Version	Date	Description	Author(s)	Revised by
V1.0	09/01/2025	Draft	Stevie Jarron	Walter Speirs

Index

01 Introduction

Muckairn Mussels Limited (Muckairn) is a Private limited Company (SC142391), registered office - Achnacloich, Connel, Oban, Argyll, PA37 1PR. Incorporated on 2 February 1993. Argyll Aquaculture, who were authors of the original license have been asked to act as Agent for Muckairn and write this Re-Application.

Muckairn hold 5 planning consents and 5 marine licenses for combined Algal and Shellfish aquaculture and is part of a larger IMTA farm group. This document is for the reapplication of farm license 06566/18/0 (Site 1), specifically. The 5 license consents held by Muckairn Mussels all lie very close to each other. Their applications are required to be done individually, which obviously will produce a lot of repetition, both in the application content and the regulator's work in considering them. The site Operator have accidentally allowed the suite of 5 licenses, to expire (May 2024) due to a bout of illness. They have thankfully recovered and wish to Re-apply for consent to farm again.

The boundaries of the existing MD IMTA license - 06566/18/0 (Site 1) are laid out as:

56° 27.353' N	5° 18.558' W
56° 27.353' N	5° 18.466' W
56° 27.299' N	5° 18.558' W
56° 27.299' N	5° 18.466' W

Northern Lighthouse Board were consulted at various re-licensing stages over the 30 plus years the 5 sites have operated and recommended that Special Marks are placed at the outer northwestern and northeastern extents of farm structures. Muckairn will ensure this is followed as equipment is deployed and recovered during operation phases. These are yellow-coloured floating buoys each marked by a top piece with a yellow St Andrews Cross. A solar powered light unit on each flash yellow at night. These allow local and visitor marine users to keep a safe distance from surface and submerged structures within the consented area. The light pattern is a conventional Yellow Flash every 5 seconds (Y Fl 5s).

The MD license - 06566/18/0 (Site 1), has the site consented for 10 x (10m x 10m) rafts, all of which can be used for shellfish and algae cultivation.

The last section of this document is the Marine Emergency Action Card (MEAC) that will be given to Northern Lighthouse Board (NLB), Marine and Coastguard Agency (MCGA) and other marine users in the area. Muckairn have already informed the Hydrographic Office of the positions and types of navigation buoys, as agreed by NLB and MCGA. The site is well marked on all nautical charts and has been operational for more than 30 years.

02 Vessel Traffic Review

A desktop study was undertaken to assess the Navigational Risks to vessels in the area of the existing IMTA Farms. Using Marine Traffic tracking software, it was possible to provide Density Maps for 2022 and 2023 combined (Fig 1).

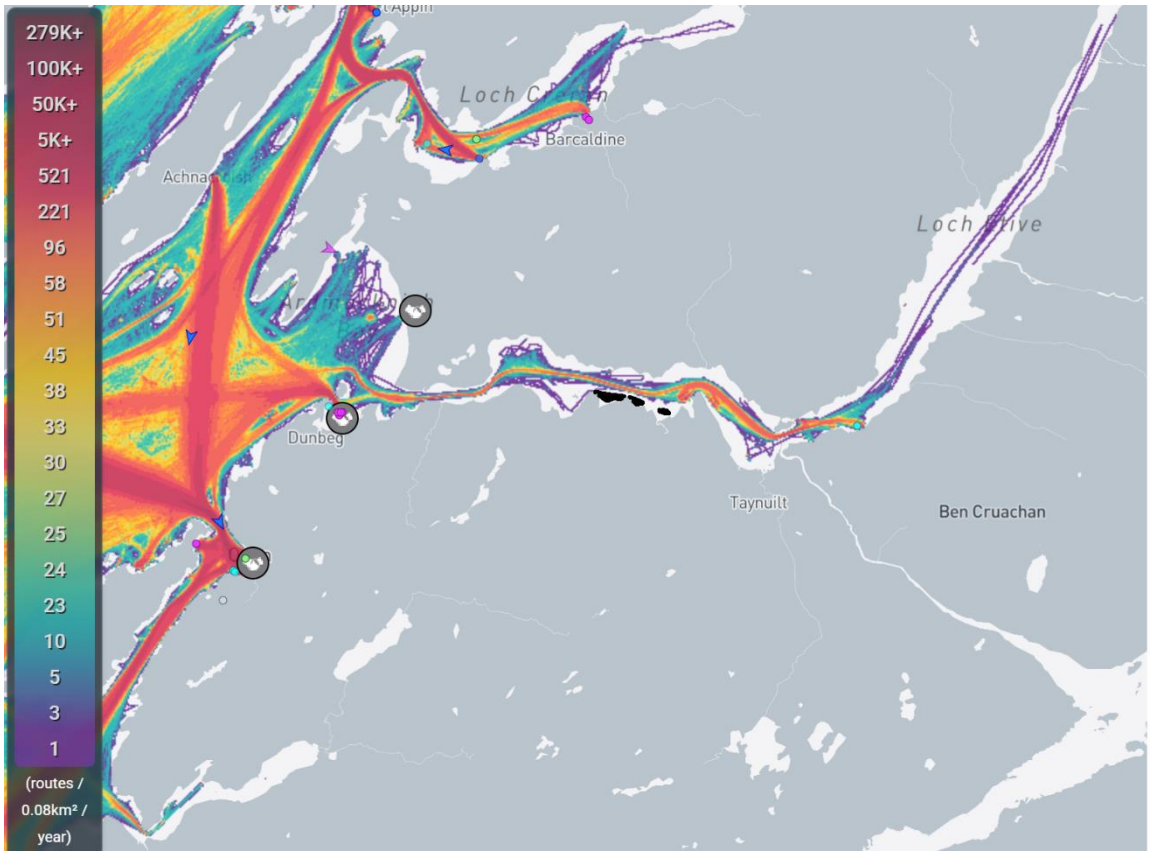

Fig 1 - AIS for 2022 and 2023 Density Map – centre black shapes are the IMTA farm sites.

As can be seen from above, AIS using vessels movements can be assesed as very low density marine traffic through the edges of the farm site. This data does not include very small fishing or pleasure vessels that use the area that do noy carry AIS transmitors.

There are several finfish farms in Loch Etive, the nearest just 2km away to the east. These are managed by MOWI fish farm company.

Occasionally, a small local creel vessel sets pots in Loch Etive, working from Dunstaffnage Bay marina. Most other creel activities are undertaken in the more open waters of Loch Linnhe and the Firth or Lorne. None of the local vessels put creels in near the IMTA farm.

Loch Etive is well used by sea kayakers, mostly around the Falls of Lora to the west. Small yachts can be seen inside the loch but due to height restrictions of the road bridge and the complex tides at the sea falls at Falls of Lora, larger vessels are discouraged from entering the loch. Power vessels do often travel up into the Loch. The far eastern end (20km east) is highly

prized fjordic landscape and tour boats often trave up and anchor overnight. Large harvest, maintenance and feed vessels for the nearby fin-fish farms also transit in and out of the loch. Occasional forestry barges come into the loch carrying harvest and planting equipment and taking away logs. The activities at the IMTA farm site will not interfere with passage of vessels as it sits tightly to the south coast of the loch, away from the normal navigation transit routes.

03 Buoyage and Lighting Arrangement

Northern Lighthouse Board were consulted at various re-licensing stages over the 30 plus years the 5 sites have operated and recommended that Special Marks are placed at the outer northwestern and northeastern extents of farm structures. Muckairn will ensure this is followed as equipment is deployed and recovered during operation phases. These are yellow-coloured floating buoys each marked by a top piece with a yellow St Andrews Cross. A solar powered light unit on each flash yellow at night. These allow local and visitor marine users to keep a safe distance from surface and submerged structures within the consented area. The light pattern is a conventional Yellow Flash every 5 seconds (Y Fl 5s).

The aquaculture site is clearly marked on updated paper and electronic charts by a dotted line at its limits and a fish and cage symbol within. The appropriate authorities and local marine users will be informed ahead of any changes to the lighting regime.

Fig 2 - Special Mark buoy

04 Deployment and Operational Vessels

To undertake the deployment and operational work at the IMTA farm site, Muckairn will charter the following style of vessels. These descriptions are to allow Statutory Consultees and Stakeholders to visualise the impacts. It is envisaged that Muckairn vessels will operate at the site for no more than 1 or 2 days a week, even at the busiest of periods. All work at the site(s) will be completed in daylight. The shorebase for Muckairn is directly within the farm footprint.

04.01 Workboat "Mollie Malone"

Muckairn owned "Mollie Malone" is a versatile workboat, 12m x 5m. Speed, with a transit speed of <8 knots. This style of vessel will be used to install or move anchors and to tension the risers to give stability to the farm structures. These vessel types are the primary workhorse for mussel and seaweed farm operations across the area. The vessel has a large deck space, deck post capstans and a powerful deck crane to deploy growing lines in the water and lift them again at harvest time. The decks will also contain harvesting machines and suitable containers for harvest and waste rope collected. They may be supported by a small aluminium tender used to support operations and bring people and equipment from the slip to the barge.

05 Transit Routes

Muckairn have their own shorebase pier building that sits on piles in the sea and vessels can land straight into the building. Or they can tie up alongside or use moorings near the shorebase. There is also a slipway owned by Muckairn to load vessels and launch smaller craft and transfer equipment (Fig 3).

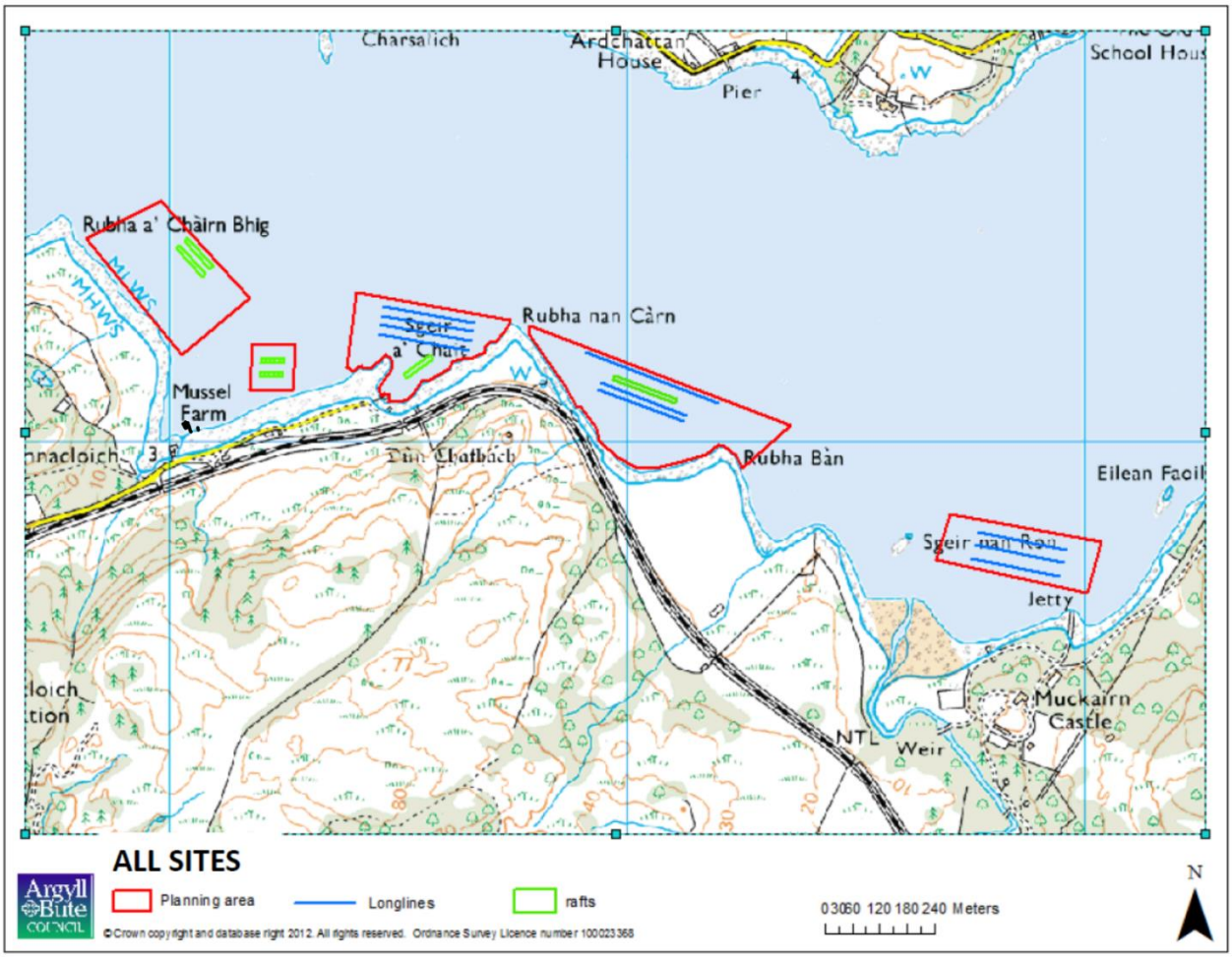

Fig 3 – Muckairn farm site(s) all lie within 2 km of the (Mussel Farm in black) shorebase and slipway. All Muckairn's planned operations will be conducted in daylight hours.

06 Operational Farming Phases

Muckairn will undertake 2 main Operational Farming Phases at it IMTA farm (Fig 4), Deployment Phase and Harvesting Phase. A further Intermediate Phase will also be described for clarity. During the Operational phases, "Mollie Malone" workboat will be used to deploy lines and to harvest product.

Mollie Malone is likely to be supported by smaller tender hard boat (in Operational and in an Intermediate Phase). The small boats will also work from the Muckairn shorebase and use it to load and unload equipment and product.

06.01 Deployment Phase

IMTA Cultivation requires the deployment of seeded seaweed and spatted shellfish lines. For seaweed this can be a late autumn operation, October to mid-November each year. Shellfish deployments can vary from late spring to late summer. As the farm productivity increases, the longer time taken to complete the Deployment phases will take, but it is hoped that technological advancements will increase efficiency accordingly.

With the current in water equipment, it is expected that Deployment will take no more than 2 days. For a fully developed IMTA farm site, it is expected that Deployment will take 2 to 3 weeks, spread out over the various seasonal differences.

06.02 Harvesting Phase

The harvesting of the matured seaweed plants begins in early-March and ends in late-May. The harvesting of the mussels/shellfish can be taken any time, but high summer is avoided.

With the current in water equipment, it is expected that seaweed harvesting will take place over a 4 week period, with roughly 2 harvest vessel journeys to the site per week, harvesting up to 5 tonnes per harvesting visit.

06.03 Intermediate Phase

Outside of the Deployment and the Harvesting or Operations phases, the IMTA farm will either be fallow or largely left unattended while the harvest grows. Vessels will visit the farm weekly to inspect the site to check on the structures (part of the license conditions) and to check on plant growth and crop quality.

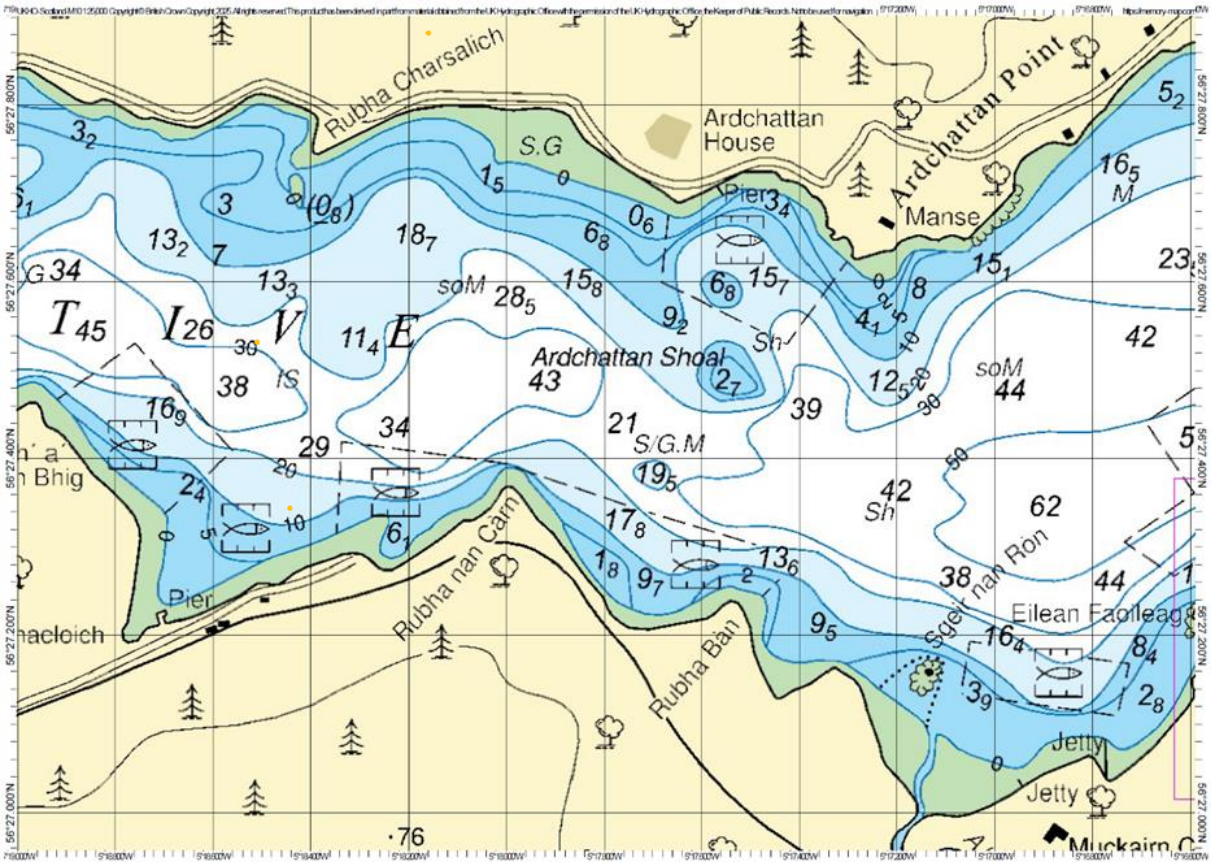

Fig 4 – Muckairn IMTA farm(s) layout seen on marine charts, showing Muckairn shorebase pier.

07 Monitoring Arrangements

Muckairn will ensure that the Loch Etive IMTA farm(s) will be regularly inspected by certified mooring specialists. A provision will also be made for the continuous monitoring of the site outwith its operational growing period. The site will be regularly visited by farm operatives by vessel. A record of visits and inspections will be kept by Muckairn and made available to any inspecting MCA staff on request.

It is essential that the navigational and health and safety regulatory expectations for mooring systems are set in proportion to the potential risks with a view to develop a safe and sustainable seaweed and mussel growing platform for the long term. To do that a registered marine provider (as yet uncontracted), will deploy a bespoke designed IMTA Farm for Muckairn that uses oversized ropes, chains and anchors to ensure the structure;

- can withstand such forces acting on it as are reasonably foreseeable including;
    - Environmental conditions, e.g. winds, waves, tidal currents
    - Loads during operational conditions including normal operation, contact loads from access boats and temporary loads during maintenance operations.
    - The weight of the installation and anything on it, buoyancy, drag and inertia forces.
      from movement
    - Unplanned incidents including vessel impact.
- its construction, commissioning, operation, modification, maintenance and repair of the IMTA Farm may proceed without prejudicing the structure's integrity.
- in the event of reasonably foreseeable damage to the installation or its moorings, it will retain sufficient integrity to enable action to be taken to organise appropriate safe repair, thus preventing mooring failure (thereby becoming a navigational hazard).
- it may be decommissioned and dismantled safely.

The farm design is sufficiently robust to withstand the most extreme weather conditions to be found at site and be well within the tolerances of the structures. Factors tested are the worst case scenarios (i.e. the effect of the worst winter storms impacting the farm when it is most heavily laden with biomass).

These farm structures have been in place (with regular replacement and maintenance) for over 30 years. The anchoring systems used are robust to ensure farm's stability but use the minimum amount of infrastructure possible to reduce the footprint of the site and reduce seabed impact.

08 Decommissioning Plan

Muckairn have been trading for over 30 years, acting as farmers and also as consultants and operational support to other low trophic farms on the west coast of Scotland.

The harvest this IMTA farm will grow, will become high value ingredients across multiple product lines. Muckairn are in consultation with processors and on developing onshore facilities for the movement and processing of their product. The cultivation of seaweed and shellfish at their new IMTA farm will strengthen the supply to the whole Scottish sector.

The IMTA farm design has been made with long service in mind. The use of heavy ropes rather than chains allow a decade or more of operation before major replacement of parts are required.

Should the business venture founder, Muckairn will hold back sufficient funds to enable the IMTA farm to be removed from site. The surface structure can easily be detached and towed to shore. The anchors that hold the structure in place can be simply lifted to the deck of a winch enabled vessel. The cost of decommissioning would be a fraction of the cost of deployment and the sale of the anchors and floats at the site should easily cover the cost of works.

09 Emergency Response Plan

This plan will exist both here for information and as a stand alone document that will be circulated to local HM Coastguard and RNLI stations, local vessel users and local houses.

Emergency scenarios and response

- vessel stranding – in the event of a vessel entering the IMTA Farm exclusion zone and colliding with the Farm structure, the first concern is the safety of the vessel and crew. 999 should be called and the coastguard/RNLI informed. MUCKAIRN should also be contacted (number below) and repairs to the Farm structure will be enacted.
- cetacean entanglement – in the unlikely event of a seal, whale, dolphin or basking shark becoming entangled in the IMTA Farm lines, The British Divers RESCUE HOTLINE: 01825 765546 should be called - https://bdmlr.org.uk/
- float loss – occasionally, some line floats may become detached from the IMTA Farm structure. This will not degrade the integrity of the Farm structure, but MUCKAIRN should be contacted (number below) so the float can be recovered and the replaced back where it came from.
- Storm damage/loss of integrity of the structure – the design of the IMTA Farm is such that multiple anchor lines hold the structure in place and the loss of several of these lines would not degrade the integrity of the Farm. But should it be observed that the Farm structure has been damaged or worse, lost from its moorings 999 should be called and the coastguard informed. MUCKAIRN should also be contacted (number below) and emergency repairs to the Farm structure will be immediately enacted. Local vessels (fishing and aquaculture boats) will be retained as emergency response and ropes, floats and other equipment held in preparation for such emergency repair at MUCKAIRN shore base.

MUCKAIRN Contact details (to be contacted in all scenarios)

Walter Speirs	MUCKAIRN	Marine Coordinator	[Redacted]

MARINE EMERGENCY ACTION CARD
For MUCKAIRN MUSSELS- *IMTA Farm*

Development summary *(include details of the design, numbers of units/structures, mooring arrangements, subsea information, etc.) A full description including diagrams must be included below.*

Emergency Contact One of the following or a combination of both, must be 24/7	
Duty Holder name	**Walter Speirs**
Primary number	[Redacted]
Secondary number	**n/a**
Media relations (if applicable)	**n/a**
Coastguard	**999**
Police	**999**

Insert a picture/drawing of the device

See attached photograph of Special Marks and specification of light below

Development location	
Range & Bearing from land	NW and NE of Muckairn shorebase, Achnacloich.
Dimensions of the area	2,000m x 150m
Number of devices	2

Device Specific information *(adapt to suit the device)*			
Heights/depths (m and ft)		**Lights / Markings**	
Height above sea level	Focal height of light 2420mm	Lights	2 x (Y Fl 5s)
Depth below surface	1.2m	Marks	Yellow
Height above seabed	14m OD		

SPECIAL MARK

Details of regular maintenance activities	Summary of number of personnel working offshore and emergency response capabilities
Daily visual inspection from shore or vessel. Records will be kept for inspection by MUCKAIRN MUSSELS. See example sheet in details.	2 or 3 personnel will maintain the site and work to deploy and harvest lines on a weekly basis. All maintenance will be done at this time.

Details of vessels operating to/from the development – include name, callsign, description, communications (e.g. channels used), number of crew, operating limits, etc.

The vessel MOLLIE MALONE is owned by MUCKAIRN MUSSELS. Operations at the site will begin in May 2025. This form will be updated as staff and vessels are assigned to the work.

Various vessels will keep visual contact on site as they pass. Local work/fishing vessels will visually inspect site regularly. Records will be kept for inspection by MUCKAIRN MUSSELS.

Personal SAR Locating Device Make & Model				
Functions: yes/no	**COSPAS-SARSAT**	**AIS**	**DSC**	**121.5MHz**
	n/a	n/a	n/a	n/a

Additional information pertinent to the development

The vessel MOLLIE MALONE is owned by MUCKAIRN MUSSELS. Operations at the site begins in May 2025. This form will be updated as staff and vessels are assigned to the work.