Fishnish A survey data summary

In support of this application, we include the following benthic survey reports:

- FishnishA-environmentalmonitoringsurvey-Aug2020
- FishnishA-BaselineandPeakBiomass-June2018
- FishnishA-Supplementary-Sep2016

The results and relevance of these surveys are summarised below.

August 2020

A four-transect survey plan was designed with input from SEPA, and the survey was carried out on 04-05/06/2018, incorporating the existing MPS monitoring transect as the site had not yet been moved onto the new CAR licence template. The survey was carried out to assess compliance in respect of the 2017-18 production cycle, which was the first crop to be farmed in the new configuration (10 x 100m circles, previously 12 x 24m steel squares).

The resulting survey reports were submitted to SEPA on 25/11/2020, but have not as yet been evaluated. We have used the results to calculate an ellipse using working as follows:

- Length of ellipse = combined length of primary transects (pen edge to first station at 0.64 IQI) plus length of site (pen edge to pen edge).
- Width of ellipse = combined length of secondary transects (pen edge to first station at 0.64 IQI) plus width of site (pen edge to pen edge).
- Area of ellipse = πab, where a = half the length and b = half the width of the ellipse.

The full calculation is provided in a separate Excel spreadsheet. From the 2020 data in the attached survey report, the 100m mixing zone works out at 77069m^2, equivalent to approximately 58% of the allowed area (133463m^2). This is expected to be conservative, as it uses the nearest monitoring station rather than the interpolation method. Transects to the NW (T1) and SW (T2) were completely unimpacted, with all stations including the pen edges yielding IQI values >0.64. This confirms the results of previous surveys at the site, which indicates that nearly all of the deposition occurs along the current MPS transect to the SE.

June 2018

This survey was carried out in respect of the 2017-18 cycle, when the site was in its previous configuration of 12 x 24m square steel cages. Following discussion with SEPA, some additional samples were collected to the north, west and east of the cage group as baseline data to support the proposed reconfiguration from 12 square to 10 circular cages. These show little evidence of enrichment to the north of the cage group, and some impact along the east and west transects (from a single station at 30m from the cage edge on either side). The MPS transect was most strongly impacted, with high numbers of enrichment polychaetes and low diversity scores in all of the MPS stations; however,

significant improvement was evident in an additional station taken at 200m along this transect. The results of this survey were reported to SEPA on //whenever, and were evaluated as 'Unsatisfactory' due to the extent of enrichment along the MPS transect. Only the MPS cage edge was sampled, and therefore we also include the results of some internal sampling that was carried out in 2016, when samples were obtained and analysed from all four cage edges.

September 2016

SSF obtained some samples at Fishnish A on 19/09/2016 to try and assess how the benthic footprint might compare against the Depositional Zone Regulations (DZR) that were then being proposed by SEPA. Although this sampling occurred two and a half months after the peak biomass survey (05/07/16), which was done within a month of peak biomass as specified by SEPA at the time , it was only two weeks after the 75% of peak biomass window that was subsequently adopted. All four cage edges were sampled, and complied with SEPA's requirements. The results of this supplementary sampling (attached) have not previously been reported to SEPA.

Sampling in respect of the 2021-22 crop at Fishnish A was carried out on 02-03/05/2022, following the same four-transect protocol as in 2020. The samples are currently undergoing analysis and the results will be reported to SEPA as soon as we have them (deadline 23/08/2022).