



Northern Ireland  
Assembly

Committee for Infrastructure

# OFFICIAL REPORT (Hansard)

'Living with Water in Belfast':  
Department for Infrastructure

18 November 2020

# NORTHERN IRELAND ASSEMBLY

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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  
Mrs Dolores Kelly  
Ms Liz Kimmins  
Mr Andrew Muir

**Witnesses:**

Mr Simon Richardson	Department for Infrastructure
Mr Stuart Wightman	Department for Infrastructure

**The Chairperson (Miss McIlveen):** We welcome Simon Richardson, director of the Living with Water programme, and Stuart Wightman, programme manager of the Living with Water programme. You are both very welcome to the Committee this morning. It is good to see you. I understand that you will make a presentation, and then members will follow up with some questions.

**Mr Simon Richardson (Department for Infrastructure):** Yes, Chair. Thank you for the opportunity to brief the Committee on the Living with Water programme strategic drainage infrastructure plan, which is entitled 'Living with Water in Belfast'. As you will be aware, the Minister launched a public consultation on the plan last week, on 11 November, and that consultation will run until 29 January. We have a presentation, which is in your pack. We will refer to each page as we go along to aid our getting through it. There are 29 slides. We will move through them very quickly, as I know that we are pushed for time. This is the presentation that we will use during the consultation process. I felt that it was very important to provide the full presentation to Committee members.

**The Chairperson (Miss McIlveen):** That is good.

**Mr Richardson:** The first slide introduces me as programme director and my colleague, Stuart, as programme manager. The plan is set out in four sections in the next slide. In today's presentation, I will lead us through sections 1 and 2 and Stuart will lead us through sections 3 and 4. Section 1 is "Setting the Scene". The slide on the next page gives a bit of background. Back in 2014, following a number of flooding events, the Executive at that stage approved the development of a strategic drainage infrastructure plan for Belfast. The aims were to protect against flooding, enhance the environment and grow the economy. I will come back to those key aims in the presentation. To take that forward, the Living with Water programme, which is a multi-agency programme led by the Department, was established. Once we have the plan developed and approved, we will develop

planning guidance to allow integrated drainage to be developed for other plans across Northern Ireland.

The following slide shows the geographical plan area that we are covering. You will notice six dots around Belfast lough. Those are the six waste water treatment works that discharge into Belfast lough. The area was set as the catchments that feed into those waste water treatment works. The area is divided into four study areas, so we have three land-based study areas and Belfast lough as a study area.

The slide on the next page takes us on to section 2, which is, "The Case for Change", and we can then look at the next two slides. Throughout the document, we used illustrations and graphics to show that the Living with Water approach is catchment-based and that we are trying to manage water through the catchment. The slide on the next page highlights some of the existing infrastructure. I will not go through that; you can see it for yourself. The next slide looks at some of the problems and highlights some of the flooding problems.

That takes us to the following slide, which shows the first objective that we want to try to deal with through the plan, and that is to protect against flooding. We want to do that by managing the flow of water through a catchment from source to sea. We want to use integrated, sustainable schemes and try to utilise green spaces in urban areas.

If you look at the map to the left, you will see that there are 12 areas of potential significant flood risk across Northern Ireland. Four of those are in the plan area, so that shows the level of flooding risk in the plan area. On the following slide, there are a few photographs that show flooding that happened in the past. The photograph on the bottom left shows surface water flooding in Ladas Drive in Belfast back in 2012. The photograph on the top left is from back in 2014 when we had a tidal surge and the harbour wall was within centimetres of being overtopped. The photograph on the right is out-of-sewer flooding, which is particularly nasty for individual homes. Moving on to the next slide, "Enhance" is the next objective that we have, and we are looking to enhance the environment through effective waste water management through the provision of blue/green infrastructure in order to benefit local communities. We want to improve the water quality in our rivers and in Belfast lough. If you notice the diagram to the left of Belfast lough, again, you see that we have the six waste water treatment works, and you will notice the shellfish waters in the protected areas. Water quality in Belfast lough is a key driver for us through the plan.

The photographs in the next slide, again, show pollution. The bottom-left photograph is the Forth river, and illustrated is fly-tipping along the river. On the top left is the debris that NI Water has removed from its sewerage system, with rubbish to the left and fats, oils and greases to the right. I just want to pause on the photograph at the top right, Chair. That shows scaffolding over the Blackstaff river in Belfast that was to accommodate the stage of a concert in the Boucher Road Playing Fields. You can see the debris on the scaffolding, which is sewage-related debris coming out of combined sewer overflows. If you can imagine that caught on the scaffolding, you can imagine what did not catch on the scaffolding and how that has now progressed down into Belfast lough. That is the level of pollution that finds its way into Belfast lough.

The third key objective, which is illustrated on the following slide, is facilitating economic growth. We want to do that by providing the necessary capacity in our waste water management systems so that we can facilitate new development and housebuilding. The diagram to the left, again, shows the waste water capacity in various areas across the plan's area. The red on the map shows where NI Water's systems are already at capacity and from where it may be getting negative responses to new planning systems. The yellow areas are those that are under review, and they could well turn red in the near future. The amber areas are those where the waste water system's capacity has some constraints, and there is the potential for negative responses.

The "Living with water approach" is on the next slide. Again, we used the catchment illustration to show what we are trying to do. I am not going to run through all those points, but we want to do upper catchment management in order to try to slow the water down in the hills around Belfast. As we move down into the urban areas, we are looking to identify green spaces in urban areas where we can attenuate water and slow the flow of water through the catchment. As we move further down towards the lough's shore, we will be doing hard engineered infrastructure improvements to sewers, waste water treatment works and tidal defences.

The next slide illustrates the need for a catchment-based approach. This is the "Issue Cycle". Point 1 in the cycle is where the developer wants to link in to the combined sewer network. At point 2, NI

Water has no capacity and says no. It needs to get capacity in its sewers, so it wants to put some storm water into the rivers. At point 3, DFI's Rivers is saying "No, the rivers are at capacity, and additional water will flood". So, there is a vicious circle that is really hard to break.

If you go onto the next slide, you see that we are trying to turn that circle around. Point 1 shows that we are trying to build capacity into the watercourses by attenuating water and green spaces. That may then allow NI Water to do some storm separation in its combined sewer systems, and that, in turn, may allow developers to link in to the system. Therefore, it is really about turning the problems and trying to solve them in an integrated way.

The next slide shows an example of what we are trying to do in the urban area. This is in Llanelli in Wales. The photograph to the top left is a swale, which is a constructed depression in a green space that is just to the side of a housing development. In dry weather, there is no, or very little, water in it. Whenever it rains and the water runs off the road network and the housing development on the right-hand side that swale fills up. That slows the water down and it does not all go into the network at the same time. If you look at the hydrograph below, you see that the red line shows what the flow of water in the sewer network would be if there was no swale. The blue line at the bottom actually flattens out that peak and lets the water flow into the sewer network at a slower rate. Also, some of the water in the swale will infiltrate into the ground and will not make its way into the system, which is good, and it may also evaporate.

That takes me onto the next slide, which is section 3, and I am going to pass over to Stuart to take us forward.

**Mr Stuart Wightman (Department for Infrastructure):** Thank you, Simon.

Section 3 covers "The Plan Outputs". If I turn to the following slide, the outputs are presented in the plan in three broad categories. There are the "Policy Measures", "Catchment Based Solutions" and "Upgrades to Wastewater Treatment Works". I will cover each of those in turn.

The next slide shows the three categories of policy measure that we are trying to progress through the plan. The first, which I am sure you will be familiar with, is sustainable drainage systems (SuDS). It is about progressing policy work in order to resolve the issues in the approval, design, adoption and maintenance of softer sustainable drainage systems, that is, rain gardens, swales, which Simon covered, and permeable paving. There has been a challenge recently in trying to get developers to consider those. We did some work, as you will be aware, a number of years back, amending the 2006 Order. Hard SuDS have come along, but we have to try to get the soft SuDS to come along as well as part of new development.

Natural flood management is similar to SuDS, but that is more about encouraging landowners to use their land for flood risk management purposes. That could be for storing water during a heavy rainfall event, so, again, we are looking at developing guidance and policy to see if there is some way that we can incentivise that. Our plan to date has focused on publicly owned land, such as council space and Housing Executive land etc, but we also want to look at whether there is private land out there that we can use.

The last point is on the role of Living with Water going forward. We do not want this to be a one-off thing; we want it to become a business-as-usual approval, so there is a need to put arrangements in place in order to make sure that that integrated approach continues. Simon alluded to this, so once the Belfast plan is finalised, we will look at rolling out a guide that means that similar plans can be developed for other areas, such as Derry and Newry, which are high up for flood risk management as well.

The next slide is on the catchment-based solutions, and Simon covered the four studies areas. One of the study areas shown on the map is the Connswater and Lagan embankment study area. For the purposes of assessment, it was split into five smaller subcatchments that were determined by where we found the issues and pressures and where the local rivers and watercourses are. For each of the study areas, a technical working group was established that included representatives from the drainage organisations, the councils and the regulators. It assessed each of those subcatchments in turn.

The next slide shows the Holywood subcatchment in the larger Connswater and Lagan embankment. It shows the issues and pressures that we identified. What I mean by "issues and pressures" is that

there could be flooding pressures that we are aware of, flooding hotspots, development constraints or water quality issues in the rivers caused by pollution. You saw the photograph of the Blackstaff river.

If you turn to the next slide, you will see that we then took those issues and pressures and examined the catchment to see what opportunities exist. There were two types of opportunities. First, are there opportunities in green spaces close to where those problems occur that we could possibly utilise to store water? Secondly, are the Government doing capital schemes that we could piggyback on, for example, and extend the remit of in order to include some drainage works?

After we took that approach, we came up with a series of concepts. I will not go through those in detail; they are in the plan. For each of the subcatchments, those concepts were then put together. If we turn to the slide after this, we see that it zooms back out and shows you the whole of the Connswater and Lagan embankment study area.

As you can see, a multitude of those concepts was developed. They have to go through detailed appraisal and design before they become shovel-ready projects and are subject to funding availability, but it is the starting point of us saying, "There is another way of doing this and another way of managing rainwater through the catchment".

I will not dwell on this for too long, but then next slide shows the third key area, which is the waste water treatment works. It does not matter how much blue/green infrastructure we do in the catchments, there is a sewage load produced from households and businesses that has to be collected, pumped and treated. Three major upgrades are needed: capacity increases to cover current and future sewage loads for growth; enhanced levels of treatment to meet current standards in order to help to improve the quality of the water in the lough and the rivers; and four of the treatment works have to have the outflow pipes extended, which is a major piece of work. Again, that is to do with water quality and environmental standards. That is set out in detail in the plan as well. It is no surprise that the waste water treatment works make up the lion's share of the investment, and we will come to that later.

The last section is on the delivery framework. The plan is a 12-year programme starting from April 2021 and running through to March 2033. It is a long-term programme, but it has to be because a critical path has to be followed and certain things, like the catchments, have to be done in advance of the treatment works etc. Also, given the sheer scale of the investment, it would not be practical to deliver it sooner.

I will turn to the next slide. The blue/green elements are new to us. It is a new area in terms of the storage and what have you, so a lot of modelling work is required to make the concepts that I mentioned become actual projects on the ground. In the interim, we have identified a number of pilot projects that we want to work through in order to learn how to progress these new techniques. The first one is Ballysillan Playing Fields. That is next year, and a £3 million Urban Villages project is being brought forward by the Executive Office, with Belfast City Council, to upgrade the playing fields, including 3G pitches and the like. We hope to piggyback on that scheme and to contribute investment next year to do works to the watercourses that pass through the park. Some of the rivers are piped, so we hope to daylight them and bring them back. That will not only provide an opportunity for the river to spill out and restore its floodplain but it will provide an amenity and biodiversity benefit as well. That is a major project.

The other three are slightly smaller. The first is the Forth river attenuation. We are looking to work with the Peace IV proposals, and the council was in the headlines about that a number of weeks back. We are hoping to piggyback with it on that work to do a greenway and to do some work to the river alongside that. That could include addressing some of the combined sewer overflows, along with creating things like leaky dams. During normal conditions, water flows down the river as normal, but, whenever you get rainfall, it begins to back up, and it is all about slowing the peak flow of water down a catchment during heavy rainfall. I always use the analogy that it is a bit like managing traffic during rush hour. You are trying to slow it down and dampen it down.

Belfast Castle is a very small project, but it is about looking at an opportunity on the grounds of the castle to build a swale and a leaky dam, almost for educational purposes, so that people can see what these things look like. It will be an opportunity for schools to see the features.

As part of Living with Water, our Minister has earmarked £130,000 this year as part of the A2 Buncrana Road scheme in Derry, and we have extended the scope of that to work with our Roads

colleagues to look at a study to see if the Living with Water approach can be rolled out in Derry. That is being commissioned as we speak.

The next slide is about financing and delivery. It is a huge plan, as I said. It is currently estimated at around £1.4 billion over the next 12 years. The pie chart shows the split, and, as you can see, around £1.2 billion of that is made up of waste water treatment works and sewerage networks. However, we have earmarked a significant amount — £200 million — for blue/green infrastructure. We hope that, by doing the blue/green infrastructure, the scale of some of the sewerage networks could be reduced and certainly that the whole-life costs of some of the works will be reduced.

To finish, I will turn to the next slide, which shows the initial profile. As I mentioned, a lot of modelling work in the early years still needs to be done, so we are not really getting up to full delivery until halfway through year 3 and into year 4. Obviously, that is an indicative profile, and it will all be dependent on budget availability. I think that you will be briefed next week by my colleagues in the Department on the draft determination.

Thank you for listening. The consultation period runs until 29 January, so we will be more than happy to come back at a later date to give you feedback on the responses.

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

**Mr Richardson:** Chair, that was a quick run through a detailed presentation, but it was important to show you all the slides. It may prompt some questions.

**The Chairperson (Miss McIlveen):** Absolutely. That was really useful. We are well aware of the problem that has been highlighted over a significant number of years, and you carried out detailed work in order to get to this stage. You have been looking at alternatives, and, as time goes on, more innovative methods can be used to address some of the issues.

Who is the consultation primarily being targeted at, and what do you hope to get back? If you are looking to start the project next year and the consultation does not conclude until the end of January, there will be timing issues. I know that we have to go through a consultation process, but I really want to find out why now. Should it have been done earlier?

**Mr Richardson:** On the consultation process, we have a Living with Water programme board, and we have a lot of key stakeholders. All the drainage organisations are on that board. A lot of work has been done, and we have identified some projects that will come forward in the early part of the process. The consultation is raising awareness about what Living with Water is. There is a bit of an identity issue about what it is and what we are trying to do, and that is one of the key issues.

There are other big organisations and landowners who are not on the board that we have brought in recently — the National Trust and the Northern Ireland Housing Executive — who are very keen to get involved with us to see how they can help, not only us but themselves to manage their land and how best we can use that. The key element of the consultation is raising awareness of what Living with Water is and trying to tie up with landowners who are doing capital projects to see whether we can do mutually beneficial work.

Stuart talked about the road scheme on the A2 Buncrana Road. That scheme was brought to us by our colleagues in DFI Roads. As we build awareness, people will come to us saying that there might be a Living with Water element to a project that is beneficial to everyone. That will be the key part of what we do in the consultation process.

We are bidding for £1.2 billion. If we had done the consultation process earlier, we would not have had the information that we have now. From an information point of view, we need detail to go out to consultation, so that when people challenge us about why we have identified a potential option, we need to fall back and say that this is our initial analysis of where we are. We have that level of detail and we can now engage constructively with landowners to develop other opportunities.

**The Chairperson (Miss McIlveen):** OK. This is an overarching consultation, although there will be further consultations with regard to specific areas, too, so anyone who misses this will have a further opportunity to engage. We are in a pandemic, so the timing is probably not helpful either, and you are moving into the Christmas period as well. I suppose that it is difficult to get the right time. How will you carry out your consultation?

**Mr Richardson:** We sent all the consultation documents to all relevant stakeholders and tried to do it as widely as possible. We have a meeting scheduled with all the councils involved and with all the key landowners that I talked about. If anyone approaches us for an information briefing, we will provide one. It is really about getting the information out there.

Going back to your point about whether this is the right time to do it, you are right: it is a difficult time. However, I do not think that there is benefit in leaving it any longer. As you say, we had to get it out there, and we will take every opportunity that we can. Stuart and I have a number of briefings like this in the diary between now and Christmas. That will be very useful in allowing stakeholders to provide us with their responses by the end of January.

**The Chairperson (Miss McIlveen):** OK. This really is a sort of stimulator to conversation, is it not?

**Mr Richardson:** Exactly.

**The Chairperson (Miss McIlveen):** It will allow anyone who has further ideas or concepts to bring them to you.

**Mr Richardson:** That is what we have found, particularly with the councils involved, as the area takes in part of five council areas. In the discussions that we have had, councils have brought forward schemes that they feel could fall into the Living with Water assessment. We will certainly look at that. That is another part of the consultation. If there is anything that we missed, we will happily take those things on board.

**Mr Wightman:** That is definitely a big thing. The list of concepts is not exhaustive, and as we move through the process, some of them will drop out and more will be added in. One of the challenges was that Belfast City Council sits on the board. We have had a lot of engagement with it, but we are conscious that with the other councils, because of the pandemic, it has been quite challenging. The consultation will be an opportunity for that, hopefully, and as Simon says, we are doing a round engagement with all the councils.

**The Chairperson (Miss McIlveen):** None of us should underestimate that this is a massive piece of work and a huge undertaking for the Department.

**Mr Richardson:** It is.

**Ms Kimmins:** Thanks, Chair, and thanks to Simon and Stuart for their comprehensive presentation. I am delighted to hear Newry mentioned because I was a bit concerned that it was focusing mainly on Belfast. I have raised before with Simon that Newry should be a high priority, given the flood risks there.

On that, we have had NI Water in before the Committee, talking about the price control 21 (PC21) and its plans with that. Can you detail the difference between the two and whether funding will be taken from NI Water's budget, or will the Living with Water programme be funded completely separately?

**Mr Richardson:** On funding, the Utility Regulator's draft determination for PC21 is out at the moment, and I think that there is a presentation on that next week. All the funding will come from central government; that is how NI Water is funded at the moment. The draft determination from the Utility Regulator will set the level that it feels is appropriate for the business plan for the work that NI Water should do. As the pie chart showed, we have identified £200 million that could be spent on blue/green spaces over the next 12 years. Again, that will have to be found from the Department's budget.

It is not a case of taking money off NI Water to do this work; it is a case of allocating the money required for the different elements of the Living with Water programme. As Stuart said, there is really nothing that we can do to influence the work to the waste-water treatment works with blue/green infrastructure. We can influence the work that is to be done on the networks through blue/green infrastructure. To avoid building bigger sewers, we are trying to build blue/green infrastructure. We do possibly have some influence to try to reduce that, but the funding that NI Water has identified in its PC21 will follow through the PC21 process and that determination. It is not necessarily that money is being taken off NI Water to deliver this. It is a wider concept than that.

**Ms Kimmins:** That is fair enough. I did not want to come across as saying that NI Water would be disadvantaged or anything like that. Because both are looking at the same elements of waste water, I was trying in my own mind to differentiate between how they work. I was wondering whether they were working almost in conjunction with each other. One will help the other, if that makes sense.

I was interested in the blue/green infrastructure. We have just had a presentation from Sustrans and departmental officials on active travel. During it, we talked about the blue/green infrastructure fund for active travel. I am interested to see how that links in with what the Living with Water programme proposes. Stuart gave a few examples, but can I have a bit more information on that and how it ties in? How do you get funding from that fund?

**Mr Richardson:** The Minister has a blue/green fund this year, which you have previously had a presentation on. Stuart mentioned, for example, the Peace IV greenway project at the Forth river in Belfast. We are trying to link into the work that is being done on the greenway to do some water-quality improvements and some water attenuation work on the river, which will run alongside the greenway. I think that the two complement each other. You can have a greenway there, but if you have a filthy river, it is not very pleasant to walk or cycle along. If we can do the work that we want to do on the blue element of it, we can hold the water back when it is wet and, obviously, improve the water quality. There is a flooding benefit, there is an environmental water-quality benefit, and there is an amenity benefit in how it looks. As I said before, it is about identifying capital schemes that councils, or any other body, are providing that we could tie up with.

Going back to your question about the link between NI Water and Living with Water, the link is a subtle one, and, over the next consultation period, we will be trying to show what Living with Water is. NI Water is a drainage organisation, as is DFI Rivers and DFI Roads. Those organisations will have to deal with individual problems and issues as they see them. Living with Water is trying to bring those organisations together to develop strategic solutions that may provide other opportunities that each organisation on its own would not be able to bring forward. That is an issue for us in the consultation process, and you make a very valid point. We will have to try to differentiate between that and explain it.

**Ms Kimmins:** That is helpful.

**Mr Wightman:** About a quarter of the £2 billion draft determination for water and sewerage services over the next six years from April is allocated to waste water in Belfast. The rest is for drinking water across the whole of the North and waste water outside Belfast. Although not ring-fenced, about a quarter is allocated to the Living with Water programme in the draft determination.

**Ms Kimmins:** That makes perfect sense. I now have a good understanding of where you are coming from.

My last question is about helping private landowners to utilise their land for natural flood management. You mentioned the Housing Executive and some statutory bodies. Are there incentives or grants for private landowners to encourage them to work with you on that?

**Mr Wightman:** That is one of the policy proposals that the Department needs to consider. With the plan to date, our focus has been on publicly owned land. I am not saying that it is low-hanging fruit; it is certainly not easy to do. We have a lot of work to do to use even those public spaces.

The further you move out the catchment, the more chance there is of moving into private land, particularly in rural areas. That is an area that we have identified as a priority. It is called natural flood management. However, it can also be in an urban area if, for example, there is a big private green space. We do not have that mechanism at the minute, but it is something that we need to look at.

**Ms Kimmins:** OK, thank you both.

**Ms Anderson:** Thank you both for your interesting presentation, as it touches on a lot of work that I am involved in in Derry as an MLA. Given the natural catchment-based management scheme that you talked about, you will be aware that waste-water sewage capacity is a problem across the North. It is certainly a problem in my constituency, and I am sure that it is a problem for many other MLAs.



My difficulty is with the Living with Water programme focusing only on Belfast, when, for instance in Derry, housing developments have been stopped because there is insufficient waste-water system capacity in Derry, too.

Taking that, and New Decade, New Approach, into account, what engagements have you had with the British Irish Governments, which are contributors to New Decade, New Approach, in relation to the funding that you are looking for? In your answer to my colleague about the NI Water budget, I am eager to hear whether funding from that budget will concentrate on an area that needs it. I accept that Belfast is at capacity, but I want it equally accepted that so are areas such as Derry.

**Mr Richardson:** A proportion of NI Water's PC21 business plan is allocated to Living with Water. That is the programme that we are undertaking and is based along the geographical plan that we showed.

In addition, there is a bid for waste-water treatment works outside Belfast. Not all the waste-water treatment money is allocated just to Living with Water in Belfast; a proportion is allocated to areas outside Belfast, and that is in the PC21 business plan. It is not "Belfast and nothing". The Belfast approach is being looked at under Living with Water; the rest of Northern Ireland at the moment is not. However, I would like to extend it.

That is why I am keen to grasp the project in Derry, which DFI Roads brought to our attention. It ticks all the boxes for Living with Water and allows us to look at opportunities right through the catchment along the A2 Buncrana Road. We are now keen to extend that to a city-wide Living with Water-type approach.

We said that, after we had done the Belfast plan, we were going to do a design guidance for integrated drainage. We have probably moved ahead of ourselves to bring the Derry scheme in, and I am pleased about that. That aspect, and the discussions that we will have in Derry very soon, will raise awareness of what we are trying to do.

**Ms Anderson:** I met DFI Roads last week and spoke about the A2 Buncrana Road and the study taking place there and the need to examine the potential for integrated drainage as outlined in the Skeoge river and Pennyburn river catchment areas.

I listened to your response to the Chair on the consultation process that is taking place in its totality. You mentioned the partners and the council, and there are different owners of pieces of land in the Linear Park in Derry, for instance, where this, hopefully, will assist with getting a base catchment management in consultation with the community in Skeoge. Nothing about them without them. It is with that in mind that I would like to ensure that the people in that area are consulted.

There is a fantastic organisation — the Greater Shantallow Area Partnership (GSAP) — there, as there are in other places in Derry, that pulls in all the different organisations. So I would ask that when you engage with people, you have GSAP in the partnership and that the people of that area are involved in the consultation.

**Mr Richardson:** Through my Roads colleagues, I have been made aware of the excellent engagement that there has been in that area. Without going over it again, it does tick all the Living with Water boxes in its approach. That is why I am very keen to grasp this opportunity because it is exactly what we want. We want other organisations coming to us and saying, "There is an opportunity here. Let us discuss it".

**Ms Anderson:** Again, the Galliagh residents need to be involved in that consultation.

**Mr Muir:** I will be relatively brief. Significant financial investment is required to deliver this. What are the implications if you do not get it?

**Mr Richardson:** We have highlighted the three key objectives and projected that there is likely to be increased flooding. The water quality in Belfast Lough is one of the key drivers in what we are trying to do. Shellfish waters are a very important business and depend on water quality.

The big one is the capacity for growth and for new planning applications. If you go back to the old methods, you could fund NI Water to do what it has done before, which was to build bigger waste-water treatment works and sewers, but is that the right way to go? There is no doubt that investment is

required to bring the waste-water system up to requirements. We are looking at holistic solutions that will bring a more sustainable integrated approach.

NI Water would tell you exactly the likely implications for it if waste-water systems are not funded. Living with Water is trying to pull together all the organisations to look at the capacity of all the systems, because the capacity in the rivers could have a big influence on what NI Water does in a certain area. Rather than build bigger pipes, it may storm-separate to get water into the rivers. However, if there is no capacity in the river, it cannot do that. Living with Water is about trying to give everybody a bigger picture and bigger opportunities to come forward with more integrated solutions.

**Mr Wightman:** It is also worth saying that it is a 12-year plan. It is not just about getting the money; it is about how you get the money. That is one of the big challenges. Being on one-year budgets is very challenging when planning for the longer term. You cannot deliver an integrated solution unless you have a longer-term approach because you then react to when you get the money and you tend to do the easier solutions when you react.

**Mr Muir:** Next year will be a one-year budget as a result of a decision by the Treasury. The Chancellor has made it clear that he wants to balance the books in the medium term, which brings concerns about the return of the old austerity policy of the UK Government.

There are beaches in Helen's Bay, Crawfordsburn, Ballyholme and my constituency where people go swimming every day. Fair dues to them, especially in this weather. If this money is not forthcoming, is there an implication that the bathing-water quality will not be of sufficient standard if the money is not invested in it?

**Mr Richardson:** That would be for individual organisations to look at. Again, what we are trying to do is find how the money is best spent if it is forthcoming; what delivers the best overall solution for Northern Ireland plc? There is no doubt that underfunding, or lack of funding, will have serious implications. In this programme, we are trying to show what we can do with the money and what the outcomes will be if we do this. If we came bidding for £1.2 billion or £1.4 billion and did not have the plan behind us, we would not expect to get the money. I hope that the detailed work that we have done behind this plan will help us to make the case for the investment required across the different organisations but to be delivered through the integrated approach that we suggest here. I hope that that plan will help everyone to identify whether the funding is needed and how it is best spent.

**Mr Muir:** OK.

**Mr Beggs:** You mentioned that there could be a choice of building bigger sewage-treatment works and looking at other flows or influences. Is there a clear business case to show that money would be better spent upstream rather than purely on the sewage-treatment works infrastructure?

**Mr Richardson:** There are different scenarios. It depends on the issue. It may be a hydraulic issue at the waste-water treatment; by that, I mean that there is too much clean water getting in. Once clean water gets into the combined sewer system, it has to be pumped into the waste-water treatment works a number of times and then treated. That is clean water. If we can separate that clean water out and not let it get into the system, there are lower pumping costs for NI Water and lower treatment costs at the waste-water treatment works. So, we can influence hydraulic loading, i.e. the flow.

As Stuart said, no matter how much we do with the hydraulic load, there is still a biological load that will get to the plant. We want to take out the clean water and have fewer combined sewer overflows. Take the example of the scaffolding that I showed you. We do not want pollution getting into the water course. If it stays in the sewers, there will be more sewage getting to the waste-water treatment works. Looking at it from a biological load point of view, if we are successful, you will probably need more treatment at the waste-water treatment works. However, you will be treating stuff that you are meant to be treating; you are not treating clean water that should not be in there. So, it depends on what the problem is at the waste-water treatment works. Is it a hydraulic issue, i.e. too much clean water getting in — well, it is not clean when it gets there, but we could have separated it out at a certain point — or is it the biological load part of it that needs to be treated? There will be different scenarios for each one.

**Mr Beggs:** Finally, on upstream ponding to avoid peak flows, how do you convince landowners to sacrifice parts of their ground, particularly if it is small farmers who are involved? How do you convince them to sacrifice part of their land for the benefit of the urban area down below?

**Mr Wightman:** As I said earlier, policy work has to be taken forward to look at that. It is likely to require incentivisation in some shape or form. Whether that will be some form of grant scheme will have to be determined through the policy. You mentioned the business case in your first question. That is one of the work streams in the plan. Traditionally, the drainage organisations would have looked at their own infrastructure, and their business cases would have focused on their own infrastructure. If you do a joint business case and you take the benefits for rivers, the benefits for Northern Ireland Water and the benefits for biodiversity and enhanced amenity, you suddenly have a much larger set of benefits. So, from a public expenditure point of view, there is a clear case for that. However, as regards individual landowners, we have identified a policy stream that needs to be worked through.

**Mr Beggs:** Thank you.

**The Chairperson (Miss McIlveen):** Thank you for the presentation. It looks as if we will be seeing you again to develop this. Thank you for the work involved in all of that; it is good to see solutions.