



**MOWI**<sup>®</sup>

**Marine Pen Fish Farm: Caolas A Deas West, Loch Shell  
Licence Reference: CAR/L/1120218  
Environmental Monitoring Plan**

**MOWI SCOTLAND LIMITED  
17.06.2024**

## Environmental Monitoring Plan

EMP/CAR/L/1120218

FOR

LICENCE REFERENCE NUMBER: CAR/L/1120218

ADDRESS OF PREMISES: Loch Shell Fish Farm, Lemreway, Isle of Lewis

Version: 4

Dated: 17/06/2024

### 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: Sampling of Soft Sediment, SEPA 2022;
- 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:

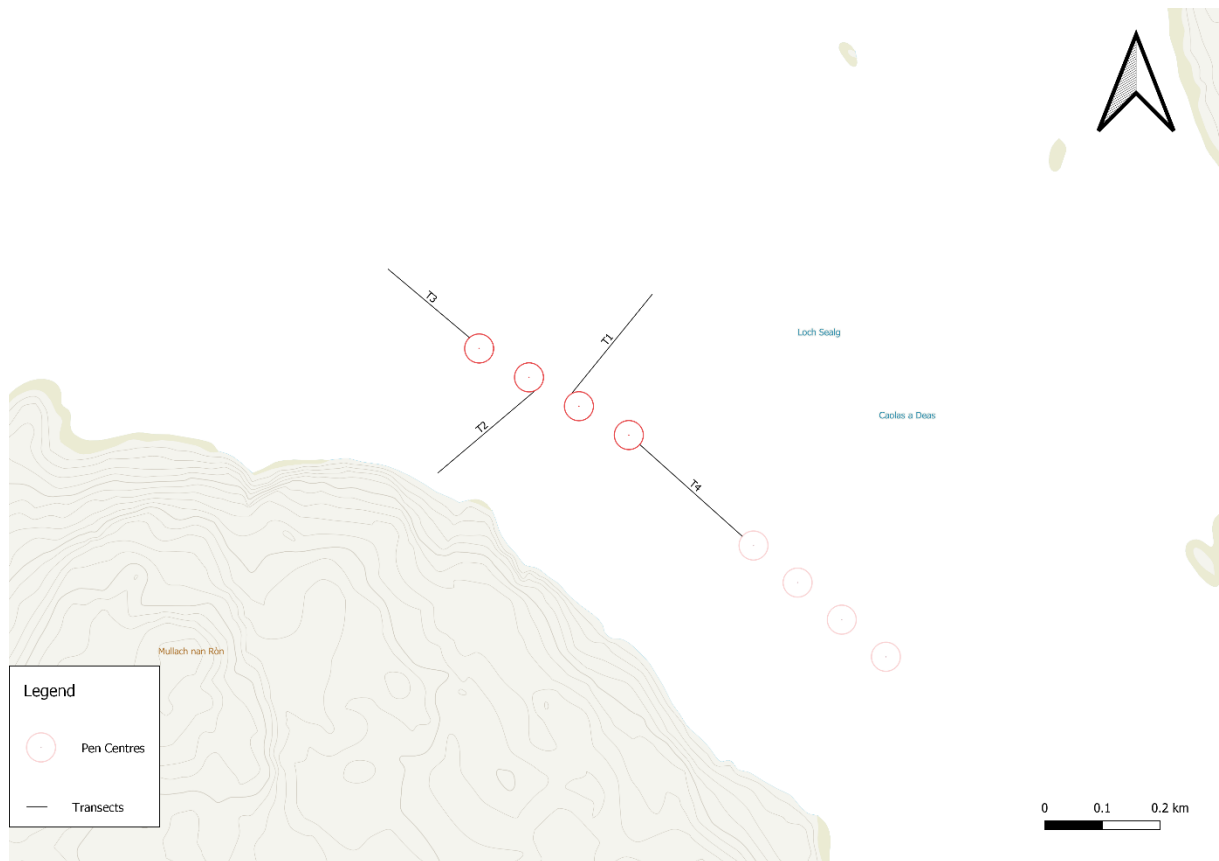
- 1 Biological Sampling**
- 2 Medicinal Residues Sampling**

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 environmental data required to enable assessment of compliance with environmental standards, as detailed in the licence, at pen edge and mixing zone boundary.

Monitoring will be undertaken along four transects (Figure 1), with sediment samples being collected from seven stations along each transect.



**Figure 1:** Biological Monitoring – direction of transects, numbered 1-4.

If it is necessary to attempt collection of samples on a replacement transect, the identification of that transect will consider:

- i) Any relevant information about the seabed to help choose a replacement that maximizes the likelihood of being able to collect sufficient samples.
- ii) In light of i) above, moving the origin for the transect to the pen group
- iii) In light of i) above, orienting the transect on a different bearing within  $\pm 5^\circ$  of the predominant direction of the bed current in the case of a replacement primary transect or, in the case of a replacement minor transect, within  $\pm 20^\circ$  of orthogonal to the direction of the predominant bed current.
- iv) A combination of (ii) and (iii) above.

The bearings for each transect are detailed in Table 1 below:

Transect	Bearing (degrees)
1	39
2	230
3	310
4	132

Table 1: Transect bearings

Sediment samples collected from each of the sample stations will be 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:

- Organic carbon
- Particle size analysis (PSA)
- Emamectin Benzoate

## 3. Survey Timing

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

## 4. 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 in accordance with licence requirements. In the event of unseen circumstances impacting on data reporting timelines notification will be provided to SEPA.

## 5. Quality Assurance

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