

1. Introduction

The Kilchoan estate is a cultural and educational enterprise. It is focused on ecological restoration, rewilding, and preservation of both the marine and terrestrial habitats for the benefit of the people of Argyll and the world. The algae farm will contribute towards a cleaner marine environment, create a sustainable food source, showcase low impact aquaculture, and help protect natural kelp forests.

Production and strategy plan

We will cultivate *Laminaria saccharina* / *Alaria esculenta* / *Laminaria digitata* / *Saccorhiza polyschides* on an annual cycle, beginning with deployment in September 2024 and aim to harvest twice a year using a small marine craft. The farm site will be regularly checked for damage, repairs and invasive non-native species (INNS) by Marnik van Cauter, a full-time employee of Kilchoan Management Ltd.

Future

The farm consists of a pilot farm which will have a seabed footprint of 16800 m². The 10-ha proposed license offers the opportunity to experiment with orientation and farm scope to optimize the cultivation set-up. If the pilot proves successful there is an opportunity to increase the farm site over the next years.

Decommissioning measures

In case the lease is terminated- ended, or the farm is unsuccessful. Kilchoan management Ltd will be responsible for the decommissioning of the farm. The used anchors will be removed allowing the seabed to be restored to its original state and the in-water equipment will be treated and disposed of correctly.

Cultivation Equipment

Removal:

- 2 x 60-meter-long lines.
- Zig-zag method growing line 360 meters.
- 2 x 20 m Foam Buoy
- 4 x 100 L Cushion Buoys

Pilot farm:

- 4 x grid moorings: 2.2 ton concrete blocks.
- 1 x Yellow special marker buoy.
- 4 x A5 yellow net buoys as corner floats

Proposed new equipment:

- 11 x 50 m longlines.
- 11 x A3 Net buoys as support.

56° 15.4833'N

5° 33.1333'W

Proposed license area	56° 15.2833'N	5° 33.25'W
	56° 15.3333'N	5° 33.4833'W
	56°15.5333'N	5°33.35W

-Yellow special marker buoy: 56°15.313'N / 5°33.363'W

Method statement

September 2024

Day 1: Set 4 anchors with boat and barge supplied by kames fish farm. The deployment of the anchors will be done according to Kames HS protocol and marine practice.

Day 2: Dive survey to check moorings and riser rope and installment of longlines.

Day 3: Dive survey final check on moorings and add small cushions buoys and extra weights.

October 2024

Day 1: Seeding lines (weather dependent)

Day 2: Dive survey to see if components are secured.

More information regarding the monitoring of the farm can be found in the 'Consultation report-1' which has been supplied in 2021

2. Information related to the Environmental conditions affecting biosecurity

Salinity	Average of 35ppt depending on rainfall.
Marine features present	Longlines, surface marker buoys, concrete anchors, mooring chain (list of floats can be found in the description)
Non-native species known to be present	Loch Melfort is used for the farming of Seatrout and Salmon. There is a history of blue mussel and pacific oyster farming.

3. Vessel types using the site and/or involved in the operation

Vessel name	Vessel type	Details & Risk factors; Pathway, speed, biofouling control, Inspection history, Internal treatment history,	Risk: High/Medium/Low

Kilchoan Estate boat	16ft Whaly 500R with a 60 hp Yamaha	Vessel is always kept on site. Gets taken out once a month for cleaning	LOW
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Heather of Melfort	Barge with hydraulic crane	Will be used for the deployment of the anchors. The boat is local to Loch Craignish / loch Melfort. Use of boat is within Kames HS / biosecurity protocol.	LOW
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4. Site Activities which have a significant risk of introducing or spreading non-native species

Activity Description	
1.	<i>Site construction</i>
2.	Seeding lines
3.	Monitoring site
4.	harvesting
5.	
6.	

4.1. Details of how each of the activities have the potential to increase the risk of introduction or onward spread of marine non-native species?

Site construction: Kames boat (Heather of Melfort) will come to site. There is a low risk of non-native species to be introduced on site. We will ask kames to notify Kilchoan management limited of any vessel movement out of Loch Melfort.

Seeding lines: The seeded line will be supplied by the SAMS hatchery in Dunstaffnage. Their brood stock is locally sourced and comes within 25 NM from Kilchoan Estate farm site. SAMS is an accredited hatchery who have their own biosecurity plan (available on request). Installation of the lines will be carried out using the Kilchoan Estate boat which does not leave the local area.

Site monitoring: Monitoring will be undertaken, by boat, once a week. We are familiar with INNS and observation/monitoring for these will be part of the regular farm management. After each use, the boat will be cleaned and disinfected.

Harvesting: The Kilchoan Estate boat will be used for harvesting. Lines will be towed to shore where the seaweed will be cut and bagged before being loaded for transport.

5. Biosecurity Control Measures – Instructions for staff/contractors/site users

Who	What	Where	When
Marnik van Cauter	Prevent biofouling: boat will be taken onto dry standing once a week and cleaned / pressure washed / disinfected	Kilchoan boat house	After monitoring the site once a week
Marnik van Cauter	INNS & site monitoring: inform staff with INNS. Poster with INNS will be displayed. Weekly check for INNS will be conducted.	Kilchoan Boat house	/
Marnik van Cauter	Cleaning PPE: Virkon will be available in the boat house.	Kilchoan boat house	After site visit
Visitors	Movement: Fill in visitor book will be accessible in the boat house.	Kilchoan boat house	After each visit.
Staff / Marnik van Cauter	Safety: Lifejackets / VHF / first aid will be present in the boat house	Kilchoan boat house	/

6. Site surveillance and reporting procedure:

The biggest threat would be the introduction or transportation from non-native species of pathogens to or from the site. However, all the seaweed we cultivate will come from SAMS who are an accredited algae hatchery and have their own biosecurity protocol in place. We do not hatch OR process our cultivated crop.

This biosecurity plan only covers from seeding the lines till harvesting the crop. The site will be weekly monitored, and staff will be trained to identify INNS. If a non-native species has been observed. We will make sure no product will leave the site. NatureScot & Marine Scotland will be informed immediately and all 'in water' equipment will be brought to shore to be treated and/or disposed of correctly.

7. Contingency Plan

Action	Responsibility	Location of Equipment
Immediately recall all vessels	Marnik van Cauter	/
Inform NatureScot / Marine Scotland	Marnik van Cauter	/
Decommission farm	Kilchoan Estate	Kilchoan Estate shoreline
Disinfect and/or dispose of equipment	Kilchoan Estate	Kilchoan Estate

8. Location of biosecurity logbook

The boat house, Kilchoan Estate, Loch Melfort, Argyll and Bute, PA34 4XD.

9. Plan review date

Adjusted June 2024.

ANNEX A: GLOSSARY

- **Native Species:** Also known as indigenous species, means a species occurring within its natural range (past or present) and dispersal potential, i.e. within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans
- **Non-Native Species:** Non-native species (also known as alien, non-indigenous, foreign or exotic) means a species or subspecies occurring outside its native range i.e. the range it occupies naturally without the intervention of human activity. This includes any part of the species that might survive and subsequently reproduce.
- **Invasive Non-Native Species:** An invasive non-native species (INNS) is defined as a 'non-native' species that threatens native biological diversity, human health or economic activity.
- **Invasive Alien Species:** Invasive Alien Species are animals and plants that are introduced accidentally or deliberately into a natural environment where they are not normally found, with serious negative consequences for their new environment. Definition used by EU and the terminology used in Regulation 1143/2014 on invasive alien species
- **Biofouling:** Biological growth which develops on manmade structures in the aquatic environment.
- **Introduction:** Refers to the movement by human means, indirect or direct, of a species outside its natural range. This movement can be within a country or between countries.
- **Establishment:** Refers to the process of a non-native species in a new location successfully producing viable offspring with the likelihood of continued survival.
- **Biosecurity:** Taking action in order to minimise the introduction or spread of invasive non-native species or disease.
- **Biosecurity Plan:** A written document which details site/ operation activities and actions that will be undertaken to minimise the introduction or spread of a specified threat (i.e. invasive non-native species).
- **Control Measures:** Refers to actions which are undertaken in order to prevent the introduction or spread of an invasive non-native species.