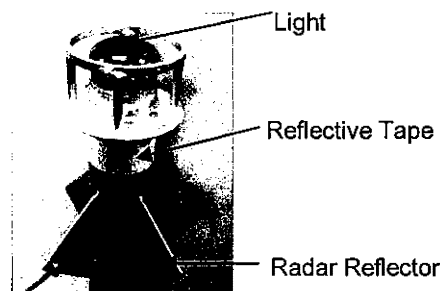


Marine Farm Lighting and Marking Plan – U040412 and MFL239 (Site no.8110)

I, Alexander van Wijngaarden, Harbourmaster of Marlborough District Council, hereby approve, under Maritime Delegation from the Director of Maritime New Zealand pursuant to Sections 200, 444(2) and 444(4) of the Maritime Transport Act 1994, the lighting and marking associated with coastal permit U040412 and MFL239 (Site no.8110), located in Forsyth Bay, Outer Pelorus as follows:

1. That each end of each longline display an orange buoy, as shall the middle of each of the seawardmost and landwardmost longlines.
2. That a yellow light, radar reflector and a band of reflective tape 50 millimetres in width be displayed in the positions marked 'A' on the attached structures plan. The lights shall be solar powered and shall have the following characteristics: F1 (5) Y (20 secs) 1m 1M.



3. That radar reflectors and a band of reflective tape be displayed in the positions marked 'B' on the attached structures plan.
4. That a band of reflective tape 50 millimetres in width be displayed in the positions marked 'C' on the attached structures plan.

Interpretation:

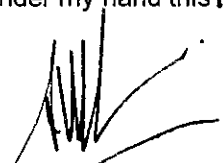
Light - a yellow light, group flash 5 every 20 seconds (minimum flash length not less than 0.5 seconds), height of light not less than 1 metre above the water, range at least 1 nautical mile.

Radar reflector – to be set at not less than 1 metre above the waterline with a band of reflective tape set above this. The radar reflector should be visible on radar at a range of at least 500 metres.

Reflective tape – should be at least 50 millimetres in width and placed around the circumference of the support tube; the tape should be visible by torchlight at a range of at least 50 metres. Alternative reflectors may be substituted for reflective tape, provided that they are mounted where they are visible by torchlight from at least 50 metres all round.

5. Each end of the most landward and most seaward longlines shall carry the name of the consent holder, and the site number issued by Marlborough District Council (e.g. #8405), displayed in bold clear letters in such a manner that they can be clearly read from a distance of 10 metres.

Given under my hand this 16th day of OCTOBER 2014

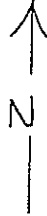


ALEXANDER VAN WIJNGAARDEN

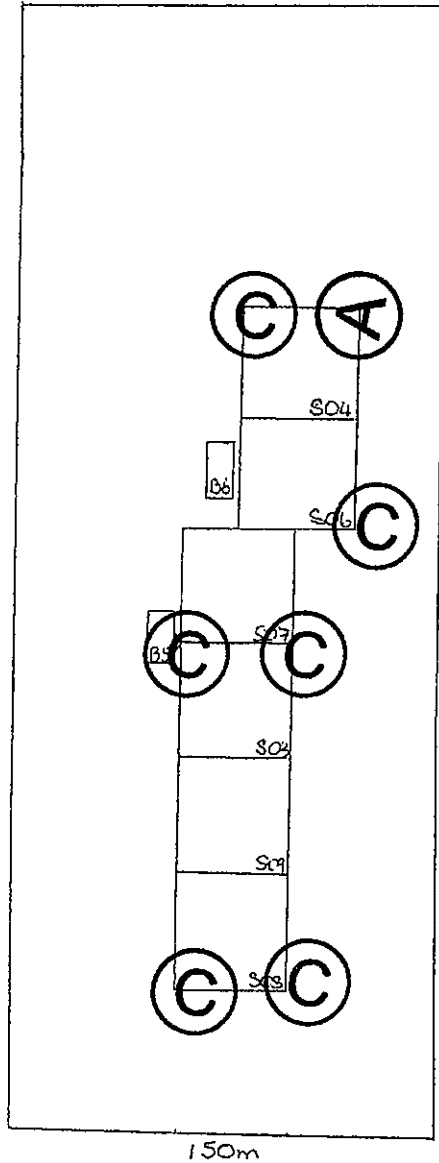
Structures and lighting plan:

MARINE FARM LICENCE 239 (LMFL239)

COASTAL PERMIT U94032



RECEIVED
29 APR 1998
MARLBOROUGH DISTRICT COUNCIL



KEY
S03 - S08 : CAGES
B5, B6 : BARGES

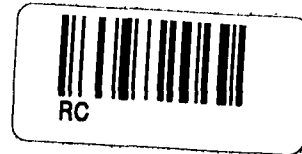
(APPROX. SCALE)

SALMON FARM LAYOUT (MFL 239) (MOKI BAY) FORSYTH B

ED

16/10/14

**RESOURCE MANAGEMENT
ACT 1991**



**Decision on Application for
Resource Consent**

RESOURCE CONSENT No: U040412

**APPLICANT: The New Zealand King
Salmon Ltd**

**This document contains a record of
decision(s) on the following application
for resource consent(s):**

COASTAL PERMIT - STRUCTURE
COASTAL PERMIT - OCCUPANCY
COASTAL PERMIT - ACTIVITY
COASTAL PERMIT - DISCHARGE TO SEAWATER

DECISION DATE:

4 May 2005



Important Information

A resource consent is comprised of:

- A decision document (subject to the outcome of any appeals/objections), and;
- The application for resource consent, except where modified by conditions.

An information sheet is attached which sets out the provisions of the Resource Management Act 1991.

It is important that you keep this document in a safe place; together with any future amendments that may be made to conditions of the resource consent.

THE RESOURCE MANAGEMENT ACT 1991
HEARING BEFORE A COMMISSIONER

**Marlborough District Council Resource Management Hearing -
Application for Resource Consent - Coastal Permit (Structure, Activity, Occupancy &
Discharge to Seawater) - West Coast, Forsyth Bay, Outer Pelorus Sound -
Marine Farm Licence 239 -
- Application on behalf of New King Salmon Company Limited
Consent No U040412**

APPLICANT: The New Zealand King Salmon Company Limited

LOCAL AUTHORITY: Marlborough District Council

APPLICATION REFERENCE: U040412

DESCRIPTION OF ACTIVITY: To increase the area of surface structures of the marine farm from 1.2 hectares to **2.0 hectares**.

To install underwater lighting.

To discharge up to **4000 metric tonnes** of salmon feed per annum.

NB: This is a new permit replacing the occupation of the Coastal Marine Area previously authorised by U940328 and U980454 which both expired on the 31st August 2004.

CONSENTS APPLIED FOR: Coastal Permit – Structure, Occupancy, Activity & Discharge to Seawater (20 year duration)

SITE OF APPLICATION: West Coast, Forsyth Bay, Outer Pelorus Sound

HEARING: Tuesday, 29 March 2005 at Blenheim



1 Introduction

- 1.1 The site in question was established as a marine farm in 1986, with a total occupation area of **6.0 hectares**. Marine farm licence 239 was issued prior to the Resource Management Act 1991 (RMA). All operational conditions were dictated by Fisheries legislation under which the licence was issued. Since 1989 there have been two further coastal permits issued specifying structure types and anchorage area. These are coastal permit U940328, and coastal permit U980454.
- 1.2 It should be noted that both of the above permits expired on 31 August 2004. New Zealand King Salmon Company Limited lodged this application on 27 February 2004. The processing of the application was deferred pending a decision by the Environment Court as to whether the moratorium applied to an increase in the size of structures. The Court subsequently confirmed that it does not and accordingly the applicant is entitled to continue in operation pending a decision on this application pursuant to section 124A of the RMA.
- 1.3 The current area of total occupation is 6.0 hectares. The majority of this can only be used for anchoring purposes with a total of 1.2 hectares to be occupied by marine farm structures. The site is currently unoccupied being “fallowed” by New Zealand King Salmon Company Limited in 2001.
- 1.4 Pursuant to section 93 of the RMA this application was notified on 9 September 2004 and at the closing of submissions on the 7 October 2004, only one had been received, that being from the Director General of Conservation opposing the application.
- 1.5 Subsequent discussions between New Zealand King Salmon Company Limited and the Department of Conservation resulted in agreement between the parties regarding the ongoing processing of this consent. A letter was received from the Director General on 24 February 2005, which includes the statement: *“Provided that any consent granted includes the agreed consent conditions I am satisfied that the concerns raised in the Director General’s submission have been addressed and therefore the right to be heard in support of this submission.”*
- 1.6 A letter was received from New Zealand King Salmon Company Limited on 18 February 2005. It was authored by Mr Mark Gillard, Operations and Contracts Manager for the above company. The letter referred to two applications submitted by New Zealand King Salmon Company Limited, that being Otanerau Bay (U040217) and Forsyth Bay (U040412). The letter contained four conditions that had been agreed with the Department of Conservation regarding the processing of the above consents. They stated:
- “1. Cages will be restricted to a clearly defined 2.0 hectare area (plan attached).



2. *The (currently consented) ability to move cages within the total farm area is hereby withdrawn.*
3. *No expansion on the current cage layout will be in a landward direction.*
4. *Prior to any expansion of cages, New Zealand King Salmon Company Limited will carry out a quantitative survey (e.g. a video transect) to document the nature of the seabed and to confirm that no significant ecological features are present."*

The letter also contained two maps; Figure 1 described the current layout and proposed expansion of the Otanerau Bay farm. Figure 2 related to this application, it being identification of the prior position of marine farm cages on the site and also identified the proposed position of the two hectares of structures sought in this application.

- 1.7 No other submissions were received to this application by the closing date. I have read all evidence and submissions relating to this application and have considered them during my deliberations.

2 Background

- 2.1 The applicants applied to increase the size of structures to a total of 2.0 hectares on the current site. The configuration of cages and ancillary barges and their location within the permit area was requested to be at the discretion of the consent holder. The extension of the marine farm activity would necessitate an increase in the amount of salmon feed discharged annually to seawater to a total of 4000 metric tonnes. The term of the consent applied for was requested to be 20 years.
- 2.2 The farm was positioned on the site in 1986 and was farmed continuously until moved in 2001, by New Zealand King Salmon Company Limited. The area subject to this application is currently vacant. The site of the marine farm occupies space zoned Coastal Marine Zone Two within the Marlborough Sounds Resource Management Plan (MSRMP). It shares the bay with a number of other marine farm licences and established marine farms.
- 2.3 New Zealand King Salmon Company Limited operate four active marine farm sites and hold occupancy rights for up to five throughout the Marlborough Sounds. Fingerlings from New Zealand King Salmon Company Limited land based hatcheries at Southbridge (Canterbury), Golden Bay or Kaituna are used to stock the present marine farms. The site of this application is located to the west of Forsyth Bay approximately 1.6 kilometres northwest of Bird Island. It lies to the south of an area identified as outstanding landscape by the MSRMP, but outside that area.



- 2.4 The adjacent coastline rises steeply from a rock and cobble intertidal zone, through steep slopes, which are currently covered by regenerating coastal shrubbery to a ridgeline approximately 200 metres above sea level.
- 2.5 To the northeast 100 metres from the proposed site is marine farm licence U941503 owned by Marlborough Mussel Company Limited, while to the southwest, approximately 350 metres away, lies mussel farm licence 153 also belonging to Marlborough Mussel Company Limited. The nearest residence would be a house, which is, located in a small embayment some 400 metres south of the site. The salmon farm is not visible from this site.
- 2.6 The proposed structures would be visible from a house on Forsyth Island to the east, however this would be a distance of 3 kilometres away. The adjoining land is zoned Rural One within the MSRMP, while the foreshore reserve is identified as Conservation Zone.
- 2.7 The MSRMP and Coastal Plan became operative on the 28 March 2003.
- 2.8 Unlike other applications made on behalf of New Zealand King Salmon Company Limited recently, the company wish to pursue the option of underwater lighting in this application.
- 2.9 No correspondence has been received from the Maritime Safety Authority or the Ministry of Fisheries in relation to this application. In terms of the status of the application, in Clause 37, Mr Heather for the Marlborough District Council, the author of the Council's report, deemed that the occupation, activity, and discharge portions of the application should be dealt with as a discretionary activity. Mr Fletcher, the counsel for the applicant company, agreed with this assessment. I also concur with Mr Heather's submission relating to the status of the application and thus it will be dealt with as a discretionary activity.

3 **Hearing**

- 3.1 The hearing was held at the Marlborough Civil Defence Headquarters in Wither Road, Blenheim at 1.30 pm on the 29 March 2005.
- 3.2 Mr Brian Fletcher of Gascoigne Wicks, Blenheim, appearing on behalf of the New Zealand King Salmon Company Limited, attended the hearing. With him giving evidence were:

Mr Paul Steere, Chief Executive Officer of New Zealand King Salmon Company Limited;

Mr Stuart Hawthorne, General Manager Aquaculture, for New Zealand King Salmon Company Limited;



Mr Mark Gillard, Operations and Contract Manager, New Zealand King Salmon Company Limited; and

Mr Barry Forest of the Cawthron Institute read evidence on behalf of Mr Grant Hopkins an environmental scientist for the Cawthron Institute who was unable to attend the hearing for personal reasons.

Mr Keith Heather, Resource Management Officer, represented Marlborough District Council.

There were no other submitters in attendance at the hearing.

- 3.3 I do not intend to summarise the evidence presented by the company to the hearing as there were no other submitting parties at the hearing and the information contained and presented to the hearing will be available and well understood by the applicant company.
- 3.4 Much of the evidence presented by Mr Fletcher and his witnesses is generic to a number of consents sought by the New Zealand King Salmon Company Limited in relation to expansion of their farms. Here again I did not wish to summarise this evidence and will really only deal with those aspects of this application which are unique to the site.
- 3.5 In opening Mr Fletcher outlined the application and introduced the various witnesses he intended to call during the course of the hearing. In submitting on the permitted baseline which may have been applicable to this application, Mr Fletcher was of the view that it would be artificial to disregard what was actually occurring on the site at present and may well occur as a controlled activity.
- 3.6 In assessing the matters which should be considered when assessing the section 104 issues in this case, Mr Fletcher outlined matters as he saw it regarding the physical nature of the site, the ecological effects on water quality and sustainability, amenity effects, noise and recreational use. He then went on to briefly outline the various policies and objectives of relevant policy statements and plans that were applicable to this application as he saw it.
- 3.7 In Clause 37 of the submission Mr Fletcher briefly described the Adaptive Management Technique that was being proposed by the company at this and other sites within the Marlborough Sounds and outlined various cases where he submitted the Environment Court had sanctioned the technique. He stated in Clause 44 of his report: *“The adaptive management suggested in this application meets the definition and the general principles set out by the Environment Court. It provides a very valuable tool to the District Council in receiving the monitoring information and requires the applicant to take steps to reduce any adverse effects that might be occurring above the baseline. It provides an incentive to the applicant to ensure that those effects are kept at or below the baseline level.”*



- 3.8 Mr Stuart Hawthorne presented his evidence in two parts. In Clause 4.2 of Part One of his evidence, he highlights the fact that the water depth, at the site, was generally over 32.0 metres and located in sheltered waters. He told the hearing that the site does experience some higher summer water temperatures and thus current management plans to farm smaller fish at this farm during the summer months.
- 3.9 He outlined the fact that the Forsyth farm was now fallow with the cages that were previously on site relocated to Waihinau Bay. The site has been vacant since December 2001. In Part Two of his evidence Mr Hawthorne told the hearing that as a result of current flow surveys in the area it had been identified that net water flow is out of the bay to the northeast, at the site, with moderate current speeds, and that this is being confirmed by further monitoring programmes. Mr Hawthorne said, in Clause 3.2.2, of his evidence that the organic and biodegradable waste had settled in a relatively small egg shaped area around the cages rather than rectangular due to the effect of tidal currents. He went on to say that the Forsyth Bay farm was well positioned in deep moderately flushed waters and had a long track record of monitoring for environmental effects. He pointed out that the seabed under the cages and within most of the bay was predominately sandy mud and believed that effects of fish feed on that environment would be measurable but remain no more than minor, due to the relatively low conservation value and sandy mud habitat types within the area.
- 3.10 In terms of options for remedying any adverse effects on the seabed below the Company farms, Mr Hawthorn considered that fallowing was the only feasible alternative for the recovering of the seabed and suggested that it would take some six months to ten years for these sites to recover, indicating that he believed the Forsyth Bay site could possibly take at least ten years to achieve this.
- 3.11 In turning to the establishment of underwater lighting, Mr Hawthorn outlined for the hearing that Chinook salmon mature, spawn and die at approximately two years old. Therefore it was possible for fish to reach that state within the cages and die before being able to be harvested. Lights had been demonstrated to be successful in reducing fish two year old maturity levels, thus if lights were used on the farm it could be found desirable in delaying the onset of maturation. He told the hearing that field trials would be required to confirm the application of lights in the New Zealand context, but given the work already completed in freshwater environments there is a high degree of confidence that it would be successful. He also pointed out that the lights that would be used would be underwater lights and thus surface visibility of them would be reduced. The Forsyth Bay site was believed relatively uninhabited, further reducing potential conflict with near neighbours and other users of the coastal zone. As the evidence of Mr Hawthorne relating to the adaptive management technique is very similar and generic to other consents I do not wish to revisit any detailed analysis of it in this particular decision.



- 3.12 Mr Mark Gillard, the Operations and Contracts Manager, for New Zealand King Salmon Company Limited then gave evidence on behalf of the company and mentioned a number of areas where he disagreed with Mr Heather's Council report.
- 3.13 Mr Gillard was unaware of any interference with customary fishing rights or areas of special significance to iwi in the area and I note that local iwi have not submitted to this particular application. In Clause 6.2.2 Mr Gillard noted that the agreement with the Department of Conservation addresses the Resource Management Officer's concern identified in the report about the practicality of the adaptive management regime where cages are to be moved in a particular area. He pointed out to the hearing that the cages were to remain stationary within a 2.0 hectare area and therefore the robustness of the adaptive management regime is maintained.
- 3.14 In terms of navigation Mr Gillard pointed out that the Harbourmaster had voiced concerns relating to the movement of the cages also. Here again Mr Gillard pointed out that, as the cages would be confined to 2.0 hectares that risk would be minimised. He also pointed out that the farm was not on a main navigation route, other than for those servicing the farm.
- 3.15 Mr Barry Forest then read the evidence provided by Mr Grant Hopkins, Environmental Scientist for the Cawthron Institute, and answered questions pertaining to that evidence and to the site, with which he was familiar. Mr Forest in reading the evidence told the hearing that the position of the farm immediately prior to fallowing in 2001 was approximately 135 metres from the shore at its nearest point, with the shore consisting of rocky habitat characteristics of an intertidal and shallow sub tidal zone.
- 3.16 In Clause 4.4 of Mr Hopkins's evidence he described the benthic conditions beneath the farm as being relatively sparse if epifauna, consisting mainly of filamentous hydroids, mussel clumps and associated species (e.g. anemones, occasional sponges and a few scallops). Results of a survey carried out in 2003 showed that the seabed beneath the former location of the salmon cages was moderately enriched and was characterised by black largely anoxic sediments that smelt of sulphide. Few epifauna were present and those observed probably reflected organisms dislodged from the farm structure. He went on to state that the results clearly indicated that there had been a noticeable improvement in seabed conditions at the Forsyth Bay site since the fallowing in November 2001, including a reduction of organic content, oxygenation of the surficial sediments and in increase in species richness of infauna. He also stated that it appeared from the 2004 monitoring survey that the rate of recovery at the Forsyth Bay site may have slowed. He still expected however, the rate of recovery to increase over time as recolonization of the site increases.
- 3.17 In Clause 5.7 of his evidence Mr Hopkins suggests that the long term monitoring of zinc levels would be justified, if future work shows that zinc concentrations beneath the farm sites are elevated



with respect to background levels within the region. When speaking on the enrichment of the water column Mr Hopkins believed that water column mixing processes would likely reduce the elevated nutrient levels to near background ambient conditions within a period of hours i.e. before the plankton are able to reproduce thus the stimulation of plankton growth would be spread out over a wide area and would not be expected to represent an adverse effect.

- 3.18 Mr Hopkins suggested that any seaward expansion of the prior location of farm cages would have the least environmental impact on their available options. He believed that before any further work in expansion took place further work would be required to confirm that the increased footprint contained no special values and to develop an appropriate effects- based programme.
- 3.19 Mr Keith Heather then spoke to his report. Mr Heather in his summary of his assessment regarding access and alienation of public space stated that the application encompasses a relatively minor extension of the marine structures within the context of the bay generally and as such he did not see it as having an adverse effect on public access. After Mr Heather concluded Mr Fletcher gave a brief summary of the evidence provided and commented on those matters raised by Mr Heather.
- 3.20 The hearing concluded at 2.45 pm.

4 Assessment

- 4.1 In assessing this application it is clear that it is a unique opportunity to assess the possible repercussions of adaptive management regimes. As this site has been previously occupied by salmon cage structures and then had them removed it has been possible to study the effects of the removal of the cages on the benthic environment on the seafloor. It is clear to me, from the evidence provided, that there is an improvement noticeable in the seafloor since the removal of the cages however that improvement has not been uniform in its rate. It would also appear that there is little effect on surrounding habitat as you move away from the farm. It would appear however, that matters relating to the recovering of the seabed below farm cages, are something that will need further investigation before final conclusions can be drawn as to the successful outcome of such a practice.
- 4.2 In this particular case we have a marine farm licence, which covers some 6.0 hectares. It should be noted here that that consent would currently allow for structures to be established in the greater area of that licence than has been the practice in previous years. This application seeks to limit the area occupied by structures to a total of 2.0 hectares over the current licensed area. I note here that the Department of Conservation concurs with this course of action. It was argued by the applicants that



to limit the area available for structures to 2.0 hectares would be an advantage in terms of the area that would be affected by the discharge from the farm and I share this view. It would certainly seem preferable to limit the area affected to that which is currently modified or a slight increase to that area, rather than have an extended area something similar to the 6.0 hectares of marine farm licence.

- 4.3 In terms of effect on amenity values of the bay I believe there would be very little difference to that which was experienced at the time that the salmon farm was established on that site. I accept that there would be some increase in vessel movements in terms of the servicing of the farm but apart from that I believe the effects on the amenity values of the bay would be no more than minor.
- 4.4 In terms of noise generated from the farm it is clear that the applicant company has a statutory responsibility to abide by noise control standards as clearly set out in the Coastal Marine Zone of the MSRMP. If the company is unable to achieve those standards as set out in the Plan they must either cease operations or modify their management practice until they can do so.
- 4.5 I acknowledge the economic benefits that New Zealand King Salmon Company Limited brings, not only to the local sounds economy, but also to the wider Marlborough and New Zealand economy. In employing over 350 fulltime staff and exporting some 60% of its produce it is clear that the company makes a significant economic contribution to the local economy.
- 4.6 Having heard evidence relating to previous farm practices and the effect that those practices have had on the seafloor in surrounding bay environment I accept the evidence that this particular site is somewhat more degraded than the company's Te Pangu Bay farm site. Having viewed video evidence of the site taken in 2003, I conclude it is because of different type of current and tidal patterns that occur in Forsyth Bay. It is clear there has been modification to the species of marine farms, animals and habitat on the seafloor under the farm. This modification has shown improvement with the fallowing of the farm and I along with others would expect that situation to continue until such time as it became back to a natural environment. This would only occur of course, if no farming activity were re-established back on site.
- 4.7 Having heard evidence in similar applications, I conclude that the effect of the discharge of salmon feed into the waters of the Marlborough Sounds, while there would be an increase in nutrient levels in the wider marine environment, the tidal flushing in this particular area of the Marlborough Sounds leads me to the conclusion that these effects would be no more than minor.
- 4.8 To ensure that the seafloor environment does not deteriorate from its present condition under the previous farm, New Zealand King Salmon Company Limited has proposed a technical adaptive management regime. This is a regime that has already been sanctioned by the Environment Court



in a number of cases. These include Kuku Mara Partnership (Forsyth Bay v Marlborough District Council, reference ENVCW25/2002; Golden Bay Marine Farmers v Tasman District Council, reference ENVCW19/2003 and Clifford Bay Marine Farms Ltd v Marlborough District Council, reference ENVC C131\200.

- 4.9 The Court has obviously seen Adaptive Management Regimes as a legitimate method of dealing with the uncertain environmental effects marine farms place on the marine environment. As such I propose to consider the application for such a regime in this particular consent as being worth pursuing. What the application proposes is a staged approach to the discharge and the assessment of the environmental effects beneath the farm and some distance beyond, following the first stage and then subsequent second and third stage.
- 4.10 Stage One would allow maximum discharge of 3000 metric tonnes of fish feed in the first year of operation. In September to November of that year following the commencement of Stage One monitoring would be undertaken. The September and November period have been chosen because salmon stock reach peak biomass over this particular period of time. Providing monitoring and then the necessary review of conditions satisfies Council that the increase in discharge is giving rise to no more than minor adverse effect, then Stage Two would be initiated. Stage Two authorises a maximum discharge of 3500 metric tonnes. Here again, as in Stage One, monitoring would take place and providing any adverse effects continued to be no more than minor then Stage Three may commence with a maximum discharge of up to 4000 metric tonnes of salmon feed. I concur with Mr Heather's view when he questioned whether an adaptive management regime based on the benthic survey and monitoring is practical where cages are to be moved, hence it is my view that it is preferable to limit cages to an area already compromised, or not extended any great distance, so that the data collected from the monitoring programme has some consistency and long term basis.
- 4.11 Ongoing survey and review at the maximum level of 4000 metric tonnes would need to show that there was no more than minor increase in effects for that level of discharge to continue.
- 4.12 It is my view that having heard, and viewed the evidence relating to the condition of the seafloor below the previous farm and recognising the local current patterns in this particular part of the Marlborough Sounds, an adaptive management regime would certainly appear to provide a cautious method of approach to managing the effects of the sensitive marine environment that exists within Forsyth Bay and the wider Marlborough Sounds.
- 4.13 One matter that I believe that is relevant to this particular application and is touched on not only by the RMA itself but also the New Zealand Coastal Policy Statement is the issue of how development within the Coastal Marine Zone of New Zealand should be managed. It is not envisaged by the Act or the New Zealand Coastal Policy Statement that there be no development in the Coastal Marine

Zone, but rather that zone be protected from inappropriate development and where development is to occur that it occurs in areas that have already been compromised.

4.14 The New Zealand Coastal Policy Statement 1.1.1 states:

"It is a national priority to preserve the natural character of the coastal environment by:

encouraging appropriate subdivision, use or development in areas where the natural character has already been compromised and avoiding sprawling or sporadic subdivision, use or development in the coastal environment;"

4.15 In this particular application there had already been a marine farm established on the site although the site has now been fallow for some four years. It is accepted that there has been modification to the seafloor beneath the farm and to some degree a distance from it. I accept however that the proposed adaptive management regime, in providing a staged cautious approach to an increased level of feed discharge, will allow for the close monitoring of the effect of that increased discharge and therefore allow for a higher level of management ability to mitigate any adverse effects on the surrounding environment.

4.16 Having read all the submissions relating to this application and having heard the evidence provided at the hearing, it is my conclusion that the approval of this application would ensure the management benefits to the company, as set out in their evidence, would be realised and economic benefits to the Marlborough community as a whole would be forthcoming. Approval would also allow for a controlled cautious approach to increased discharge at the site. This controlled approach must ensure that there is no significant deterioration in the environment beneath the farm.

4.17 The application for undersea lighting for the cage will I believe be worthwhile, in as much as it is experimental at this stage within New Zealand waters, however this is an appropriate opportunity to establish whether the benefits as highlighted in the evidence are forthcoming. As there are few residential buildings in close proximity to this farm an opportunity presents itself to trial the experiment with this lighting proposal without having an undue effect on any nearby neighbours.

4.18 To achieve the results as seen by New Zealand King Salmon Company Limited there will need to be attached to this consent a number of conditions relating to the staging of increased discharge of fish feed and environmental quality standards to be met within three zones of the cages. There will also need to be a high quality of environmental monitoring and reporting to ensure a higher level of credibility and results of ongoing information.

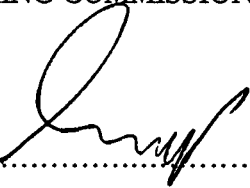


5 Decision

5.1 After considering all relevant evidence placed before me, I conclude that the application by New Zealand King Salmon Company Limited for Resource Consent – Coastal Permit (Occupancy, Structures, Activity and Discharge to Seawater) at Forsyth Bay be GRANTED with the attached conditions.

NB: This replaces the occupation of the Coastal Marine Area previously authorised by Coastal Permits U940328 (anchorage area) and U980454 (structures).

MICHAEL G BRIGGS
HEARING COMMISSIONER



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Dated: 4 May 2005

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Conditions of Consent **U040412**

Coastal Permit – (Occupancy & Activity)

1. This consent shall expire on the 31 December 2024. (To align with the term of MFL239 as provided for under the Aquaculture Reform (Repeals and Transitional Provisions) Act 2004.)
2. The species to be grown on this farm shall be restricted to **Salmon and Snapper**.

Coastal Permit – (Structure)

1. This consent shall expire on the 31 December 2024. (To align with the term of MFL446 as provided for under the Aquaculture Reform (Repeals and Transitional Provisions) Act 2004).
2. Cages will be restricted to within a clearly defined **2 hectare area** (plan attached).
3. The (currently consented) ability to move cages within the total farm area is hereby withdrawn.
4. No expansions on the current cage layout will be in a landward direction.
5. Prior to any expansion of cages, NZKS will carry out a qualitative survey (e.g. a video transect) to document the nature of the seabed and to confirm that no significant ecological features are present.
6. That the placement of marine farm lighting and marking shall be approved by the Harbourmaster under his Maritime Delegation from the Director of Maritime Safety pursuant to Sections 200, 444(2) and 444(4) of the Maritime Transport Act 1994.

NB: A specific approval will be required prior to structures being placed on site and prior to any relocation or reconfiguration of structures thereafter.

Coastal Permit – (Discharge to Seawater))

1. This consent shall expire on the 31 December 2024. (To align with the term of MFL446 as provided for under the Aquaculture Reform (Repeals and Transitional Provisions) Act 2004).
2. Only extruded pellets or similar shall be fed at the marine farm.

STAGING OF DISCHARGE VOLUMES

STAGE 1

3. For the first 1 year of the operation of this consent the maximum volume of feed to be discharged shall be 3000 metric tonnes per annum.



4. Within the period September to November after commencing discharge at the 3000 metric tonnes per annum maximum specified above, the consent holder shall monitor the sea floor in accordance with the environmental monitoring programme to be agreed, as specified under conditions 17 to 22.
5. A full report detailing the state of the sea floor shall be submitted to the Council within 3 months of the monitoring being completed.
6. On receipt of the monitoring report, the Council shall if necessary, within 1 month, initiate a review of the conditions of this consent, including the maximum volumes to be discharged, in accordance with Sections 128 and 129 of the Resource Management Act 1991, and as further specified under condition 24.

STAGE 2

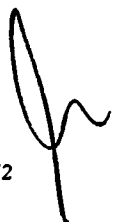
7. Following receipt by Council of the monitoring report specified under stage 1 above and subject to any review of conditions of this consent specified in condition 24, the consent holder may for the following year discharge a maximum of 3500 metric tonnes per annum.
8. In the period September to November following commencement of discharge at the 3500 metric tonnes per annum maximum the consent holder shall prepare a monitoring report on the state of the seabed using the environmental quality standards and the environment monitoring and reporting requirements specified in conditions 14 to 22 of this consent.
9. This report shall be submitted to Council within 3 months of completion.
10. Within 1 month of receipt of the report, Council shall review the conditions of this consent, including the maximum volumes to be discharged in accordance with condition 24.

STAGE 3

11. Following receipt by council of the reports required in Stage 2 above and subject to any review of the conditions of this consent, pursuant to condition 24 of this consent the consent holder may then discharge the maximum volume permitted under the consent of 4000 metric tonnes per annum.

IMPLEMENTATION OF STAGES AND DISCHARGE VOLUMES

12. For the avoidance of doubt in interpreting the above conditions, there shall be a review of conditions prior to each of the above stages where monitoring indicates the development may give rise to adverse effects on the environment. The consent holder shall not increase the discharge of feed until the Council confirms that the subject stages are not individually or cumulatively creating any adverse effects.



13. Should the consent holder not discharge feed to the maximum volume permitted under any stage, then the increase in feed permitted within the next stage shall be 500MT above the maximum feed volume discharged under the previous stage.

ENVIRONMENTAL QUALITY STANDARDS

14. The environmental quality standards (EQS) that shall be applied for seabed effects follow the model as presented in the application i.e. seabed effects are 'zoned' around the cages to allow for a mixing or transition zone. Outside this zone no adverse effect on the seabed is allowed. Three 'zones' under and around the marine farm shall be established as follows:
 - a. Referred to as 'Zone 1' – Beneath the cages and out to 50 m from the cages.
 - b. Referred to as 'Zone 2' - From 50 m to 150 m from the outside edge of the cages.
 - c. Referred to as 'Zone 3' - Beyond 150 m from the outside edge of the cages.
15. The zones may be distorted to allow for the action of tidal currents such that the total area of each zone remains the same as if concentric zones were around the marine farm.
16. In this instance it is anticipated that the zones will be distorted to the North West as shown in B below.

Figure 4: Schematic diagram of the impact zones concept.

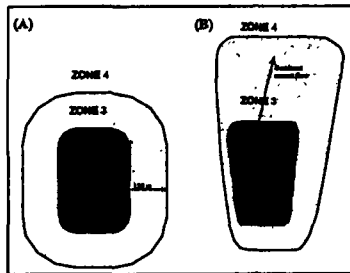
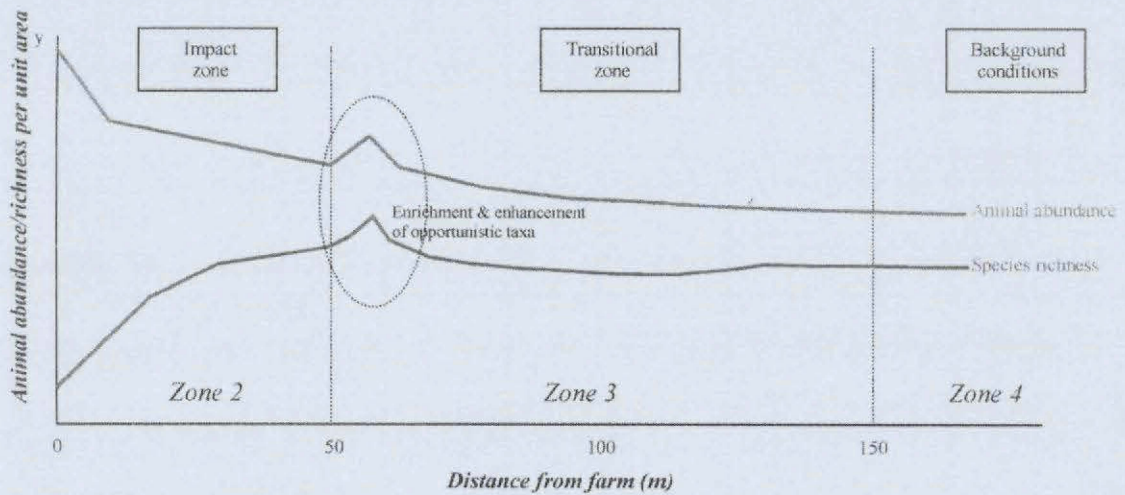


Figure 5: (A) Conceptual approach to defining seabed impact zones for NZKS salmon farm sites. (B) A proposed method for adapting the impact zones to the environmental conditions at the Otomaru Bay salmon farm site. Note that the areas of Zone 2 and 3 are the same in both A and B.

17. The EQS in each zone is as follows:

Zone	Spatial Extent	Description and Bottom Line
1	Beneath the cages and out to 50 m from their outside edge	Sediments become highly impacted and contain low species diversity, dominated by opportunistic taxa (e.g. polychaetes, nematodes). It is expected that a gradient will exist within this zone, with higher impacts present directly beneath the cages.
2	From 50 m to 150 m from the outside edge of the cages	A transitional zone between zones 2 and 4. Within this zone, some enrichment and enhancement of opportunistic species may occur, however species diversity remains high with no displacement of functional groups. It is expected that a gradient will also exist within this zone.
3	Beyond 150 m from the outside edge of the cages	Normal conditions (i.e. background or control conditions).
All Zones	These conditions are not permitted beneath any NZKS farm	Sediments that are anoxic and azoic (i.e. no life present) will not be permitted.



ENVIRONMENTAL MONITORING AND REPORTING

18. Prior to exercising the consent, the consent holder shall prepare an environmental monitoring programme to show compliance with the Environmental Quality Standards set out in conditions 14 to 17 of this consent.
19. This monitoring programme shall be submitted to the Council for approval and shall address, but not be limited to, the following effects within the boundary of the marine farm and in the immediate vicinity beyond the boundary of the marine farm:
- a. effects on water quality;

- b. seabed deposition (sedimentation and crop loss) and oxygen depletion; and
- c. effects on benthic community composition and abundance.

20. The survey/monitoring programme shall describe:

- a. the surveys, baseline and/or ongoing, to be undertaken;
- b. location and extent of environmental features within the vicinity and potential impacts on these features;
- c. the environmental performance indicators that are to be used to assess effects;
- d. methods, location and frequency of sampling, including reference sites;
- e. a definition of species diversity and what comprises the transitional zone; and
- f. recording and reporting requirements.

ONGOING ANNUAL MONITORING

21. A monitoring report is to be prepared at least annually, and will include:

- a. a description of the types, location and area of structures within the 2 hectare authorised area and a description of any movement or relocation of structures over the previous year;
- b. presentation of monitoring results;
- c. a comprehensive and integrated report on the effects of the development and operation of the farm to date, including maximum biomass of fish and feed volumes discharged over that year;
- d. an assessment as to whether or not the farm is having a significant adverse effect on the environment or not;
- e. recommendations as to how any adverse effects on the environment can be avoided, remedied or mitigated; and
- f. the adequacy of the monitoring programme. NB: The monitoring programme shall be public record.

22. The consent holder shall commission an independent person (or persons) with appropriate expertise in environmental monitoring to undertake the monitoring and reporting work required by the conditions of this consent.

23. The Council may require an independent peer review of the surveys, monitoring and reporting required under conditions 17 to 22 above. Such a peer review will be at the cost of the consent holder.



24. That in accordance with sections 128 and 129 of the Resource Management Act 1991, the consent authority may review the conditions of this consent by serving notice of its intention to do so for one or more of the following purposes:

PURPOSE(S)	TIME(S) OF SERVICE OF NOTICE
To modify the monitoring programme.	Within 2 months of receipt of any monitoring report as required by the conditions of this consent.
To deal with any adverse effects that may become apparent as a result of the exercise of this resource consent.	<p>Within 2 months of receipt of the monitoring report required by conditions 4 and 5 of this consent (Stage 1).</p> <p>Within 2 months of receipt of the monitoring report required by conditions 8 and 9 of this consent (Stage 2).</p> <p>Within 6 months of receipt of any other monitoring report required under the conditions of this consent.</p>
To require the consent holder to adopt the best practicable option to avoid, remedy or mitigate any adverse effect on the environment relating to the activity.	<p>Within 2 months of receipt of the monitoring report required by conditions 4 and 5 of this consent (Stage 1).</p> <p>Within 2 months of receipt of the monitoring report required by conditions 8 and 9 of this consent (Stage 2).</p> <p>Within 6 months of receipt of any other monitoring report required under the conditions of this consent.</p>

25. Pursuant to section 36 of the Resource Management Act 1991 and Marlborough District Council's Schedule of Fees, the consent holder shall pay all actual and reasonable costs associated with any review of this resource consent.

26. Inspection and monitoring by Council's Resource Management and 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 indicates the need for more frequent inspection and monitoring.

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 Council's Schedule of Fees approved pursuant to section 36 of Resource Management Act 1991.

Footnote

- *This consent authorises the occupation of the coastal marine area for the purpose of an aquaculture activity in respect of (inter alia) that area where occupation was previously authorised by coastal permit [U950653]. Notwithstanding the grant of this permit the consent holder may not commence nor undertake an aquaculture activity within that area previously authorised pursuant to coastal permit [U950653] until such time as the consent holder shall have complied with the requirements of Section 20/21 Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 and Section 12A Resource Management Act 1991.*
- *That it is accepted that 'fallowing' forms part of finfish farming activities and this consent shall not lapse pursuant to section 125 of the Resource Management Act 1991 where the site is vacated of structures for the purposes of fallowing the seabed.*

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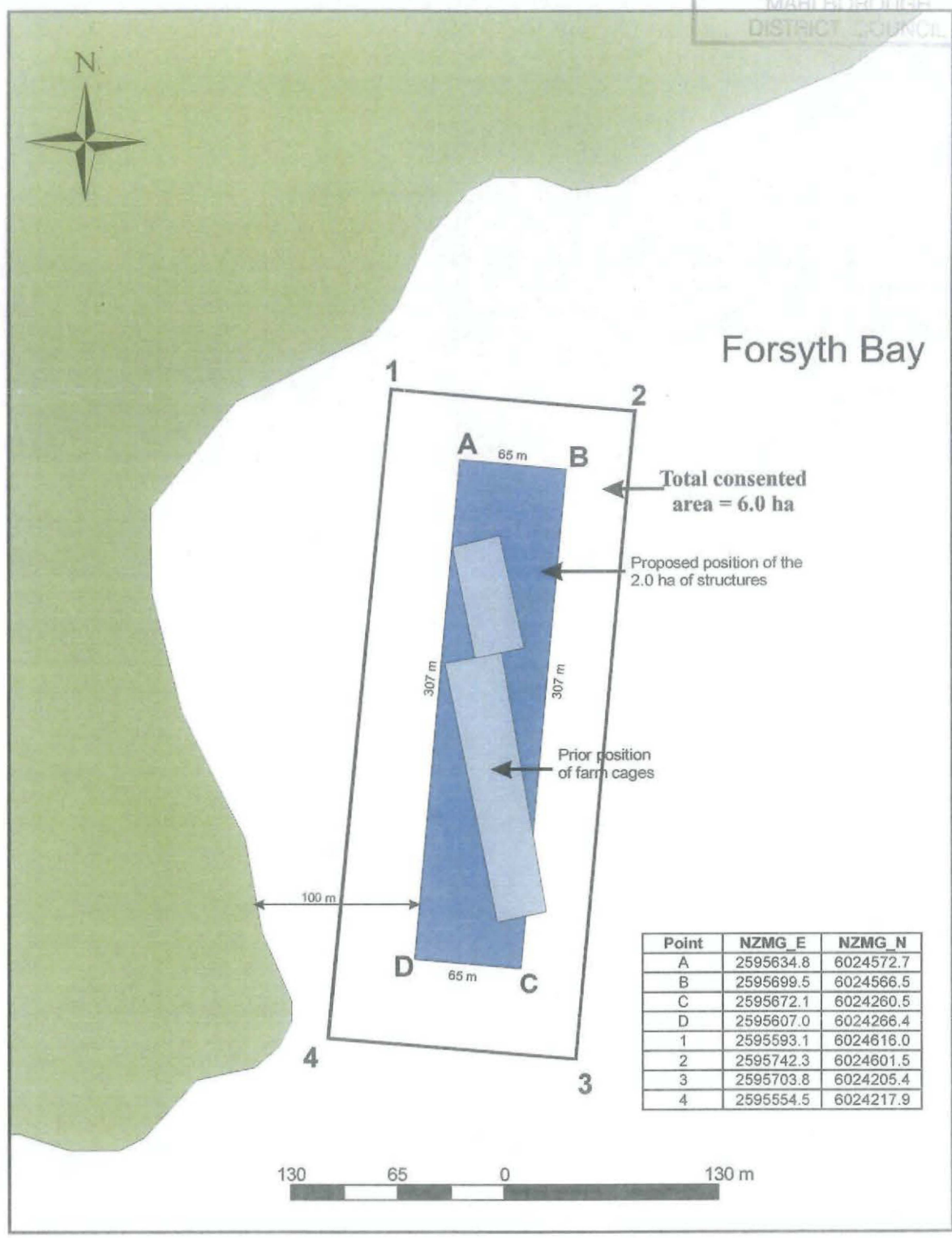


Figure 2: Proposed layout of the Forsyth Bay salmon farm (2.0), showing the historical position of the farm.