



Northern Ireland
Assembly

Committee for Agriculture and Rural
Development

OFFICIAL REPORT (Hansard)

Reservoirs Bill:
Northern Ireland Environment Agency

18 February 2014

Down a level, we have areas of special scientific interest (ASSIs), and that is the designation of land that is of national importance. All our Natura 2000 sites are double-badged as ASSIs. Whereas we have over 50 Natura 2000 sites, we have something of the order of 360 ASSIs, which cover 7% to 8% of the area of the country. Within that suite of sites, each site is identified for particular reasons, and owner-occupiers of the sites are required to notify us if they propose to carry out any operations that could damage features of the ASSIs.

At the next level below that — the local level — there are other species that are protected under the wildlife order that are not species of European importance. Otters and all birds are protected by law. Furthermore, as I mentioned, we have priority habitats and priority species in the wider countryside. There is a general obligation on public bodies to protect those where they can.

That gives you some background to and context of how nature conservation and protection works. There is much more detail behind it than that, but, just to give people a starting framework to think about, that is the broad framework under which we operate.

The Chairperson: Peter, do you want to add to that?

Mr Peter Close (Northern Ireland Environment Agency): Yes. I work in the water management unit of the Northern Ireland Environment Agency. I have responsibility for the team that regulates the abstraction and impoundment licensing regulations for Northern Ireland, so any abstraction or diversion of water for hydropower or Northern Ireland Water taking water from reservoirs for potable supply etc fall under this legislation.

I was tasked with contributing to the work on the Bill and for the consultation on it, so my team and I have been involved in all aspects of the work of Rivers Agency thus far and fully support the Bill and the regulations from a health and safety perspective. During that time, we were made aware that Northern Ireland Water, in preparation for the Bill and, obviously, in preparation for good practice and inspections, had identified reservoirs that fell within its area of ownership and which may require work on scour valves or the refurbishment of the valves associated with the towers and their structures. That meant that there was a fair chance that some of them would need to be drawn down and, possibly, emptied. Therefore I established, essentially, a cross-NIEA committee to take into consideration how best that activity could be done in line with the current environmental legislation and in line with a way that would still support Northern Ireland Water and meet the requirements of the Reservoirs Bill from a health and safety point of view. Most of the information that I have provided has been on the guidance and agreement that we have put to Northern Ireland Water in relation to an activity such as the drawing down of the water in our reservoirs.

The Chairperson: Thank you very much, Peter and Bob, for your presentation. It is clear that you have an area of responsibility and concern about the impact of drawdown not only on wildlife in the reservoir but in the surrounding area and downstream of a reservoir, including habitat. There is also the pollution aspect, and I was interested to read your detail, albeit technical for my simple mind, on the differences in the water levels. You say that, when you have to drain the reservoir down to an adequate level to work at valves or pipes, you then disrupt or go into a different type of water. If it were all to be drained at one time, it could affect water tables or the type of water flowing down into our water courses. Have you concerns about the implementation of the Bill? You said that you welcome the Bill for health and safety reasons, which is good, but have you any concerns about its impact?

Mr Close: I do not have any concerns about the Bill, and, as stated, NIEA welcomes the Bill and its key objectives. There is activity of a reservoir having to have works done to the impoundment or to valves, for example, the scour valve, and that activity is necessary. Essentially, it has to be located at a very low level. The consultant's report from Northern Ireland Water indicated that a number of those scour valves may need to be replaced and that, in doing so, the level that you would have to draw down would be quite low. So, yes, we have concerns about potential impacts of the release of such water. From a quantity point of view, if you release too much — it would take a considerable time, maybe 30 or 60 days, to draw all that water down — you have also water coming into the reservoir. A reservoir that was built in the 1850s, say, will have received considerable amounts of sediment from the catchment above it that will naturally come down to the impoundment. Over time, there may have been servicing by way of the scour valves, but, essentially, you will always have a build-up of sediment that will sit on the bottom of the reservoir. Because of the nature of the sediment, the material that is coming in and the chemistry associated with the water in those columns that we spoke about, dissolved oxygen at lower levels is very low and the temperature of the water is very low. If you

simply open a valve in the middle of the summer, for argument's sake, and you have a reasonably good ecosystem below with fish etc, very cold water with no oxygen in it and lots of sediment would have an adverse impact; hence there are controls.

I have spoken to the Environment Agency, the Environmental Protection Agency (EPA) and the Scottish Environment Protection Agency (SEPA), our Scottish sister agency, about those issues, and a fair bit of work has been done on them. However, it is not very often that that needs to be done and done in a manner whereby you need to draw down the whole thing or a lot of it. It took quite a while, with the group that we established, to set up a mechanism to look for the best fit to mitigate the potential for environmental damage by controlling the discharge. Northern Ireland Water and the consultants have, broadly speaking, agreed and welcomed the document that we have greened and the authorisation that we have given.

The Chairperson: The Committee is hearing of some councils, one in particular and one reservoir owner in particular, that is of the mind that it should decommission its reservoir. What is to stop a reservoir manager or owner decommissioning and draining their reservoir now and perhaps indirectly causing an impact?

Mr Close: Without prior agreement from the agency, they would be in breach of a number of pieces of environmental legislation, for example, the Water (Northern Ireland) Order 1999. It would be illegal to discharge what could be a polluting or noxious material as described. The contents of the bottom of a reservoir would not be regarded as pristine, clean water; therefore, they would be knowingly or otherwise discharging something that could have a polluting impact. If there is a fish kill, the fisheries legislation kicks in. It would not be consistent with the water framework directive, and if it is in a sensitive habitat or area, and a number of the private reservoirs are, it could breach the habitat regulations as well. We have responded to small bodies of water that have been drained, perhaps because of disputes between farmers, and even those small activities have led to impacts and, allegedly, fish kills, although we did not get the evidence when we went out to inspect.

Mr Davidson: I do not know the particular example, but, in theory, moving from a reservoir full of water to dry land is a change of land use, which could require planning permission. There is no set formula for deciding whether, if you turn a small reservoir into slightly drier wetland, that is a change of land use. The Planning Service would have to decide whether the change in land use was significant enough to warrant planning permission. Once the planning permission process kicked in, we would be consulted and be directly involved in commenting on or conditioning how it was done.

The Chairperson: You said that you had a part to play in discussions with the various agencies in drafting the Bill. Is there anything not in the Bill that should be in it?

Mr Close: Not that I am aware of.

The Chairperson: You are happy with the scale of enforcement, the management regime and the panel of experts that will need to be put in place at all the different levels. You are content with everything.

Mr Close: Essentially, yes.

Mr Buchanan: I want to come in on a point that has perhaps been partially answered. You went over all that needs to be done around the draining down of reservoirs to get at the scour valves. Is that not something that Northern Ireland Water would have done in the past?

Mr Close: It may well have. However, I have no evidence or information to that effect.

Mr Buchanan: A great deal of information is coming forward from NIEA about regulations that Northern Ireland Water has to abide by when changing scour valves because of the difficulties that that could cause downstream. Would Northern Ireland Water not have done that in the past without causing any difficulties? Now, it may be faced with a ream of stuff that it has to adhere to.

Mr Close: No. Northern Ireland Water identified the reservoirs that were inspected by the panel engineer. Of the first tranche of the 151 reservoirs identified — previously it was 156 — 90 were inspected that are under its ownership. Those 17 reservoirs — originally 19 — were identified by the panel engineer and their inspection programme as being at risk. As is good practice, the company

responded accordingly. I have worked for NIEA for 26 years, in emergency pollution through to industrial consents, and waste and agriculture regulations. To my knowledge, NIEA has never been approached in that capacity before. That was new to me. To be quite honest with you, there was a lengthy debate on whether other environmental legislation would have applied that set legal controls on how it would be done. That was set aside because of the health and safety implications and because there was a requirement that the valves needed to be replaced to ensure that the structures were fit for purpose and safe so that it could continue to provide the service and be an asset to the company. NIEA took a very pragmatic, sensible and balanced approach and, in conjunction and consultation with NIW, Rivers Agency and its consultants, and across our disciplines, came up with the best fit to allow the activity to take place in a manner that would provide health and safety benefits, environmental benefits to the advantage of all.

Mr Swann: You said that if anybody was going to drain down a reservoir, there would be all sorts of potential planning issues. Would that be under PPS 15 or just in general?

Mr Davidson: It is just in general. Under PPS 1, there is a definition of development. A change of land use is considered development. However, I am not aware that there is a precise definition for changing a reservoir to an area of dry land.

Mr Swann: I am just concerned that, if a private reservoir owner does remedial works, NIEA and planning enforcement will come in because he did not go through the proper procedures. We need to look at the supporting documentation to the Bill so that if something is put into planning or if somebody has to drain down a reservoir that they are going to reinstate as a reservoir, they do not have to go down the route of planning permission for changing consent. You are talking about the planning process and appeals. It needs to be a simplified process to do that.

You talked about the time that it would take to draw down some of those reservoirs. How long would it take to refill them?

Mr Close: How long is a piece of string? It depends on the catchments that drain into the reservoirs. We have licensed Northern Ireland Water's water treatment facilities, and the reservoirs sit with those. Ballinrees, for example, has 18 sources of abstraction, all of which work in a slightly different way depending on how the abstraction facilities were engineered. We are reviewing those licences in line with the water strategy to ensure that we fully understand how the mechanisms work.

It is a good question. The number of days to bring it down depends on how much you release. How much you release depends on the capacity of the system below to carry the water safely to, for argument's sake, the sea. If you are draining through Bangor, the last thing you want to do is wash most of it away.

There are both quantity and quality aspects. That is why we asked the company to recognise that it will draw down into supply as much quality water as possible and do so very slowly, either through the scour valve or — SEPA suggested this — possibly a siphoning system, whereby a pipe would be designed to take a certain quantity primed and draw that down using gravity. You would draw from the top-down, so if it came to a point where dissolved oxygen levels or sediment were becoming problematic, you could stop it.

The other issue that we asked it to explore was whether the depth of the water at that point could allow for an engineered solution around the tower itself, such as cofferdamming, whereby you would pump the water out and back in again. In that way, you could contain the water while you worked on dry land.

What we are looking at is preventative. Setting aside the planning issue, if a private reservoir owner were to do this activity so that they could bring their reservoir back into use, there is a template here for how they would do it in a manner that would not give rise to flooding downstream and pollution issues. If your neighbour has a fish farm that requires good, clean oxygenated water and does not like sediment, the last thing you would want to do is put their business out of action as a result of this. We have a responsibility under our legislative powers. However, there is a balance to be struck between the needs of industry and the needs of the environment. That is what we are trying to strike: the right balance.

Mr Swann: Do you have any idea — this may be outside your remit — about cofferdamming?

Mr Close: I am not an engineer. That is the suggestion. To be honest, it may or may not be practical. It may be very expensive, so, again, a private individual, Northern Ireland Water or others can challenge it. To be honest, the guidance is guidance as an authorisation. We are here to assist and support the activity so that the assets can be brought back into use. If the scour valves are not operating — they will be used in the event of something happening to the impounding structure; that is where you release the pressure — and are not fit for purpose, I would not like to say what would happen. What I am saying is that we would like to facilitate that work.

Mr Byrne: Have we had recent examples of where the decommissioning of a reservoir has posed difficulties such as stratification or otherwise?

Mr Close: I have never come across that — ever.

The Chairperson: So there has been no decommissioning of any reservoir.

Mr Close: Northern Ireland Water has indicated that it does not use a number of reservoirs. In those instances, it has looked at the reservoirs' intake and return back to the natural environment and has struck a balance. The reservoir is not acting as a supply but is still acting as a diversion of water. In many ways, the reservoir itself is intake [*Inaudible.*] and the [*Inaudible.*] is out. They have operated for 50, 60 or 70 years and have therefore become waterways in their own right. If we were to insist, under legislation, that that had to stop, you would have to demonstrate that there would be more environmental benefits as a result of taking something offline. Hence, Northern Ireland Water's looking for recreational use of those assets and retaining ownership still gives it the opportunity, in the future, to access that water in the event of a problem, such as a drought.

The Chairperson: You talk about your guidance, and I am sure that it would be in the best interests of all the reservoir managers and owners to use that guidance for this sector of people, habitat and everything else. However, in the Bill —

Mr Close: It does not sit in the Bill.

The Chairperson: The question is this: should it? If the Bill forces a reservoir manager into action, one way or the other, and although they do not damage the actual structure of the dam or reservoir, they may have an indirect effect on someone. Is that a blind spot? Is it new legislation? Is it something that is governed by other law?

Mr Close: That is an interesting point. I am not sure.

Mr Davidson: From an area of special scientific interest (ASSI) conservation point of view, it is not a blind spot, mostly. I say "mostly", but I might come back to that. If a reservoir is designated as an ASSI, the owner is legally bound to notify us of their intentions. If there is an ASSI downstream, a private landowner is not obliged to notify us if they are changing an operation. However, if it is a publicly managed reservoir, or if a public body is giving permission for a draw down or some sort of change, we are routinely notified. That is a legal requirement. Our environment order, through the ASSI framework, gives protection to the environment. There is also protection for protected species. People are not allowed to harm protected species such as bats or otters knowingly. There could be bats, for example, in disused pipe work. They could get washed out if the pipes were suddenly opened. Otters could get washed out if there were floods. Outside that, it is an interesting question.

The Chairperson: What about badgers?

Mr Davidson: Badgers' setts could get flooded out. One of the best practice recommendations is that the controlled discharge mimic, as far as possible, a natural flood. Otters are used to natural floods, but a sudden and extreme event would be bad for many reasons, not just for wildlife; it would be bad for public safety.

Mr Close: I am not competent to talk on built heritage, which is another directorate in the NIEA, but there are other structures that you would need to take into consideration, such as crannogs. If you drop the level of a reservoir, a crannog will dry out. They are internationally important. Then you have terrestrial ecosystems or wetland features, which may be protected under legislation. Once the level drops, it takes a year or two to empty and fill. In that time, you could lose habitat or bryophytes. It is a complicated scenario, but that is why consultation and working with the agency will be important at the

pre-application planning stage. When a panel engineer recommends action to a private owner, an informative signposting to us would be useful. Perhaps we could talk to Rivers Agency about that afterwards.

The Chairperson: Yes, to me, that is a blind spot. If a panel engineer who is competent in his field tells a reservoir owner that they must do a, b and c, he will not necessarily know the impact that that will have.

Mr Close: Yes. I accept that point.

The Chairperson: OK. There are no further questions. Thank you very much for your time, your presentation and your answers.