

Assessment of Environmental Effects for the Private Plan Change Request by The Wainui Bay Spat Catching Group

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1. Assessment of Environmental Effects

- 1.1 As part of an application for a Plan Change, the applicant must assess the effects of their proposal on the environment. This document performs that role.
- 1.2 In order to understand this document, it is necessary to refer to the proposal and the purpose of the proposal which, is set out in the preceding Private Plan Change Request document.
- 1.3 This document first outlines in some detail the process of mussel spat catching more generally, mussel spat catching at Wainui Bay specifically, and other sources of spat, before assessing the effects of this proposal on the environment.
- 1.4 The conclusion reached in the following assessment is that Wainui Bay produces spat which is used to grow approximately half of the mussels in the top of the South Island.
- 1.5 The 16 hectares of surface structures at Wainui Bay will affect the amenity of the immediate locality, as will the servicing of the 16 hectares. Conditions are proposed to be written into the Tasman Resource Management Plan (“the Plan”) to address hours of operation, noise, lighting and other effects. Other matters are dealt with in industry codes of practice. All other impacts have been assessed as either appropriate or minor.
- 1.6 Note that all references to spat and spat catching in this document are references to mussel spat and mussel spat catching. The Plan defines those terms as follows:¹

Mussel spat - means any stage of the lifecycle of Green-lipped mussel (*Perna canaliculus*) less than 40 millimetres in length.

Mussel spat catching - means spat catching that is limited to the obtaining or retention of mussel spat and the harvesting thereof from aquaculture structures.

- 1.7 In this document mussel spat holding, or allowing the development of spat caught, refers to spat between 40 – 60 millimetres in length. A new definition of mussel spat holding is proposed to be added to the Plan as part of this Plan Change.

2. Location

- 2.1 Wainui Bay is located in south eastern Golden Bay. A map showing Wainui Bay in the context of the wider Golden Bay area is included at Appendix C.
- 2.2 The entrance to Wainui Bay opens to the broad expanse of Golden Bay. Within Wainui Bay, the farm is located south east of Abel Tasman Point, adjacent to, but separate from, a rock and reef structure that extends out from the Point. An aerial photograph showing the locations of the existing resource consents is included at Appendix D.

¹ Tasman Resource Management Plan, Chapter 2 “The Meaning of Words” at 22.

- 2.3 The land immediately adjacent to Abel Tasman Point is privately owned by Tata Lands Limited. That land is subject to an open space covenant pursuant to s 22 of the Queen Elizabeth II National Trust Act 1977. The house on that section is located on an elevated platform above the Wainui Bay spat farm.
- 2.4 Immediately adjacent to Tata Lands Limited's land is property owned by Ann Louise De Lambert and The New Zealand Guardian Trust Company Limited. On that title are holiday homes that overlook the site. They are not prominent in the landscape. In addition, there are nine house in total in the Bay in the vicinity of the farms.
- 2.5 The road from Pohara and Tarakohe crosses a low saddle south of Tata Lands Limited's property and continues down into Wainui Bay itself through a series of cuts made into the roading hillface. Wainui Bay is characterised by a patchwork of grassed areas, stands of native bush, stands of pinus radiata forest, white sandy beaches, and estuarine environment, particularly behind the sandspit. On the far side of Wainui Bay is the Abel Tasman National Park, which commences shortly before the road end on the eastern side of the Bay. The main road in the Bay continues to Totaranui, which contains a Department of Conservation camping ground, among other facilities.
- 2.6 The waters of Wainui Bay are bisected by a large sandspit, which encloses the inner Bay with the exception of a small channel. The sandspit itself is not within the Abel Tasman National Park, but within the Abel Tasman Foreshore Scenic Reserve. Across the channel from the sandspit lies Takapou with Burial Point at its end. The site is a recognised urupa.

3. **Spat Catching**

- 3.1 Spat catching is the first stage of greenshell mussel (*Perna canaliculus*) production. The greenshell mussel, also known as the green-lipped mussel, is a species endemic to New Zealand. Greenshell mussels are one of the larger mussel species, reaching 240mm in length. At the stage when spat attaches to the rope it is around 250 microns in length. As such, it is microscopic and invisible to the naked eye.
- 3.2 Mussel spat is free-swimming for the first month of its life and drifts or fixes its place in the tidal stream (using foot adhesion and gas vacuole secretion and byssus placement) to reach a desired spot for settlement. There is evidence of a transport mechanism which suggests that the mussel spat directs itself around the top of the South Island from the West Coast and pushes itself into Golden Bay, Tasman Bay and the Marlborough Sounds.
- 3.3 Spat is caught on ropes specifically designed for the purpose. The rope has a heavy core to ensure that it sinks in the water. In order to maximise the surface area of the rope, a number of hairs or bristles extend out from the rope.



Figure 1: Spat Catching Rope

- 3.4 Buoyancy is achieved by attaching the spat-catching rope to a continuous line running at or near the surface of the water, called a backbone. The backbone is, in turn, attached to a series of mussel floats to provide buoyancy. The backbone and floats are kept in place by ropes (called warps), which descend through the water at an angle and are attached to anchors on the sea floor. In this way the farm stays in position, part of the spat-catching rope is attached at or near the surface of the water and the remaining rope is suspended in the water column. A schematic drawing of longline marine farming is included at Appendix E.
- 3.5 Due to the fact that spat has negligible weight, less than half the number of mussel floats are used for spat catching in comparison to normal mussel farming. When purely spat catching, 12-15 mussel buoys support the backbones and catch rope for each longline. This amounts to roughly half of the number of floats used for mussel farming on average during the season and a quarter of the number of floats used on a mussel farm which is ready for harvest. More floats are required as the mussels increase in size. This is a difficult balance. Too much buoyancy and the lines will move excessively in choppy seas. Too much movement will encourage the spat to fall off. Too little buoyancy and the farm will sink.
- 3.6 Mussel spat feeds on phytoplankton that exists naturally in the water column. However, given their size, the spat do not consume a significant amount of phytoplankton. Furthermore, whether the spat are suspended in the water column or attached to spat-catching rope, they are naturally present in the environment and will feed off the phytoplankton.

- 3.7 Just as mussel spat can attach itself to spat-catching rope, spat can also remove itself from that rope and re-enter the water column. This tends to occur during a storm event, but can occur due to changes in the environment, such as temperature, depth, salinity and food availability.
- 3.8 Spat holding (allowing the development of spat caught) is best done in water with current that forces the spat to “remain attached” to the growing rope. Spat is seeded out when it has achieved an optimal size for seeding (for on-growing to mussels) to occur, at the rate the operator demands for their final harvest or transfer to processing plant. Target weights per metre vary due to the vagaries of water conditions; however, a normal range is 5-7kg/m of growing rope. Most companies would be seeking the higher number.²

4. **The History of Spat Catching**

- 4.1 Attempts to farm greenshell mussels began in the early 1970s. It was initially assumed that spat could be produced at a hatchery or caught in the wild. There was initial success at catching wild spat. Early efforts at producing viable commercial hatchery spat were mixed, but generally poor. While the level of scientific knowledge has increased markedly since the early days, there are still some further technological and scientific challenges to overcome before hatchery produced spat can be relied upon as a substitute for wild mussel spat.
- 4.2 Spat was eventually found attached to drift seaweed that periodically washes up along the length of Ninety Mile Beach in Northland in vast quantities. This kick-started the industry, along with the advent of the modern longline system, adapted from oyster farming in Japan. It was found that mussels grown from spat sourced from Ninety Mile Beach followed a very narrow growth and condition cycle. Those mussels would not grow to potential below 12 metres in water depth, nor would they grow to potential in many Marlborough Sounds locations. Those mussels would be in condition (fat) in a narrow season between January and June each year. Mussel producers were faced with a choice of harvesting poor quality mussels in the off season or the workforce being seasonalised in the summer/autumn period. It was impossible to build an export market from this and the industry struggled to survive.
- 4.3 In the late 1980s two farms were established in Wainui Bay by Bengie and Climpson, but these struggled to be commercially viable because of unknown growth, fattening cycles and the newness of the technology. Eventually these were sold to new entrants, who discovered a readily available spat source growing on the lines.
- 4.4 Another discovery was that getting spat to attach to lines was only the first part of a complex puzzle. Spat harvested from Ninety Mile Beach have a significantly lower growth rate in terms of growing through to adult mussels when compared with Wainui Bay spat. The explanation for this is that Wainui Bay spat is adapted for growing in cooler water temperatures compared to Ninety Mile Beach spat, although this is by no means the only relevant factor.

² Merv Whipp (Ngāi Tahu Seafood Limited), and John Young (Clearwater Mussels Limited), Personal Communication.

4.5 There have been some failures of Ninety Mile Beach spat, especially in recent years with the extended La Nina period, which depletes the spat food levels off the coast of Ninety Mile Beach. The ability to harvest spat from Ninety Mile Beach can also be constrained by the lack of stranding of spat encrusted seaweed. This last season has been a salutary example of this and has reinforced the value of Wainui Bay spat to the industry. In addition, a challenging organism began to appear on Ninety Mile Beach about 15 years ago. This catenatum cyst species resulted in restrictions on the movement of spat around the country being imposed until a treatment method was found for it, by washing it off in a contained system. At such times the Nelson/Marlborough Sounds industry is totally reliant on Wainui Bay spat, plus whatever can be harvested from the other spat catching sites in Golden Bay and Tasman Bay (AMAs 1, 2 and 3) and the Marlborough Sounds.

5. Continued Challenges for Spat-Catching

5.1 Experienced spat-catchers will tell you that the catching of spat is more of an art than a science. Spat fall can occur at one end of a longline, but not at the other end. It may occur below a certain depth, but not above. It may fall heavily on one line, but not on the adjacent line.

5.2 Once you have caught spat, it is a challenge to keep it. Spat from different sources has different holding properties. If spat (or the mussels which grow from that spat) does not stay on the mussel lines, it is of no good to the farmer.

5.3 Different spat have different quality characteristics. Spat harvested from colder water tends to be more suited to growing in cold water. Different spat will be sourced from different genetics and accordingly may fatten up at different times. Mussel connoisseurs can tell differences in taste between mussels grown from different sources.

6. Spat Catching Activity at Wainui Bay

6.1 Wainui Bay is of national significance for mussel spat catching, as it has provided a consistent and reliable source of mussel spat since first being farmed around 1980. This site provides about half of the spat that is used for mussel farming in the Top of the South.

6.2 Wainui Bay is a natural topographical feature where westerly wind streams blowing offshore cause an upwelling in the Bay. Spat appears in vast quantities during these regular events.

6.3 Spat congregate by tide and current at this location. The discovery of this part of Wainui Bay as a site for catching and holding spat is a matter of folklore within the marine farming community. Over the years a number of other sites have been informally tested. Wainui Bay is outstanding in respect of the quantity of spat, the quality of spat and the consistency of spat fall.

6.4 At Wainui Bay, the ropes consistently catch over 1,000 spat per metre of catch-rope through a season extending from October to July in the following year.³ Each spat

³ Andrea Strang data, as per Appendix JK.

catching episode historically commences with a Spring set in October and several sets from late February through to April. The number of sets is variable, as they are subject to seasonal conditions and wind patterns.



Figure 2: Spat Catching at Wainui Bay



Figure 3: A national treasure - heavily laden spat rope, Wainui Bay

- 6.5 The importance of Wainui Bay is underlined in the Report and graphs by Andrea Strang, of Aquaculture Solutions Ltd, which are included at Appendix JK. Andrea Strang has been responsible for collecting spat-catching data from sites in Tasman and Golden Bay. She has been collecting data on a weekly basis since August 2007, and has earlier records dating back to 2003.⁴ Andrea's work demonstrates that, as compared with the other sites monitored, there is more spat available at Wainui Bay more consistently than at any other site. We, therefore, know that Wainui Bay is substantially more reliable than either Tasman or Golden Bay.
- 6.6 This comparison of the spat catching potential between Wainui Bay, Tasman Bay and Golden Bay is clearly illustrated by Andrea's graphs, also included at Appendix JK. The data is displayed in a set of time series graphs, which show:
- (a) Averaged weekly spat catch per metre of catchrope between November 2006 and May 2009;
 - (b) Averaged weekly spat catch per metre of catchrope between May 2009 and May 2012;
 - (c) Averaged weekly spat catch per metre of catchrope between April 2012 and July 2015;
 - (d) The above three graphs combined to show Averaged weekly spat catch per metre of catchrope between November 2006 and July 2015; and
 - (e) A similar combined graph showing Averaged weekly spat catch per metre of catchrope between November 2006 and July 2015 depicted in block colours.
- 6.7 Wainui Bay is represented by the solid blue shading in the first four graphs. Where white space is visible underneath one of the coloured lines, this shows times when one of the other three sample sites was catching spat, while Wainui Bay was not. The graphs show that this occurs very infrequently. Wainui Bay produces at most times when the other sites produce, and frequently when they do not. The final block colour time series graph shows the combined data in a slightly different way. In essence, at any point along the time scale where the grey area representing Wainui Bay is visible, Wainui Bay has out-performed the other three sites. That is, a greater number of spat per metre of catch rope was caught at Wainui Bay for that week. These graphs illustrate that, while the other sites are an important adjunct to Wainui Bay caught spat, they are in no way a substitute. Consistency over time is key, and Wainui Bay is by far the most consistent of these four sampled sites.
- 6.8 Andrea Strang's report tells us in a relative sense how much spat is available to be caught. How much spat is in fact caught and the quality and usability of that spat depends on a wide range of factors. Often that information is commercially sensitive. However, each grower can identify the source of spat used to grow harvested product. Once the various amounts are added up, approximately 50% of all mussels farmed in Tasman Bay, Golden Bay and the Marlborough Sounds are sourced from Wainui Bay spat.⁵

⁴ Note that the Marine Farming Association also has records from the Wainui Bay site dating back to 1993.

⁵ Ron Sutherland, based on personal communications with Clearwater Mussels Limited, Ngāi Tahu Seafood Limited, Talley's Group Limited, and Maclab (NZ) Limited.

- 6.9 The Wainui Bay spat catching zone comprises six blocks, with seven resource consents, and encompasses some 16ha of farmed area that is due to expire in December 2024.
- 6.10 At present there are 66 longlines from which spat catching rope is hung in Wainui Bay. Overall there is some 482,000 metres of spat rope placed per set.
- 6.11 It takes three to four weeks to effectively measure a spat catch, as spat is transferred to spat holding sites in Golden Bay and Marlborough, where the spat grows on growing lines until it is ready to be stripped and seeded out for on-growing on mussel farms.
- 6.12 Taking an average of three sets per annum from the 66 lines results in an average of 25,000 - 30,000 tonnes of harvested product. Depending on the seeding strategy of each company, the spat from Wainui provides about half of the spat for the industry in Tasman/Nelson and Marlborough. One company sources 75% of its stock from Wainui and 25% from Kaitaia, while others have a 60% Wainui, 40% Kaitaia split in the Marlborough Sounds.⁶
- 6.13 From approximately April to approximately October, the predominant activity at Wainui Bay is spat-holding. In that circumstance spat is kept on the lines and allowed to grow up to 40mm in length and, in unusual circumstances, up to 60mm. This process allows seeding of mussels during the off-season, which provides for a continuous supply of product to the processing factories. In turn that enables the supply of product all year round, which is essential to avoid seasonality issues.

Service Vessels and Marine Farming Codes of Practice

- 6.14 The companies operating the mussel spat catching farms at Wainui Bay operate 10 service vessels, eight of which are based at Port Tarkohe, and two in the Marlborough Sounds. On average each vessel visits the site and manages the lines and floats two days a week. During the height of the spat-catching season, vessels operate from 6.00 a.m. to 8.00 p.m. to lay catch rope or uplift rope for spat transfer. On average it takes around two hours to uplift one longline of rope.
- 6.15 All vessels comply with applicable maritime regulations in terms of safety systems, navigation lights, communication equipment and the like.
- 6.16 Three marine farming codes of practice are relevant to the Wainui Bay site, namely:
- (a) The Aquaculture New Zealand managed Environmental Code of Practice (June 2007), now replaced by the Aquaculture New Zealand A+ Sustainable Management Framework: New Zealand Mussels;
 - (b) The Marine Farming Association Standard Operating Procedures, Marlborough Sounds, Golden Bay and Tasman Bay (2015); and
 - (c) The Code of Practice for Wainui Bay.
- 6.17 The Aquaculture New Zealand managed Environmental Code of Practice (June 2007), which all of the consent holders were party to, was the overarching industry code of

⁶ Ron Sutherland, based on personal communications with Clearwater Mussels Limited, Ngāi Tahu Seafood Limited, Talley's Group Limited, and Maclab (NZ) Limited.

practice (“COP”) until mid-2015. This has been superseded by the Aquaculture New Zealand A+ Sustainable Management Framework: New Zealand Mussels, which is still in the process of being rolled out.⁷ This is a more holistic programme that aims to standardise and advance environmental management across the industry. The best practices contained in the 2007 COP are reflected in the Operational Procedures in Appendix 2 of the new A+ Sustainable Management Framework.

- 6.18 The Marine Farming Association Standard Operating Procedures, Marlborough Sounds, Golden Bay and Tasman Bay (2015), provides for specific operating practices on a regional basis. These reflect the original 2007 COP, adapted where appropriate to the regional scale.
- 6.19 At the local site level, a code of practice has been developed for the Wainui Bay consent holders to follow while carrying out operations at the site. It is designed to avoid, remedy or mitigate environmental impacts from marine farming activities at the Wainui Bay spat catching sites on other users and residents. Its purpose is to:
- (a) “Be sensitive and considerate to residents and other users when undertaking marine farm activities on the water.
 - (b) Recognise the impact of mussel spat catching on other users in the Wainui Bay and local residents.
 - (c) To provide methods/guidelines for marine farm industry operators to follow to reduce the localised impact of mussel spat catching activities.
 - (d) To provide methods/guidelines for marine farm operators to follow to avoid unnecessary noise and disruption to residents from marine farming vessel’s lights.”
- 6.20 The local code provides industry standards for the likes of noise requirements, lights, vessel speeds, debris management and float management. The codes of practice are the mechanism used by the industry to manage itself. They are a tool used by the industry to assist in avoiding a formal regulatory response.⁸
- 6.21 The regional and local codes of practice are included at Appendices M and N respectively.
- 6.22 Wainui provides a safe working option in regular south east gales. It is the only calm spot that is workable in Golden Bay during south east winds, which can last for days or weeks at a time.
- 6.23 Eight vessels use Port Tarakohe as their home port. The crews of those vessels generally live in Golden Bay. Two other vessels that regularly work Wainui Bay are based elsewhere. In circumstances where there is an acute shortage of spat, other vessels may come from the Marlborough Sounds, although generally Wainui Bay

⁷ A copy of the Aquaculture New Zealand A+ Sustainable Management Framework: New Zealand Mussels is available here:

<http://static1.squarespace.com/static/55d2b0eee4b0649ae7068665/t/55f7d6afe4b05cc86891dd9f/1442305711334/Greenshell+Mussel+SMF+July+2015+10-9-15.pdf>.

⁸ In addition to this means of self-regulation, the Wainui Bay Spat Catching Group has proposed that a set of conditions be included in the Tasman Resource Plan to address residents’ concerns arising from service vehicles operating at the Wainui Bay farms. These conditions are discussed below in section 13, in relation to mitigation of amenity effects.

spat is taken to an intermediate spat-holding site, such as Collingwood, before being transferred to farms for on-growing.

Navigation Lights

- 6.24 All of the sites have navigation lights and radar reflectors to enhance navigation around each consented area. These are a condition of consent and follow the requirements of the local Harbourmaster and Navigation Guidelines for Marine Farms.⁹ The conditions of the existing Wainui Bay consents include a requirement to provide special marks at the northern corner of the area authorised by RM071049 and at the eastern corner of the area authorised by RM071050. The light is yellow, set to group flash five times every 20 seconds, is visible for at least one nautical mile and at least one metre above sea level. Radar reflective/reflector tapes are required to be provided in association with the special marks.
- 6.25 Navigational safety matters are discussed at length below under section 16.

7. Mussel Transport and Processing

- 7.1 Products on-grown from Wainui Bay mussel spat are transported to and processed in factories throughout the top of the South Island. The aquaculture industry has developed an integrated production system that begins its cycle from mussel spat caught at Wainui Bay. The industry has become an important part of the Golden Bay economy as well as the economy of the top of the South Island.

Transport

- 7.2 Currently eight vessels use Port Tarakohe as “home base”, while two come from the Marlborough Sounds or Nelson to pick up product for re-seeding or to deliver equipment. At times, other vessels from the Sounds uplift Wainui spat for re-seeding; however, the majority is collected for intermediate reseeded at Collingwood or local spat holding sites. This material is then re-harvested at between 35-45 mm in size for transport to the Marlborough Sounds or to local growing sites in Golden or Tasman Bays. At the height of the season, transfer over the wharf can occur on a daily basis, with 10 loads per vessel per week being the average.¹⁰ On average Clearwater Mussels Ltd transports two loads a day from Port Tarakohe to the Marlborough Sounds.¹¹
- 7.3 Port Tarakohe is the focus of this transport activity, where most equipment for use at Wainui Bay is loaded over the wharf. This includes ropes and buoys. When necessary after lines are stripped and cleaned, usually on board the vessels, the lines are transferred back to land for reconditioning of the lead rope core at the various yards used by the consent holding companies. This equipment is then available to be reset when the spat count indicates it is time to relay catch rope.

⁹ Guidelines for Aquaculture Management Areas and Marine Farms, Maritime NZ (2005), available here: <http://www.maritimenz.govt.nz/Publications-and-forms/Commercial-operations/Ports-and-harbours/Guideline-for-Aquaculture-Management-areas-and-Marine-Farms.pdf>.

¹⁰ John Young, Personal Communication.

¹¹ Hika Rountree, Personal Communication.

- 7.4 The industry is an important client for Port Tarakohe, where all equipment and product loaded over the wharf is charged for through the port weighbridge system. A substantial tonnage of final product, at least 100 tonne a week during peak times, is taken over the wharf for transport to processing plants in Motueka, Nelson, Havelock and Blenheim.¹²

Processing

- 7.5 Spat that has not been transported elsewhere is on-grown at various sites within Golden and Tasman Bays. Much of that product eventually goes over the Port Tarakohe wharf. For instance, Clearwater Mussels aims to grow 24 – 26 tonne of product per longline and harvests around 1500 tonnes a year from this source. If the product is free from over settled blue mussels, it will go directly to Motueka for processing. If it contains both blue and green mussels, it is trucked to Havelock to be colour graded, then on trucked to processors in Blenheim, Motueka or Maclab in Nelson.¹³ A small amount of product is harvested at United Fisheries Limited's processing factory in Christchurch.
- 7.6 It is clear that the aquaculture industry has developed an integrated production system that begins its cycle from Wainui Bay spat catching. As a consequence, the industry has become an important part of the economy of Golden Bay initially and, subsequently, the top of the South Island as a whole.

8. Other Sources of Spat

- 8.1 The source of mussel spat nationally has been confined to a limited number of locations with variable performance. They are:
- (a) Kaitaia spat, which relies on weather patterns to wash seaweed encrusted with spat into the Ninety Mile Beach area;
 - (b) Three spat catching sites in the Pelorus Sound, Marlborough Sounds, which provide limited locally produced spat;
 - (c) The offshore marine farm sites in Golden and Tasman Bays (AMAs 1, 2 and 3) are also used for spat catching; however, the percentage of spat caught at these locations is small;
 - (d) Limited spat from Canterbury;
 - (e) Potential hatchery spat; however, development is still ongoing in this area; and
 - (f) Wainui Bay.
- 8.2 Kaitaia spat is harvested from Ninety Mile Beach. Spat is washed ashore attached to seaweed. The mechanism by which mussel spat ends up on Ninety Mile Beach is poorly understood scientifically. The fundamentals of the system are that mussel spat needs to be present in reasonable quantities, seaweed also needs to be present and weather conditions must exist to bring that seaweed onto the beach. During an La Nina event, such as that experienced in 2014-2015, less seaweed is brought up onto the beach, resulting in shortages of Kaitaia spat.
- 8.3 This spat has a different season and, importantly, has different fattening cycles to Wainui sourced spat. Viability of spat can also be problematic depending on the

¹² Allan Kilgour, Port Manager, Port Tarakohe, Personal Communication.

¹³ Hika Rountree, Personal Communication.

time the spat is out of the water and seeded out for on-growing. Nearly all spat for the North Island comes from this source, as well as minor spat catching from harbours in the upper western North Island.

- 8.4 Most companies attempt to balance their spat requirement using both Wainui and Kaitia sources, which allows a full year production cycle to be maintained. This, of course, has a flow on effect in the employment and service sectors of the industry.
- 8.5 Other sources of spat include spat catching at AMA 1 Waikato, AMA 2 Puramakau, and AMA 3 Te Kumara; however, these sources vary in their performance. These sites are also seasonal, because of the needs of other users of the common water space. A comparison between spat availability at Wainui as opposed to the Golden Bay and Tasman Bay AMAs is contained in Andrea Strang's report at Appendix JK.
- 8.6 Mussel spat catching sites are also present in the Marlborough Sounds, primarily at the head of Clova and Beatrix Bays. These sites are also variable in terms of spat congregation and require both northwest and southerly winds to create up-wellings of deeper water to bring spat within the target depth required for capture. In late October to early November 2014, an early catch occurred that was better than average. The total available from this source is estimated to be between 5-10% of the total spat used in Nelson and Marlborough.
- 8.7 A small amount of spat is caught within Banks Peninsula in Canterbury, and is used locally.
- 8.8 All of the above sites are important adjuncts to Wainui Bay sourced spat.
- 8.9 Considerable research into spat breeding has been undertaken by the Cawthron Institute and industry partners.¹⁴ The techniques to develop spat in a hatchery environment have been developed. While there has been some success, there are still challenges to overcome. Researchers are hopeful that this project will be successful, and have set an initial target to produce spat capable of producing the equivalent of 10,000 tonnes of adult mussels.
- 8.10 The existing consent holders at Wainui Bay have developed an efficient means of identifying when spat is present and techniques to catch and hold spat that are reliable and provide a consistent result. Hatchery produced mussel spat are a useful adjunct to wild spat, but are still not a reliable replacement.
- 8.11 Wainui Bay spat is by far the most reliable site and is highly productive due to the special conditions that cause spat to accumulate in large numbers in this small area. Over recent years spat has been in short supply. The loss of Wainui Bay spat would have a critical impact on the marine farming industry right across the top of the South Island.

9. **Why Mussels are Not Grown at Wainui Bay**

- 9.1 Full mussel farming has not occurred at Wainui Bay since the sites were first established in the 1980s. The reasons for that are twofold:

¹⁴ See <http://aquaculture.org.nz/2015/04/02/spatnz-launch-new-era-for-industry/>.

- (a) Wainui Bay is far too valuable as a spat catching site to be used for mussel farming; and
- (b) If mussels were farmed at Wainui Bay they would be constantly inundated with fresh spat.

9.2 A reliable source of good quality spat is a rare commodity. Despite significant areas being devoted in AMAs 1, 2 and 3 to spat catching, the 16 hectares at Wainui contributes to roughly half of the spat used to grow mussels in the top of the South Island.

9.3 Just as important, mussel spat can attach itself to the shells of larger mussels. Accordingly, if Wainui is used for mussel farming, it ends up with mussels at different lifecycle stages on the same crop rope. While that is unavoidable to some extent, it does pose challenges for mussel farmers. In other locations mussel farmers vary the depth of their lines in order to reduce the risk of over-settlement. However, the Wainui site is relatively shallow. Accordingly, it is not possible to drop the mussel crop below the top few metres where settlement often occurs.

9.4 While Wainui is a fantastic spat-catching site, there are better locations to grow mussels.

10. Resource Management Issues

10.1 Clauses 6 and 7, Schedule 4, of the Resource Management Act 1991 (“the Act”) set out the information required and the matters that must be considered as part of an assessment of environmental effects. These statutory provisions are set out in Appendix B. The likely effects of the proposed continuation of mussel spat farming at Wainui Bay are assessed below at Sections 11 - 20.

11. Landscape Assessment

11.1 Both the Act and the New Zealand Coastal Policy Statement 2010 (“NZCPS”) state that outstanding natural features and landscapes are important matters to consider in the resource management context. “Outstanding” is not defined in the legislation or the policy document, so is typically given its ordinary meaning, something akin to exceptional.

11.2 The New Zealand Institute of Landscape Architects (NZILA) puts forward the following definition of landscape:¹⁵

Landscape is the cumulative expression of natural and cultural features, patterns and processes in a geographical area, including human perceptions and associations.

11.3 A landscape is an area that is perceived as a whole, either experienced from within or seen as the whole of an outlook. By contrast, a feature is a discrete element within a landscape, but one that still has integrity as a whole element.¹⁶

¹⁵ NZILA *Best Practice Note 10:1: Landscape Assessment and Sustainable Management*, New Zealand Education Foundation, 2 November 2010.

¹⁶ *Wainui Bay Landscape Expert Panel Workshop*, 22-23 September 2014 at 12.

- 11.4 The whole of Golden Bay has been recognised by the Environment Court as an outstanding natural landscape that is of national importance.¹⁷ The Wainui Bay farms, due to their location, scale, low impact on biophysical and associative values and limited perceptual impacts, do not interfere with the outstanding natural landscape of Golden Bay. The Wainui Bay farms have been assessed as appropriate by a community-led landscape project, discussed below.

Sources of Information

- 11.5 Two recent projects have characterised landscapes and features in Wainui Bay. Those projects are:

- (a) The Tasman District Council Golden Bay/Mohua Landscape Project;¹⁸ and
- (b) The Wainui Bay Landscape Expert Panel Workshop.¹⁹

Golden Bay Mohua Landscape Project

- 11.6 The Golden Bay/Mohua Landscape Project has a lengthy back-story. The Tasman Resource Management Plan was notified in 1996. That Plan, as proposed, contained a number of Landscape Priority Areas. As a result of submissions, variation 1 removed all but two of those areas (Takaka Hill and St Arnaud). Subsequent decisions committed Council to further investigation and consultation on the location of outstanding natural features and landscapes and the rules necessary for their appropriate protection. This enabled appeals in the Environment Court to be resolved.
- 11.7 Work commenced on the Golden Bay/Mohua Landscape Project in late 2007. At that point there were some investigations and engagement with community stakeholders. Work paused from August 2008 to June 2010. A Working Group was established in December 2010 and this Group met three times in 2011 and once in 2012. It became clear to the Working Group that, while it had produced some useful results over a series of facilitated sessions, it was not going to arrive at a group recommendation.
- 11.8 It was agreed that the work would be continued by a small group (“Small Group”) comprising: Debs Martin (Forest and Bird), Michelle Riley (Federated Farmers), Trina Mitchell (Manawhenua ki Mohua), Helen Campbell (Friends of Nelson Haven and Tasman Bay), Doug Saunderson-Loder (Talley’s Group Limited), Don Mead (Friends of Golden Bay-Mohua), Joan Butts (Port Tarakohe Ltd) and Nigel Harwood (Northwest Coast farmers). Mike Newman later stepped in as a proxy for Don Mead.
- 11.9 The Small Group had support in its work by Glen Lauder (Common Ground/Cultivate), Phillip Barker, who took on a role of recording views, agreements and

¹⁷ *Golden Bay Marine Farmers v Tasman District Council* W042/2001, page 150. Attention also needs to be drawn to [707] on page 126. No party sought the removal of the Wainui farms as part of that case, nor its inclusion in an aquaculture exclusion area. There has been significant new evidence since that time.

¹⁸ More information about this project and a copy of the report is available here:

<http://www.tasman.govt.nz/tasman/projects/environmental-projects/golden-bay-landscape-project/>.

¹⁹ A copy of the report produced is included at Appendix L.

recommendations, and Shelagh Noble, who was the Tasman District Council's contact for the Group.

- 11.10 In October 2014 the Small Group produced a report, which was then put out for public consultation.²⁰ While the report attracted many public submissions, none of those submissions contradict the findings and recommendations of the Small Group in respect of the Wainui Bay marine farms.
- 11.11 It follows that the report of the Small Group accurately reflects the community view in respect of landscape and features in the immediate vicinity of the Wainui Bay farms.
- 11.12 That Small Group agreed with the Environment Court's determination in *Golden Bay Marine Farmers v Tasman District Council* W42/2001 (27 April 2001) that the Golden Bay/Mohua marine area is an Outstanding Natural Landscape/Seascape.²¹ The Small Group "accepted that boating fishing and marine farming are part of the character of the bay."²² It went on to acknowledge that "Wainui Bay is an area of beauty, also valued by the community for the quality spat produced by the marine farm."²³
- 11.13 The site is immediately adjacent to the Abel Tasman National Park, an outstanding natural landscape, which encompasses the land on both sides of Wainui Bay.²⁴ In addition, the farm is immediately adjacent to the Wainui Bay inlet outstanding natural feature.²⁵ There was a reservation in the Small Group as to whether the outstanding natural feature should include the whole bay.
- 11.14 The existing mussel spat farm at Wainui Bay was recognised as an appropriate activity.²⁶
- 11.15 The Small Group Draft Report is a product of much hard work by the participants. However, it is a document which has not been adopted through a formal process, nor is it a document in final form.

The Wainui Bay Landscape Expert Panel Workshop

- 11.16 An expert panel of landscape architects convened a workshop at the Pohara Boat Club on 22-23 September 2014 ("Expert Workshop"). The landscape architects who attended were Gavin Lister (Isthmus), Julia Williams (Drakeford Williams), Dennis Scott (D J Scott), John Hudson (Hudson & Associates) and James Bentley (Boffa Miskell). Also in attendance were Steve Markham, Shelagh Noble and Rosalind Squire (Tasman District Council), Rod Witty (Department of Conservation), Quentin Davies (Gascoigne Wicks) and, for part of the first day, Chanelle Courtney and Greg Knapp (Department of Conservation).

²⁰ Tasman District Council *Golden Bay/ Mohua Landscape Project: Draft Report of the Small Group*, October 2014.

²¹ *Draft Report of the Small Group*, at 6.

²² *Draft Report of the Small Group* at 16.

²³ *Draft Report of the Small Group* at 16.

²⁴ *Draft Report of the Small Group* at 20.

²⁵ *Draft Report of the Small Group* at 32.

²⁶ *Draft Report of the Small Group* at 16.

- 11.17 The Expert Workshop produced a written document, which is included at Appendix L.²⁷ The methodology for assessing the extent of the coastal environment, coastal natural character and coastal landscape is detailed in that document.
- 11.18 The participants assessed Outstanding Natural Landscape and Outstanding Natural Features and concluded that Wainui Bay has strong natural values, even though the natural ecology patterns and sequencing have been disturbed. This was observed to be most pronounced on the Abel Tasman headland and west-facing hill slopes. However, the valley floor and east-facing hill slopes show distinct signs of human habitation in the form of a road and prominent dwellings sited high on the hillside above the Bay, and the coastal erosion works below that distort the edge of the Takapou sandspit. While the landscape architects agreed that the combination of high quality physical attributes, high quality perceptual attributes and very high associative attributes was close to the threshold of being an outstanding natural feature, they were not able to reach a conclusion on that due to the lack of contextual information on landscape values within Golden Bay and the wider Tasman District. In short, they did not know whether the landscape 'stood out' such that it could be viewed as outstanding.²⁸
- 11.19 Finally, the participants assessed the effects of the Wainui Bay marine farm itself. They concluded the mussel spat farm has a low impact on biophysical values. Although the report of the Small Group was released after the workshop, they were told that the Golden Bay/Mohua Landscape Study Small Group had accepted the farm as part of the Wainui Bay landscape and its effect on associated values was low and could have positive connotations.²⁹
- 11.20 Effects of the mussel spat farm were seen as largely perceptual and included visual effects, night lights and noise from boats working the spat lines. Those visual effects were seen as localised, occurring mainly in views looking down into the Bay, and were most pronounced in views from the road over Wainui Hill looking down into the Bay. This view is valued by residents who live along the road. A viewing point at the top of the Hill is referenced in the Small Group documentation and in the District Plan as a viewing point. However, in reality, as a result of coastal erosion of the road, there are now limited opportunities for drivers to actually pull over from the road to enjoy this view.³⁰
- 11.21 The experts noted that the effects of the spat farm are reversible. The participants agreed that the presence of the spat farm was influential, but not the deciding factor as to whether or not Wainui Bay was an outstanding natural feature.³¹
- 11.22 This information leads to the following conclusions:
- (a) The Wainui Bay spat farms may fall into a very large landscape that was identified by the Environment Court as outstanding. Nevertheless, the impact of 16 hectares of farmed area over the vast Golden Bay landscape is trivial.

²⁷ *Wainui Bay Landscape Expert Panel Workshop, 22-23 September 2014.*

²⁸ *Wainui Bay Landscape Expert Panel Workshop* at 15-16.

²⁹ *Wainui Bay Landscape Expert Panel Workshop* at 16.

³⁰ *Wainui Bay Landscape Expert Panel Workshop* at 16-17.

³¹ *Wainui Bay Landscape Expert Panel Workshop* at 17.

- (b) Aquaculture has the ability to have impacts on finer grained landscapes and features. The community approach has been to deliberately exclude the farms from those landscapes and features. The experts queried whether the adjoining land met the necessary threshold to be considered outstanding.
- (c) Irrespective of that, the spat farms are part of a number of human modifications that cause adverse effects, but are not the determining factor. Instead they are seen as appropriate in its context.

12. Natural Character

- 12.1 Preservation of the natural character of the coastal environment is another key objective in the Act and the NZCPS. The term “natural character” is not defined in either context. The NZCPS Policy 13 Guidance Note contains the following working definition of natural character:³²

Natural character is the term used to describe the natural elements of all coastal environments. The degree or level of natural character within an environment depends on:

- 1. The extent to which the natural elements, patterns and processes³³ occur;*
- 2. The nature and extent of modification to the ecosystems and landscape/seascape;*
- 3. The degree of natural character is highest where there is least modification;*
- 4. The effect of different types of modification upon natural character varies with context and may be perceived differently by different parts of the community.*

- 12.2 Natural character was not part of the terms of reference for the Small Group. It follows that the only source of up-to-date information is from the Expert Workshop. The experts considered that the overall ranking of Wainui Bay was of high coastal natural character with the western side, in which the farm is located, being of moderate to high natural character.³⁴
- 12.3 The experts recorded that the existing marine farm affected the marine component of the Bay’s natural character rating, but the land-based modifications including the road, houses, the dairy farming, commercial forestry and the presence of exotic flora were more obvious detractors from the naturalness of the Bay. The experts agreed that Wainui Bay does not have outstanding natural character.³⁵
- 12.4 In summary, the mussel spat farm does not have a significant effect on the natural character of Wainui Bay.

13. Amenity

- 13.1 Amenity values are intertwined with landscape values and landscape quality. “Amenity values” are defined as those natural or physical qualities and

³² Department of Conservation, *NZCPS 2010 Guidance Note Policy 13: Preservation of natural character* (version 1: September 2013) at 11.

³³ For the purposes of interpreting the NZCPS 2010 Policy 13.2, ‘elements, patterns and processes’ means: biophysical, ecological, geological and geomorphological aspects; natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks; and the natural movement of water and sediment.

³⁴ *Wainui Bay Landscape Expert Panel Workshop* at 13.

³⁵ *Wainui Bay Landscape Expert Panel Workshop* at 13-14.

characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.³⁶

- 13.2 Section 7 of the Act requires those with functions and powers under the Act to have particular regard to the “maintenance and enhancement of amenity values.” The question that must be asked is, what elements make up the amenity character of the area and are there threats to those various elements from the activities proposed?
- 13.3 Amenity is multifaceted, where two themes are recognised:
- (a) “Amenity Attributes - these are tangible and measurable matters such as noise, odour, density of development, shading etc that define the amenity character of an area and:
 - (b) Perceptions and expectations that people hold about amenity. These derive from people’s culture, values and desires, and from people’s differing tolerances in relation to amenity attributes and to changes to those attributes.”³⁷
- 13.4 Amenity attributes include the dynamic relationship between land and seascapes of the coastal environment and the visual and scenic qualities to be found in such areas.
- 13.5 Amenity attributes encompass the existing environment, which has built elements such as housing, transport routes, agricultural land use and indigenous vegetation on land and the built environment on the water, with marine farm structures and the intermittent presence of vessels carrying out the various management activities on the spat catching sites.
- 13.6 The continued presence of the marine farm in Wainui Bay would cause adverse amenity effects, principally to those people residing in the houses which overlook the site, but also to some of the recreationalists who come close to the site of the farm. Those effects are principally visual and sound. To the extent that they can be, these effects are mitigated by all of the consent holders being parties to the Code of Practice for Wainui Bay (Appendix N), discussed above at 6.19.
- 13.7 In addition, the proposed Plan provisions enable resource consents to be issued subject to a condition that the consent holder attends an annual meeting with the Wainui Bay community. Such a condition currently exists on all Wainui Bay farms and has been a long-standing condition in relation to the outer two farms. Those community meetings help maintain relationships, build an understanding, encourage good practice and resolve concerns. Examples of how they operate are set out in the meeting minutes from 2013, 2014 and 2015 (Appendices S, T and UV respectively).
- 13.8 The Plan Change also proposes to include conditions in the Plan to acknowledge the effects that the Wainui Bay farms have on nearby residents and visitors to the area and to better address these concerns. The proposed conditions can be viewed in

³⁶ Section 2(1) Resource Management Act 1991.

³⁷ Ministry for the Environment, *Managing Rural Amenity Conflicts*, Chapter 2 “Amenity Values” (Wellington, 2000) at 15-16.

detail in the track-changed version of the Plan at Appendix A. These conditions aim to mitigate effects on amenity by addressing:

- (a) Hours of operation;
- (b) Noise and radio use;
- (c) Lights; and
- (d) Debris and refuse.

Visual Amenity

- 13.9 Visual Amenity will depend on where the farm is viewed from. Cyclists or people with cars who manage to find a safe parking spot will be able to obtain glimpses of the farm through trees and vegetation after coming over the hill from Tata Beach. Viewed from that position the farm will be seen as one of a number of manmade elements. Whether the effect will be positive or negative will depend on the attitude of the viewer.
- 13.10 When viewed from above the surface of the water, a marine farm looks like a series of black mussel floats, joined together by barely visible ropes. Generally the subsurface structures cannot be seen. The mussel floats are partially submerged, so roughly only their upper-half is shown. At the end of each row of mussel buoys is an orange buoy, which is necessary for navigational safety. Keen observers will see radar reflectors and reflective tape on some of the outer buoys. At the corner edges of the farm, marine farming lighting is installed. At night, lights with a one nautical mile range flash five times every 20 seconds with a soft yellow light and stand one metre above sea level. Again, this is required for navigational safety purposes.
- 13.11 Fully sub-surfacing the mussel floats at Wainui Bay is not a viable option, as the water is too shallow.³⁸
- 13.12 When viewed underwater, the marine farm is only visible when immediately adjacent to the lines. The ability to see the farm is attenuated by sediment suspended in the water column, which varies with conditions, and is unrelated to the spat farm itself.
- 13.13 A total of 10 vessels regularly service the area. On rare occasions further vessels would come from the Marlborough Sounds to uplift spat. On average, each vessel visits the site and manages the lines with floats two days per week. The presence of boats in the Coastal Marine Area is not unexpected. Some fishermen use the mussel farm to catch fish nearby, as fish tend to aggregate around marine farms.
- 13.14 There are at least two properties with a clear view to or across the site, one on the Ann Louise De Lambert and the New Zealand Guardian Trust Company Limited land, and one belonging to James Beard on the Tata Lands Ltd land. Occupiers of those properties have previously submitted in opposition to the continued presence of the farms. Certainly, the owners of these properties consider that their views are impaired. In addition, the farms could be in the line of sight of up to nine other properties.

³⁸ Hika Rountree, Personal Communication.

- 13.15 Looking back towards Wainui Bay as a passenger in a vessel at sea, the farms are part of a number of visible manmade interventions. Amenity may be affected by views of the road, the presence of houses, the presence of exotic vegetation including plantation forests, tracks, coastal erosion works and other signs of human modification.
- 13.16 When viewed from a distance at sea, the houses and road are more prominent than the marine farm. However, plainly the marine farm would be more prominent if one is right next to it.
- 13.17 The conditions attaching to the Plan Change (particularly 25.1.3.1 (ga)) mitigate adverse visual amenity effects. Specifically, there are conditions relating to:
- (a) Debris;
 - (b) Lights shining on the shore; and
 - (c) Hours of operation.

Noise

- 13.18 The predominant source of noise occurs from vessels servicing the area.³⁹ Boats are present twice a week on average, and less often in winter. Noise is generated from the boat engines (revving and speed of travel means this source varies in severity), maritime radio, conversation between employees on board the vessels, and machinery and equipment used to harvest the spat, such as winches and hydraulics.
- 13.19 Vessel operators have a strong preference not to work in a noisy environment. Some changes have been made to some vessels and work practice, including changing the winch type, use of mufflers, dampening noise from the engine room and turning the main engine off once vessels reach the Bay.⁴⁰
- 13.20 The right of vessels to navigate is affirmed in s 27 Marine and Coastal Area (Takutai Moana) Act 2011. That right includes “anything reasonably incidental to their exercise,” which includes the generation of noise. Nevertheless, measures to manage noise are offered in the proposed Plan conditions, specifically in 25.1.3.1(ga). This proposes that:
- (a) Hours of operation are limited to generally between 6.00 a.m. and 8.00 p.m.;
 - (b) The use of broadcast radio station, digital or analogue recorded music is prohibited; and
 - (c) Daytime and night-time noise limits are prescribed.
- 13.21 The consent-holders also take all steps practical to reduce the amount of noise. Those steps are detailed in the Code of Practice for Wainui Bay, which is addressed above at 6.19.

³⁹ Service vessels and their operation at the Wainui Bay site are discussed in more detail above at 6.14 - 6.23.

⁴⁰ Hika Rountree, Wainui Bay Consent Holders’ Annual Community Meeting, Pohara Boat Club, 12 June 2015.

Recreational Use

13.22 The presence of the mussel spat farm at Wainui Bay does not hinder recreational-use, that is, the use of the Bay for enjoyment by members of the public. Swimmers can still access the ocean via the beach. The farms' longlines can be kayaked through. Small vessels can navigate between the lines. The creation of an artificial reef structure increases the abundance of fish. The presence of the structures prevents commercial trawling for scallops, yet these can still be trawled for recreationally or dived for. Marine farming structures are often targeted by recreational fishers. One resident has viewed the presence of the spat farms as enhancing fishing, noting an increase in marine life generally, and increasingly successful fishing on the seaward side of the floats.⁴¹ The Wainui Bay farm has something of a cult following among amateur snapper fishermen in Golden Bay.⁴²

13.23 The immediate vicinity of Wainui Bay has considerable locations suitable for recreation. Ligar Bay and Tata Beach to the west have many holiday homes. Tata Beach has a concrete boat ramp which is popular with water skiers and jet skiers. Still further west is Port Tarakohe, which contains a marina, moorings and the Pohara Boat Club. A short track up the Wainui River through native bush takes walkers to Wainui Falls, the largest falls in Golden Bay. Wainui Bay is located adjacent to Abel Tasman Point. On the other side of the Bay is the Abel Tasman National Park. This area is extremely popular with recreationalists, in particular for the Abel Tasman Coast Track, one of New Zealand's Great Walks.

13.24 The *New Zealand Cruising Guide* states the following:⁴³

The Wainui Inlet is too shallow for cruising boats and dries at LW. The eastern side of Abel Tasman Point provides good shelter from sea breezes and other W to N winds. The rocks that extend north-east from the point protect the area as do the mussel rafts. This is a pleasant spot for anchorage during the day but is open to the usual SW to W winds that blow during the evening [emphasis added].

13.25 In relation to wider Golden Bay, the following is noted:⁴⁴

The bay extends from Farewell Spit in the north to Separation Point in the south. It is from 18 to 35 metres deep and gives shelter in winds from the S to NW. The bay forms a large crescent open to the east. The bay shoals to most beaches and great care must be taken when heading for land, particularly north towards the Spit. There are safe anchorages well offshore along the beaches, but it can be quite boisterous and uncomfortable.

Sea breezes from the W to N dominate during the day with SE to S winds during the evening. The water is very warm and pleasant for swimming but the lack of satisfactory anchorage makes this area best visited in settled weather.

13.26 The Wainui Bay farm is located adjacent to the Abel Tasman Foreshore Scenic Reserve.⁴⁵ This was gazetted as a scenic reserve in January 2007 as a way of

⁴¹ Resident's Personal Communication with Ron Sutherland.

⁴² Hika Rountree, Personal Communication.

⁴³ K W J Murray and Baron R Von Kohorn *New Zealand Cruising Guide: Central Area* (2006 ed., Steven William Publications, Wellington) at 216.

⁴⁴ *New Zealand Cruising Guide* at 215.

managing the Abel Tasman Coast. It comprises 774 hectares of foreshore, predominantly a narrow strip of land, excluding estuaries, that lies between the Mean High Water Mark and Mean Low Water Springs, along the Abel Tasman Coastline. A map of this area is included at Appendix F. The purpose of designating the foreshore as scenic reserve was to protect the area's natural features, while maintaining the quality of the visitor experience. This includes continuing to allow access to the area and managing commercial activities, rather than avoiding them altogether.⁴⁶

- 13.27 The presence of the spat farm will have a minimal effect on the ability to recreate in Wainui Bay, and this is not anticipated to change if the farm continues to operate post-2024. However, it may be that the visual presence of the farm, in combination with other manmade interventions, will cause people to choose to recreate elsewhere.

14. Benthic Assessment

- 14.1 A key requirement under the Act and the NZCPS is a consideration of the effects of the proposed Plan change on the environment. Matters such as indigenous biodiversity, habitats and vegetation; water quality; discharge and sedimentation are relevant factors.

- 14.2 NIWA have assessed the effects on the benthic environment of the spat catching farm as being measurable but not significant under the lines themselves, and not being measurable beyond the boundaries of the resource consents. The organisms caught on spat catching ropes are naturally occurring organisms. When they are caught they are microscopic. They must be removed from the site while they are still juvenile. There are two relevant assessments of benthic ecology at the Wainui Bay site:

- (a) A 2007 assessment by Ken Grange and Mark Hadfield (Appendix HI); and
- (b) A recent 2015 assessment by Ken Grange at NIWA (Appendix G).

The 2007 Study

- 14.3 At the time of the 2007 assessment, the site had been in place for approximately 25 years. Results determined that "deposition of faecal material [was] low and restricted to within consent boundaries." Shell debris did occur beneath dropper lines. This report noted that biological samples, which were taken within and outside the farms, showed a diverse fauna of common and widespread species. The effects from the mussel spat farms were considered comparable to other farms in Golden Bay and the Marlborough Sounds.
- 14.4 Tidal currents were measured and showed currents were moderate to high compared with other mussel farming areas in Golden Bay and the Marlborough

⁴⁵ More information, including a copy of the *Abel Tasman Foreshore Scenic Reserve Management Plan* (2012), is available on the Tasman District Council's website at: <http://www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/abel-tasman-foreshore-scenic-reserve-management-plan/>.

⁴⁶ Tasman District Council and Department of Conservation, *Abel Tasman Foreshore Scenic Reserve Management Plan* (June 2012), at 10.

Sounds, but were not sufficient to disperse spat or shells. The presence of the reef was considered to have the most marked effect on the hydrodynamics of the Wainui Bay site, while the presence of the farm structures was considered to have no more than minor effects, particularly given the small size and sheltered nature of the farms. As the farms were for catching spat, the impact on phytoplankton was considered negligible, as the modelling process was conducted as if it was a production farm for full grown mussels.

- 14.5 The ecological effects of the two sites studied after approximately 25 years of operation were small. As the effects of spat catching are quickly reversible, there would be negligible change in ecological effects through continued farming of the site for spat catching.

The 2015 Study

- 14.6 In early 2015, as part of this Plan change proposal, The Wainui Bay Spat Catching Group commissioned NIWA to carry out an ecological assessment of the effects of the Wainui Bay farms. Ken Grange conducted the assessment and reached the conclusions outlined below in his report entitled *Ecological Assessment of Marine Farms in Wainui, Golden Bay*, dated May 2015 (Appendix G).
- 14.7 Seabed characteristics examined in the benthic survey showed that the spat catching activity has had few effects on the seabed other than some shell litter beneath the spat collecting structures.
- 14.8 Side scan swathes of the seabed in the vicinity of the farms showed some rocky reef habitat extending from the shore to within 25 metres of the inshore boundary of the farm blocks. This habitat feature is sufficiently distant from the farm structures that it is unlikely to be affected by deposition from the marine farming activity.
- 14.9 There was no indication of organic enrichment of sediments. There was some shell litter observed within the farm boundaries as expected, but this was sparsely distributed. The assemblage of seabed-dwelling animals sampled inside and outside the farm boundaries was similar, and comprised species commonly found in the region. There was no evidence of unusually high or low abundance of animals on the seabed within the farm boundaries.
- 14.10 Benthic sampling showed no significant increase in organic material beneath the farms. Rather, the levels of mud and organic content of the sediments are related to each other, and to the water depth of the sample locations, not to the presence or absence of the farms.
- 14.11 Benthic deposition of faecal material was modelled to be low, and barely distinguishable from background sediment except by modelling. Deposition falls to background levels beyond the farm boundaries, where the deposition is no longer measureable. Scattered shell debris occurs only directly beneath the spat collecting lines.
- 14.12 The activity has been shown to have a negligible effect on the seabed. Limited mussel shell has accumulated, as the spat is removed early in the growing process of juvenile mussels.

14.13 In summary, this survey shows effects from around 35 years of mussel spat catching activity at the Wainui Bay site to be less than minor. It is not expected that the continued the operation of the spat catching farms will lead to any additional effects in the future.

15. Unwanted Organisms

15.1 All boats and structures in the Coastal Marine Area must contend with underwater organisms. The marine environment is teeming with life. Part of the lifecycle of many organisms is to attach themselves to reefs, rocks and other structures within the Coastal Marine Area. Mussels are a good example of this sort of organism.

15.2 Consequently, one of the challenges of marine farming is to encourage the growth of mussels, while discouraging the growth of other species.

15.3 The main management solution is to ensure that ropes are regularly removed from the Coastal Marine Area and cleaned.

15.4 One particular unwanted organism is *Undaria* (*Undaria pinnatifida*), known to the Japanese as Wakame. Once dried and pressed, Wakame is used in Japanese, Chinese, Korean and French cooking, most notably as the seaweed around Japanese sushi. *Undaria* is seasonally present at Wainui Bay; however, the catch lines are seldom in the water long enough for *Undaria* to be present or become established. It does occur in warps and backbones and is removed at each harvest cycle.

16. Navigational Safety

16.1 The entire site has been in position for many years without any known incident being reported of vessels having been caught on lines within farms. The Harbourmaster, Tasman District Council, advised by email in December 2014 that he has “discussed the safety of the sites with various recreational and commercial water users and [he has] not been informed of any accidents or incidents associated with positioning or marking of these Marine Farms.”⁴⁷ He goes on to say:

So long as the lights and radar reflectors remain in accordance with the standards set out in the System of Buoyage and Beaconage for New Zealand under the Marine Transport Act 1994, I cannot see any Navigation Safety related reason why these sites cannot continue in their current form.

16.2 The sites have been considered under the Guidelines for Aquaculture Management Areas and Marine Farms (“the Guidelines”).⁴⁸ The purpose of these Guidelines is to “identify relevant navigational issues and describe the criteria that regional councils and marine farm applicants should be aware of during the process of the creation of AMAs, and the establishment and management of marine farms.”⁴⁹

16.3 The Guidelines identify matters of navigational safety as falling within four distinct groups:

⁴⁷ A copy of the email received from the Harbourmaster is included at Appendix PQ.

⁴⁸ Maritime New Zealand *Guidelines for Aquaculture Management Areas and Marine Farms* (December 2005).

⁴⁹ *Guidelines for Aquaculture Management Areas and Marine Farms* at 3.

- (a) Location;
- (b) Marking and Lighting;
- (c) Safety Management; and
- (d) Control and compliance.

These are discussed further below.

Location – Wainui Bay

- 16.4 Access into Wainui Bay is not impeded, access around the site can be achieved inshore of the existing farms, and traversing access gaps exist between each consent area. There are 54m wide access ways between each site and further access can be achieved by kayaks and recreational boats.
- 16.5 The Guidelines define an inshore farm as one sited within 200 metres from mean low water and an offshore farm as sited in coastal waters beyond 200 metres from mean low water. The Wainui Bay site extends beyond 200m from shore. However, the Harbourmaster has the ability to determine the appropriate category of a farm. Previously these farms have been categorised as inshore farms.⁵⁰
- 16.6 There is a navigation route from Port Tarakohe, around the Tata Islands and into Wainui Bay. However, that navigation route is constrained by the presence of the Tata Islands and the reefs and rocks extending out from Abel Tasman Point. This causes vessels to stand off Abel Tasman Point, which results in vessels following recognised navigation routes standing clear of the farm. Based on historic routes along the coast, occupation by farms at this site will not create additional navigational safety concerns.
- 16.7 Recreational boats can and do traverse between longlines. There is ample room for small vessels to navigate between the lines as they are 18m apart with 54m corridors between blocks, allowing across-site access and north-south access.

Marking and Lighting

- 16.8 Because the Harbourmaster has considered that this farm should be assessed as if it were an inshore farm, reduced navigation aid requirements are able to be utilised. This minimises the adverse effects on the visual amenity of the area during both daylight and night time hours. The conditions of the existing consents include a requirement to provide special marks at the northern corner of the area authorised by RM071049 and at the eastern corner of the area authorised by RM071050. The light is yellow, set to group flash five times every 20 seconds, is visible for at least one nautical mile and at least one metre above sea level. Radar reflective/reflector tapes are required to be provided in association with the special marks.

⁵⁰ TDC Report EP08/02/01 (s 42A Report prepared in respect of Waitapu Fishing Co Limited's application for resource consent, Rosalind Squire, 14 January 2009, page 24).

Safety Management

16.9 Safety management is a matter that is usually addressed at the resource consent stage. The consent for the two outer farms required the preparation of an Operational Management Plan which addresses the following:⁵¹

- (a) Annual community liaison meeting;
- (b) Hours of operation;
- (c) Noise;
- (d) Unwanted marine organisms;
- (e) Structure inspection and cleaning;
- (f) Lashing off cuts;
- (g) Emergency response after storm events;
- (h) Special mark maintenance;
- (i) Floats on empty lines;
- (j) Oil spills;
- (k) Anchor inspections; and
- (l) Standards .

Control and Compliance

16.10 The Guidelines suggest the following conditions of consent:

- (a) The consent holder shall install and maintain a Maritime New Zealand (“MNZ”) approved lighting plan on the marine farm;
- (b) The consent holder shall at all times comply with the provisions of the Lighting Plan;
- (c) That in the event of non-compliance the marine farm permit may be revoked; and
- (d) The consent holder shall remove the marine farm on the expiry of the resource consent unless a subsequent resource consent has been applied for and issued.

16.11 Whether or not these are included as conditions of consent is a matter for the decision-maker at the appropriate stage.

Conclusion on Navigational Safety

16.12 The Harbourmaster has confirmed that there is no navigational safety reason why these sites cannot continue in their current form.

16.13 Given the positioning of the existing sites together with adoption of the Guidelines’ requirements regarding marking and lighting, safety management, and compliance, it is considered unlikely that continued spat catching at the Wainui Bay site will give rise to navigational safety issues in the future.

⁵¹ A copy of this Operational Management Plan is included at Appendix O.

17. Historical and Cultural Heritage

- 17.1 There are various sites of historical and cultural significance in the wider Wainui Bay catchment, but none that are affected by the presence of the Wainui Bay farms.
- 17.2 The waters of Wainui Bay are bisected by a large sandspit. Across the channel from the sandspit lies Takapou with Burial Point at its end. The site is a recognised urupa. Taupo Point is also considered to be a historic waka launching site.
- 17.3 Dutch explorer Abel Tasman encountered local Maori in Wainui Bay in 1642. There has recently been renewed scholarly debate over whether Tasman was in fact the first European to come to shore in New Zealand, at Wainui Bay, rather than Captain James Cook.⁵²
- 17.4 The applicant recognises that Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngāti Toa Rangatira have statutory acknowledgments in the area of the application site. Those acknowledgements have been considered during the preparation of this application.
- 17.5 The applicant is undertaking consultation with iwi groups, as outlined below in section 21.
- 17.6 The applicant has checked the NABIS website operated by the Ministry for Primary Industries.⁵³ There are no taiāpure or mahinga mātaihai in the area of the application. There are also no established areas of protected customary rights or customary marine title within the meaning of the Marine and Coastal Area (Takutai Moana) Act 2011.

18. Economic Effects

- 18.1 The aquaculture industry makes a significant contribution to the New Zealand economy and plays a key role in the Government's growth agenda. New Zealand Greenshell Mussels are the single largest seafood export, and had an export value of NZ \$218.1 million for the 2011 year.⁵⁴ Aquaculture New Zealand has forecast revenue from the mussel sector (for domestic and export markets combined) to reach NZ \$484 million by 2025.⁵⁵
- 18.2 Given that the majority of Greenshell Mussels grown and processed in New Zealand are for the export market, rampant growth in global demand for seafood is highly relevant. This demand will continue to increase, as a rapidly growing world population requires a viable source of protein. Aquaculture is the world's fastest

⁵² See, for example, the article entitled "Historian scrutinises Tasman's voyage and visit to Wainui" in The G.B. Weekly: <http://www.gbweekly.co.nz/the-gb-weekly-news-archives/4-september-2015/#4-september-15/page4-page5>.

⁵³ See <http://www2.nabis.govt.nz/map.aspx>.

⁵⁴ Marine Farming Association *Aquaculture in Golden Bay and Tasman Bay Fact Sheet 2012*. A copy is available here: <http://assets.marinefarming.co.nz/Aqua%20Fact%20Sheet%20-%20GB%20&%20TB.pdf>.

⁵⁵ Deloitte *Ministry of Agriculture & Forestry: Styela Economic Impact Assessment Report* (August 2011) at 21.

growing primary industry, is an efficient form of food production, and is considered a sustainable solution to feeding the world. United Nations Food and Agricultural Organisation figures show that aquaculture production accounts for about 47% of seafood consumed globally by humans. Production levels have been growing at an approximate rate of 6.3% annually for the last decade. It is estimated that aquaculture will soon produce more seafood than wild fisheries, with wild-catch levels remaining relatively static.⁵⁶

- 18.3 Combined production of mussel farming in Marlborough, Nelson and Golden Bay and Tasman Bay equates to approximately 70% of New Zealand's production on average.⁵⁷ Given that spat caught in Wainui Bay is the starting point for roughly 50% of this production, the Wainui Bay farms are likely to play a vital part in achieving The Government's Aquaculture Strategy and Five-year Action Plan to Support Aquaculture, which supports the industry's goal of growing sales to \$NZ 1 billion by 2025.⁵⁸ This Strategy is discussed in greater detail in the economic evaluation of alternatives at Schedules 5 and 6.
- 18.4 In August 2011 Aquaculture New Zealand forecast revenue from the domestic and export markets for mussels to be \$361 million for 2015.⁵⁹ If we attribute 70% of this to the combined Golden/Tasman Bays, Nelson and Marlborough region, then the mussel farming and processing industry in the Top of the South is likely to account for approximately \$252.7 million in revenue for New Zealand in 2015.
- 18.5 This industry is entirely dependent on the supply of mussel spat. Wainui Bay is of vital significance, accounting for half of the spat used in the Top of the South and, subsequently, for half the economic activity in mussel farming and processing in Golden/Tasman Bays, Nelson and Marlborough. If 50% of the product sold to the domestic and export markets is on-grown from mussel spat sourced from Wainui Bay, then approximately \$126.35 million in annual revenue can be attributed to the Wainui sites (ie. 50% of \$252.7 million).
- 18.6 The consistency and timing of spat fall at Wainui Bay also contributes to productivity in the mussel industry by minimising the shut-down of plant that typically occurs from mid-June to August. The process has grown from more or less a "cottage" industry, into a highly specialised industry with professional crews, processing and marketing. Year round processing avoids seasonality issues, helping to retain skilled staff, which in turn encourages greater investment in human capital.

⁵⁶ See Aquaculture New Zealand's overview at: <http://aquaculture.org.nz/industry/overview/>.

⁵⁷ This percentage is higher in some years. See, for example, the New Zealand spatial distribution map in the Statement of Evidence of Fraser James Colegrave in *Whangaroa Maritime Recreational Park Steering Group v Westpac Mussels Distributors Limited* ENV-2013-329-000001, which shows the 2011 contribution as 72%. In 2011 the percentage of national mussel production for the combined Nelson/ Tasman and Marlborough regions was 72.6%, based on NZIER figures included in the Deloitte *Ministry of Agriculture & Forestry: Styela Economic Impact Assessment Report* (August 2011) at 22.

⁵⁸ A copy of the strategy is available here: <http://www.fish.govt.nz/NR/rdonlyres/20A0ED89-A20B-4975-9E63-6B302187840D/0/AQUAstrat5yrplan2012.pdf>. This is discussed in more detail in the evaluation of alternatives at Schedule 5.

⁵⁹ Deloitte *Ministry of Agriculture & Forestry: Styela Economic Impact Assessment Report* (August 2011) at 21.

19. Social and Community Effects

- 19.1 Significant resources have recently been expended in an attempt to better understand the significant contribution that aquaculture typically makes to the communities in which it is based. The Ministry for Primary Industries has released two reports on the subject.⁶⁰ These are discussed in more detail in the evaluation of alternatives under s 32 of the Act, at Schedule 5.
- 19.2 Individuals from among the Wainui Bay consent holders and employees have indicated that spat farming at Wainui Bay has many beneficial community effects, including:⁶¹
- (a) Financial contributions to local schools and sports teams;
 - (b) An industry golf day to raise funds for the Andy Ritchie Scholarship for Marine Biology at Victoria University;
 - (c) Product donations of mussels for community and social occasions;
 - (d) A marine farmer on the Takaka Freshwater Land Advisory Group working with the Tasman District Council;
 - (e) Owners', employees' and dependants' involvement with local schools, and in sports teams and local clubs;
 - (f) Educational opportunities by way of school visits to the Wainui Bay sites; and
 - (g) Employee involvement in volunteer work in marine emergencies and Search and Rescue.
- 19.3 Operation and servicing of the marine farms at Wainui Bay supports the viability of a broad range of local supply chain businesses in various sectors, including transport, engineering, electrical, mechanics, boat yards, vessel berthage, slipways, local fuel companies (NDP), yard leases, coldstorage, and skip hire operators.
- 19.4 Employment at Wainui Bay, or in the mussel farming and processing industry, offers many benefits, including:⁶²
- (a) Wages or salaries that are typically above average in the relevant region;⁶³
 - (b) Good job stability with year round employment and casual staff opportunities during busy seasons;
 - (c) Ongoing on the job training, particularly in Health and Safety;
 - (d) Opportunities to upskill, such as obtaining a skipper's licence;
 - (e) Good promotional opportunities, with people often starting as deckhands and working their way up within a company; and
 - (f) Many future opportunities, as aquaculture is in its infancy. However, this is largely dependent on the development of new waterspace, which is dependent on mussel spat availability.

⁶⁰ Quigley, R. and Baines, J. *The Social Value of a Job* (2014, Ministry for Primary Industries, Wellington). A copy of this report is available here: <http://mpi.govt.nz/news-and-resources/publications/>; and Quigley, R. and Baines, J. *The Social and Community Effects of Aquaculture: A case study of Southland aquaculture* (2015, Ministry for Primary Industries, Wellington). A copy of this report is available here: <http://mpi.govt.nz/news-and-resources/publications/>.

⁶¹ Merv Whipp and Hika Rountree, Personal Communications.

⁶² Merv Whipp and Hika Rountree, Personal Communications.

⁶³ John Young, Personal Communication.

- 19.5 The mussel farming and processing industry in the Top of the South has even broader positive community and social effects. These include, but are not limited to:⁶⁴
- (a) Sponsorship of the NMIT Aquaculture scholarship;
 - (b) Sponsorship of the Havelock Mussel Festival (a major event and contribution to the town's identity);
 - (c) Sponsorship of the Queen Charlotte College Academy;
 - (d) Involvement in the Golden and Tasman Bays Beach Clean Programme;
 - (e) Commitment to the Marlborough Beach Clean Programme; and
 - (f) Involvement in the Mussel Industry Heritage Programme.
- 19.6 While these positive effects are difficult to measure and quantify, if spat catching at Wainui Bay is not able to continue post-2024, there will be a tangible impact on businesses, schools and organisations in the local area, and in the Top of the South.
- 20. Employment Statistics**
- 20.1 A significant number of full time equivalent positions can be directly attributed to the Wainui Bay sites. 23 people from various companies are directly employed fulltime in relation to the six farms.⁶⁵
- 20.2 The mussel industry (including farming and downstream processing) in the Marlborough, Nelson, Tasman and Golden Bay regions provides some 1020 full time equivalent employment positions ("FTEs").⁶⁶ If 50% of these positions are attributed to spat caught from Wainui Bay, then spat farming at that location accounts for 510 fulltime jobs in the combined region in mussel farming and processing. Therefore, the total number of fulltime jobs in the combined region attributed to Wainui Bay is 530 (23 +510, rounded down). These numbers may be conservative, but they are a good initial estimate of the social benefits flowing from marine farming at Wainui Bay.
- 20.3 Mussel spat catching at Wainui Bay will also have flow on effects resulting in employment in wider New Zealand. Based on the approach taken in recent economic evaluations in the mussel farming industry, discussed in more detail in the s 32 economic evaluation at Schedules 5 and 6, the total number of New Zealand-wide FTEs in mussel farming and processing of mussels on-grown from Wainui Bay spat can be estimated to be approximately 1300 (rounded down).
- 20.4 Although the applicant does not have precise figures, productivity in mussel farming and processing will have at least some flow-on effect in terms of suppliers in the industry and for general economic activity, because household employment and income results in spending in the wider economy.
- 20.5 The greenshell mussel industry, the jobs it creates, the wages it pays, and the export returns it generates, all depend on secure spat supply. That is the foundation for the

⁶⁴ Marine Farming Association *Aquaculture in Golden Bay and Tasman Bay Fact Sheet 2012*.

⁶⁵ Clearwater Mussels Limited, Ngāi Tahu Seafood Limited, Talley's Group Limited, and Maclab (NZ) Limited.

⁶⁶ Marine Farming Association *Aquaculture in Golden Bay and Tasman Bay Fact Sheet 2012*; Andrew Talley, Personal Communication.

production chain of the industry. Those involved cannot build or expand their business and volumes from insecure tenure. Certainty and security of supply for spat are needed before those marine farmers and processors can obtain capital from investors or lenders, build brands, establish markets, secure additional growing space, build factories or create new jobs. It all starts with spat, so its access and availability should never be uncertain. If tenure and therefore certainty are questionable or insecure, as it is in Wainui, those involved are simply unable to build and expand industry. They have nothing to build on.

- 20.6 It is of national importance to sustain this mussel spat source for the ongoing sustainability of the greenshell mussel growing and processing industry. In addition, the certainty gained from the proposed Plan Change will ensure the viability of employment, supply chain businesses, and community and social infrastructure that are dependent upon mussel spat catching at Wainui Bay.

21. Consultation

- 21.1 Consultation has involved three key groups: Iwi from Te Tau Ihu, Wainui Bay landowners, and the Department of Conservation.

Consultation with Iwi

- 21.2 The applicants are aware of the Statutory Acknowledgements relating to iwi claims under the Treaty of Waitangi and acknowledged by the Crown. Iwi consulted were as follows:

- (a) Ngāti Apa ki te Rā Tō
- (b) Ngāti Kōata Trust
- (c) Ngāti Rārua Iwi Trust
- (d) Ngāti Tama ki Te Tau Ihu
- (e) Te Ātiawa o Te Waka-a-Māui
- (f) Te Runanga O Ngāti Kuia
- (g) Te Runanga a Rangitane O Wairau
- (h) Ngati Toa Rangatira

- 21.3 Consultation was initially undertaken with Ngāti Tama ki Te Tau Ihu representatives in Nelson in December 2014, where the Plan Change proposal was outlined. All of the Te Tau Ihu iwi were informed of the proposal by way of letter at that time.

- 21.4 Ngati Tama ke Te Waipounamu Trust, within whose rohe the sites fall, responded by letter in December, confirming support of the proposed application in principle. A copy of that letter is included at Appendix R.

- 21.5 The remaining iwi asked that a full proposal be prepared as a draft for consideration before they would comment further. The initial draft Plan Change proposal was forwarded to iwi in mid-June 2015 with a request for comment. Follow up phone calls were also made, with a number indicating the proposal was not a concern to them.

- 21.6 Since the initial draft, there has been considerable refinement of the proposal as a result of discussions with a number of staff at the Tasman District Council.

Accordingly, an illustrated diagram entitled “Why Wainui” has been forwarded to iwi outlining the proposal. A copy of the final version of the Plan Change will be sent to iwi after it is lodged with Council.

Property Owners in Wainui Bay

- 21.7 The Plan Change proposal was first outlined to local residents at the annual Wainui Bay consent holders and landowners community liaison meeting held on 12 June 2015 at the Pohara Boat Club in Golden Bay (a copy of the minutes is included at Appendix UV). Representatives of the Tasman District Council were also in attendance. Unfortunately only two landowners were present.
- 21.8 In early September 2015 Ron Sutherland commenced a round of telephone calls to landowners. He was met with limited success, as many landowners do not reside in Wainui Bay, or were away. As a consequence, an advisory letter, photo plan and the illustrated outline entitled “Why Wainui” were posted to 25 landowners understood to own property in the Wainui Bay Catchment. This included a request to contact Ron Sutherland to facilitate the future exchange of information.
- 21.9 Landowners contacted were as follows:
- C & L Ahern
 - D & J Foxwell
 - E. Paterson
 - Network Tasman Limited
 - K & J Watchman
 - B & S Beuke
 - W. Beatson
 - Tata Lands Limited
 - B Carmody
 - V. Henderson
 - A. De Lambert
 - Wainui Gold Limited- D. Darwen
 - M. Robertson
 - M. Dean
 - R. Doughty
 - P. Griffiths
 - R. Walker
 - J Robertson
 - D. Reed & B. Whitehead
 - E Schulman
 - K Lovell
 - Tui Spiritual & Educational Trust
 - L. McIntyre
 - A. Robertson
- 21.10 Ron Sutherland is keeping a record of responses from these landowners as he receives them. It is anticipated that further consultation will be undertaken with landowners following lodgement of the Plan Change with Council.

Department of Conservation

- 21.11 Department of Conservation staff participated in the Wainui Bay Landscape Expert Panel workshop in September 2014, which considered landscape in relation to the existing spat catching sites. Staff members in attendance included Rod Witty, Shanel Courtney and Greg Knapp.
- 21.12 Following further development of the Plan Change, a photomap and the illustrated outline entitled “Why Wainui’ was forwarded to Ms Anna Cameron at the DoC office in Christchurch, to ensure that DoC’s statutory Planning Advisors were aware of the Plan Change proposal. Subsequently, Ron Sutherland had a discussion with Ms Cameron. It was agreed that DoC would be provided with a copy of the final version of the Plan Change request once it is sent to the Council.

22. AEE Conclusion

- 22.1 Continued operation of the Wainui Bay sites will have an impact on the amenity of local residents, property owners and visitors to the area. Conditions have been written into the Plan Change to address hours of operation, noise, lighting and other effects, to acknowledge and mitigate these effects. Other effects are dealt with in industry codes of practice.
- 22.2 All other impacts from spat catching at Wainui Bay to date, and the likelihood of effects in the future, have been assessed as either appropriate or trivial. The significant social and economic benefits of these farms to the local community, the top of the South Island and New Zealand would be lost if the farms cannot continue to operate post-2024. It is of national importance to sustain this mussel spat source for the ongoing sustainability of the greenshell mussel growing and processing industry.