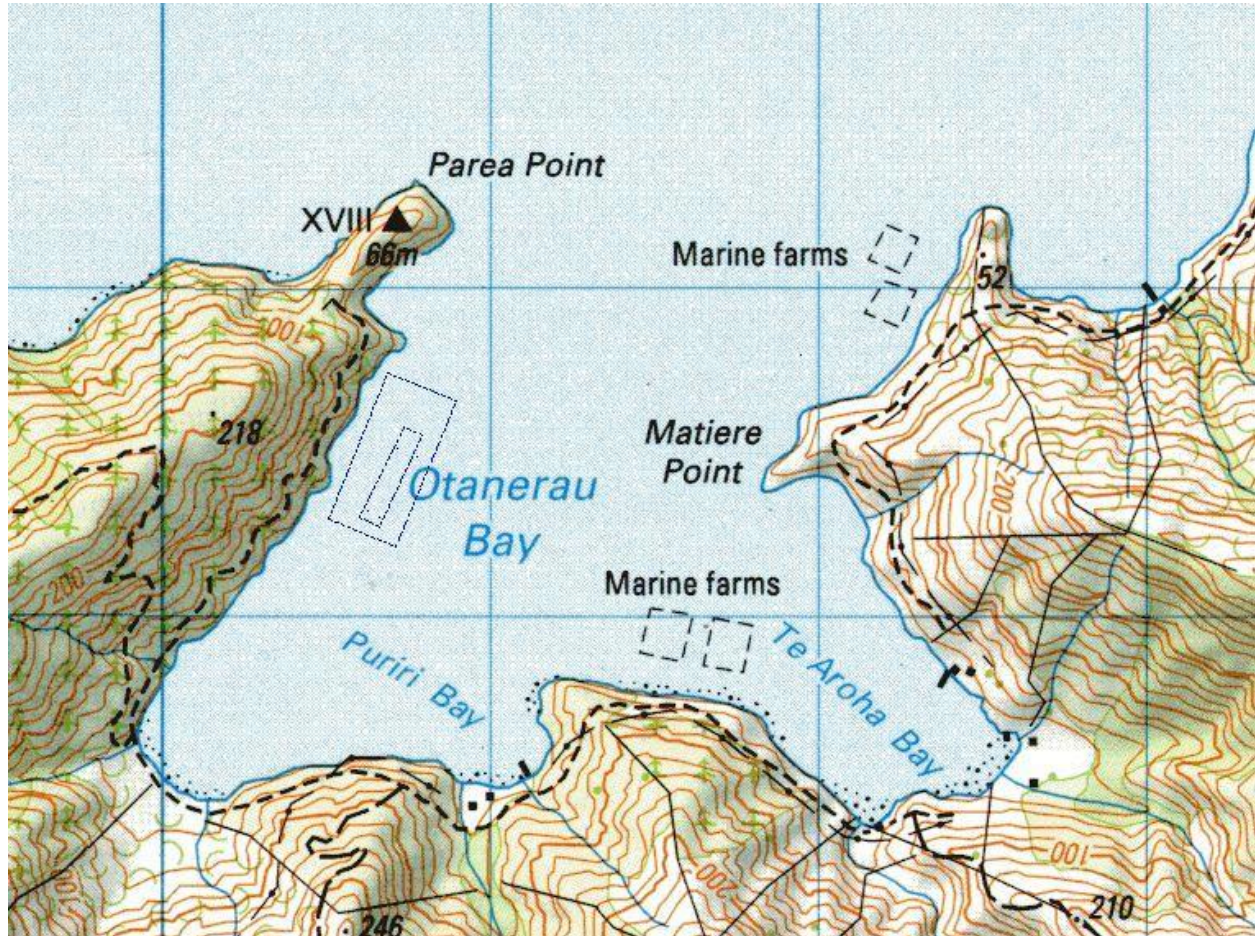
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4.26 Ngamahau Bay mooring zone



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4.27 Otanerau Bay farm – Mooring zone



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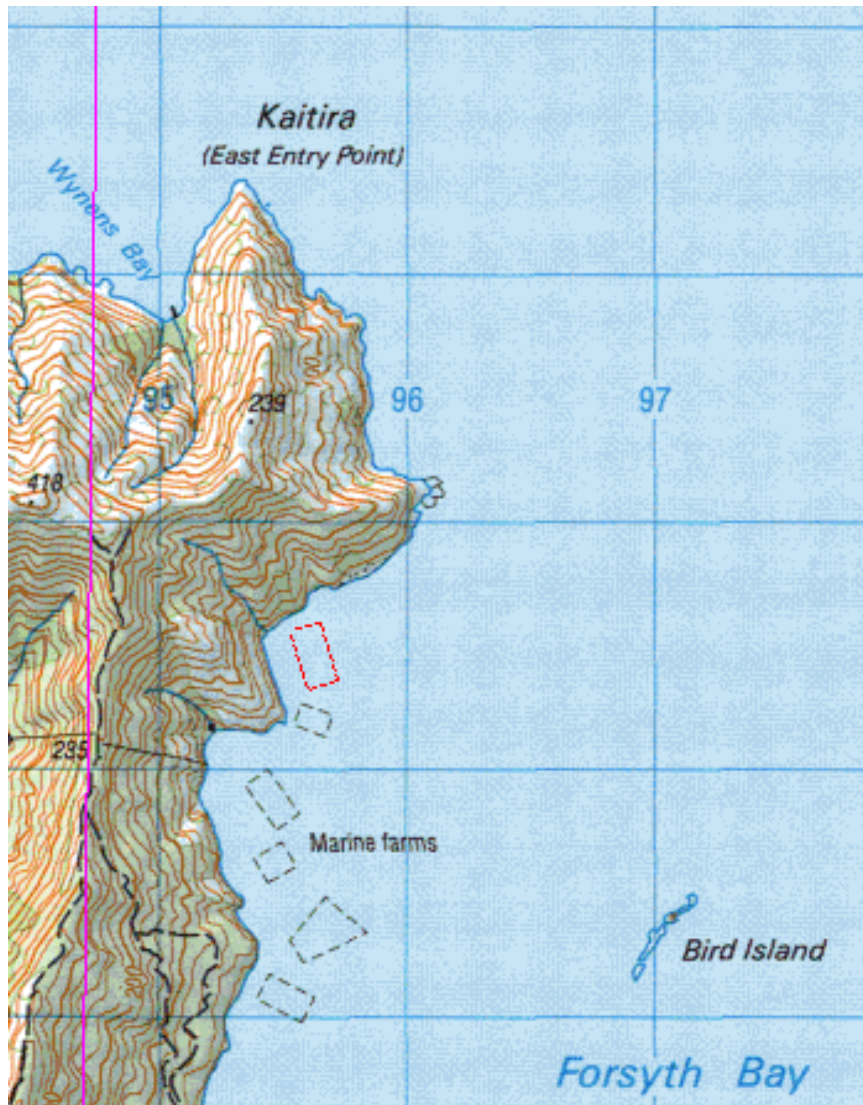
4.28 Waihinau and Waitata farms – Mooring zones (including boat Rock Point)



Boat Rock Point – King Shag Buffer Zone

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4.29 Forsyth Bay farm – Mooring zone



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4.30 Crail Bay farm – Mooring zone

