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9<sup>th</sup> April 2009

Dear Mr Moghraby,

## **CONSULTATION ON MODERNISATION OF SALMON AND FRESH WATER FISHERIES LEGISLATION: NEW ORDER TO ADDRESS THE PASSAGE OF FISH**

I am responding on behalf of the British Hydropower Association (BHA) to the Consultation on Modernisation of Salmon and Fresh Water Fisheries Legislation: New Order to Address the Passage of Fish.

The BHA is the trade association for the UK hydropower industry. With around 150 members, the Association represents a wide range of interests: consulting engineering, design, manufacture, investment and operation, and specialist service providers. The BHA represents generators from small owner-operators to large UK and international companies.

We cannot accept the proposals made in this consultation. The consultation notes that the Government aims to minimise the number of fish removed from inland waters, by various abstraction methods. The BHA acknowledges that this is a reasonable aim but we suggest that the number of fish lost because of hydroelectric generation is insignificant when compared to the numbers removed for sport. We do not believe that the consultation paper demonstrates the urgent need for such sweeping measures. Legislation should not be introduced without the evidence or rationale to support them and it is difficult to see how these proposals can be framed in legislation that is fair, practical and enforceable.

The document uses ill-defined, un-quantified statements e.g. 'can greatly reduce or eliminate fish stocks'; it is full of vague words: 'might', 'may', 'could', 'risk'; and the distinction between the generally accepted meaning of 'migration' and fish 'movement' within a river system is blurred. On the need for fish passes, the document repeatedly refers to salmon, sea trout, and eels, linking this experience to coarse fish; the needs of these two groups are very different, recognised in the specific provisions the Salmon and Freshwater Fisheries Act (SFFA).

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Our members are particularly concerned by the potential impact the proposals would have on their businesses. If enacted, they would seriously affect existing small and micro hydropower plants and put in question future developments without any evidence that they would make any appreciable difference to fish stocks. The impact on hydropower of these measures would fall disproportionately on independent and small companies.

We do not believe that an order based on initial assessments of the impacts of installing passes or removing barriers fully equates to evidence-based or risk-based regulation. The Water Framework Directive (WFD), which is cited as the primary driver for the proposed new legislative powers, is about water quality and refers to the presence, numbers and diversity of fish stocks in a length of river as an *indicator* of water quality; the good status of fish stocks does not constitute good water quality. If fish are less abundant in a certain stretch of water because of the presence of a barrier (which might be naturally occurring) then the ecological quality of that stretch is not reduced, it is simply lacking one of the indicators. The WFD calls on member states to implement a programme of measures to prevent deterioration in the ecological status of water bodies and sets reaching Good Ecological Status or Good Ecological Potential as an aim by 2015, targets that can be extended to 2021 or 2027 if it is disproportionately expensive or technically unfeasible to achieve Good Status by 2015. Weirs that have been in situ for several decades, even centuries in many cases, cannot be the cause of any deterioration and therefore their removal/bypass is not required by the Water Framework Directive. Removing weirs that have controlled flooding for centuries may adversely affect the upper reaches of watercourses and have unintended negative consequences on fish stocks. There are several other factors that the document lists as causing a decline in fish stocks besides water quality: disease, over-exploitation, increased predation, increased nutrient levels from farming run-off and other discharges, siltration from agricultural practices, uncontrolled introduction of alien species, poor river engineering, loss of habitat and climate change.

### **Fish stocks**

Evidence in the partial Impact Assessment (IA) suggests that barriers have *not* prevented the recovery of salmon and trout stocks (points 102-104) and that these fish are breeding in some UK river systems for the first time in decades despite the existence of these barriers. The IA makes reference to the concerns of the International Council for the Exploration of the Seas, advisors to the North Atlantic Salmon Conservation Organisation, *that salmon are particularly under threat during the marine phase of their life cycle*. The reported collapse in eel numbers is clearly not caused by obstructions either, as it has taken place since 1980, long after the introduction of most UK weirs (point 107). Coarse fish numbers are also reported to have made significant improvement over the last twenty years (point 109), the same period that has seen a resurgence in hydropower projects, further demonstrating that weirs have not had an appreciable impact on fish numbers. The statement that to do nothing would ...“inevitably contribute to further reductions in stocks” is not demonstrated by the evidence. The Association accepts that there may be a case to make specific provisions for eels.

### **Costs and benefits of removing barriers and installing screens**

We believe that these proposals will impose a huge financial burden on the private sector without the evidence to justify it. The proposed rate of fish pass installation at 420 per year is hardly realistic when 130 have been installed in the past 10 years. The document estimates the

costs of new fish passes at £250,000 each. The real cost of installation is available and is often considerably higher, as in the case of the fish pass installed on the river Aire at Castleford, recently installed at the cost of £380,000. The document puts the costs of intake screens at between £5,000 and £250,000 but no reference is made to the considerable costs of cleaning and maintaining the fine mesh screens that are being proposed. No evidence is provided to show that hydropower schemes are killing fish. There should be evidence of significant fish mortality before different screen specification is imposed on existing projects. The SFFA makes it illegal to knowingly kill or injure immature fish of any species; not a single small hydropower scheme has been prosecuted since this legislation was enacted in 1975. We note that there is legislation in Scotland on passes and screens [The Salmon (Fish Passes and Screens) (Scotland) Regulations 1994]. We believe there should be consistency of approach between Scotland and England and Wales. The financial and resource costs of authorisation and enforcement have not been adequately set out, and as the Environment Agency has rarely used its existing powers on migratory rivers, as the consultation document reports (para.63), it is difficult to see how it will be able to implement the sweeping powers these proposals would give to them.

One of the drivers for the installation of fish passes and screens is the economic value of fish stocks. The consultation document says that "investment into the free passage of freshwater fish...will benefit both commercial and recreational fishing interests" (point 73) and says supporting fish stocks supports £1bn of economic activity derived from anglers (point 76). There is a partial recognition that the beneficiaries of the measures should contribute to the costs and in the section on proposals on obstructions, the consultation document makes reference to powers for the Environment Agency to raise funds from fishery, riparian owners and owners of the obstruction.

There is an assumption that owners/occupiers of weirs have the financial resource to spend on installing fish passes. In the case of most hydropower schemes this is not true and the Government recognises this through the support provided by the Renewables Obligation.

### **Carbon impact**

We dispute the assertion in the Impact Assessment that the proposals will have no significant effect on carbon emissions. Significance is a subjective matter but all the engineering work in retro-fitting passes will, inherently, give rise to carbon emissions. These proposals would make many new run-of-river hydro schemes uneconomic and reduce the output of existing stations which need to be replaced by conventional generation worsening overall carbon emissions considerably. The requirement on owners/occupiers of weirs to install fish passes is likely to act as a deterrent to future development of small-scale hydropower. The removal of redundant weirs would further reduce the potential to generate renewable, carbon-free electricity. Many would argue that the global warming caused by carbon emissions is a much greater threat to fish stocks than old weirs.

### **BHA conclusions and recommendations**

The consultation document is not evidence-based and ignores risk-based regulation. There is nothing to indicate that the proposed measures would have an appreciable beneficial impact. Legislation based on it would be unfair, unenforceable and would damage wider environmental and energy interests. We believe that a more extensive assessment of the costs and benefits should be made before measures are introduced. The Water Framework Directive provides time for a full, evidence-based assessment to be made and implemented. The Environment Agency's own infrastructure (it owns around 900 gauging weirs) should provide the basis for this assessment. We suggest that any requirement to install a fish pass should be paid for by

those who might benefit from its presence, i.e. the fishing interests. Where the installation is detrimental to the operation of an existing hydropower project, the impact should be minimized in the interests of the wider protection of the environment (the paragraph at point 17 recognising that tackling climate change itself is essential if the UK is to be able to manage its fisheries effectively) and loss of revenue to the hydropower scheme should also be reimbursed in the interests of equity and to ensure would-be investors are not deterred from developing future hydro schemes. Alternatively, an incentive to the developer to install fish passes could be to offer a fixed grant and an abstraction licence without time limit, an approach that has been taken in Germany.

We believe that the work the BHA and Environment Agency has undertaken on good practice in hydropower installation and operation is the right way to deal with issues of this nature. This work is currently stalled but should form the basis for an established, on-going relationship to resolve issues.

Taking into account the potential impact that this proposed legislation will have on the Government's energy and climate change policy, we cannot accept these proposals and, accordingly, I am copying this response to the Department of Energy and Climate Change.

For and behalf of the Council and Members of the British Hydropower Association.



David Williams  
*Chief Executive*



Adrian Abbott  
*Policy & Consultations Manager*

The Council comprises:

Mr Andrew Frazer DL – Chairman, Harperstown Hydro  
Mr Chris Brett – Vice Chairman, Inter Hydro  
Mr Michael Banks – SM Seals  
Mr Oliver Barratt OBE – Lowwood Products Co. Ltd  
Mr Andy Billcliff – RWE Npower Renewables Ltd  
Mr Steve Cryer  
Mr Kevin Dibble – First Hydro  
Mr Martin Foster – Ashfield Hydro  
Dr Tim Foster – SmartestEnergy  
Mr Kieron Hanson – Hydroplan UK  
Mr Paul Lane – Alstom Power Hydro  
Mr Terry Maguire – NHT Engineering  
Mr Dave Mann - MannPower  
Mr David McKenzie – Arkaig Hydro and Alba Energy  
Dr Bob Middleton – Tradelink Solutions  
Mr Jon Needle – Derwent Hydro  
Dr Jamie O’Nians – IT Power  
Mr Nick Pike – Gilbert Gilkes & Gordon

## **Specific points on the key proposed changes**

### **Duty to make and maintain fish passes**

We accept that new obstructions should not be introduced without a suitable fish pass where there is evidence that fish could reasonably be expected to be restricted in breeding by the proposed development. All hydro abstractions on any river are already required to incorporate fish screening measures approved by the Agency. The section goes on to say that the new requirement would be to screen mill channels at the point of leaving the river. We consider that the current good practice for hydro inlet screening, along with extra protection and passage for true migratory fish already in place through the Salmon and Freshwater Fisheries Act, is very effective. This is demonstrated in that UK salmon and trout stocks are recovering or good. If implemented as suggested, these proposals would be very costly to non benefiting parties, lead to a loss of existing green generation and may well fail to benefit the general public. The current, practical, effective and approved method is to screen at the turbine inlet and provide a fish escape route. This must continue to be an option. Unnecessary controls would be detrimental to the hydro industry and reduce opportunities to increase generation of renewable electricity in the future. Any further obligations on hydro operators would disadvantage the investors. We believe that if existing obstructions are to be fitted with a fish bypass this should be done only with the owner/occupier's consent and at the cost of those requesting it because a fish pass could prejudice existing use of the site.

### **Agency power to construct and alter fish passes**

See the arguments set out above. Many of the barriers are under the control of the Environment Agency (EA) and that the cost of fish passes on non-EA barriers should be met by those who stand to gain by the construction or alteration of a fish pass. We note that the Impact Assessment acknowledges that improvement works may not be successful, and that it has not been possible to quantify the benefits of the predicted improvements. This suggests to the BHA that there is no adequate justification for the implementation of costly alterations.

### **Consents and approvals for fish passes**

The Environment Agency's approval of designs for fish passage should have due regard for water conservation. Water used by a fish pass should be the minimum possible because any water flowing in a fish passage is not available for hydroelectric generation and hence is a neglected zero-carbon electricity resource. Where the obstruction concerned is already used for hydro then this also represents a loss of revenue for the operator who should therefore be compensated. Where the weir is not used for hydropower, then the greater the flow demanded by any fish pass the longer it will be before that site is used to generate electricity, so again there is a carbon cost to consider

### **Sluices**

We agree that this is outdated and should be repealed.

### **Screens**

Where hydropower is concerned, screen form and specification should be according to the Good Practice Guides currently in development. This is a joint project primarily involving the collaboration of the Environment Agency and the British Hydropower Association (but also involving others including Defra and DECC) partially funded by the Government.

### **Agency power to use screens etc to limit movements of salmon and trout**

No particular comments.

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