

1. Have you engaged with private owners here and what is their level of understanding about their responsibilities?

ICE, as a professional body, acting in a learned society role could not, and has not, engaged with private owners in relation to the Bill.

ICE was invited to make presentations at stakeholder consultation workshops, arranged by DARD, to provide an understanding of reservoir design issues, the possible defects that arise and the processes and Panel Engineer systems being proposed. During these sessions it was apparent from questioning that some private owners did not fully realise their responsibility.

2. Can you give the Committee an indication of the types of defects you expect to have to address?

It is likely that the types of defects which may be found will cover the entire range of issues normally associated with earth retaining dams. The scale of inadequacies will vary widely from site to site but may include: insufficient overflow capacity, inadequate draw-off pipework, unstable slopes, damaged upstream pitching, growths and/or trees on embankments, leakage and interference by animals.

a. What costs are involved such defects?

The costs involved in the repair of such defects will obviously depend on the extent of the deficiency and the scale of the structure. It could stretch from a few thousand to many tens of thousands pounds and would not be known until there was a meaningful inspection by a Qualified Panel Engineer.

b. Is there any particular type of structure you are concerned about? Any why?

The greatest uncertainty with regards to cost and safety relates to overgrown earth dams. Vegetation growth on the structure may have occurred over many years and when present is generally indicative that maintenance or inspections have not occurred. The vegetation prevents meaningful inspection of the structure and may be masking defects.

In these cases, the first action will be to carefully clear the vegetation under the guidance of a Qualified Panel Engineer to permit proper inspection. It is worth noting, that because the structure is overgrown, it does not necessarily mean that, when cleared for meaningful inspection, that problems will be identified.

3. What are the likely costs associated with decommissioning a reservoir and how do you assess the wider/social/recreational/habitats impact?

Panel Engineers consider that decommissioning of a reservoir relates to the process of abandonment. Abandonment of a reservoir is the complete removal of the structure's ability to store water above natural ground. The likely cost of abandoning a reservoir is site specific, however, would include not just the removal of part of the structure but also the obtaining of appropriate permissions from the statutory authorities.

The wider impacts on flooding habitats, fishing, social, environment etc. require consultations and may necessitate some form of environmental assessment and an economic appraisal to quantify these elements. The skills of Panel Engineers can assist owners with this wider assessment however the extent of the process will depend on the requirements of the respective statutory Authorities.

4. Does the small number of Panel Engineers available mean that there is limited competition and therefore a fixed market regarding costs?

As discussed at our meeting with the Committee, the number of Panel Engineers resident in NI is increasing. Mr Meldrum reported to the Committee that in his opinion Northern Ireland would need 10 Supervising Engineers. By the time the primary and secondary legislation is in place we believe that there could be 5 supervising panel members resident in NI. In addition, there are several companies active in NI which have access to appropriately trained staff.

As reported to the Committee, there is the opportunity for several owners to group together to obtain economies of scale and there would be a sufficient level of interest from the market to generate competition attracting companies from GB to travel to NI.

5. Once the reservoirs in NI are designated through the Risk Assessment process as high or medium, they will require an inspection by an Inspecting Engineer with a short time period.

a. Will all High or Medium reservoirs require an inspection within a short time?

The initial designation process will identify whether reservoirs have an inspection currently valid. Many council-owned reservoirs and NIW reservoirs already have a valid inspection in place and will not immediately require a new inspection. ICE understands that currently this may cover approximately 50% of the medium and high risk reservoirs.

Only those reservoirs without an active inspection report will require the new inspection carried out. During the consultation with stakeholders, Rivers Agency has emphasised this and encouraged Reservoir Managers to undertake an inspection as soon as possible, not waiting for the commencement of legislation.

In many cases the inspection will be carried out in two stages because it will be necessary to first visit the site to advise on the required amount of clearance of excessive growth to enable a meaningful inspection.

As noted above, the grouping of reservoirs could also assist in the process of completing the initial inspections.

b. Can ICE guarantee that its Inspecting Engineers will be able to meet this demand?

Given the number of reservoirs that may be designated at high or medium, the inspection period should not cause a problem to the inspection process. ICE is

confident that the number of Panel Engineers available across the United Kingdom will not preclude this being undertaken within the required period.

As noted above, the grouping of reservoirs could also assist in the process of completing the initial inspections and ensuring market competition to attract GB-based Inspecting Engineers to quote competitively for such services.