

# Consent Monitoring - Information

App No: 140295

Applicant: The New Zealand King Salmon Company Limited

Location: Kopaua Richmond Bay Outer Pelorus

Area: Outer Pelorus Croisilles Tawhitinui D'Urville

Consent Date: 17 Apr 2014

Duration of Consent: 10 Dec 2049

Case Officer: Bruno Brosnan

Monitoring Officer: Marine Farms

Proposal: To establish and operate a marine farm and undertake marine farming of King Salmon (*Onchorynchus tshawystcha*), including:

- a) All associated structures, activities in the coastal marine area, occupation of the common marine and coastal area, disturbance of or damage to the foreshore or seabed, and other ancillary activities and structures;
- b) All associated discharges to water, but excluding the discharge of human sewage;
- c) All discharges of air of odour and from diesel and petrol powered equipment;
- d) The associated taking and use of coastal water. Site Name Kopaua

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- d) The associated taking and use of coastal water.

60324

## Coastal Permit

Property No:

Lapse Date: 17 Apr 2017

Comments

| No | Condition Description   | Monitoring Type |
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| 01 | Lapse<br>This consent shall lapse three years from the date of commencement. The consent shall not lapse if the Baseline Plan required under condition 56 is provided to and approved by the Council in accordance with Condition 60 and the monitoring required by the Baseline Plan is confirmed to have commenced. |                 |

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| 02 | <p>Occupancy and Activity<br/>Occupation and Activity Area</p> <p>The occupancy and activity shall not be limited to the area shown in Figure 1 attached to this consent. The marine farm layout shall be generally in accordance with the layout shown on Figure 1.</p> <p>Advice Note: While the occupancy and activity associated with the marine farm and marine farming will occur within the area specified in Condition 2, some effects arising from the activities may be experienced beyond the boundary of this area. For example, the marine farm will be able to be seen and heard from beyond the boundary of the area, and some waste material will travel beyond the boundary.</p>   |  |
| 03 | <p>The consented area may be exclusively occupied to the extent necessary to undertake the activity and ensure the safety and security of the marine farm and all its structures. In particular, the physical space occupied by all surface structures, including all net pens and barges (refer Conditions 14 and 15), may be exclusively occupied; and all mooring lines extending from the structures to the seabed and the anchoring systems with the seabed may exclusively occupy the physical space that they occupy, but not the water space above, between, and below the lines (other than as necessary to ensure the safety and security of the lines and the anchoring systems).</p>  |  |
| 04 | <p>Salmon Stock</p> <p>All farmed salmon shall be from roe sourced in New Zealand.</p>  |  |
| 05 | <p>Noise</p> <p>All marine farming shall be conducted so as to ensure that noise arising from such activities does not exceed the following noise limits when measured no closer than 250m from any marine farm surface structure:</p> <p>0700 hours- 2200 hours Monday to Friday and 0700 hours -1200 hours Saturday - 55 dBA L10</p> <p>On any day between 0700 hours and 2200 hours - No Lmax limit.</p> <p>At all other times including public holiday - 45 dBA L10, and 75 dBA Lmax.</p> <p>All marine farming shall be conducted so as to ensure that noise arising from such activities does not exceed the following noise limits when measured at the Notional Boundary of dwellings existing at 17 April 2014:</p> <p>0700 hours - 2200 hours Monday to Friday - 50 dBA L10 and 0700 hours - 1200 hours Saturday</p> <p>On any day between 0700 hours and 2200 hours - No Lmax limit.</p> <p>At all other times including public holiday - 40 dBA L10, and 75 dBA Lmax.</p> |  |
| 06 | <p>Noise shall be measured in accordance with NZS 6801:2008. Adjusted levels shall be determined in accordance with NZS 6802:2008. Any construction activities will meet standards specified in NZS 6803:1999.</p>  |  |

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| 07 | <p>The following activities shall be exempt from the above noise standard:</p> <ul style="list-style-type: none"> <li>a. Noise generated by navigational aids, safety signals, warning devices, or emergency pressure relief valves;</li> <li>b. Noise generated by emergency work arising from the need to protect life of limb or prevent loss or serious damage to property or minimise or prevent environmental damage; or</li> <li>c. Noise ordinarily generated by the arrival and departure of vessels servicing the marine farm.</li> </ul>   |  |
| 08 | <p>The use of outdoor radios or similar external speakers on the marine farm is prohibited.</p>   |  |
| 09 | <p><b>Submerged Artificial Lighting</b><br/> The consent holder shall ensure that the submerged artificial lighting set up in each net pen will not be comprised of any more than the luminance of nine 1000 watt halide underwater lights.</p>   |  |
| 10 | <p><b>King Shag - Buffer Area and Management Plan</b><br/> As shown on Figure 2 a buffer area of 100m shall be maintained from the King Shag roosting site in the vicinity of the marine farm, as at the date of the commencement of this consent, within which no ship movements associated with the marine farm shall occur.</p>  |  |
| 11 | <p>The consent holder shall, in consultation with the Department of Conservation and the members of the Tangata Whenua Panel (refer to condition 77) prepare and implement a King Shag Management Plan (KSMP). The consent holder shall engage an independent person (or persons) with appropriate knowledge and expertise to prepare the KSMP. The objective of the KSMP shall be to ensure the establishment and operation of the marine farm does not result in a reduction in the population of King Shag in the Marlborough Sounds, with particular regard to the Duffers Reef Shag colony. This plan shall be provided to the Council prior to the first discharge of feed to the marine farm, with copies being provided to the Department of Conservation and the members of the Tangata Whenua Panel.</p> <p>The KSMP shall require:</p> <ul style="list-style-type: none"> <li>a. Surveys of the numbers of King Shag in the Marlborough Sounds no less than once every three years. The first survey shall be undertaken prior to the first discharge of feed to the marine farm. All survey results are to be provided to the Council, Department of Conservation and the Tangata Whenua Panel within three months of completion of the survey, and posted on the King Salmon website.</li> <li>b. In the event that a statistically significant decline of King Shag numbers (<math>p &lt; 0.05</math>) has occurred since the previous survey, the consent holder shall investigate whether the operation of the marine farm is causing or contributing to the decline.</li> <li>c. A response mechanism is to be implemented if the marine farm is found to be causing or contributing to the decline in King Salmon numbers. Such mechanism to include but not be limited to immediate changes to marine farm management practices including a reduction in feed or stocking levels.</li> </ul> |  |

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| 12 | <p><b>Structures</b><br/>Location of Structures for Benthic Monitoring Purposes</p> <p>A corner of (one of) the first marine farm net pen(s) established on the marine farm shall be located on the point nominated for that purpose in condition 20 and located at one end of either row of the salmon net pens. So long as there remain marine farm net pens on the marine farm, net pens shall be located so as to extend contiguously from the nominated corner in either direction.</p> <p>Advice Note: Condition 12 above is necessary to assist benthic monitoring.</p>   |  |
| 13 | <p><b>Design and Size of Structures</b><br/>Marine farm net pens shall be steel framed net pens.</p>   |  |
| 14 | <p>The maximum net area of marine farm net pen surface structures within the marine farm (other than temporary net pens for transferring salmon to or from the marine farm) shall be 1.5 hectares.</p>   |  |
| 15 | <p>Only one feed/accommodation barge (the 'barge') shall be located on the marine farm. The 'barge' shall have a maximum footprint of 280m<sup>2</sup> and a maximum height of 7.5m above water level.</p>   |  |
| 16 | <p>The exterior design of the feed/accommodation barge (the 'barge') shall be generally in accordance with the design produced by HMA, King Salmon Feed Barge Drawing SK09, 9th August 2012.</p>   |  |
| 17 | <p><b>Colours and Material for Structures</b><br/>The exterior design of the feed/accommodation barge ('the barge'). Including its roof and all ancillary features (such as drain pipes), shall be finished in non-reflective materials and painted in a dark colour (such as Karaka Green). Dark coloured curtains, blinds or shutters are to be provided for the windows of rooms used for staff accommodation.</p>  |  |
| 18 | <p>All exterior above-water metal structures (other than the surface of walkways) are to be painted or otherwise finished in dark recessive colours.</p>   |  |
| 19 | <p>Black or dark colour is to be used for predator nets, grower nets and bird netting which are normally above-water. Lighter colours may be used for bird netting if trials find this to be more effective.</p>   |  |
| 20 | <p><b>Council to be Informed of Installation of Structures</b><br/>The Council shall be notified that structures have been installed on the marine farm, and provided with a plan showing the location of those structures, within one month following the initial placement of the first structure(s) at the marine farm, and within one month of the addition of any further structures. When the Council is notified of the initial installation of the first structure(s) on the marine farm, it shall also be informed of the co-ordinates of the starting corner of the marine farm for the purpose of condition 12.</p> |  |
| 21 | <p><b>Marine Farm Navigational Lighting and Marking</b><br/>The placement of marine farm navigational lighting and marking shall be approved by the Harbourmaster under his or her Maritime Delegation from the Director of Maritime Safety pursuant to sections 200, 444(2) and 444(4) of the Maritime Transport Act 1994.</p>  |  |

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| 22 | <p>Structural Engineering Design, Installation and Maintenance</p> <p>The design, including the design loading, for the anchoring and mooring warp system shall be specified by a suitably qualified and experienced Chartered Professional Engineer (with appropriate peer review) to cater for the maximum wave loading, and maximum tidal range and currents, the design report and plans shall be provided to the Council, prior to the initial placement of the first structure(s) at the marine farm. A suitably qualified and experienced Chartered Professional engineer shall supervise the installation of, and certify that, the anchoring system has been installed in accordance with the design report and plans.</p>  |  |
| 23 | <p>During installation of the anchoring and mooring warp system, a test pullout loading shall be undertaken of a representative screw anchor, in order to confirm the anchor pullout capacity, in accordance with the Engineering Feasibility Report dated September 2011, prepared by OCEL Consultants Limited and lodged with the application. A report describing the results of the test, and confirming the pullout capacity of the representative screw anchor shall be prepared by the Chartered Professional Engineer specified in condition 22 who supervises the installation of the anchoring system, and provided to the Council.</p>  |  |
| 24 | <p>The anchoring and mooring warp system shall be monitored and maintained in accordance with a 'Marine Farming Mooring Monitoring and Maintenance Schedule' prepared or reviewed and accepted by a suitable qualified and experienced Chartered Professional engineer and provided to the Council. This schedule shall be provided to the Council proper to the initial placement of the first structure(s) at the marine farm. The monitoring shall include periodic monitoring of the actual mooring loads caused by the hydrodynamic forces on the marine farm by tidal currents and waves, designed to demonstrate that the design loading on the anchors and mooring warps is not exceeded. If monitoring shows that design loadings have been exceeded, the causes of the loading exceedance shall be investigated and rectified.</p> |  |
| 25 | <p>The mooring system shall be designed and maintained such that the maximum loading, under all normal tidal and weather conditions, on any mooring is the lesser of 20% of the anchor pullout capacity determined in accordance with condition 23, or 20% of the mooring line tension capacity after allowing for the deleterious effects of splices and ties.</p>  |  |
| 26 | <p>The structures and mooring system shall be designed such that, under all design cases, the failure of a critical component under the design loading case does not result in the progressive break-up of the structure or progressive failure of the mooring system.</p>   |  |
| 27 | <p>Beyond 20m from any surface structure, no mooring line shall be within 4m of the surface if the water.</p>  |  |
| 28 | <p>The consent holder shall maintain all structure and fixtures to ensure that they are restrained, secure and in working order at all ties, so as to not create a navigational hazard.</p>  |  |

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| 29 | <p><b>Navigation al Information and Safety</b><br/> One month prior to the initial placement of the first structure(s) at the marine farm, the consent holder shall notify the Harbourmaster, Land Information New Zealand and the Ngati Koata Trust Board (or its successors) that the structures are to be placed within the area, and provide them with a copy of the Farm Layout Plan in Figure 1 and a copy of the plan required by condition 20. Any subsequent additions or disestablishment of the structures shall be notified in a similar manner.</p>  |  |
| 30 | <p>Following the initial placement of the first structure(s) at the marine farm, the consent holder shall:</p> <ol style="list-style-type: none"> <li>a. Ensure that a notice alerting mariners to the presence and location of the marine farm is broadcast on Marlborough Radio as directed by the Harbourmaster;</li> <li>b. Prepare and implement an education strategy to alert and inform Marlborough Sounds boat users of the presence and location of the marine farm, its structures and associated mooring lines. The strategy shall be prepared in conjunction with the Harbour Master prior to the initial placement of the first structure(s) at the marine farming and will cover a period of 2 years from the initial placement of the first structure(s) at the marine farm.</li> </ol>                     |  |
| 31 | <p>The consent holder shall, prior to the initial placement of the first structure(s) at the marine farm, prepare a Navigation Risk Reduction and Management Plan. The Navigation Risk Reduction and Management Plan shall provide details of the risk controls (design criteria, processes and procedures) to be put into place to operate the marine farm in compliance with Condition 22-30 and minimise the potential for adverse navigation effects due to the operation of the marine farm. The Navigation Risk Reduction and Management Plan shall be reviewed and updated to reflect any changed circumstances and at not more than 5 yearly intervals. The initial preparation of the Navigation Risk Reduction and Management Plan and its review shall be undertaken in consultation with the Harbourmaster.</p> |  |
| 32 | <p><b>Removal of Marine Farm Structures</b><br/> The consent holder shall remove all associated structures from the site under the following circumstances:</p> <ol style="list-style-type: none"> <li>a. If the marine farm has not been operated by the consent holder for a period of 2 years, and there is no evidence from the consent holder during that period that it intends to continue to maintain and use the marine farm; or</li> <li>b. The term of the consent for marine farm structures has expired and the consent holder has not lodged an application to renew the consent for those structures, or if such an application has been lodged then consent has been refused and all rights of appeal exhausted.</li> </ol>   |  |
| 33 | <p><b>Discharge of Feed, Marine Fouling and Antifouling to Coastal Water</b><br/> <b>Fee Discharge Limits</b><br/> Only extruded pellets or similar shall be fed at the marine farm.</p>  |  |

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| 34 | <p>The annual tonnage of nitrogen that may be discharged to the marine farm is to be limited to 7% of the tonnage of feed that may be discharged in accordance with Condition 35 and Table 1 (i.e. if up to 3000 tonnes of feed can be discharged then up to 210 tonnes of nitrogen can be discharged).</p>  |  |
| 35 | <p>The annual tonnage of feed that may be discharged to the marine farm is limited as follows:</p> <ul style="list-style-type: none"> <li>a. The initial feed discharged (in at least each of the first three years) shall not exceed the Maximum Initial Feed Discharge specified in Table 1;</li> <li>b. In any year, the tonnage of feed discharged shall not exceed the Maximum feed Discharge specified in Table 1;</li> <li>c. Any increase in feed discharged (from one year to the next) shall not exceed the Maximum Increase in Feed Discharge specified in Table 1;</li> <li>d. Whether or not the annual tonnage of feed discharge may increase above the Maximum Initial Feed Discharge, or may reach the Maximum Feed Discharge, is dependent upon compliance with Condition 36 below.</li> </ul>  |  |
| 36 | <p>The annual tonnage of feed discharged to the marine farm may only be increased above the Maximum Initial Feed Discharge specified in condition 35, or above any subsequent allowable annual feed discharge level, if the following requirements are met:</p> <p>The requirements of Condition 37</p> <p>The requirements of conditions 38-44 (relating to compliance with Environmental Quality Standards (EQS)); and</p> <p>Any specifications for marine farm management in the Marine Environmental Monitoring and Adaptive Management Plan (MEM-AMP) for that year (condition 65).</p> <p>Table 1 Maximum initial and maximum annual feed discharges, and maximum increase in annual feed discharges (from one year to the next)</p> <p>Farm Richmond</p> <p>Maximum Initial Feed Discharge (tonnes per annum) 1500</p> <p>Maximum Increase in Feed Discharge (tonnes per annum) 500</p> <p>Maximum Feed Discharge (tonnes per annum) 4000</p> <p>Notes</p> <ul style="list-style-type: none"> <li>1. The annual feed discharge may exceed the relevant maximum feed discharges specified in Table 1 by up to 15% provided that over any continuous 3 year period, the average annual feed discharge does not exceed the relevant maximum feed discharges specified in Table 1.</li> <li>2. There is no limit to any decrease in the annual tonnage of feed discharge.</li> </ul> |  |

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| 37 | <p>There shall be no increase in the annual tonnage of feed discharged to the marine farm unless the following requirements are met:</p> <p>a. The marine farm shall have operated at or near (<math>\pm 15\%</math>) its current maximum annual feed discharge level for at least 3 years; and</p> <p>b. Annual monitoring results of the Enrichment Stage (ES) from the most recent two successive years shall be comparable, based on the monitoring undertaken in condition 66, assessed as follows. The Enrichment Stage (ES) from the annual monitoring, assessed in accordance with Condition 40, shall statistically not be significantly more than the ES from the previous year, based on the average result for all sampling stations (figure 3) within each compliance Zone. The requirement must be met for each of the Environmental Quality Standards (EQS) compliance Zones for which ES are specified in condition 39; and</p> <p>c. The marine farm complies with all the EQS specified in condition 40 and is less than the relevant maximum EQS for each Zone.</p>  |  |
| 38 | <p>Environmental Quality Standards (EQS)<br/>The discharge of feed, marine biofouling and antifouling at the marine farm shall meet the requirements of conditions 39-44 relating to Environmental Quality Standards (EQS) at all times. Any breach of these requirements shall, as soon as practicable, be notified to the Marlborough District Council and the members of the Tangata Whenua Panel (refer to condition 77).</p>   |  |
| 39 | <p>Environmental Quality Standards (EQS) - Seabed Deposition<br/>EQS Compliance Zones shall be defined for the marine farm, in accordance with Figure 3 and the dimensions and area contained in Table 2.<br/>Table 2: Maximum Distances of EQS Compliance Zone 2/3 and Zone 3/4 boundaries from the nearest edge of the marine farm net pens; and the maximum total affected areas of Zones 1, 2 and 3.<br/>Farm Richmond<br/>EQS Compliance Zone boundary dimensions (Maximum Distances)<br/>Distance from nearest net pen to Zone 2/3 boundary<br/>60 metres<br/>Distance from nearest net pen to Zone 3/4 boundary<br/>250metres<br/>EQS Compliance Zone Area (Maximum area)<br/>Total area of Zones 1, 2 and 3 (the footprint) 10 hectares</p> <p>a. The above Zones shall be fixed.<br/>B. Notwithstanding, condition 39A, the size and shape of the above Zones will be reviewed (to enable comparison with the zone dimensions contained in Table 2), after 3 years of operation at the Initial Feed discharge level in Table 1, as part of the Annual Report (refer to condition 67) for that year. The dimension and area of the Zones may be amended as a result of a recommendation in the Annual Report, provided that the total area of Zones 1, 2 and 3 does not exceed by more than 10% from the area specified in Table 2.</p> |  |



At all times, the seabed beneath and in the vicinity of the marine farm shall comply with the EQS specified in Table 3. Zone dimensions and area for compliance purposes shall be defined in accordance with condition 39. Enrichment Stage (ES shall be defined in accordance with Figure 4 and table 5.

Zone - Zones 1 & 2 - beside and beneath the net pens.

Compliance Monitoring Location - Measured beneath the edge of the net pens - 'Pen' Stations on Figure 3.  
EQS - ES less than or equal to 5.0. No more than one replicate core with no taxa (azoic); No obvious, spontaneous out-gassing (H<sub>2</sub>S/methane); Bacteria mat (Beggiatoa) coverage not greater than localized/patchy in distribution.

Zone 3 - near to the net pens.

Compliance Monitoring Location - Measured at the Zone 2/3 Boundary Stations on Figure 3.  
EQS - ES less than or equal to 4.0. Infauna abundance is not significantly higher than at corresponding 'Pen' Station. Number of taxa >75% of number at relevant / appropriate reference Station(s)

Zone 4 - outside the footprint area.

Compliance Monitoring Location - Measured at the Zone 3/4 Boundary Stations on Figure 3.  
EQS - ES < 3.0. Conditions remain statistically comparable with relevant appropriate reference Station(s).

ES exceedance

a. In the event that the ES is up to and including 0.3 above the EQS for the 1/2 (Pen), 2/3 or 3/4 Zone Boundary Stations in Table 3, the consent holder shall in the year following receipt of confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), reduce the amount of feed discharged to the marine farm by 20% of the amount discharged in the year before.

B. In the event that the ES is greater than 0.3 and not greater than 0.6 above the EQS for the 1/2 Pen, 2/3 or 3/4 Zone Monitoring Locations in Table 3, the consent holder shall in the year following receipt of confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), reduce the amount of feed discharged to the marine farm by 40% of the amount discharged in the year before.

C. In the event that the ES is greater than 0.6 above the EQS for the 1/2 Pen, 2/3 or 3/4 Zone Monitoring Locations in Table 3, the consent holder shall with four months from the date the consent holder receives confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), remove stock and fallow the site until compliance is achieved. Upon any re-stocking, the consent holder shall ensure that the amount of stock shall be designed to ensure that the ES levels required in Table 3 for the 1/2 Pen, 2/3 and 3/4 Zones Monitoring Locations will be met in the following year.

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| 41 | <p>Environmental Quality Standards (EQS) - Copper and Zinc Levels</p> <p>Composite samples of sediments beneath and beside the net pens (measured beneath the edge of the net pen - Pen Stations on Figure 3) shall be assessed against the ANZECC (2000) ISQG-Low criteria for copper and zinc; as a first tier trigger level.</p>   |  |
| 42 | <p>Where total metals analysis of composite sediment samples exceeds the ANZECC (2000) ISQG-Low criteria for copper and zinc; the MEM-AMP (refer conditions 65-660 shall include a hierarchical schedule of monitoring of increasing focus and intensity and, ultimately, management action based on the decision hierarchy contained in Figure 5.</p>  |  |
| 43 | <p>Environmental Quality Standards (EQS) - Water Column</p> <p>The marine farm shall be operated at all times in such a way as to achieve the following Water Quality Objectives in the water column:</p> <ul style="list-style-type: none"> <li>a. To not cause an increase in the frequency, intensity or duration of phytoplankton blooms (i.e. chlorophyll a concentrations greater than or equal to 5 mg/m<sup>3</sup>) [Note: water clarity as affected by chlorophyll a concentrations is addressed by this objective];</li> <li>b. To not cause a change in the typical seasonal patterns of phytoplankton community structure (i.e. diatoms vs. dinoflagellates), and with no increased frequency of harmful algal blooms (HAB's) (i.e. exceeding toxicity thresholds for HAB species);</li> <li>c. To not cause reduction in dissolved oxygen concentrations to levels that are potentially harmful to marine biota [Note: Near bottom dissolved oxygen under the net pens is addressed separately through the EQS – Seabed Deposition];</li> <li>d. To not cause elevation of nutrient concentrations outside the confines of established natural variation for the location and time of year, beyond 250m from the edge of the net pens;</li> <li>e. To not cause a statistically significant shift, beyond that which is likely to occur naturally, from a oligotrophic/mesotrophic state towards a eutrophic state;</li> <li>f. To not cause an obvious or noxious build-up of macroalgal (e.g. sea lettuce) biomass [Note: to be monitored in accordance with condition 66h].</li> </ul> |  |

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| 44 | <p>The marine farm shall be operated at all times in such a way as to comply with Water Quality Standards (WQS), and associated responses, for the near-farm and wider-scale water column environment of Pelorus Sound. Two tiers of response to potential breaches of WQS shall be set, the first trigger further monitoring and the second to require reduced stocking on the marine farm following the next harvest of salmon on the marine farm. The WQS and responses shall be established as follows:</p> <p>a. For the first three years of marine farm operation, initial WQS for chlorophyll a (chl a), dissolved oxygen (DO), Total Nitrogen (TN) concentrations and an integrated trophic index to achieve the qualitative Water Quality Objectives a, c, d and e of condition 43 shall be specified in the Baseline Report (condition 64) and may be reviewed in the Annual Report at the end of the first and second years of marine farm operation (condition 67).</p> <p>b. The initial WQS shall be reviewed in the Annual Report at the end of the third year of marine farm operation (condition 67) and WQS specified to achieve the Water Quality Objectives a-e of condition 43. These WQS shall be reviewed through the Annual Report every three years thereafter unless any other Annual report (condition 67) necessitates earlier review.</p> <p>c. WQS shall be specified at the locations specified in condition 63c.</p> <p>d. In the Baseline Report and each Annual Report, a hierarchy of responses to potential breaches of the WQS shall be specified, including:</p> <ul style="list-style-type: none"> <li>i. A first level response requiring further monitoring and/or analysis to determine the operation of the marine farm is causing the relevant WQS not to be achieved; and</li> <li>ii. A second level response requiring a plan of action as soon as practicable, with clear timeframes to reduce effects on the water column and achieve full compliance with e WQS, through reduced stocking on the marine farm following the next harvest of salmon on the marine farm.</li> </ul> |  |
| 45 | <p><b>Discharge of Greywater to Coastal Water</b></p> <p>Greywater may be discharged from the staff facilities on the marine farm, including from showers, wash basin, kitchen and laundry facilities. The greywater discharge shall not exceed 1m<sup>3</sup> per day from the marine farm. The consent holder shall ensure that an appropriate system is operated at the marine farm to determine the volume of greywater discharge. The results shall be provided to the Council not less frequently than once a year. The consent holder shall notify the Council of a non-compliance with this condition, and explain the reason for it, within one month of the consent holder becoming aware of the non-compliance.</p>  |  |
| 46 | <p><b>General</b></p> <p>At all times the consent shall be exercised in accordance with the following General Condition 47-84 and any documents required under those conditions.</p>  |  |

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| 47 | <p>Exercise of this consent in accordance with Information Provided</p> <p>The exercise of this consent shall be undertaken:</p> <ul style="list-style-type: none"> <li>a. Generally in accordance with the following documents (where applicable); NZ King Salmon, Sustainably Growing King Salmon, Resource consent application, dated October 2011, except as amended within the evidence presented by witnesses for NZ King Salmon during the hearing of the resource consent applications, and except where amendments are required by the conditions of this consent, provided that:</li> <li>b. In the event of differences of conflict between the information described in the documents and these conditions, the conditions shall prevail.</li> </ul>   |  |
| 48 | <p>Odour Management</p> <p>The consent holder shall, prior to the first discharge of feed to the marine farm, have in place, and implement, operation procedures to implement best management practices to:</p> <ul style="list-style-type: none"> <li>a. Ensure that, as far as practicable, filling of the 'mort' bin (storing dead fish) does not occur during still air conditions;</li> <li>b. Establish target times for cleaning the grower nets once they have been raised, to minimise the potential for odour from dirty nets;</li> <li>c. Ensure that, as far as practicable, there is only one grower net being lifted and cleaned at one time, to minimise the potential from odours from this activity.</li> </ul>   |  |
| 49 | <p>Marine Mammal and Shark Management</p> <p>The consent holder shall, in consultation with the Department of Conservation, and the members of the Tangata Whenua Panel (refer to condition 77) prepare, implement and comply with a Marine Mammal and Shark Management Plan. This plan shall be provided to the Council prior to the initial placement of the first structure(s) at the marine farm. The objectives of the Marine Mammal and Shark Management Plan shall be to:</p> <ul style="list-style-type: none"> <li>a. Minimise the adverse effects on marine mammals and protected sharks from the operation of the marine farms; <ul style="list-style-type: none"> <li>aa. Minimise the interaction of sharks with the salmon farms;</li> </ul> </li> <li>b. Determine how the operation of the marine farm will be managed adaptively to avoid, remedy and mitigate adverse effects on marine mammals and protected sharks.</li> <li>c. Ensure that the best practicable option is adopted to avoid entanglement or entrapment of marine mammals and sharks, having regard to best international practice, ongoing research and allowing for technological improvements in net design and construction;</li> <li>d. Establish a monitoring programme to assess the effectiveness of the Marine Mammal and Shark Management Plan; and</li> <li>e. Establish reporting and response procedures in the event of marine mammal and protected shark entrapment, entanglement, injury or death.</li> </ul> |  |
| 50 | <p>The Marine Mammal and Shark Management Plan shall include but not be limited to, the following details;</p> <ul style="list-style-type: none"> <li>a. Minimising the potential for sharks and marine mammals to enter the marine farm net pens through</li> </ul>   |  |

the use of predator-resistant materials in net pen construction and predator exclusion nets enclosing the marine farm net pen structures and extending sufficiently high above the water around the marine farm to exclude such predators, but no higher;

- b. Limiting the maximum mesh size of any predator netting to 200mm (the internal measurement when the net is stretched in the direction of the long diagonal of the meshes);
- c. Ensuring predator nets are sufficiently tensioned and maintained at that tension at all times so as to avoid entanglement of marine mammals or large sharks;
- d. Ensuring the twine diameter of the predator net is of a sufficient gauge to:
  - i. Be detected acoustically dolphins; and
  - ii. Avoid the entanglement of marine mammals or large sharks;
- e. Predator net maintenance requirements, including:
  - i. Standards and scheduling;
  - ii. Repairing holes and tears immediately;
  - iii. Avoiding predator nets being left open overnight for extended periods of time;
  - iv. Avoiding forming entrapment pockets in predator nets;
- f. Procedures for auditing marine farm security following any marine mammal gaining access beyond a predator net, and taking all practical steps to correct any faults found;
- g. Procedures to ensure visual surface marine mammal surveys are conducted prior to major net maintenance work and that nets are not opened, removed or shifted if dolphins are observed within 2km of the marine farm;
- h. Procedures for capture and release of any entrapped or entangled marine mammal and protected shark species;
- i. Procedures for the retrieval, storage and transport of dead marine mammals and protected shark species for formal identification and autopsy purposes;
- j. Staff training requirements, including identification of protected shark species;
- k. Ensuring there is no feeding of marine mammals and sharks;
- l. Ensuring dead fish are removed promptly from the fish pens;
- m. Ensuring anchor warps are maintained under sufficient tension to prevent possible entanglement of cetaceans and large sharks;
- n. Ensuring all lines associated with the marine farm are secured at all times, and that any loose lines are secured and/or retrieved promptly;
- o. Ensuring that all nets are removed from marine farm structures that are left fallow, untended or are abandoned;
- p. Ensuring all net and cordage debris, plastic strapping and other marine farm, domestic or other non-biodegradable waste is collected, retained and disposed of at an approved solid waste facility onshore, and that if any loose debris does enter the water around the marine farm, it is retrieved from the seabed, water column or foreshore promptly;
- q. Reporting requirements to the Marlborough District Council and the Department of Conservation, and in particular:
  - i. A minimum of annual summary reports of all

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|    | <p>incidents involving marine mammals and protected sharks becoming entangled or entrapped at a marine farm;</p> <p>ii. Immediate reporting (within 24 hours) of any incident where a marine mammal or protected shark may be injured or killed;</p> <p>iii. Reporting (within one week) of actions undertaken to remedy any unforeseen events such as a marine mammal or protected shark becoming entrapped or entangled at a marine farm.</p> <p>The Marine Mammal and Shark Management Plan, shall be reviewed, to ensure best practice, by an appropriate qualified person at 5-yearly intervals and provided to the Council.</p>   |  |
| 51 | <p><b>Biosecurity Management</b></p> <p>The consent holder shall prepare and implement a Biosecurity Management Plan with the objectives of minimising the risk of spreading marine pests and disease agents as a result of the establishment and operation of the marine farm. The consent holder shall consult with the Tangata Whenua Panel (refer to condition 77) in the course of preparing the Biosecurity Management plan. The reasonable costs of this participation will be met by the consent holder.</p>  |  |
| 52 | <p>The Biosecurity Management Plan shall include on-farm, as well as vector-based, management measures to reduce the risk of spread, including;</p> <p>a. Methods to manage vectors that could spread marine pests and disease agents to or from marine farms;</p> <p>b. Routine practices to manage fouling of nets and structures;</p> <p>c. A passive surveillance regime to facilitate early detection of unusual or suspicious organisms associated with marine farm structures;</p> <p>d. An effective disease surveillance regime for salmon stock;</p> <p>e. The use of husbandry and harvesting methods consistent with best practice for the minimisation of disease risk;</p> <p>f. On-farm management measures to prevent, control or contain biosecurity risks to the extent practicable. The Biosecurity Management plan shall also specify the parties to be notified should any new biosecurity risk from marine pests or disease agents be identified at the farm. These parties shall include the members of the Tangata Whenua Panel (refer to condition 77) and landowners and tourism/recreation businesses within 1km of the farm</p> |  |
| 53 | <p>The Biosecurity Management Plan shall be reviewed, to ensure best practice, by a person or persons appropriately qualified in marine biosecurity and aquatic animal diseases, and provided to the Council prior to the initial placement of the first structure(s) at the marine farm. The Plan shall be reviewed at least annually by the consent holder to ensure that the management practices specified in the Plan are consistent with conditions 51 and 52. Any revisions to the Plan shall be provided to the Council within one month following completion of the revisions.</p>   |  |

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| 54 | <p>Marine Environment Monitoring, Adaptive Management and Reporting</p> <p>The marine environmental monitoring, adaptive management and reporting to be undertaken in accordance with condition 56-67 shall address, but not be limited to, the following potential effects from the operation of the marine farm:</p> <ol style="list-style-type: none"> <li>a. Effects of deposition on the seabed and foreshore;</li> <li>b. Effects on water quality.</li> </ol>   |  |
| 55 | <p>The Purposes of the marine environmental monitoring, adaptive management and reporting to be undertaken in accordance with condition 56-67 shall be:</p> <ol style="list-style-type: none"> <li>a. To ensure that the discharge of feed, marine biofouling and antifouling at the marine farm meets the requirements of conditions 38-44 relating to Environmental Quality Standards (EQS) at all times;</li> <li>b. To ensure that the operation of the marine farm does not result in adverse effects to notable biological features within 1km of the marine farm including any areas of blue cod habitat or any area identified by the tangata Whenua panel (refer to condition 77) as customary kaimoana gathering areas, as a result of biodeposition or nutrient enrichment. For purposes of this condition 'notable biological features' shall include but not be limited to area of significant reef, tubeworm mounds and hydroid colonies;</li> <li>c. To ensure that the operation of the marine farm does not result in seabed enrichment in areas of natural deposition in neighbouring bays to the marine farm including any areas in those bays identified by the Tangata Whenua Panel (refer to condition 77) as customary kaimoana gathering area;</li> <li>d. To ensure that the operation of the marine farm does not result in any adverse effects on macroalgal biomass on intertidal and shallow rocky reefs, including any reefs identified by the Tangata Whenua Panel (refer to condition 77) as customary kaimoana gathering areas, as a result of biodeposition or nutrient enrichment;</li> <li>e. To obtain information regarding farm-specific, near-farm mixing properties in order to provide a context for achieving the WQS set under condition 44;</li> <li>f. To confirm that the magnitude of effects from submerged artificial lighting on night-time feeding activity by fish, seabirds and marine mammals in and around the illuminated pens are generally as described in the evidence of Dr C Cornelisen presented to the hearing by the Board of Inquiry.</li> <li>g. To confirm the average feed loss levels from the marine farm, including how the feed loss varies over time;</li> <li>h. To improve understanding of the size and composition of aggregations of pelagic and demersal fish beneath the marine farm; and of the potential for key heavy metal and organohalogenated contaminants of public health interest in long-lived benthic-pelagic fish species, of recreational, commercial or customary interest, residing in the near vicinity of the marine farm.</li> </ol> |  |

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| 56 | <p>The following plans and reports shall be prepared by the consent holder, in order to address the potential effects set out in condition 54 and achieve the Purposes in condition 55.</p> <p>a. Prior to the initial placement of the first structure(s) at the marine farm, a Baseline Plan to specify the monitoring and analysis to be undertaken in order that baseline information can be obtained and analysed prior to the initial placement of the first structure(s) at the marine farm;</p> <p>b. Prior to initial placement of the first structure(s) at the marine farm, a baseline Report which presents the results from the monitoring and analysis undertaken in accordance with the Baseline Plan, makes recommendation for the development of the marine farm and the monitoring to be undertaken in the first year of operation of the marine farm, and specifies the initial WQS and responses in accordance with condition 44;</p> <p>c. For each year of operation of the marine farm, a MEM-AMP to provide a summary of the relevant recommendations from the previous year's Baseline Report or Annual Report, and specify the proposed monitoring and marine farm management actions for the following year. The MEM_AMP may be prepared as on Plan jointly with the MEM-AMP(s) for other marine farms managed by the same consent holder.</p> <p>d. For each year of operation of the marine farm, and Annual Report to provide details of the monitoring results from the previous year, an analysis of the monitoring results (including in terms of compliance with the EQS), and recommendations for changes to the monitoring and marine farm management actions for the following year. The Annual Report may be prepared jointly with Annual Reports for other marine farms managed by the same consent holder.</p> |  |
| 57 | <p>The consent holder shall engage an independent person (or persons) with appropriate knowledge and expertise to prepare the Baseline Plan and Baseline Report, the MEM-AMP and the Annual Report, in accordance with the conditions of this consent.</p>   |  |
| 58 | <p>Prior to finalising the plans and reports specified in condition 56, the consent holder shall provide them in draft form to the Peer Review Panel for its review, assessment, recommendations and reports, in accordance with conditions 68-74. The consent holder shall have particular regard to any recommendations from the Peer Review Panel in finalising these plans and reports. The plans and reports shall specify how the consent holder has had regard to any recommendations from the Peer Review Panel, if any recommendations have been adopted and the reasons why.</p>   |  |
| 59 | <p>Prior to finalising the plans and reports specified in condition 56, the consent holder shall provide them to the members of the Tangata Whenua Panel (see condition 77), and provide that Panel with the opportunity to:</p> <p>a. Receive and discuss with the consent holder the results of all monitoring and analysis required by the conditions of this consent;</p> <p>b. Review and provide input to the preparation of the Baseline Plan and Baseline report, the MEM-Amp and the Annual Report, required by condition 56.</p>   |  |



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| 60 | <p>Having had particular regard to any recommendations from the Peer Review Panel, the consent holder shall provide the following final plans and reports to the Council for its approval in terms of the conditions of this consent:</p> <ol style="list-style-type: none"> <li>a. Baseline Plan;</li> <li>b. The Baseline Report; and</li> <li>c. Any Annual report which includes: <ol style="list-style-type: none"> <li>i. Any changes in any WQS;</li> <li>ii. Any adjustment to the area and dimensions of the seabed EQS Compliance Zones; or</li> <li>iii. Any increase in the maximum annual tonnage of feed that may be discharged to the marine farm.</li> </ol> </li> </ol> <p>The monitoring and analysis required in terms of the Baseline Plan shall not be commenced until the Baseline Plan has been approved by Council.</p> <p>No structure(s) shall be placed on the marine farm until the Baseline Report has been approved by the Council.</p> <p>No change may be made to any WQS, no adjustment may be made to the area or dimensions of any seabed EQS Compliance Zone, and there shall be no increase in annual tonnage of feed that may be discharged to the marine farm, until the relevant aspects of the Annual Report that includes that/those recommendations(s) is approved by the Council.</p> <p>Following its approval by the Council, the consent holder shall provide copies of the relevant final plans and reports to the Tangata Whenua Panel (refer condition 77).</p> |  |
| 61 | <p>Other than as specified in condition 60, having had particular regard to any recommendations from the Peer Review Panel, the consent holder shall provide the following plans and reports specified in condition 56 to the Council and the Tangata Whenua Panel (refer condition 77), in accordance with the following timing:</p> <ol style="list-style-type: none"> <li>a. The first MEM-AMP - following the provision of the Baseline Report to the Council and prior to the first discharge of feed to the marine farm;</li> <li>b. Each subsequent annual MEM-AMP - 31 July each year.</li> <li>c. The Annual report - by 30 April each year.</li> </ol>  |  |
| 62 | <p>The consent holder shall undertake the monitoring, analysis, marine farm management and other actions in accordance with the Baseline Plan and the current provisions of the MEM-AMP for that year. The monitoring and analysis shall be undertaken by a person or persons with appropriate knowledge and expertise.</p>   |  |
| 63 | <p>The Baseline Plan shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>a. Quantitative and qualitative mapping of soft-sediment habitats and communities across the occupancy and activity area specified in condition 1; and across the area of EQS compliance Zones 1, 2 and 3 specified in conditions 39 and 40, including replicate data for the primary environmental variables from each of the proposed on-going monitoring stations and at appropriate reference stations.</li> <li>b. A synthesis and review of all available existing water quality data relevant to the enrichment status of Pelorus Sound, in order to provide a historical baseline of water quality conditions;</li> </ol>  |  |

c. Water column monitoring for nutrient (NH<sub>4</sub>-N, NO<sub>3</sub>-N, NO<sub>2</sub>-N, DRP, Si, TN and TP) and chlorophyll a concentrations, phytoplankton composition and biomass, salinity, clarity, temperature, turbidity and dissolved oxygen (DO) at the following locations:

- i. Near-farm locations within 1km from the net pens;
- ii. Locations within Pelorus Sound that are expected to have the greatest potential for marine farm-related cumulative enrichment effects (particularly where marine farms are located in proximity to one another and/or as indicated by spatially explicit nutrient modelling or other modelling considered necessary by the Peer Review Panel in accordance with condition 70a);
- iii. Locations further away from the marine farms or groups of marine farms in Pelorus Sound that are expected to have progressively lesser marine farm-related cumulative enrichment effects (as indicated by the spatially explicit nutrient modelling or other modelling considered necessary by the Peer Review Panel in accordance with condition 85a);
- iv. Locations that are identified as being of high ecological value;
- v. Within the inner Sounds; and
- vi. Near the Cook Strait.

The above water column data shall be collected at least monthly at these locations over one year (this shall be required for up to two years if recommended by the Peer Review Panel) prior to the first discharge of feed to the marine farm, provided that this frequency could be reduced in whole or in part, depending in the availability of existing water column data (which can suitably substitute). The appropriateness of any reduction is to be specifically considered by the Peer Review Panel (as part of its review of the Baseline Plan under condition 70).

The monitoring stations for this water column monitoring shall be established as long-term monitoring stations for the purposes of undertaking the long term water column monitoring specified in conditions 66c. The precise location of the long-term monitoring stations and the range of specific nutrient parameters monitored may, however, be adjusted over time in response to monitoring results (in accordance with condition 66c) and/or in response to modelling considered necessary by the Peer Review Panel in accordance with condition 70a.

d. Quantitative and qualitative baseline monitoring (for potential biodepositional effects following marine farm operation) of habitats that support notable biological features within 1km of the marine farm ('reef' monitoring), including any area of blue cod habitat or any area identified by the Tangata Whenua Panel (refer conditions 77) as customary kaimoana gathering area, as well as comparable habitats at appropriate reference sites. The monitoring shall be undertaken two times during one year. For the purpose of this condition 'notable biological features' shall include but not be limited to area of significant reef, tubeworm mounds and hydroid colonies.

e. Quantitative and qualitative baseline monitoring (for potential seabed enrichment effects following marine farm operation) at soft sediment sites in neighbouring bays near to, and removed from, the marine farm, chosen based on potential exposure to increased biodeposition including any areas in those

bays identified by the Tangata Whenua Panel (refer to condition 77) as customary kaimoana gathering areas.

This monitoring shall be undertaken two times during one year. [The same monitoring may be undertaken for a group of marine farms, as it will provide baseline information for all marine farms in that group.]

f. Quantitative and qualitative baseline monitoring (for potential effects on macroalgal biomass from biodeposition and/or nutrient enrichment) of peripheral macroalgae (e.g. *Ulva* sp.), benthic algal films and perennial algae (e.g. *Hormosira banksii*) percentage cover and the abundance of grazing invertebrates (e.g. cats' eyes snails (*Turbo smaragdus*) and Kina (*Evechinus chloroticus*) on intertidal and shallow subtidal rock reefs, including any reefs identified by the Tangata Whenua Group (refer to condition 77) as customary kaimoana gathering areas. Monitoring shall be undertaken two times during one year at the following locations:

- i. At or near locations expected to have the greatest potential for marine farm-related cumulative enrichment effects (either within 1km of the marine farm or in neighbouring bays);
- ii. At or near locations further away from the marine farm or groups of marine farms in locations that are expected to have less marine farm-related cumulative enrichment effects.

64

The Baseline Report shall include the following:

- a. Presentation of the results from, and analysis of , the baseline monitoring required by the Baseline Plan, including the results of the synthesis and review of all available existing water quality data relevant to the enrichment status;
- b. Any recommendation as to the specific location or installation of marine farm anchoring structures;
- c. Any recommendations regarding ongoing monitoring following the initial placement of the first structure(s) at the marine farm and the first discharge of feed to the marine farm;
- d. As required by Condition 44, specification of initial WQS and associated hierarchy of responses to breaches of the WQS. Prior to specifying the initial WQS and responses, the consent holder shall consult with the Council and the Department of Conservation.

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| 65  | <p>The MEM-AMP shall specify the following:</p> <p>a. A summary of the recommendation from the Baseline Report (in the case of the first MEM-AMP for the marine farm) or from the previous year's Annual Report regarding marine farm management actions and monitoring (including any increases or decreases in the tonnage of feed to be discharged).</p> <p>b. A description of all monitoring to be undertaken for the coming year (detailed monitoring requirements are set out in condition 66). This shall include the methods, locations and frequency of the monitoring, including any control/reference sites. This shall give effect to any recommendations contained in the Annual Report for amendments to the dimensions and area of the EQS compliance Zones specified in Table 2 and/or to the location of the representative compliance monitoring Stations specified in Table 3, following the review of the results of the monitoring undertaken after 3 years of operation at the initial Feed Discharge level in Table 1.</p> <p>c. All monitoring and management actions to be undertaken at the marine farm in order to meet the requirements of conditions 38-44 (including any areas or decreases in the tonnage of feed to be discharged).</p> <p>d. Any other actions to be undertaken in order to address the potential effects from the operation of the marine farm set out in condition 54 and achieve the Purpose in condition 55, including to avoiding, remedying or mitigating any significant adverse effects from the operation of the marine farm identified in the previous year's Annual Report.</p>   |  |
| 66a | <p>The MEM-AMP shall include the following monitoring:</p> <p>a. The level of sampling and range of environmental variables, (e.g. sediment grain size, infauna, percent organic matter, redox &amp; sulphides) to be measured annually at each of the near-farm benthic (soft-sediment) monitoring stations in order to determine compliance with the EQS - Seabed Deposition in condition 40. This includes appropriate farm-specific reference station, which may also double as far-field soft-sediment monitoring sites (see condition 66f);</p> <p>b. Monitoring in order to determine compliance with the EQS - Copper and Zinc levels required by conditions 41 and 42 using a decision-tree approach, whereby monitoring effort increases in focus and intensity as trigger levels (representing the increased likelihood of ecological effects) are reached.</p> <p>c. Monitoring in order to determine compliance with the WQS in condition 44. Throughout the term of the consent this shall include long-term water column monitoring for nutrient (NH<sub>4</sub>-N, NO<sub>3</sub>-N, NO<sub>2</sub>-N, DRP, Si, TN and TP) and chlorophyll a concentrations, phytoplankton composition and biomass, salinity, clarity, temperature, turbidity and dissolved oxygen (DO) at locations stipulated in condition 63c. The precise location of the long-term monitoring stations and the range of specific nutrient parameters monitored may, however, be adjusted over time in response to monitoring results and/or in response to modelling considered necessary by the Peer Review Panel in accordance with condition 70c. This monitoring is to be undertaken at least four times per year with at least two surveys occurring during mid-summer periods of highest salmon feed discharge rates and at least two surveys occurring periods</p> |  |

associated with winter/spring and/or autumn diatom maxima.

d. Monitoring intensity of a-c above shall be dependent upon the age of the marine farm, how stable the feed discharge levels have been over the 12 months, and whether or not the marine farm had been compliant with the EQS over the last 2 years (and the nature of any breaches).

E. The MEM-AMP shall include the following monitoring:

Targeted water column surveys to quantify the localised effect of the marine farm on surrounding water quality, for the purpose of obtaining information regarding marine farm-specific, near-farm mixing properties in order to provide a context for evaluating compliance with the EQS – WQS in condition 44. This shall involve a series of fine scale surveys in the vicinity of the marine farm (within 1km from the net pens) measuring: salinity, clarity, temperature, chlorophyll a, turbidity, dissolved oxygen (DO), nutrient concentrations (NH<sub>4</sub>-N, NO<sub>3</sub>-N, NO<sub>2</sub>-N, DRP, Si, TN and TP), phytoplankton composition and biomass along transects that move away from the marine farm and span potential nutrient gradients. The surveys shall be undertaken at least twice per year and continued for at least two years after the marine farm has reached stable maximum feed discharge levels and no future increases are proposed. With respect to the monitoring objective, the monitoring approach may be adjusted over time in accordance with the written recommendation of the Peer Review Panel.

F. Annual quantitative and qualitative monitoring for potential effects at soft sediment sites in neighbouring bays near to, and removed from, the marine farm, in order to ensure that the marine farm is not resulting in seabed enrichment in areas of natural deposition in neighbouring bays. The sites shall be chosen based on potential exposure to increased biodeposition including any areas in those bays identified by the Tangata Whenua Panel (refer to condition 77) as customary kaimoana gathering areas. This monitoring shall be undertaken at a selection of representative soft sediment sites, which may also double as reference sites for near-farm monitoring (see condition 66a), and shall be continued until at least 5 years after the marine farm has reached a stable level of feed discharge and no future increases are proposed. [The same monitoring may be undertaken for a group of marine farms, as it will assess the cumulative effects from all marine farms in that group.]

g. Annual quantitative and qualitative monitoring of habitats that support notable biological features under or within 1km of the net pens ('reef' monitoring), including any area of blue cod habitat or any areas identified by the Tangata Whenua Panel (refer to condition 77) as customary kaimoana gathering area, in order to ensure that the operation of the marine farm is not causing adverse effects as a result of biodeposition. Monitoring shall also include comparable habitats at appropriate reference sites. This monitoring shall be continued until at least 5 years after the marine farm has reached a stable level of feed discharge and no future increases are proposed. For the purposes of this condition 'notable biological features' shall include but not be limited to

66 (e) Condition amended -  
variation approved 05/09/2017

areas of significant reef, tubeworm mounds and hydroid colonies. [This condition will only apply to those marine farms with notable biological features within 1km of the marine farm.]

Continued in condition 66b.

66b

h. Annual quantitative and qualitative monitoring of ephemeral macroalgae (e.g. *Ulva* sp.), benthic algal films and perennial algae (e.g. *Hormosira banksii*) percentage cover and the abundance of grazing invertebrates (e.g. cats' eyes snails (*Turbo smaragdus*) and Kina (*Evechinus chloroticus*) on intertidal and shallow subtidal rock reefs, including any reefs identified by the Tangata Whenua Group (refer to condition 77) as customary kaimoana gathering area in order to ensure that the operation of the marine farm does not cause an obvious or noxious build-up of macroalgal (e.g. sea lettuce) biomass. Monitoring shall be undertaken two times during one year at the following locations:

i. At or near locations expected to have the greatest potential for marine farm-related cumulative enrichment effects (either within 1km of the marine farm or in neighbouring bays);

ii. At or near locations further away from the marine farm or groups of marine farms in locations that are expected to have less marine farm-related cumulative enrichment effects.

This monitoring shall be continued until at least 5 years after the marine farm has reached a stable level of feed discharge and no future increases are proposed.

i. After 3 years of operation at the Initial Feed Discharge level in Table 1, a repeat of the baseline monitoring undertaken in accordance with condition 63a, in order to review the dimensions and areas of the EQS compliance Zones in Table 2, condition 39, and the location of the compliance monitoring Stations specified in Table 3, condition 40. This monitoring may incorporate the compliance monitoring for the EQS – Seabed Deposition in terms of condition 66a for that year.

j. One-off monitoring of the effects of submerged artificial lighting on the biology of the water column (e.g. zooplankton composition and abundance), when the submerged artificial lights are fully operation, to compare with the assessment of effect of submerged artificial lighting undertaken at Clay Point marine farm, in order to confirm that the effects are similar. (To apply to any farm which is exposed to lower current speeds than Clay Point where the assessment of effect of submerged artificial lighting for the application was undertaken.)

k. Quarterly monitoring over 2 years by scientifically advised marine farm staff of the effects from submerged artificial lighting on changes in night-time feeding activity by fish, seabirds and marine mammals in and around the illuminated net pens, in order to confirm that the magnitude of these effects are generally as expected.

l. Monitoring of feed loss at a range of appropriate times across a full production cycle, once the marine farm has reached a stable level of feed discharge and no future increases are proposed, to establish feed loss levels and their variability through time.

m. Seasonal monitoring of the size and composition of aggregations of pelagic and demersal fish beneath the marine farm at a range of appropriate times across one year, once the marine farm has reached a stable level of feed discharge and no future increases are proposed.

The Annual Report shall include, but not be limited to, the following:

- a. A statement as to the tonnage of feed and nitrogen discharged each month over the previous year.
- b. The results of all monitoring undertaken in the previous year.
- c. A comprehensive analysis of the results of that monitoring, including:
  - i. whether the monitoring information obtained is fit for the purpose of determining the effects from the operation of the marine farm and for determining whether compliance with the EQS specified in conditions 38-44 is achieved.
  - ii. whether there are any evident trends of effects from the operation of the marine farm.

EQS - Deposition on the Seabed

- d. An assessment and conclusions as to whether compliance with the EQS specified in condition 48 has, or has not, been achieved for the previous year.
- E. Recommendations as to any amendments to management practices (including any increases or decreases on the tonnage of feed to be discharged) at the marine farm in order to ensure that the EQS in condition 40 are complied with.

EQS – Copper and Zinc Levels

- f. An assessment and conclusions as to whether compliance with the ANZECC (2000) ISQG-Low criteria for copper and zinc set out in condition 41 has, or has not, been achieved for the previous year.
- G. Where the ANZECC (2000) ISQG-Low criteria for copper and zinc have been exceeded, recommendation as to any amendments to monitoring and management actions at the marine farm, in accordance with condition 42.

EQS – Water Column

- h. An assessment and conclusions as to whether the WQS specified in condition 44 have, or have not, been complied with, for the previous year.
- i. Recommendations as to any amendments to management practices (including any increases or decreases in the tonnage of feed to be discharged) at the marine farm, in order to ensure that the WQS specified in condition 44 continue to be complied with. In the case of non-compliance with the WQS, recommendations as to monitoring, analysis and/or management responses in accordance with condition 44d.

Review of the Dimensions of the EQS Compliance Zones in Table 2

- j. Following 3 years of operation at the Initial Feed Discharge level in Table 1, a review of the results of the monitoring undertaken in terms of condition 66i. This shall include a comparison of those monitoring results with the dimensions and areas of the EQS compliance Zones specified in Table 2, condition 39. In accordance with condition 39b, the Annual Report shall specify any recommendations for amendments to the dimensions and areas of the EQS compliance Zones in Table 2, condition 39, and to the location of the representative compliance monitoring Stations specified in table 3, condition 40, for the subsequent years;

Determination of WQS

- k. The Annual report will include the relevant reviews of the near farm and wider-scale water column and ecosystem monitoring results and of WQS and



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|    | <p>associated hierarchy of responses to breaches of the WQS as specified in condition 44. Prior to specifying amendments to the WQS and responses, the consent holder shall consult with the Council and the Department of Conservation.</p> <p>Other Recommendations</p> <p>I. Where identified as a result of the monitoring, and recommendations for other actions to be undertaken to address potential effects from the operation of the marine farm set out in condition 54 and to achieve to Purposes in condition 55, including to avoid, remedy or mitigate any significant adverse effects from the operation of the marine farm.</p> <p>M. Any other recommendation for amendments to the monitoring programme for the following year.</p>   |  |
| 68 | <p>Peer Review Panel</p> <p>The consent holder shall establish, at its own cost, a Peer review Panel, for the following purposes:</p> <p>a. To review and provide recommendation to the Council and the consent holder in respect of the adequacy and appropriateness of the Baseline Plan and the Baseline Report required by conditions 63 and 64, prior to their provision to the Council for its approval;</p> <p>b. To review and provide recommendation to the Council and the consent holder in respect of the adequacy and appropriateness of any aspect of an Annual Report (required under condition 67) which relates to:</p> <ul style="list-style-type: none"> <li>i. Any change in any WQS;</li> <li>ii. Any adjustment to the areas and dimensions of the seabed EQS Compliance Zones; or</li> <li>iii. Any increase in feed discharge to the marine farm;</li> </ul> <p>Prior to its provision to the Council for its approval; and</p> <p>c. To review and provide recommendations to the consent holder in respect of the adequacy and appropriateness of the Marine Environmental Monitoring and Adaptive Management Plans (MEM-AMP) and Annual Reports (other than those aspects specified in b above) required under conditions 65-67, prior to their provision to the Council.</p> <p>The Peer Review Panel shall be established in time to review the Baseline Plan.</p> |  |
| 69 | <p>The Peer review Panel shall comprise:</p> <p>Not less than three persons, at least two of whom shall be scientists who, between them, have experience across the following scientific areas - marine seabed and water column ecology - and evaluating enrichment-related effect - and who are recognised by their peers as having such experience, knowledge and skill. Prior to nominating any person for membership of the Peer Review Panel, the consent holder shall seek comment on that person from the Department of Conservation. These persons shall be approved in writing by the Council before they commence their review functions.</p>   |  |

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| 70 | <p>The Peer Review Panel shall report to the consent holder and/or the Council (as required by condition 68) on the following matters:</p> <ul style="list-style-type: none"> <li>a. Its review of the Baseline Plan, its assessment as to the adequacy of the existing water quality data and monitoring to achieve the requirements of condition 63 and whether the actions and methods are in accordance with good practice, and any recommendation regarding changes to the monitoring proposed or any requirements for further modelling;</li> <li>b. Its review of the Baseline Report, its assessment as to whether it adequately responds to the results of the monitoring undertaken in terms of the Baseline Plan and achieves the requirements of condition 64 and any recommendations regarding changes to the conclusions and recommendation contained in the Baseline Report. This shall specifically include a review of, and any recommendation for changes to, the initial WQS required by conditions 44a and the hierarchy of responses to breaches of the WQS;</li> <li>c. Its annual review of the MEM-Amp, its assessment as to the adequacy of the monitoring and marine farm management and other actions proposed to achieve the requirements of conditions 65-66 and whether the actions and methods are in accordance with good practice, and any recommendations regarding changes to the monitoring proposed or any requirement for further modelling.</li> <li>d. Its annual review of the Annual Report, its assessment as to whether it adequately responds to the results of the monitoring undertaken in terms of the previous MEM-AMP and achieves the requirements of condition 67 and any recommendations regarding changes to the conclusions, recommendations and other matters specified in the Annual Report. This shall specifically include a review of, and any recommendations for changes to, the WQS required by Condition 44b and the hierarchy of responses to breaches of the WQS;</li> <li>e. Prior to any increase in the annual tonnage of feed discharge to the marine farm, confirmation that the requirements of conditions 36-37 are complied with, and any associated recommendations regarding changes to the monitoring proposed or any requirement for further modelling;</li> <li>f. Confirmation that the requirements of condition 38-44 have been complied with;</li> <li>g. Any other matters it considers appropriate in fulfilling its purposes in terms of condition 68 above;</li> <li>h. Any recommendations as to whether it considers any particular condition(s) should be subject to review in accordance with sections 128 and 128 of the Act.</li> </ul> |  |
| 71 | <p>As part of undertaking its role in accordance with condition 70, the Peer Review Panel shall provide an opportunity for the Tangata Whenua Panel (refer to condition 77) to submit information to the Peer Review Panel that relates to the matters it is required to consider and for the Tangata Whenua Panel to meet and speak at least annually with the Panel prior to the Panel finalising its report to the consent holder on the Baseline report and the Annual Report in terms of condition 70b and 70d.</p>   |  |

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| 72 | Copies of all reports from the Peer review Panel shall be provided to the consent holder, the Council and the members of the Tangata Whenua Panel (refer to condition 77). These shall be public documents and shall be published on the consent holder's website within four weeks of its receipt by the consent holder.  |  |
| 73 | <p>The consent holder shall, in relation to the Peer Review Panel:</p> <p>a. Develop protocols regarding appointment processes, including resignation, replacements, and reappointments; the holding of meetings; provision of information and technical advice, administrative support; and other necessary and related procedures. Such protocols are to be developed in consultation with the Council.</p> <p>b. Maintain and support the ongoing purposes and work of the Panel, as required by the condition of these consents.</p> <p>c. Meet the reasonable costs of undertaking its functions in accordance with the conditions of these consents.</p>   |  |
| 74 | The Peer Review Panel shall determine its own processes and procedures for conducting its meeting as it sees fit. The frequency of meetings shall be determined by the consent holder in consultation with the Peer Review Panel, and shall be sufficient to enable the Peer Review Panel to adequately undertake its duties in a timely manner in terms of condition 70 above.  |  |
| 75 | <p>Social Impact Management</p> <p>The consent holder shall develop the following management plans and provide them to the Council prior to the initial placement of the first structure(s) at the marine farm:</p> <p>a. A Residential Amenity Management Plan to minimise the risk of neighbours experiencing significant reductions in residential amenity due to off-site visual, noise and odour and other effects from the marine farm. This shall include a requirement that there be no firearms at the marine farm at any time, nor on any vessel associated with the marine farm and operate by the consent holder. This shall include the identification of a specific liaison person to be the point of contact with neighbours and any local residents association for the purpose of disseminating information relating to the operation of the marine farm and to respond to any issued or concerns raised.</p> <p>B. A Wildlife Nuisance Management Plan to minimise the risk of neighbours experiencing significant reductions in amenity values due to wildlife nuisances attributable to the marine farm.</p> <p>C. A Solid Waste Management Plan to minimise the risk of reductions in neighbouring amenity values caused by the accumulation of solid waste debris along the shoreline resulting from the marine farm.</p> <p>D. A Staff Recruitment and Training Plan to maximise opportunities for Marlborough residents to gain employment in the consent holders expanded Marlborough operations resulting from the development of the marine farm.</p> <p>These Plans may be combined together or form part of a wider management plan, provided the matters referred to are addressed in any such document.</p> |  |

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| 76 | <p>Tourism and Recreation<br/>The consent holder shall:</p> <p>a. Prior to the initial placement of the first structure(s) at the marine farm, establish a nominated person within the consent holder's company to liaise with Destination Marlborough (or its successor) and relevant tourism and recreation businesses and organisations in the Marlborough Sounds. The name and contact details for the nominated person, and any changes to those details, shall be provided to Destination Marlborough (or its successor). The nominated person shall be the authorised point of contact for anyone who might be interested in discussing, or meeting, with the consent holder in relation to:</p> <p>i. Tourism opportunities associated with salmon or salmon farming;</p> <p>ii. Queries or concern about the operation of the farm, as relevant to tourism or recreation in the Marlborough Sounds.</p> <p>b. Offer to host, and provide relevant expertise from within the consent holder's company, at an annual forum for tourism operators within the Marlborough Sounds, in order to assist in growing tourism opportunities and business in the Sounds, including in Outer Pelorus Sound. The Offer shall be mad through Destination Marlborough (or its successor) which shall be asked to co-ordinate the forum.</p>  |  |
| 77 | <p>Tangata Whenua<br/>Prior to finalising the Baseline Plan, the consent holder shall offer Te Runanga o Ngati Kuia Charitable Trust (or the organisation with a mandate to represent Te Runanga o Ngati Kuia in relation to these issues) and Ngati Koata Trust Board (or the organisation with a mandate to represent Ngati Koata in relation to these issues) the opportunity to establish, and decide the membership of, a Tangata Whenua Panel. The purpose of the Tangata Whenua Panel ,if established, shall be to advise the Peer review Panel in respect of any matters of concern or issue to the Tangata Whenua Panel including but not limited to:</p> <p>a. The mauri of the water in the Sounds.</p> <p>b. Any cultural matters or consideration that the Peer review Panel should be aware of or take into account in considering the water column monitoring locations proposed in the Baseline Plan, the initial Water Quality Standards proposed in the Baseline report and any amendment to the ongoing Water Quality Standards in a subsequent Annual Report.</p> <p>If requested by the Tangata Whenua Panel, the consent holder shall meet with it promptly, and shall take into account any matters raised by the Panel in respect of the exercise of the consent.</p> <p>The consent holder shall also:</p> <p>c. Consult with the Tangata Whenua Panel in relation to the preparation of the Marine Mammal Management Plan and the Biosecurity Management Plan, required by conditions 50 and 51;</p> <p>d. Pay all reasonable costs of the Tangata Whenua Panel meeting and providing advice to the Peer review Panel and the consent holder on cultural matters in respect of this consent.</p> <p>The Tangata Whenua Panel may operate jointly for more than one marine farm managed by the same consent holder.</p> |  |

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| 78 | <p>Prior to the initial placement of the first structure(s) at the marine farm, the consent holder shall, in consultation with the Tangata Whenua Panel (refer to condition 77, prepare an Accidental Discovery Protocol, and provide a copy of the protocol to the Council. The protocol shall be implemented in the event of an accidental discovery of cultural or archaeological artefacts during the development of the marine farm. The protocol shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a. Training procedures for contractors installing anchors for the marine farm regarding the possible presence of cultural or archaeological sites or material, what these might look like, and the relevant actions to take if any sites or material are discovered;</li> <li>b. Parties to be notified in the event of an accidental discovery shall include, but not be limited to, the iwi with manamoana in the vicinity of the marine farm, the New Zealand Historic Places Trust and the Council.</li> <li>c. Procedures to be undertaken in the event of an accidental discovery (these shall include the immediate ceasing of all physical works in the vicinity of the discovery);</li> <li>d. Procedures to be undertaken before work may recommence in the vicinity of the discovery. These shall include allowance for appropriate tikanga (protocols), recording of sites and material, recovery of any artefacts, and consulting the iwi with manamoana in the vicinity of the marine farm and the Historic Places Trust prior to recommencing works in the vicinity of the discovery.</li> </ul> |  |
| 79 | <p>Prior to the initial placement of structure(s) at the marine farm the consent holder shall invite the members of the Tangata whenua Panel (refer to condition 77) to collaborate in undertaking a Stocktake of Wahi Tapu in the areas that may be affected by the installation or operation of the marine farm, including wahi tapu located in the immediate vicinity of the marine farm. This stocktake shall involve the collation of available information (written and oral) regarding the location of, and values associated with, any wahi tapu in these areas.</p>  |  |

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| 80 | <p>Review of Conditions by Consent Authority<br/>In accordance with the provisions of sections 128 and 129 of the Resource Management Act (or any provision in substitution therefore), the Council may, at the time(s) specified in Table 4 below, review the conditions of consent, by serving notice of its intention to do so for one or more of the purposes specified in Table 4:</p> <p>Table 4: Purpose and Times of Potential review of Condition of tis Consent</p> <p>Purpose - To deal with any adverse effect on the environment which may arise from the commencement of the consent and which cannot be adequately avoided, remedied or mitigated by any term or condition incorporated within the consent, pursuant to the provisions of section 128(1)(a)(iii) of the Act.</p> <p>Time(s) of Service of Notice - On any anniversary of the initial placement of the first structure(s) at the marine farm, or, within 2 months of the receipt of the Annual report or 5 months of any other report.</p> <p>Purpose - To modify the monitoring programme.</p> <p>Time(s) of Service of Notice - Within 2 months of receipt of the Annual Report required by condition 67.</p> <p>Purpose - To review the tonnage of feed that may be discharged in accordance with the conditions of this consent, in order to ensure compliance with the EQS in conditions 38-44 is achieved.</p> <p>Time(s) of Service of Notice - Within 2 months of receipt of the Annual report or 5 months of any other report.</p> <p>Purpose - To review the specification of the WQS required by conditions 44a and 44b and the hierarchy of WQS and responses.</p> <p>Time(s) of Service of Notice - Within 2 months of receipt of the Baseline Report required by condition 64 or the Annual Report required by condition 67.</p> <p>Purpose - To require the consent holder to adopt the best practicable option to avoid, remedy or mitigate any adverse effect on the environment relating on the activity.</p> <p>Time(s) of Service of Notice - Within 2 months of the Annual Report or 5 months of any other report.</p> <p>Purpose - To review the navigation risk reduction and management plan to ensure that management practices result in compliance with conditions 22-30.</p> <p>Time(s) of Service of Notice - On any anniversary of the initial placement of the first structure(s) at the marine farm.</p> |  |
| 81 | <p>Other Matters<br/>Pursuant to section 36 of the Act and the Council's Schedule of Fees, the consent holder shall pay all actual and reasonable costs associated with any review of this resource consent.</p>   |  |
| 82 | <p>Inspection and monitoring by the Council's Regulatory Department in respect of the conditions of this consent may take place annually or more frequently in the event that a previous inspection or complaint indicated the need for more frequent inspection and monitoring.</p>   |  |
| 83 | <p>The costs of these inspections and any formal monitoring programme established in consultation with the consent holder will be charged to the consent holder in accordance with the Council's Schedule of Fees pursuant to section 36 of the Act.</p>   |  |

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| 84 | <p>Prior to the first discharge of feed to the marine farm, either:<br/> All costs payable by the applicant to the Environmental Protection Authority or the Minister pursuant to s149ZD of the Resource Management Act 1991 must have been recovered; or<br/> If the amount payable to the Environmental Protection Authority or the Ministry pursuant to s149ZD is subject to a dispute, objection or appeal, the outstanding amount must be placed into a trust as nominated by the Environmental Protections Authority pending resolution of the dispute, objection or appeal.</p> |  |
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**Important Notes**

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