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Director General Environment
c/o Pilot Project
European Commission
Environment DG
B-1049 Brussels
Belgium

Your ref: 2094/11/ENVI
Our ref: zB95392/1
24 August 2011

[REDACTED]
Thank you for your communication of 16 June 2011 relating to a complaint made by [REDACTED] on behalf of his clients and which concerns the designation of sites for Atlantic salmon in the United Kingdom under Directive 92/43/EEC (the Habitats Directive), with particular reference to the Ullapool River in the north-west of Scotland and the regulation of aquaculture activities in accordance with the requirements of the Habitats Directive.

The points raised by the Commission are answered in order.

1. The sufficiency of the suite of Special Areas of Conservation for Atlantic salmon

The allegation is that the UK has failed to meet the requirements of Article 4.1 of the Habitats Directive as evidenced by the uneven geographical distribution of sites within Scotland with particular reference to the north west of Scotland.

This allegation is not accepted. The evaluation of the sufficiency of Sites of Community Importance is based on the range of each species and habitat in the full territory of each Member State and within the sites proposed by the Member States. The representativeness is assessed by experts during scientific seminars led by the European Commission. In December 2010, the Commission provided detailed conclusions of the representativeness of habitats and species in the pSCIs of the United Kingdom (which is available via the following web link) and this does not list an insufficiency for Atlantic salmon (*Salmo salar*) in the UK.

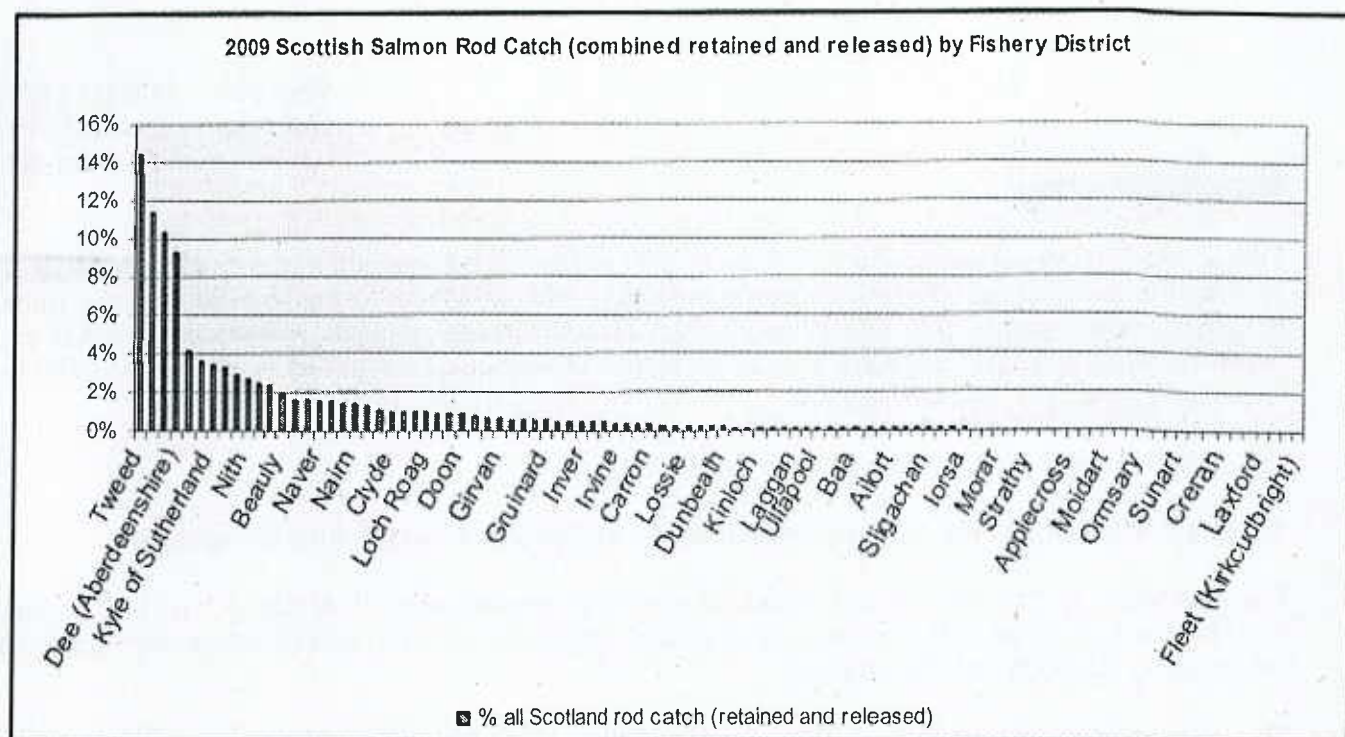
http://circa.europa.eu/Public/irc/env/natura_2000/library?l=/iv_reserve_lists/updated_conclusions_26&vm=detailed&sb=Title

Moreover, there is no requirement in the Habitats Directive for Member States to designate an SAC suite for a particular Annex 1 habitat or Annex 2 species with the primary aim of achieving a geographically balanced spread of sites (as is inferred by the observation that there are relatively few sites in the north west of Scotland).

The Atlantic salmon is not distributed evenly across its UK range. The following graph serves to illustrate this by plotting salmon rod catch for all of Scotland's fishery districts using the most recently published data¹. This provides a very rough index of relative population size in a national context.

Points to assist interpretation:

1. data are collected by Marine Scotland Science at a fishery district scale and are not always representative of individual rivers;
2. rod catch data do not provide a particularly meaningful index of adult salmon abundance without consideration also of possible differences in effort, variance in angler experience and the favourability of conditions for catching salmon, but in the majority of instances they represent the only available regional index of adult salmon abundance.
3. it has been necessary to omit some district names on the x-axis to allow those remaining to be legible.



This markedly uneven distribution is, to a greater extent, a result of Scotland's topography. Scotland's largest rivers (which support the majority of the UK population) flow to the east coast (e.g. Tay, Tweed, Spey, Dee), and to a lesser extent the north coast (e.g. Thurso, Naver). Of particular note is that according to the 2009 data set, the Ullapool District contributed in the region of 0.1% of the overall Scottish rod catch.

In the UK, sites were selected following an appraisal against the criteria provided in Annex III of the Habitats Directive which can be summarised as:

- a. population size and density;
- b. degree of conservation of the features of the habitat that are important for the species, and restoration possibilities;
- c. degree of isolation of the population in relation to the species' natural range;
- d. global assessment of conservation value (i.e. an overall assessment, based on a-c above);

In relation to criterion (a), two features were of particular note: adult abundance (based on both rod and net catches where applicable), and the presence of multiple life history types as sub-components within the overall stock. Geographical location was also an important determinant in considering criterion (c) and three SACs (rather than two as the complainant asserts) are designated for Atlantic salmon in the north-west i.e. the Little Gruinard River (which is approximately 20km from the Ullapool River), Langavat and North Harris. A further two Atlantic Salmon SACs are located in westward flowing catchments to the south (the Endrick Water and the River Bladnoch SACs), three in rivers flowing to the north coast (Rivers Borgie, Naver and Thurso), and nine for rivers flowing to the east coast (Berriedale and Langell Waters, Rivers Oykel, Moriston, Spey, Dee, South Esk, Tay, Teith and Tweed).

Whilst it is acknowledged that Scotland is indeed a European stronghold for Atlantic salmon (as is reflected in Scotland's SAC suite of 17 sites which include approximately 40% of the UK resource), it must also be acknowledged that Scotland is not solely responsible for delivering the UK's responsibilities under the Habitats Directive for this species (a fact reflected in turn by the UK SAC suite for the species). A map showing the distribution of salmon SACs in the UK is available via the following web link:

http://jncc.defra.gov.uk/ProtectedSites/SACselection/feature_map.asp?FeatureIntCode=S1106

More information on the selection rationale for the UK Atlantic salmon SAC site series is available via the following web link:

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1106>

2. The conservation status of *Salmo salar* in the UK

The conservation status of Atlantic salmon in the UK is judged in the 2007 Art.17 report as unfavourable inadequate (amber). This overall assessment is based on the following conclusions:

Range: favourable

Population: unfavourable – inadequate

Habitat (freshwater): unfavourable – inadequate but improving

Future prospects: unfavourable – inadequate

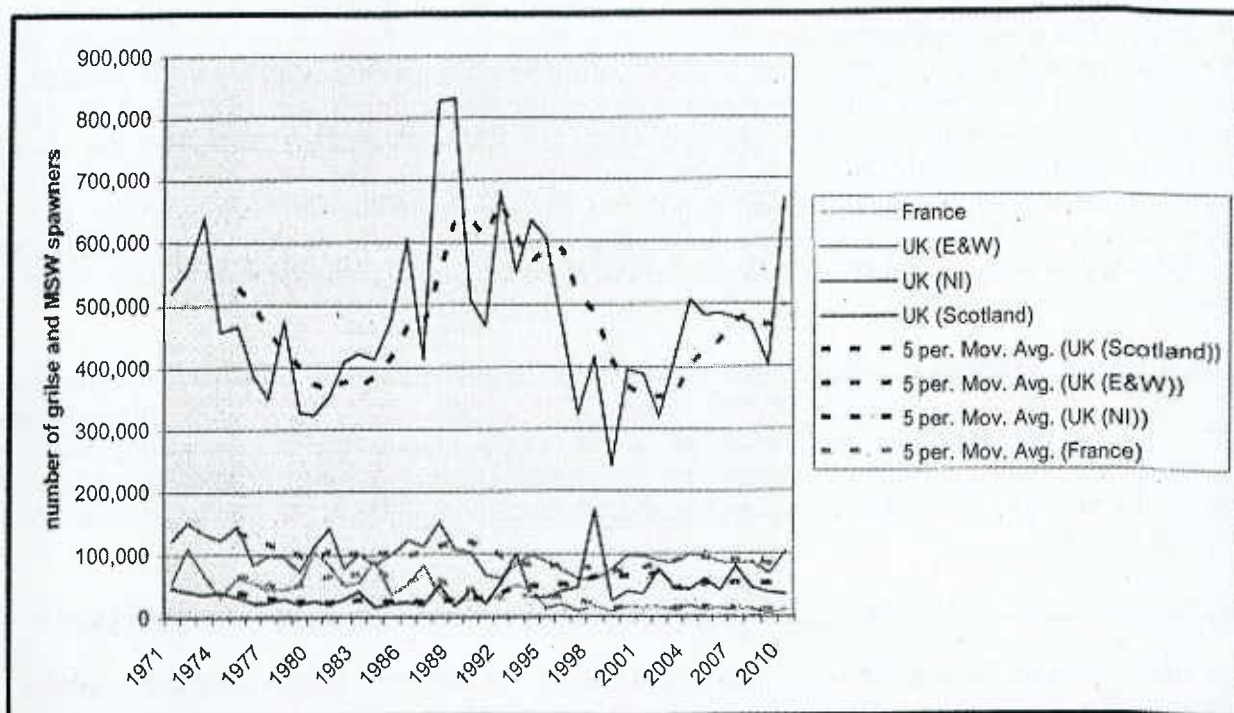
However, consideration of the audit trail document submitted with the UK report allows a greater understanding of the overall UK assessment at a national (i.e. sub-UK) scale.

Population – the population trend was reported as stable in Scotland but declining in England & Wales. Overall, Scottish rod catch figures are considered to have been stable since 1994 (and longer) but in order for the UK population to be reported as 'favourable', the trend must be stable or increasing (and the population must be equal to or greater than the favourable reference population).

An additional index of the status of the Atlantic salmon populations for a range of countries around the North Atlantic is provided in the International Council for the Exploration of the Sea (ICES) reports of the Working Group on North Atlantic Salmon (WGNAS), which is available at the following web address:

<http://www.ices.dk/workinggroups/ViewWorkingGroup.aspx?ID=35>

The most recent report provides estimated numbers of one sea winter (i.e. grilse) and multi sea winter (MSW) spawners from 1971 to 2010, and these data are combined (i.e. numbers of grilse plus MSW fish) and illustrated in the following graph for Scotland (with England and Wales, Northern Ireland and France included for reference).



This graph demonstrates remarkable inter-annual variation over the entire time series but a (perhaps) more meaningful picture emerges when a trend line with a 5-year moving average is plotted. Based on the (estimated) figures provided in the ICES report, the Scottish spawning population shows a clear increase in recent years, with no consistent trend apparent over the breadth of the time series.

Habitat – the trend for the UK was reported as 'stable and possibly improving' but received a conclusion of unfavourable on the basis that some habitat had not yet sufficiently recovered from historic declines. This improving status is in recognition of practical work undertaken in many rivers across the UK to remove barriers to migration (as exemplified by the CASS LIFE project).

Future prospects – this was concluded as unfavourable largely on the basis of declining populations in England & Wales in combination with external pressures acting on the entire UK stock, the most significant of which is considered to be increased mortality during the marine phase of the species' life cycle (thought to be driven by increases in sea temperature as a consequence of climate change).

The decision matrix for the most recent Article 17 report required that if any parameter was 'unfavourable-inadequate', then the overall conclusion would have to reflect this status. This meant that even if the picture was better in Scotland than for the UK overall (and even if the population parameter for Scotland could be concluded as 'favourable'), in order to be assessed as 'favourable' overall, the parameters of habitat and future prospects would also need to be assessed as 'favourable' in all other parts of the UK.

Accordingly, whilst our interpretation of the requirements of the Habitats Directive is that an unfavourable status should not necessarily lead to a requirement to designate additional sites, it is important to stress that the negative population trends reported for England and Wales and in relation to the marine environment would not be ameliorated by the designation of a further SAC in Scotland.

It is therefore considered that whilst the conservation status of Atlantic salmon in the UK is judged in the 2007 Article 17 report as Unfavourable Inadequate (amber), this is not representative of the conservation status of the species in Scotland at the present time. It is not accurate to describe the Atlantic salmon as a declining species in Scotland and we note that a number of rod fisheries in Scotland reported record catches in 2010 (e.g. see the news stories in the following web links).

<http://www.bbc.co.uk/news/uk-scotland-12847601>

3. The Ullapool River

We do not believe that the additional designation of the Ullapool River would provide a 'technically meaningful addition in view of the conservation status of the species and geographic distribution of sites in the UK' (should it ever become established that additional representation for the species was required in the UK). Whilst it is acknowledged that the presence of a spring running component in the Ullapool River is of some local significance (and whilst also noting that it is not the only river with a spring run in the north-west of Scotland), this comprises an estimated 0.02% of the Scottish spring salmon catch in a river which contributes approximately 0.1% of the overall Scottish rod catch. The addition of such a small population would have no noticeable impact on the proportion of the national resource represented in the site series and it would not meaningfully extend the geographic distribution of sites in the UK series because the Little Gruinard River, which is less than 20km away from the Ullapool River, is already designated for Atlantic salmon. It is again important to stress that the negative population trends reported above for England and Wales, and in relation to the marine environment, would not be ameliorated by the designation of the Ullapool River as an SAC.

Furthermore, whilst it is laudable that a landowner should wish to contribute to the Natura 2000 network by seeking to secure the designation of their land, this doesn't necessarily mean that the site is either suitable or appropriate for designation. Such action would undermine the approach taken across the UK to date which is to seek to base decisions on site selection as objectively as possible using the criteria provided by the Directive and the best available knowledge.

4. Action related to sea-lice and escapes with specific reference to Natura 2000

The most recent assessment of the condition of the Little Gruinard and Langavat SACs under Scottish Natural Heritage's Site Condition Monitoring (SCM) programme (made in 2004) assessed both sites as being in 'unfavourable – recovering' condition for salmon. Further information on the methodology which was applied is available at the following web address:

<http://www.scotland.gov.uk/Resource/Doc/295194/0096508.pdf>

Scottish Natural Heritage will again make an assessment of the condition of Scotland's entire Atlantic salmon SAC suite later this year under the current SCM cycle. We are not aware of any indication that these sites have deteriorated since they were last assessed.

In Scotland, a range of measures have been taken (and more are planned) in consultation with stakeholders to provide effective management and regulatory arrangements for fish farming.

In 2007, the Scottish Government introduced the Aquaculture and Fisheries (Scotland) Act which provided inspection and audit powers in relation to sea lice control and containment on salmon farms. The legislation was introduced as a 'backstop' to the measures in the voluntary Code of Good Practice (COGP) for Scottish Finfish Aquaculture - published in 2006 - to ensure that all fish farms adhere to certain minimum standards. Sign up to the CoGP is a condition of Scottish Salmon Producer's Organisation membership - which represents over 95% of farmed salmon production by volume.

Marine Scotland Fish Health Inspectorate (FHI) is responsible for enforcing the provisions within the 2007 Act. Parasites are currently defined at Section 4 as the sea lice species *Lepeophtheirus salmonis* and *Caligus elongatus*. The FHI has powers to make an assessment of the level of sea lice on site and to determine that satisfactory measures are in place for the prevention, control and reduction of sea lice. Where it is concluded that satisfactory measures are not in place to prevent, control or reduce sea lice on fish farms, powers to serve an enforcement notice exist and can direct the execution of specific work as necessary.

The 2007 Act also provides FHI with powers to assess the risk of an escape of fish from a site and determine that satisfactory measures are in place to contain fish, prevent escapes and recover escaped fish.

The renewed Strategic Framework for Scottish Aquaculture – *A Fresh Start* – was published in 2009. This sets out a number of desired outcomes including the adoption of disease and parasite-control strategies which contribute to minimising impacts on the environment and improved containment to minimise adverse impacts and improve profitability. A number of working groups were set up under the Strategic Framework.

The Healthier Fish Working Group has made a number of recommendations, including improved access to sea lice data and a new statutory reporting requirement to Marine Scotland for sea lice treatment failures. We propose to consult on those recommendations as part of a wider package of measures later this year.

An Improved Containment Working Group was also established and has progressed work on developing a Scottish Technical Standard (STS) for fish farm equipment. The standard will apply to all Scottish freshwater and marine trout and salmon farms and will cover nets, pens and mooring systems. An initial draft is expected to be completed through The Scottish Aquaculture Research Forum (SARF) by September and will also be subject to consultation. A contract for a research project into the impacts of freshwater production has also just been awarded.

Scientific research is an essential component to inform Scottish Government policy on the issue of sea lice, its control in farmed environments, and the impacts between farmed and wild fish populations. In May, the Scottish Aquaculture Research Forum (SARF) facilitated an event which brought together Marine Scotland (including scientists), farmed salmon producing companies, pharmaceutical companies, the SSPO, the Bergen Sea-lice Research Institute, and other research organisations to discuss short, medium and long-term sea lice research. An international sea lice symposium will be held later this year in Edinburgh, organised by SARF.

A considerable amount of sea lice research is currently underway, which will help to ensure the long term future of the industry and contribute to minimising impacts on the environment. The following research work is currently being undertaken by Marine Scotland:

- Understanding the dispersal and risk from sea lice through the development of sea lice dispersal models. If robust, the models could be used to predict the effect for different farm management scenarios on sea lice distributions and relative concentrations within lochs, as well as providing information on suitable management areas;
- Sentinel cage and planktonic sea lice studies in Loch Linnhe to validate sea lice dispersal models;
- Analysis of wild salmonid movements (tagging and tracking) in Loch Linnhe and potential for overlap with sea lice distributions;
- The long term monitoring of sea lice in Loch Shielraig;
- Assessing infestation levels on sentinel fish over two production cycles in Loch Shielraig;
- Analysis of sweep netting data from the Tri-Partite Working Group;
- Analysis of net and rod catches, and sea lice levels on fish, in relation to the potential impact of aquaculture;
- Impact of a farm removal on local planktonic sea lice larvae levels - Loch Torridon;

- Vertical distribution and diel migration of sea lice within the water column and the effects of haloclines on lice distribution;
- The immune response of the host following sea lice infection.

Returning wild salmon adults are unlikely to be compromised by lice infestations due both to their size and the fact that any lice will be killed when the fish returns to freshwater. This is supported by samples of returning adult salmon which do not show high levels of very recent coastal infestation.

5. Evidence of genetic pollution of wild salmon in general, and with specific reference to Natura 2000

We are not aware of any evidence which indicates that harmful genetic introgression has occurred in Scottish SACs where Atlantic salmon is listed as a qualifying feature as a result of fish farm escapes. Whilst there may be gaps in our understanding of the genetics of the species, work is currently under way to improve this. For example, a programme of genetic sampling and analysis of Atlantic salmon populations is being carried out under Focussing Atlantic Salmon Management on Populations (FASMOP), which will help to develop a genetic map of salmon in Scotland. This work is being undertaken by a partnership of River and Fisheries Trusts Scotland (RAFTS), Marine Scotland and individual District Salmon Fishery Boards and 24 Fisheries Trusts.

Further analysis has been instigated to verify the issue of introgression. This involves a programme of sampling of juvenile and adult migratory salmonids from rivers across the west coast in order to identify natural genetic structure and identify evidence of aquaculture genetic ingress to these populations

Improvements to containment and the development of a technical standard (as outlined above) need to be considered against the lowest reported level of fish farm escapes (in 2010) since statutory reporting began in May 2002 and we are on track for a further reduction this year.

6. Distancing of fish farms from salmon rivers

We note that many of the references quoted by the complainant refer to work undertaken on species other than Atlantic salmon. For example, he notes on page 39 that researchers have linked a rapid decline in the number of sea trout returning to rivers to the location of fish farms and that wild salmon are similarly affected. Further examination reveals that the reference used to support this statement relates to Pacific, not Atlantic salmon.

Due to the important populations of Atlantic salmon in north and east coast rivers (as outlined in section 1, above) and due to the precautionary nature of our policies, there has been a presumption against marine finfish aquaculture development on Scotland's east and north coasts since 1999. This was re-emphasised in *Scottish Planning Policy (SPP) 22 Planning for Fish Farming* when the responsibility for aquaculture development passed to planning authorities in 2007.

The complainant refers to a value of 25 km for the siting of salmon farms from important salmon rivers. However, this value actually relates to a study of sea trout in Ireland and we do not therefore consider that it automatically translates to Atlantic salmon in Scotland. Additionally, the reference to Scottish Government scientists in relation to the 30 km reference is misleading and wrongly implies that the views of the author are also held by the editors. While the paper referenced does recommend a value of 30 km there is no explanation of how this value was derived and it appears to have no scientific basis. We therefore consider there is no scientific basis currently to siting salmon farms at this (apparently arbitrary) distance.

We would also like to emphasise that fish farm development in Scotland is well regulated and potential environmental impacts are considered in detail in each case before any consent is granted. Planning Authorities follow guidance on the location and siting of sites from a number of sources and must comply with the requirements of the Environmental Impact Assessment Regulations (1999).



Consequently, all new or modifying developments must be subject to EIA screening (and on the recommendation of a positive screening response, EIA scoping).

Should there be a likelihood that a proposed fish farm might have a significant effect on a Natura 2000 site, the procedural requirements of Article 6.3 of the Habitats Directive (as transposed into domestic law by Part IV of the Conservation and Natural Habitats &c., Regulations 1994 as amended) are followed by the competent authority and an appropriate assessment is undertaken when required. Consent may only be given if it can be ascertained, following appropriate assessment, that the proposal will not have an adverse effect upon the integrity of the site in view of its conservation objectives.

Planning decisions are also taken in the light of guidance provided by statutory consultees covering impacts of discharges (Locational Guidelines), fish disease risk (disease management areas) and landscape (landscape guidance from SNH). In addition, several Local Authorities operate their own regional development framework plans or coastal zone plans many of which are formulated with risks to wild salmonids taken into account.

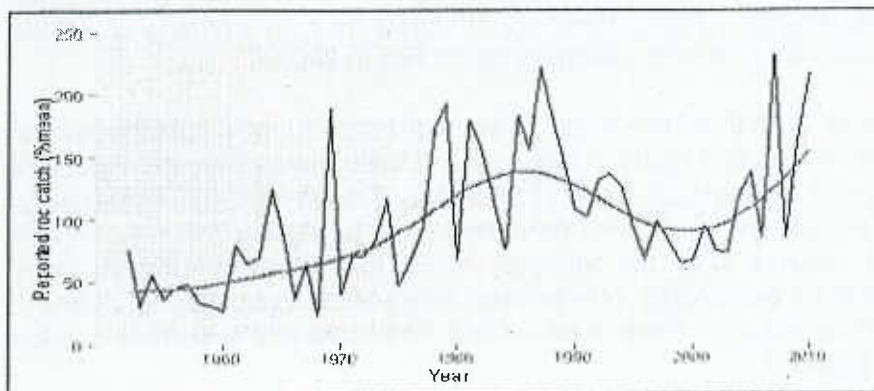
7. The status of the Little Gruinard and Langavat SACs and the recommendations made by the complainant

We do not accept the assertion that these SACs have a poor status for Atlantic salmon.

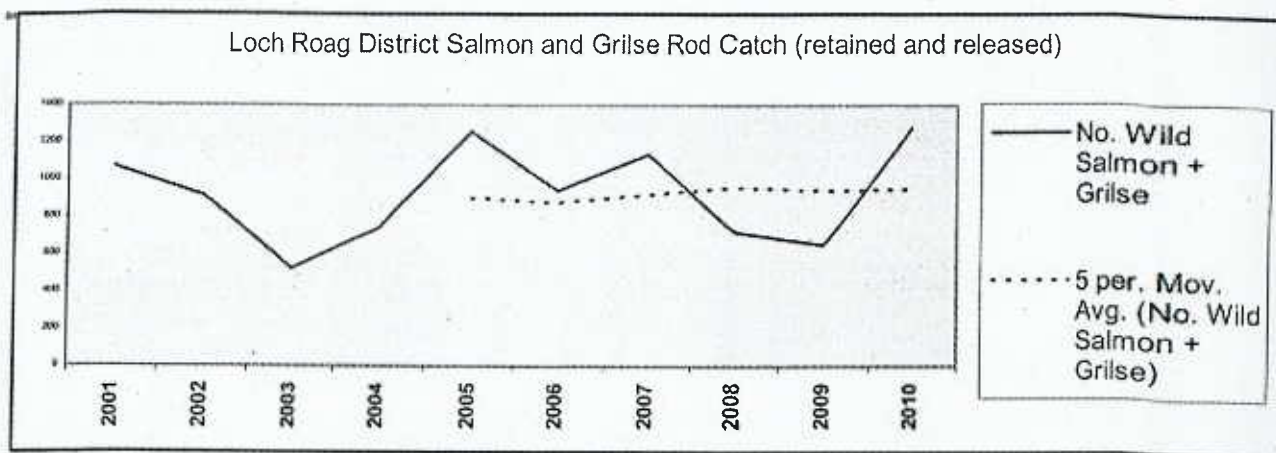
The most recent assessments of the condition of the Little Gruinard and Langavat SACs under Scottish Natural Heritage's Site Condition Monitoring programme (made in 2004) are noted above under section 4. Sites were assessed against the date of submission to the European Commission as proposed Sites of Community Interest (pSCI), which for these sites was 2001. As a consequence, only the rod-catch statistics from 2002-2004 were taken into account in the determination. Statistical reliability is therefore an issue, particularly in the case of the two years in question, one of which was exceptionally dry and the other exceptionally wet.

The Little Gruinard River is likely to have been previously recorded as 'unfavourable' because numbers of summer and autumn fish were lower than in the reference year (2001). This may have been influenced by the atypical weather (as described above). The site was assessed as being in favourable condition in all other respects, including for the spring component of the adult salmon population, juvenile densities, water quality, water flow and habitat condition. Positive influences on the site include long-term conservation-based fisheries management and environmentally sympathetic changes in forestry practices.

Rod catch data for the Gruinard district are illustrated in the graph below (showing % variance from the mean). These show an increase (and are currently at historically high levels).



Turning to the Langavat SAC, this was submitted as a pSCI (known as a candidate SAC in the UK) on 16 March 2001. Rod catch for the Loch Roag fishery district (which contains the Langavat SAC) is illustrated in the following graph (2010 data are provisional). This shows no apparent evidence that the site has deteriorated since it was designated.



An Area Management Agreement (AMA) between local aquaculture industry and wild fisheries interests operates in Loch Roag (which the Grimersta River flows into). This agreement implements strategic sea-lice treatment strategies and best practice to secure a low level of sea lice, with the key aim of zero egg bearing lice during the migration and post smolt period of wild salmon and sea trout smolts.

As mentioned previously, Scottish Natural Heritage will shortly commence its assessment of the condition of this site (along with the rest of the Scottish Atlantic salmon SAC suite). Given the scientific evidence summarised, the condition of the SACs and the range of precautionary measures in place, we do not consider it necessary to implement the recommendations proposed by the complainant.

I have sent a copy of this letter to [REDACTED]

Your sincerely,

[REDACTED]

[REDACTED]

[REDACTED]

