

**Application for resource consent section 88 of the  
Resource Management Act 1991**

**To:** Auckland Council  
Private Bag 92300  
AUCKLAND 1142

**1. Applicant**

1.1 Westpac Mussels Distributors Limited.

**2. Resource consent sought**

2.1 A coastal permit is sought to use and occupy space in the coastal marine area for conventional longline structures and spat catching frames or ropes for the purpose of collecting the spat of New Zealand greenshell mussels (*Perna canaliculus*) and to undertake associated discharges to air and water and disturbance of and deposition on the seabed.

2.2 The activities proposed are discussed in more detail in the Assessment of Environmental Effects forming part of this application (**AEE**).

2.3 The term of the resource consent sought is 35 years.

**3. Location of the proposed activities**

3.1 The area to which this application relates comprises approximately 171 hectares. It is located in the middle reaches of the Firth of Thames within the Auckland Region. The application area is approximately 7.8 kilometres from the shoreline at the closest point and 1.56 kilometres from the nearest existing marine farm which is located to the south-east at Wilsons Bay.

3.2 The area is more precisely identified in the survey plan filed with the application.

**4. Owner and occupier of land to which application relates**

4.1 The application relates to land located in the common marine and coastal area, and ownership is governed by the Marine and Coastal Area (Takutai Moana) Act 2011. The area to which the application relates is currently unoccupied.

**5. Additional resource consents required**

5.1 No other resource consents are required for the proposed activity.

**6. Assessment of Environmental Effects**

6.1 Attached to this application, in accordance with Schedule 4 of the Resource Management Act 1991, is an AEE that corresponds with the scale and significance of the effects that the proposed activities may have on the environment. Also attached are the Council's internal forms for applications for coastal permits, which have been completed including by reference to this document and the AEE.







**7. Additional information required**

7.1 All additional information required to be submitted with the application is contained in, or attached to, the AEE submitted with this application.

**8. Attachments**

8.1 Attached to this application are:

- (a) The Council's internal application forms.
- (b) An AEE, within which is contained or with which is attached all information required to be included in this application under the Resource Management Act 1991.

**Dated:** 3 October 2014

**Westpac Mussels Distributors Limited** by its  
solicitors and duly authorised agents, Minter  
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# **Assessment of Effects on the Environment**

## **Resource Consent Application**

### **Westpac Mussels Distributors Ltd**

#### **Central Firth of Thames**

##### **Mussel Spat Catching Area**

**Prepared By:**

**Robin Britton**

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**PO Box 7016**

**Hamilton**

**September 2014**



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# **Westpac Mussels Distributors Ltd – Mid Firth of Thames**

## **Resource Consent Applications**

### **Assessment of Effects on the Environment**

**September 2014**

**Prepared in accordance with Section 88(2)(b) of the Resource Management Act and taking into particular account the provisions of the Auckland Regional Plan: Coastal and the Proposed Auckland Unitary Plan.**

## **1. Introduction**

- 1.1 This assessment of effects on the environment (AEE) is in respect of the application by Westpac Mussels Distributors Limited (applicant), for consent for mussel spat catching (*Perna canaliculus*), in an area in the middle reaches of the Firth of Thames (application), in accordance with s88(2)(b) of and the Fourth Schedule to the Resource Management Act 1991 (RMA).
- 1.2 The application relates to the site described below and as indicated on the map and plans attached to the applications (refer Appendix 1). The proposed area which is the subject of this AEE is inclusive of all structures (anchors, lines, spat catching frames or ropes, floats and navigation aids).
- 1.3 Reference in this document to the Auckland Regional Plan: Coastal (RP:C) is taken as reference to the Auckland Regional Plan: Coastal 2004, and reference to the Proposed Auckland Unitary Plan (PAUP) is to the plan as proposed in 2013.
- 1.4 The Transitional Regional Coastal Plan (by default), the RP:C (rule 22.5.2) and the PAUP (Chapter I) provide for spat catching as a discretionary activity in the location subject to this application. Proposed RP:C rules 22.5.9 and 22.5.10 propose to make aquaculture a prohibited activity unless inside an Aquaculture Management Area. These rules do not prevent the applications being made, and have been superseded by more recent changes to the RMA. Rule Chapter I: 6, 1.8 in the PAUP refers to aquaculture activities, of which spat catching is a sub-set.
- 1.5 This AEE is structured using the headings of the Fourth Schedule to the RMA. The scientific observations and findings in the report attached as Appendix 2 to this AEE and the assessment of landscape and visual effects in the report attached as Appendix 3 to this AEE address many of the issues in more detail. The information required for coastal permit applications by the Auckland Council in its application forms is provided, as relevant to the applications, in this AEE and the appendices to the AEE.



## 2. Description of the Proposal and Alternatives

- 2.1 The application is for consent for spat catching. Resource consents are sought to use and occupy space in the Coastal Marine Area (CMA) for conventional longline structures and spat catching frames or ropes for the purpose of mussel spat catching (*Perna canaliculus* otherwise known as the New Zealand greenshell mussel™) and including associated discharges to air and water and disturbance to and deposition on the seabed.
- 2.2 No other resource consents are required for this activity. Any land use consent required for the continued use of the landing facility at Stevenson's Quarry wharf, Kaiaua, will be subsequently obtained should this application be consented.
- 2.3 The area subject to the application is shown on the attached location map (refer Appendix 1). In broad terms, the area is described as follows:
- within the Auckland region
  - an area of approximately 171 ha (1900 x 900m)
  - in waters that are from 20-25 metres in depth
  - located over mud-dominated substrate
  - at the closest point is approximately
    - 7.8km from the western shore line
    - 8.3 km from the eastern shoreline, and
    - 1.56km from the nearest existing marine farm (located to the south-east at Wilsons Bay).
- 2.4 **Description of spat catching activity:** There are three distinct stages to growing mussels.
- Stage 1 is spat catching – this involves the microscopic spat alighting on a substrate and staying there until it is of a size that can be handled i.e. between 20 – 40mm.
  - Stage 2 is “thinning out” – this is initial seeding, and is dependent on density of spat per metre of rope (seeding involves slipping the spat product (now known as seed) from the culture ropes and re-seeding onto growing lines).
  - Stage 3 is the final seed out – this involves farming up until harvesting.
- 2.5 The application is for the stage 1 spat catching activity only.
- 2.6 Spat is microscopic when spawned by mature mussels and does not immediately alight on substrates, but floats in the water column until it attaches to a suitable host.
- 2.7 Once it has attached to the spat catching culture rope, it cannot be handled (or “caught”) until it is between 20 – 40mm. From a practical perspective removing smaller-sized spat from spat catching lines is not feasible as, due to the fragile, small and soft nature of the spat, it does not survive being handled, and is likely to be squashed. In addition, if the lines were removed when



the spat is less than 20mm, most of the spat would fall off the lines, before the lines had been hauled in.

- 2.8 Therefore “catching spat” from a practical and realistic perspective covers that period from initial settling (not visible to the naked eye) to a suitable growth size, at which stage it can be handled and detached from the culture rope in a “live form”. Any alternative interpretation of spat catching would not recognise the pragmatic reality of this stage of the growing cycle and would preclude the option for farmers to catch spat where marine farming proper is not allowed. [Note that even with leaving the spat until it is between 20 – 35mm, the industry still experiences a 97% mortality rate (from spat to maturity); (*pers. comm. from applicant based on Industry Statistics*).]
- 2.9 When considering the distinction between “catching” and “farming” with an analogy to fishing - if you catch a fish on a line – you can still handle it and remove it *alive*. If you catch spat on a line you cannot handle it to remove it *alive* until it is between 20 – 35mm.
- 2.10 Another key distinction between “catching” and “farming” is that the ropes used for each process is distinctly different. However it is acknowledged that the fundamental structure of anchors, warps and back-bones are the same for both processes. Spat is caught on specially designed culture rope (notably hairier than farming ropes providing greater substrate for the spat to alight upon). The rope is either hung from the backbone lines in the traditional manner or it is wound around spat catching frames which in turn are suspended from the backbones. (Refer to diagrams in Appendix 1).
- 2.11 It is important to note that it is neither practical nor viable to catch spat and then on-grow mussels on the same rope. Re-seeding onto another rope occurs when the spat is of a sufficient size to be handled (as mentioned above). Re-seeding is required to alter the density of product which allows for better growing conditions, and to manage the weight on the ropes. The ropes used for growing are not as “hairy”.
- 2.12 **Description of spat catching structures:** Refer to Appendix 1 for an indicative layout of the spat catching area and diagram of the structures. The area consists of:
- a) Longlines:
- The culture methods used involve either a continuous rope dropper or a frame suspended from the longlines (discussed further below)
  - All longlines are surface lines and are orientated parallel to tidal flows
  - A combination of single and double backbone lines would be used
  - The lengths of the longlines to be used will be approx 180 - 200m metres
  - The density of lines would be an average of 2.5 - 3.5 longlines per hectare
  - The separation between backbone lines will be between 15 to 20 metres
  - The backbone and mooring line rope used is quality equipment Duradan (synthetic rope).



**b) Culture ropes/ frames:**

- There are two options for spat catching:
- Option 1 involves timber or steel frames hung by two corners, at between 0.5 - 1m below the surface.
  - Each frame is approximately 1.2 x 2.4m.
  - Each frame is wound with approximately 200m of spat catching culture rope. This culture rope is wound densely and in a way whereby the entire frame is filled in with the rope, while still allowing for the current to pass readily through.
  - The number of frames per line will be trialed over time to ascertain the most effective density for optimum settling of spat; along with considerations given to the weight that can be carried per line. In general it is proposed to install 50 - 60 frames per backbone line.
- Option 2 is that spat catching culture rope would be hung as droppers from the backbone lines.
  - Spat catching culture rope is “hairier” than the normal farming rope and offers an increased substrate area for the spat to adhere to.
  - **NOTE:** It is neither practical nor viable to catch spat and then on-grow mussels on the same rope. Re-seeding onto another rope occurs when the spat is of a sufficient size to be handled (as mentioned above). Re-seeding is required to alter the density of product which allows for better growing conditions, and to manage the weight on the ropes.
- While this is a description of the current structures used by the industry, the applicant also seeks some flexibility to enable other spat catching structures and substrate matter to be trialed. However, any future methods will still involve the use of longlines, with the only potential difference being to the ‘catching’ structures hanging off the longlines.

**c) Floats:**

- The floats used to support the longlines are 293 litres in volume.
- There will be approximately seven floats on each longline (three to support the longline and two at each end of the longline).
- In addition, there will be approximately 1 float every 10m to support the frames or droppers
- Orange floats will be used:
  - at the end of each longline
  - in the middle of the seaward most longline
  - in the middle of the landward most line.

**d) Structure Anchors:**

- The anchors used to secure the long-line structures to the seabed are screw anchors, buried to a depth of approximately 6 to 9 metres.
- The warp line length is approximately 30m to 50m.



e) Lighting:

- The spat catching area would be lit as a unit, with cardinal marks at each corner of the block (visible for 4nm), and special marks (visible for 1nm) located along the sides as per draft diagrams in Appendix 1. The cardinal marks would also have radar reflective capability. The lights would be constructed to meet the requirements set out in Maritime New Zealand's document "Guidelines for Aquaculture Management Areas and Marine Farms", 2005 and "NZ's System of Buoys and Beacons" 2005. The draft lighting plan would be discussed further with the Auckland Council harbourmaster, prior to a lighting application being submitted to Maritime NZ for approval to install such navigation aids.

f) Land based facilities:

- The applicant would utilise the existing land-based loading and unloading facilities at Stevenson's Quarry (approximately 5 km north of Kaiaua). This is on private property and the applicant currently has a lease to access the wharf and to store ropes, floats, bags and other equipment. There is ample manoeuvring space for trucks servicing the spat catching area. The applicant considers that these facilities are sufficient to satisfy the existing marine farming activities plus the proposed spat catching activities, along with any recreational demand (which also operates under a lease to the owners). There are currently no conflicts over the use of this area, and none are anticipated as a result of the subject applications. If necessary, land use consent will be obtained for the continued use of this wharf and would be sought subsequent to any consent being granted for this application. It is understood that this process is acceptable to Council.

- 2.13 **Timing and frequency of placing structures in the water:** The frames and culture rope are only placed in the water on a temporary basis. Generally spawning occurs over a period of 3-8 weeks (usually early to late summer). However, the proposal incorporates the option and ability to trial the catching of spat all year round.
- 2.14 If no spat is caught over this period, the frames or spat catching culture ropes are removed from the water, washed, dried and readied for a further attempt, for example a month later. Empty frames / ropes are removed as they would only become fouled with other marine life and therefore not available for catching spat. Fouled lines would also make spat removal from the lines almost impossible due to the delicate nature of spat. In addition, allowing lines to become fouled reduces the life expectancy of the lines themselves which is not a wise economic decision.
- 2.15 If spat settles during the spawning period, the frames / ropes would be left in the water until the catching size of 20-40mm is reached. Depending on season and weather conditions, the growth rate to reach this size may take from 7-12 months. (i.e. winter is a slow/ no growth period and spawning is generally occurs in early to late summer). (Likewise, it is noted that the "wild" spat



attached to seaweed from Ninety Mile beach cannot be removed from the seaweed until it is 35 – 45mm size, and again this may take from 7-12 months to reach this size.)

- 2.16 **Density of spat and viability of catching it:** Spat density relies heavily on the scale of spawning events and weather conditions at the time e.g. spat fall often occurs after a period of warm, calm weather followed by a storm. Density of spat is also dependent on the quantity of mature mussels in the wider locality at spawning time.
- 2.17 Spat is currently found on some lines in some of the existing mussel farming lines at Waimango Point and at Wilsons Bay. This is indicative of the presence of spat and its potential to be caught within the Firth of Thames. Currently no existing marine farmer in the Auckland or Waikato regions use their farm specifically for catching spat. Some parts of the Firth have been shown to sustain high spat settlement (Hayden and Kendrick 1992<sup>1</sup>). Therefore ecologically it is considered to be viable. From an economic perspective, viability will depend on a range of factors relevant to the particular business undertaking the activity, and the applicant considers the proposal to be commercially viable.
- 2.18 There will be little to no by-catch to be “managed” on the spat catching lines. As mentioned above, if no spat is caught, the frames and culture rope will only be located in the water for 3-8 week periods, at any given time. This is insufficient time for the culture rope to become fouled with marine life. When spat is caught, the frames and culture rope could be in the water up to 12 months. Some settling of other species may occur over this time, however any other species that did attach to the rope at the same period as the spat, would be removed from the line when the spat is removed. Any marine by-catch is released back to the sea at the time of slipping the spat from the ropes, as per current standard marine farming practices.
- 2.19 The spat removal process is undertaken by a machine which strips the spat from the line. [Spat is then sorted before being re-seeded with a stocking covering onto a growing rope and placed on a mussel farm for further growth.

#### ***Consideration of Possible Alternative Locations for undertaking the activity***

- 2.20 The RMA requires a description of any possible alternative locations or methods for undertaking the activity for which consent is sought, where it is likely that the activity will result in *any significant adverse effect* on the environment. There is little risk of any *significant adverse effect* on the environment being caused by granting consent to the area subject to the application.
- 2.21 The Firth of Thames is generally recognised as an appropriate location for aquaculture, based on use by existing farms (including the existing marine farm block at Waimango Point and the development in the Wilsons Bay Marine Farming Zones) and the historical presence of a dredge mussel industry. The RP:C and, Transitional RCP and the PAUP classify the proposed activity and associated structures as a discretionary activity.

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<sup>1</sup> B Hayden and J Kendrick 1992 *Mussel industry project to find new spat catching areas in Marlborough Sound and Coromandel*. 2nd Annual Progress Report from MAF Fisheries to Mussel Industry Council



- 2.22 Compared with some alternative locations in the Firth of Thames, the proposed area would minimise impacts on other marine farms, landscape and natural character and navigation safety. Alternative locations in the Firth are limited by the planning framework for the Waikato region, existing farms and other pre-existing applications for spat-catching.

***Appropriateness of activity in location sought***

- 2.23 As is envisaged by the RP:C and the PAUP, and as experienced by the existing farming operations at Waimango Point and at Wilsons Bay, the area subject to the application would be appropriate for spat-catching. The appropriateness of the area being applied for is also supported by the assessments recorded in this AEE and the findings of the attached expert reports.
- 2.24 The application to catch spat in this area supports the consolidation of marine farming activities in the Firth of Thames.
- 2.25 The North Island mussel farming industry has to date relied on wild spat being sourced from Ninety Mile Beach in Northland. In recent seasons, spat being brought in from this area has had a very high mortality rate. This has been catastrophic for the industry and highlights that the current reliance on this source is not sustainable into the future. Therefore the applicant is seeking to have a wider area available for spat catching to support the industry with locally sourced spat.
- 2.26 It is clear that the applicant will need to trial and be innovative in maximising the potential for catching spat in the proposed area. Without a more certain supply of spat the industry as a whole is threatened for the future. The spat catching consents being applied for provide an opportunity for the applicant to develop a locally sourced supply of spat.
- 2.27 There is a functional need for the activity to be located in the CMA, which reinforces the appropriateness of this activity in the Firth of Thames.

***Efficient Use and Development***

- 2.28 Under s7(b) of the RMA, there is a requirement to give “particular regard to” the efficient use and development of natural and physical resources. This is closely aligned to the comments above regarding the appropriateness of the activity in this location. In addition, the NZCPS, RPS, RCP and PAUP all recognise aquaculture as being an appropriate activity in the CMA. It is noted in particular that the PAUP (as indicative of Council’s most recent policy position) has not zoned any aquaculture areas and instead aquaculture is classified as a discretionary activity in the General Coastal Marine Zone.
- 2.29 The allocation of space and efficient use of that space, including in the context of any other uses/ users of the area, are also relevant to considering the appropriateness of the activity. The proposed spat catching area has a functional need to locate in the CMA. The proposed area would enable the local marine farming industry to grow, resulting in positive effects on the cultural, economic and social wellbeing of the local communities, through for example



employment opportunities, downstream support industries, and the government's commitment to the 20% allocation to iwi. Additional space providing for spat catching would enable the industry to develop a more robust economic basis: i.e. it is my understating that the failure rate for spat sourced from Kaitaia is currently in excess of 97%. Clearly the industry needs to identify alternative options – such as more efficiently catching the spat locally to reduce transportation stress and develop local spat supplies.

2.30 Key reasons why the scale and layout of the proposed area is efficient use of resources and appropriate, include:

- The proposed area reflects the scale appropriate to ensure economic viability: i.e. to develop a locally-based spat market, there needs to be sufficient spat supply to establish a workable and economic market for spat.
- There is a demand for developing a local source of spat supply, due to the extremely high (97%) failure rate associated with the use of Kaitaia spat and the proposed area is of an appropriate scale to enable the applicant to meet this demand.
- There are economies of scale related to the need for equipment, vessels and land-based operations.
- There are economies of scale at an operational level as the proposed area would enable the consolidation of the spat catching operations, including by enabling spat catching to be coordinated with the applicant's existing mussel farming activities. This in turn enhances efficiency of operations, including any land-based transport-servicing requirements (i.e. there would be less economic waste in terms of time and transport costs by having spat available locally).
- At a practical level the size and layout of the area reflects the fact that when attempting to catch spat there are large spatial differences i.e. spat may fall in one area and 200m away there will be none. Currently there is no way to determine exactly where the spat will be caught in any given time. Therefore the spatial distribution of the blocks increases the options for catching spat.

2.31 The layout of the proposed site represents the efficient use of the space, as it meets industry design standards (concise and consolidated area demarcated by coloured floats and lighting), takes into account access for recreational vessels to travel safely around or between blocks (50m gaps and lighting); and recognises that the spacing between lines is required for the replenishment of plankton and to avoid restricting current flows.

2.32 The applicant is not seeking exclusive occupation of the space. It is also an efficient use of space and resources given that the activity is compatible with fishing, and other recreational uses occurring in this area.



### **3. Assessment of actual or potential effects**

#### **3.1 Introduction**

This part of the AEE deals in detail with the actual or potential effects of the proposed activity on the environment. This part addresses the matters, where relevant, outlined in the Fourth Schedule to the RMA. The comments made below are in addition to the relevant findings of the attached expert reports (Appendices 2 and 3), which are relied on to address many of the issues raised in this part of the AEE.

#### **3.2 Any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects**

- 3.2.1 It is widely accepted that the aquaculture industry creates and supports direct employment opportunities to both the Auckland and Waikato regions, making a significant contribution to the social and economic wellbeing of both regions. This contribution is clearly recognised in Chapter 22 of the RP:C and the PAUP (refer also to section 7 below). In respect of this application, potential socio-economic effects include the on-going support for local employment to manage the spat catching area as well as supporting the local industry of marine farmers to have ready access to locally sourced spat. The availability of alternative spat sources will assist in making the local farming industry more resilient to spat failures from the Northland spat. In turn, the supply of spat to the marine farming industry will have consequential benefits for mussel farming, which are generally accepted to be significant.
- 3.2.2 The applicant is a well established business that has been operating in the Firth of Thames area (both in the waters of Coromandel and Waimango) for a considerable time.

#### **3.3 Any physical effect on the locality, including any landscape and visual effects**

- 3.3.1 Reference is made to the landscape and visual effects assessment in the attached report which addresses this matter in detail (Appendix 3). The findings of this report are relied on in support of the contention that any effect on the landscape, visual and natural character aspects, from granting the consents sought will be less than minor. It is also contended that the landscape and visual effects assessment submitted in support of the application provides sufficient information for the purpose of adequately assessing this aspect of environmental effects.
- 3.3.2 Mr Hudson notes that due to the distance of the proposed area from land, views from land-based people would be limited and further notes that the primary viewing audience will be from vessels. The relatively limited viewing points contribute to Mt Hudson's conclusions that any adverse visual effects would be less than minor.
- 3.3.3 The natural character, landscape and natural features of the area are noted in the attached report (Appendix 3) as being modified, on land by settlement, roads and changes in vegetation,



as well as at sea by the existing marine farms at Waimango Point and the two areas consented at Wilsons Bay. In my opinion, and based on the evidence of Mr Hudson, the overall impact of the proposed spat catching area on the landscape and natural character of the wider area is minimal due to the existing uses by marine farming, the distances from shore, the distances from other farms, the low profile of the structures in the water, the negligible landward viewing opportunities and the protection of water quality.

- 3.3.4 Orange floats will be used to delineate the ends of each longline. They will also be used to delineate the middle of the seaward-most line and the landward-most line of each block within the area. The use of orange floats not only identifies the limits of each block but it also has a significant safety role, as it serves to warn other users of the marine environment of the boundaries. Although bright in colour, these floats will not be visible from the shore but will serve as navigation aids for marine users. The remaining floats are primarily black (NB: the industry is also trialling other dark colours such as blue/ green/ grey) and their level of visibility would be dependent on weather and distance. In addition, the number of black floats used on a spat farm (compared to a mussel farm) is significantly less due to the lighter weight of the culture ropes or frames on the long-lines. This further reduces any visual impact.
- 3.3.5 The servicing vessel that will be utilised in the spat operations would be visible from a marine perspective, but would otherwise be barely noticeable from land. The vessel has authorised berthage at Stevenson's quarry and this wharf area is currently used for refuelling, loading of equipment and landing of product from the applicant's existing mussel farms.
- 3.3.6 In my opinion, and based on the evidence provided in Appendix 3, the spat catching structures would have a low visual profile. Clearly the farms would be visible from the sea, depending on the location and distance of vessels on the water travelling in this vicinity.
- 3.3.7 The cumulative effects on the locality arising from the existing farms at Waimango Point and Wilsons Bay are also considered to be minimal. The reasons for this opinion are: based on the findings of the scientific report in Appendix 2 that spat catching would have negligible effects on the ecology of the Firth of Thames; the proposed area is sited well off-shore; and the proposed site is at a significant distance from the other existing farms. Likewise the spat catching area is only likely to be utilised for a certain period of time each year. In addition it is noted that the Firth of Thames historically had a significant dredge mussel industry, indicating the presence of greater numbers of mussels and spat, occurring in this vicinity in the past.
- 3.3.8 The conclusion of Mr Hudson that the adverse effects (including cumulative effects) on landscape, visual and natural character values of the proposed area would be less than minor, is relied on in support of the applications, and indicates that the overall potential impacts of the applications are acceptable.



### **3.4 Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity**

- 3.4.1 Reference is made to the scientific information and opinions in the attached report which address this matter in more detail (Appendix 2). The findings of this report are relied on in support of the contention that any effects on the ecosystem, from granting the consents sought, will be low risk and low potential impact and therefore less than minor. It is also contended that the scientific report submitted in support of the applications provides sufficient information for the purpose of adequately assessing this aspect of environmental effects.
- 3.4.2 The RP:C and PAUP envisage that any adverse effects on ecosystems will be managed sustainably. Based on the information in Appendix 2 it is considered that the cumulative effects on the ecosystem of the proposed area (subject to the application) together with the effects from the existing farms at Waimango Point and Wilsons Bay would be less than minor.
- 3.4.3 It is also noted in the attached report that *spat supply is a critical and at times limiting resource to the NZ mussel industry* (p2) and is further noted the advantages of catching spat in close proximity to the farms where it would be subsequently seeded out.
- 3.4.4 The Mussel Farming Industry in New Zealand is subject to various stringent requirements in respect of the quality of the marine waters in which aquaculture activities are located (including food and health standards which are set by the United States Food and Drug Authority and implemented by NZ's Health Authorities). Therefore the Mussel Farming Industry's own self governing systems have the effect of ensuring that the community has a highly competent 'watchdog' system to continuously review and maintain high water quality standards within the proposed spat catching area. Such policing of environmental standards is considerably in excess of that available to marine areas and ecosystems not advantaged by the presence of marine farms. The applicant proposes to comply with all relevant Industry best practice guidelines when exercising the consents sought.

#### ***Hydrodynamics and Water Column Effects***

- 3.4.5 In relation to the effects on hydrodynamics and water column in the area of the proposed spat catching area, the findings of the attached scientific report notes that it is unlikely that the spat catching activities would have any significant impact on the nitrogen balance in the southern Firth; and that the removal of nitrogen incorporated within the biomass of spat was concluded to represent a very small amount of the nitrogen pool relative to that moving in and out of the Firth daily.(p.6) The report also notes that the exposed hydrodynamic setting and relatively high current regime limit any adverse effects of the proposed activities. Therefore based on the attached report and my understanding and experience with mussel farms and associated hydrodynamic issues, it is considered that any hydrodynamic and water column effects would be less than minor.



- 3.4.6 This conclusion is relied on in support of the application, and indicates that potential impacts of the proposed spat catching activities on this matter are acceptable and less than minor.

#### ***Benthic Assessment***

- 3.4.7 In relation to the effects on the benthic environment, the attached scientific report provides an overview of literature which covers a range of benthic assessments undertaken in the area. It is concluded that the proposed spat farm is likely to have less than minor effects on the benthic ecology of the seabed beneath or near the farms. (p.6)
- 3.4.8 The attached scientific report notes that biodeposits generated by the spat crop are unlikely to be significant and the risk of adverse effects on the seabed is considered to be negligible.
- 3.4.9 This conclusion is relied on in support of the applications, and indicates that potential impacts of the proposed spat catching activities on this matter are acceptable, and less than minor.

#### ***Other Ecosystem Effects***

- 3.4.10 The attached scientific report notes that *mussel farms are well know to attract fish, starfish, crabs, other marine life and also seabirds. In addition to growing the culture species, farms function as mid-water artificial reefs and create habitats. Artificial structures provide new foraging habitat, food sources, breeding habitat, and refuge from predators for some species. These are for the most part positive effects.* (p.7)
- 3.4.11 The attached scientific report notes that potential effects on marine mammals (seals, dolphins and whales) relate mainly to habitat modification, entanglement in structures and habitat exclusion and concludes that this risk is small.
- 3.4.12 The attached scientific report also refer to the RAMSAR wetland in the southern Firth of Thames and concludes that the effects from the spat catching on this site would be negligible.

#### ***Biosecurity Risks and Management***

- 3.4.13 The spat caught will firstly be used on the applicant's existing farms at Waimango Point and at Coromandel. Secondly it would be available to other farmers within the Firth of Thames, including in particular the recently consented Area B at Wilsons Bay. There is no biosecurity risk associated with utilising the spat within the same general area.
- 3.4.14 If additional spat is caught that cannot be used locally it would be made available to other famers in other regions. Note: the Ninety Mile Beach spat is currently transported to mussel farms located anywhere in NZ, and is not considered to be a biosecurity risk.
- 3.4.15 A biosecurity risk can arise from (i) equipment or vessels; and (ii) new invasive species that may destroy the spat product.



- a. **Vessel:** The vessel to be used for this operation will be an existing barge that is currently utilised in the Firth of Thames. It is considered that this vessel would not have any associated biosecurity risk over and above the current situation.
- b. **Equipment:** The equipment to be used on the farm will include floats, ropes, anchors and frames. The floats, ropes, frames and anchors would all be new equipment. It is considered that there is no biosecurity risk associated with new equipment.
- c. **New Species/ Disease Control:** Staff servicing the spat catching area will be seasoned and experienced skippers, managers and workers. They have already been trained to look out for any new or unusual species appearing on the current farms that they work with. In the event that the spat product was affected by a disease or other similar biosecurity risk, the applicant would work in conjunction with Aquaculture NZ, the Ministry of Fisheries (Biosecurity), and the Auckland Council to ensure the most appropriate actions were undertaken. In this respect it is noted that the Aquaculture Industry is developing a document to address such a risk: i.e. the proposed Mussel Industry Biosecurity Contingency Plan. In addition Aquaculture NZ has developed a draft "Exotic Disease Response Plan". In the event of any incursion, both these documents would be drawn upon in any response.

#### **Summary Comment**

- 3.4.16 The scientific report (Appendix 2) notes that there is a negligible risk of adverse ecological or water column effects from the proposed spat area, and that these effects are further reduced by farm management practices such as variations in line densities over time, and the highly flexible nature of the spat catching activity.
- 3.4.17 The scientific report concludes that *the following factors limit any risk to the seabed community or local benthic or water column ecology and indicate that the local environment has a low sensitivity to the proposed activities:*
- *the exposed hydrodynamic setting and relatively high current regime;*
  - *the significant distance to shore areas,*
  - *the likely muddy benthic and modified substrates*
  - *a likely common invertebrate assemblage*
  - *the flexibility of spat collection intensity;*
  - *the discontinuous nature of spat collection (p. 9)*
- 3.4.18 The scientific report further concludes that *the approval or otherwise of the applications does not reside in questions as to ecological or water column effects. Any such effects would be less than minor. It is concluded that effects on fish and fishing and seabirds are likely to be positive*



*or at least not adverse. It is concluded that the risk of entanglement of whales or dolphins in spat lines is remote and effects on cetaceans are less than minor. (p.9)*

- 3.4.19 This conclusion, that any ecological or water column effects would be less than minor, is relied on in support of the application, and indicates that the overall potential impacts of the proposed spat catching activities are acceptable, and less than minor.

### **3.5 Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, cultural, or other special value for present or future generations**

- 3.5.1 The recreational values of the proposed area are linked to on-the-water activities. Potential adverse effects on navigation safety would be minimal due to the proposed lighting (corner cardinal marks and perimeter special marks) and the provision of navigable corridors through and around the proposed area. In addition the area would be marked with coloured floats. (Refer above for description of lighting and floats). The farm is also aligned in parallel to the Wilsons Bay areas to provide a clear thoroughfare between the farms (even though they are off-set).
- 3.5.2 The area is not located in any navigation channel or formally identified navigation route. Any vessels (including less-maneuvrable barges) would be able to navigate past the proposed farm (as indicated on the map in Appendix 1). This map shows indicative alternative routes for general navigation between Auckland and Thames. These routes were identified in discussions with the current barge operator, McCallum Bros Ltd. McCallum Bros Ltd, operates the only large vessel within the vicinity of the proposed farm, shifting aggregate within the Firth of Thames, from time to time. Mr McCallum advised that a 0.5nm distance would be required for the barge to navigate past the farm. In addition, recreational vessels and charter fishing vessels would also use this area of the Firth of Thames. Recreational & charter fishing vessels would not be unduly restricted by the presence of the proposed spat catching area.
- 3.5.3 As with all parts of the CMA, the proposed area is of some recreational value. As discussed above, the use of appropriate navigational marking (lights, buoys, radar reflectors) should ensure that skippers would have sufficient warning of the location of the area. Public access through the area will not be restricted.
- 3.5.4 The attached landscape, visual and natural character assessment report (Appendix 3) concludes that the visual effects of the proposed spat catching area would be less than minor.
- 3.5.5 The applicant and its consultants involved in preparing this application have no knowledge of any heritage or scientific values which may be adversely affected by the proposal, and there are none listed in any of the planning documents considered below. Likewise it is not considered that there would be any adverse effects on any nearby Department of Conservation land.



### **3.6 Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants**

- 3.6.1 The discharges associated with spat catching would be negligible due to the short length of time that the spat frames or catching ropes are likely to remain in the water and the small size of the spat (with feeding and excretion rates proportionate to body mass). There may be some “drop-off” of spat and other marine life, resulting from the collection processes, however as stated above this would be negligible. The effects of the discharges on the benthic ecosystems are covered in the scientific report submitted in support of the application (Appendix 2).
- 3.6.2 Appropriate housekeeping in accordance with the Mussel Industry’s Code of Practice in the spat catching area and on the service vessel will ensure that there is minimal overboard loss of non-degradable materials. Regular maintenance checks of the area including lighting will be undertaken. Checks are undertaken to ensure security of the high economic investment in the structures. Any waste materials would be taken to shore for land disposal. If floats are lost from the area the maintenance staff would go looking for them and retrieve them (since they are a significant cost).
- 3.6.3 There will be no unreasonable emissions of noise from the proposed activity. The only noise resulting from the activity would be from the barge and would therefore be intermittent and localised.

### **3.7 Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations**

- 3.7.1 The relevance of these matters to these applications is in respect of:
- (i) potential hazardous installations in the form of the longlines and navigational equipment and the potential, albeit minor, resulting hazard to marine users; and
  - (ii) the effects of natural hazards, in the form of adverse weather conditions, or changes in sea level.
- 3.7.2 The proposed longline structures would be secured to the ocean floor by screw anchors at each end of each backbone line. The anchors do not pose any threat to vessels, as they would be between 10 and 18 metres below the surface.
- 3.7.3 There is sufficient room between the spat catching lines to provide safe navigable channels for small vessels and service vessels. There is also a 50 metre gap between the proposed blocks within the overall area. Accordingly, it is anticipated that recreational and charter vessels that are under competent control will still be able to utilise the waters of the area and navigate freely within the area, without undue risk, including in adverse weather conditions.



- 3.7.4 As further hazard avoidance for other users of the CMA, the applicant would maintain the lighting system which delineates the overall area of the proposed area, and would ensure the appropriate use of orange floats (refer to details above and proposed lighting plan in Appendix 1).
- 3.7.5 In terms of any storm events that may cause damage to the spat catching operation, technological changes in recent years in terms of anchoring and type of ropes used and changes in farming practices have significantly reduced the occurrence of breakages. Should there be a rope break, however, the 50m separation between the proposed blocks in each area would provide a clear path to avoid impacts on neighbouring blocks. In addition, the spat catching area will be regularly maintained to ensure security of lines and floats. As the structures are floating, the effects of sea level rise will be negligible.
- 3.7.6 There will be no hazardous substances used in exercising the consent applied for by the applications.

#### **4. Description of mitigation measures**

- 4.1 A description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effects of the proposed activity is required to be provided by the RMA. The applicant has demonstrated through existing operations that the spat catching area would be operated in a sound commercial manner and in compliance with the industry standards that are designed to ensure efficient management of the proposed area, to ensure long term financial viability and environmental sustainability.
- 4.2 The applicant complies with the Code of Practice of the NZ Mussel Industry Council (which was developed by the Mussel Industry Council in consultation with regulatory authorities and scientists). This code promotes good practice management and identifies various mitigation measures to be undertaken in the event of accidents or disease. It should be noted that farmers are audited by Aquaculture New Zealand in respect to implementing this Code of Practice.
- 4.3 A rigorous maintenance regime is undertaken to ensure the security of the structures as the cost of lost and damaged lines, floats and spat product is economically significant. Regular checks and maintenance are also carried out for the lights.
- 4.4 The low lying nature of the structures and the proposed layout of the spat catching area, mitigates against the effects of visual impacts and of sprawling or sporadic developments.

#### **5. Consultation**

- 5.1 Consultation has been undertaken with Ngati Paoa and Ngati Whanaunga on a progressive approach, from the time of applying for an extension to Westpac's existing farm at Waimango,



to the recent current applications for new areas for spat catching. As a result of comments made to the applicant this new area (subject of this application) was identified by the applicant as an appropriate response to the land-based and proximity to shore matters raised by Ngati Paoa and Ngati Whanaunga.

- 5.2 No other consultation has been undertaken, due to commercial sensitivity. Due to the strong competition in the marine farming industry it is commercially wise for any applicant to maintain a level of confidentiality until an application is lodged and priority within the Council system is secured.

## **6. Monitoring**

- 6.1 The RMA requires a description of the monitoring that would be undertaken, where the *scale or significance of effects is such* that monitoring is required. It is considered that the environmental effects would be no more than minor, based on the expert reports in Appendices 2 and 3, and that no specific monitoring requirements are required. It is also noted that no monitoring is required of the mussel seeding trials being undertaken in the northern Firth of Thames.
- 6.2 It is envisaged that the imposition of appropriate consent conditions, would provide a basis for appropriate compliance monitoring.

## **7. Relevant Planning Provisions**

### **7.1 Introduction**

Although a planning assessment is not required to be included in an AEE, this part of the AEE sets out the relevant planning framework for the purpose of the subsequent assessment under s104(1)(b) of the RMA.

### **7.2 Regulations**

- 7.2.1 The Fisheries (Commercial Fishing) Regulations 2001 defines spat as meaning:

*...a lifecycle stage or size range of fish, aquatic life, or seaweed that is declared by the chief executive by notice in the Gazette to be spat*

- 7.2.2 Gazette No. 10699 Fisheries (Declaration of Species as Spat Notice (No.2)) 1993 further defines "spat" for the Green-lipped mussel/Greenshell mussel species *perna canaliculus*. It states:

*For the purpose of any spat catching permit issued pursuant to section 67q of the Fisheries Act 1983, spat is hereby defined as: (a) any stage of the lifecycle of the following molluscs:....iv. Green-lipped mussel/Greenshell mussel less than 40mm in length.*



- 7.2.3 While mussel spat is defined as being less than 40mm, as mentioned above, it is generally removed from the spat catching lines at a size ranging from 20 – 35mm.

### 7.3 Transitional Regional Coastal Plan

- 7.3.1 The NZ Gazette Notice: 8 November, 1984 No 204 p4796 forms a part of the Transitional Regional Coastal Plan and remains in place until the RP:C aquaculture provisions are operative. This Gazette notice determined that certain areas of the Hauraki Gulf were not available for marine farming leasing or licensing and therefore marine farming was prohibited. The area covered by the application is located within this prohibited marine farming area. While marine farming is prohibited, spat catching is deemed to be a discretionary activity, as spat catching was not included within the definition of marine farming in the 1984 Gazette notice.
- 7.3.2 The Gazette notice therefore provides for spat catching within the proposed area.

### 7.4 New Zealand Coastal Policy Statement (2010)

- 7.4.1 The operative New Zealand Coastal Policy Statement (2010) (NZCPS) includes a strong management directive for Aquaculture, in Objective 6 and Policy 8 in particular. Together these policy directives recognise that aquaculture activities (as proposed by the application) are an appropriate use of the CMA and they recognise the important value aquaculture can provide for social, cultural and economic well-being.

- 7.4.2 The NZCPS states in 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, recognising 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;*
- *some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;*
- *functionally some uses and developments can only be located on the coast or in the coastal marine area;*
- *the coastal environment contains renewable energy resources of significant value;*
- *the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities;*
- *the potential to protect, use, and develop natural and physical resources in the coastal marine area should not be compromised by activities on land;*
- *the proportion of the coastal marine area under any formal protection is small and therefore management under the Act is an important means by which the natural resources of the coastal marine area can be protected; and*
- *historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivision, use, and development.*



7.4.3 The NZCPS states in Policy 8:

*Recognise the significant existing and potential contribution of aquaculture to the social, economic and cultural well-being of people and communities by:*

- a. including in regional policy statements and regional coastal plans provision for aquaculture activities in appropriate places in the coastal environment, recognising that relevant considerations may include:*
  - i. the need for high water quality for aquaculture activities; and*
  - ii. the need for land-based facilities associated with marine farming;*
- b. taking account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits; and*
- c. ensuring that development in the coastal environment does not make water quality unfit for aquaculture activities in areas approved for that purpose.*

7.4.4 Other NZCPS policies of particular relevance to the applications include: Policies 4 & 6 (in relation to the integration of land and water activities of aquaculture and use of renewable resources); Policies 13 & 15 (in relation to preserving natural character and protecting natural features); and Policies 21 & 23 (in relation to water quality).

7.4.5 With regard to Policy 4, the application outlines the facilities available for managing the loading and unloading of equipment and spat product, and the associated storage above MHWS.

7.4.6 With regard to Policy 6 (1) (e & f, h & i), the land based facilities available are appropriate for aquaculture activities and will be used for the operation of aquaculture in the CMA. The area is set back from the road, is an existing quarried site, has limited access (padlocked gate) and has less than minor effects on visual or natural character characteristics of the area. The facilities are currently used by the applicant for its existing marine farming activities and any new effects arising from the use of the facilities for the proposed spat catching activities will be minimal.

7.4.7 With regard to Policy 6 (2)(a, c, e) it is considered that the proposed spat catching activities would contribute significantly to the social and economic well-being of people and communities from the use of the CMA, by providing a strong economic base for the future of this industry in the Firth of Thames (as also anticipated by NZCPS Policy 8) and ensuring that the CMA is used as efficiently as possible. As noted above, the applicant seeks to develop a local supply of spat to reduce the current reliance on wild spat sourced from Ninety-Mile beach and ensure the ongoing viability of mussel farming in the Firth of Thames.

7.4.8 With regard to policies 13 & 15, the information provided in the report in Appendix 3 supports the conclusion that spat catching is an appropriate use in the proposed area. The information provided in this report notes that the adverse effects from the proposed area would be less than minor. Further detail assessing these policies is found in the report in Appendix 3.



- 7.4.9 With regard to policies 21 & 23 the information provided in the attached report (Appendix 2) supports the conclusion that the impacts on water quality would be negligible.
- 7.4.10 In considering the above-mentioned objective and policies, there is a strong directive for enabling aquaculture along with balancing the impacts on natural character and landscape. In my opinion, the proposed spat catching area subject to this application is an appropriate use in this area and the application is consistent with the directions of the New Zealand Coastal Policy Statement and would meet the purpose of the RMA.

## 7.5 Hauraki Gulf Marine Park Act (2000)

- 7.5.1 Sections 7 and 8 of the Hauraki Gulf Marine Park Act (2000) (HGMPA) have the effect of an NZCPS. This Act promotes a co-operative approach to the integrated and sustainable management of the Hauraki Gulf. This Act recognises the importance of the Hauraki Gulf and the diversity of the marine ecosystem and the wide values and uses people have of the area.

- 7.5.2 Section 7 recognises the national significance of the Gulf and emphasises the life-supporting capacity of the Gulf and in particular identifies that this:

*"...includes the capacity -*

*(a) to provide for the ... relationship of the tangata whenua of the Gulf with the Gulf ... and the ... wellbeing of people and communities,*

*(b) to use the resources of the Gulf ...for economic activities and recreation...and*

*(c) to maintain the...water and ecosystems of the Gulf".*

- 7.5.3 In relation to the wider Firth of Thames, I consider that the proposed area is consistent with these NZCPS directives and would meet the purpose of the Hauraki Gulf Marine Park Act.

- 7.5.4 Section 8 identifies management objectives. These relate to a range of environmental, Maori and community matters, and have been addressed in this AEE. The protection of kaimoana is one objective, and based on the assessments referred to in this AEE, there will be no adverse effects on this resource as a result of these applications, due to the distance from shore and the negligible impact on nutrients in the water column. Sub-section 8(e) states:

*"the maintenance and, where appropriate, the enhancement of the contribution of the ...physical resources of the Hauraki Gulf...to the social and economic well-being of the people and communities of the Hauraki Gulf and New Zealand".*

Aquaculture provides an opportunity to enhance the social and economic wellbeing of people and communities of the Hauraki Gulf (as discussed above and further below). This also directly reflects Policy 8 of the NZCPS 2010.

- 7.5.5 In my opinion, the area that is the subject of the application is consistent with the directions of this NZCPS.



## **7.6 Regional Policy Statement (1999)**

- 7.6.1 The Auckland Regional Policy Statement (1999) (RPS) provides overarching regional policy for the RP:C and the Auckland Council District Plan – Operative Franklin Section 2000 (DP). Of particular relevance to the application is Chapter 7 which addresses the Coastal Environment. The most relevant objectives to be considered include: Objectives 1 and 3 which address natural character and enabling appropriate use and development in the coastal environment; and Objective 11 which refers to implementing the NZCPS of the Hauraki Gulf Marine Park Act. The application meets these objectives. In accordance with Policy 7.4.10, it is contended that the application is appropriate in the CMA and would enable people and communities to provide for their social and economic well-being.
- 7.6.2 These policy directives have been built on in further detail in the RP:C and are therefore addressed further below. Further detail assessing the policies relevant for landscape, visual and natural character effects is found in the report in Appendix 3. The application is consistent with the RPS and would meet the purpose of the Act.

## **7.7 Auckland Regional Plan: Coastal (2004)**

- 7.7.1 The 2004 RP:C (operative in part) is the most relevant planning instrument to the application. It is also noted that: (i) while aquaculture-related variations have been proposed to the RP:C the statutory process has been put on hold; and (ii) the RMA and associated aquaculture legislation have been amended and changes came into effect as at 1 October, 2011.

This section of the AEE addresses the provisions of the RP:C.

### ***Objectives and Policies***

- 7.7.2 Chapter 22 of the RP:C addresses aquaculture. The Issues, Objectives and Policies in Chapter 22 recognise the importance of and supports aquaculture within the Auckland CMA. Objective 22.3.1 seeks to ensure appropriate activities, while avoiding remedying or mitigating adverse effects. It is contended that based on the information provided in this AEE, the proposed spat catching area is an appropriate use in this part of the Firth of Thames. The 6 proposed objectives (22.3.1 – 22.3.6) are enabling of aquaculture in Aquaculture Management Areas (AMAs). While it is noted that the requirement for AMAs is no longer in legislation, the underlying intent of these objectives is to ensure farms are “co-located” and to enable them to occur where appropriate. The proposed area is compact and would not impact on other farming areas, as such it is considered to be an appropriate use in the CMA. The environmental effects of spat catching in this area have been discussed in detail above.
- 7.7.3 The application is consistent with the RP:C objectives and would meet the purpose of the RMA.
- 7.7.4 Policy 22.4.13 requires activities to be consolidated and policy 22.4.15 requires cumulative effects to be addressed. The application is consistent with these policy directives, as the proposed area is confined and the proposed layout would ensure efficient use of the space. As



explained in the report attached as Appendix 2, there would be limited cumulative effects on the ecology from the proposed area along with the existing current farmed areas at Waimango Point and Wilsons Bay. The cumulative visual effects are lessened by the concentration of the proposed area in the middle of the Firth of Thames and the proposed layout of the area in distinct blocks. (Refer Appendices 2 and 3)

- 7.7.5 Policies 22.4.1, 2.4.4, 22.4.6, 22.4.9, 22.4.14 are not relevant to the application.
- 7.7.6 With regard to the intent of proposed policies 22.4.1 and 22.4.2 it is considered that the proposed layout would be appropriate to and consistent with the intent of these policies.
- 7.7.7 Proposed policy 22.4.3 is relevant in that water quality is essential to the catching and harvesting of spat. Land based facilities are currently in place and are discussed above. It is considered that the application is consistent with this policy directive.
- 7.7.8 Proposed policy 22.4.10 is not consistent with the recent legislative changes and the request as per section 8 of this AEE is that the consent is issued for a 35 year period.
- 7.7.9 Proposed policies 22.4.11, 22.4.12 and 22.4.13 are particularly relevant and it is contended that the matters raised by these policies have been addressed in section 3 above.
- 7.7.10 Proposed policies 22.4.1, 22.4.4, 22.4.5, 22.4.6, 22.4.7, 22.4.8, 22.4.9, 22.4.14 and 22.4.15 are not relevant to the application.
- 7.7.11 Objectives and policies relating to natural character, landscape and natural features are also relevant. The proposed spat catching area is located in the General Management Area under the RP:C. In my opinion, and based on the information in Appendices 2 & 3 the proposed spat catching activities would have minimal impact on these matters.
- 7.7.12 The coastline is identified as a regionally significant landscape. Objective 3.3.1 seeks to preserve natural character by protecting it from inappropriate use and development. This includes in Policy 3.4.1: avoiding where practicable, remedying or mitigating adverse effects on the qualities, elements and features which contribute to natural character. The proposed spat catching area is located in the General Management Area and is 7.8km from the western shore and 8.3km from the eastern shore at the respective closest points. The area will not be visible from either coastline.
- 7.7.13 Objective 4.3.1 seeks to protect the key elements, features and patterns of regionally significant landscapes from inappropriate use and development. This is supported by Policies 4.4.2 and 4.4.3 which provides guidance on what would be inappropriate use and development. This includes in particular, any significant adverse effects on those key elements, features and patterns which contribute to the landscape quality, aesthetic value and landscape sensitivity of areas identified as regionally significant landscapes. Likewise the scale, design and location of proposed activities should avoid, where practicable, remedy or mitigate adverse effects on key landscape elements, features and patterns. In my opinion and based on the evidence in the



landscape, visual and natural character report in Appendix 3, the adverse effects on landscape would be less than minor.

- 7.7.14 It is considered that the application is consistent with and would meet the above objectives and relevant policies. Further detail assessing the relevant landscape, visual and natural character plan provisions is found in the report in Appendix 3. The proposed spat catching area would be managed in an efficient and sustainable manner and would be an appropriate use in the CMA in the location being applied for.

#### **Relevant Rules**

- 7.7.15 A coastal permit is required for the following activities:

- Occupation of coastal space
- On-going use of structures on the foreshore or seabed
- Disturbance of the foreshore or seabed
- Deposition of material on the foreshore or seabed or into coastal waters, and associated discharges (although it is noted that for spat catching, this aspect of the activity will be minimal).

- 7.7.16 In accordance with pre-variation rule 22.5.2 of the RP:C and the Gazette notice the proposed spat catching activities are discretionary activities in the area subject to the application. While rules 22.5.11 and 22.5.12 of the proposed variation would make marine farming in all areas subject to the application prohibited (as they are not within an AMA) the RMA clarifies that prohibited activity rules have no effect if they are not operative. It is contended that coastal permits should be issued for the proposed spat catching area, inclusive of all activities that are fundamental to the spat catching activities.

### **7.8 Auckland Council District Plan – Operative Franklin Section 2000**

- 7.8.1 The land-base area to be used to service the proposed area is at the Stevenson's Quarry site. The activities taking place at this site would include: cleaning and reconditioning of ropes, storage of ropes (in bags) and storage of floats. Trucks would arrive to deliver the ropes and floats prior to their re-use on the farms. The trucks would also be used to collect spat and deliver to other locations (when or if necessary – i.e. it may be delivered by vessel).
- 7.8.2 Any requirement for a land use consent to cover these activities would be sought if necessary, subject to the decision made on this application.

### **7.9 Proposed Auckland Unitary Plan (September 2013)**

- 7.9.1 The PAUP maps show that the proposed area falls within the general coastal marine zone and does not show any overlays impacting on the area.



### **7.9.2 Part 1: Introduction and Strategic Directions: Chapter A: Introduction**

Of particular relevance in the section of the PAUP to the application are the following provisions:

- Chapter 1.2 places emphasis on considering mana whenua interests and values in RM decision-making. Discussions with Ngati Paoa and Ngati Whanaunga have been held in respect of other applications in the Firth of Thames. These have been considered in preparing this application.
- Chapter 1.6 notes the opportunities aquaculture provides for sustainable economic growth.
- S86B RMA states a rule has effect only once decisions have been made on submissions – one of the exceptions to this is aquaculture – the rules in the activity table (shaded) have immediate effect from 30 September 2013.

### **7.9.3 Part 1: Introduction and Strategic Directions: Chapter B – RPS**

The PAUP identifies eight issues of regional significance. Issue 2 which relates to enabling economic well-being and Issue 6 which relates to sustainably managing our coastal environment are particularly relevant for aquaculture. Other issues of relevance include:

- Under Issue 2, aquaculture is recognised as a significant contributor to Auckland's economic well-being and the need to provide for these site-dependent activities is acknowledged.
- Issue 3 identifies the need for active stewardship to protect historic heritage, historic character and natural heritage; including protecting outstanding natural features and natural landscapes, while recognising many of these areas are working environments.
- Issue 4 addresses issues of significance to Mana Whenua, in particular recognising Treaty Settlements, protecting resources, enabling Mana Whenua economic, social and cultural development, sustainable management of natural and physical resources and enhancing Mana Whenua's relationship with the natural environment.
- Issue 5 is about sustainably managing natural resources, including the need to manage multiple values and pressures.
- Issue 6 focuses on sustainably managing the coastal environment, with an emphasis on ensuring the activity is in an appropriate location and an appropriate form. The significant benefits of aquaculture to the national and regional economy are recognised.

7.9.4 Chapter 3 sets out the objectives and policies for managing and developing Auckland's economy. Objective 3.1.1 is relevant in promoting business opportunities for current and future needs of Aucklanders; while 3.1.3 refer to appropriate locations that promote sustainable economic growth, efficient use of resources and avoids conflicts between incompatible activities. The application meets these objectives (and the policies emphasising compact and consolidated activities) as discussed above.

7.9.5 Chapter 4.3.1 addresses Natural Heritage, including the natural character of the coastal environment, natural landscapes, natural features and biodiversity. Objectives 1 and 2 seek to



protect areas of outstanding or high natural character; and to retain elements or features that contribute to the natural character of an area. Policy 1 requires that significant adverse effects on the natural character of the coastal environment are avoided, and other effects avoided, remedied or mitigated, taking into account the man-made changes to landform, vegetation, coastal processes and water movement; the elements, features and experiential values that contribute significantly to the natural character values of the area, and the extent to which they are affected; alternative locations; and functional need. The proposed area is not located in any area identified in the planning maps as having outstanding or high natural character. Further detail assessing the relevant landscape, visual and natural character plan provisions is found in the report in Appendix 3.

- 7.9.6 Chapter 4.3.2 addresses landscapes and natural features. The proposed area is not located in any area identified in the planning maps as having ONLs or ONFs. Landscape and natural features are addressed in Appendix 3.
- 7.9.7 Chapter 4.3.4 addresses biodiversity. Significant ecological areas (SEA) have been identified as SEA – Marine 1 and SEA – Marine 2. The proposed area is not identified as an SEA. Objective 4 focuses in particular on the protection of coastal ecosystems and their life-supporting capacity. The supporting ecological report (Appendix 2) addresses these matters in further detail. Policy 10 refers specifically to preventing the spread of pest species, including by managing aquaculture to avoid or reduce opportunities for the spread of pest species. I consider that the risks associated with pest species will be appropriately managed for the reasons set out above. In particular, the proposed area would be serviced by existing vessels, no equipment from any other site outside of the Firth of Thames would be used.
- 7.9.8 Policy 14 of 4.3.4 requires avoidance of activities that would among other matters impact on avifauna and marine mammals. The existing marine farms at Waimango Point and Wilsons Bay have had no known adverse effects on avifauna or marine mammals, and it is expected that there would be none arising from the proposed spat catching area. The floats are often used by birds for roosting. It is considered that the proposed spat catching area would have minimal if any adverse effects on avifauna or marine mammals.
- 7.9.9 Chapter 5 outlines the interests of Mana Whenua, with Objective 5.1.2 focused specifically on participation in resource consent processes and decisions, with the policies indicating a range of options for Council to implement this objective. Objective 5.2.1 and .2 has a focus on Mana Whenua values and relationships, with the policies emphasising the need for identification of values and integration of them into the management of coastal resources, and decision-making recognising the impacts of use and development on specified matters of interest to Mana Whenua. Objectives 5.4.1 - .5 cover the protection of Mana Whenua values and provision for the relationship of Mana Whenua with cultural heritage and protection and enhancement of cultural landscapes, supported with specific policies targeted at gaining and utilising information from Mana Whenua perspectives.



- 7.9.10 Chapter 7 specifically addresses the management of the coastal environment. Objective 7.1.1 seeks to ensure use and development is undertaken in appropriate places, taking into account the range of uses and values of the area. Objective 7.1.2 focuses on efficient use of resources and recognition that some activities which need to occur in the CMA are provided for. Objective 7.1.3 emphasises functional need for occupying space, while Objective 7.1.4 emphasises integration between land and water activities.
- 7.9.11 These Objectives are supported by 6 policies: Policy 7.1.1 requires that appropriateness is determined with reference to this section as well as to the sections on historic heritage, natural character, landscape and natural features, biodiversity and Mana Whenua. Policy 7.1.2 focuses on avoiding sprawling or sporadic developments and Policy 7.1.3 seeks to provide for activities with a functional need to locate in the CMA and cross references Policies 7.1.1 & 7.1.2 for determining appropriateness of areas. Policy 7.1.4 seeks to maintain the value of the coast as an open space area with free public access. Policy 7.1.5 provides for the on-going use of existing activities in the CMA, while avoiding significant adverse effects to the extent practicable, and avoiding remedying or mitigating other adverse effects. Policy 7.1.6 requires that the effects of activities on both land and the CMA are assessed.
- 7.9.12 The application is consistent with these objectives and policies as discussed above, particularly in relation to efficient of use and appropriateness of the location, and the impacts on ecosystems and landscape matters as covered in Appendices 2 & 3.
- 7.9.13 Objectives 7.2.1 - .3 address public access and the maintenance and enhancement of open space, recreation and amenity values. These are supported by 5 policies: Policy 7.2.1 emphasises the need to minimise impacts on public access through design and location. Policy 7.2.3 emphasises providing for open space access and recreational activities while avoiding conflicts and safety issues. These issues have been addressed above. Navigation and access matters have also been discussed above.
- 7.9.14 Objectives 7.3.1-.3 and associated policies focus on degraded water quality. The area of the application is not mapped as being in a degraded area. Aquaculture requires high water quality in order to meet the USFDA food health standards for product. A regular water quality monitoring program is undertaken for all farms.
- 7.9.15 Objectives 7.4.1 - .7 focus on giving effect to the Hauraki Gulf Marine Park Act, including protecting the ecological values of the Gulf, maintaining or enhancing the open space, recreation and amenity values of the Gulf, and generating economic well-being. There are 19 supporting policies. Policies 7.4.1 - .3 focus on protecting ecological values and the life-supporting capacity of the Gulf and ensuring that cumulative effects are assessed. Policies 7.4.4 - .7 focus on avoiding use and development that would impact on the values of the islands of the Gulf. Policies 7.4.8 - .9 are concerned with protecting key areas and habitats and establishing ecological bottom lines for managing resources and establishing baselines for monitoring changes. Policies 7.4.10 - .12 reinforce the Mana Whenua relationship with the Gulf, including



decision-making to take into account the relationships Mana Whenua have with the Gulf. Policies 7.4.13 - .14 focus on enhancing social, cultural and recreational values for the Gulf communities. Policies 7.4.16 - .19 focus on providing for use of resources and economic activities. This includes providing for commercial activities provided effects of activities do not result in further degradation or net loss of sensitive marine ecosystems and promoting economic development opportunities that complement the unique values of the Gulf. The application meets these policy directives as discussed above.

**7.9.16 Part 2: Regional & District Objectives & Policies: Chapter C: Auckland-wide objectives & policies**

Objective 1.1.1 recognises the benefits of infrastructure, and is supported by Policy 1 which recognises the value of infrastructure to enabling economic growth and Policy 2 which seeks to prevent reverse sensitivity from activities that might compromise use of infrastructure. As discussed above, the infrastructure to be used to support the proposed area is located at Stevenson's Quarry where the applicant already has a lease for operating his barge and a land-base for equipment.

7.9.17 Objectives 5.15.1.3 and .4 address water quality and seek to ensure that water quality is not further degraded and where possible enhanced, and that development is undertaken in a way that minimises adverse effects on ecosystems. Policy 23 seeks to prevent adverse effects of other discharges from activities by setting performance standards or where this is not appropriate, having regard to the level of contaminants, the sensitivity of the receiving environment and mitigation options. As discussed above and with reference to the ecological report (Appendix 2), the application is consistent with these policy directives. High water quality is a fundamental requirement for the mussel industry.

**7.9.18 Part 2: Regional & District Objectives & Policies: Chapter D: Zone objectives & policies**

The proposed area falls within the General Coastal Marine Zone – which comprises the majority of the CMA outside other specified zones. The purpose of this zone is to provide for use and development that has a functional need to be undertaken in the CMA, and to manage conflicts between activities. Section 5.1.14 deals specifically with aquaculture. There are 3 Objectives: Objective 5.1.14.1 recognises the cultural, social and economic benefits of aquaculture, and the need to develop it in appropriate places that avoid or minimise conflicts with other uses and values; Objective 5.1.14.2 recognises the importance of high water quality and the need to manage other activities; and Objective 5.1.14.3 seeks to minimise the risk of introducing or spreading harmful aquatic organisms.

7.9.19 There are 10 supporting policies:

- Policy 1 refers to new locations - where the actual of potential effects are not fully understood, and Policy 2 to staged development where the effects are not fully understood. It is contended that while the proposed area is a new location, the effects of spat catching



activities are well understood. These effects are discussed in detail above and in the attached Appendices.

- Policy 3: requires management of the spread of harmful aquatic organisms: The spat catching area would use new screw anchors and back-bone lines. Dropper ropes would be new. The vessel servicing the proposed area would be from Kaiaua. Staff would be trained to be observant at harvesting and maintenance runs to observe any new/ different species growing on the ropes. Biosecurity risks and management are discussed in detail above.
- Policy 4 requires that location and design avoids adverse effects on significant ecological areas, ONC areas, ONFs, ONLs and schedules historic heritage places. The proposed area is not within any of these locations.
- Policy 5 requires that location and design avoid significant adverse effects or avoid, remedy or mitigate other adverse effects on significant ecological areas, HNC areas, mooring zones, safe navigation routes and anchorages; areas of high recreational use or amenity value; public access. The proposed area is not located in any of these areas. Refer above for the discussion on navigation safety routes. It is considered that recreational use is compatible with the proposed activities and it is noted that the use of existing farm areas for recreational fishing is a common occurrence. Public access is not restricted through or around the proposed area.
- Policy 6 addresses reverse sensitivity issues and is not relevant to the application.
- Policy 7 requires land-based facilities to be provided for. As discussed above the landing and loading facilities to be used are at Stevenson's Quarry.
- Policy 8 addresses the allocation of space. Within the proposed area applied for there is no other known competing demand from aquaculture operators. Mana Whenua can benefit from the applications through the 20% equivalent space regime.
- Policy 9 seeks to co-locate aquaculture in existing areas to consolidate activities, and where adverse cumulative effects do not arise. The proposed blocks are co-located within the wider area being applied for, and are at sufficient distance from other farms to avoid impacts on existing farms. Any cumulative effects arising from the addition of the proposed area is considered to be minimal as discussed above.
- Policy 10 (Mahurangi Harbour) is not relevant to these applications.

#### **7.9.20 Part 2: Regional & District Objectives & Policies: Chapter E Overlay Objectives and Policies**

This chapter identifies overlays of information with details set out in Appendices 1-12. From my reading of these appendices, there are no overlays relating to the proposed area.

#### **7.9.21 Part 3: Regional and District Rules: Chapter G: General Provisions**

Section 1.10 states that s 86B of the RMA has legal effect if the rule provides for aquaculture activities - rules with immediate effect are shaded grey. Section 2.7.4.4 requires a cultural impact assessment to be undertaken for activities in the CMA which may have adverse effects on mana whenua values, however it is not directly an aquaculture rule. Nevertheless, the minor aspects of the proposal listed in Rule 2.7.4.4 (discharges to the CMA and disturbance of the seabed) will not have adverse effects on mana whenua values.



#### **7.9.22 Part 3: Regional and District Rules: Chapter H – Auckland wide rules**

4.1 Air quality: Permitted - the proposed area would meet the permitted activity general controls.

#### **7.9.23 Part 3: Regional and District Rules: Chapter I – Zone rules**

**General Coastal Marine Zone:** Under Rules for the General Coastal Marine Zone: New aquaculture activities are deemed to be discretionary activities (refer Rule Chapter I: 6, 1.8). In respect to the development controls:

- Structures below the seabed must not be capable of being uncovered or moved by coastal processes – the screw anchors proposed by the applicant would meet this requirement.
- LINZ would be notified of any changes to the lighting once consent process completed.

7.9.24 Section 6.6.2 sets out the Special Information Requirements for aquaculture. These matters have been addressed in this AEE. A draft management plan is attached as Appendix 4.

### **7.10 Overview of Planning Provisions**

7.10.1 The proposed area which is the subject of this application is for spat catching activities and the location is shown on the map in Appendix 1.

7.10.2 The area is covered by the Gazette notice under the Transitional Regional Coastal Plan, which allows for spat catching to take place.

7.10.3 It is contended that the proposed spat catching activities should be addressed as discretionary activities in accordance with both the RP:C and the PAUP.

7.10.4 For the reasons discussed above and in Appendices 2 & 3, it is considered that the proposed spat catching area is consistent with the policy directives of the various planning documents, and is an appropriate activity in the proposed area.

## **8. Consent Conditions and Notification Requirements**

8.1 The applicant seeks a 35 year consent term.

8.2 It is considered that there is no need for any environmental monitoring on the basis of the conclusions reached in the attached technical reports (and section 6 above).

8.3 It is considered that the application should be non-notified on the basis that:

- The applicant does not request notification;
- There is no planning rule or NES requiring notification;
- The effects are no more than minor;



- No persons are adversely affected by the activity in a minor or more than minor way; and
- No special circumstances exist which would justify notification.

## 9. Conclusions

### 9.1 The key points of this application are:

- i) The application is made in respect of an area that is in the mid-Firth of Thames.
- ii) The activity is mussel spat catching.
- iii) The proposed spat catching activities are consistent with the policy directives relevant to the proposed location and meet the relevant criteria of the RP:C, RPS, NZCPS, HGMPA, and PAUP. Any adverse environmental effects from the spat catching activities in the proposed area are considered to be less than minor, and no person is adversely affected by the proposal in a minor or more than minor way.
- iv) Based on the scientific report submitted in support of the applications, the environmental effects of undertaking spat catching at the proposed site is considered to be less than minor and acceptable.
- v) Based on the landscape, visual and natural character report submitted in support of the application the adverse effects from the proposed area are less than minor.
- vi) The application provides for the efficient use of the proposed area and will enable the local marine farming industry to continue to become more self-reliant on locally produced spat, with resultant positive effects on the economic and social wellbeing of the local communities.
- vii) The application allows for the development of a more sustainable and robust source of spat for the industry.



## Appendices

Appendix 1     A: Location plan & indicative navigation routes

B: Survey plan

C: Indicative layout & structures

D: Proposed lighting plan

Appendix 2     Poynter, M., 2014. *Proposed Mussel Spat Catching Area: Northern Firth of Thames: For Westpac Mussels Distributors Ltd: Application for Resource Consent for Spat Catching: Ecological Report.* Andrew Stewart.

Appendix 3     Hudson, J., 2014. *Firth of Thames: Central Spat Catching Area.* Hudson Associates Landscape Architects.

Appendix 4     Draft Management Plan







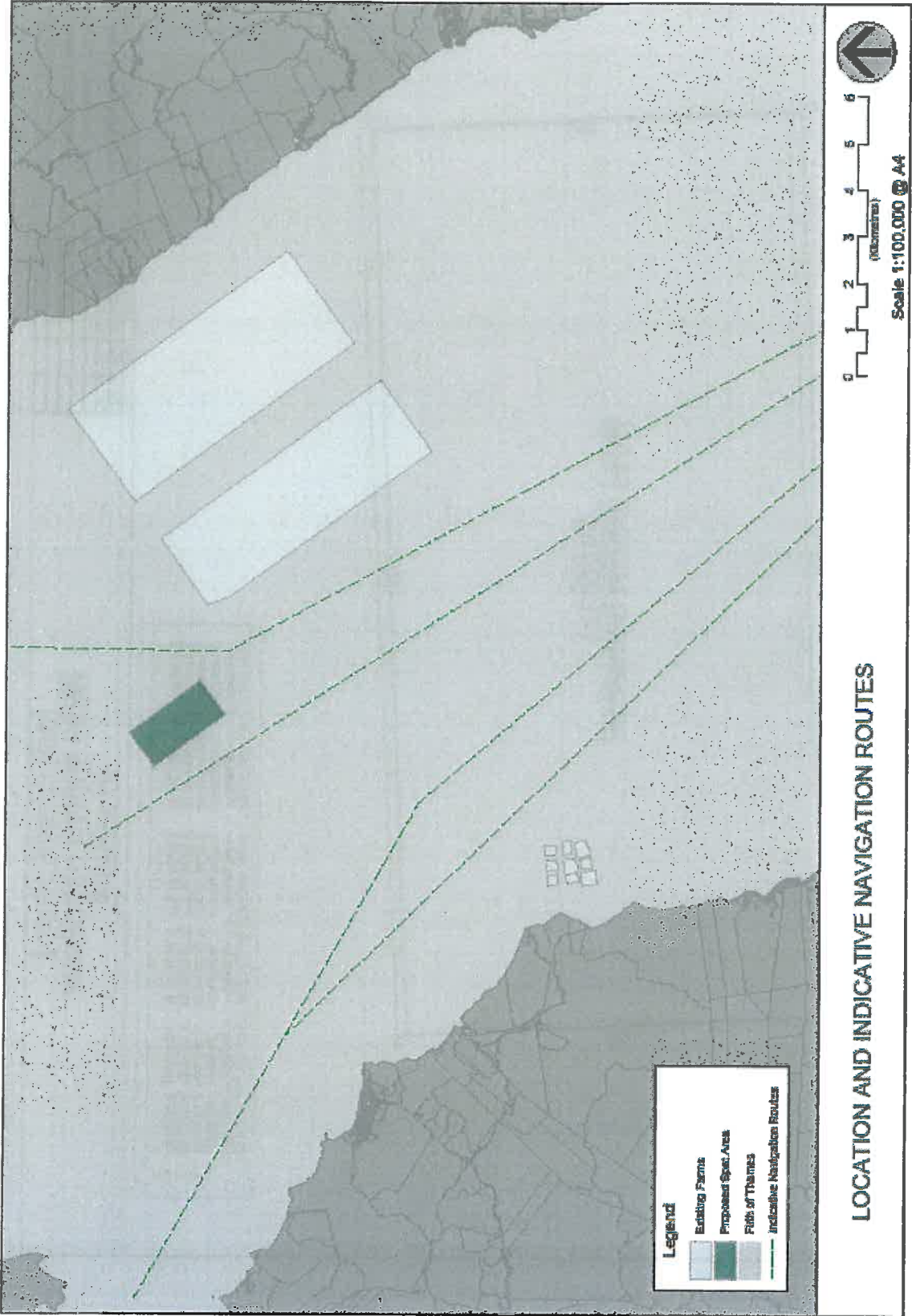
## **Appendices**

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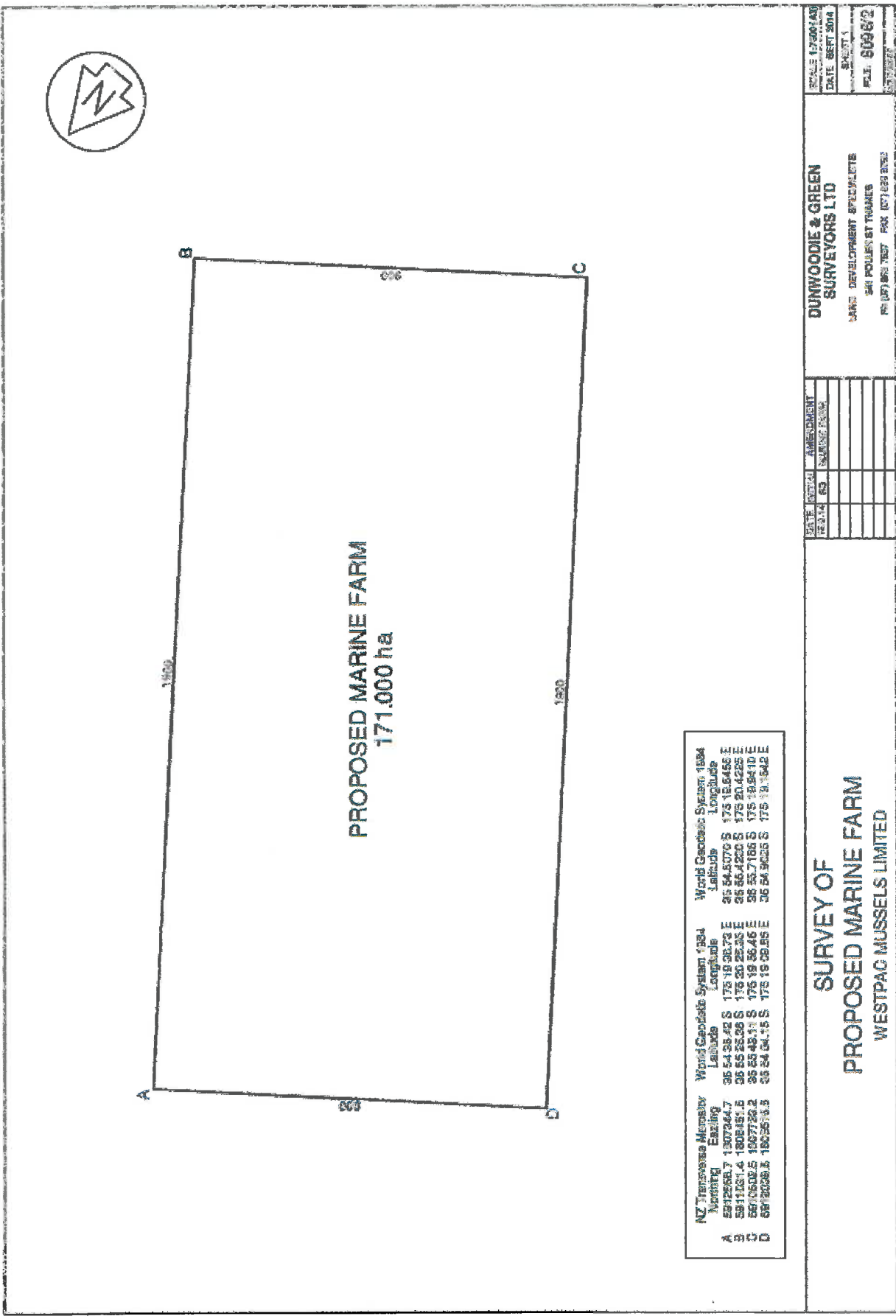




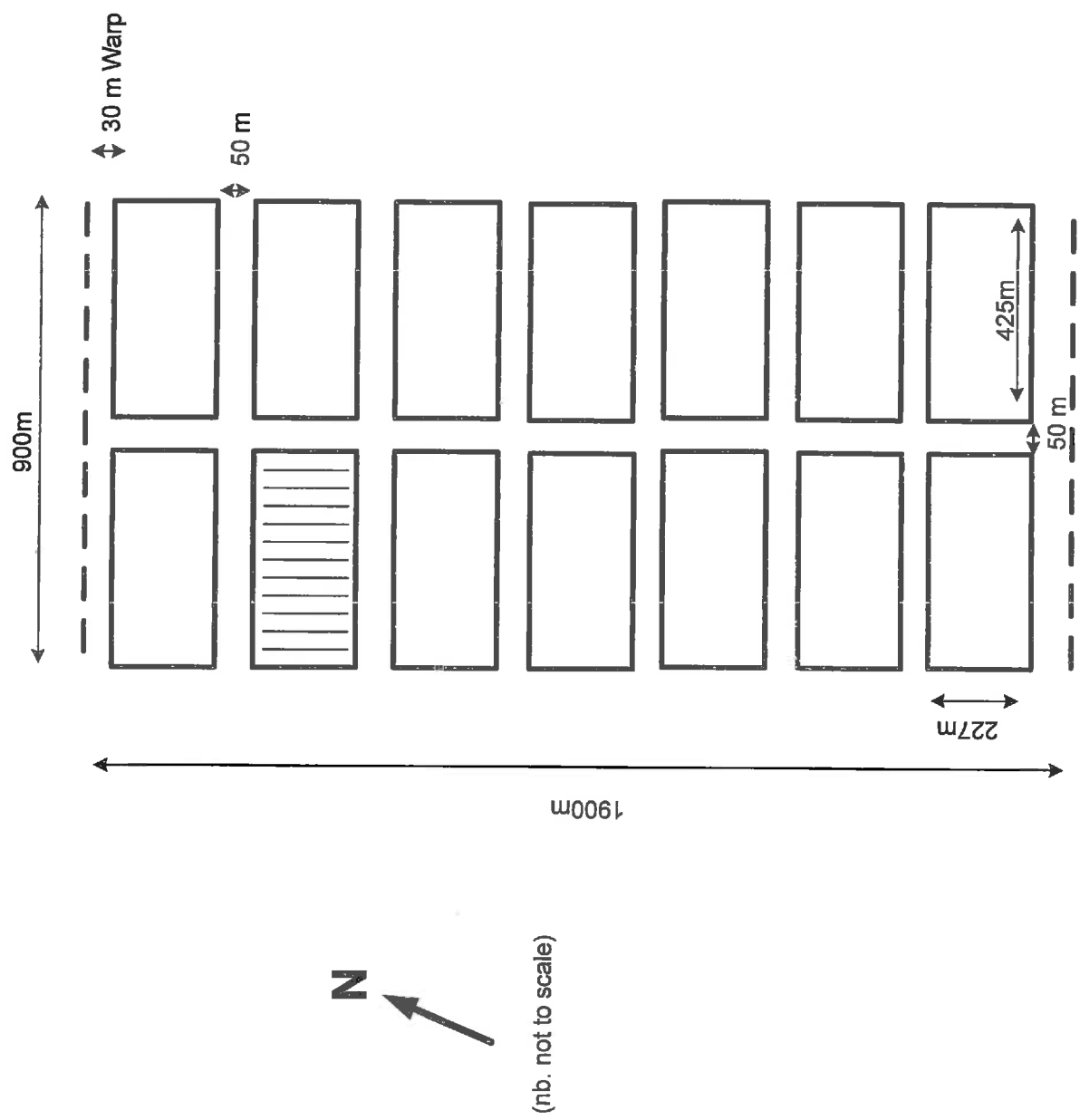








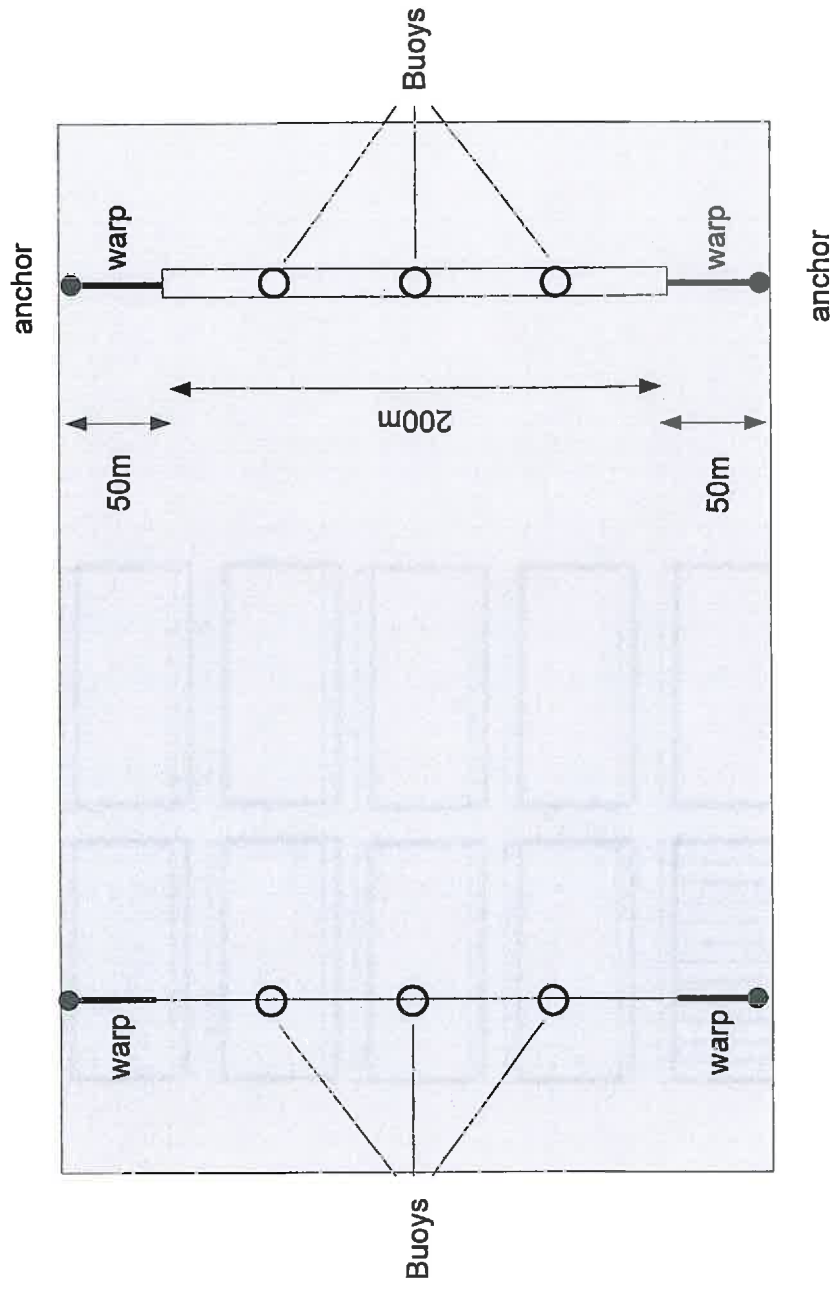






**Westpac Mussel Distributors Ltd.  
Spat Catching Structures**

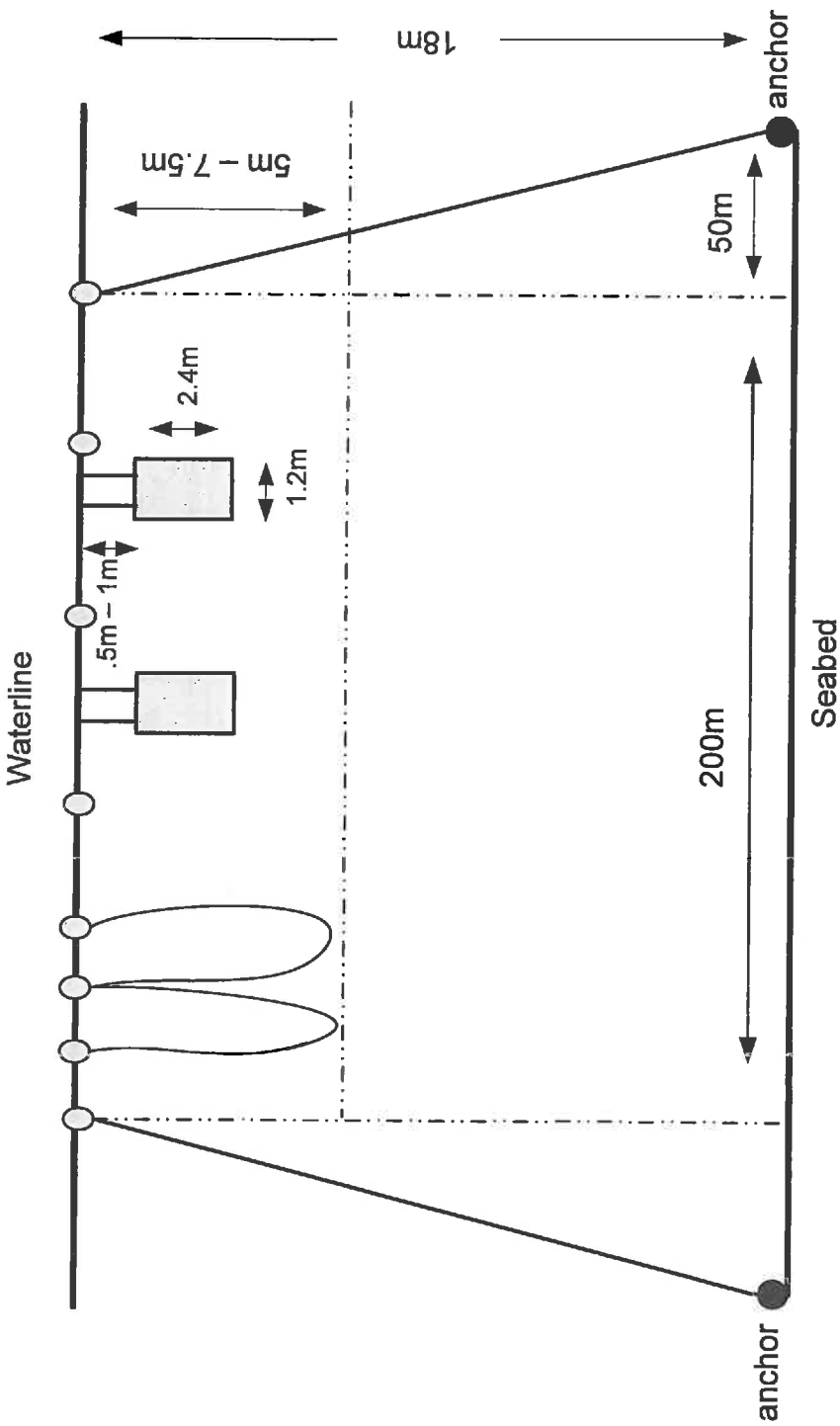
**Diagram 1.  
Top View  
(not to scale)**



- Either single (left side of diagram) or double (right side of diagram) backbones would be used
- Approx. 15m to 20m between each line
- Average 2.5 – 3.5 lines per ha.

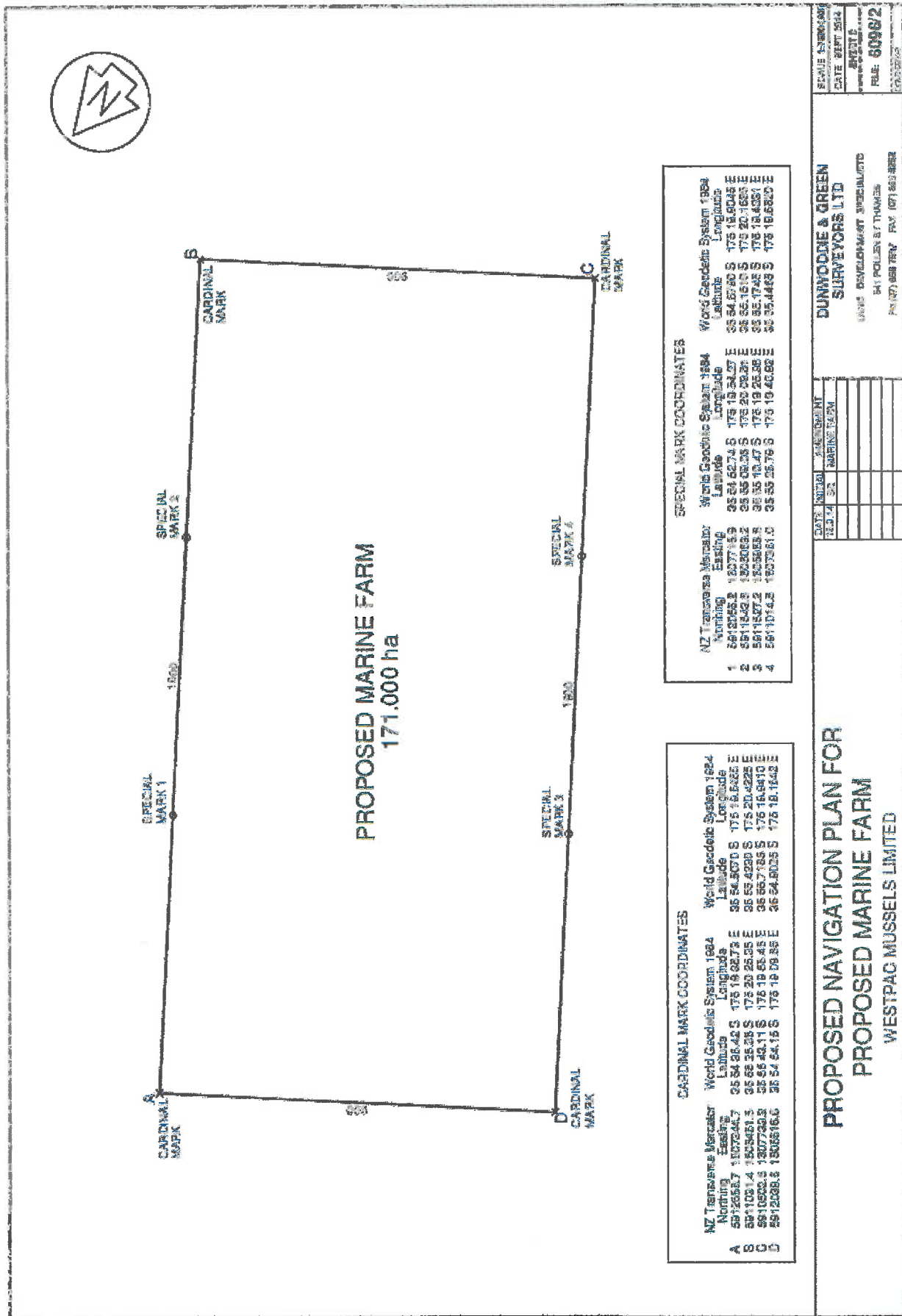


**Westpac Mussel Distributors Ltd.**  
**Spat Catching Structures**  
(continuous rope dropper or suspended frames)





# Appendix 1:D Proposed Lighting Plan





**Appendix 2: Poynter, M., 2014. *Proposed Mussel Spat Catching Area: Northern Firth of Thames: For Westpac Mussels Distributors Ltd: Application for Resource Consent for Spat Catching: Ecological Report.* Andrew Stewart**



