

IN THE MATTER OF the Resource Management Act 1991
AND

**IN THE MATTER OF
APPLICATIONS**

CRC160456 – Coastal Permit for Pegasus Bay Marine Farms Limited Coastal permit to extend an existing marine farm, including occupation and disturbance of the seabed with anchoring devices, take and discharge of coastal water, and discharge of biodegradable and organic waste matter into the coastal marine area in Squally Bay, Banks Peninsula.

CRC160457 – Coastal Permit for Ngāi Tahu Seafood Resources Limited Coastal permit to extend an existing marine farm, including occupation and disturbance of the seabed with anchoring devices, take and discharge of coastal water, and discharge of biodegradable and organic waste matter into the coastal marine area in Squally Bay, Banks Peninsula.

CRC160458 – Coastal Permit for Koukourārata Development Company Limited Coastal permit to occupy and disturb the seabed with anchoring devices, take and discharge of coastal water, and discharge of biodegradable and organic waste matter into the coastal marine area in Squally Bay, Banks Peninsula.

REPORT AND DECISION OF HEARING COMMISSIONER

GREG RYDER

CANTERBURY REGIONAL COUNCIL

18th May 2016

RERESENTATIONS AND APPEARANCES

For the Applicant:

Mr Mike Hardy-Jones Clark, Counsel (assisted by Kim Lawson)

Mr Mervyn Whipp, Aquaculture Manager (Ngāi Tahu Seafood Limited)

Mr Hamish Menzies, Director (Pegasus Bay Marine farms Limited)

Mr Charles Croft, Chairman (Koukourārata Development Company Limited) (on behalf of **Mr Peter Ramsden**, Deputy Chairman of Te Rūnanga O Koukourārata and the Chairman of Koukourārata Development Company Limited)

Mr Rob Davidson, Marine Biologist (Davidson Environmental Limited)

Dr David Taylor, Senior Marine Scientist (Cawthron Institute)

Mr Benjamin Knight, Biophysical Marine Scientist (Cawthron Institute)

Dr Barrie Forrest, Senior Marine Ecologist (Cawthron Institute)

Mr Rory Langbridge, Landscape Architect (Rory Langbridge Landscape Architects)

Mr Chris Glasson, Landscape Architect (Chris Glasson Landscape Architects Limited)

Mr Ron Sutherland, Land and Environmental Consultant (Property & Land Management Services Limited)

Submitters:

Mr Hamish Crow and Mrs Annabel Crow, Directors (Longridge Agriculture Limited)

Mr Alastair Crow and Mrs Sue Crow, Directors (Longridge Agriculture Limited)

Mr Michael Williams and Mrs Gillian Williams, Brockworth Farm, Decanter Bay

Dr James Miller and Mrs Carole Miller, 388 Decanter Bay Road

Mr Gerard Cleary, Counsel for David and Carole Miller

Dr Michael Steven, Landscape Architect and Planner (Michael Steven Limited), expert witness for David and Carole Miller

Written Statements of Evidence Tabled:

Mr Patrick Cotter, Director (Te Wharau Investments Limited – owner of Rehutai Farm)

Dr Paul Mensink, Marine Biology Lecturer (Queen's University of Belfast), for David and Carole Miller

Canterbury Regional Council Section 42A (s42A Report) reporting officers:

Dr Deepani Seneviratna, Consents Planner (CRC)

Mr James Bentley, Principal Landscape Planner (Boffa Miskell)

Written attachments to the s42A report were provided by:

Dr Leslie Bolton-Richie, Senior Coastal Water Quality Scientist (CRC)

Mr Ian Fox, Deputy Harbourmaster (CRC)

BACKGROUND AND PROCEDURAL MATTERS

1. This is a decision of hearing Commissioner Dr Greg Ryder, appointed by the Canterbury Regional Council (or **CRC**) to hear and decide on three applications to extend an existing marine farm at Squally Bay, Banks Peninsula.
2. The original application, as lodged with the Canterbury Regional Council and publicly advertised, was to extend the existing consented marine farm by 52.5 hectares (ha). However, as discussed further on in this decision, following the adjournment of the hearing, the Applicant, via its closing legal submissions, signalled that it was prepared to revise its Proposal by reducing the size of the extension sought to approximately 35 ha. For reasons that will be explained further in the decision, I assessed the evidence presented at the hearing based on the original application size, but where appropriate have also made comments on the effects of the proposed reduced application size.
3. The hearing was held in The Ballroom at Wigram Base, Christchurch, on 29 February and 1 March 2016. On 29 February 2016, I adjourned the hearing and indicated I would undertake a site visit of the area on the following day. The site visit was undertaken from land, and views of the existing marine farm and surrounding land and seascape were made from land owned by Te Wharau Investments (Otohuao Head), David and Carole Miller (Squally Bay), Michael and Gillian Williams (Brockworth, Decanter Bay) and Alastair and Sue Craw (Long Lookout Road, western side of Little Akaloa Bay). Conditions on the day were high overcast skies and virtually no wind. The sea was relatively flat making for what seemed to me to be relatively good viewing conditions. I was able to clearly see buoys and lines associated with the existing farm's current infrastructure, and also the eastern marker buoy (indicating the outer end of the northeast corner of the proposed extension) was visible from several of the vantage points. I also note for completeness that, during my visit, a large vessel was operating within the existing marine farm boundary and another smaller boat, travelling from the west, motored through the space between the inward boundary of the farm and Squally Bay, towards Decanter Bay.
4. Receipt of the Applicant's written right of reply was received on 14 March 2016. The hearing was formally closed on 8 April 2016.

APPLICATIONS

5. Pegasus Bay Marine Farm Limited and Ngāi Tahu Seafood Resources Limited operate a 35 ha marine farm at Squally Bay on the northern side of Banks Peninsula (hereafter also referred to as the **Site**). The existing marine farm was established under Coastal Permit CRC010002 by way of an Environment Court consent order in September 2002 and grows mussels (predominantly Green Shell mussels, *Perna canaliculus*) for commercial sale.
6. The two existing owners, along with the Koukourārata Development Company Limited (Koukourārata Runanga) (collectively referred to in this decision as the **Applicant**), are seeking three coastal permits to extend the existing farm by 52.5 ha, and so occupy a total area of 87.5 ha (hereafter also referred to as the **Proposal**). As discussed further on in this decision, and as already signalled, following the adjournment of the hearing, the applicant in its closing legal

submissions signalled that it was prepared to reduce the size of the extension sought.

7. The applications seek to farm Green Shell mussels, Blue Shell mussels (*Mytilus galloprovincialis*) and several algae (*Macroscystic pyrifera*, *Ecklonia radiata*, *Gracilaria spp.*, *Pterocladia lucida* and *Undaria*). The intent is that these species (other than Green Shell mussels) would be harvested as 'bycatch', as they are all regarded as bio-fouling organisms that naturally grow on marine farm structures.
8. The application also seeks to harvest mussel spat (juveniles) for the purposes of re-seeding the marine farm and other farms in the area. According to several of the Applicant's witnesses, Green Shell mussel spat accumulates in Squally Bay at relatively high rates. The Applicant would like to take advantage of this natural phenomena as it would reduce reliance on outside sources of spat and reduce potential biosecurity issues arising from spat sourced from other parts of the country¹. Mr Sutherland stated that the driving force behind the Proposal was spat catching, which he stated was of regional significance².
9. In addition to the above, the applications include disturbing the seabed with anchoring devices (e.g., screw anchors), the taking and discharge of coastal water, the harvesting of marine farming produce and the discharge of organic waste during harvesting. The three applications only differ in respect of the applicant groups member and the coastal space that are seeking to occupy and operate within. The applications have been assessed as one single expansion of the existing marine farm.
10. The Proposal is situated within the coastal marine area (**CMA**) of the Canterbury Region. The Regional Coastal Environment Plan for the Canterbury Region (**RCEP**) deals with issues within the CMA and so applies.
11. Under the provisions of the RCEP, the Proposal has been considered as a **discretionary activity** as set out in the s42A Report³.
12. Consent durations of 35 years were originally sought but since reduced to 20 years by the Applicant.
13. If the Proposal is granted resource consents, Pegasus Bay Marine Farm and Ngāi Tahu Seafood Resources would surrender their existing consents (CRC154277 and CRC154268).

SITE DESCRIPTION

14. The existing marine farm sits immediately off Squally Bay. The Proposal would extend the farm westwards towards Otohauo Head, eastwards in the direction of the entrance to Decanter Bay, and northwards to open waters of Pegasus Bay.
15. Squally Bay is situated along the north-eastern coastline of Banks Peninsula, between Menzies Bay and Decanter Bay. The general area, like most of the

¹ M Whipp evidence-in-chief, para 31

² R Sutherland evidence-in-chief, para 128

³ D Seneviratna s42A Report, paras 60-81

Banks Peninsula coastline, is characterised by frequent bays and indentations surrounded by steeply graded valleys and headlands.

16. The Squally Bay locality is dominated by prominent and highly visible coastal cliffs, broken by a single beach within Squally Bay. Land above and beyond the coastal cliffs is dominated by pasture with occasional shelter belts, a small amount of amenity planting and an isolated stand of production pine forest immediately adjacent to the bay⁴.
17. The existing farm consists of up to 66 longlines with a total backbone length of 8,798 m. These are set out in six blocks⁵ each 233 by 250 m, with each block containing 11 longlines spaced 24 m apart. The existing concession area measures 700 m x 500 m. The consented area for a marine farm covers a greater surface area and does not account for the setbacks that occur due to the subsurface nature of the farm infrastructure (anchor blocks and anchor warps)⁶.
18. The proposed extension includes 123 longlines, spaced 18.5 m apart, giving a total backbone length of 16,396 m. The additional longlines will result in an additional nine blocks, surrounding the existing consented blocks on the eastern, western and outer (northern) sides. Each new block is approximately 250 x 233 m or 5.8 ha in size. The Proposal includes a 100 m gap between the surface structures of each block. The site will lie between 127 m and 170 m from the coast while the offshore boundary is 1,070 m in the west and 1,004 m in the east⁷.
19. Each of the three applicants would own three of the new nine blocks.
20. The longlines will be attached to the seabed by a series of anchoring devices. Installation of screw anchors will require disturbance of the seabed.
21. In its closing submission, the Applicant offered to reduce the size of the application area by removing three blocks on the eastern side of the application area (blocks J, K and L). The three applicants would each be assigned two of the new blocks.

NOTIFICATION

22. The application was publicly notified in The Press on 10 October 2015 and on the 'Akaroa Mail' on 9 October 2015. The period for Submissions was closed on 9 November 2015.
23. The following parties were also served with a copy of the notification:
 - (a) Harbourmaster, Canterbury Regional Council
 - (b) Maritime New Zealand
 - (c) Community and Public Health

⁴ R Langbridge evidence-in-chief, paras 7.3-7.5

⁵ Only five blocks were being used at the time the hearing took place.

⁶ R Langbridge evidence-in-chief, para 5.3

⁷ R Sutherland evidence-in-chief, paras 15-16

- (d) Christchurch City Council
- (e) Te Rūnanga o Ngāi Tahu
- (f) Te Rūnanga o Koukourārata
- (g) Minister of Conservation
- (h) Ministry for Primary Industries
- (i) Friends of Banks Peninsula
- (j) NZ Federation of Commercial Fishermen Inc
- (k) Canterbury Network Sea Kayakers
- (l) Adjacent landowners with direct views and within 2 kilometres of the Site: James David Miller, c/o SW Harris, 388 Decanter Bay Road, RD 3, Akaroa 7583 (Owner/occupier of Part Lot 1 DP 6923 and RES 1227); Te Wharau Investments Limited, PO Box 2301, Christchurch 8140 (Owner/occupier of RS 6109, Pat RS 22871, Part RS 29979, RS 33508); and Michael & Gillian Williams, Brockworth, 201 Decanter Bay Road, RD 3, Akaroa 7583 (Owner/occupier of Part RS 24211).

SUBMISSIONS

24. A total of 12 submissions were received through the notification process. One submission supported the application, and the remaining 11 submissions opposed the application. With the exception of the submitter who supported the application, all submitters indicated that they wished to be heard.

ISSUES RAISED IN SUBMISSIONS

25. Issues raised in submissions can be broadly grouped as follows:
- (a) adverse effects on landscape, natural character and amenity values including the visual amenity of the local area;
 - (b) adverse effects on ecology;
 - (c) effects on the safe navigation of vessels;
 - (d) positive effects on the local economy and community; and
 - (e) duration of the consent period sought.

ISSUES TO ADDRESS

26. As highlighted in submissions and also identified by the Applicant in its assessment of effects and through the hearing process itself, the key issues that arise from the Proposal include:
- (a) navigation of vessels and public space;

- (b) ecological effects including biosecurity risk;
 - (c) economic, social and cultural benefits;
 - (d) effects on natural character; and
 - (e) effects on landscape and amenity values.
27. These issues are discussed under their respective headings below.
- 28. EFFECTS ON NAVIGATION OF VESSELS AND PUBLIC SPACE**
29. Section 6(d) of the Resource Management Act (**RMA**) requires us to recognise and provide for the maintenance and enhancement of public access to and along the coastal marine area. The Proposal as advertised would increase the consented area of the Squally Bay marine farm from 35 ha to 87.5 ha. The occupation of the CMA by the marine farm potentially restricts its use for other purposes including recreational activities, navigation and commercial fishing.
30. Mr Hamish Menzies, who is a director of Pegasus Bay Marine Farms Limited, and is actively involved in the day to day running of the existing marine farm, noted that the original site was selected due to its remote location, with minimal impact on the public⁸. He stated that from his experience, the area is not heavily visited, and most vessels he observes are from the local Lyttelton fishing fleet, trawling or long-lining offshore, although he has observed commercial cray fishers working inshore of the Site from time to time.
31. Mr Menzies also noted that kayakers were occasionally seen, but only on 'exceptionally calm days' and they always kept to inshore of the farm, which he concluded was due to the marine farm's buoys providing some protection from ocean swells⁹. It was his opinion that most vessels travelling near the Site are travelling somewhere else and not using the Site as a destination.
32. Dr Seneviratna, who prepared the Canterbury Regional Council s42A Report, was advised by Mr Ian Fox, Canterbury Regional Council's Deputy Harbourmaster, that there is a possibility of some recreational fishing activities in the area.
33. Dr Seneviratna noted in her s42A report that no submissions were received that raised concerns in respect of the effect on recreational activities and public access to the CMA. She concluded that the impacts on recreational activities and access to the CMA due to the proposal will be less than minor.
34. Mr Patrick Cotter (Te Wharau Investments Limited), in his written submission that was tabled at the hearing, reiterated the concern of Te Wharau Investments regarding the potential effects of the Proposal on navigation.
35. The Maritime Safety Authority prepared an assessment of navigational matters following the Guidelines for Aquaculture Management Areas Farm 2005. Matters including location, marking and lighting, safety management, and control and compliance were considered in the assessment. The Applicant has

⁸ H Menzies evidence-in-chief, para 14

⁹ H Menzies evidence-in-chief, para 22

proposed consent conditions relating to buoys and lighting that are consistent with Maritime Safety Authority policy as referred to in its publication "*System of Buoyage and Beaconage in New Zealand*".

36. The Applicant consulted with the Canterbury Regional Council Deputy Harbourmaster (Mr Fox) who also advised on requirements for navigational aids including lighting, radar reflectors and buoy colours. Mr Sutherland indicated that the Applicant is in agreement with Mr Fox's requirements, which replicate the navigation safety requirements for the existing marine farm¹⁰.
37. Dr Seneviratna also indicated in her report that the Canterbury Regional Council Harbourmaster's office did not have any other concerns with this proposal as "*...the amount of recreational use (including considerations of traffic density, and width of clear passage between the farm and the coast and if necessary between the buoy lines of the farm) of this area is not of a scale that would be affected to any greater degree than less than minor by the proposal*"¹¹.
38. In terms of navigation and the integrity of marine farm structures, Dr Seneviratna was of the view that the Applicant should be required to have the design plans of any structures to be installed and certified by a suitably qualified marine structural engineer.

39. Evaluation

40. I am satisfied that the Proposal does not represent a significant issue with respect to the occupation of public space and navigation safety. It is located in an area that receives relatively little attention by commercial and recreational boaties (other than the operators of the marine farm) and is sufficiently distant from the main navigation zone around the north of Banks Peninsula so as not to pose any navigational risk. The structural integrity of the farm and methods to avoid adverse effects associated with navigations and safety can be adequately dealt with through appropriate resource consent conditions and the requirements of the Maritime Safety Authority.

41. EFFECTS ON ECOLOGY AND WATER QUALITY

(i) Water quality and the benthic environment

42. The submissions of Michael and Gillian Williams, and James Miller, raised concerns about the negative impacts the marine farm may have on ecology, while the submission of Te Wharau expressed concern that the Applicant's assessment of effects under-estimated the significance of adverse effects of the Proposal.
43. It is well known that marine farms can alter the surrounding water column and benthic (bottom) environment through a range of factors. Mussels are filter-feeding animals, relying on naturally occurring plankton suspended in the water column as their food source. The plankton is conveyed to the Site by favourable ocean current and tidal movements.

¹⁰ R Sutherland evidence-in-chief, para 89

¹¹ D Seneviratna s42A report, para 282

44. Dr Seneviratna summarised the potential effects of the Proposal on the water column as being:
- (a) phytoplankton depletion and changes in planktonic community composition;
 - (b) dissolved nutrient and particulate release into the water column; and
 - (c) effects from biofouling communities¹².
45. Mr Benjamin Knight, a marine scientist at the Cawthron Institute, undertook assessments of water column effects for both the existing farm and the proposed extension. He described the Site as having high currents and being moderately enriched with phytoplankton.
46. Mr Knight noted that no depletion of phytoplankton had been detected in monitoring of the existing site to date, but that modelling suggested that up to 16% depletion may be possible. He concluded that the effects of the existing site on phytoplankton depletion appear to be very small and difficult to detect¹³.
47. Mr Knight went on to conclude that phytoplankton depletion due to an expanded marine farm would typically be small (<5%), and while moderate amounts of phytoplankton depletion may be detectable at the boundary of the Site (e.g., up to 30%), this would be unlikely to lead to adverse ecological effects on the wider ecosystem¹⁴.
48. Mr Knight suggested monitoring of the water column for checking his model predictions of phytoplankton depletion, however he did not consider this was necessary to protect the local environment (that is, monitoring for the purposes of assessing compliance against a phytoplankton depletion limit). He suggested a depletion limit of at least 15%, although he considered this could be increased to a higher limit (e.g., 30%) without a substantive risk to the environment¹⁵.
49. Dr Leslie Bolton-Richie, Canterbury Regional Council's Senior Coastal Water Quality Scientist, provided advice on the effects on the water column due to the proposed expansion after reviewing the Applicant's reports on this issue. Her advice was appended to the s42A Report (as Appendix D). Dr Bolton-Ritchie remained of the view that the phytoplankton depletion consent limit for the Proposal be kept at 5%, given that this limit would be a median value and so 50% of the time depletion would be greater than 5%.
50. Shells, faeces and pseudofaeces fall from mussel farms and deposit on the seabed below. Some of this waste can be rich in nutrients and organic material and so affect the nutrient and turbidity status of the water column. However, Mr Knight concluded that nutrients and turbidity were unlikely to be an issue with the Proposal. Dr Seneviratna noted that Dr Bolton-Ritchie agreed with this conclusion for the following reasons:
- (a) any changes in turbidity/water clarity caused by the organic particulate

¹² D Seneviratna s42A report ,para 139

¹³ B Knight evidence-in-chief, para 25

¹⁴ B Knight evidence-in-chief, para 30

¹⁵ B Knight evidence-in-chief, para 52

material produced by the mussel farm are likely to be within the range of natural variability and therefore it would not be possible to attribute impacts to the farm; and

- (b) the nutrients and particulates will be dispersed quickly and difficult to detect beyond the farm boundary.¹⁶

51. In terms of potential effects on the benthic environment, Dr Seneviratna summarised these as being:

- (a) localised organic enrichment of the seabed beneath the farm;
- (b) smothering of benthic organisms by bio-deposits;
- (c) bio-fouling drop-off and debris altering the composition of the seabed; and
- (d) seabed shading by structures which could affect localised algal productivity under the farm.

52. Dr David Taylor, a Senior Marine Scientist at the Cawthron Institute, gave evidence on behalf of the Applicant in relation to the benthic environment and proposed benthic monitoring for the Proposal. He described the various studies that had been undertaken in relation to the Site.

53. Dr Taylor found that the Site is situated over predominantly soft mud and gravel habitats, which are common habitats at the heads of bays along the northern edge of Banks Peninsula¹⁷. He noted that some very mild organic enrichment was found beneath the lines of the existing mussel farm, but the benthic environment appeared to be in a healthy state. The infaunal communities (animals living in the sediments) were found to be similar across all areas surveyed and comprised mainly of species of deposit-feeding polychaete worms. In his opinion, the results indicated that mild farm-related seabed enrichment effects had occurred, but were limited to the immediate vicinity of the farmed areas. He attributed the lack of more significant changes to the seabed under the existing mussel farm to the open coast and high-energy hydrodynamic environment at the Site¹⁸.

54. Dr Taylor concluded that any adverse effects of the proposed marine farm extension on the benthic environment in Squally Bay will be minor and limited to mild enrichment beneath and in the immediate vicinity of the farm lines.

55. With respect to monitoring, he considered the proposed conditions relating to benthic environmental quality standards to be appropriate, but suggested some reductions in the number of sampling sites and the frequency of epifaunal (surface fauna) dredge sampling, which he described as 'highly destructive'.

56. Dr Bolton-Richie had noted that a 'very robust' way of assessing the benthic environment and effects on aquaculture had been developed by the Waikato

¹⁶ D Seneviratna evidence-in-chief, para 173

¹⁷ D Taylor evidence-in-chief, para 37

¹⁸ D Taylor evidence-in-chief, para 28

Regional Council recently and she recommended that this approach should be applied to the Squally Bay marine farm. However, it is my understanding through questioning of Cawthron scientists at the hearing that the Waikato approach may need to be modified before being considered appropriate for the Banks Peninsula environment.

57. Concern about effects of the Proposal on water quality and the benthic environment were expressed by Mrs Carol Miller in her evidence. She expressed particular concern about the adequacy of ecological monitoring of the existing farm and the proposed extension to it. Mrs Miller noted that she and Dr Miller had engaged a Marine Biologist (Dr Paul Mensink) to peer review the relevant ecological and water quality reports relating the application, and she sought to present Dr Mensink's report at the hearing. Given the Applicant had no objection to this report being tabled, I received the report, but have placed very little weight on its content. With all due respect to the Millers, and the report author, the report was not issued prior to the commencement of the hearing and neither I, the Applicant, or the Canterbury Regional Council reporting officers were aware of its existence up until it was raised by Mrs Miller when she presented her evidence. Further, Dr Mensink was not present at the hearing to defend his findings in a manner expected of an expert witness. In any event, I am confident that the Applicant and Canterbury Regional Councils' expert witnesses have adequately addressed all relevant matters relating to water quality and benthic ecology.

Evaluation

58. Having considered the information provided by the Applicant's expert witnesses, and the comments of Dr Bolton-Richie, I am satisfied that potential adverse effects of the Proposal on water quality and phytoplankton depletion can be mitigated through appropriate consent conditions relating to depletion limits and associated monitoring.
59. I agree with Dr Seneviratna's conclusion that the effects of the proposed farm on the benthic environment and disturbance of the seabed as a result of the proposed extension are unlikely be significant. Dr Seneviratna rightly points out that the proposed farm will be located over soft substrata, and that these habitats are generally more resilient than other hard shore habitats and, therefore, are less likely to be affected by further sedimentation.
60. I also note that no concerns were raised regarding disturbances to the seabed as a result of installing additional screw anchors. I further agree with Dr Seneviratna's conclusion when she considered that these disturbances will be only for a short period of time and only in small areas, therefore the effects will be minimal.
61. There remains an issue around the degree and form of water column and benthic environment monitoring, should consent be granted. I address that matter in more detail where I comment on consent conditions.

(ii) Marine mammals and birds

62. Marine farms have potential to effect marine mammals and birds through:

- (a) habitat exclusion or modification leading to less use or less productive use by mammals;
 - (b) potential for entanglement; and
 - (c) underwater noise disturbance, which may either exclude or attract marine mammals.
63. Banks Peninsula is a marine mammal sanctuary and home to the endangered Hector's Dolphin. Dr Seneviratna noted that the Applicant had undertaken surveys and activities of Hector's Dolphin/Marine mammals required under its existing consents. Observations concluded that dolphins rarely entered the Site.
64. Dr Seneviratna noted that a 2013 report by the Ministry for Primary Industries (MPI¹⁹), that reviewed the ecological effects of aquaculture in New Zealand, highlights that the adverse effects of existing aquaculture on marine mammals are not presently considered significant issues, however, the significance of these effects need to be considered in relation to any larger-scale and offshore developments in New Zealand waters.
65. In relation to the adverse effects of aquaculture on seabirds, the MPI report states that it is not considered as significant in New Zealand and the risk of entanglement of seabirds is low in the New Zealand mussel industry where long-lines are placed under considerable tension.
66. The Applicant engaged Mr Rob Davidson (a marine biologist at Davidson Environmental Limited) to provide an assessment of the current and predicted effects on marine mammals and birds. He also assisted Cawthron research staff on surveys of the Site carried out in June 2014. Mr Davidson noted a variety of birds and marine mammals inhabit, visit or move through Squally Bay.
67. He acknowledged that entanglements remain a major concern for a wide variety of species around the world and New Zealand, and while the major causes are difficult to determine, it was his opinion that discarded fishing gear and marine rubbish 'appear' the predominant cause. Mr Davidson stated that no entanglements between Hector's Dolphins and mussel farms have been documented²⁰. No evidence to the contrary was presented and the Department of Conservation did not formally submit on the applications, but did comment on proposed monitoring conditions (28 and 29) and requested that information on marine mammals will need to be provided to them as it will assist with giving effect to the Department's Marine Mammals Act management role.²¹

Evaluation

68. I am satisfied that the effects of the Proposal on marine mammals and birds are less than minor, subject to appropriate conditions as recommended in Dr Seneviratna's report. The recommended conditions are consistent with those suggested by the Applicant and reflect what is required under the current consents.

¹⁹ Ministry for Primary Industries Report (2013) (MPI, 2013). Overview of ecological effects of aquaculture. MPI Aquaculture Unit document. ISBN 978-0-478-40536-1

²⁰ R Davidson evidence-in-chief, para 26

²¹ D Seneviratna evidence-in-chief, para 33

69. BIOSECURITY RISK

70. Dr Barrie Forrest, a Senior Marine Ecologist at the Cawthron Institute and specialist in marine biosecurity, provided evidence on behalf of the Applicant in relation to the biosecurity risks associated with the Proposal. Dr Forrest described how mussel aquaculture in general can give rise to biosecurity risks in two main ways:
- (a) movements of stock, recycled gear (e.g., ropes, floats) and vessels (e.g., barges, specialist vessels for farm construction) among farming regions can lead to the inadvertent transfer of “*harmful marine organisms*” (HMOs); and
 - (b) mussel farms can alter the local environment and make it more suitable for HMOs; for example, by enrichment, shell-drop, and provision of a hard substratum habitat.
71. Dr Forrest noted that the Applicant does not propose any activities that would present ‘new’ types of biosecurity risk, but rather the Proposal will represent an ‘incremental biosecurity risk’ to that which already exists. He considered any incremental effects from the above mechanisms were likely to be relatively small in the context of the range of existing activities that collectively form the biosecurity ‘risk profile of the wider region. He noted that the Proposal is relatively close to Lyttelton Harbour, which already has established populations of marine pests, many of which are capable of spreading to the mussel farm area by natural mechanisms²².
72. Because bycatch was to be moved to land-processing facilities (via Lyttelton), and not to other coastal marine areas, Dr Forrest considered that the bycatch of algae species and blue mussels to be of limited relevance to biosecurity.
73. Mrs Miller expressed concern about the potential presence of *Undaria* in Squally Bay and was not convinced that the Applicant’s proposal to remove it would mitigate its environmental impact²³.
74. *Undaria* is an exotic kelp that is classified as an ‘unwanted organism’ under the Biosecurity Act 1993. Dr Forrest noted that *Undaria* would be ‘passively’ collected from mussel lines as part of normal harvesting operations, and this would require a permit from the Ministry for Primary Industries. He described how this species is widely established nationally, including in rocky habitats of the Banks Peninsula area. He did not consider bycatch of this species as a significant issue, given it would be transported for land-based processing via the port at Lyttelton (where it is already established).
75. Dr Forrest recommended mitigation measures for the proposed Squally Bay extension based largely on ‘Operational Practices’ for risk reduction outlined by Aquaculture New Zealand. He recommended consent conditions that would require the Applicant to prepare a Biosecurity Management Plan.
76. Dr Bolton-Ritchie reviewed the Applicant’s reports on biosecurity issues. Her

²² B Forrest evidence-in-chief, para 16

²³ C Miller evidence-in-chief, paras 24-26

comments resulted in some further clarification and recommendations from the Applicant's experts regarding biosecurity. Dr Seneviratna considered that, overall, the potential effects on biosecurity as a result of the proposed activity can be avoided, mitigated or minimised by adhering to recommended conditions.

Evaluation

77. I am satisfied that the biosecurity risks associated with the Proposal can be appropriately addressed through conditions of consent that reflect the recommendations of Dr Forrest and Dr Bolton-Ritchie. The Proposal will not exacerbate the biosecurity risk of the Site over and above that which presently exists with the existing consented marine farm.

78. ECONOMIC, SOCIAL AND CULTURAL BENEFITS

79. Several witnesses gave evidence on behalf of the Applicant in support of the economic, social and cultural benefits of the Proposal.
80. As previously noted, Mr Hamish Menzies is a director of Pegasus Bay Marine Farms Limited and plays an active role in the running of the existing marine farm at Squally Bay. He described how the existing operation owns and operates a work vessel and employs two permanent staff members and six part-time staff. He stated that the Squally Bay marine farm enabled his family to diversify their work and ensure the ongoing viability of their land-based farming operations in Menzies Bay and Decanter Bay.
81. Mr Mervyn Whipp, an Aquaculture Manager for Ngāi Tahu Seafood Limited (part of the Applicant group), described Ngāi Tahu's involvement in the New Zealand aquaculture industry and its seafood related assets. He stated that Ngāi Tahu contributes substantially to the Marlborough, Golden Bay and Canterbury communities with wages to its employees and sourcing goods and services locally within these areas.
82. Mr Whipp's evidence described how the extension of the existing marine farm at Squally Bay would lead to building 'critical volume' to allow Ngāi Tahu Seafood to invest in building a processing factory and creating additional employment and additional income to industries such as transport, rope supplies, boat building and engineering support.
83. Mr Sutherland estimated that with the proposed extension to the marine farm, tonnage will rise by 2,500 green weight tonnes per annum giving a conservative 3,800 tonnes and a gross revenue of some \$4.5 million. He said if cycle times were reduced to 14 months, annual production could potentially increase to \$4.8 million²⁴. The Proposal, if operating with an optimum crop, could create employment for 50 plus staff based on current industry rates²⁵.
84. The RCEP identifies Squally Bay as being within the Te Tai o Mahaanui (Banks Peninsula Coastal Marine Area) Statutory Acknowledgement Area. Mr Peter Ramsden is Deputy Chairman of Te Rūnanga O Kōkourārata and the

²⁴ R Sutherland evidence-in-chief, para 96

²⁵ R Sutherland evidence-in-chief, para 99

Chairman of Koukourārata Development Company Limited, which forms part of the Applicant group. He described in his written evidence how Squally Bay, and the proposed marine farm extension, falls within the rohe of Te Rūnanga O Koukourārata. The evidence of Mr Ramsden stressed the importance of maintaining a cultural connection to the coast within the rohe of Te Rūnanga O Koukourārata and for the coast to provide for their future generations, culturally, economically and socially. He also explained how involvement in aquaculture was seen as a way of enhancing their connection with the area and maintaining links with their past.

85. Mr Ramsden's evidence stated that the Proposal was consistent with the purposes of the Mahaanui Iwi Management Plan 2013, which is an expression of kaitiakitanga and rangatiratanga, and that the Proposal would not affect any sites of cultural significance to Te Rūnanga O Koukourārata.
86. Mr Charles Croft attended the hearing and said he had authority to speak on behalf of Mr Ramsden and the Runanga at the hearing. When I asked Mr Croft how the allocation of the new blocks had been derived, he stated that it was purely random and the location of the blocks allocated to Koukourārata had no particular significance to iwi.
87. I understand that Koukourārata Development Company's role in the Proposal is one of an equal share of the proposed extension, along with the other two members of the joint venture (Ngāi Tahu Seafood Resources Limited and Pegasus Bay Marine Farms Limited). Mr Ramsden expects that Koukourārata's section of the Site will produce approximately 800 to 1,200 tonnes per growing cycle (depending on the ratio of spat catching, spat holding and lines necessary to support final crop lines) to directly assist the hapu's economic development²⁶.
88. Dr Seneviratna undertook an assessment of the Proposal against the Mahaanui Iwi Management Plan to provide additional information about potential cultural effects of the Proposal. She noted that the Applicant had consulted Te Rūnanga O Koukourārata with regard to the site location for the Proposal, and concluded that the cultural impact on the location of the marine farm is low. She also concluded that, given there were no responses received from any cultural groups, including Te Rūnanga O Koukourārata, and that no submissions were received which raised concerns with respect to the effects on Tangata Whenua values, she did not anticipate any adverse cultural impacts.

Evaluation

89. The Proposal appears to sit comfortably within the various relevant statutory documents relating to Tangata Whenua. Te Rūnanga O Koukourārata are manawhenua of this part of Banks Peninsula, and commercial arms of both it and Te Rūnanga Ngāi Tahu are equal partners in this joint venture. The Proposal would in all likelihood produce socio-economic benefits for these entities, the owners of Pegasus Marine Farms Limited and, potentially, the wider community.
90. The Applicant's offer to reduce the application size would, presumably, result in some equivalent reduction in the economic benefits of the Proposal. The

²⁶ P Ramsden evidence-in-chief, para 22

Applicant's closing submission indicated that the reduced application size would be shared evenly by the three members of the Applicant group such that Ngāi Tahu and Koukourārata interests would each own two blocks. Accordingly, my conclusion of the positive cultural benefits of the application remain, but potential economic benefits may be less than initially portrayed in the Applicant's evidence. Mr Hardy-Jones, in his closing submissions on behalf of the Applicant, provided some revised figures on potential income associated with the revised proposal²⁷.

91. EFFECTS ON NATURAL CHARACTER

92. Section 6(a) and (b) of the RMA are relevant matters that must be addressed when considering an application for a resource consent. The relevant wording is:

“In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.”*

93. A good deal of evidence and submissions on natural character was provided at the hearing and it was clear that this, along with effects on landscape and amenity values, were important issues associated with the Proposal.

94. The RMA does not define natural character, however the Regional Coastal Environment Plan (RCEP) for the Canterbury Region contains the following definition:

“Natural character is a relative term which reflects the extent to which a place, area, or landscape in the coastal environment is a product of nature rather than culture (Human activity). An area that has high natural character will generally have, (or be perceived to have), a dominance of natural elements, and an absence of cultural elements such as structures and modification. However, almost all areas of the coast retain some natural character. Elements of natural character include landforms such as sea cliffs, wave-cut platforms, sand dunes and estuaries; water and associated characteristics (such as clarity and salinity); coastal processes such as wave and tide action, beach formation processes and sediment transfer; coastal ecosystem functioning and resilience and plant and animal species.”

95. The submissions and evidence of the Crows, the Millers, the Williams and Mr Cotter (Te Wharau Investments) all stressed their concerns about the effects of the Proposal on the natural character of the area. The Crows own land surrounding Little Akaloa Bay and the home of Sue and Alastair Crow on Long Lookout Road has views of the sea and wider coastline including the headlands of Decanter Bay and part of the existing marine farm. The eastern and some northern blocks of the Proposal would extend out and across this view. The Crows were concerned that the proposed expansion would introduce “a

²⁷ Applicant's closing legal submissions, para 24

*significant level of additional structures that will appear large and more prominent*²⁸. They agreed with Mr Bentley's recommendation to reduce the extent of the expansion by 233 m on the eastern side and 100 m on the north side.

96. The Williams farm overlooks Decanter Bay. Mrs Williams was concerned that the closer a marine farm is placed to the headlands of Decanter Bay the more it will detract from their beauty. Mr Williams noted that he had observed the development of the existing marine farm and it was his opinion that the larger the farm became the more it dominated the view. He considered the scale of the Proposal was inappropriate for this location.
97. In his written evidence, Mr Cotter's described how the Te Wharau Investment-owned farm (Rehutai) overlooks both Menzies Bay and Squally Bay. The farm has views of the existing marine farm in Squally Bay and those located along the coastline further west (including the Scrubby Bay marine farm). It was Mr Cotter's opinion that the Proposal would result in significant adverse effects on natural character, landscape and visual amenity values. He considered that the reductions in the size of the Proposal as recommended by Mr Bentley may mitigate concerns around adverse visual effects²⁹.
98. The Miller farm is located in Squally Bay and looks directly out towards the existing marine farm. Dr Miller was unequivocal in his comments about mussel farms not fitting in with the natural landscape and seascape, and did not consider any mitigation was able to alter his opinion on this³⁰.
99. Counsel for the Millers, Mr Gerard Cleary, submitted that the Applicant's experts had failed to undertake a land-based assessment from his client's property, which he considered was most affected by the Proposal.
100. Mr Langbridge, on behalf of the Applicant, assessed the natural character of the Squally Bay coastal environment using a five point scale. He found the natural character values of the landscape to be at the upper end of moderate ('moderate to high') due to the modification evident within the landscape (i.e., due to farming) and the presence of the existing marine farm. He noted that previous assessments of Banks Peninsula found that Squally Bay and its immediate environment was not considered to be an area with important or notable natural values, and does not have particular or notable aesthetic values. He also noted that this location did not qualify as either a Coastal Natural Character Landscape (CNCL) or an Outstanding Natural Landscape (ONL) in the 2007 Banks Peninsula Landscape Study by Boffa Miskell³¹.
101. Mr Langbridge emphasised that in his experience the impact of marine farms on natural character, particularly their visual impact, was scale sensitive. For example, in relation to the coast line between Otohauo Head and Long Lookout Point, when viewed at the wider scale, and beyond the 'zone of visual influence' of the marine farms, he considered the natural character values of the landscape to be 'high' despite the obvious human induced modifications that

²⁸ H & A Crow evidence-in-chief, para 15

²⁹ P Cotter evidence-in-chief, para 7

³⁰ J Miller evidence-in-chief, para 28

³¹ CNCLs are defined in the 2007 Banks Peninsula Landscape Study (Prepared for Christchurch City Council by Boffa Miskell) as "Where predominately natural landscapes occur within the coastal environment"

have occurred. At a distance of 300 - 500 m from the existing marine farm boundary, he considered its structures become increasingly dominant, and the natural character values at this distance to be 'moderate' due to the impact of the buoys in this location.

102. Mr Langbridge also viewed the Site from points on Decanter Bay Road and Long Lookout Road. He concluded that the existing farm was not prominent and described the natural character values of these two views as 'high' despite the presence of the existing marine farm³².
103. He emphasised that his assessment focused on the change created by the granting of consents for nine additional blocks. Mr Langbridge concluded, albeit in a roundabout way, that the effects of this change on natural character will be less than minor³³.
104. Mr Glasson's evidence supported the findings of Mr Langbridge. He agreed with the rating of 'moderate to high' natural character of the coastline between the west headland of Decanter Bay and the east headland of Menzies Bay³⁴. However, he also considered the landscape to be modified due to farming practices and the existing mussel farm.
105. Mr Glasson was clear in concluding that the Squally Bay coastline was modified, but this did not mean it did not have high natural character. He stated:

*"The Squally Bay coastline has a modified natural character due to the existing marine farm, pastoral farmland, woodlots and shelterbelts, utilities and a paucity of native vegetation. Having said that the steep and vertical cliff faces and rocky foreshore represent the volcanic processes, wave action, clarity of water, and wildlife all contribute to the high natural character."*³⁵
106. It was his opinion that, given the diminished 'harmony' of the coastline, the proposed mussel farm expansion would not impact further on the natural character. He went on to say that the effect of an addition to the existing marine farm will mean that the cumulative effects on the natural character will be no more than minor³⁶.
107. Dr Steven's opinion differed widely from that of Mr Langbridge and Mr Glasson. He was of the view that previous methodology to assess natural character was no longer appropriate given the wording of Policy 13 of the NZCPS. In particular, he stated that it is no longer regarded as appropriate to reduce the natural character rating of the CMA on the basis that adjacent terrestrial environments may have a 'moderate' (or lower) level of natural character. On that basis, he provided an alternative assessment of the natural character of the Site.
108. In doing so, he applied a seven-range scale that differed from the scale used by Mr Langbridge and Mr Glasson and he urged caution when comparing the two scales. With respect to the natural character of the Squally Bay landscape

³² R Langbridge evidence-in-chief, para 12.15

³³ R Langbridge evidence-in-chief, para 17.2-17.3

³⁴ C Glasson evidence-in-chief, para 8.6

³⁵ C Glasson evidence-in-chief, para 9.5

³⁶ C Glasson evidence-in-chief, para 9.6

inland of the coastal cliffs, he agreed that it rated as 'medium' (or Moderate, in terms of the scale he applied).

109. With respect to the Squally Bay coastal environment, between Otohauo Head and the eastern headland at the entrance to Decanter Bay, Dr Steven rated its overall natural character as 'High'. He went further to suggest that this coastal environment could even be regarded as having 'outstanding natural character' if it not for the presence of the existing marine farming. He considered that the rock stacks at the eastern entrance to Decanter Bay could justifiably be categorised as exhibiting outstanding natural character³⁷.
110. In terms of the natural character of the Squally Bay coastal cliffs landscape feature, Dr Steven rated the natural character of this as 'Very High' and sufficient to pass the natural character threshold for the purpose of regarding Squally Bay coastal cliffs as a natural feature for the purposes of NZCPS Policy 15(b), and potentially, an 'outstanding natural feature' (ONF) for the purposes of NZCPS Policy 15(a).
111. Dr Steven also made reference to a recent report commissioned by the Canterbury Regional Council that presents an assessment of the natural character of the coastal environment of Canterbury. The findings were published in "*Canterbury's coastal natural character: Defining and mapping the Canterbury coastal environment*" (2012). Dr Steven stated that this work was driven by Policy 13(1)(c) of the NZCP, which requires local authorities to map or otherwise identify at least areas of high natural character in the coastal environment. Dr Steven appended figures 3a and 3b of this report to his evidence, which relate to 'Coastal Area 27, Eastern Bays', which includes Squally Bay. He emphasised that the Eastern Bays area receives an 'Overall Natural Character Rating for Coastal Area' of 'High'. I note, however, that the Eastern Bays area is an extensive coastline that runs from Pigeon Bay to Akaroa Harbour, and Squally Bay represents only a relatively small section of it.
112. Dr Steven was of the opinion that the marine farm expansion would have adverse effects on the natural character of the coastal environment between Otohauo Head and Decanter Bay. He added that these adverse effects of the proposed expansion would be greater in reality than the consented extent of the current farm might suggest, as the consented farm has not been developed in its entirety. Mr Menzies confirmed that block F has never been used.
113. In Dr Steven's opinion, the effects of the proposed extension would be significantly adverse, and as such should be avoided. If the effects were considered to be less than significantly adverse, he was of the opinion that the effects can neither be remedied nor mitigated, and as such should also be avoided. I note that the Applicant proposes to operate the extended marine farm by employing buoys submerged up to 80% of their volume (on average). However, Dr Steven did not accept this methodology as mitigation of effects on natural character as, "*the presence of the buoys constitute an unnatural element arranged in an unnatural pattern, whether on the surface or partially submerged within the water column.*"³⁸. In his opinion, this shifted the structures from one part of the CMA to another.

³⁷ M Steven evidence-in-chief, para 61

³⁸ M Steven evidence-in-chief, para 95.

114. The Canterbury Regional Council engaged Mr James Bentley to peer review the original report of Mr Langbridge for the Applicant. Mr Bentley was present at the hearing and spoke to his review and commented on the evidence and responses that Mr Langbridge and Mr Glasson had presented at the hearing.
115. Mr Bentley's report considered that the enlargement of the marine farm will further affect the level of naturalness of this section of the coast, despite it already being affected by the presence of the existing marine farm. It was his opinion that Mr Langbridge had under-estimated the degree to which natural character will be affected.
116. Mr Bentley concluded that the natural character and landscape values of Squally Bay are high. While he noted that there is no 'Outstanding Landscape' overlay on or adjacent to the Site, and that the 2007 Banks Peninsula Landscape Study did not rate the area as holding a highly aesthetic legible landform, nor as a CNCL, he considered that at a local scale, the cliffs, rock stacks and caves retain a high level of natural character. He concluded that the proposal would significantly affect the local landscape and natural character of Squally Bay as well as visual amenity up to approximately 1 km, and recommended that the eastern and western sides of the extension be reduced to reduce the effects on the visual amenity of Squally Bay and remove potential effects on Decanter Bay and Menzies Bay. He also recommended reductions to the northern extension to avoid effects on vessels in the primary boat channel.

Evaluation

117. There appears to be an element of subjectivity around the degree to which a proposal such as this impacts on natural character. The four landscape expert witnesses at the hearing, all who are experienced and well respected in their field, had differing opinions on the effects of the Proposal on natural character, indeed some were quite contrasting. They generally agreed, however, that the Squally Bay environment, while modified, does retain a high level of natural character even with the existing marine farm.
118. I note that the existing marine farm has never been fully developed and so being able to assess its full effect on natural character has yet to be tested in the real world. This situation presents a further level of uncertainty in assessing the effects of an extended marine farm.
119. Dr Steven describes marine farms as having unnatural elements arranged in an unnatural pattern³⁹. However, I found that the existing farm does fit relatively comfortably within the physical confines of Squally Bay and does not encroach on the headlands at either end of the bay. I conclude that the extended marine farm would do so and become more of a dominant feature of the wider Squally Bay landscape.
120. Based on the evidence presented at the hearing, I conclude that the extended marine farm, if fully developed, does have potential to significantly affect the natural character of Squally Bay. Mr Langbridge's assessment, where he determines the area of marine farm influence, and maps areas that would change from a minor effect to a significant effect, indicates that additional

³⁹ M Steven evidence-in-chief, para 95

significant effects on headlands are possible. I accept the conclusions of Mr Bentley and Dr Steven that the Proposal would have significant adverse effects on natural character. These effects are contrary to Policy 131(b) of the NZCPS.

121. I accept Dr Steven's opinion that the proposal to manage buoys at 80% submergence (on average) would not sufficiently mitigate effects on natural character. Further, there is some question as to how this would be achieved and whether all buoys would be managed in this way all of the time.
122. Less was said about the specific effects of the northern extension on natural character. Mr Langbridge was of the view that boat users would be the group most likely to view the existing and extended marine farms, and Mr Bentley recommended a reduction of 100 m to the northern extension. Removing the eastern and western extensions would also effectively reduce the width of the northern extension by 40%, or by approximately 470 m, and in doing so retain the existing length of the marine farm relative to the coastline. This would reduce the effects on boat users to a level similar to that experienced now.
123. Natural character also includes the environment below the sea surface, including biophysical and ecological elements⁴⁰. While physical and biological changes to the seabed beneath the Proposal are likely, they are not considered to be significant and limited to mild enrichment, as described by Dr Taylor, and the presence of sea anchors, which would disturb and then occupy a very small proportion of the sea floor.

124. EFFECTS ON AMENITY VALUES AND LANDSCAPE

(i) Amenity values

125. The RMA and RCEP for the Canterbury Region state that 'amenity values' means:

"...those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes."

126. Mr Langbridge considered the visual amenity values of the area to range from 'moderate' to 'high' depending on one's location and one's proximity to the existing marine farms found in these waters. He stated that despite the proposed extension increasing the visible surface structures of the marine farm by a factor of 2.5, the impact of that change would be less than minor compared to what currently is experienced. He considered that a series of experiential sequences currently exist, where boat users will see, approach and go through the existing marine farm when approaching from any number of directions. In his opinion, this experience will remain substantially similar.
127. He also considered that lighting associated with the expanded marine farm would become visible during optimum conditions at night, however the change in the impacts would remain as they are currently, and the effects would be less than minor.
128. In general, Mr Langbridge was of the opinion that changes to the amenity

⁴⁰ NZCPS, Policy 13(2)

values that will result from the Proposal will not be substantially different to what currently exists and will not be particularly adverse, but rather similar and comparable in almost all instances. The expansion as proposed will extend the farm predominantly out into more open waters thus mitigating to a degree the visual effects that result⁴¹.

129. Mr Glasson addressed the cumulative effects of the expanded marine farm on visual amenity. He stated that this consisted of:
- (a) combined visibility (when a viewer can see two or more developments from one viewpoint); and
 - (b) sequential effects (when the viewer moves to another viewpoint within the landscape).
130. Mr Glasson determined that when one is stationary at the proposed Squally Bay marine farm, the Scrubby Bay marine farm (situated to the west of Squally Bay) will be visible, albeit at a distance of approximately 2.5 km. He considered this to be a considerable distance and it would be difficult to discern the form and extent of the Scrubby Bay farm, so regarded the visual effects as 'very benign'⁴². He went on to state: *"I am of the opinion that the existing mussel farms between Point Levy to Squally Bay have set the scene for the effect on amenity value, so much so that this proposed extension will have additional effects that are no more than minor."*⁴³.
131. Dr Steven was critical of Mr Langbridge's assessment of amenity values in that he said it focused almost exclusively on visual amenity values. He pointed out that the RMA's definition of amenity values includes a very wide range of environmental qualities and characteristics⁴⁴.
132. Dr Steven was of the opinion that the amenity afforded by the location and context of the Miller farm and currently enjoyed by the Millers will be significantly diminished as a consequence of the proposed extension to the existing marine farm. He stated that visual amenity will be diminished as a consequence of greater visibility and that the sense of wildness and remoteness, already compromised to an extent by the existing farm, will be further compromised by more extensive areas of mussel buoys and the more frequent and longer duration stays of vessels required to service them⁴⁵.
133. He also concluded that the recreational amenity associated with near-shore boating activities such as kayaking, and the aesthetic appreciation of the coastal cliffs, will be compromised as the proposed farm is extended east and west, adjacent to a greater extent of the shoreline, including the entrance to Squally Bay.
134. Mr Bentley presented the following summary of the likely visual effects of marine farms:

⁴¹ R Langbridge evidence-in-chief, para 17.1

⁴² C Glasson evidence-in-chief, para 9.14

⁴³ C Glasson evidence-in-chief, para 12.9.4

⁴⁴ M Steven evidence-in-chief, para 141

⁴⁵ M Steven evidence-in-chief, para 130

*"It is considered that marine farms are highly significant up to around the 500m in good conditions in the water and significant up to around 1km also in good conditions. From elevated positions these distances are somewhat increased, where highly significant effects will be gained up to approximately 500m and significant from 500m to 1.5km / 2km. These are considered in perfect viewing conditions, where the Site will be located in an exposed section of coast."*⁴⁶

135. Mr Bentley was of the opinion that Mr Langbridge's report that formed part of the Applicant's AEE underestimated the level of visual amenity effects. He considered the proposal will have significant visual effects that will extend into the areas of Decanter Bay and Menzies Bay, *"opening up entirely new visual catchments"*. It was his opinion that the proposal will *"appear as a very large marine farm in Squally Bay, dominating the nearshore coastal waters with lines of buoys, adversely affecting the level of naturalness. This dominating effect will be especially pertinent in elevated land based views, where the farm will appear as a very large structure"*⁴⁷.
136. Mr Bentley also pointed out that land adjacent to the Site is contained as a 'Visual Amenity Landscape' within the Christchurch City Plan, as is the bulk of the Banks Peninsula. He noted that the marine component of Banks Peninsula has not been valued or mapped as part of this updated district-wide landscape and natural character analysis.
137. Mr Langbridge and Mr Glasson challenged Mr Bentley's findings with respect to amenity values. Mr Langbridge considered he had misinterpreted his analysis of how, and to what degree, the zone of visual influence of the existing marine farm would change⁴⁸. Mr Glasson considered that Mr Bentley's assessment of visual effects of the proposal had not accounted for the submergence of the buoys by 80% throughout the duration of the crop.

(ii) Landscape

138. Aspects relating to landscape effects have already been touched on in the section on Natural Character. The Regional Coastal Environment Plan for the Canterbury Region (2005) states that Banks Peninsula is an outstanding natural feature and landscape, and the coast is an important contributor to these values. While acknowledging this fact, the landscape expert witnesses largely agreed that the Squally Bay environment does not classify as an ONL.
139. A report prepared for the Canterbury Regional Council by Boffa Miskell in 2001 considered Squally Bay has medium to high natural features/landscape values (and natural character)⁴⁹. Dr Steven went so far to consider that the coastal cliffs of Squally Bay could qualify as an ONF for the purposes of Policy 15(a) of NZCPS. Mr Bentley, however, agreed with Mr Langbridge's assessment that the landscape associated with the Proposal is impressive, but does not quite match the quality of some other parts of the outer north eastern coast and therefore not considered to be outstanding at the district scale. Therefore Policy 15(a) of the NZCPS did not apply⁵⁰.

⁴⁶ J Bentley s42A Report Appendix F, page 8

⁴⁷ J Bentley s42A report Appendix F, page 8

⁴⁸ R Langbridge evidence-in-chief, paras 15.9 and 15.10

⁴⁹ Boffal Miskell. 2001. Assessment of coastal suitability for marine farms on Banks Peninsula. Prepared for CRC.

⁵⁰ J Bentley s42A report Appendix F, page 6

Evaluation

140. As with natural character, the landscape expert witnesses had quite diverging opinions on the amenity and landscape values of Squally Bay and the potential effects of the Proposal on those values.
141. On the balance of the evidence and submissions I received, Squally Bay does appear to have moderately high visual amenity values, and its landscape features, while not as striking as some parts of Banks Peninsula, are nonetheless impressive.
142. Dr Steven rated natural character as 'Very High' and sufficient to pass the natural character threshold for the purpose of regarding Squally Bay coastal cliffs as a natural feature for the purposes of NZCPS Policy 15(b), and potentially, an 'outstanding natural feature' (ONF) for the purposes of NZCPS Policy 15(a). However, I do not consider the weight of evidence supported Dr Steven's opinion on this matter.
143. Mr Langbridge's Figure 3 of Appendix C indicates that the part of Squally Bay will change from having marine farms as a significant impact to a 'very significant' visual impact. It also shows that parts of the headlands at either end of the bay will change from having marine farms as a 'minor' visual impact to a 'significant' impact. There may be some debate over the degree of change caused by the Proposal, however, this increase in effect on natural features and natural landscape is contrary to Policy 15(b) of the NZCPS.
144. I accept the evidence of Mr Bentley and Dr Steven that an increase in the size of the existing marine farm to the scale originally sought by the Applicant would mean the farm becomes more dominant and adversely affects the amenity values of Squally Bay, and potentially begin to impact on the headlands east and west of the Site. These are areas of high natural character.
145. The reduction in the scale of the Proposal, as table by the Applicant in its closing submission, would go some distance to alleviating effects on amenity and landscape values, and natural character, however I consider they do not go far enough.

STATUTORY ASSESSMENT

146. There was no debate at the hearing that the Proposal is for a **discretionary activity** under the provisions of the RCEP.

Section 104(1) of the RMA states: "*When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to –*

.....

(b) *any relevant provisions of:....*

- (i) *a national environmental standard*
- (ii) *other regulations; and*
- (iii) *a national policy statement*
- (iv) *a New Zealand coastal policy statement*
- (v) *a regional policy statement or proposed regional policy statement*
- (iv) *a plan or proposed plan; and*

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.”

147. There are no relevant national environmental standards or other regulations.
148. An analysis of the relevant provisions of the New Zealand Coastal Policy Statement 2010 (NZCPS), the Canterbury Regional Policy Statement (CRPS), the Regional Coastal Environment Plan (RCEP) was provided in the s42A report by Dr Seneviratna. Mr Sutherland prepared an analysis of NZCPS and RCEP provisions on behalf of the Applicant.
149. Dr Seneviratna concluded in her analysis of relevant planning instruments that the Proposal is not consistent with many of the Objectives and Policies of the relevant planning documents, due to significant adverse effects on natural character, landscape, seascape and amenity values. Mr Sutherland considered that the Proposal was consistent with all relevant provisions of the CRPS and RCEP.

New Zealand Coastal Policy Statement

150. The NZCPS sets out policies to achieve the purpose of the RMA in relation to the coastal environment of New Zealand. The principal policies that relate to marine farms concern matters of natural character, aquaculture and discharges in the CMA.
151. The Applicant's AEE states that the Proposal is consistent with and meets the elements within each of the Objectives 1, 2, 3, 4, and 6, and is consistent with Policies 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 15, 18, 21, 22, and 23 of the NZCPS.
152. Several objectives of the NZCPS are relevant to the application.
153. **Objective 1** *“To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land...”*
154. I am satisfied that this objective can be met by the Proposal provided an appropriate phytoplankton depletion limit is applied to the farm and complied with. I am also satisfied that the nature of the coastal water and seafloor in the vicinity of the Proposal act to limit potential adverse effects on the local marine ecosystem.

Objective 2 *“To preserve the natural character of the coastal environment and protect natural features and landscape values...”*

155. The Proposal, as applied for, is inconsistent with Objective 2 as it fails to preserve the natural character of the Squally Bay coastal environment and protect its natural features and landscape values. I consider this Objective can be met by the removal of blocks J, K, L, M, N and O from the Proposal.

Objective 3 *“To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment...”*

156. The Proposal has taken into consideration the principles of Treaty of Waitangi and provided for tangata whenua involvement in the management of this coastal environment. Therefore I conclude that the Proposal complies with Objective 3.

Objective 4 *“To maintain and enhance the public open space qualities and recreation opportunities of the coastal environment...”*

157. I am satisfied that the effects of the Proposal on recreational activities and the quality of open space in the CMA are less than minor, and that Objective 4 is achieved.

Objective 6 *“To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development recognizing that:*

- *the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits; ...”*

158. Objective 6 is wide-ranging in its scope. The Proposal will enable people and communities to provide for their social, economic and cultural well-being. However, the Proposal, as applied for, fails to protect values of the coastal environment with respect to natural character, landscape and amenity values. I consider this Objective can be met by the removal of blocks J, K, L, M, N and O from the Proposal.

159. I am satisfied that the Proposal, as applied for, is not inconsistent with Policy 2 (Treaty of Waitangi, tangata whenua and Māori heritage), Policy 8 (aquaculture), Policy 11 (indigenous biological diversity (biodiversity)), Policy 12 (harmful aquatic organisms) and Policy 23 (discharge of contaminants) for the following reasons:

160. The Proposal has been developed in consultation with local iwi and Ngāi Tahu interests, and appears consistent with the Mahaanui Iwi Management Plan. Therefore I consider the Proposal is not inconsistent with **Policy 2**.

161. The Proposal clearly has social and economic benefits relating to aquaculture and so is consistent with **Policy 8**.

162. The studies undertaken by the Applicant indicate that the Proposal will not threaten indigenous biodiversity or have significant adverse effects on vulnerable ecosystems and indigenous species. Thus the Proposal is not inconsistent with **Policy 11**.

163. The Applicant had an expert assessment of the biosecurity risk of the Proposal that concluded the Proposal will represent an incremental, but relatively small biosecurity risk to that which already exists at the Site. Given the above, and the recommendation to prepare and implement a Biosecurity Management Plan as a condition of consent, I am satisfied that the Proposal is not inconsistent with **Policy 12**.

164. As with the existing marine farm at the Site, the Proposal will introduce contaminants into the water, primarily from the natural functions of mussel

metabolism (faeces and psuedofaeces). The evidence indicates that these contaminants will not result in significant adverse effects on ecosystems and habitats. Consequently I am satisfied that the Proposal is not inconsistent with Policy 23.

165. **Policy 13** (Preservation of natural character) and **Policy 15** (Natural features and natural landscapes) are highly relevant to these applications. I consider that the Proposal, as applied for, has potential for significant adverse effects on the natural character, landscape and amenity values of Squally Bay and therefore is inconsistent with Policies 13 and 15. In particular, the scale of the Proposal, when combined with the existing marine farm, would begin to dominate the nearshore coastal waters and encroach on the headlands at either end of the bay, adversely affecting the level of naturalness. In doing so, the visual amenity value of the area will be further compromised.
166. I agree with Mr Bentley that reducing the eastern and western ends of the Proposal would avoid these adverse effects, but I do not agree that a reduction of the northern side of the Proposal is necessary for it to be not inconsistent with Policies 13 and 15.

Canterbury Regional Policy Statement 2013 (CRPS)

167. The Proposal is situated in an area with high natural character and moderately high visual amenity values. The proposal is such that it is not consistent with Objective 8.2.4 (preservation, protection and enhancement of the coastal environment) and Policy 8.2.4 (preservation of the natural character of the coastal environment) of the CRPS. Clause 4 of Policy 8.2.4 relates to avoiding new development adjacent to the coastal marine area that will compromise areas of high natural character.
168. Objective 8.2.5 relates to the maintenance and enhancement of appropriate public and Ngāi Tahu access to and along the coastal marine area to enhance recreational opportunities and to enhance the ability of Ngāi Tahu as tāngata whenua to access kaimoana and exercise tikanga Māori. Policy 8.3.5 seeks to maintain and enhance public and Ngāi Tahu access to and along the CMA subject to protecting health and safety, coastal values, coastal buffers, sites of cultural significance, infrastructure and lawful activities.
169. Objective 8.2.6 relates to the protection and improvement of coastal water from significant adverse effects of the point and non-point discharge of contaminants.
170. I conclude from the evidence that the Proposal is not inconsistent with Objectives 8.2.5 and 8.2.6, and Policy 8.3.5.

Regional Coastal Environment Plan 2005 (RCEP)

171. The RCEP contains operative objectives and policies for the Canterbury Region that relate to the coastal environment (both the CMA and areas immediately landward of this, as defined in the RCEP). Objectives and Policies of Chapter 6 (natural character and appropriate use of the coastal environment), 7 (coastal water quality) and 8 (activities and occupation in the coastal marine area) are relevant to this application and are considered below.

172. **Objective 6.1** states *“To protect, and where appropriate enhance, the following areas, sites and habitats of high natural, physical, heritage or cultural value including:*
- i) Areas of significant amenity value, including recreational attributes;*
 - j) Areas having high natural character in the coastal environment;...”*
173. Clauses (i) and (j) of Objective 6.1 are relevant to the Proposal. I have concluded that the Site has high natural character and moderately high amenity values, and that the Proposal may not protect these attributes. Its scale is such that it has potential to significantly impact on headlands and cliff faces at either end of the bay and dominate the landscape.
174. **Objective 6.2** states *“To protect, and where appropriate enhance, natural character and amenity values of the Banks Peninsula coastal environment including:*
- a) Volcanic and coastal landforms and features;*
 - c) Coastal processes and ecosystems;*
 - e) Areas of high visual amenity value, and/or otherwise unmodified by structures or other activities, in particular the outer bays and open coast.”*
175. I am satisfied that the Proposal is not inconsistent with clause (c) of Objective 6.2, but I am less certain about it being consistent with clause (a), with respect to coastal landforms and features, for reasons I have already stated. With respect to clause (e), the Site has moderately high visual amenity values even with the presence of the existing marine farm. I have concluded that a fully extended marine farm has potential to have adverse effects on the visual amenity value and natural character of the Site.
176. **Policy 6.1(a)** of the RCEP states: *“Within the Coastal Marine Area Environment Canterbury will:*
- i) control activities and development to remedy or mitigate adverse effects on:*
 - coastal ecosystems and processes,*
 - the identified values of Areas of Significant Natural Value,*
 - the identified values of areas of high natural, physical, heritage or cultural value, and*
 - natural character in areas of the coastal environment where natural character predominates; and*
 - ii) control activities and development to avoid any significant adverse effects on:*
 - coastal ecosystems and processes,*
 - the identified values of Areas of Significant Natural Value,*
 - the identified values of areas of high natural, physical, heritage or cultural value, and*
 - natural character in areas of the coastal environment where natural character predominates;*

unless there are special or extraordinary and unique reasons why those adverse effects cannot be avoided; and
 - iii) adopt a precautionary approach when considering applications for resource consents where the effects, including cumulative effects, are as yet unknown or little understood, or where the functioning of marine ecosystems and coastal*

processes is poorly understood. ...”.

177. I have concluded that the Proposal has potential to have significant adverse effects on the natural character of Squally Bay, which is high, and arguably predominates the area. The Applicant has indicated that Squally Bay is an area of naturally high occurring spat accumulation and they wish to capitalise on this natural phenomena by extending the size of the existing farm. Mr Menzies said he had not seen this anywhere else in Banks Peninsula⁵¹. However there was no evidence to suggest that this in itself was a special or extraordinary and unique reason why adverse effects on natural character cannot be avoided. Managing the farm such that buoys would be submerged to 80% of their depth (on average) was put forward as a method for avoiding adverse effects on visual amenity values. However I agree with Dr Steven when he states: “*While the submergence of buoys may influence visibility, it is incorrect to maintain that this also diminishes the adverse effects of the proposal on natural character*”⁵². The Applicant’s Proposal enabled the longlines of the extension to be spaced 18.5 m apart compared to 25 m apart for the existing lines. Thus, longlines would be more densely spaced in the extension area and presumably so would the buoys. I also note that buoys marking the corners of the marine farm would have to remain clearly visible for navigational reasons, as would corner lights for night time navigation.

178. **Objective 6.3** states “*Enable people to undertake commercial and recreational activities in the coastal environment while:*

- a) Protecting regionally significant network utility assets and commercial ports from encroachment from activities that would adversely affect their efficiency and effectiveness; and*
- b) avoiding, remedying or mitigating the adverse effects of those activities on the natural character of the coastal environment.”*

179. I am satisfied that the proposal meets Objective 6.3(a) with respect to protecting regionally significant network utility assets, namely those associated with the Lyttelton Port. The location of the Proposal is sufficiently away from lanes typically used by commercial vessels entering and leaving Lyttelton Harbour. For reasons already discussed, I do not consider that Objective 6.3(b) can be met by the granting of the application in full.

180. In relation to water quality, **Objective 7.1** of the RCEP states “*Enable present and future generations to gain cultural, social, recreational, economic, health and other benefits from the quality of the water in the Coastal Marine Area, while:*

- a) maintaining the overall existing high natural water quality of coastal waters;*
- b) safeguarding the life-supporting capacity of the water, including its associated: aquatic ecosystems, significant habitats of indigenous fauna and areas of significant indigenous vegetation;*
- c) safeguarding, and where appropriate, enhancing its value for providing mahinga*

⁵¹ H Menzies evidence-in-chief, para 17

⁵² M Steven evidence-in-chief, para 167

kai for Tangata Whenua;

- d) protecting wahi tapu and wahi taonga of value to Tangata Whenua;*
- e) preserving natural character and protecting outstanding natural features and landscapes, where water quality is an aspect of their value, from reductions in water quality;*
- f) maintaining, and where appropriate enhancing, amenity values; and*
- g) recognising the intrinsic values of ecosystems and any finite characteristics of the coastal environment.”*

181. Assessments of the existing site and proposed extension provided by the Applicant's expert witnesses on water quality and marine ecology, and the evidence and submissions of Koukourāata and Ngai Tahu representatives, lead me to conclude that Objective 7.1 can be met by the Proposal. This conclusion is contingent on complying with relevant conditions of consent.

182. **Policy 7.6** of the RCEP states: *“In setting conditions on a resource consent to discharge a contaminant or water into water, or onto or into land in the Coastal Marine Area, a reasonable mixing zone should be determined by considering, amongst other matters, the following:*

- a) the volumes, contaminant loading and contaminant concentrations involved with the discharge;*
- (b) factors such as sea conditions, tides, wave action, water depths, water velocity, and flushing characteristics that will normally affect the assimilative capacity of the receiving water and the dispersion of the contaminants or the discharge water;*
- (c) the presence of an Area of Significant Natural Value at the site or in close proximity;*
- (d) the existing use of the immediate area, including the presence of other discharges;*
- (e) if in any area within which a water quality standard is set, the size of the area in relation to the mixing zone; and*
- (f) the proximity of adjacent areas where water quality standards have been set; and*
- (g) the natural values of the receiving environment.”*

183. Proposed conditions of consent include monitoring sites for the benthic environment and water column. Monitoring sites to detect impacts of the marine farm on phytoplankton depletion and changes to the benthic environment are both positioned 50 m away from the marine farm boundary, effectively identifying the mixing zone as the zone between these sites and boundary of the marine farm. Given the scale of the Proposal, and the distance of the marine boundary to potentially sensitive rocky shore ecosystems, I consider that 50 m is suitable mixing zone distance for the purposes of Policy 7.6.

184. **Policy 7.7** states: *“Ensure that discharges of water or contaminants into water, or*

onto or into land in the Coastal Marine Area avoid significant adverse effects on cultural or spiritual values associated with sites (e.g. areas covered by controls such as taiapure or mahinga mataitai), of special significance to the Tangata Whenua”.

185. I am satisfied that the Proposal meets Policy 7.7 for the reasons stated above in relation to Policy 7.6.

186. **Policy 7.8 states:** *“After reasonable mixing, the discharge of a contaminant or water into water, or onto or into land in the Coastal Marine Area, (either by itself or in combination with the same, similar, or other contaminants or water) should not:*

- a) give rise to any significant adverse effects on the existing habitats or feeding grounds of indigenous fauna or any significant adverse effects on aquatic ecosystems; and*
- b) have acute or chronic toxic effects on fish, either directly or indirectly as a result of an adverse effect on aquatic organisms.”*

187. I accept the findings of the Applicant’s expert witnesses on water quality and marine ecology. There was no evidence presented to suggest that the Proposal would give rise to any of the matters relevant to Policy 7.8. Consequently, I am satisfied that the Proposal meets Policy 7.8.

188. **Objective 8.1 states** *“To enable people to use the Coastal Marine Area and its resources while avoiding, remedying or mitigating the adverse effects of that use on the environment, including avoiding, remedying or mitigating the adverse effects:*

- a) of conflicts between these uses and people’s well-being, health, safety and amenity; and*
- b) on natural character, and other (natural, ecological, amenity, Tangata Whenua, historic and cultural) values of the coastal environment. ...”*

189. **Policy 8.3 states:** *“In considering applications for resource consents to undertake activities in the Coastal Marine Area, Environment Canterbury will have regard to:*

- a) the existing level of use and development in the area and the national priority in the New Zealand Coastal Policy Statement to preserve the natural character of the coastal environment; and*
- b) the need to protect characteristics of the coastal environment of special value to Tangata Whenua; and*
- c) effects on the public use and enjoyment of the coast, including public access to and along the Coastal Marine Area, and the contribution of open space to the amenity value of the coast; and*
- d) cumulative effects of such activities on the coastal environment both within and outside the immediate location; and*
- e) existing agricultural and other use and development of the adjacent land area, and any adverse effects on that activity; and*

- f) *the status of any lands or areas administered by the Department of Conservation that are affected; and*
 - g) *the publicly notified purpose of any proposal for protected status, if the application affects an area proposed for protection under a statute administered by the Department of Conservation; and*
 - h) *the possibility of natural features migrating inland as the result of dynamic coastal processes, including sea level rise, and the ability of natural features to protect subdivision, use and development from erosion and inundation; and*
 - i) *the need to protect existing network utility infrastructure where such infrastructure is located adjacent to or within the Coastal Marine Area”*
190. While a marine farm is already consented in Squally Bay, its size and location is such that the natural character and amenity values of the area have been protected. I have concluded that the proposed extension of the marine farm will adversely affect those values, and that the only way that these effects can be avoided or mitigated is by reducing the scale of the Proposal, in particular by removing that eastern and western blocks. I have concluded that removing these blocks would enable the proposal to be not inconsistent with all matters identified in Objective 8.1 and Policy 8.3 of the RCEP.
191. **Policy 8.5 states:** *“In considering applications for resource consents to occupy the Coastal Marine Area, Environment Canterbury should:*
- a) *give priority to safe anchorages;*
 - b) *avoid impeding navigation channels;*
 - c) *avoid displacing existing public recreational use;*
 - d) *have regard to existing commercial use;*
 - e) *have regard to any adverse effects on the values relating to the natural character of the coastal environment, both within and outside the immediate location;*
 - f) *have regard to any adverse effects on the cultural, historic, scenic, amenity, Tangata Whenua, and natural values of the area;*
 - g) *have regard to available alternative sites and the reasons for the applicant’s choice of site; and*
 - h) *have regard to existing use and development of the area and the extent to which the natural character of the area has already been compromised; and*
 - i) *only provide for the period or periods of occupation that the natural character of the coast, cultural and amenity value, alternative locations and only provide for periods of occupation reasonably necessary to meet the purposes for which occupation is sought.”*
192. I have concluded from the evidence that the Proposal will not significantly affect navigation or recreation. There was also no evidence to indicate that other

commercial uses of the CMA (e.g., fishing) would be significantly affected by the Proposal as explained by Mr Sutherland⁵³. The extended marine farm is unlikely to significantly affect Squally Bay as a place of safe anchorage. Other nearby bays and are more suitable for safe anchorage. Mr Menzies stated that he had never seen a vessel land in Squally Bay and he considered it “*inhospitable for recreational use*”⁵⁴.

193. I accept the rationale behind the Applicant’s choice of site. Existing infrastructure already exists and the area reportedly attracts large concentrations of mussel spat. Mr Hardy-Jones in his closing submissions for the Applicant stated that there are effectively no alternative sites on Banks Peninsula where a marine farm with ‘sufficient sizing capacity’ to address the economic benefits and requirements of the Applicants could be sited⁵⁵.
194. I have already concluded that visual amenity values and natural character will be adversely affected by the Proposal, but that these effects can be avoided by reducing the scale of the extension.

RESOURCE MANAGEMENT ACT (RMA)

Section 105 (Matters relevant to certain applications)

195. Section 105(1) states “*If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(1), have regard to—*
- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (b) the applicant’s reasons for the proposed choice; and*
 - (c) any possible alternative methods of discharge, including discharge into any other receiving environment.”*
196. I am satisfied that the matters to be considered under Section 105 have been taken into account in my assessment of the evidence in relation to the effects of the Proposal.

Section 107 (Restriction on grant of certain discharge permits)

197. Section 107 restricts the consent authority from granting applications for discharges that may give rise to adverse effects on water quality, after reasonable mixing. The RMA does not define reasonable mixing, however Policy 7.6 of the RCEP lists some matters to consider when determining a mixing zone. I have take these matters into account and I am satisfied that a mixing zone of 50 m from the edge of the marine farm boundary, as proposed in draft conditions of consents, is suitable.

198. **PART 2 MATTERS**

⁵³ R Sutherland evidence-in-chief, para 73

⁵⁴ H Menzies evidence-in-chief, para 23

⁵⁵ Applicant’s closing legal submissions, para 32

199. Decisions on resource consent applications are to be made subject to Part 2 of the Act.

Section 5 - Purpose

200. Section 5(1) states *“The purpose of this Act is to promote the sustainable management of natural and physical resources.”*
201. Section 5(2) states *“In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—*
- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
 - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*
202. I have concluded that granting consent for a reduced marine farm extension, in particular the removal of the eastern and western blocks from the original Proposal, will promote sustainable management and enable social, economic and cultural wellbeing consistent with the provisions of Section 5(2). Potential adverse effects of the Proposal, in conjunction with the existing marine farm, will be avoided or mitigated through the attached conditions of consents, such that the life supporting capacity of coastal water and ecosystems will be protected.

Section 6 – Matters of national importance

203. Clauses 6(a) and 6(b) address the preservation and protection of natural character, and the protection of outstanding natural features and landscapes. These matters have been addressed in a number of sections of this decision. In summary, while the whole of Banks Peninsula can be regarded as an outstanding natural landscape, the Site of the Proposal does not qualify as an outstanding natural landscape or an outstanding natural feature, despite the landscape being regarded as impressive. However, the Site does have high natural character, which I have concluded would be adversely affected (along with visual amenity values) by granting consent for the Proposal as applied for. These adverse effects can be avoided by reducing the size of the Proposal in particular by not granting consent for blocks that lie adjacent to the eastern and western ends of the existing marine farm.
204. The granting of the reduced extension will not impact on areas of significant indigenous vegetation and significant habitats of indigenous fauna, and, as such, will be consistent with Section 6(c).
205. Despite granting consent for a greatly reduced extension relative to that applied for by the Applicant, I am satisfied that this remains consistent with the values of Māori and their culture and traditions, particularly with water, and consequently is consistent with Section 6(e).

Section 7 – Other matters

206. Section 7 states *“In achieving the purpose of the RMA, all persons exercising functions and powers under the RMA are directed to have particular regard to –*
- (a) kaitiakitanga:*
 - (aa) the ethic of stewardship:*
 - (b) the efficient use and development of natural and physical resources:*
 - (ba) the efficiency of the end use of energy:*
 - (c) The maintenance and enhancement of amenity values:*
 - (d) intrinsic values of ecosystems:*
 - (e) [Repealed]*
 - (f) maintenance and enhancement of the quality of the environment:*
 - (g) any finite characteristics of natural and physical resources:*
 - (h) the protection of the habitat of trout and salmon:*
 - (i) the effects of climate change:*
 - (j) the benefits to be derived from the use and development of renewable energy.”*
207. I have had regard to the relevant clauses of section 7. Granting consent for a reduced extension area will ensure that the Proposal is not inconsistent with clauses (a), (b), (c), (d) and (f).

Section 8 – Treaty of Waitangi

208. Section 8 states *“In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).”*
209. No evidence or submissions suggested the Proposal was contrary to Section 8 of the RMA. I find that the Proposal, even if granted in a reduced form, is not inconsistent with the Mahaanui Iwi Management Plan, which provides a statement of Ngāi Tahu objectives, issues and policies for natural resource and environmental management, and includes reference to Section 8.

OVERALL FINDING

210. I have concluded that the Proposal, as originally applied for, cannot be granted. The Proposal would increase the size of the existing farm by 2.5 times its current size, and in doing so create adverse effects on the natural character and visual amenity of Squally Bay. These effects would not be consistent with section 6(a) of the RMA or with objectives and policies of the New Zealand Coastal Policy Statement, the Canterbury Regional Policy Statement and the

Canterbury Regional Coastal Environment Plan that relate to natural character and amenity values.

211. While the Applicant offered to reduce the scale of the Proposal by removing the three blocks adjacent to the eastern side of the existing marine farm, I do not consider this reduction goes far enough. While I accept that the Applicant's offer would mitigate the effects of the extended marine farm on the eastern end of Squally Bay and headlands towards the entrance of Decanter Bay, it would not sufficiently reduce the overall scale of the marine farm such that the effects identified above are sufficiently avoided, remedied or mitigated.
212. The Applicant's proposed mitigation of visual amenity effects through management of buoy flotation is uncertain in its effectiveness.
213. Potential effects on ecology, biosecurity and navigation can be mitigated adequately through consent conditions. I have accepted the Applicant's evidence regarding the potential economic benefits of the Proposal and involvement of local iwi.
214. Therefore, on the balance of the evidence before me, and for the reasons I have set out above, I consider that the purpose of the RMA can best be achieved by granting consent application CRC160457, along with conditions, and declining consent applications CRC160456 and CRC160458.
215. Consent application CRC160457 is for northern blocks G, H and I. Those three northern blocks fall under just one member of the applicant group, Ngai Tāhu Seafoods. This is coincidental, and the decision should in no way be construed as singling out any particular member or members of the applicant group. It is my understanding through questioning of the Applicant at the hearing that ownership of individual blocks was 'purely random', and the three applications for consent have essentially been treated as one application.

TERM AND CONDITIONS

216. Section 123A of the RMA (Duration of consent for aquaculture activities) states:

"(1) A coastal permit authorising aquaculture activities to be undertaken in the coastal marine area must specify the period for which it is granted.

(2) The period specified under subsection (1) must be not less than 20 years from the date of commencement of the consent under section 116A unless—

(a) the applicant has requested a shorter period; or

(b) a shorter period is required to ensure that adverse effects on the environment are adequately managed."

217. Dr Seneviratna's s42A report states that the Applicant applied for consent duration of 35 years⁵⁶. Mr Sutherland in his planning evidence for the Applicant states a consent duration of 20 years has now been sought⁵⁷. Accordingly, I am granting consent CRC160457 for a term of 20 years consistent with Section

⁵⁶ D Seneviratna s42A Report para 450

⁵⁷ R Sutherland evidence-in-chief, para 9

123A.

218. Discussions and correspondence on conditions of consent have previously occurred between the Applicant and Canterbury Regional Council s42A reporting officers. I understand that agreement was largely reached with recommended conditions 1 through to 28⁵⁸.
219. However, there were some differences of opinion remaining over monitoring of the benthic environment and water column. On the basis of the evidence on these issues, I have amended some of the relevant conditions as previously recommended in the s42A Report.

DECISION

220. To grant application CRC160457 with conditions, for a term of 20 years, and decline applications CRC160456 and CRC160458.

A handwritten signature in black ink, appearing to read 'G. Ryder'.

Gregory Ian Ryder

18th May 2016

⁵⁸ R Sutherland evidence-in-chief, para 141

APPENDIX ONE: CONDITIONS

	GENERAL															
1	This consent authorises: a. The occupation of part of the coastal marine area; b. The erection and placement of structures; c. The disturbance of the seabed; and d. The incidental deposition of shell material and other natural material as a consequence of operating the marine farm; for the purposes of the growing of green shell mussels (<i>Perna canaliculus</i>), blue shell mussels (<i>Mytilus galloprovincialis</i>) and algae (<i>Macrocystic pyrifera</i>, <i>Ecklonia radiata</i>, <i>Gracilaria</i> spp., <i>Pterocladia lucida</i> and <i>Undaria pinnatifida</i>), and for the collection of mussel spat.															
2	The marine farm (the “Permit Area”) shall not occupy an area in excess of 17.5 hectares and shall be generally located within the area shown on the layout plan attached as Plan CRC160457 and between the following New Zealand map grid co-ordinates (NZTM2000): <table><tr><td>Point</td><td>East</td><td>North</td></tr><tr><td>17</td><td>1599407.39</td><td>5169152.91</td></tr><tr><td>20</td><td>1600016.74</td><td>5168808.38</td></tr><tr><td>2</td><td>1599284.35</td><td>5168935.29</td></tr><tr><td>3</td><td>1599893.69</td><td>5168590.76</td></tr></table>	Point	East	North	17	1599407.39	5169152.91	20	1600016.74	5168808.38	2	1599284.35	5168935.29	3	1599893.69	5168590.76
Point	East	North														
17	1599407.39	5169152.91														
20	1600016.74	5168808.38														
2	1599284.35	5168935.29														
3	1599893.69	5168590.76														
3	The structures authorised by this consent shall be limited to screw anchors, chains, ropes, droppers, buoys and lights associated with marine farming in the “Permit areas” (“the structures”). The number of lines shall be at the discretion of the consent holder, but shall not exceed the number set out in the layout plans lodged with the application. The lines shall be laid out generally in accordance with the layout plans.															
4	The consent holder shall ensure that the structures authorised by this resource consent as set out in Condition (3) are restrained, secured, and maintained in good working order at all times.															
5	The consent holder must not exclude public access to the Permit Area.															
6	All marine farming operations shall follow best practice and shall be undertaken generally in accordance with the Mussel Farming Code of Practice document entitled “Greenshell™ Mussel Industry Environment Code of Practice 2007” or subsequent updates to that document, except where to do so, would be inconsistent with these conditions of consent.															
7	The consent holder shall not dispose, or allow the disposal by a person under the consent holder's control, of inorganic material or debris into															

	the marine environment.
8	The consent holder shall ensure any non-biodegradable material lost from the structures is removed from the seabed, water column or foreshore as soon as practicable after discovery.
9	No artificial foods or antibiotics shall be added to water within the Permit Area unless authorised by resource consent.
10	All the marine farming structures shall be completed within five years of the commencement of the consent within the "permit area".
	FARM STRUCTURES
11	Before any new structures are installed, the consent holder shall provide to the Canterbury Regional Council: a. Final detailed plans of the structures ("final design plans"); and b. A certificate signed by a Marine Structural Engineer stating that the structures referred to in Condition (11)(a) have been designed for the sea conditions in the location of the Permit Area; and c. Details of the qualifications and/or experience of the person who will install the marine farm structures.
12	The structures shall be installed and maintained by a suitably qualified or experienced person in accordance with the certified final design plans.
13	A certificate from the installer confirming that the structures have been properly installed in accordance with the certified design plans shall be provided to Canterbury Regional Council by the consent holder within two months of the completion of the installation.
14	Within two months of installing any structures referred to in Condition (3), the consent holder shall provide to the Canterbury Regional Council: a. A survey plan ("as built plan") by a registered surveyor and GPS locations that define the boundary and position of the structure (to an accuracy of plus or minus five metres); and b. A map using a marine chart and GPS survey points of the corner points of the Permit Area of the marine farm to an accuracy of plus or minus five metres.
15	The structures shall be inspected annually, by 30 April each year, by a suitably qualified or experienced person to ascertain that the marine farm and its mooring systems are secure and maintained in good working order. A report shall be prepared on the security and maintenance of the structure following inspection and such report shall be submitted to the Canterbury Regional Council within one month of inspection.
16	The consent holder shall immediately advise the Canterbury Regional Council if any part (individually or collectively) of the structures (mooring structure or sea anchors) fail.

17	At least one month prior to the placement of the structures, the consent holder shall forward to the chief cartographer/hydrographer of Land Information New Zealand, the details of the location and lighting characteristics of the marine farm, and shall no later than one month following the placement of any structure, forward to those persons "as built" plans of the structures. The consent holder shall advise Land Information New Zealand immediately of any subsequent changes to, or removal of, the structures.
18	Prior to the date of expiry of this consent, the consent holder shall remove all structures from the Permit Area unless continuation of the activity has been authorised by resource consent.
	BUOYS
19	All buoys used in the marine farm shall be clearly marked with the consent holders initials.
20	The consent holder shall use buoys that: a. Are commonly used and acceptable in the mussel farming industry; and b. Have the least visual impact; and c. Are not orange unless they form part of the navigational safety system.
21	All buoyancy devices (flotation) shall be managed to ensure that on average no more than 20 percent of the diameter of such buoyancy devices is above the water surface at any time, provided that this condition shall not apply to flotation bearing reflectors, lights or contrivances required by the Maritime Safety Authority policy as referred to in its publication "System of Buoyage and Beaconage in New Zealand".
22	All buoyancy devices shall not exceed 900 millimetres by 600 millimetres in dimension, provided that this condition shall not apply to buoys bearing reflectors, lights or other contrivances as set out in condition (23).
	NAVIGATION SAFETY (Lighting System)
23	Before any part of the farm structure is installed, the consent holder shall: a. Submit a plan of the farm lighting system to Canterbury Regional Council; and b. Have a certificate by a registered engineer who is a member of the Institute of Professional Engineers of New Zealand stating that the lighting system has been designed in accordance with the requirements of the Maritime Safety Authority policy as referred to in its publication "System of Buoyage and Beaconage in New Zealand" and any subsequent amendments to that publication.
24	The lighting system shall be constructed and maintained in accordance with the approved design plans as set out in condition (23) at all times.

	In the event of non-compliance with condition (23), the marine farm permit may be revoked.
25	The lighting system shall be inspected every month by the consent holder to ensure that the lighting system is operational and is being maintained in good working order. The date of observation and findings shall be recorded in a log and submitted to Canterbury Regional Council upon request.
	BOND
26	At least two months prior to the installation of any structures referred to in Condition (3), the consent holder shall enter into an enforceable agreement acceptable to Canterbury Regional Council and bond pursuant to section 108(2)(b) and 108A of the Resource Management Act 1991; to provide and to maintain for the duration of the consent or until the removal of all structures, whichever is the later in time: a. A bank bond acceptable to the Canterbury Regional Council to secure the performance of the obligations of the consent holder under the bond and conditions of this consent in the event of any default by the consent holder or any occurrence of any adverse effect requiring remedy; or b. A cash bond based on \$2000 per hectare developed at any time and delivered up to Canterbury Regional Council two months prior to the development of each hectare.
27	The costs of, and incidental to, the preparation of documentation to meet Condition (26) shall be met by the consent holder.
28	The Canterbury Regional Council shall release the bond upon: a. The removal of all structures authorised under this consent and provided that it is satisfied that there are no outstanding compliance matters and/or remaining adverse effects due to the activity; or b. The replacement of the bond and agreement acceptable to the Canterbury Regional Council if the consent is transferred to another party.
	BENTHIC MONITORING
29	The consent holder shall monitor benthic species composition and sediment characteristics at all test and control sites.

30	Benthic monitoring sites shall be established as follows: a. Two benthic control sites shall be established. The sites shall be located: i. 250 metres away from each of the eastern and western boundaries of the marine farm; and ii. Midway along each of the boundaries specified in (30)(a)(i). b. Two benthic impact sites shall be established outside the boundaries of the farm, located as follows: i. 50 metres away from each of the eastern and western boundaries of the marine farm; ii. Midway along each of the boundaries specified in (30)(b)(i); and c. Four benthic farm sites shall be established within the boundary of the marine farm. Two sites are to be in the extension area and two within the existing farm area.
31	The location of the control and benthic impact sites will be selected before monitoring begins from a survey using GPS or equivalent technology with a precision of plus or minus 10 metres.
32	At each of the control, impact and farm sites specified in condition (30), quantitative samples shall be collected using grabs to collect sediment to a depth of 10 centimetres. At each site: a. Three replicate grab samples shall be collected for sediment analysis; and b. Three replicate grab samples shall be collected for benthic fauna analysis.
33	From each replicate grab sample taken for sediment analysis, the following analyses shall be undertaken: a. sediment colour; b. sediment smell; c. redox potential; d. total free sulphides; e. organic matter content to a depth of 2cm; f. particle size distribution to a depth of 2 cm; and g. total nitrogen and total phosphorus to a depth of 2 cm.
34	To determine infauna species composition and abundance in the benthic environment, three replicates of 130 mm diameter by 100 mm deep core samples shall be collected from the grab samples collected in accordance with condition (32). Each replicate core sample shall be sieved through a 0.5 mm mesh and the biota collected identified to the lowest practicable taxonomical level and counted by trained and

	experienced personnel.
35	To determine presence or absence, and relative abundance, of large bodied epifauna and shell debris in the benthic environment, a single tow not less than ten metre distance will be carried out at each impact and control site using either a benthic sled or dredge to collect large-bodied epifauna and shell debris. This sampling is to be carried out after six harvests following the installation of any structures.
36	Trigger points referred to in benthic monitoring conditions shall include; a. Occurrence of mussel shell in three infauna or benthic sled samples at test sites 50 metres outside the marine farm boundary but not at control sites 250 m from the farm boundaries; b. Depth of the oxygenated layer in the sediment is 5 centimetres or less in three samples at test sites 50 metres outside the marine farm boundary but not at control sites 250 m from the farm boundaries; c. Organic matter content (loss on ignition) of three samples is greater than 3.5 percent at test sites 50 metres outside the marine farm boundary but not at control sites 250m from the farm boundaries, d. The infauna biological community at test sites 50 metres outside the farm boundary is clearly different to that at the control sites 250 m from the farm boundaries as shown on a multi-dimensional scaling plot (nMDS or similar); A significantly high proportion of any one target species at 50 metres outside the farm boundary but not at control sites 250 m from the farm boundaries. This applies to infauna and benthic sled samples. Target species include: dorvillid polychaetes, capitellid polychaetes, <i>Coscinasterias</i> sp. and hermit crabs.
37	Benthic monitoring shall be undertaken in accordance with conditions (30) to (36): a. After two harvests and thereafter; b. Six harvests; after installation of any structures.
38	Benthic sampling and analysis shall be undertaken by appropriately experienced or trained people. The results of all monitoring conducted shall be reported to the Canterbury Regional Council within three months of undertaking the monitoring.

39	Data analysis and reporting shall be undertaken by appropriately experienced and qualified personnel. Each monitoring report shall include but not be limited to: a. Data from, and results of, all sampling and analysis conducted under the conditions of the consent ("results"); b. Graphical presentation and statistical analysis of all results; c. Identification of, and analysis for, trends in the results; d. Comparison of the most recent results with past results; e. An evaluation of trigger limits as stipulated in Condition (36); f. A list of species considered important in terms of indicating potential impacts; g. Recommended changes to the monitoring requirements; and h. Recommended measures to avoid, remedy or mitigate any exceedance of the trigger limits described in Condition (36).
	WATER COLUMN MONITORING
40	Mean phytoplankton biomass, as determined from chlorophyll-a or a suitable proxy, at a downstream location 50 m from the farm boundary shall be maintained at levels of greater than 85 percent of the concentrations observed at a comparable control site.
41	To determine if the condition (40) is being met: a. The consent holder shall undertake a phytoplankton survey using either moored instruments or calibrated fluorescent instrument for a month and a synoptic survey of the farm and surrounding area during a probable large depletion period (i.e. neap tides and calm conditions), when the site is fully established with lines and mussels within two years. b. The consent holder shall submit to the Canterbury Regional Council the water column survey plan as of Condition 41(a) as soon as the marine farm is fully established. This plan shall define where the sampling sites are (within the 50 m boundary) to be located. The plan shall provide detail of the methodology to be undertaken which will be used as a basis to establish those control sites. c. On completion of the surveys, the consent holder shall provide a report with the details of the survey results to the Canterbury Regional Council within two months of the completion of the surveys. This report shall provide an assessment of the requirements specified in condition (38).

42	If the phytoplankton results for a fully established farm cannot comply with condition (40), the consent holder shall: a. Alter the spacing of the lines or the stocking density or b. Have a farm management plan such that line use (spat collection or growing out of stock) is managed in a way to meet condition (38). c. Submit to the Canterbury Regional Council a water column monitoring plan that will allow for the assessment of the mitigation activities on phytoplankton levels.
	BIOSECURITY
43	All structures and equipment to be placed in the Permit Area referred to in Condition (3) shall be either not previously used, or if previously used shall be cleaned and decontaminated. The consent holder shall keep records of the origin and destination of all structures and equipment and records of any treatment of structures and equipment. Such records shall be provided to the Canterbury Regional Council upon request.
44	The consent holder shall: a. Maintain all vessels properly to prevent the growth of biofouling, the accumulation of sediment or debris, or colonisation by designated marine pests; b. Ensure that spat and seed transferred from other regions be de-clumped, thoroughly washed and be visible free of biofouling and sediment prior to transfer; c. Ensure that personnel are familiar with, remain vigilant for, and report new pest or signs of disease to the relevant authorities; d. Undertake all cleaning of mussel farm infrastructure (e.g. Ropes, floats etc) on-site or on land with debris collected and disposed at an authorised location/facility; and e. Adhere to any New Zealand Biosecurity requirements in relation to marine farming as indicated in the "Biosecurity Manual for the Aquaculture Industry (July 2015) by Ministry for Primary Industries and can be found at http://www.mpi.govt.nz/news-and-resources/publications/.
	UNDARIA
45	The consent holder shall maintain a <i>Undaria pinnatifida</i> Management Plan for the site prior and during the establishment of the marine farm, and shall operate in compliance with that plan at all times.
	MARINE MAMMALS
46	A log and chart of the farm area shall be kept on all vessels working on the farm, in which all sightings of dolphins in or near the marine farm are to be recorded. An indication of their activity shall be recorded if possible. A copy of the log shall be provided to the Canterbury Regional Council and Department of Conservation by 30 May each year or upon request.

47	In the event that a marine mammal becomes entangled or is found dead within the Permit Area, the consent holder or its agents shall immediately notify the Canterbury Regional Council and the Department of Conservation.
----	--

