

July
2022



Chalmers Hope, Scapa Flow

Benthic Environmental Monitoring Plan (EMP)

Environmental Monitoring Plan, BENTHIC – SITE SPECIFIC

EMP/CAR/L/ 1003062

FOR

LICENCE REFERENCE NUMBER: CAR/L/ 1003062

ADDRESS OF PREMISES: Chalmers Hope, Scapa Flow, Orkney.

The responsible person (Cooke Aquaculture Scotland Limited), as named in the licence, will carry out monitoring at the premises as specified in the protocol below.

The benthic Environmental Monitoring Plan (EMP) will be modified, in agreement with SEPA should it be deemed necessary. The modified EMP will be dated and shall clearly state that it replaces and supersedes the previous version.

Version: 3

Dated: 05th July 2022.

Sampling Plans and Protocol

Sampling methods for benthic and in-feed chemical treatments will comply with Measurement Assurance and Certification Scotland (MACS) (SEPA, 2019) as well as Seabed environmental standards: Demonstrating compliance (SEPA, 2022).

Monitoring Plan

The site consists of 120m circumference pens, in 1 group of 2 x 6 arrangement with a 70m grid separation. Pen centre locations are provided in table 1. The pen groups are aligned on a NW axis. All pens at the site have a net depth of 12 m.

Table 1. Pen centre locations.

| Pen No. | Easting | Northing | Latitude | Longitude |
|---------|---------|----------|-------------|------------|
| 1 | 328834 | 1001162 | 58°53.512'N | 3°14.195'W |
| 2 | 328784 | 1001212 | 58°53.538'N | 3°14.247'W |
| 3 | 328735 | 1001261 | 58°53.564'N | 3°14.299'W |
| 4 | 328686 | 1001311 | 58°53.591'N | 3°14.352'W |
| 5 | 328636 | 1001361 | 58°53.617'N | 3°14.404'W |
| 6 | 328587 | 1001410 | 58°53.643'N | 3°14.456'W |
| 7 | 328883 | 1001211 | 58°53.539'N | 3°14.144'W |
| 8 | 328834 | 1001261 | 58°53.565'N | 3°14.196'W |
| 9 | 328785 | 1001311 | 58°53.591'N | 3°14.248'W |
| 10 | 328735 | 1001360 | 58°53.618'N | 3°14.301'W |
| 11 | 328686 | 1001410 | 58°53.644'N | 3°14.353'W |
| 12 | 328637 | 1001460 | 58°53.670'N | 3°14.405'W |

The monitoring transects are illustrated in figure 1. The primary transect (T1) is aligned with the modelled benthic footprint. Transects T2-4 are arranged orthogonal to the farm. Transect details are provided in table 2. Each transect will comprise a maximum of 7 sample stations with the first sample station taken at the cage edge.

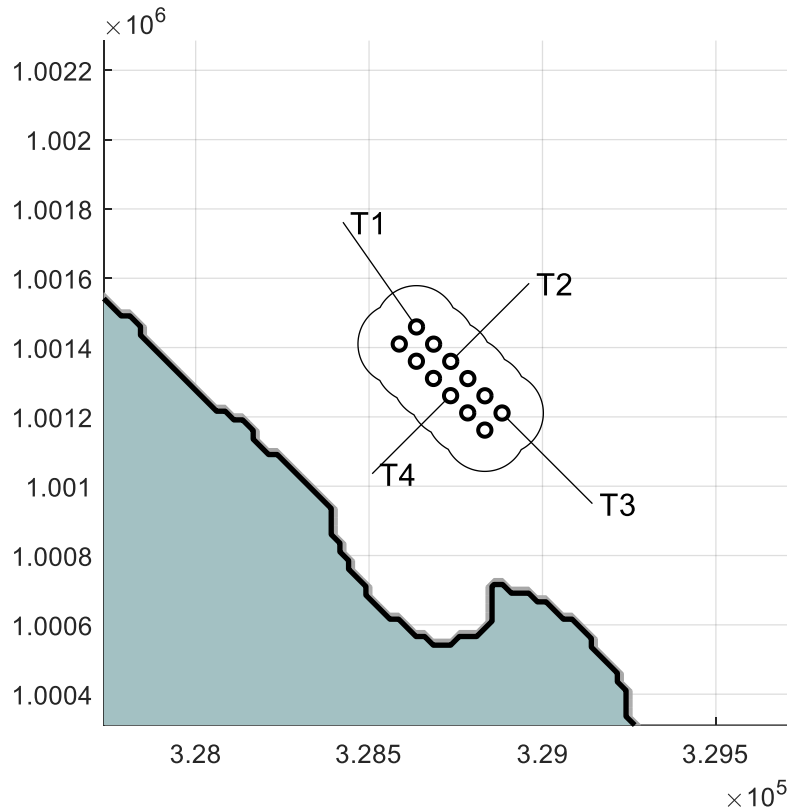


Figure 1. Pen layout with 100m mixing zone and benthic sampling transects.

Table 2. Benthic sampling transects information

| Transect Name | Number | Bearing |
|---------------|--------|---------|
| NW | T1 | 325 |
| NE | T2 | 45 |
| SE | T3 | 135 |
| SW | T4 | 225 |

Reference

Scottish Environmental Protection Agency (2019) “Measurement Assurance and Certification Scotland - Performance Standard MACS-WAT-01”

Scottish Environmental Protection Agency (2022) “Seabed environmental standards: Demonstrating compliance”.