



Committee for Infrastructure

OFFICIAL REPORT (Hansard)

Flood Management Plans, including
Reservoirs: DFI Briefing

2 December 2020

NORTHERN IRELAND ASSEMBLY

Committee for Infrastructure

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Members present for all or part of the proceedings:

Miss Michelle McIlveen (Chairperson)
Mr David Hilditch (Deputy Chairperson)
Ms Martina Anderson
Mr Roy Beggs
Mr Cathal Boylan
Mr Keith Buchanan
Mrs Dolores Kelly
Ms Liz Kimmings
Mr Andrew Muir

Witnesses:

Mr Damian Curran	Department for Infrastructure
Mr Jonathan McKee	Department for Infrastructure
Mr Mark Stranaghan	Department for Infrastructure

The Chairperson (Miss McIlveen): We welcome Jonathan McKee, director of rivers; Damian Curran, acting director of water and drainage policy division; and Mark Stranaghan, head of flooding and drainage policy. You are very welcome. If you would like to start with a brief overview, members will follow up with questions.

Mr Jonathan McKee (Department for Infrastructure): Good morning, Chair and members. Thank you for inviting us to present some detail on the Department's work in developing and implementing the flood risk management plans. I would also like to present some of the issues and proposed next steps in relation to reservoir safety and flood risk.

Damian heads up our water policy division, and he will begin by giving an overview of how the flood risk management plans have been developed and some legislative issues in relation to reservoirs. I will follow up with an overview on the Department's operational management of flood risk, the implementation of the flood risk management plans, and some of our ongoing reservoir-related work from an operational perspective.

Mr Damian Curran (Department for Infrastructure): Just as Jonathan described, I would like to give the Committee further context on policy and legislation in relation to the flood risk management plans and the Reservoirs Act (Northern Ireland) 2015, for which the Department will soon be taking statutory responsibility.

I will turn first to the next cycle of the flood risk management plans. The requirement for the plans is within the European floods directive, which is to provide a consistent approach to the assessment and

management of flood risk. The requirements of the directive are enshrined in law here by the Water Environment (Floods Directive) Regulations (Northern Ireland) 2009. Flooding can have devastating impacts, so protecting the needs of the community is at the heart of the floods directive approach. It aims to manage and mitigate the adverse consequences that flooding may have on elements of society, including human health, the environment, cultural heritage and economic activity. The Department is the competent authority for implementing the directive in Northern Ireland, in partnership with a number of statutory bodies, including Northern Ireland Water and councils.

There are three stages to the implementation of the floods directive. The first is completion of the flood risk assessment. That is the Northern Ireland flood risk assessment 2018, which assessed the areas thought to be of greatest risk. Those are identified as areas of potential significant flood risk. The second stage is preparation of flood hazard and flood risk maps for these areas. The third stage is preparation of the flood risk management plan, and that includes objectives and measures to manage potential flood risk in each of those areas.

The Northern Ireland flood risk assessment is a technical report, published in December 2018. It is a high-level analysis of the economic, social and environmental impacts that could result from flooding. It included a review of something called the preliminary flood risk assessment in 2011, and it uses the Department's flood maps to identify which areas are at risk of fluvial or river, coastal, and pluvial or surface-water flooding. Those assessments are carried out in a six-year cycle, which allows for the inclusion of new and improved information. This next six-year cycle of the flood risk management plan will cover the period 2021-27. The draft flood risk management plan is due to be issued for a six-month consultation from 22 December, with publication of the final flood risk management plan by 22 December 2021. So it is a one-year process of consultation, review and finalisation of the plan. The flood risk management plan will highlight the flood hazards and the areas of potential significant flood risk in Northern Ireland. The plan will identify the objectives and measures that will be undertaken to manage the risk of flooding and set out how the relevant authorities will work together with the communities to manage those flood risks. That will follow the 3Ps approach of prevention, protection and preparedness, and Jonathan will expand on the practical application of that later on.

The flood risk management planning process will help the Department and others to understand the potential impacts of flooding and will inform where measures to manage flood risk will provide most benefit. There is much data analysis and reporting involved in the process of delivering these plans and in meeting the terms of the floods directive.

I want to give the Committee an overview of the consultation process, because that is an important step in shaping the management of flood risk throughout Northern Ireland over the six-year life cycle of the plan. The consultation will give organisations and individuals the opportunity to influence the plan, and it is important for the Department to take on board any of the ideas and comments that they might have. It is a public consultation, as required by legislation, and, through it, we hope to engage with all interested parties, particularly those communities that are affected by flooding.

I also want to give a sense of the scale of flood risk in Northern Ireland. Our data shows that approximately 45,000 — 5% — of the 861,000 properties in Northern Ireland are located in areas that are at risk from flooding during an event that has a medium probability of occurring, and I will explain medium probability shortly. To give a bit of context, I want to compare that stat with the figures from England, where there are about 5.2 million properties. One in six properties there are at risk of flooding, so that is over 16%. A medium-probability event is where the probability of a river flooding is described as a one-in-100-year event; coastal flooding is one in 200 years; and surface water flooding is also one in 200 years.

There has been analysis of the economic costs of flooding, and, naturally enough, these can be significant. If flooding were to occur simultaneously in all the areas predicted to be at risk of river, coastal or surface water flooding, as identified in the Northern Ireland flood risk assessment, the estimated average economic damage is £56 million in a given year. There is also potential immeasurable social harm and damage to how people live, so it is significant.

On the flood risk management plans, I want to finish this part by referring to climate change. There is information in the briefing on climate change and how that has been considered. To rehearse that, climate change has to be considered in the development of our flood risk management plans, and, in February 2019, the Department introduced new technical flood risk guidance in relation to allowances for climate change. That guidance is now used by officials to inform allowances to be made for climate change in the design of flood alleviation and drainage infrastructure schemes. The guidance is forward-looking in that it looks forward to the end of this century in terms of allowances to be applied

for potential increases in river flood flows, sea level rise and surface water flooding due to higher rainfall intensities.

I will now take the Committee on to the Reservoirs Act (Northern Ireland) 2015 and give a brief overview of the purpose and commencement of that Act. The core purpose of the Act is to provide powers for the regulation of reservoir safety in Northern Ireland. It will introduce a proportionate regulatory framework for the management and maintenance of reservoirs that are capable of holding 10,000 cubic metres or more of water above the natural level of the surrounding land. They are defined as controlled reservoirs. In terms of scale and context, at the minute, there are considered to be around 179 controlled reservoirs in Northern Ireland. However, that number might change and vary as the process of registering these reservoirs commences under the Act.

Who owns these 179 reservoirs? Currently, 89 of them are owned by Northern Ireland Water, and 29 of them are owned by other public sector organisations. There are 48 in the private sector and 13 in the not-for-profit sector. It is estimated that 83,000 people live in the inundation zone of these reservoirs. To give further context, the 10,000 cubic metres capacity volume threshold was set by reservoirs engineers. That is generally considered to be the volume above which, if there was an uncontrolled release of water as a result of dam failure, there would be the potential to result in loss of life and/or significant damage to property and the environment. The purpose of the Act is as a response to that risk. It introduces a management regime to protect people, the environment, the economy and cultural heritage from harm due to dam failure.

Who is going to be held responsible under the Act? The Act provides that a reservoir manager is responsible for reservoir safety. Generally, the reservoir manager is the person who manages or operates the reservoir. If no one manages or operates the reservoir, by default, the reservoir owner is the reservoir manager. The Department has identified most of the reservoir managers of the reservoirs that fall within the scope of the Act. However, we need the implementation of the reservoir-owner-registration process before we have full visibility of this.

I will bring you on to the commencement of the Act and how that is intended to run. The Committee might be aware that statutory responsibility for the Act remains with DAERA. The Act was left out of the Departments (Transfer of Functions) Order 2016, which dealt with the restructure of the Departments. However, this year, our Minister wrote to the AERA Minister agreeing to the transfer of the Act to the Department. The Executive Office is currently processing a transfer of functions order through the Assembly. This process was expected to complete by mid-December, but the latest information, as of yesterday, is that it is likely to be early in the new year. Following completion of that process, for commencement of the Act, our Minister will consider introduction of the orders and regulations required to implement the key reservoir safety regime, which is provided by the Act and based on industry best practice, for the management and maintenance of reservoirs.

I will give the Committee a flavour of what the safety regime means. The system includes registration, which is the first stage of the process. It compels reservoir managers to register the reservoirs. Secondly, there will be a process of designation. Following registration, the Department will give the controlled reservoir a designation of high consequence, medium consequence or low consequence. There will need to be regulations around supervision. A reservoir that is designated as high or medium consequence must be supervised by a supervising engineer. There will then be the inspection stage where high- and medium-consequence reservoirs will be inspected by an inspecting engineer. An inspecting report will be provided to the reservoir manager and the Department, identifying the measures required in the interests of safety. The measures required in the interests of safety will be the key report. The reservoir manager must undertake those safety actions as directed under the supervision of the inspecting engineer. The inspecting engineer will then provide the necessary certificates to confirm completion of that process. The Department is also establishing a panel of reservoir engineers and will appoint engineers to those panels as recommended. These will be suitably skilled and recommended engineers who have been qualified by the Institution of Civil Engineers.

This is a big piece of legislation. Other associated sections and regulations will be required to assist reservoir managers to comply with or implement the management regime. Information will be provided in relation to, for example, registration, the dispute referral process, forms, content of notices, certificates, reports, and emergency response; these all require regulations to be made.

The designation of the reservoir as high, medium or low consequence is also an important step, because that determines the level of regulation and management required in the process, as I described, with most focus being placed on high- and medium-consequence reservoirs. The criteria

for designating a reservoir is based on the potential for adverse consequences for human health and life from the uncontrolled release of water. Naturally, any reservoir with potential for an adverse risk to human life will be designated as high consequence and will require the appropriate level of scrutiny and oversight.

I will finish by referencing the financial assistance and grant-making powers. The Reservoirs Act provides a power to bring such grant-making powers forward by regulation. Our Minister is minded to give consideration to a grant scheme for reservoir managers. That will require a number of considerations. It might be a time-bound capital grant, for example, where the Department pays a contribution of capital costs for safety-related work on reservoirs. We are in the process of working through an appropriate business case. We will need to consider the available funding. We need to look at the options and get proper consultation, analysis and support.

I will hand back to Jonathan. Thank you for your time.

The Chairperson (Miss McIlveen): Thank you.

Mr McKee: Thank you, Damian. Damian has outlined the work that the Department is taking forward to develop new flood risk management plans, but there is an existing suite of flood risk management plans that cover the period from 2015 to 2021. Those plans outline all aspects of flood risk management, focusing on three main themes or pillars that underpin our flood risk management work: prevention, protection and preparedness.

Prevention is our work in advising planning authorities on development proposals that are being considered. The key objective there is to avoid development in known areas of flood risk. Planning and flood risk policy here is recognised as very robust. It is one of the reasons why there are fewer properties here in known areas of flood risk than there are in England, for example. This is an area of work that has grown in recent years. Since 2011, there has been an increase of between 200% and 300% in the number of planning consultations that we deal with. It is very important work because avoiding development in known areas of flood risk reduces not only the flood risk but the need for flood alleviation infrastructure. To improve our performance in responding to planning consultations, at the end of last year, we augmented our planning team in rivers. We are seeing a significant improvement in consultation response timeliness. However, a further increase in planning consultations could adversely impact performance. An increase in the number of consultations is possible as we move towards using climate change flood maps, as opposed to present day flood maps, for development management, and climate change flood plains being included in the councils' local development plans.

The next of the three main pillars that underpin our work is protection. At the heart of that is the development of flood alleviation schemes and the maintenance of our drainage infrastructure. To give a sense of scale, we have approximately 70 projects on our capital works programme. Investment of about £130 million would be required if all those projects were to be taken forward simultaneously. One of the largest schemes that we are working on is the Belfast tidal flood alleviation scheme. It is estimated that that scheme will protect about 1,500 properties at coastal flood risk and will cost about £18 million. It is hoped that that scheme will be on-site in the summer of 2021.

Other areas where significant projects are being developed include Newry, Portadown, Drumahoe, Eglinton and Derry. Those are just a few; there are many other locations on our capital works programme. The Newcastle flood alleviation scheme is also due to go to tender in the near future. As the Minister has asked, we are doing all that we can to accelerate the delivery of that project. We also undertake a significant amount of maintenance on our watercourses and flood defences. This year, we plan to undertake approximately 6 km of repairs to culverts, sea defences and fluvial, or river-related, defences. In addition, we inspect and maintain, as necessary, around 900 urban watercourses and 350 rural watercourses.

The third main pillar in the management of flood risk here is the theme of preparedness. That includes our operational emergency response, which involves our own direct labour force. We are fortunate that we have our own staff who can carry that out; they understand the importance of emergency response and where our critical infrastructure is and can respond in a very timely way. As we all know, flooding events can be of such a scale that they overwhelm the resources of the Department. Therefore, we have a very important role in fulfilling the role of lead Government Department, which means that we provide the expertise that allows all of the other response organisations to respond in a cohesive way and make best use of the combined resources of Government to help in times of emergency.

We also have, in conjunction with local government, led a regional programme of community engagement, which is to help local communities develop their resilience in areas of known flood risk. There are over 31 areas where that approach has been used very successfully. That work has developed very well in recent years; it is well recognised both here and in England, Scotland and Wales as being a good example of how to undertake that type of community engagement work. We are using our relatively small regional size to our advantage.

One of the novel approaches that we have recently developed to manage flood risk here is the homeowner flood protection grant scheme. The aim of that scheme is to encourage the owners of residential properties to modify their properties to make them more resistant to flooding. A project evaluation of that has demonstrated that the scheme provides value money and that there is a need for, and benefit from, a property level protection grant scheme. The scheme continues while we consider what the next steps should be and what should be included in any substantive scheme that the Minister may wish to take forward.

In terms of some other operational responsibilities that we have had to take forward in recent times, safety issues in absence of the full commencement of the Reservoirs Act is an area that we have been focusing on. As part of that, and in the interests of public safety, we wrote to the managers of some reservoirs, most recently in May of this year, to remind them of their common law responsibility to ensure that their reservoirs are in a safe condition.

Urgent interventions are required in at least nine reservoirs. The Department has engaged with the managers of those reservoirs, where possible, on the engineers' recommendations that need to be taken forward. However, not all managers have responded positively; issues remain, and there is most definitely a need for the full commencement of the Reservoirs Act.

Planning and reservoir issues concern some members, and rightly so. Planning policy here includes the effective management of development in the inundation areas of controlled reservoirs. However, a developer must demonstrate that the condition, management and maintenance regime of the reservoir is appropriate to allow the development to proceed.

In order to be as pragmatic and helpful as possible, we have worked closely with local planning authorities and other officials in the Department to develop short-term approaches, one of which is the development of a process known as the responsible reservoir manager status. That allows reservoir managers to comply voluntarily with the provisions in the Act. If they obtain that status for their reservoir, it will allow a positive planning consultation response.

There will always be future flood-risk management challenges, regardless of how much we do and how well we do it. Of all those challenges, perhaps the biggest of all are extreme rainfall events — a large amount of rainfall falling over a short period. That is still a key area of concern, not just here but in many other countries. The exact locations of heavy, thunderous downpours, such as those that were experienced in the north-west in August 2017 and in Newcastle just this year, are very difficult to predict. Forecasting of that weather tests the abilities of the world's best forecasters and the extremely complex forecasting models that are available to them. Therefore, a risk remains that a very severe weather incident could overwhelm the capacity of infrastructure and the combined resources of government organisations to respond to such an emergency. Nevertheless, we continue to do all we can to reduce that risk here, and we use to maximum benefit the variety of approaches and measures that I have mentioned.

Thank you for allowing us to outline some of our work.

The Chairperson (Miss McIlveen): Thank you for that very detailed briefing. It is very much appreciated.

Mr Boylan: Chair, I have family members who work in the Rivers Agency.

The Chairperson (Miss McIlveen): Are you declaring that as an interest?

Mrs D Kelly: Ho ho! *[Laughter.]*

A Member: There will be questions to you.

Mr Boylan: I had better put that on record, just in case. I will just say "relatives" — no names.

Mrs D Kelly: We used to call them "Ministry men".

Mr Boylan: We used to call them "Ministry men" back in the day, yes.

The Chairperson (Miss McIlveen): Your interest is declared. Now I have lost the run —.

Mr Boylan: Sorry, Chair.

Mrs D Kelly: Can I just ask about the standard of the workforce?

The Chairperson (Miss McIlveen): OK. Thank you very much. I remind members that we need to leave the room by midday.

You mentioned a number of flood alleviation schemes that are moving towards commencement. We all saw the devastation caused by flash flooding in the Newcastle area recently. The Belfast tidal scheme is probably the one closest to commencement. It has an anticipated commencement date of spring next year. How long will that project take?

Mr McKee: It will take at least a year. The contractor has to undertake a design element, and once they commence on site, it will take at least a year, or two, to develop the scheme.

The Chairperson (Miss McIlveen): You referred to other schemes, Newcastle being one of them. When is that anticipated to start?

Mr McKee: Newcastle's programme will commence on site in the summer of next year. However, as I mentioned, the Minister has asked us to accelerate the scheme, as far as possible. It is due to go out to tender in the near future, and we are looking at how we can reduce not only the length of time to get it onto site but the time it will take to develop.

The Chairperson (Miss McIlveen): You mentioned the homeowner flood protection grant scheme. You see that as value for money, and there are benefits that flow from it. However, homeowners are only encouraged to take part. What are the barriers to participation in that scheme?

Mrs D Kelly: Knowing about it.

Mr McKee: We have publicised the scheme through a number of channels, including our engagement with communities at known flood risk. We have made a significant number of people aware of the scheme. Some homeowners feel that their 10% contribution to the scheme is prohibitively high. Another feature of the scheme is that, if protection measures around the property cost in excess of £10,000, the homeowner has to pay the full cost of that excess above £10,000. In a number of cases, that has also been a limiting factor. Where homeowners have availed themselves of the scheme, the general consensus is that it is worthwhile and gives peace of mind that, should flooding occur in the future, their home will be protected to a greater level than it was without the grant scheme.

The Chairperson (Miss McIlveen): If homeowners take up the scheme, is there a benefit to them in insurance costs?

Mr McKee: It is not universally accepted by the insurance industry that those who have availed themselves of the homeowner grant scheme will pay a lower premium. However, it is certainly information that they should pass on to their insurance company, and it may be that particular insurers take that into account and reduce their premium.

As well as that, homeowners can avail themselves of a product called Flood Re, which is available here and has been developed to allow homeowners in a flood risk area to access home insurance more readily and on a more affordable basis. We work closely with the Department for Environment, Food and Rural Affairs (DEFRA) in England to make sure that that scheme is applicable here. Quite a few insurance policies have availed of that, since the scheme began in 2016.

The Chairperson (Miss McIlveen): Could you provide the Committee with more information on that scheme and its uptake?

Mr McKee: On the grant scheme, Chair, or —?

The Chairperson (Miss McIlveen): Yes, the flood protection grant scheme.

Mr McKee: Yes, I can. In broad terms, the grant scheme —.

The Chairperson (Miss McIlveen): I am happy for you to supply that in writing, if that is OK.

Mr McKee: Absolutely. Yes. We can do that in writing.

The Chairperson (Miss McIlveen): OK. That would be useful.

I will move on to ask about the reservoirs. Obviously, the legislation has been long awaited. Although it has not been commenced, as you said, planners are taking it into consideration and that has caused considerable challenges for development. That, alongside issues around Northern Ireland Water, has choked development in many towns and villages.

Will you give me more information on an anticipated timeline for the commencement of the orders? We will have to go through a period of consultation, and I am mindful of the fact that there could be a considerable number of them — I would like you to share that number. Are they likely to be brought through as one, or will we have a drip feed of statutory rules (SRs) over a protracted period?

Mr Curran: I will ask Mark to come in on the timeline. On the commencement of the Act, our Minister is minded to stand up its key safety elements. That will be our priority in bringing forward the orders and regulations: to stand up that process and to take it forward. I will ask Mark to take us through the proposed timeline.

Mr Mark Stranaghan (Department for Infrastructure): We expect that an SL1 will go to the Committee around March. A consultation document will then be issued, and there will possibly be a targeted consultation. Following that, we hope to make negative resolution commencement orders and the draft affirmative resolution commencement orders around September or October. Of course, there will also need to be negative and draft affirmative regulations. We hope that they would be made around November or December next year.

The Chairperson (Miss McIlveen): Will that primarily be about getting it started and dealing with the safety aspect, without looking at the designation, supervision, inspection and so on? Will that come after that?

Mr Stranaghan: Absolutely. If we get through that timeline, in January the following year, we will be looking at the registration — reservoir owners have six months to register — and we will then get into the designation and so forth.

The Chairperson (Miss McIlveen): OK. We are talking about moving towards the next mandate before it will be in place.

Mr Stranaghan: Potentially.

Mr Curran: Yes. It will take time potentially. It is a significant piece of legislation.

The other thing to add for the Committee's attention is that taking it forward will place an additional burden on the Department's baseline resource. It will require effort, people and expertise to help us to bring it forward. We will work in the Department and with the Minister to secure that resource. It is a significant piece of work. It is important to state that our Minister recognises that it is about the safety of people and the environment. It is something that we are trying to get after to commence. We have a timeline and a process that we need to follow to allow us to take the orders and regulations through the necessary channels.

The Chairperson (Miss McIlveen): OK. Finally, what concerns me from your briefing is that you have identified that at least nine reservoirs require urgent minimum intervention. Furthermore, not all the managers whom you have contacted have responded positively, and you still have issues in and

around that. I appreciate that action is limited in the absence of the legislation, but, at the same time, problems are, clearly, not being addressed.

Mr McKee: Chair, I will come in here from the DFI Rivers perspective. We have been engaging with the managers of those reservoirs where we can. A couple of reservoir managers do not acknowledge that they own or manage the reservoir. We are investigating whether any other enforcement powers may be available to us to try to get at least that minimum level of work undertaken. We have commenced that process and are taking legal advice on that. It is a very slow process. Certainly, if we use something like the drainage order, for example, that is not what the primary function of that order was ever intended to do.

Some managers of the nine reservoirs have responded positively and have agreed to undertake the works. Some of them actually have the works completed. We are very much aware of the issues. We are doing all that we can to try to close down that risk. However, it is fair to say that, in the absence of the legislation, a risk does remain in relation to reservoirs and flood risk.

Mr K Buchanan: I have a couple of quick questions, gentlemen. The Chair talked about the homeowner flood protection grant scheme. Am I correct in saying that the scheme covers only the actual dwelling and not the perimeter of the dwelling?

Mr McKee: Yes. The scheme is designed to protect the dwelling. There may have been some discussions about certain dwellings where it had been proved that the house could have been properly protected safely at the perimeter. That may have been considered as part of an overall discussion. However, the principal objective of the scheme is to apply products to the home.

Mr K Buchanan: Is that something that you could look at, Jonathan? In my area, I know of one person who had to build a wall and one who had to build a bank, at considerable cost. It was more cost-effective for them to do that than to put something on their dwellings, because that would not have stopped the problem. However, they could not avail themselves of any support. Can you look into the possibility of developing it to include the perimeter of the dwelling? Obviously, that would work better in rural areas than it would in urban ones.

Mr McKee: We could look into that. There are some limitations in what we could do. Obviously, we would be bound by the Department's best use of its finances in relation to the grant scheme. However, we could certainly look at that, yes.

Mr K Buchanan: On the Chair's point — she took all my questions — about reservoirs, is there any risk to life or property at the minute from those nine reservoirs that you mentioned?

Mr McKee: Property is located in the inundation zone of almost all reservoirs. Therefore, with that, there is a risk to life and property if a reservoir were to catastrophically collapse or fail. It was with that in mind, those years ago, that the need for the Reservoirs Act was brought forward. That is why the Department has taken forward what it has done to try to address those issues in the absence of the Act being fully commenced. However, there is a risk.

Mr K Buchanan: Is there a greater risk or considerable risk with regard to those nine reservoirs? What are they on your risk register; high, medium or low?

Mr McKee: We have looked at those reservoirs. We have actually employed specialist reservoir engineers to look at them. Their view is that they are in either poor or very poor condition, and that urgent action needs to be undertaken to reduce the risk. That is the language that they use to describe the risk. Since we have had possession of that information, we have approached the managers of those reservoirs, where we could, with a view to them undertaking the works that they need to do to try to reduce the risk of flooding and for safety issues.

Mr K Buchanan: My final question is on flood risk. Obviously, you know that councils liaise with you on the flood risk in an area. The applicant does not always like what they hear, and they get their own flood risk assessment done. What communication is there between the council and the Department with respect to an individual's getting their own flood risk assessment done? How does that tie up?

Mr McKee: Very often, if a developer wants to undertake their own flood risk assessment, and, perhaps, even to challenge the Department's view on the flood risk that pertains to their site, they

would engage directly with our staff in the advisory unit. That would then be taken into account in any planning consultation response that we might give.

Mr K Buchanan: OK. Thank you.

Mr Muir: Is it possible that you could name the nine reservoirs where urgent intervention is required?

Mr McKee: Not off the top of my head, no, but I could provide that information if it is needed.

The Chairperson (Miss McIlveen): That would be helpful.

Mr Muir: It would be useful if you could provide that information to the Committee. Have the people who are living at risk of flooding been advised of that risk?

Mr McKee: We have engaged with the councils as part of our emergency planning processes to advise them of the condition of the reservoirs in each council area and to make sure that they are fully sighted on the risk that is presented, but individual homeowners have not been advised, no.

Mr Muir: Would it be good practice to advise them that that risk exists, especially since some reservoir owners are saying that they have no responsibility around it all?

Mr McKee: We do not normally advise individual homeowners about flood risk from any source. We deal with that through our well-established emergency planning processes, so that, if a situation was to develop, we would know how to respond with our multi-agency partners to get that message out in a timely fashion.

Mr Muir: I am concerned that we have quite a serious issue here that needs to be addressed. I welcome what you said about the potential for grant funding. What are the timescales around that? Rectifying some of these reservoirs will require giving grant funding to the owners, and we will need to bring that forward as soon as possible. Is there any idea of outline timescales for when that grant funding will be available?

Mr Stranaghan: We need to make the regulations before we can introduce the grant programme. As we have outlined, under the indicative timeline, regulations would not come in until the end of next year, so the earliest that a grant programme could kick in would be January of the following year, and that is subject to the timeline.

Mr Muir: OK. I am very concerned about the delays around this. For the transfer of functions to take place, you required the Assembly and Executive to be restored. That occurred in January. Why is there delay in the transfer of functions?

Mr Curran: There has been a process in which the Minister of Agriculture, Environment and Rural Affairs has had to agree to release the responsibility for the Act, our Minister has had to agree to accept the Act and the Executive Office has had to process the transfer of functions order, and that takes time in terms of briefing, scheduling and, indeed, scheduling time with the Assembly. Our latest information is that the process should, hopefully, be complete by early in the new year — January.

Mr Muir: Frankly, it defies belief that it takes a year to do it. I know that government moves slowly in Northern Ireland, but a year to transfer the functions — I am sorry, but that takes me to the town.

This is my last question. Flooding occurred in the north-west in August 2017 and in Newcastle in August this year. Were any lessons learned from that and, if possible, could they be shared?

Mr McKee: Yes. After the flooding in August 2017, a very comprehensive multi-agency review was undertaken, and 14 recommendations were identified to further improve our emergency response and wider issues in relation to flood risk. Those recommendations have all been progressed, and 10 of them have been completed. After the Newcastle flooding, there was a multi-agency debrief, and the lessons that could be learned as a result of that incident have been captured with a view to building them into our existing emergency response procedures. We can share with the Committee the north-west review recommendations and some of the key learning from the Newcastle flooding multi-agency debrief.

Mr Muir: Thank you. It is important, Chair, that we get a list of those reservoirs.

Mr Hilditch: In 30 years as an elected representative, I have seen the good, the bad and the ugly of flooding over the years. The Joymount flood alleviation scheme in Carrick was a great success in alleviating the problem in the town centre. Off the top of my head, the last three, four or maybe five flooding incidents that I have been involved in, as an elected representative, have been down to human failings at a certain level of officialdom, wherever that might lie. For instance, when a new development is built on a hill above other housing, a hard surface is created, and, if not enough gratings or drains are put in, the lower development will be flooded. This year, the Minister had to step in to rectify a case like that.

Other issues include developments that feed into other developments where the pipes do not get smaller as they go forward. The first phase of development has a smaller pipe, and the second phase may be slightly bigger. There have been a couple of incidents this year where bigger pipes have fed into smaller diameter pipes and caused floods. That is down to planning and consultation. Who polices that type of issue? If departmental officials make a recommendation to planners is that the end of your responsibility, or do you keep an eye on issues that may create potential flood areas?

Mr McKee: We provide advice on flood risk to the planning authorities, and, as part of that, there will be an assessment of surface-water flood risk or the risk from rivers or the sea. We will comment on whether the developer's proposals are acceptable from a flood risk point of view or otherwise. As the developer goes forward and undertakes what has been agreed, the responsibility for policing that falls to the planning authorities.

In the scenarios that you talk about, where some developers have larger pipes upstream than the pipes that are downstream, it may be that larger pipes are put into some developments upstream to attenuate or hold water in those pipes so it can be released slowly downstream as part of a storage solution. Whilst it is counter-intuitive, perhaps, to have larger pipes upstream, sometimes that will happen as part of a wider approach to store water that is discharged under gravity at a slower rate when the peak of the storm has passed.

Mr Hilditch: The pipes in the lower developments can, potentially, become blocked more quickly and cause a problem as a result. The pipes need to be maintained as well.

Mr McKee: Yes. If it is a designated watercourse and the culvert is designated, the Department makes a cyclical inspection of the watercourse and carries out whatever maintenance is necessary. If you have a particular watercourse or development in mind, we would be very happy to look at that with you.

Mr Hilditch: I have to be honest. The drainage guys are based in Lisburn, are they not?

Mr McKee: Yes.

Mr Hilditch: They have been very helpful and very good in some places. Is it also correct that, where there is a drainage system running underneath a house or its grounds, the owner is responsible for making sure that the drain is operating correctly?

Mr McKee: If the drain is not a designated watercourse, the maintenance responsibility will fall to whoever owns the property through which it runs.

Mr Hilditch: OK. Thank you.

Mr Boylan: Jonathan, Mark and Damian, you are very welcome. I have a couple of points. There has been a legal challenge to the process for the Belfast tidal scheme, and it has been set aside. Can you elaborate on that? Are you allowed to speak about that?

Mr McKee: I can elaborate a little bit on it. A legal challenge was brought by an economic operator that was not included in the select list to be considered and issued with the tender documents going forward. The legal challenge brought about an automatic stay to the procurement process that would have inevitably delayed the full procurement of that project and its commencement on site. Subsequently, Belfast city centre would have been exposed to a longer period of flood risk from the sea. On balance, it was felt that it was best to set aside that issue and to progress with the

procurement. That is what we have done, having received legal advice on that point, with a view to progressing the project as quickly as possible.

Mr Boylan: This question is for Jonathan or Damian. Brexit has meant that some of the European regulations on flooding have been transposed into local regulations. Is the Department happy to follow those regulations? What assurances can be given that a high standard has been set?

Mr Curran: Those will continue, certainly once the transition phase ends. It will be over to the UK Government in terms of what legislation and alterations to regulations they bring forward at the end of the transition phase. Clearly that will be something that we will be conscious of, and I guess that the Committee and the Executive will be keen to react to and to be part of that, as it develops.

Mr Boylan: Jonathan, you will know Clay Lake in Keady very well.

Mr McKee: I do.

Mr Boylan: Mr Buchanan raised a point earlier about developers and flood risk assessments. Some of them are not that keen, and they find out when they go through the process. I mention my town because it is easily understood. The lake is nearly a mile outside the town, but, at the far end of the town, they have to do a flood risk assessment — a mile away. I am not arguing that point, but clearly the developers are finding out about that only when they put in an application, which is grand.

My main point is that, obviously, we are doing the local development plans now. What are you doing in working with the councils in the development of the local area plans? Each area plan will indicate the number of housing units that will be built over the next, say, 10 to 15 years. Is that message getting out there to developers? Is it part of the new process to make sure that the message gets out there? I understand the flood risk issue, but what engagement and discussion are you having as part of the area plans?

Mr McKee: We have very good engagement with all the planning authorities on the development of their local development plans. We have a designated officer in Rivers who engages with all the councils. We provided guidance to them in relation to flood risk policies that should be contained in the local development plans and, obviously, our flood maps are shared with them — present-day and climate change maps. We have been able to stress to them the importance of some of our flood risk policies, so that there is no deterioration, if you like, in the policy coverage between the old PPS 15 and the move forward into the new local development plan process. That said, each council has its own autonomy in relation to what it does with our advice, but we certainly have good relationships with the councils and are able to engage very clearly with them on the importance of our policies.

You raised the point about a developer perhaps not being aware of what our requirements might be before he puts a planning application in. We would encourage developers to engage with us as early as possible. Our flood risk maps are available online. They should be able to determine quickly whether their development might be impacted by flood risk. We welcome early engagement before developers perhaps spend a lot of money assessing the flood risks for themselves or are not aware of what our requirements are before they begin the process.

Mr Boylan: OK, Chair. Thank you very much.

The Chairperson (Miss McIlveen): Ms Anderson? Sorry, you must still be on mute.

Ms Anderson: OK, that is me off mute. Thank you for the presentation and for the information that we have received.

I have previously asked about this — I do not know whether it was you, Damian, or who was in front of the Committee — because it is a bit of a bee in my bonnet. I cannot, for the life of me, understand how, when the functions were being transferred in 2016, we ended up in a situation where we had DAERA getting part of the reservoir functions that belonged with the Department for Infrastructure. I have been asking for an explanation of that, and I really would appreciate receiving that, because it has made a difficult situation worse for some of us representatives in the area. As Andrew Muir said, it is shocking that we have to wait until January — not of next year, but the following year — for a grant system to be put in place, given the planning applications that we know have been made. In each constituency, including my Derry constituency, planning applications have been made for much-

needed housing developments in the Glens in Derry, for instance, and for development in Fort George and a second Catalyst Inc building. There was a danger of even much-needed independent living facilities on the Culmore Road being refused planning permission because of the policy of catastrophic failure that seems to have been put in place with the Creggan reservoir. When that proposed development on the Culmore Road, which is a few miles away from Creggan, was assessed, it was discovered that it would have amounted to a puddle.

Coming from the north-west — Derry — as I do, I am deeply concerned about flood risks, but PPS15 does not allow for a three-tier risk assessment that would deal with the prioritisation of safety, while, in many ways, stopping the Rivers Agency making worse-case assumptions in compiling a flood risk assessment. I want an answer; as a Committee, we deserve that. How did this mess happen in 2016, when reservoirs ended up in DAERA and not the Department for Infrastructure? I am not saying that any of you are responsible, but somebody in the system is responsible for this mess, which means that it will be 2022 before a proper process is in place to allow for grants to be given to deal with the management of some of these issues and with the capital risk, or whatever is required to help to resolve some of the problems so that planning that has been applied for can be moved forward. Can we try to find that out? Can I get an answer to that? Can the Committee get an answer about what happened?

Mr Curran: It might be best if we provided a response in writing, if that is sufficient. The explanation that we can give now is that it was an inadvertent issue — error — that the Reservoirs Act was left out of the Departments (Transfer of Functions) Order (Northern Ireland) 2016. I do not know the context of why that happened, or what led up to that occurring. Yes, it happened, and I will seek to provide a better explanation, if that is OK.

Ms Anderson: I await that. It happened, Damian, and, consequently, problems have unfolded. Since TEO issued the transfer of functions, we have had to go to a number of Ministers, including the Infrastructure Minister. She is more than willing, and she needs the transfer function to take place. We have also gone to the AERA Minister to ensure that he accepts that it should be taken out, and to the two Ministers in TEO to make sure that it happens. That is the kind of thing that had to be put in place. We all know about accelerated passage and how that can be taken forward. Given that there was such a monumental mess and cock-up, we have to see how the issue can be accelerated and taken forward.

I know from my experience of dealing with the Creggan reservoir in Derry that the council is going to register to be the responsible reservoir manager, if it has not already done so, so that it can get a designation. It will be low or high, and there will be ongoing supervision. We are aware of the process that needs to take place. Development is required, be that in Fort George, on the A2, Magee, the much-needed housing in the Glens or a community centre. I could list other investment and developments, and other members could do the same.

Some support needs to be given to the council for it to take forward the work that needs to be done on the reservoir to fulfil what was put in place by the assessment about the problems that it could cause. It may not be catastrophic — in fact, not catastrophic — but problematic enough to prevent development. In that way, I do not think that the council in Derry, and, I assume, other councils that would apply for that grant, can wait until January 2022, if I heard you correctly in response to Andrew, when that grant would kick in. Are there any other possible ways for that to be accelerated?

Mr Curran: We have to step carefully through what a grant looks like. We are in the process of looking at options. Our Minister is minded to consider what those options look like. We also have to be mindful about who is eligible for the grant. That will all form part of the analysis that we will undertake. For example, an organisation such as Derry City and Strabane District Council, as reservoir owners, will clearly know that the Act is coming down the line. We can inform it of the obligations of the Act on a reservoir owner and the safety regime that is expected alongside that.

What I am saying is that there is nothing to stop reservoir owners from taking action to address safety concerns with assets that they are in possession of now in advance of the Act coming down the line.

Ms Anderson: I do not want to interrupt you, but you are probably aware, as we as Members are aware, that every council is struggling because of COVID. Councils know their obligations and what needs to be done in terms of the safety regime. They simply do not have the finances, and they are now looking for some support.

It needs a cocktail of support. For instance, I have been going to the Department for Communities — not that it is its responsibility; it is not. Even though the Department is giving over some of its assets for development, unfortunately, planning application refusal is impacting Fort George and the Glens, and it is also impacting me. It is impacting the potential development of Magee and of Derry.

We need a grant scheme for councils that are strapped and unable to take that work forward. The Finance Minister recently gave councils £10 million to help with their operational running costs and all the other functions that they need to do during COVID. It is not that councils need to understand their obligations. Councils are acutely aware of those obligations but do not have the finances, unless we come up with a cocktail of funding. If the Minister for Infrastructure is not able to trigger the grants regime, perhaps there may be another method of support to allow necessary development.

There is no point in our saying, "build back better", and having some recovery, hopefully, coming out of this virus if there is now a vaccine to give us a little bit of hope going into the future, and then we find something like a reservoir in Derry, and other reservoirs, including the nine that Andrew asked about, stopping development from taking place, stopping houses from being built, stopping any kind of

The Chairperson (Miss McIlveen): Sorry, Ms Anderson, could you bring your remarks to a conclusion? I am very conscious of time.

Ms Anderson: I am sorry, Chair, but I have been asking as a member of this Committee to try to get some answers about this, and it is something that I have really worked hard [*Interruption*] [*Inaudible*.]

The Chairperson (Miss McIlveen): I appreciate that.

Ms Anderson: I apologise for that but that is the question. I am asking whether we can come together to get a cocktail of funding for councils like Derry and elsewhere, if it is not going to be the grant.

The Chairperson (Miss McIlveen): OK. Thank you.

Ms Kimmins: Thank you for such a comprehensive presentation. My questions are on climate change, which we know has an impact on flood risk. How much of a challenge will that be for the North, where we already have significant challenges? Have we any idea how much additional investment would be needed to combat that as part of the current climate emergency?

Mr Curran: I will pick up on the points about climate change and how it is informing plans. Climate change data is changing and moving, and it is an ever-evolving piece of work. However, we are obliged to consider climate change data and forecasts in our flood risk management plans. As I briefed the Committee earlier, our flood risk management plans are on the cusp of a new cycle. We will be publishing them for consultation near the end of December.

Prior to that, in February 2019, the Department introduced new technical flood risk guidance in relation to allowances for climate change. That is being used for the design of flood alleviation and drainage infrastructure schemes. We are conscious of the issue, and it is having a practical impact on designs and planning at this time. It will be embedded further in our flood risk management plans as we look forward over the next six-year cycle. Hopefully, that gives you a brief introduction about the policy side. Jonathan may wish to say something about the practical application.

Mr McKee: Thank you, Damian. The design flows of the schemes that we are taking forward, such as the Belfast tidal and Newry flood alleviation schemes, already take climate change into account. That is based on the latest guidance that the Department has in place. We have also developed climate change flood maps, which we are now starting to use increasingly in development management and in informing local development plans.

The challenge will be that, as climate change predictions perhaps increase in future, we may have to consider greater design flows in DFI Rivers for example, which could mean that we need additional investment. Therefore, it is all the more important that we avoid development in known areas of flood risk or those that are likely to be impacted by climate change in order to reduce future flood risk to homeowners and businesses and to avoid storing up a huge capital investment problem in future as well.

Ms Kimmings: Thank you. You mentioned some of the flood alleviation schemes, but I could not hear you very well. The Newcastle one has been particularly prominent recently, and people are still waiting for the Shimna Road flood alleviation scheme to commence. Is there any update on when that can be expected? I am sorry if I missed that.

Mr McKee: The Shimna flood alleviation scheme is expected to be on site in the summer of next year, although, as members will know, the Minister has asked us to expedite the project as quickly as possible, and we hope that we can do that. It is due to go out to tender very shortly, and it is hoped that we can commence some enabling works on trees and so on in the near future. We are doing all that we can to reduce the time frame to get on site. Once we are on site, we will also try to reduce the construction time.

Mrs D Kelly: Thanks for the presentation. You will probably expect some commentary on the Reservoirs Act (Northern Ireland) 2015 on the question: when is a reservoir not a managed reservoir? The 2015 Act has had a significant impact on development in my constituency; I have raised that matter here before. I understand that some of the delays have been caused not only by COVID but by the lack of resources in your agencies for expert advice. I am aware that a panel engineer had to be brought in from England to make assessments at Lurgan Park lake. Has there been a significant shortfall in resources for the Department's areas of responsibility following, for example, some of the voluntary exit schemes from a couple of years ago? Will that experience and expertise be in-house or will it always be bought in?

Mr McKee: I will lead off on that, Damian, if that is OK. We have found ourselves dealing with a greater number of reservoirs issues in the absence of the 2015 Act being fully commenced, which we never envisaged. As well as that, some of the complications in and around planning have been very resource-intensive from a DFI Rivers point of view. That has meant that we have not had the resources that we would like in order to address some of those issues at the rate that we would like. Nevertheless, we have made progress, but we recognise that, in order to sustain that progress and to be prepared for the commencement of the 2015 Act, we need additional resource. My staff and Damian's staff have worked very closely to develop a fuller understanding of what that might be, and we have had preliminary discussions with the Minister on some of the resources that will be needed to deal with the technical and administrative issues with reservoirs as they stand and what they will be in the future.

The specific expertise that is needed to evaluate the condition of reservoirs and what works are necessary is a very specialist area of civil engineering. There is no one in the Department who has that expertise, and, therefore, it is more cost-effective for us to bring that in. There is a pool of engineers whom we can draw from to provide us with that necessary guidance and expertise, and we are able to do that. We have set up a number of arrangements whereby reservoirs that the Department manages can be inspected and maintained appropriately. Therefore, we can draw on that specialist expertise for other inspections that we want to carry out on reservoirs where we think that there may be a risk. We have access to specialist reservoir engineers, but there is most definitely a need for additional resource to manage the full requirements of the reservoir issue as it stands and the legislative piece that will go forward.

Mr Beggs: Thanks for your update. You indicated that it is an incredibly slow process to transfer the function. Given that a potential risk to life has been highlighted to us, I think that we as a Committee need to progress that matter with the Executive Office initially and, subsequently, with the Department for Infrastructure.

You indicated that nine urgent interventions are required to reduce the risks and that 26 other areas are of concern. You seem to be saying that you have engaged with the managers in those nine urgent cases where you are aware of them. Can you advise how many you have not been able to identify? Can you clarify that the owner has the responsibility? Are they not deemed to be the manager in the absence of anybody else being nominated?

Mr McKee: When the reservoir audit was undertaken in 2016, it identified 45 reservoirs that were in poor or very poor condition. We engaged with reservoir managers once we were in possession of that information to encourage them to fulfil their common-law responsibility to ensure that the reservoirs were safe. That meant that progress was made, and, ultimately, about a year or 18 months ago, we were concerned about 26 reservoirs and felt that we needed more information to understand how great the risk was around those. We carried out inspections using the specialist engineers whom I mentioned earlier, and that identified nine reservoirs where urgent interventions were needed. We

have engaged with those managers where we can. What I mean by that is that there are two managers who would dispute that they are the reservoir manager. Nevertheless, we believe that they are, and, therefore, their common-law responsibility remains. As I said, we are looking at what other legislative means we can bring to bear to enforce them in carrying out the works that we deem that they need to carry out. However, as you will all appreciate by this stage of our discussion, in the absence of the legislation, what we can do is very limited when it comes to dealing with the full range of matters that need to be undertaken with all reservoirs in the interests of safety. This is very much our exploring, to the very best of our ability, what we can do to reduce that risk.

Mr Beggs: Can you explain why there is a dispute over who has responsibility? It must be exceptionally dangerous when no one is taking responsibility in a risk situation. Is there a dispute over who the owner is?

Mr McKee: The owners, as we believe them to be, are disputing the fact that they are the owners. It is difficult for them to prove that, but, nevertheless, we are proceeding on the basis that they are the owners.

Mr Beggs: In the information that you are providing us with about these nine sites, can you identify the ones where there is a dispute over ownership? The public may be able to assist in clarifying that.

Your presentation included a discussion of the homeowner flood protection grant. I am aware that that is increasingly used in other parts of the United Kingdom, particularly because of climate change and the risk of widespread flooding, which is more difficult to predict. How widely known is the scheme among the public and, for that matter, public representatives? I was not aware of it until relatively recently.

Mr McKee: We publicise it in areas of known flood risk through our regional community resilience group engagement. All the councils have been made aware of the scheme, so a significant number of elected members are aware of it. One of the recommendations that has emerged from our review is that there is the potential to publicise the scheme further and, if a substantive scheme is taken forward, to engage actively with known areas of flood risk to take forward a scheme of homeowner flood protection. That would mean that, rather than one homeowner on a street availing themselves of the scheme while others did not, we could, perhaps, look at that in a wider context.

We have an advantage here. As a result of our region being small, we can control the scheme. That is different from what happens in England, where different approaches are taken in different areas. We have an opportunity to build something consistent and universal.

Mr Beggs: I understand that the scheme is most successful where there is local buy-in and widespread adoption. That probably emphasises the importance of engaging with the councils and, for that matter, relevant communities where there are flooding risks.

Mr McKee: Yes. We accept that. The project was taken forward as a first step into that area of work to learn lessons and to see what we needed to do to improve the future and to see whether that was a suitable way of improving our approach to flood risk in certain circumstances. We have learned from the first years of its operation, and, if a substantive scheme is developed, we will try to incorporate that learning. Your comments are very helpful in how we will shape that.

Mr Beggs: Thank you.

The Chairperson (Miss McIlveen): OK. Thank you all for attending. It was quite enlightening, but, apart from anything else, I think that members collectively are quite concerned about the timescales, particularly for reservoirs. We will follow up on that. Again, thank you all for attending.

Mr McKee: Thank you.

Mr Curran: Thank you.