

Environmental Monitoring Plan

Permit Number: CAR/L/1181033

Marine Pen Fish Farm: North Arran

Responsible company: Bakkafrost Scotland

Version: 1

Date: 19/12/2022

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 - bearing 332 degrees.
- Transect 2 - bearing 144 degrees.
- Transect 3 - bearing 243 degrees.
- Transect 4 - bearing 65 degrees.
- Transect 5 - bearing 223 degrees.
- Transect 6 - bearing 39 degrees.
- Transect 7 - bearing 134 degrees.

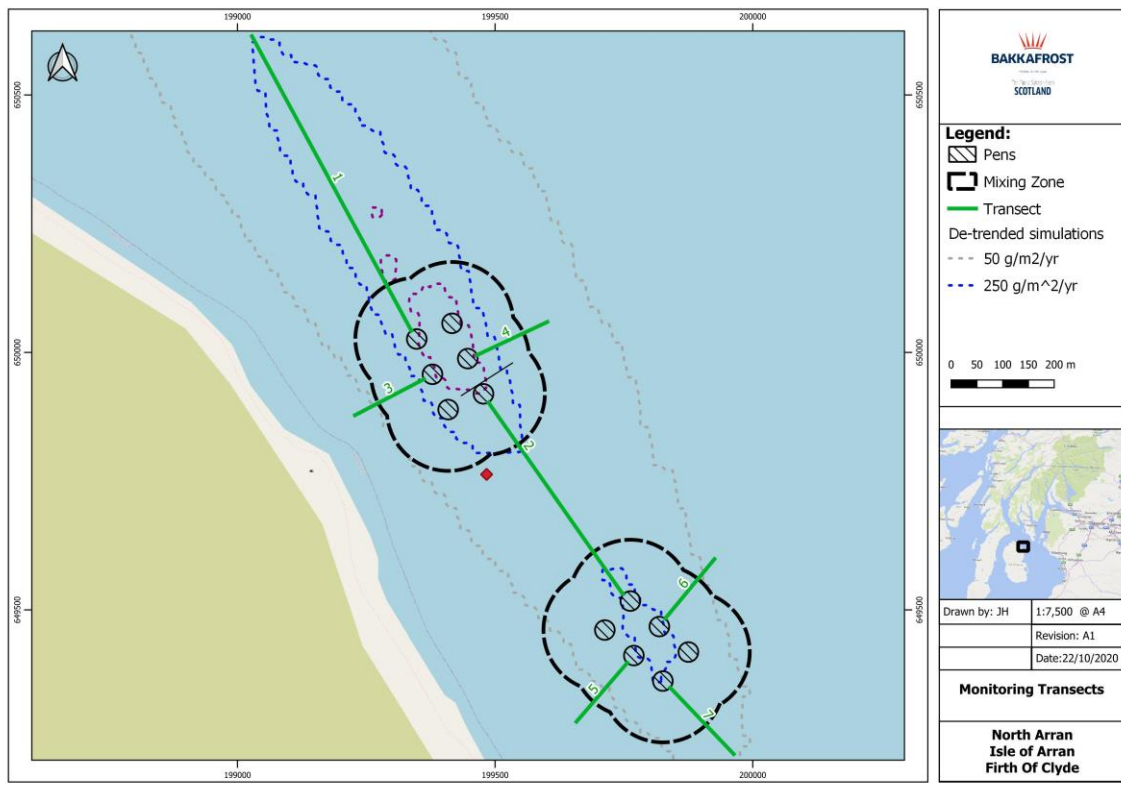


Figure 1 – North Arran Monitoring Transects

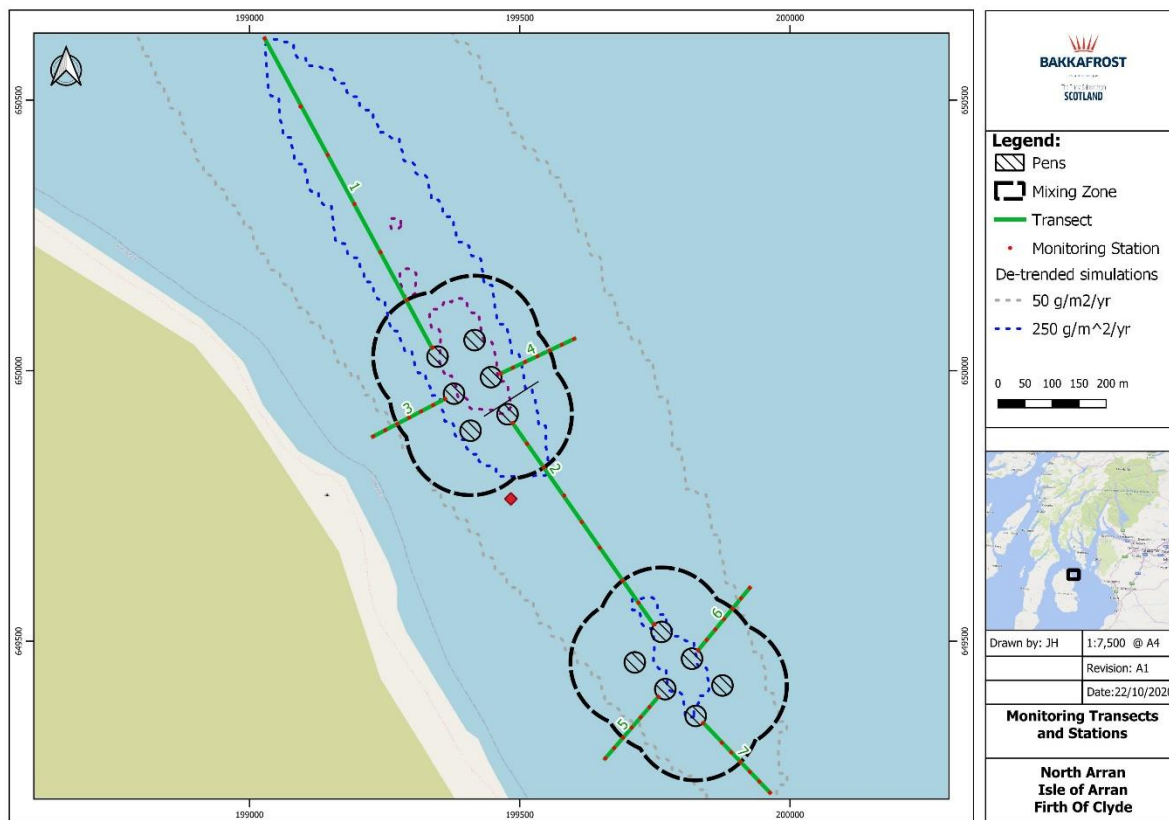


Figure 2 – North Arran Monitoring Transects and Stations

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

- benthic infauna
- Particle size analysis (PSA).

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. Chemical Residues Sampling

This sampling is designed to collect the required seabed data that will allow an assessment of compliance against schedule 4.2 of the permit.

Samples will be collected at the locations specified above.

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

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

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

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