

Environment and Climate Change Committee

Corrected oral evidence: Drought preparedness

Wednesday 11 February 2026

10 am

Watch the meeting

Members present: Baroness Sheehan (The Chair); Lord Ashcombe; Lord Jay of Ewelme; Lord Krebs; Lord Layard; The Earl of Leicester; Lord Lennie; Lord Mancroft; Baroness McIntosh of Pickering; Earl Russell; Lord Trees; Baroness Whitaker.

Evidence Session No. 11

Heard in Public

Questions 174 - 203

Witnesses

I: Emma Hardy MP, Minister for Water and Flooding, Defra; Martin Woolhead, Deputy Director of Water Infrastructure Delivery, Defra.

Examination of witnesses

Emma Hardy and Martin Woolhead.

Q174 **The Chair:** Good morning and welcome to the Lords Environment and Climate Change Committee. For the final session in our inquiry into drought preparedness, we are delighted to have with us the honourable Emma Hardy MP, Defra Minister for Water and Flooding, and Martin Woolhead, Defra's deputy director for water services. I extend a very warm welcome to both of our witnesses and thank them for making the time to be with us in what must be a very busy schedule, with all the rain that we are having.

Before we start, I remind everyone that the session will be webcast live and that a transcript will be taken and made public. Witnesses will have the opportunity to review the transcript and if necessary make very minor amendments. Members are reminded to declare any relevant interests the first time they speak. I will take this opportunity to declare that I am a director of Peers for the Planet and the joint owner of a borehole on our property at home in Oxfordshire. I appeal to witnesses to keep answers as short as possible and, at the same time, give the committee

information that is as full as possible in response to questions. I know it can be difficult sometimes but we have a very full agenda.

I will start with a question in two parts. First, how effective is the Government's approach to drought resilience currently? In your response, please could you address whether you are confident that you have all the current evidence and data you need to make sensible decisions? Secondly, are the existing frameworks for engaging with the Environment Agency and other government departments sufficient to ensure that this is not a siloed issue?

Emma Hardy: Thank you so much for having me here today to talk about this important issue. I will mention the current situation because, despite the huge amount of rain, there are areas that are still classified as being in prolonged dry weather—East Anglia and parts of Essex—and then areas that are still in recovery. Even though it seems odd when we look at the weather outside the window, we are not fully out of the situation. There are two reservoirs that are below 60% full: Abberton and Hanningfield in the east of England. That is just setting the context for why this is such an important issue.

On how we approach drought, we have the National Drought Group, which is led by the Environment Agency. I have attended every meeting but one, which I unfortunately could not attend, throughout the summer. It is a really good place to bring together a huge cast of people who are interested in this as well as some representatives from different government departments, including the Department of Health and Social Care, DBT, DESNZ and MHCLG, as well as everyone else you would expect to be on the National Drought Group. Interest in this group obviously varies depending on the level of severity of drought. It was meeting monthly during the summer. We have the information from the National Drought Group, which will flag areas where it is concerned.

Each water company has a huge amount of data on its assets and that is so useful because there is a long history of it. You can look at trends and what is happening with it. The Environment Agency has loads of data on river levels, soil moisture content and all of this other information, and that is fed through.

The way that we plan for drought is there are various phases. Once you reach the emergency phase, of course you have COBRA. On Wednesday, 4 February there was a test COBRA on our response to drought and how we would deal with it. One of the issues there, which we are working on at the moment, is, in the event of a severe drought—so this is preparing—how would you prioritise who gets water? That is a really difficult question to think about. We have not got to that point yet but that is one of the questions we are thinking about. If you are in severe drought, you would say we will prioritise hospitals, but where would your level of prioritisation be? We are grappling with that now.

Before that point and before you have COBRA, of course you have Defra as the lead government department looking at particular areas bringing

in expertise. You have the National Drought Group as well. They are all responding to the situation, and then we have water resource management plans, which is our plan for the next five or 10 up to 25 years.

- Q175 **The Chair:** One of the reasons I asked specifically about evidence based on data is because last week when the Environment Agency was before us, it mentioned several instances where more research would be helpful to it. For example, it recommended that the National Environment Research Council starts a comprehensive research programme on social behaviours and drought impacts. I really want to concentrate on drought impacts in this question. I take that to be impacts on the urban and rural environments and, within the urban environment, impacts on housing and the risks that home owners face with subsidence and so on as it expands and sinks. I guess it is urban transport infrastructure as well, the impact on roads and railways, and impacts on human health also. Do you have all the data that you need on that or is there scope to do more?

Emma Hardy: There is always scope to do more and do more research, absolutely. I think you are right to highlight the impacts on human health. That is why it is so important that the Department of Health and Social Care sits on the National Drought Group. From reading the report on how it impacts human behaviour, there is the potential that people wash their hands less. This is where we are thinking about prioritisation and how we deal with the possible consequences of drought. When you reach more of an emergency situation, it is about how that is influencing human behaviour and one of my big concerns is around health.

You are right; it impacts everything—every part—which is why I think it is so important to have all the different bodies coming together. Our first layer of concern is the National Drought Group. Then we move on to the government department bringing people together on a particular issue in a place. Then you are on to COBRA and emergency response. Do you want to add anything, Martin?

Martin Woolhead: I think that is fair. There are various areas where more research would be quite helpful. Taking a big step back, the main mechanism through which all of this is investigated is the water resource management plans, where they are looking at supply and demand balance over 25 years. A lot of analysis sits behind that on what water is available, but on the impacts of drought on things like property and society it probably feels like quite a gap.

The Chair: Before I come to Lord Krebs for a supplementary, could you say a little bit about what the Climate Resilience Board is; where can I find more information about it? Also, how comprehensively does drought feature in the UK's resilience framework?

Emma Hardy: I will explain it and then you can tell me if you want more information. We wrote to the Climate Change Committee to ask for assistance in setting an overarching target for resilience to climate change and we are working on that right now. That is not just for drought

but for everything. Once that target is worked up, we want it to be applied and thought about across everything that government does. We are planning it into our thoughts around every single thing. One of the things we were able to get into the 10-year infrastructure strategy is thinking about climate resilience as a bit of a thread that goes through everything that government is trying to do. That is not just for drought; it will also be flooding and overheating. It is all in there.

I am keen to work a bit more with the Climate Change Committee on how we can develop and use this as a lens through which the Government think about the new hospital programme and the upgrading of schools that we have announced. In everything we are thinking about, we are not just building things for now; we are building things for the future.

To illustrate this, yesterday I was in Somerset, and they are extremely concerned about climate change, flooding and the situation they might be facing. I was able to say, with the NaFRA2 mapping, that the new flood maps that the Environment Agency has created for the first time take account of climate change. These maps will inform what flood defences we build and where, so for the first time we are thinking about whether, if we are going to put a flood defence somewhere, how that will be the right place for climate change.

The Chair: I just wanted to have some factual information about the Climate Resilience Board. I understand it was established in 2023 by Defra and the Cabinet Office, but the Climate Change Committee told us that it does not have the evidence on whether it is working well or not. Maybe you could write us with further information on that.

Emma Hardy: Of course.

The Chair: That would be much appreciated.

Lord Krebs: Very briefly, do you have a definition of resilience?

Emma Hardy: That is exactly what we want to be working on with the Climate Change Committee, as something that can be defined. You are quite right that otherwise it sounds incredibly woolly. The idea is that we come up with a target to say “resilient to” whatever it might be—it might be a particular temperature increase. That is to be worked through. The answer to your question is: not currently, but we are working on one.

Q176 **Lord Layard:** You mentioned that the Government are working on providing guidance for prioritising water supply in the event of a drought. Do you have a date for when this will be provided? When was the scenario for a severe national drought last tested?

Emma Hardy: Defra and COBRA met together on 4 February, last week, to test whether, in the event of a severe drought—it was basically a practice run—we have everything we need. They are doing it right now. It is a question of prioritising how we make those decisions. The situation I want to get to—the outcome I want—is that we have that ready to go, so that in the event of a severe drought we are not there thinking about

whether we are looking at hospitals, care homes or schools, and asking: where are we going? We will have got it, and that is what I want to achieve. As I say, the group met on 4 February and it is working on that now. The last thing I want to happen is that we face a severe drought and we are scrambling around trying to work out where we think the water needs to go most urgently.

Lord Layard: Will this relate just to the water companies or also to other sectors?

Emma Hardy: It is COBRA, so yes.

Martin Woolhead: Yes, and it will relate to other sectors as well. There already exists in the department a playbook that has various uses of water and prioritisation at a high level. The point is that that needs to be more and more granular and more and more detailed as to what you will do under different scenarios, and there are obviously trade-offs involved. The idea is that that covers all sectors and all uses of water to understand in the round what those are and what the prioritisation would be.

Q177 **Lord Trees:** I think you may have answered my question, which was: are you considering introducing requirements for other sectors to have drought plans? I will ask another related question. You can have resilience plan for a drought. Who determines that we have a drought? It will be a regional issue probably, rather than a national one, will it not?

Emma Hardy: You are right. On the plans, just to cover that off completely, the Canal & River Trust has a drought plan because quite clearly it needs to plan for drought, given the navigation it has. NESO, the National Energy System Operator—so energy as well—has plans for what would happen in a drought. On what triggers a classification of being in drought, that is all based on data and information. We were talking about modelling for drought and modelling when you come in and out of drought. All the data goes into these models and determines how long we think we will be in drought. The problem with the models—I thought this was particularly interesting last year—is that they are based on a usual weather pattern. When your weather pattern is unusual, the models are inaccurate. Last summer, the model inaccurately predicted when we were going to come out of drought because it assumed the weather would return to normal and it did not. On the modelling and looking at when you are classified as being in drought and out of drought, everything needs to be ground truthed in what the situation actually is, not just what the model tells us.

Lord Trees: Who takes the decision? Is that your decision or is it the water company in a particular area?

Martin Woolhead: The Environment Agency makes the decision on the drought status. There are four levels of drought and it takes a decision, based on trigger points, about where it sits. Based on which drought trigger you are at, when you go into severe drought that triggers

government-level response as opposed to Environment Agency local area response.

Emma Hardy: We never got into it but it was concerning throughout the whole of last summer. The National Drought Group stepped up to meeting every four weeks. It met throughout that time, constantly evaluating, and I would get briefs saying, "This is the situation in this area, this is what we think is happening in that area"—looking at the different regions, because of course it did not impact the country all in the same way—so that we would be ready to at any point move into COBRA if we had to.

Q178 **The Chair:** Can I push you a little bit about plans for other sectors? At the moment it is only the water companies that have a statutory duty to produce water plans. We have heard from several witnesses that other sectors—the industrial sector or the energy sector—should have their own drought plans. I think it may concentrate their minds in the way that they use and reuse water. I am not clear whether that is something that the Government are pushing for or not.

Emma Hardy: We are seriously considering it at the moment—that is where I am on it. As I say, the Canal & River Trust has a non-statutory plan. It is very effective and it is doing the job very well. The energy sector has one through the National Energy System Operator. I think agriculture would be incredibly difficult to do because of the massive diversity in that sector. It would be very difficult and we would not expect a small farmer with a small dairy herd to be producing a drought plan. Agriculture is very tricky. I am looking at each sector separately and thinking about where it would be suitable and practical to have something and where it would not work. That is where I am with it.

The Chair: Drought planning for the agriculture sector must be of fairly high importance to the Government.

Emma Hardy: Absolutely, but it is about where you place that responsibility. In my mind, it would be unreasonable to place the responsibility for producing a drought plan on an individual smallholder farmer, so where do you have that responsibility and, therefore, who is looking at drought and availability of water for the water sector? It is easier to say for the energy companies, "You are responsible for a drought plan". I would not want to be burdening a small farmer by saying, "You have to produce a drought plan". We are looking at where it would be. When you are talking about agriculture, the needs for arable might be different to other needs—it gets a bit more complicated and I want to be mindful that we do this in the best possible way.

Martin Woolhead: Where agriculture currently feeds in is at the regional level. You will probably have heard that there are five regional groups for water resource planning around England. At that level, the agriculture sector is plugged into planning for water resources and drought. Water resource management plans have agricultural representatives on the

groups to look at the regional level. That is the level where it feels quite appropriate to have agricultural interests and agriculture represented.

Emma Hardy: Rather than placing it on the individual farmer.

- Q179 **Earl Russell:** I declare my interest as a board member and non-exec director of the Water Retail Company. Can I return to the really interesting point you made about ground truths? Obviously, our climate is rapidly changing, and entering particularly extreme prolonged heat for a long period has new and unknown impacts on drought. How are you doing that? Is that working more with citizen science? Is that going right through to computer models and working with the Met Office? How do you know the unknowns and then model those back? We are entering new and uncharted territory, and all our past data is not relevant to the threats we face going forward.

Emma Hardy: You are absolutely right. The Environment Agency is looking a little bit at AI. The Met Office does an incredible job in predicting weather patterns and feeding in all that data. The individual data that comes from the water companies is really helpful because they can talk about the state of their assets and give that real on-the-ground picture. You are quite right about the modelling, because last year it just did not rain in the summer. The modelling is based on past truths, and when the future is more uncertain it is quite difficult. We have the up-to-date data from the Environment Agency on soil moisture, so you can get that real-time information back through.

That is why I think getting everyone together every four weeks to have an assessment of the situation with everybody in the room matters so much, because you have the representatives from the farming sector on the National Drought Group, and the water companies. These are people who can challenge the information that is presented to them. To me, whatever the information says, it is about how we are verifying the situation on the ground.

- Q180 **Lord Ashcombe:** I would like to take you back to the drought plans. You talked about the River & Canal Trust, NESO and agriculture. What about industry? It is a massive user of water, so where does it fit in? It is not holier than thou in comparison to anybody else.

Martin Woolhead: It factors in through water resource management planning and is on the public supply through water companies and water company data and modelling. Where there are large users of non-potable water, they are factored into plans at the regional level. We have been doing some work to look at the largest users of water and basically using potable or non-potable supplies, which we may come on to. Broadly speaking, we have been looking at who uses the public water supply, particularly in big amounts, and then at the alternative uses of water—non-potable uses and things like that. Are there other things they could be doing to reduce water use?

Lord Ashcombe: The percentage of non-public water supply used is fairly significant, and that is still part of the overall water resource. Who

has control over that? Does Defra have control over it? Does the Environment Agency have control?

Martin Woolhead: It is the Environment Agency, which through managing abstraction and abstraction licences has an overall picture of control. It has done a lot of work on reducing abstraction licences where they are underused to make sure that there are not additional unexpected uses of water within abstraction licences. The Environment Agency does a lot of work using essentially the abstraction regime to understand the overall impact of abstraction.

Lord Ashcombe: We heard a bit about the agriculture industry, particularly in East Anglia, and about abstraction, but we have not heard much about the Environment Agency talking to industry about it. Does it actually do anything with it? I am not the greatest fan of the Environment Agency.

Martin Woolhead: Yes, it does. The other entity here is an organisation called MOSL, which is the system body that does the data work for the retail market. It has the data on usage by non-household customers. Cambridge is a really good example. One of the issues we have been facing is water scarcity in Cambridge. A particular piece of work has been done by the Environment Agency and MOSL looking at the largest users of water in those catchments and then speaking to them individually about their water use and what the other options might be, for example. MOSL has the data on water usage and is able to use that and work with the Environment Agency on conversations about water usage: whether there are alternatives, water efficiency measures and other things like that.

Q181 **Lord Mancroft:** We are obviously here to talk about drought today and, Minister, you have been down on the Somerset Levels, where they are absolutely not worried about drought today—but that is the other side of the coin. The reality is that we have known that the Somerset Levels have flooded for 1,000 years, and the reason they have flooded so badly in the last three or four years, or 10 years I guess, is because of the lack of dredging of the rivers. If there is a problem in the Somerset Levels, it is the Environment Agency's failure to manage what the monks seemed to have managed rather well 1,000 years ago or 500 years ago. We do not seem to do that now. While we have problems with drought in East Anglia, and we have just come through a year of terrible drought, here we are again: it is a bit of a damp February and the same problem is back at the Levels, which I realise are not economically important on a national level, although they are quite important to the people who have to live there. It appears they have been sort of abandoned. Again and again, every year, we get this thing and they are flooded out in a way they never used to be flooded out. Of course we have climate change, but it has not been that quick and that sudden, and we have known about flooding on the Levels for ever. It just seems to be a failure.

Emma Hardy: I went to see them yesterday and the people there are incredibly resilient.

Lord Mancroft: Yes, they need to be.

Emma Hardy: They are very used to dealing with a lot of water. On the situation there now—I do not want to go on too much of a tangent about flooding—one of the problems they have with pumping the water is that the rivers are just full. You literally cannot pump the water into something that is incredibly full already. There are some very practical concerns there. They were explaining to me how the different catchments work when it comes to draining it and how basically you do not want to try to move water from one place and flood somewhere else. It needs to be managed really carefully in the different pumping stations.

The question of dredging often comes up. There are some areas where you want to slow the water down and some areas where you want to speed the water up. Maintenance was mentioned and in our Flood Resilience Taskforce we have a group looking at the issue of maintenance and how we are managing that network. The Environment Agency sits on that group. Sorry, we have got diverted.

Q182 **The Chair:** Indeed, but we will be taking that up later, considering how we manage water in times of plenty to balance it in times of drought. Before we leave these questions, I want to go back to prioritisation because I think it is such an important issue with political trade-offs and decisions that have to be made by government. We heard from the National Fire Chiefs Council that it is concerned about water availability in times of wildfires. We saw that a lot last year, more than we have ever seen before. On a repeat of a high risk of fires in a severe drought situation, I do not know whether it was severe drought last year in places—

Baroness McIntosh of Pickering: It certainly was in Yorkshire.

The Chair: What priority will be given to ensure that water is available to the fire service when it has to have water to fight fires?

Emma Hardy: This is exactly what they are working through right now: how do you prioritise? You are absolutely right; they are really difficult trade-offs when you start talking about the use of water for hospitals or for the fire service. They are incredibly difficult. I cannot answer now about what the prioritisation will look like but, as I said, work started on it on 4 February and we are looking at it now.

Martin Woolhead: Clearly fire prevention and firefighting will be an important aspect of it. There is also a bit of circularity back to water. There was an example of some wildfires that were threatening the water supply assets that the water company had. There is a certain amount of protection of that infrastructure as well in the case of wildfire.

The Chair: Can I get some indication of the timelines that you are working to in producing this prioritisation?

Martin Woolhead: There are a few inputs. There is some work that the team is doing combined with drought plans that have been prepared by

water companies, for which the deadline is the end of March. My expectation is that, a few months after that, there will be a prioritisation that is essentially ready for Ministers to consider and some trade-offs to be considered. We will then want to assess and test those as well. It is an ongoing process but I imagine that certainly by the summer we would want to have a strong sense of prioritisation, but there will be an ongoing process of making sure we are constantly assessing, updating and seeking to understand. We will want to consult quite widely with different entities to make sure that we have captured and understood water usage at a granular level.

The Chair: It is rather urgent, given our experiences last summer. Yes, it is raining now, but we have no idea. One thing that climate change is bringing is unpredictability. We have no idea how soon we might be in a situation like we were in last year. We need those plans in place beforehand. We need early warning systems. It would be really useful for the committee to know how much urgency the Government are giving to this and whether it is a top priority.

Emma Hardy: I think I am allowed to say this—I was quite shocked when I came into Government that they did not exist, but we are getting on with it. That is my understanding on the granular level of prioritisation.

Martin Woolhead: There is a broad level of prioritisation around essential and non-essential use, but we want to understand at a granular level what the uses of water are.

The Chair: I hope the Government understand that this is an issue that has been covered with the witnesses that we have heard from and that they are concerned about this.

Baroness McIntosh of Pickering: On wildfires, is it not a matter of concern to you that the fire and rescue services are not statutory consultees on major planning developments, because it impacts on drought and flooding? Is that something that concerns you? When we had the wildfire on the North York Moors last year, there was a real concern about where the water was coming from.

Emma Hardy: It sounds a bit more like a planning decision rather than a decision for me. I do not want to speak out of turn on it but quite clearly availability of water for fire and rescue is important. I pay tribute to you and your work on SUDS here. You may remember that from before the election—it is nice to see you again.

Q183 **Lord Mancroft:** It is quite clear from what we have heard that the environmental and social impacts of drought are not very well understood and they are not particularly well reported, apart from when terrible things happen and get into the newspapers. What plans do you have as a department, if any, to increase the monitoring and the reporting of the impacts before they happen? There is not much point in reporting them after they have happened. What are your timelines? Do you have a plan

to do that?

Emma Hardy: The literal reporting of the drought situation is really good: as I have said, soil moisture levels, river levels and all of that. The physical reporting is really good. The bit where I am interested in seeing what more can be done is the human societal impact. I feel that we are really good in measuring or having the data for what the moisture content is in one part, the river level in another, or what the impact is on an asset, but I would like to understand a little bit more how that impacts on human behaviour.

Lord Mancroft: Do you have the levers you need, and do they work when you pull them?

Emma Hardy: It depends on which bit you mean. When it comes to drought, I am pushing open doors. There is a huge amount. People recognise that this is an important issue.

Lord Mancroft: Is it a good thing or a bad thing that you are pushing an open door?

Emma Hardy: I think it is good: people recognise how important it is because it is so tangible. We have just gone through a summer where you could see it. On the argument on drought, I have found with public behaviour and public response that it is so much harder to say that right now two reservoirs are at 60%: people look out of the window and say, "Are you joking?" What I have found on drought is that, when the grass is literally dry, the newspapers are photographing reservoirs that are really low and people are talking about it, then people believe it and think it is real, but when you say we are still in drought and we have just had two weeks of rain, it is quite difficult. I want to work on the message around water matters all year round. One of things I want to do with the water efficiency fund and communication—I want this ready for this summer—is to send that message. In this country we have never thought about water as a scarce resource and, even saying that, people will think I am a bit bonkers.

Lord Mancroft: No, you are right.

Emma Hardy: But we need to start thinking about it in a different way. I hope to develop the message that this matters all year round through the communication plan. I know from the interviews I did when I was questioned during the drought—people said to me, "How can we have a drought when it does nothing but rain?"—that there is that sense. It is quite a difficult message because it almost goes against what people can see. As I say, when it is dry it is easier to communicate that.

Lord Ashcombe: Very quickly on that point, do you think it would be sensible to communicate the position the reservoirs are at, or however you want to state it, somewhere where it is reported regularly so that people understand that we are a stressed country for water. We are not as bad as Australia, California or places like that, and I think we have a lot to learn from them, but somehow you have got to get the awareness

out to the public more, both us and the industrial public, so that they understand that they cannot just go on and on and on.

Martin Woolhead: The Environment Agency publishes information regularly on GOV.UK on reservoir levels, storm-water deficits and so on. There are some really good examples of where there has been some excellent practice, and a lot of it is international. There are some apps and things where people can look at the local reservoir and see its level in real time. I thought it was great a few years ago when South West Water did a campaign to ensure that its reservoir stayed at a certain level—something like 30%—and it gave an incentive. It said to its customers, “If you can stop the drop”—as it called it—“and stop the reservoir dropping below a certain level we will put some money back on your bill to credit you for reducing water use”. It published data on where the level was. Engaging people in a local reservoir and its water level, understanding that there is a target that can be achieved, drives some changes in behaviour. There are some quite interesting things done and a lot of it is by water companies at an individual level. People respond best to a local message about a local water environment.

Lord Ashcombe: Reservoirs are easy to see. What about the aquifers, which are the dead opposite?

Martin Woolhead: The data on that is through the soil moisture data and the Environment Agency publishes that. I do not think there has been much use of it in a creative way to show what is happening.

Emma Hardy: For this year, we have the joint communication campaign with the idea that we try to communicate throughout the year that this is an important issue. It is a really hard message to land, I have found.

Lord Ashcombe: I do not deny that.

Q184 **Lord Krebs:** My question builds very nicely on the discussion we have just been having. The way I present it to myself is that we treat water in a profligate way: we are wasteful and it is cheap. It is as though we are in an era where petrol is cheap and we are all driving round in gas guzzlers. Some of our witnesses—for example, MOSL, Water Resources South East and Anglian Water—have argued that the price of water should increase to reflect its scarcity and to signal to people that you are dealing with a precious scarce resource. The example that Martin gave us a few moments ago was illustrative of how price signals can affect people’s behaviour. On the other hand, Ofwat took the opposite view. It said to us, “We cannot increase the price of water because of the cost of living crisis”.

That leads to my question. There is a trade-off in increasing water bills and therefore being able to fund infrastructure upgrades to tackle leakage and become less wasteful of water. What assessment have you made, Minister, of the need to alter the price of water to reflect its scarcity and at the same time be able to meet demands, deal with the cost of living crisis and make water supply more secure? It is a tricky

balance, and I wondered what your view is on that.

Emma Hardy: You are right; it is a tricky balance. There is a cost of living crisis and we know that the water bill increases that everybody has had have had an impact on the cost of living. There are measures we can take on the consultations on water, looking at the social tariff that companies offer to support people who are struggling to pay, but it is really difficult. I want to get a clear analysis of the price of increasing water capacity because the most expensive way is to build reservoirs or large infrastructure. It is hugely expensive. The cheapest way to increase water capacity is to reduce demand. One of the ways I am really interested in as the cheapest way of doing this is how we reduce demand. We will run our campaign on water scarcity and do our very best, but trying to influence human behaviour is incredibly difficult.

I have been looking at the other levers for reducing demand. I have been talking to MHCLG about the new homes programme and about designing homes in areas of water scarcity with building standards that reduce the amount of water that people can use down to 100 litres a day. That makes it a lot cheaper. There is water efficiency labelling—the mandatory putting of labels on dishwashers and washing machines—and trying to influence people, but I think building standards is a huge thing. I am looking at data centres having closed-loop cooling technology rather than a constant source, and at potable or non-potable. Where can we use a non-drinking water quality standard? It is to my mind slightly bonkers that we use drinking-standard water to cool things down when we do not necessarily need to. It is about looking at how we change the rules and regulations. That is the cheapest and most affordable way.

The flipside, where we have the large projects—because we are building reservoirs and things like that—is making sure that they are actually done. The job of the Water Delivery Taskforce is to monitor, track and ensure that these are done where we are building the bigger infrastructure.

Lord Krebs: I will just ask a very short follow-up. All of that sounds very sensible to me and I also liked Martin's example where, rather than punishing people for using more water, you reward them for using less water, so you flip the reward system on its head. But the bit that we have not alluded to, which again comes up from the evidence we have had from water companies, is tackling the fact that one in every five litres of water is wasted through leakage. The water companies said they put in a bid to Ofwat to repair their pipes and reduce leakage, and Ofwat said, "No, you can't add that to a consumer's bill". How do you get around that? How can we reduce leakage without increasing investment?

Emma Hardy: The water companies have been allocated money to reduce leakage. Some may argue they have not been given as much as they would like, but they have been. I am extremely keen to see water companies deliver on the leakage reduction that they have been invested in to do so far. I want to see them delivering on what they have been funded for at the moment. You are absolutely right; reducing leakage is

one of the cheapest ways to increase our water capacity. The Water Delivery Taskforce looks very carefully at whether water companies are on track. I have to say that at the moment they are, so that is positive.

Going up a level and thinking about the bigger picture, we know we have these five-year price reviews where there are booms and busts in investment all the time. One of the things our White Paper reforms want to do is think about resilience and asset health as an ongoing item that needs investment throughout. At the moment, they are funded every five years to reduce leakage. Reducing leakage surely is something that companies will be doing for the next 20 or 25 years. Instead of having the five-yearly pockets where you are looking at investment, asset health and asset resilience will be an ongoing issue that needs to be funded. Therefore, how do we structure the price review in a way that reflects that? That is the bigger answer.

The Chair: I have four colleagues who would like to ask supplementaries. If they can keep them very brief, we will try to fit them all in, if the question is still unanswered.

- Q185 **Lord Trees:** On reduction of demand, our background notes tell me that the Government have a target to reduce the use of public water supply in England per head of population by 20% by a certain date. I am sure I am not the only person in the country who had no idea that we have that target. What have the Government done in the way of public information to try to get that across?

Emma Hardy: As I said, there is a national comms campaign that is looking at trying to reduce people's water capacity, but that is just about influencing behaviour. I have a graph that I can share with you if you would like—it shows how we will reach our target for demand reduction. Each part of it shows how different interventions add together to make the calculation for demand reduction.

The Chair: Thank you very much. If you could let our clerk have that graph, that would be very helpful.

- Q186 **Lord Lennie:** You mentioned building standards as a way to help reduce water demand. Are you finding resistance at all from the builders, given cost of living increases, house price increases and all the rest of it, at the same time as you are trying to do your best to get that down?

Emma Hardy: I deal directly with MHCLG and it speaks to the housebuilders. We have just done a consultation. I think it has finished now or is about to finish.

Martin Woolhead: It has finished.

Emma Hardy: It looked at exactly this, asking how we change building standards for water use. We will look at the consultation results and respond to that, but in my mind there are areas, particularly in Oxford, Cambridge and elsewhere, where we probably need to look at going

further where there are areas of water scarcity. The consultation has finished.

The Chair: Lord Lennie will have an opportunity to ask further questions on that issue later. Lord Layard, just a brief question, please.

Lord Layard: You mentioned the cost of reservoirs. How firm is the plan for the future building of reservoirs? Are you satisfied that it gives value for money?

The Chair: Can we park that? I think that is covered in Baroness McIntosh's question, and she is up next.

Q187 **Baroness McIntosh of Pickering:** May I reciprocate? It is a pleasure to see you and congratulate you on all you do in your roles. Between us we must have done more flood visits than most. I formally declare my interests. I am co-chair of the All Party Water Group, I am vice-president of ADA—the Association of Drainage Authorities—and I am a small shareholder in Pennon and United Utilities.

We have had a lot of evidence about the alternative approaches to large reservoirs. Are you able to say when you will conclude the Balmforth review into reservoirs and come forward with proposals?

Emma Hardy: There is a reservoir group, which is probably not the same one you are referring to. From the Water Delivery Taskforce we have set up a group—I cannot remember the name of it but Martin will be able to tell me—looking at the construction of reservoirs. We will be building a lot at the same time and we are looking in detail at how we can do it in the most efficient and effective way, and at how we can learn from the ones that are being built. That is doing some work right now to present back to the taskforce.

Martin Woolhead: A group has been formed called the Reservoir Senior Steering Group, and essentially that oversees the delivery of the major projects. That is the White Horse reservoir and the Fens reservoir, and there are some further ones down the track: the south Lincolnshire reservoir and others. The idea is to make sure that government understands the key issues that apply to it, particularly things like environmental issues and getting those across, as well as making sure that they are in a good state for things like the planning process and that essentially feasible viable schemes are being brought forward in that space.

Baroness McIntosh of Pickering: We know it takes probably more than 10 years to build a reservoir, and I know the department has done a lot to encourage small reservoirs, but we have been led to believe that it would require a change in legislation. The internal drainage boards, which of course are mostly run by farmers who have the kit to do the maintenance and the other work, would like to see the possibility—it would require a change—of managing water quality and allowing natural transfers of water. We heard from the Canal & River Trust that it would like to integrate canals with reservoirs, permitting water transfers such as

we have seen from the Midlands to the Grand Union Canal. To store water on farmland is a technical breach of the *de minimis* law. Is that something that you will visit, perhaps revisiting the Land Drainage Act 1991 to allow these powers to be given to the drainage boards and the Canal & River Trust? It would be a sea change—pardon the pun—if you were able to do that.

Emma Hardy: The Canal & River Trust absolutely has a role in water transfer and moving water around the country. I think it is a role that has been underutilised. It is basically an open network that can move water. Thinking about that a little bit, to me that is a major win on every level because it already exists, so it is cheaper, and everyone loves canals, so it feels like a huge win.

We are putting an SI forward at the moment on IDBs but that is more on how we create new ones and look at the ones we have, accepting that they have a huge role. I could not agree with you more about reservoirs on farms. There is always the question, when you are talking about safety, of how you do this in a safe way, and that has to be at the forefront. But the bigger question—the exam question, to me—is: how do you increase resilience of farms? As we saw last summer, they were not allowed to extract and it had a huge influence on them.

How do we increase that? We are looking at water extraction groups and I want to create more of those around the country. I want to talk to some about how they are working. For groups of farmers, how can you increase the ability to store water on land in a way that is safe? I want to be able to solve this problem—100%—because it feels fundamentally unfair at the moment that farmers are struggling during drought but not able to store the water during winter. I am thinking about balancing all the risk, who pays and how it will work.

Martin Woolhead: I agree with that. We funded a number of pilots—we call them local resource options—for essentially small-scale on-farm reservoirs. There is some funding from the department to understand how they can be implemented better, working with our groups and things like that. There are some really exciting water resource options coming forward, using the canal network, as you discussed. The Canal & River Trust has a number of disused reservoirs and other pieces of infrastructure. There are some exciting opportunities around mine water and the treatment, supply and transport of things like that. A load of these different sources will become really important in future years for supply.

Baroness McIntosh of Pickering: I presume the place to do this is the forthcoming water Bill following the White Paper to make the change?

Emma Hardy: I am looking at whether we need primary legislation change or whether we can do some of this through SIs.

Baroness McIntosh of Pickering: There was a question from the written evidence we have just received from the East Suffolk Water

Abstractors Group, which does not believe that it needs more abstraction. It asks whether, in a coastal region where farmers pay land drainage rates to the IDB to pump fresh water into the North Sea, which is mindless, we could not reverse the flow and pump the same water back into land to fill reservoirs and possibly aquifers as well to support summer water supply for irrigation. You probably agree with that.

Emma Hardy: Yes—as I say, it is just working through because at the same time we are looking at increasing reservoir safety, for obvious reasons. It is about thinking all the time about the best and most effective way of doing this, but fundamentally I agree with the point. It is just working through how we do that in a practical way.

Baroness McIntosh of Pickering: You mentioned SUDS. Do you think SUDS has a role to play in drought and floods for major new developments?

Emma Hardy: Yes, 100%.

Q188 **Earl Russell:** My question is a supplementary but I think you have covered a fair amount of the ground already. I want to ask you about the local supply options identified in the revised environmental improvement plan, particularly the timescales for that and looking at the local resource options and new water abstraction groups. It has been covered a little bit previously but I do not know if there is more. I am really interested in the integrated approach and in the research you are doing. You have taken a question about whether that needs to be in SIs or in the water plan. I think it is really welcome that it seems you are taking a broad approach to this. I am asking whether there is more on that that you would like to say.

Martin Woolhead: A particular microcosm of it is around Cambridge and the Oxford-Cambridge Arc, given the particular issues of water scarcity in the Cambridge region. It is quite an agricultural area and there are some active and interested abstractor groups that are doing things. We have a number of schemes that are being funded and examined to basically prove the concept over the next year or two—so relatively soon—on a fairly small scale. That includes some on reservoirs but it also includes some building to recharge aquifers and things like that. There is a little bit in Cambridge, throwing the kitchen sink at the various options, how creative we can be and where we can bring water from. Any sources are being examined through that.

Earl Russell: I would definitely encourage that approach. It is definitely needed in these areas where we have acute water stress at the moment. If I had a supplementary, my question would be: how are you going to learn the lessons from that and apply those across the board to other areas that are slightly less water stressed at the moment but might be entering water stress in the future? How can that best practice be learned, put into legislation and shared with partners and organisations?

Emma Hardy: There is really interesting—or really scary, depending on your view—work by NISTA that looks at where we are looking for development and growth where there is water scarcity. It layers together all of those. On the question about levers, there is a real willingness. There is an OxCam group that sits cross-government, chaired by Lord Vallance. I sit on it and MHCLG is there. I am forgetting some of the people but lots of others are on there as well. This is a real issue and there is a huge amount of interest.

Going back to the question from Lord Krebs, the most expensive way to deal with water scarcity is reservoirs, but what are all the other options? What are all the other ways that we could do things? It feels like there is a huge appetite for innovation in this particular area. I do not have the exact answer on what that will look like but, as Martin said, we are trying some pilots, we are looking at extending water abstraction groups, and we are thinking about how we could use the Canal & River Trust more effectively.

Everything has to be part of the mix, as well as how we influence behaviour and how we change fixtures and fittings. The answer will never be that it will be solved by one thing. It will be: "Let's try all these". It might be that we try some things and say we need to change them, but we are trying to do as much as we possibly can to answer the question of how we ensure water security for our country for the next 10, 20 or 30 years.

Earl Russell: It needs to be forward thinking. It needs to be inclusive. It needs to be local and it probably needs to be whole-society.

Emma Hardy: Yes—there are some things that will not have much of an impact on the general public. If you are buying a new home and your fixtures and fittings are all upgraded to use less water, you probably will not notice that. You might notice if you have a water meter because your bill will be lower but otherwise you probably would not notice. There are lots of different ways. The criticism we have had is when people say, "Your strategy is all based on changing behaviour". That is not true because changing building standards and fixtures and fittings, looking at where you can have incremental gains across a wider area, is all part of the mix, as well as the big water transfers, reservoirs and larger projects.

Q189 **Lord Ashcombe:** I am very conscious that in Australia there would not be a shearing shed, which is a massive building, where the water is not collected, pretty much running that station for most of the year in terms of water. We have not only many agricultural buildings but huge warehouses in various parts of this country that surely should be collecting water which is just pure run-off. That must be part of the solution in my opinion. You cannot just build a big shed and let the water just flow away.

Emma Hardy: As I say, we have just done a consultation on building standards and are waiting for that to come back. There is an appetite in areas where there is greater water scarcity to think about this, but I

would argue, from the flooding perspective as well, that if you are able to—that is why I like SUDS so much—hold some of the water that you are collecting and stop it running into the network, that is a positive for everyone. The White Paper talks quite a lot about pre-pipe solutions. Again, this is such an easy win because if, after a storm, you hold the water in SUDS—or however you hold it—you reduce pollution incidents. It stops going into the combined sewer overflow, and it stops that spilling out. Everyone is a winner and you have a beautiful area for nature.

This afternoon, which I am very excited about, I have my regional steering group looking at how we set up regional plans for dealing with water. I have my first steering group this afternoon and I think one of those is about where there is mutual interest from the water companies and environmental groups—from everybody—in how we bring that together to say, “Storing water here will really help water companies because they are not going to have as many pollution incidents. It will keep it away from their network and it will help farmers because we have got some water here stored in case they need it”. This is rare in politics, but I think that in this everyone can win.

Lord Ashcombe: It is not just farmers. Along the A14, which is in the middle of the country, one of my brothers has a huge number of enormous buildings. I do not know whether he collects water; I have never asked him.

Martin Woolhead: There are a lot of water companies that work in logistics hubs, for example, where you have lots of large warehouses. They will often collect the rainwater off those.

The Chair: Please give a short answer and then we must move on.

Martin Woolhead: Just as an example, there are water companies that use that, and again it is for both: it reduces the impact on their drainage systems and at the same time there is a water resource there.

Emma Hardy: You can collect water in SUDS on new estates and potentially, depending on what happens with the building regulations, that water could be used in greywater systems for homes.

Q190 **The Earl of Leicester:** On my register of interests, I am a farmer in Norfolk, and on all our new sheds we collect the water. We are not told to collect the water by government or an agency but we just do because it is sensible; it is therefore cheaper water for cattle and for sprayers. We also have a borehole abstraction licence, but the main thing is winter water abstraction from rivers into reservoirs. I am interested, Minister, in where you get your information from when you are talking about reservoir safety. I am assuming that is farm reservoir safety. These reservoirs are built to a very strict specification and I know of no failure, anywhere in the country, of a farm reservoir.

Emma Hardy: I am grateful to be able to clarify. No, I am talking about national reservoirs. It was a few years ago that the investigation was done into the Toddbrook reservoir and consequently they recommended

altering the guidance and rules around reservoirs. If you are changing the rules on reservoirs and reservoir safety then that impacts every reservoir, but you are right that there have not been any examples on farms.

The Earl of Leicester: So there therefore should not be an impediment other than possibly a planning one to allow—

Baroness McIntosh of Pickering: It is the de minimis rule that has to be revisited in the Reservoirs Act 1975.

Emma Hardy: I would be more than happy to send something through because I want to think about what we have put out publicly and what we are still working on before I answer this question. Fundamentally, the reason we are revisiting reservoir safety is because of Toddbrook.

Q191 **The Chair:** We will certainly take you up on your offer to feed through any further information you may have. Before I come to Lord Lennie, something that occurred to me when you mentioned your meeting this afternoon with the regional steering groups is about WAGs—water abstractor groups. We have heard from them that they would welcome opportunities to engage more meaningfully with the Environment Agency in drought planning. Are they included in your regional steering group this afternoon, for example?

Emma Hardy: The steering group this afternoon is bringing together everyone to think about how we design these regional groups. I anticipate that there will be a slightly different composition of people depending on where these regional groups are. It is something I would be very happy to take away. It would be dependent on the region and whether it would warrant the inclusion of a WAG.

The Chair: Yes, the WAGs have asked specifically about their role and increased usefulness, and it would be useful to get your take on that. Before we move on, the *Environment Improvement Plan 2025* committed Defra to delivering LRO screening studies and to increasing the number of water abstractor groups, but no timelines have been given. Do you have any idea when we can expect those?

Emma Hardy: I met Jenny Riddell-Carpenter MP in her constituency and talked to the group there. We have some more in train now.

Martin Woolhead: It is in progress, but it is over the next couple of years, so it is medium term.

The Chair: Anything further in writing would be appreciated.

Q192 **Lord Lennie:** What assessments have the Government made of any of the cost effectiveness of maximising demand reduction measures compared with building new supply infrastructure?

Emma Hardy: It is so much cheaper to reduce demand and to fix leaks than to build new infrastructure. One of the things I was thinking about doing is to look at the graph and look at the information and work out the cost per megalitre of all the different ways of doing it, to illustrate that

point further. The cheapest way is to reduce demand. We need to be honest about how much demand reduction can be achieved by changing human behaviour. That is very tricky; therefore we need to think about building regulations, standards, planning and leak reduction. The metering programme is one; there is helping leakage reduction; I mentioned the water efficiency campaign; there is mandatory water efficiency labelling. All these different things are anticipated to have a different effect on reducing demand, but all are needed. I think some people want the answer to be all about building bigger and bigger reservoirs, but that is incredibly expensive for the customer. We must have everything in the mix.

Lord Lennie: What percentage is smart metering in there?

Emma Hardy: I will send you this piece of paper. I do not know if you can see. All these different things add together as to how we will reach our water reduction target, but it is the green bit. I will get you a copy of that.

Q193 **Earl Russell:** The water companies themselves have some funds for reducing water usage, but my impression is they often struggle to spend it efficiently. Is that something that the Government are looking at, whether those moneys can be pooled or used in other ways? I am aware that it is a bit like the home insulation bit, in that it has never quite worked as it could do. I know it is a complicated problem with getting into people's homes and doing all this stuff, but are the Government looking at other ways to improve that home water efficiency bit?

Emma Hardy: They have their leakage demand reduction and they are responsible for reducing consumer usage, and there are various innovative bits where companies have tried to work on messaging around water reduction.

Martin Woolhead: The main thing is that Ofwat and its water efficiency campaign, which we talked about, is taking a national approach. Rather than each company trying different things, the idea is that there will be a national approach. There are pros and cons to that. Clearly hyper-local messaging and things like that can help in some cases. At the same time, with a national brand, a national awareness and doing something that is across all the water companies, the idea is that water companies can then reinforce that through some of their own work as well, so there is an umbrella essentially under which individual water companies can operate.

Q194 **The Chair:** A quick question from me: it is a very elementary question but it is one I would like an answer to. How robust is the evidence behind what new supply infrastructure we need if we utilise sensibly all the rain that is falling out of the sky and stop wasting water?

Emma Hardy: As I say, it is difficult to anticipate how much impact changes in human behaviour will have.

The Chair: I guess what I am asking is: how robust is that shortfall figure of 5,000 megalitres per day by 2025?

Martin Woolhead: Essentially it comes from water resource management plans and understanding water company plans nationwide. The modelling for those is very robust.

The Chair: Do they take demand reduction and sensible use of water into account?

Martin Woolhead: They do. They have projections around demand and demand reduction. They have projections around environmental designation—so what savings need to be made to protect the environment—and they have projections around things such as growth and population. There is always more accurate data over time. For example, things such as growth figures and census figures change over time, but fundamentally there are many thousands of inputs and they run scholastic analysis across all of those to create pathways, and they do a lot of very detailed modelling. At a water company level, the planning is based on lots of very good inputs. There are shortcomings in places, so there are some water resource management plans where, for example, we see much more additional growth than would have been anticipated previously. We have talked about Oxford and Cambridge as examples. There is quite a lot of growth planned in those regions that is not currently factored into water resource management plans locally, and we are looking at revisiting those.

The Chair: I think we will come to that. Baroness Whitaker?

Q195 **Baroness Whitaker:** You have touched on water availability and its relation to planning with the new homes programme and building standards. That is the area I would like to ask you about. From our evidence, there is a possibility of discordance between various parts of planning development—housing; land use; energy, which is of course extremely sensitive to drought and I would add into that industries such as AI data centres that need lots and lots of water, so drought really matters to them. How much is water availability a material consideration when deciding where new planning and infrastructure projects will be located? In that connection how do you work with DESNZ and the housing department to address emerging water usage needs for housing and energy projects?

Emma Hardy: It is a huge consideration and becoming even more of a consideration. I think this is why that NISTA alignment tool that I mentioned matters so much because it maps together energy resource, water resource, where you have growth and it helps to identify areas of concern where there is scarcity. Minister Pennycook sits on the Water Delivery Taskforce from MHCLG. We both sit on the OxCam group together, where there are areas of more acute shortage. We have been working with DSIT around data centres because you can have data centres designed in a way that makes them water efficient and they do not need to have drinking water pumped through them to cool them. You can have a closed loop system. We are looking at what the standards are that you need to write to ensure water efficiency. In areas of scarcity, instead of having 105 litres per person per day, how do we have 100

litres? It is looking at building regulations. The short answer to your question is: it has become more of an issue than it ever has been before, and it is being taken more seriously than it has been before.

Baroness Whitaker: I am glad to hear that, but I am surprised that water companies are not statutory consultees on planning decisions for that reason.

Emma Hardy: I am trying to remember the language that we used in the White Paper.

Martin Woolhead: We have said we will look at it. Essentially it is about what we are seeking to achieve in this space, which is a link between local plans and water companies being able to understand the trajectory and build-out rate for infrastructure in their areas and being able to make sure that the water infrastructure is keeping tabs with it. The questions we are examining are: to what extent does a water company need to be a statutory consultee for that to happen; and to what extent are there other things within the system that could be done to make sure that water companies are working together with local authorities in their local plans, to make sure that the water infrastructure is keeping up with housing and other infrastructure and development at a local level?

Baroness Whitaker: Very quickly, if I may: local authorities, yes, but then there are national plans. Does the same system apply? The energy infrastructure is not only local.

Martin Woolhead: Things such as energy and other sectors do tend to work closely with water companies at the regional or local level, so regional system operators with the regional water companies and at a local level the local authorities, as we said about. There is a national framework for water resources that looks in the round across sectors, so they work with other sectors—we talked about agriculture, energy and others—to understand what the national picture looks like.

Emma Hardy: The Water Delivery Taskforce is working with DESNZ to look at Sizewell C to make sure that we have the water that we need for construction and for operation.

Baroness Whitaker: You could use any old water, I think.

Emma Hardy: That point matters so much because, in my opinion, for too long we have used drinking water for non-drinking water purposes. One of the things I am keen to do is look at the use of non-potable water as well. There are some regulations that need to change. There is some anxiety with the Drinking Water Inspectorate around public health and, if you are going to plumb in non-potable water into homes, how you do that in a way that someone does not accidentally mix up the supply. There is a safety element to this but, fundamentally, I ask the question: why are we using drinking water to flush our toilets? I am yet to have a valid answer other than, "Because we always have". I am keen to look at this. It is much easier when looking at new developments, of course.

Q196 Lord Jay of Ewelme: Thanks very much for being with us today, Minister. We have spoken quite a lot about the need to reduce demand, which is sensible. Some other countries seem to be rather better at doing this than we are; I am thinking of Austria, Denmark, the Netherlands in particular. Are you looking at what others are doing to see what lessons there are that can be useful for us? The other question is, as you say, that there still seem to be some regulatory barriers to using water in a more effective way. Could you say a bit more about the regulations that you think may need to be changed both for domestic and industrial use? In particular on industrial use, it is a question that goes back to something that Lord Ashcombe asked earlier about: how is pressure put on industry to reduce water use if it is not convinced that it is in its interests, but is quite clearly in the national interest?

Emma Hardy: Great questions. One thing I found when I came in, which I was just completely shocked by and which we have changed, was that there was an incentive for large industrial users of water to pay less for their water the more they used. I thought that was absolutely bonkers, because you are using more and more drinking water and you are paying less for it. It did not feel right, so that has been changed, but there is more that we could do on tariff reform—looking for non-household use and industrial use on this and, if they are going to use non-potable water supplies, could that be reflected in tariff reform?

The biggest barrier—and I should not say “barrier” because it is an understandable barrier—when it comes to domestic is of course, understandably, the Drinking Water Inspectorate and the rules around public health. At the moment you are not allowed to have any water source going into a domestic property that is not drinking water standard. If we are going to look at changing some of that for things such as flushing toilets, then we need to do it in a way that is very safe. That is something to be worked through; it is not an impossible area. Yes, we are definitely really interested in what other countries do and how they do this.

Martin Woolhead: To give you a few examples, we are looking at the work that Spain does around desalination. We are working with examples in America around data centres and the way in which they use water, and there is a lot to learn from Australia and Singapore about water more generally. We have had quite a lot of dialogue with the Australians and Singaporeans around the way in which they use water. There are quite a few countries to learn from internationally.

Emma Hardy: The one that Marcus Rink always mentions—he is the person from the Drinking Water Inspectorate—is, when we built the Olympic Park in 2012, they were able to use non-potable water for the Olympic Park. We have not been able to recreate that since. Martin will be able to fill in the detail of where you have an industry that uses drinking water near where a wastewater treatment works produces wastewater. Why are we not using the wastewater to cool the tower instead of using the drinking water? There are some regulatory changes that will be required to do some of this but, fundamentally, we need to

start thinking about our drinking water as a precious resource and we need to stop using it for things that it does not need to be used for.

Lord Jay of Ewelme: I agree with that, which goes back to the question about pricing that Lord Krebs was asking earlier. Going back a little bit to a discussion that we had earlier about messaging, I think we can all get on to the Environment Agency website and water company websites. They are quite interesting but, if we really want to change attitudes, can we not use social media more effectively? How do we use social media more effectively so that we get through to people whose attitudes we want to change?

Emma Hardy: I wish I knew the answer to that. How we can go viral on water scarcity is a tricky one. At a national level we are looking at messaging and testing which messages are effective and which have greater influence on different parts of society. There is an area down in Southern Water where they have the lowest use of water because the community there are so passionate about their chalk streams, so they really think about their water use because they are worried about the impact on the local chalk streams that they love. There are some examples where there has been an accurate reflection on behaviour. United Utilities told me that they were able to look at reducing use through water metering and through price, so it is about what the different messages are that will influence people to act in a different way. Sometimes that might be to think about the environment; in other places it might be to think about the cost. That is what they are looking at in that messaging, and there will not be a single message that works for everybody, but it is how you think about this in different ways. I have found for some groups the environmental message has been more effective, because people do not tend to be overly fond of their water company—but when you say that this is not about helping the water company but is about helping their local chalk stream, it seems to resonate differently.

Lord Jay of Ewelme: Yes, I agree with that. It is what Earl Russell was saying about the importance of a local approach.

Emma Hardy: Yes, but we do want to run it as a national campaign. We do want to have some kind of co-ordination but we will try some messaging out. Some will not work and we might need to go back to it, but we need to try different ways.

Q197 **Lord Krebs:** My question goes back to the previous discussion with Baroness Whitaker about the spatial aspects of infrastructure and the impacts on water supply. I particularly want to ask you one question. With the plan to build new nuclear power stations including SMRs around the country, they will be water-intensive and the Fingleton review sparked some level of alarm about the balance between water for the natural environment and water for nuclear power stations. Could you comment about how the trade-off will be made between protecting habitats that require water and supplying water for nuclear power stations?

Emma Hardy: That is a great question. We are talking to DSIT now about design and learning from other countries in the way that things are designed and how much water they will be able to use. As I say, it seems obscene to me that we would use drinking water to cool some of these. I cannot speak on the nature side because I would have to defer that to Minister Creagh, but from the water use side we are having conversations around how to design things in a way that uses the least water possible. I can ask Minister Creagh to get back to you on that balance around impact on nature and growth.

Lord Krebs: Thank you. I would very much appreciate a note from Minister Creagh.

Q198 **Baroness McIntosh of Pickering:** This is something that Mr Woolhead said in response to Baroness Whitaker. You spoke of water companies being statutory consultees. They are currently not statutory consultees and they would like to be. The problem we have is that housing and the other department, planning, do not wish to have any more statutory consultees. How are we going to get around this little problem?

Martin Woolhead: To me it is about what we are trying to achieve, and the key thing is making sure that water companies are involved at the right point so that they understand what is coming and are able to adjust the infrastructure. I think the question is whether making them a statutory consultee would achieve that or whether there are other ways to tie them into the planning system appropriately through making sure that there is a link at the right point in the process. It is focusing on the outcome rather than statutory consultee as such.

Emma Hardy: It is mentioned in the White Paper. There is a mention not of making them statutory consultees but, as Martin said, of how they will be involved in the planning process. I cannot remember the exact language, but it is about that point: what is the best way of achieving the outcome we want?

The Chair: I will come to Lord Layard and then Lord Ashcombe. If any colleagues have outstanding supplementaries after that, then if there is time I will try to fit them in.

Q199 **Lord Layard:** We have learned that you are rethinking how to reduce demand, but our briefing tells us that you are committed to these nine new reservoirs. Is that a firm commitment or is that part of the rethink?

Emma Hardy: It is an absolutely firm commitment, because it is in our water resource management plans that reducing demand will get us so far but we also have to factor in climate change and the changing weather. I absolutely believe that we need these reservoirs as well as reducing demand. I do not think you can do it all one way or another. I think we need to do both, as well as the water recycling and the various other infrastructure projects that we need to do.

Lord Layard: Has there been a benefit-cost analysis of each of the reservoirs? If there has, could we be sent it?

Martin Woolhead: For some of the more immediate reservoirs, the ones that are further along in the process, there are quite robust and sophisticated estimates of the costs. As they get much further out, they are more conceptual and we do not have a strong sense of what the costs of those will be. There is not a full cost-benefit done for the full programme of the reservoirs versus demand reduction, but broadly speaking about two-thirds of the supply and demand balance is met by demand reduction and only about a third of it is new supply, which is these schemes. It is a combination of reservoirs, water transfers, and potentially desalination, and those plans will continue to iterate over time.

While the plans are 25-year water resource management plans, they will continue to be iterated and at each point there is an assessment and analysis of best value. What is the cost of each of the options? What is the yield of water? Which are not necessarily the cheapest but the best value options? That exercise is done through water resource management planning every five years. Through the White Paper we will continue to do water planning. There are changes to the planning to reduce the number of plans that are done, but fundamentally we will continue to revisit water resource management plans regularly to understand how the supply and demand balance is evolving and whether the options should evolve.

Lord Layard: Can you send us details of anything that is public on this?

Emma Hardy: Of course.

Q200 **Lord Ashcombe:** Minister, you quite rightly said that water is a very precious resource. Turning back to leakage very quickly, if an oil pipeline was leaking 20% of the product down it, there would be world war. That is what is going out of water pipes, and it is ignored to a degree. The public do not like being told to turn down the amount of water they are using if we are losing 20% of it. That is a huge issue.

I turn to my more formal question. How will the plans in the water White Paper support an integrated approach to drought management? Will the regional water resource function mentioned in the White Paper enable nature-based solutions for flood and drought mitigation at a catchment scale? Flood and drought have to go together.

Emma Hardy: Yes, I could not agree more. You are absolutely right, and this was the difficulty with the messaging in the summer over not using your hose-pipe and then seeing a burst water main in the middle of the town. I hope asset standards will be a bit of a game-changer on this, to be developed through the White Paper. On your wider question, this afternoon I have my regional steering group and we are looking at this. I am a huge fan of nature-based solutions. For flooding we have already set a minimum amount of money that has to be spent on nature-based solutions. This comes into what I call the pre-pipe, and there is a massive amount of overlap and collaboration. Wessex Water does quite a bit around nature-based solutions in some of the work it does. In Hull, Yorkshire Water does the Living With Water project, so there are some

good examples of this. To me it is just a win for everybody if you can do something with nature because it boosts biodiversity, helps solve a problem and is much cheaper.

Lord Ashcombe: I totally agree, but in the Environment Agency's policy paper *Drought: How it is managed in England* there is very little mention of using nature-based solutions. Over the period of this inquiry we have heard quite a lot about nature-based solutions and, to your point, they are some of the best if they are in the right place. The Environment Agency needs to wake up to the fact and ask how we are going to make it happen.

Emma Hardy: It depends on the exact composition in different areas on our regional planning steering groups, but I think that question around resilience and how nature can be our friend goes back to the point around cost to customers. If you use nature, it is much cheaper than building a chemical treatment works and everything else that goes with it. I was given an example by a water company that was telling me that as it stands it has to create a pipe that costs millions of pounds to deal with an issue around water pollution, whereas the answer would be to fence off the cows from going in the stream.

There are some really expensive solutions out there at the moment because we do not have an integrated approach at a local level to what is the best cost answer for this. That is what I am trying to achieve through the regional planning. We have the steering group this afternoon and we are looking at having an early rollout around the country of some areas where we can try this, looking at one that is more coastal and one that is more chalk stream to see how it will work in practice. In my mind it is all about the best solution for the environment and the best solution for customers in terms of cost, and I find that quite often the answer is nature.

Lord Ashcombe: I have a great friend in Scotland who fenced his animals out of the little burns years and years ago, with the result that salmon are going up there to spawn exactly where he has done this, which is a great story but it means the expense is on the landowner, and many of the farmers are not exactly flush at the moment—putting it politely. We have to make sure that if we are going to go down this route, there has to be some sort of system to help those farmers do what we want them to do because it will be on their land.

Emma Hardy: In this example, the water company said to me it could pay the farmer to do that for millions less than it would cost to put the pipe in. This is what I am saying: at a local level, they could work together on some of these things. We have various examples of water companies paying farmers to do things that support what they need to do. That feels really sensible because it helps the farmer, it reduces pollution and it is cheaper for the customer, so it is about encouraging more of that. At the moment that feels like the exception rather than the norm, so it is about how we make that a more normal way of going about this.

Martin Woolhead: More generally, a real game-changer around nature-based solutions will be the stuff around reuse. Clearly, at the moment drinking water needs to be treated to a very high standard to be able to go into the network. If there is much more use of non-potable water, the treatment that nature-based solutions provide becomes unlocked. It is tied into the conversation that we had earlier about reuse.

Lord Ashcombe: It is also slowing the flow, et cetera. That is the point.

The Chair: Thank you, Minister. We are at time. However, I have three colleagues who would like to ask supplementary questions. Do you have time to stay with us a little longer?

Emma Hardy: Yes, I can.

Earl Russell: I want to thank you both for your evidence this morning. It has been very useful to the inquiry. It is more just a comment. You started your evidence today by talking about looking out of the window, and yet some of our reservoirs are still in drought. On the complicated public information whole-society approach, I want to encourage you to look at ways in which we might be able to use national weather forecasts to encourage public information around drought and groundwater resources. I think it is just another tool that could be useful.

Emma Hardy: Thank you. That is helpful.

Q201 **Baroness McIntosh of Pickering:** Pickering Slow the Flow has been a great success, but it was only thanks to public funding that it was used. We heard in evidence that under the environmental improvement plans currently, farmers are not paid to improve the land in the way that we have been discussing. Also, it is not clear whether the higher-tier environmental land management schemes, which are intended to enable nature-based solutions, can be used in this way at catchment scale. Is that something you could take away?

Emma Hardy: Yes, I am very happy to take it away. I know water companies might have their own local arrangement with farmers in some instances, but I am happy to take away the point on ELMS and how that is being used.

Baroness McIntosh of Pickering: On the Defra website there is a reference, which might be out of date, to the Balmforth review on reservoirs. It said that Defra and the Environment Agency will begin a programme of work in summer 2022 with a view to consultation in 2025. When you write to the committee, could you let us know whether the consultation happened, whether it is in the pipeline and what is happening? That would be very interesting.

Emma Hardy: Of course. Yes.

Q202 **Lord Mancroft:** You touched on the White Paper and we have talked about that, but taking that forward will presumably require primary legislation at some point. I do not know about the next King's Speech or

anything like that, but that is quite a big piece of legislation we are talking about, is it not?

Emma Hardy: Yes. It will be quite a beast.

Lord Mancroft: Will it be one of your department's priorities? I hope it will.

Emma Hardy: Absolutely. At the moment I am trying to work through some things that we can do now. There is a transition plan coming out relatively soon that will talk to Ofwat and the Environment Agency with a new, updated SPS—strategic policy statement—telling them how we want them to implement transition, so the moment we get Royal Assent we are ready to go and looking at how we create a shadow organisation during the time the Bill passes through Parliament so that there is not a lurch from one system to another. That is what we are working on, but you are absolutely right that lots of the things require primary legislation. We are working on a big Bill.

Q203 **The Chair:** Thank you very much. I have one very quick question about prices. I think it is quite important that we understand what we are talking about here. The Environment Agency is responsible for setting the charges for water abstraction over 20 cubic metres per day. Is it one price for all sectors or does the price vary by sector?

Emma Hardy: I would have to come back on that—sorry. I am not sure.

The Chair: It would be useful to know how pricing is structured and works. Could you also include within that any recent evaluation that the Environment Agency has made of the price or prices? It would be very helpful indeed. Thank you very much, Minister. You have been very generous with your time and your information, and we appreciate you coming today.