

## Environmental Monitoring Plan

Permit Number: CAR/L/1003931  
 Marine Pen Fish Farm: Shapinsay (Veantrow Bay)  
 Responsible company: Scottish Sea Farms  
 Version: 1  
 Date: 18 August 2024

The purpose of this EMP is to monitor seabed impacts from the marine fish farm in order to assess compliance with the seabed standards specified in schedule 4 of the permit.

This plan has been developed in accordance with SEPA guidance: "Version 1 May 2022 Seabed Environmental Standards - Demonstrating Compliance".

Two environmental monitoring survey designs are required:

1. Biological Sampling
2. Chemical Residues Sampling

### 1. Biological sampling

This sampling is designed to collect the required seabed data that will allow an assessment of compliance against schedule 4.1 of the permit.

The default monitoring layout will be followed, with the direction of each transect as follows:

- Transect 1 - 110 (along the near-bed major axis)
- Transect 2 - 200 (perpendicular to the major axis)
- Transect 3 - 290 (reciprocal of the major axis)
- Transect 4 - 20 (perpendicular to the major axis)

At each sample station samples of sediment will be collected and analysed for:

- benthic infauna
- particle size analysis (PSA).

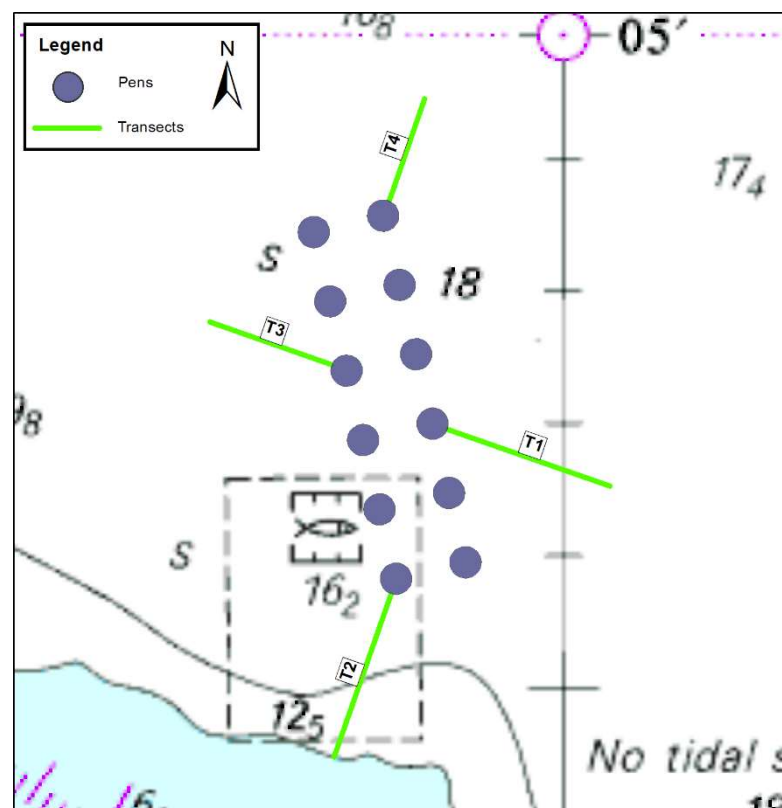


Figure 1 – Site map of with benthic survey transect origins and directions indicated.

If a suitable seabed sample cannot be collected at one or more monitoring stations on a transect:

- a) the collection of a suitable sample (or samples) will be attempted at different locations on the transect concerned.
- b) if sufficient suitable samples cannot be collected on the transect after trying to sample at different locations, the collection of samples along a replacement transect will be attempted. 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 maximises the likelihood of being able to collect sufficient samples.
  - (ii) In the light of (i) above, moving the origin for the transect on the pen group.
  - (iii) In the 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.

## 2. Visual monitoring

This monitoring is designed to evaluate the condition of maerl habitats identified during the baseline visual surveys which were conducted to support the CAR licence application. Transects are specified along three of the original transect lines and at three reference locations. Transect identifiers preserve continuity with baseline survey naming convention.

Transect	Origin	Bearing ( $^\circ$ G)	Target length (m)
C08	Pen 1	171	500
C09	Pen 2	213	500
C10	Pen 4	241	700
Ref1	350634, 1020492	118	100
Ref2	349658, 1020700	213	100
Ref3	349116, 1021132	241	100

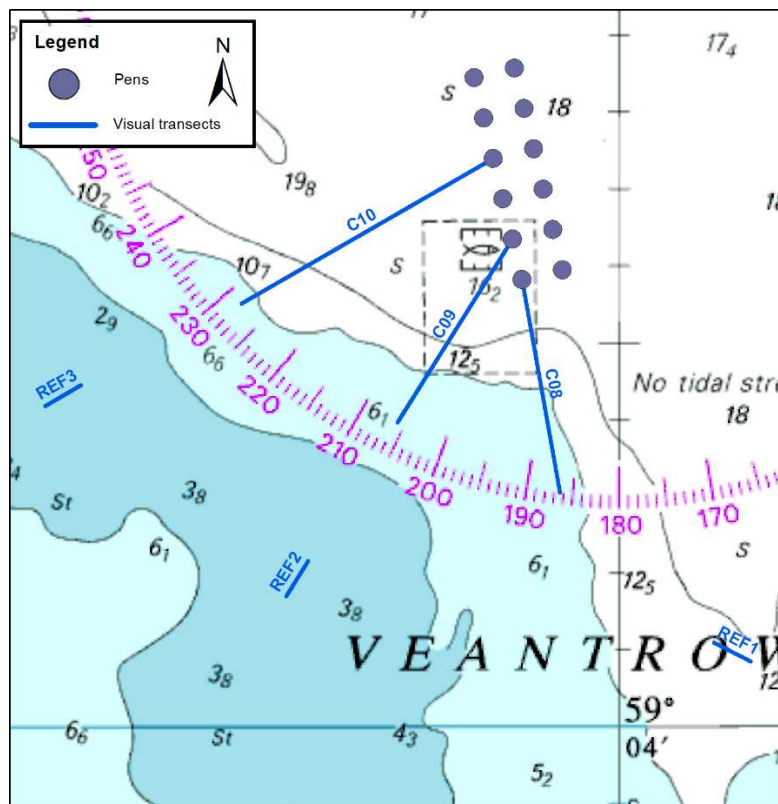


Figure 2 – Site map of with visual monitoring transects indicated.

Depending on conditions and resources the three main transects originating at the pens may be split into shorter sections with footage collected at intervals along the defined transect lines.

Footage will be assessed to estimate of percentage of maerl cover (both percent live and total percent cover) along each transect.

### **3. Chemical Residues Sampling**

At each sample station specified in the CAR licence, samples of sediment will be collected and analysed for:

- Emamectin benzoate
- Particle size
- Total organic carbon

Sampling and analyses, will be carried out in accordance with the following MACS documents:

- Performance Standard MACS-FFA-PSO1 - Version 2 July 2023
- Performance Standard MACS-FFA-PSO2 - Version 1 March 2022
- Performance Standard MACS-FFA-PSO3 - Version 1 March 2022