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Bord Iascaigh Mhara  
Irish Sea Fisheries Board

DM/DM

4<sup>th</sup> October 2012

Ms. Geraldine Farrell  
AFMD  
Department of Agriculture Food and Marine  
Clogheen  
Clonakilty  
Co. Cork

**Re: T9/489 A & B Aquaculture and Foreshore Licence Applications  
at Inis Oirr Co Galway – response to An Taisce observations, authored by Roisin Kearney  
and Camilla Keane, during the Statutory Consultation Phase**

Dear Ms. Farrell,

I wish to acknowledge receipt of your letter dated 1<sup>st</sup> October 2012 containing comments from An Taisce received under the Statutory Consultation Process for the above licence application.

We will respond to the comments made by An Taisce in the same order in which they raised them, and we will follow the headings set out in their letter.

#### Salmonid migration paths

An Taisce appear to have misread the research carried out by Jackson *et al.*, which they cite in a footnote as the source of their opinion. The research set out in these papers clearly demonstrates that sea lice, from any source either farmed or wild, does not play a significant part in determining salmon survival at sea. Further An Taisce suggest, in the studies cited, that differences between the control groups of fish and the experimental groups of fish released were recorded, supporting the view they put forward regarding the influence of sea lice on the marine survival of salmon. In fact, the paper cited clearly states “The difference in percentage survival between the treated and control groups is not significant”. We can only conclude that the An Taisce personnel failed to understand the methodology and hence the conclusions clearly set out in these peer reviewed publications.

The An Taisce assertion that the possible impact on wild salmonid populations has not been accurately assessed in the EIA is not grounded in fact. The Marine Institute sponsored studies cited by the applicants in the EIA are comprehensive, and demonstrate clearly that the proposed development, by virtue of its location and stringent sea lice management regime, is highly unlikely to have any significant impact on migratory salmonids in Galway Bay.

The An Taisce suggestion that ‘a baseline study needs to be carried out’ is clearly unnecessary. Both Inland Fisheries Ireland and the Marine Institute have carried out extensive studies already on the

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salmonid stocks in and around Galway Bay over many years, at the tax payers expense. No useful purpose would be served by duplicating the scientific work already undertaken.

#### Sealice Models

The An Taisce reviewers appear to have misunderstood the meaning of the dispersion models for sea lice larvae contained in the EIS. The basis for the modelling is relative probability. The dispersion models clearly show that any larvae that might emanate from the proposed development will die in the plankton long before they are likely to come into contact with any migratory wild salmonids. It is clear that the proposed location is remote from any migratory salmonid routes and that thus, the danger of negative interaction is very small.

#### Treatment for Sealice

The issues around the various medicines that may be used to treat salmon stock for sea lice infestations, and the subsequent fate of these chemicals in the marine environment is dealt with in great detail in a number of sections in the EIS. The modelled data and the supporting information, clearly shows that there will be no significant negative impact arising from the treatments, however carried out, on the receiving environment.

It is acknowledged that the point raised by An Taisce, with regard to the aquaculture regulatory limits, is difficult to interpret from the data set out in the EIS. Although it is clearly stated that the models used were extremely conservative in nature, and did not take into account the take up of the active ingredients during treatments and their subsequent decay rates, this qualification, which will have the effect of reducing the actual amounts of active ingredient released by several orders of magnitude, is not explicitly carried through into the section dealing with the results of the modelling. An extra note will be inserted into an *errata* sheet, which will accompany all EISs distributed during the public consultation phase to rectify this short coming.

BIM thank An Taisce for bringing this lack of clarity to our attention.

#### Source of Juvenile Salmon

In response to the An Taisce concern, BIM will include an appropriately weighted consideration of planned investment in freshwater production facilities into its selection matrix of criteria in selecting an operator for the proposed development should a licence be granted. In that way, BIM will ensure that Irish grown smolts are used in the production system in the shortest possible timeframe.

#### Source of Fish Food

The fish food to be used in the proposed development will be sourced from one or other of the multi-national, long established and reputable specialist salmon feed supply companies. It is anticipated that the feed will be organically certified and that a significant proportion of the raw material used in its manufacture will come from off-cuts arising from the processing of fish for human consumption. All fish meal and fish oil will be certified as coming from sustainable sources. It is worth noting that BIM, as part of its own pre-submission consultative efforts, supplied An Taisce with extensive details regarding the specification of organic certified salmon feed under separate cover in June of this year.

The closing statement from An Taisce in this section “as salmon farming increases, there will be further pressure on this wild resource” is not accurate. The global supply of fish meal and fish oil has remained largely stable for the past 45 years or more, long before salmon farming started. Thus, the advent of the salmon farming industry and its subsequent growth, has had no influence or has not caused any greater pressure to be brought to bear on industrial fishing stocks. What has happened is that fish meal and fish oil has been used to great effect by the aquaculture industry and diverted

away from less efficient means of human food production such as poultry or pork production. Fish are much more efficient converters of this valuable finite natural resource than warm blooded animals, and aquaculture is the best way to use the world supply of fish meal and fish oil to produce food for human consumption. Also the ratio of wild fish needed to produce farmed salmon cited by An Taisce is incorrect, the real figure is half of what was set out.

#### Nutrient Loading

The An Taisce concerns regarding nutrient loading are not borne out by the findings of the EIS. The studies quite clearly show that the levels of nitrogen and phosphorous, which might be released by the proposed development, are insignificant in the context of the overall natural nutrient cycles taking place annually in Galway Bay.

An Taisce also voice concern regarding the possibility that nutrients from the farm might contribute to harmful algal blooms in Galway Bay, and they mention a particular species of plankton. The connection is quite erroneous and somewhat worrying in terms of the levels of knowledge displayed by the authors with regard to the marine environment. It is clearly understood and has been stated repeatedly by the experts in the Marine Institute that the species of plankton involved in biotoxin incidences form offshore and are blown inshore by prevailing tides and winds. Thus their occurrences

are not influenced by human activities of any kind. The EIS clearly demonstrates that the proposed development poses no risk whatsoever to shellfish aquaculture in Galway Bay or to human health as a result of consuming such shellfish.

#### Sedimentation

The concerns raised by An Taisce fail to take into account, despite it being stated clearly in the EIS, that the projected impacts are taken as a worse-case scenario and that the model used did not factor in meteorologically driven current activity at the proposed sites. The EIS predicts with a high degree of confidence that the reality of sedimentation at the proposed sites will be minimal to non-existent, and that there is an extremely low likelihood of any significant benthic impact arising from the proposed development. It should also be noted that the operator of the site will be required to submit a detailed annual benthic impact monitoring study, carried out by independent consultants, and submitted to DAFM for assessment. This will ensure that good seabed conditions under the proposed sites are maintained and that the predicted outputs from the models are constantly verified in practice.

#### Natura Impact Statement (NIS)

The EIS contains a great deal of data regarding any possibly impacts of the proposed fish farm on salmon populations in Galway Bay. It is acknowledged that these are dealt with in several sections, and BIM contends that it would have amounted to needless repetition to have duplicated them in the NIS. The data in other sections was fully referenced in the NIS and it is clear the proposed development poses no threat to the protected salmon features of the SACs cited by An Taisce.

#### Tidal Data

The concerns expressed by An Taisce regarding the hydrographic data collected are not reasonable. When taken, together with the extensive data held by the Marine Institute arising from other studies, such as the 'Smart Bay Project', carried out in Galway Bay, the hydrographic modellers were confident that they had more than adequate raw data, which correlated well with other data sources, to be able to run and calibrate the models displayed in the EIS. There is no need to gather further data as the Marine Institute are confident that the currents within the bay are accurately represented in the EIS.

### Model Outputs

Contrary to the assertion by An Taisce, the outputs from the various models are in fact consistent when viewed appropriately. The differences arise because of the nature of the scenarios being modelled, the nature of the compounds being released and the differing model methodologies employed to model those compounds. Because each scenario is different, the outputs as might reasonably be expected, are also different. Having said that the models do correlate well and show that the proposed sites are highly flushed and that there is a very low likelihood of any problematic impacts arising from the proposed development.

### General Issues

BIM thank An Taisce for picking up two minor typographic errors in the text of the EIS. Despite repeated and dedicated editing, it is almost inevitable in a multi-author document of the size, complexity and sophistication of the EIS supplied, that such minor typographical errors will occur. An *errata* sheet correcting these minor errors will be supplied with all EISs distributed during the public consultation phase.

Please contact me if you have any queries.

Yours sincerely,



Mr Donal Maguire  
Aquaculture Divisional Manager