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Scottish Environment Protection Agency
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Our Ref: 008/19

CAR APPLICATION CAR/L/1178003, DAWNFRESH FARMING LTD., ARDENTINNY, LOCH LONG

09/04/2019

Dear Mandy,

We have undertaken hydrographic modelling studies in relation to the input of nutrients from this development.

The approach taken in modelling the input of nutrients to sea lochs is described in Gillibrand and Turrell (1997: The use of simple models in the regulation of the impact of fish farms on water quality in Scottish sea lochs, Aquaculture, 159, 33-46). It provides an estimate of the possible enhancement of nutrient levels in the loch arising from all the fish farms in the loch (including the proposed development), treating the nutrient as a conservative substance. These values of notional nutrient enhancement have then been used to prepare a ranking of 114 sea lochs, covering a large part of the coasts of the Scottish mainland and islands. The ranking reflects the scale of fish farming in each loch, in relation to the size of the loch and rate of water exchange. A ranking towards the top of the scale (i.e. a ranking approaching number 1) indicates a relatively large input of nutrients in relation to the hydrographic characteristics of the loch, whereas a low ranking indicates a small potential for nutrient enhancement. The modelling of nutrient inputs indicates that the current proposals would place Loch Long at a low position in the rank of lochs we have examined in this way (i.e. a ranking number of 89 in comparison with the other 114 lochs modelled). The ECE value is 0.148µmol/l, which gives a Locational Guidelines index of 1.

Modelling of the deposition of particulate waste suggests that the discharge of particulate organic waste will lead to a total of 0.205 % of the sea bed of the Loch showing faunal communities of reduced Infaunal Trophic Index (87521 m² for this site), which gives a Locational Guidelines index of 1.

Loch Long was a Category 3 sea loch and will remain so with this application.

This site does not currently have a Marine Licence that allows discharge from a wellboat.

Yours sincerely
Anna Donald

On behalf of Marine Scotland Science