INTER HYDRO TECHNOLOGY
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a structured approach to hydro projects

Hydropower - 2

Starting from scratch

New perspectives on harnessing the potential of onshore hydro

Protecting the environment
by promoting the use of hydropower

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British Hydropower Association

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Developing small hydro the reality

Protecting the environment
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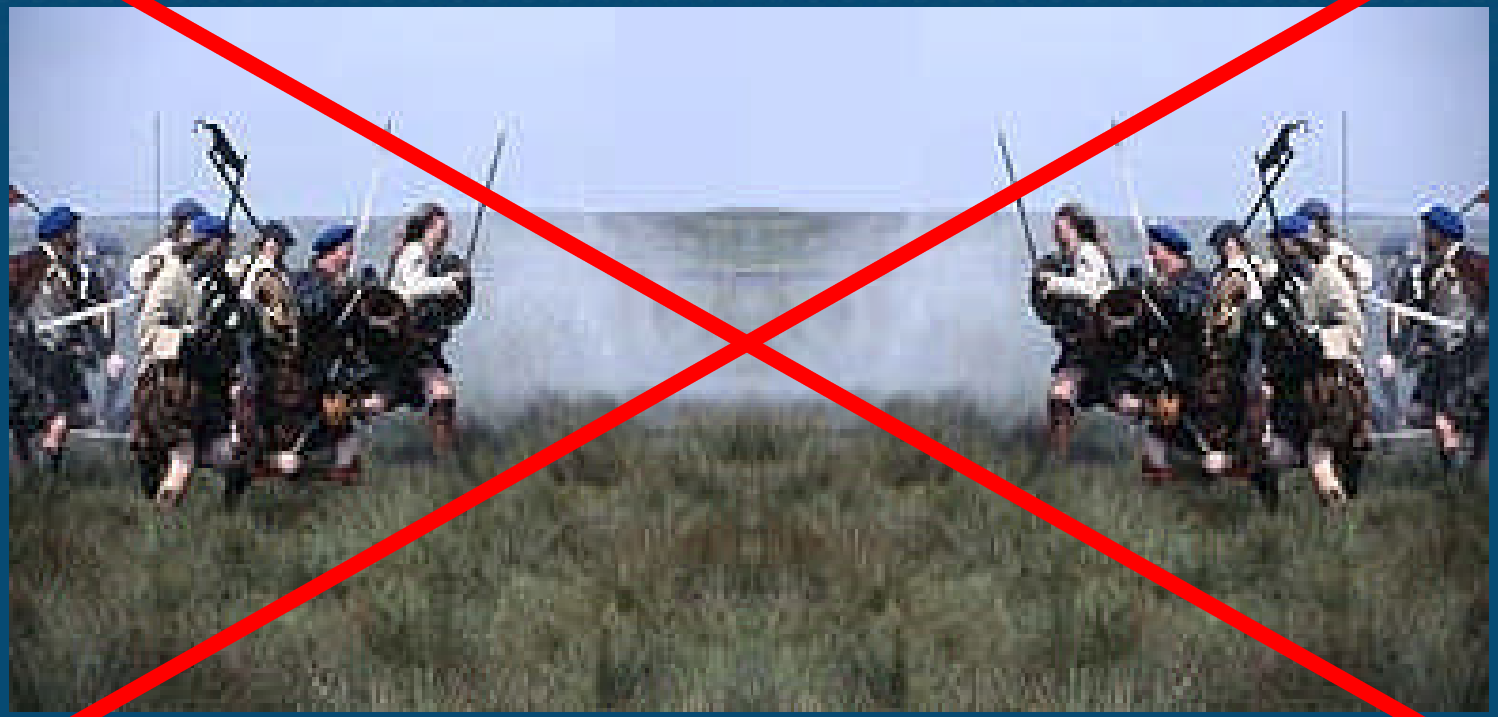

Protecting the environment

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Environment Agency

Limiting climate change

Small scale hydropower

Achieving our climate change targets will require a massive shift from the use of fossil fuels to renewable energy and other energy technologies with very low greenhouse gas emissions.

The UK is committed to generating 15 per cent of its energy from renewables by 2020, and the Committee on Climate Change advises that the electricity sector needs to cut its net emissions of carbon dioxide almost entirely by 2030.

Hydropower currently produces 1.2 per cent of electricity consumed in the UK. The potential for large-scale increase is limited, but there could be some significant growth in small-scale hydropower schemes

Our role

We have already seen an increase in the number of hydropower applications we are dealing with. There are currently 307 small scale hydropower schemes in the UK, 45 were built in 2008 and we have received interest in a further 77 schemes this year. Projections suggest that there could be more than 1200 schemes by 2020.

Hydropower schemes require a number of permits and consents issued by us,

including an abstraction and/or impoundment licence and flood defence consent. We also have a regulatory duty to ensure that schemes comply with environmental regulations such as:

Water Framework Directive - the freedom of movement of fish, upstream or downstream, is important for achieving or maintaining good ecological status.

Salmon and Freshwater Fisheries Act (1975) – we are required to maintain, improve and develop all freshwater fisheries, and to ensure the free passage of migratory salmon and sea trout.

Our position

We support the deployment of sustainable renewable energy, including hydropower, to help achieve the UK's renewable energy and greenhouse gas emissions reduction targets.

We have published good practice guidance for hydropower schemes. This clearly communicates what needs to be done to comply with environmental and other legislation.

We are working to encourage hydropower by identifying and mapping hydropower opportunities and streamlining our permitting process.

Where schemes would not comply with environmental or other legislation by, for example, preventing the passage of migratory fish or increasing flood risk, we will not support their development.

Our project work

Good practice guidance
We published the good practice guidance for small scale hydropower in August 2009, aimed at our own staff and hydropower developers.

It provides information on the design standards for hydropower schemes to encourage development with an appropriate level of environmental protection.

Hydropower opportunity mapping
We are mapping opportunities for hydropower schemes in England and Wales, determining their maximum power potential and assessing the environmental risk associated with their exploitation. The project will provide the most comprehensive and accurate resource assessment of small-scale hydropower availability. Results will be available by the end of 2009.

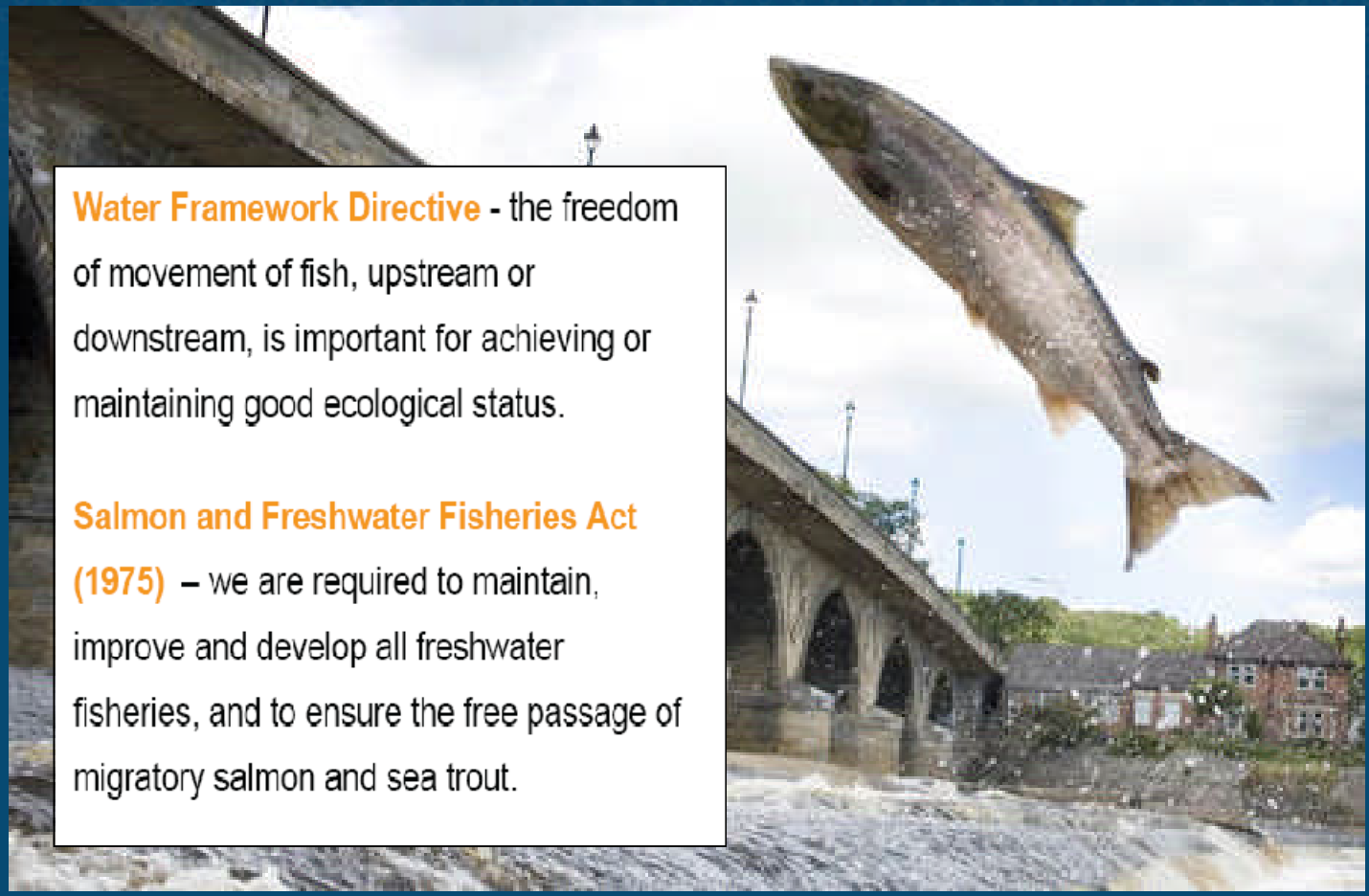
Review of the permitting regime for small-scale hydropower
We have committed to reviewing the permitting process for small-scale hydropower, and will publish the results in 2010. The review aims to streamline the process by making it more efficient and easier for developers.

Monitoring impacts of different screening arrangements on fish
We are using a monitoring programme to better understand what screening arrangements are needed on different types of turbines.

Developing hydropower schemes on our own infrastructure
We have identified a number of our weirs in the Thames region for hydropower development. The first project will be Romney Weir, a 300kw scheme that is being developed with Southeast Power Engineering.

For more information contact the Climate Change Team on 08708 506 506 or enquiries@environment-agency.gov.uk

Limiting climate change



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The precautionary principle

If it could happen assume it will