Marine Pen Fish Farm: North Shore East, Loch Erisort.
Licence Reference: CAR/L/1129789
Environmental Monitoring Plan

Mowi Scotland Limited
January 2024

Environmental Monitoring Plan

EMP/CAR/L/1129789

FOR

LICENCE REFERENCE NUMBER: CAR/L/1129789

ADDRESS OF PREMISES: North Shore East Marine Pen Fish Farm, Loch Erisort

Version: 2

Dated: 22/01/2024

Aim

The aim of this Environmental Monitoring Plan (EMP) is to monitor seabed environmental impacts from the marine fish farm in order to assess compliance with the environmental quality standards that are specified in the licence.

Scope of the Monitoring Plan

This plan outlines the environmental monitoring design, sampling methods, frequency, and requirements for reporting of data. The plan has been developed in accordance with the following guidance:

- Performance Standard MACS-FFA-PS-01 v2: Sampling of Soft Sediment, SEPA 2023
- Performance Standard MACS-FFA-PS-02: Physical and chemical testing, SEPA 2022
- Performance Standard MACS-FFA-PS-03: Biological testing, SEPA 2022
- Seabed Environmental Standards - Demonstrating Compliance, SEPA 2022

Monitoring Survey Design

Two monitoring survey designs are presented as part of this Plan:

1 Biological Sampling
2 Medicinal Residues Sampling

Any changes to these monitoring surveys will be agreed with SEPA prior to fieldwork commencing.

1. Biological sampling

This survey is designed to collect the required environmental data that will allow an assessment of compliance against the two environmental standards for the biological condition of the seabed. The standard that must be met at the boundary of the permitted mixing zone, the maximum area of which is specified in the permit and the other standard which must be met within the mixing zone at the outer edges of the pens.

Monitoring will be undertaken along four directions (transects) on bearings running seaward from each side of the pen groups. The direction of the primary transects and the sides of the pen group where they will originate are highlighted in Figure 1 below. Samples will be taken along each transect, with directions reflecting historical hydrographic data.

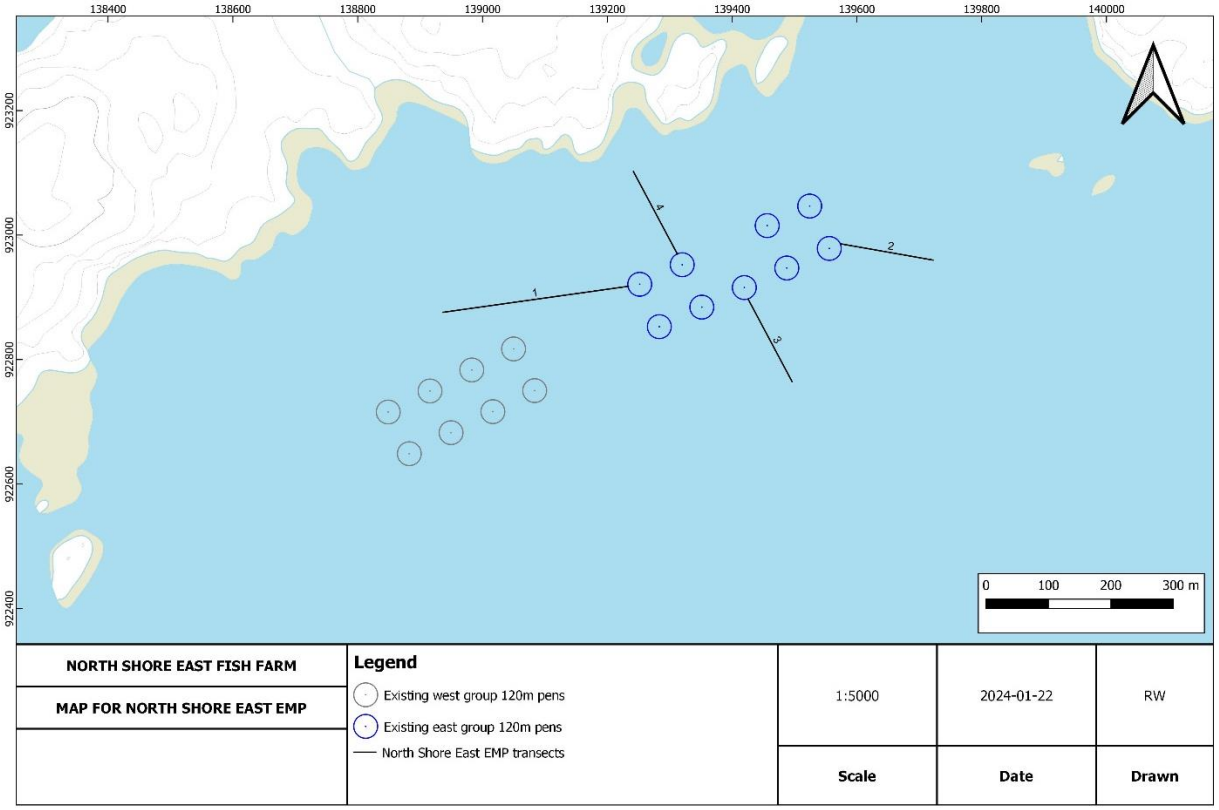

Figure 1: Biological Monitoring - Direction of Primary (T1, T2) and Secondary Transects (T3, T4). North Shore West marine pen fish farm is shown in grey to illustrate its close proximity.

The bearings for each of the transects are as follows:

- Transect 1 - bearing 255 degrees;
- Transect 2 - bearing 100 degrees;
- Transect 3 – bearing 149 degrees;
- Transect 4 – bearing 329 degrees.

The bearing and transect length for T1 has been modified in order to gain sufficient data to prove 'Good' IQI status whilst still maintaining sample positions between North Shore East and the neighbouring North Shore West salmon farm, whilst also avoiding the automatic feeding barge and subsea structures. Multiple anchors, chain and mooring lines will be in this vicinity therefore a bearing of 255° will be used. T3 and T4 have been modified to avoid any entanglement with cage moorings, and are therefore proposed at 149° and 329° respectively.

All modifications to a standard EMP design have been taken using existing knowledge and experience, and are intended to optimize data collection for a sound assessment whilst maintaining practicality and appropriate seamanship safety.

To assess compliance with the environmental standard for the boundary of the mixing zone, samples of sediment will be collected at each sample station across the four transects and analysed for the following parameters:

- Particle size analysis (PSA)
- Benthic infauna

2. Medicinal Residues Sampling

This survey is designed to collect the required environmental data that will allow an assessment of compliance against the environmental standards for Emamectin Benzoate concentrations in the seabed sediment.

Samples will be collected at the locations specified in the licence.

At each sample station, samples of sediment will be collected and analysed for the following parameters:

- Total Organic Carbon (TOC)
- Particle size analysis (PSA)
- Emamectin Benzoate.

Survey Timing

During each production cycle seabed sampling will be undertaken in accordance with the periods specified in the licence. In the event of unforeseen circumstances impacting on survey timing, notification will be provided to SEPA.

Data Reporting

Results from the analysis of all samples collected in accordance with this plan will be submitted to SEPA using the required reporting template within a 26 week reporting timescale, in accordance with licence requirements. In the event of unseen circumstances impacting on data reporting timelines, notification will be provided to SEPA.

Quality Assurance

Sample collection and laboratory analyses will be conducted in accordance with the relevant SEPA MACS Performance Standards by competent and authorised persons (with the necessary knowledge, training, and certifications) on behalf of the Responsible Person (Mowi Scotland Limited).