

Freedom of Information Query No FOI 791- Flood Storage Areas
Mr G N Hawkes

3rd October 2008

Dear Mr Hawkes,

I refer to your email to Neil Harding dated 11th September 2008 requesting data and technical information about flood storage areas owned, managed or operated by the Environment Agency whether or not they fall within the terms of the Reservoirs Act.

We do not hold of detailed technical data (such as spillway design, capacity and type) on our assets centrally. Such data is held by our area operational teams who manage these assets. Therefore to answer your query I will need to ask for information from each of these teams. This is likely to involve a significant effort and cost to obtain. In order for me to assess this cost and to ensure any data we supply is what you require I firstly need you to clarify some aspects of your questions.

- 1) You ask for data relating to the United Kingdom. Any data we provide will relate only to England and Wales. Please confirm that you would wish us to proceed on this basis.
- 2) You refer to 'flood storage areas' and I assume that you mean areas that are designed and constructed with the primary purpose of temporarily storing floodwater (as opposed to areas where unintended, incidental, or natural temporary storage may occur). Could you please confirm.
- 3) In your original query you make reference to research.
'Research indicates that a flood storage area has a 'normal' unrestricted flow, above which rate the water is restricted by a dam and held within a pond. If, under exceptional circumstances, the pond becomes full, the water overflows the dam. This overflow water is normally unrestricted and may lead to flooding further downstream. Some Flood Storage Areas have a restricted overflow designed to cause flooding upstream of the dam, as a measure to prevent flooding further downstream. I am trying to establish how many Flood Storage Areas are constructed to cause upstream flooding in an attempt to reduce downstream flooding'.

Could you please provide a copy of this research or advise where I can obtain a copy.

- 4) Reservoir spillways are designed to pass flows in excess of the reservoir capacity in a safe and controlled way. For reservoirs falling under the Reservoirs Act (similar considerations should apply to others) the capacity of a spillway is assessed by the designer based on the potential consequences of the dam failing. Only for the highest consequence dams is the design spillway capacity normally the Probable Maximum Flood (PMF). Other reservoir spillways may be designed for less than the PMF and would, by definition, be 'restricted by design'. In the event of an extreme flood greater than the capacity of the spillway then water levels upstream will be raised. In your question, by '...restricted overtopping spillways that are restricted by design?' do you mean spillways that are not designed to convey the full PMF, or do you mean something else?

Once I have clarification of the above I will be able to decide how best to obtain the information to answer your query and estimate the cost. I will then be able to advise you further on how we will manage your request.

Yours Sincerely

Dave Denness
Technical Advisor
Asset Management