Proposed eight-grid seaweed farm in Loch Snizort, Isle of Skye

Marine Licence – Summary Method Statement

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62216 / July 2025

1 Introduction

1.1.1 A Marine Licence Application for an algal farm at Loch Snizort, Isle of Skye has been submitted under the Marine Scotland Act (2010) on behalf of Kaly Group Ltd.

1.1.2 The application is supported by a series of reports and graphics as follows:

- Marine Directorate Licence Application Form
- Supporting Plans and Charts
- Marine Directorate Additional Coordinates Form
- Appendix 1A and 1B - Pre-Application Consultation Reporting (March and June 2025) plus responses from statutory consultees.
- Appendix 2 – Navigational Risk Assessment with Vessel Management
- Appendix 3 – Marine Emergency Action Card
- Appendix 4 – Decommissioning Plan
- Appendix 5 – Marine Planning Policy Compliance
- Appendix 6 – Environmental Impact Assessment Screening
- Appendix 7 – Habitats Regulation Appraisal and Ecological Baseline Report
- Appendix 8 – Landscape and Visual Appraisal including photomontages
- Appendix 9 – Biosecurity Plan

2 Approach to Site Selection

2.1 Due Diligence and Constraints

2.1.1 Kaly are committed to sustainable development and the approach to site selection was based around a series of key stages:

- Review of the lessons learned from the Loch Bay licensing and consenting process and importance of site selection and due diligence exercise to identify an optimal location which minimizes impacts on the environment and range of receptors;
- Early review of environmental baseline data available for the loch system and mapping of sensitive features / protected areas – the team progressed an environmental risk assessment against a series of topic areas for an initial long-list of possible site options to inform further consultation and engagement;
- Initial consultee and community engagement (March 2025) – an early in-person event to provide information on the site selection process and seek feedback from the community. Contact also made with other stakeholders to seek feedback;
- Engagement with statutory consultees and other marine users and ongoing stakeholder mapping - again, to establish particular sensitivities such as important fishing grounds, areas of potential conflict with other user groups, ecological and environmental designations and known features;
- Selection of 'preferred site' and completion of a range of detailed environmental assessment - ornithology, ecology, landscape plus technical guidance from Kaly engineers, marine advisors, environmental scientists and expert advisors in the breeding and propagating of seaweed. Completion of EIA Screening for completeness as an internal exercise to identify topics to be covered in the Marine Licence application.
- Statutory consultee and community engagement (June 2025) – further in-person event to provide information on the proposed seaweed site and seek feedback;

2.1.2 A summary of the consultation feedback received during the site selection engagement process has been summarized in Appendix 1B.

3 The Proposed Development

3.1.1 The proposed seaweed farm site is located within a marine lease area (from Crown Estate Scotland) within Loch Snizort, North West Skye. The proposed location and layout are provided on Figures 1, 2 and 3 accompanying the application.

3.1.2 Key characteristics are as follows (see section 4 and 5 below for more detail):

- 8 no 'grids' with series of deployed growing lines for brown seaweed cultivation (e.g., *Alaria esculenta*, *Saccharina latissima*, and *Laminaria digitata*)
- Seed sourced locally, cultivated and applied to growing lines during winter months
- Deployment of the growing lines typically in October each year
- Monitoring October to May each year (infrastructure checks and growth rate plus seaweed composition)
- Harvesting typically in May each year (depending on growth volume)
- Vessel-based maintenance and monitoring with no permanent above-surface infrastructure.

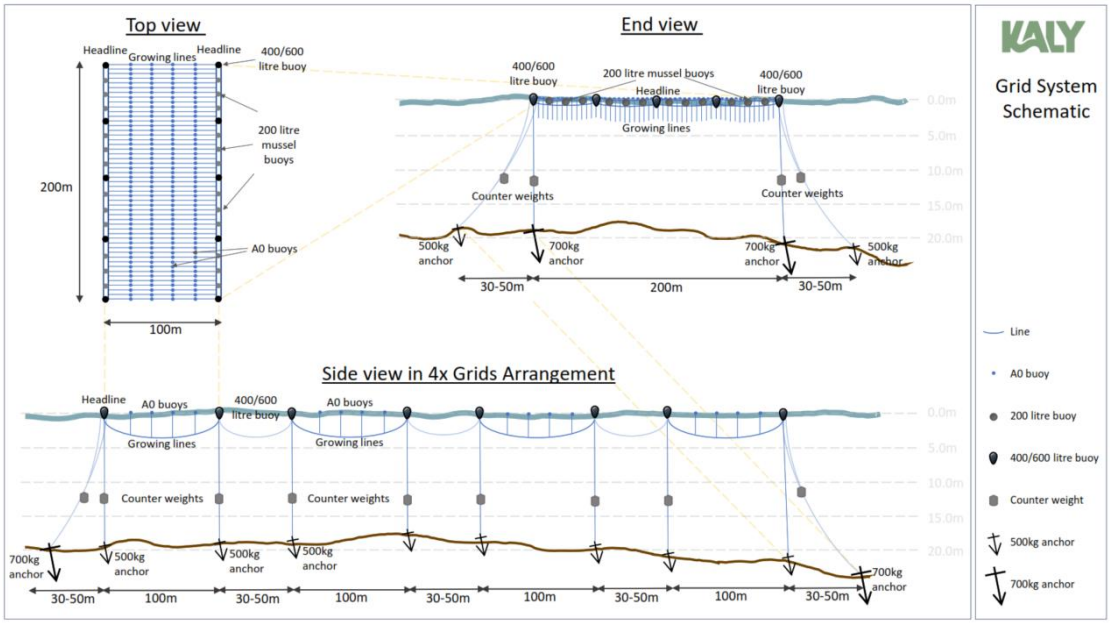
4 Grid and Growing Lines

4.1.1 Kaly will be using a 'grid system' structure. The 'grid system' for the proposed Loch Snizort farm totals 8 grids each of 200m x 100m subsurface ropes and anchors.

4.1.2 Seeded growing lines are deployed within each 'grid'. Kaly's experience indicates that if the growing lines are set out as low as 2m spacing between lines then they may interact and twist. Therefore, based on an 4m spacing each grid unit can take 50 lines (50 lines at 100m each so 5,000m of growing line per grid unit and total growing lines across the farm of 40,000m). To allow for anchoring and vessel space between grids each 200m x 100m grid unit is given a 30-50m separation space. The general arrangement is shown in Figure 4.

4.1.3 As advised by Northern Lighthouse Board, the outer corners of the sea farm area will be delimited by Special Marks. These are the conventional system for marking aquaculture sites and are large, yellow-coloured floating buoys. Each buoy has a top piece with a yellow St Andrews Cross and solar panel charged battery powered lights which flash yellow at night. These will allow local and visitor marine users to keep a safe distance from surface and submerged structures within the consented area.

Figure 4: Grid System Structure



5 Overview of Seaweed Growing Process

5.1 Seeding Process

5.1.1 Kaly intend to cultivate several native species at the Loch Snizort site. The three main seaweed cultivation species will be Atlantic Wakame (*Alaria esculenta*), Oar Weed (*Laminaria digitata*), and Sugar Kelp (*Saccharina latissma*). These large brown seaweeds are native to Skye and are found on lower littoral and sub-littoral rocks exposed to strong wave action along the Skye Coast.

5.1.2 Kaly specialists collect seed from these species within the Loch and cultivate them before they are added to seaweed growing lines for deployment.

5.2 Seed Deployment

5.2.1 Kaly will use one of two main methods for deploying seaweed cultivation lines – string seedings and direct seeding.

5.3 String deployment

5.3.1 In this method, fertile seaweed spores are sprayed and allowed to settle on spools which have thing string wrapped around them. Once the seeded spools are ready for deployment, they are taken to the farm site on small workboats. At the farm site, narrow ropes (10mm to 14mm) are passed through the seeded spools and laced together. These seaweed lines are deployed by existing local craft, creel vessels or landing craft style workboats.

5.4 Direct seeding

5.4.1 In direct seeding, the propagated material is affixed directly to ropes. This method has been

used to seed the testline at Loch Bay with positive results.

5.5 Line Deployment

5.5.1 Growing lines are strung out across the sea farm structure by pulling ropes from one vessel over to another on opposite sides of the sea farm. These lines are intended to be held horizontally in the water to maintain the optimum light and nutrient condition for the growing of seaweed. There are no chemical additions or treatments used for the seaweed growing process and no nutrients introduced to the water.

5.5.2 The farm structure is designed to maintain a tension on the Growing Lines keeping them below the surface to a maximum of 5m. Growing Line deployment is done between mid October and early November, or late January to early February. Growth of juvenile plants rapidly starts in late February as the days lengthen. Plants are ready to harvest as early as late March through into late May.

5.6 Site Monitoring

5.6.1 Regular monitoring of seaweed growth will be done via visits to the sea farm by small vessels. These visits will also act as means of checking the integrity of the sea farm structure, floats and Growing Lines. Samples of seaweed will be taken and the quality tested. See details within the Navigational Risk Assessment relative to marine traffic and vessels to be used during operations.

5.7 Harvesting process

5.7.1 Automated harvesting machines are being developed which will use a simple frame with rollers and guides to channel seaweed past cutting heads. These will trim the useable frond of the plant into bins or boxes while leaving the rope and growing base (stype and holdfast) of the plant intact. This coppicing capability may be used to allow multiple harvests. At the end of the growth cycle the Growing Lines will be scraped of plant matter and taken ashore for further cleaning for future reuse.

5.8 Onward Processing

5.8.1 To ensure the seaweed retains its quality it will be landed locally (anticipated at Kyle of Lochalsh with suitable scale of facilities) and loaded onto temperature controlled vehicles for onward delivery to be processed.

5.8.2 Drying will be the main processing method. Water content will be reduced through compressing or spinning equipment before chopping then drying at low temperatures. This creates a stable, storable product that can be rehydrated as an ingredient.

5.8.3 Kaly may begin operations by suppling seaweed to other companies for processing, but the intention will be to grow and process seaweeds at a Hub Building (subject to a future planning application and consent) to suit pre-agreed buyer specifications.

5.9 Commitment to Environmental Protection

5.9.1 Kaly are committed to environmental protection and stewardship across its seaweed operations and farm management.

5.9.2 As set out in section 2, the first stage is site selection and consideration of environmental sensitivities at the options appraisal stage such that the mitigation hierarchy can be applied - avoid, minimise, restore, offset. Kaly commissioned an early options appraisal to consider a range of sites against environmental criteria and available baseline. This was then supported by more detailed survey and a 2 stage consultation process with statutory consultees, stakeholder and the public.

5.9.3 During operations, environmental mitigation will be based on Best Practice as follows:

- Use of local, low-noise vessels to reduce disturbance to marine life and local communities.
- No in-water lighting or use of non-biodegradable materials, preventing pollution and minimizing attraction or harm to wildlife.
- Weekly inspections for entanglement risks, ensuring prompt detection and response to any issues affecting marine species.
- Soft-start protocols for vessel approach, minimizing sudden disturbances to sensitive species such as seals and porpoises.
- Emergency contact with British Divers Marine Life Rescue (BDMLR) in the event of wildlife entanglement, ensuring rapid and expert intervention

Best Practice Measures

Best Practice Measures	Reason
Scale and location	This site has been surveyed and is suitable in terms of scale and location for a seaweed aquaculture installation without conflict with other fishing activity or recreational users. The site is marked by required navigational marker buoys and lights. The seaweed farm is located c. 135m to Mean Low Water Spring (MLWH) at closest point and approximately 200m from Mean High Water Spring (MHWS) at its closest point. The seabed in the seaweed farm is a mix of Sand / mud and pebbles
Timing of the construction and operational works	Following deployment (20 days each for Phases 1) the seeding and harvesting periods are also limited in duration (two and four weeks respectively) with weekly visual check throughout the year by small local vessel which minimises disturbance to Harbour seal, Harbour porpoise and other EPS including otter. Overall timing of farming activity, October-May, avoids periods of harbour seal sensitivity and the main reporting period for local porpoise.
Precautionary best practice seal haulout	Although no significant adverse impacts are predicted, boat approach speeds will be kept to minimum and a soft start up

Best Practice Measures	Reason
disturbance avoidance measures	procedure will be followed during construction and on arrival for each operational visit.
Emergency Response	Whilst entanglement risk for marine species is extremely unlikely, the seaweed farm will be inspected regularly (from shore and via weekly boat based inspections) and SEA partners (Scottish Entanglement Alliance - 07746 634757) and British Divers Marine Life Rescue (BDMLR) would be called to assist with a release (https://bdmlr.org.uk/ Hotline 01825 765546)

6 Next Steps

6.1.1 Once the application has been lodged, Kaly will continue to liaise with the statutory consultees and would be happy to discuss the detail of the application with the Marine Directorate team. A confidential bird annex will be submitted to NatureScot to support their review of the application.