

Environment, Food and Rural Affairs Committee

Oral evidence: Water Resources Infrastructure National Policy Statement, HC 1978

Wednesday 13 March 2019

Ordered by the House of Commons to be published on 13 March 2019.

[Watch the meeting](#)

Members present: Neil Parish (Chair); Alan Brown; John Grogan; Dr Caroline Johnson; Kerry McCarthy; Mrs Sheryll Murray; David Simpson; Angela Smith; Julian Sturdy.

Questions 1 – 67

Witnesses

I: Richard Aylard CVO, External Affairs and Sustainability Director, Thames Water; Trevor Bishop, Organisational Development Director, Water Resources South East; Hannah Stanley-Jones, Head of Water Resources, Anglian Water.

II: Hannah Freeman, Chair, Blueprint for Water; Rob Lawson, Chair of Water Resources Specialist Panel, Chartered Institution of Water and Environmental Management.

Written evidence from witnesses:

– [Anglian Water](#)

– [Chartered Institution of Water and Environmental Management](#)

Examination of witnesses

Witnesses: Richard Aylard, Trevor Bishop and Hannah Stanley-Jones.

Q1 **Chair:** Good morning. Thank you very much for joining us. We are looking at the national policy here, so I am happy to have you with us this morning. Hannah, would you like to introduce yourself, then we will go across the panel and make a start?

Hannah Stanley-Jones: I am Hannah Stanley-Jones, head of water resources at Anglian Water. I am responsible for our water resources management planning process and ensuring water resources management planning is adequately implemented across the area we cover, the east of England.

Richard Aylard: I am Richard Aylard, the external affairs and sustainability director at Thames Water.

Trevor Bishop: Good morning. My name is Trevor Bishop and I am organisational development director at Water Resources South East. It is a long-standing organisation, but we have recently beefed it up with myself and other directors to act as an alliance of water companies for integrated strategic planning.

Q2 **Chair:** Naturally, it is very south-east orientated, but that is partly because that is where a lot of the drought, potential drought or shortage of water is. The first question is: the NPS encourages three specific types of water resource infrastructure project. Are the types of project and the deployable output targets the right priorities to meet the challenge that we face and you face?

Hannah Stanley-Jones: I would like to start by making a point around the wider water resources management planning process and the twin-track approach that we take to water resources management planning. Absolutely those are the right types of schemes to help us address the deficit, but they are not the only things that we look at. We would always look to implement demand management measures first, so looking to tackle leakage, encourage water efficiency and rolling out smart metering are parts of Anglian Water's plan. That would always be the point where we would start.

Q3 **Chair:** What are the leakage figures for Anglian Water at the moment?

Hannah Stanley-Jones: Could I come back to you on that question? I have that information to hand and I can tell you what our leakage targets are for the next five years.

Chair: Yes, but I would certainly like it before you leave so that it goes on the record. It is important because, as we take more and more water out of our rivers and reservoirs, we have to get on to the leakage problem.



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Hannah Stanley-Jones: That is absolutely a priority for us.

Chair: If I let Richard in and then Trevor, before you finish this question, perhaps you could look up the figures and come back to me.

Richard Aylard: I agree on the twin-track approach. We would always look to manage demand first, before we get to resource development but, in our area, there are constraints of population growth and climate change combined. They mean we have to look at resource development, once we have done as much as we possibly can, as a twin-track approach with demand management. Leakage is a high priority for us. As a rolling average across the year, we are just under 700 million litres a day at the moment.

Q4 **Chair:** What is that in percentage terms?

Richard Aylard: It is just under 25%.

Q5 **Chair:** Is it? That is far too high, is it not?

Richard Aylard: It is too high and we are fixing about 1,800 leaks a week at the moment.

Chair: I suppose your infrastructure is very old.

Richard Aylard: It is very old and some of it is difficult to work on, under busy streets in London. We have to be mindful of traffic disruption, but we are working hard to find as many leaks as possible to get them fixed. We are spending about £1 million a day on reducing leakage, and we are committed to getting leakage down by a further 15%, over the next five years.

Q6 **Chair:** That is 15% of 25%, I imagine, rather than bringing it down 10%.

Richard Aylard: Yes, that is right.

Chair: There are lies, damn lies and statistics.

Richard Aylard: If we could, we would. We would love to get to 10%.

Q7 **Chair:** So 15% is about four percentage points, is it?

Richard Aylard: It would be in that region, yes.

Q8 **Chair:** Is that ambitious enough?

Richard Aylard: We were looking at getting about 10%. We challenged ourselves to get further, and we have looked at the cost of doing that against other schemes. We think that, in conjunction with fitting many more meters and increasing water efficiency, it is doable. There is no point in us pretending to do things we cannot. Over five years, 15% is a challenging target.

Q9 **Chair:** The blunt question to you is: is Thames prioritising where you should spend money? Are you giving too much to your shareholders and



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chief executive, and not enough on repairing the pipes? Seriously, I do not think any water company can go on expecting to take more and more out of the rivers, as we seem to get drier summers and less water available, when 25% of what we are taking is leaking away. I do not think it is sustainable in the end.

Richard Aylard: They are all fair points. I will just make two points in response. The first is, in order to prioritise investment, particularly in leakage, our shareholders took no external dividend last year, none this year and none next year. They are going to take very low levels of dividends over the next five years, so as much money as possible will go into improving the infrastructure. On taking water from the rivers, I agree about taking water in the summer. In the winter, for most of the time there is plenty of water in the rivers and it is running away to the sea. This is why one of the big projects in our water resources management plan is a storage and transfer reservoir that will benefit both us and Anglian Water, taking water out of the river in the winter, storing it and putting it back in the summer.

Q10 **Chair:** You are right, because I went to Norfolk and there is quite a lot of water in the Norfolk Broads still going out into the North Sea. It is flat there, so it does not take too much to alter that flow of that water. I hate to see freshwater going straight out into the North Sea. It is a question of us using our resources better, but I go back to the fact that leakage is not satisfactory. Has Anglian decided where you are on leakage?

Hannah Stanley-Jones: Our 2015-16 leakage target was 192 megalitres a day—that is million litres a day. We achieved 189. Our target by 2020 is 172 million litres a day.

Q11 **Chair:** What is that in percentage terms?

Hannah Stanley-Jones: In our water resources management plan, we aim to get down to less than 10% by 2045. That is where we are aiming. Anglian Water is industry-leading when it comes to leakage, so we currently have the best performance in the industry.

Q12 **Chair:** I suppose Thames would argue that Anglian Water has newer pipes. I am going to play devil's advocate now: why is it that Anglian can get to 10% and you are on 25%? You are looking at reducing it by perhaps four percentage points to 21%. It is not good enough, is it?

Richard Aylard: The Anglian Water figure you were just given was for 2045. The one I gave you was for 2025.

Q13 **Chair:** What is it in 2025 then?

Hannah Stanley-Jones: I do not have it as an exact percentage, but our 2020 target is 172 megalitres a day.

Q14 **Chair:** What percentage of the total water that you are processing is leaking away?



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Hannah Stanley-Jones: What we are aiming for is a 22% reduction by 2025.

Q15 **Chair:** What percentage of water that you are putting through your system at the moment is leaking away? That is the answer I want.

Hannah Stanley-Jones: Can I come back to you? I have the numbers in front of me. I just need to work out that percentage. Can I come back to you in writing on that question?

Chair: We definitely want that in writing, please. Surely you would have expected to get that question this morning. Caroline.

Q16 **Dr Johnson:** Can I ask about leakage? When we have talked to water companies about leakage before, they have basically said that they do not know how much is leaking because it is a guess. You have talked, Mr Aylard, about putting in meters. When you put in an increased number of meters, you have more idea of how much is really leaking. Are your estimates high or low? How much of your reduction is caused by more accurate recording of what is leaking and how much is a result of fixing leaks you have already identified?

Richard Aylard: Leakage is always going to be an estimate, a calculation, rather than a measurement. What we are doing by putting in many more meters is giving ourselves much better information. Because we are using smart meters that give us readings every 15 minutes of water consumption, we can work out which houses have a leak on their pipework. About a quarter of our total leakage is on customers' pipes, so once we fit a smart meter, we can identify where those leaks are, go in and do free repairs for them. We have found that the amount of water that is leaking in that way is roughly the amount we expected, but spread over many more properties, so we are finding there are more smaller leaks, but the total volume is about the same.

Q17 **Dr Johnson:** What you are saying is you think your estimates are fairly accurate.

Richard Aylard: We do, yes, and we check them, because we know how much water we are putting into the system and how much our customers are using, on the grand scale. We can then work it out from there. It is more difficult when you mend an individual leak to know exactly how much water has been going out of that leak, because you are not going to sit and measure it; you want to cover it up as quickly as possible. When you are doing 1,800 fixes a week, it is important that your measurements are accurate, so a lot of work has been going on to refine that. Just to finish the point about our leakage reduction, by 2050 we want to get it down by 50% from where it is now, so we are going to halve it. It will be 15% over the next five years then going up to 50% by 2050.

Q18 **Chair:** In the original figures that you gave as the reduction target for your overall leakage, how much is in domestic properties that are leaking



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and how much is in your infrastructure?

Richard Aylard: It is both. It varies from area to area but, looked at across our region, which goes all the way up to Cirencester, about a quarter of the total leakage is on customer pipes.

Q19 **Chair:** No, the question I was asking is that you said you are going to improve the situation in the future. Are you targeting your own pipes as well as the customers' pipes?

Richard Aylard: We are doing both. It does not matter which we do for the overall number, because we have one leakage figure, which is our total leakage, which includes leakage from customer pipes.

Q20 **Chair:** Trevor, you are not being let off the hook. Do not worry; your time will come, and it has come now. What are your figures and where is your company?

Trevor Bishop: We are not a water company. We are an alliance that helps water companies do things more strategically. If I may make a few points on leakage, I am involved in the international context, which could be useful. When you look at where we are in England and Wales on leakage—and I have been involved in regulation, as well as a leakage manager many years ago—there are only three things you can do. You can find the leaks and fix them ever faster. It is a never-ending job that will never, ever stop. You can calm the network, manage the pressure and reduce the amount of damage to the network and therefore the leakage, but again you are not repairing the underlying problem, which is the condition and the performance of the network. This brings you to the third option, which is to replace the network. We all know that that is really what we would all love to do, but the economics of doing so are astronomical. It is a process that companies are starting, where appropriate.

That 15% is 15% of that bigger number, so you are right it is not 15% overall. What is important to recognise is that leakage is hard work, and we see this internationally, where we are probably in the middle of the pack. When you talk about 15% leakage; I suspect most companies know how to get 5%, 8% or maybe even 10%, but that extra 5% at the end is genuine innovation. Companies are having to go out to the supply chain and take on the innovation that is out there. There is always a risk about whether that innovation will deliver, and none of us wants to underperform because of the reputational damage that would have with customers and other stakeholders around leakage.

We also must not forget the economics. Most companies are now progressing a leakage policy beyond the economic level—that is, it would be cheaper to generate more water than to save that water, but companies are doing that because customers support it, because they see how important leakage is. There is a threshold beyond which an uneconomic level of leakage activity becomes quite difficult to justify.



Chair: In the south-east a lot of the rivers are chalk-based. Therefore, there is real pressure on our rivers. Naturally you need water for human consumption, but you can expect us to be tough with you, when we ask how much more water you want to take out of these rivers and then leak it away. For generations, we have not spent enough on our pipes, so it is no good me just blaming you all for the situation, but there probably has to be even greater effort than you are making at the moment to get it right. I will park that question there. Hannah, if you would not mind, come back with those percentage figures, please.

Q21 **Angela Smith:** I want to look at water resources management plans, and the relationship between those and the National Policy Statement, and the balance between the two. The proposal is to enable a more efficient approach to delivering infrastructure and agreeing projects by agreeing the inclusion of them in the water resources management plans. Now, there is a big debate about this and whether the democratic and consultative process will be short-circuited by using the WRMPs. What is your view on that? I just ask an open question. Do you think that the WRMP is a robust and satisfactory way of helping to deliver infrastructure?

Trevor Bishop: The water resources management planning process is the statutory process for determining the gap between supply and demand, both now and into the future, and the most effective way to deliver best-value solutions, whether demand management or infrastructure, to rebalance that. There is flexibility within that system, and both the Environment Agency and Ofwat are statutory consultees, so they get an early opportunity. There is a statutory process that involves customer consultation, so they are involved in the early process. It is fascinating, as we have done that more rigorously over recent years than we might have done historically, and it is revealing preferences about what customers think about smart metering, effluent reuse and acceptability, and those kinds of things.

So we have a robust process, but I do not think any of us would say it is perfect and we are at utopia. It will need to adapt, particularly as we have increased uncertainty on so many factors that will influence that balance between supply and demand, and what the best infrastructure solutions are to close that gap. The flexibility is there within the system, as long as Government, regulators, companies and stakeholders can work together on that, which I am sure they will.

The NPS, I would suggest, is a facilitation tool. Once that gap in supply/demand and the preferred infrastructure solution is identified, it streamlines it going through the process. I would not like to think that it would in any way bypass the democratic or consultative aspects surrounding infrastructure. The Secretary of State still has the ability to take decisions on that or pass it on an inspector to be tested for an examination in public or whatever is the appropriate route. It helps what has proved, over the last couple of decades, to be a fraught and difficult



process for any companies to deliver strategic infrastructure. We have not seen a reservoir built in this country since 1989 or something, and there is a reason behind that.

Richard Aylard: The water resources management plan, as Trevor said, is the statutory process by which we decide how much water our customers are going to need and the best way of delivering it. There is extensive public consultation involved. We back that up with a water resources forum and a technical panel. Our draft plan will go to the Secretary of State in two or three weeks' time. It will contain no surprises, because we have a water resources forum, which will tell all our stakeholders exactly what is in that plan. They have been involved in challenging us and working through that journey with us.

The other point about water resources planning is not just that it is well understood, but the process starts with a guideline that is issued by the Government and their regulators, so we all know what we are aiming for and what good looks like. Even once the plan has been signed off by the Secretary of State, there are annual reviews and the option for the Secretary of State to require a company to produce a new water resources plan at any stage, so the flexibility is there. What it does is then separate the need for the scheme from the way it is implemented, and that is going to help local people.

I took the Thames Tideway Tunnel through its public consultation, starting with the NPS and then to development consent, and it means that local people have two clear opportunities to make their points. First, they can challenge the need when the water resources management plan is being developed and then, if the plan is still required, they have the whole development consent order process. It starts with a detailed consultation. In fact, the first thing the examining authority does is to look at the consultation process and, if it was not done well enough, you have to go back to the drawing board. So there are lots of opportunities, but you separate out the need from the implementation, and those two stages are clear to people.

Hannah Stanley-Jones: I echo those points and there are an additional couple of points I would like to make. To reiterate, the water resources management plan is the correct statutory process where the need is established. There are extensive guidelines and technical guidance as to how companies should assess the impacts of population growth, climate change, the need to protect against future droughts, and also the robustness and the detail that goes into the optioneering and the options appraisal process specifically. A lot of the work that is done in the water resources management plans can then be used as part of the development order consent process—for example, the work that is done around the environmental assessments to look at the environmental impact of options.



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We agree with that being the right place, and the process is there to ensure that the water resources management plans are delivering best value for customers. Companies are now required to consider not just least-cost solutions, but best-value solutions, considering wider environmental benefits and customer perception of options, for example. I echo Richard's point and see that the water resources management plan is there as a statutory process with public consultation, where inquiries and hearings can be made in public, if Defra and the Secretary of State feel it is appropriate, at that stage, to establish the need and the correct option. The development consent order process then establishes the details of that specific scheme.

Q22 Angela Smith: I have to leave temporarily, Chair. I am sorry about this but, if I had time, I would have liked to ask the question around whether the mechanism—the water resources management plan—is sufficient. Water companies do not always work at the appropriate catchment level. If we are building a big new reservoir, it may be at catchment level, but I am afraid I have to leave. I put that question on the table and perhaps ask the panel to respond, but I am afraid I cannot stay to listen to the answer. I am sorry.

Chair: We will listen to the answer, so you have the question. Thank you, Angela. I understand you need to leave. Would you like to answer the question? Richard, will you have a shot, please?

Richard Aylard: Companies are co-ordinating on regional plans. That is why water resources in the south-east have been strengthened, with the appointment of people like Trevor, to get the best regional solution. Our water resources plan, which we are about to put into the Secretary of State, has a reservoir in it, which is also in Affinity Water's plans. It will be a joint resource, and it will mean that we can take water out of the River Thames in the winter and store it. When we need it in the summer, we put it back in the river and it flows all the way down to London, so we are using the Thames as green infrastructure, basically. It will flow down under gravity and we can abstract it for London. More importantly, Affinity can abstract it to deal with all the small catchments and chalk streams in their area, so it will not have to take so much from the chalk streams. It can take water directly from the Thames, because we will have put it in from our reservoir.

Q23 Chair: With the Thames, is it all freshwater at this stage? The salt does not come in until farther up.

Richard Aylard: It is all freshwater. The salt is basically below Teddington Weir, and we abstract above Teddington Weir at places like Hampton and Walton, so the bottom end of the non-tidal river.

Q24 Chair: I was thinking that otherwise you would have salt penetration. That seems a good idea. You say you store the water; is this in reservoirs?



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Richard Aylard: It is in a reservoir, yes. The idea is that you build a big new reservoir. There is a site just south-west of Abingdon that has been identified for the last 20 years. We build a big reservoir there and take water out of the River Thames in the winter, when the flow is sufficient and we store it. Then, when we need it in the summer, we put it back in the river via a turbine, so we get half of the energy costs back. It goes back in the river in that area, then it flows down to London where we abstract it. We talk sometimes about reservoirs and transfers as if they are different things but, in this case, we are using the reservoir to make a transfer. We are using water that has fallen on the Cotswolds in the winter, storing it and using it to supply east London in the summer, so it has been transferred a considerable way and between seasons.

Q25 **Chair:** Is that all gravity-fed?

Richard Aylard: It is all gravity-fed, yes, so in climate change terms this is a good solution. In climate change terms, we expect to get wetter winters and drier summers, so we are storing the water from the wetter winters to use in the drier summers.

Chair: Providing you sort your leaks out at the same time, you can take advantage of having more water.

Richard Aylard: And we will sort the leaks out at the same time. It is a twin-track approach.

Trevor Bishop: Richard articulated some of the benefits of looking at a regional scale. To go into that in more detail, a company's licence and their duties to operate are to plan for their own customers within their own area, historically. By taking a broader geographical view and working on a catchment and basin scale, we are able to understand where there are opportunities for a company that would not develop the source, which is in juxtaposition to a company that has a deficit of water. We have identified a series of schemes, which are now being progressed through the planning process, to better manage the optimisation of resources at a basin scale, because the boundaries of water companies are historic and administrative, rather than hydrologically based.

Hannah Stanley-Jones: I would like to give an example of one way in which Anglian Water is specifically considering catchment and multi-sector needs, as well as just public water supply. Trevor made the point that, traditionally, water resources management plan and water companies would just plan for public water supply needs. As part of the Water Resources East initiative, Anglian Water has been working across our region with other sectors as well, so with the environment sector, agricultural sectors and other uses of water in the catchment. We are specifically looking at the future need for a reservoir in south Lincolnshire, and working with stakeholders in that catchment to work up designs for how that reservoir, if it were to be needed and implemented, would provide wider benefits for the environment, potentially for flood risk management and for agricultural needs. We are completely on board



and engaged with Defra's priority catchments, which fall within our region, and working with other abstractors within those catchments. As part of Defra's consultation proposals that are out now, on improving our management of water in the environment, there is a specific move towards companies planning for multi-sector needs and engaging with other abstractors at a catchment scale.

- Q26 **Chair:** There is a need to maintain enough waters in reservoirs, because one of the issues in East Anglia is that some farmers are having their licences to grow crops and vegetables revoked. This is controversial, because it will put a number of them out of business, so it is something we need to take seriously. The point that Trevor made is interesting, because it was all about how catchment areas do not necessarily follow company boundaries. I know there is a lot of co-operation and things between companies, but does this framework do enough? Water is fine when there is plenty of it, but not quite so good when there is not so much of it. To a degree, you could hold each other to ransom if you wanted. I am sure you would not, but is there any mechanism that lays out how that happens?

Trevor Bishop: If I could kick off, we talked about Water Resources South East, but there are four other regional groups that cover the whole of England and that may be extended to another one that covers Wales as well, but it is not quite there yet. Those groups can plan objectively, in a balanced and impartial way, across their geography. They can do likewise at their boundaries with the other groups. That is why we have three regional groups working together to think about whether water can be brought from the north of England, down the River Severn, utilising possible water in Wales and over the boundary into the Thames Basin to support companies in the south-east. We are not looking just at regional solutions; we are looking at inter-regional, super-regional and national-type solutions.

- Q27 **Mrs Murray:** What assessment can you give that the WRMP process provides enough engagement and consultation to support the development consent applications?

Richard Aylard: The water resources management plan is a statutory process and we are required to consult on our draft plans. In fact, we consult even before we produce the draft plans, so we get views and input from our various stakeholders. The plan then goes out for public consultation and we get, in our case, many hundreds of responses. We then have to publish a statement of response, which gives our answer to each question that has been asked, and that goes to the Secretary of State with the revised plan.

When that plan gets to the Secretary of State, he or she has three options. One is to accept the plan. The second one is to send it back saying, "You need some more work here. I'm not satisfied", and the third one is to call a public hearing or inquiry to expose an issue in greater detail. The whole thing is done under a government guideline, which is



Defra and the regulators working together. I believe there is sufficient involvement there to give a genuine consultation. It is a process by which our stakeholders can challenge us. They can say, "You are not being ambitious enough on leakages", as the Chairman was just doing. They can say, "Your per-capita consumption figures are too high". They can say, "We want more demand management over a certain period". Everything is up for discussion and ultimately, as it should be, the Secretary of State decides, so yes, I think it is fit for purpose.

Q28 Mrs Murray: Should the National Planning Statement be clearer in setting out the process linking company plans to the development consent process?

Richard Aylard: I think it is clear, but the more clarity, the better, because we want everyone to know exactly where they stand. It may be that, in the NPS, there should be greater explanation of how the WRMP process works. Bear in mind we are trying to serve our customers and we are trying to ensure they have water they need when they need it. Getting bogged down in a long planning inquiry will not allow us to deliver that. Any individual should be able to know how to make their views known, at every stage of the process.

Hannah Stanley-Jones: There is a section in the current draft NPS that states that the need will be identified as part of the water resources management planning process, so I think it is clear, but it would help to put more clarity around that. When we talk about need being established as part of that process, I would like to see it explicitly explained that that is both the need for a scheme, because of the challenges of climate change, drought, et cetera, and also the need for that specific solution. That is so you do not end up in a situation where you have your water resources management plan signed off by the Secretary of State and then go through your development consent process, but in going through that process and the public examination part, your water resources management planning strategy and options appraisal process is undermined.

It would help to have more clarity in the draft document as it currently is. We are not talking about huge amendments, but spelling out that this is the opportunity for stakeholders and the public to input to the process around what the best solution is—for example, whether it is a reservoir, desalination plant or whatever it may be—as part of the water resources management plan. Then, when we go through the development consent order process, it is more around the detailed design, assessment criteria and the principles of how we would deliver that exact scheme, not going back around to say, "Could you do something else instead?" That is almost settled once it is in your final water resources management plan that been signed off by the Secretary of State. That is not brought into question again as part of the process. I think that is in there. The meaning is there, but perhaps the wording needs more fleshing out.



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Trevor Bishop: Those points are well made, and I do not think I can add extra value. I support them very much.

Q29 **Dr Johnson:** Mine is about the timing of this document. The Environment Agency is leading the development of a national planning framework for water resources, which will report later this year. Has this been brought out too early?

Trevor Bishop: It has not at all; it is really timely. In my career in water, I have never seen such a collegiate approach between the national framework that the Environment Agency is developing, the regional groups, companies and other stakeholders. The penny has dropped with everyone now. We are not talking about which bit of infrastructure we might build in the future; the scale of the challenge is in which order we build it and the timescales for its delivery. The evidence you will have seen has articulated that we are at a tipping point in the gap between supply and demand, and the uncertainties associated with that into the future. I am pleased to see this draft consultation coming out. It will support the process and streamline an important part. It is worth noting—and this is the core of your point—that this is just part of the jigsaw. How we, regulators and government all work together in this will be critical to us doing the right thing, in a timely fashion. The clock is ticking on strategic infrastructure now.

Richard Aylard: I agree. Regardless of what the national planning framework is, we will still need a mechanism to get whatever schemes are needed through the planning process quickly, efficiently and fairly, which is what the NPS does, in my view.

Hannah Stanley-Jones: I agree as well. It has been timely and well planned, and the consultation process has been good.

Dr Johnson: It is always good for people to be happy with things.

Q30 **David Simpson:** Do you agree with the inclusion of the environmental net gain as a cross-cutting assessment principle in the NPS, and should biodiversity be given special attention in the calculation of net gain? Do not all rush at once.

Hannah Stanley-Jones: The point I would make—and I do not necessarily intend to get into the details of the technical approach to how you calculate net gain—is the broader point around the water resources management planning process and that being a mechanism to deliver environmental objectives and benefits in itself. As part of water resources management planning, companies are required to assess the need to reduce abstractions. For example, Anglian Water will be reducing abstraction by a significant amount as part of our water resources management process. That drives the need for these new schemes.

If you then have a requirement to prove environmental net gain as part of the scheme itself, it could potentially present unnecessary barriers to that scheme progressing and could result in an overall outcome, as part



of the water resources management planning process, which is less environmentally beneficial than if you delivered that scheme. If you think about the types of schemes we are talking about, reservoirs are a good example of where you can build in biodiversity and wider environmental benefits, creating habitats for example. It would be more difficult to do that with a transfer scheme. It is too narrow just to consider those schemes individually, rather than looking at the wider environmental benefits of the overall water resources management planning strategy. It is a good thing, and I think that the process, to an extent, already takes account of assessing environmental benefits and potential impacts, as part of the strategic environmental assessment processes. But to make it scheme-specific would create additional restraints that could lead to poorer outcomes overall.

Richard Aylard: I agree with Hannah. The environmental net gain needs to be looked at in the round, rather than as one particular scheme, because one scheme may deliver a benefit in another area. You asked about biodiversity specifically. Yes, this is something that we are keen to do and indeed our customers are too, when we asked them about it. We have a commitment in our next business plan to achieve a 5% net gain in biodiversity across our sites, over the next five years. We are using the Government metric, we have done baseline assessments and we are going to be improving biodiversity. Clearly individual schemes being brought forward in the future, in the water resources planning process via the NPS, can have a positive benefit for biodiversity. Reservoirs are a good example of that, as Hannah says. Equally, transfers can be problematic, in the transfer of invasive species, sediment and so on. Biodiversity is best looked at at the scheme level; environmental net gain in the round.

Trevor Bishop: All I would add is that, in the past, we have looked at the environment as a set of statutory duties and tick boxes to be filled. There is an important growing realisation that the natural environment underpins everything that we do and that, if we do not look after it properly today, the problems it will cause for our generation and future generations cannot be countenanced. Therefore, I do not think anyone argues against net gain, but I agree with the point that Hannah and Richard have made. If it was too tightly defined within a particular scheme, it could lead to some perverse decisions being made. The strategic environmental assessment might be one tool, but there are better tools to understand net gain at a larger scale and to give that context. That could lead to much more sustainable solutions than we are thinking about today.

Q31 **Chair:** South West Water and some water companies—it depends on the terrain—are able to rewet peat, especially up on Exmoor. That is then held in the winter and drains naturally through the summer. That works well. Do you think across the country, and Thames and Anglian, you are doing enough of this? There is an argument that you can get greater biodiversity and do not necessarily need to build another reservoir. Are



we doing enough of that nationally, Trevor? Then I will ask what Richard and Hannah are doing as their own companies.

Trevor Bishop: I had the great pleasure of a wet day on Dartmoor recently looking at the Mires on the Moors project, the rewetting of the wetlands and the benefits that provides, not only in carbon sequestration, but also in water resources, water requirement and biodiversity. What we saw at PR14 was that companies, as an aggregate, had about 100 similar schemes that looked at using natural processes, rather than building concrete, chemical and pipe-based solutions. In this planning round, companies are putting in between 500 and 600 of those schemes and it is not just the number; it is the scale and that they are offsetting bits of infrastructure by using natural processes in probably a more sustainable and cost-effective way.

In the south-east, we have further to go than we have seen in the south-west. We do not have the same type of uplands, so cannot manage the environment, and also population density and other pressures on the natural environment are such that we need to think about different ways. We are engaging internationally, where we have similar catchments in the south-east, which are utilised by agriculture, housing, industry, commerce and the way that they are. There are things that we can do, but of course more.

Q32 **Chair:** Coming to Richard, the cost of building your new reservoir must be substantial. Have you looked at other methods of holding water and increasing biodiversity with it?

Richard Aylard: We have looked at other methods. The problem is the volume that you need to achieve. When you have London's population and the south-east growing at the rate they are, we need quite big solutions to complement demand management. What we have done, for instance, is reduced abstraction from the River Kennet in the summer to help biodiversity. We are working on a number of catchment management schemes with farmers to improve water quality, but the more water we can leave in the environment, the better things will be for biodiversity, rivers and wetlands, which is where demand management becomes so important and working with our customers to get demand down. We would like to see building regulations change, so we have more water-efficient new housing stock. That would also help, but it is mainly a question of just taking less water out of the environment. We do not have big flood plains that we can rewet, as they have in the south-west, unfortunately. We do not have any peat.

Q33 **Chair:** When it comes to Anglia, I would have thought that quite a few areas could be rewetted, or am I wrong?

Hannah Stanley-Jones: I would like to stress that we are a water-stressed area. One of the key challenges that we face is the number of environmentally sensitive sites. We have to reduce abstraction from the environment. We have a rigorous process of going through and working



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out all the potential feasible options and blue-sky thinking of what can be done. Then we go through a process of looking at the Environment Agency's assessments of those catchments and whether it is possible to take any more water in those catchments or not.

Q34 Chair: The question I am asking you is not what you are abstracting. The question I am asking is if there are areas that you can rewet during the winter—hold the water back, so you can draw it out in the summer. We understand it is stressed, but if it is stressed, you have to look at smarter ways of holding water. That is the question I am asking you.

Hannah Stanley-Jones: As part of our option development process, we look at all the different types of feasible options and then we take them through the process of assessing whether they are environmentally acceptable. One of the challenges that we face is that there is a limited number of feasible options, due to the constraints around environmental protection, for example, but we are looking at innovative ways to store water.

One of the schemes we are looking at as a potential future option is storing water in groundwater—so, aquifer storage and recovery. When there is surplus water in the winter, we would inject that water into our groundwater systems and re-abstract it in the summer. Obviously you are making best use of an existing groundwater system to store that water, rather than building something to do that. Those are the types of innovative options that we are looking at in the east of England. I echo Richard's point around the challenge of volumes. Those sorts of solutions are more appropriate for smaller-scale catchments, rather than the sorts of volumes that we are potentially talking about needing in the future.

Q35 Chair: Going back to a previous point I made, if you have water that you are discharging into the North Sea, there is no justification for that. I do not think you are going to make a lot of difference to the salt content of the North Sea, dare I say. I might be corrected by some environmentalists, but I am not convinced that the amount of freshwater we are going to put into the North Sea will make any difference to the saline condition of the North Sea. Are you looking at the bigger picture? I am not sure whether Anglian Water goes right to the coast, but I suspect it does. Therefore, if it is right to keep that water going to the sea, let us keep that river full, especially in the summer. I accept you probably need to pen the water, but is there justification to let that water go out to sea? You have the Environment Agency taking licences away from farmers to grow crops now; we have to be a bit smarter with our water.

Hannah Stanley-Jones: The point I will make on that goes back to highlighting the work that we are doing in the catchment in south Lincolnshire. We are working with the internal drainage board there to do that exact assessment and work out how much water is being discharged out to sea that does not need to be, and can potentially be capturing and stored. That would then potentially link to a reservoir option. We are



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storing that water that, at the moment as part of flood risk management, is being discharged out to sea.

Q36 Chair: I farm in Somerset, where we have drainage boards. A lot of the water can be held within the ditches and the infrastructure, if you do not let it go out to sea in the first place. That is the situation, where I think can do more to hold that water back. Some of it may need to go into a reservoir. If you could pen that water and stop it going out to sea, you could hold a lot more of it. I know it may affect farming methods in some cases, because the water levels might rise. Do we then look at land management and agricultural water policy in the future? I do not know whether the water companies are considering the brave new world that might come in a minute and where you will be. I think you need to come forward with some ideas about holding water in the land, so that you do not always have to build a reservoir. I am also not convinced, by any means, that so much water should go out to sea, when you are saying you are short of water. This is a nonsense in my simple brain, dare I say it.

Richard Aylard: It is a question of scale. To hold back that water would be difficult on the River Thames, because we are talking about Richmond, Kingston, Surbiton and places like that.

Chair: I am not necessarily suggesting you flood them.

Richard Aylard: I did not think you were, Mr Chairman. If you were to hold it back, you could probably hold it back two or three feet deep. You would need an area to hold a substantial volume of water. Bear in mind the reservoir that we and Affinity Water are planning to build will produce 285 million litres a day for 18 months. The volumes are massive and of course London is very thirsty.

Hannah was talking about aquifer storage and recharge. We have 160 boreholes across north London and, when we filled our Lee Valley reservoirs in the winter, any additional water is treated and injected underground. That forms a strategic resource that we can draw on in times of drought. We have another one in Horton Kirby in Kent, where we push the water underneath the greensand layer to take the pressure off the River Darent and other chalk streams in the summer, so where we can store this water, we do. Generally speaking, it is more efficient to do it in reservoirs or underground, rather than just by holding back the water. Although that will still help and we would not discourage it.

Chair: The benefit of holding it underground is you do not lose as much in evaporation. That is the only problem with a reservoir. I know, if it is very deep, the percentage of evaporation is not massive, but I imagine a hot summer makes a lot of difference too.

Richard Aylard: Over the course of a year, the amount of evaporation from a reservoir is almost equally balanced by the amount of rain that falls directly on top of it, so it stays about the same over time. That is not



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the same on farmland because, once it was dry, the grass would start using the water, but for a reservoir, over the course of a year it is net zero.

- Q37 **John Grogan:** I was going to ask about whether you regarded the consultation with Defra as adequate, but you have already said you liked it, so I thought I would pursue Mr Simpson's argument about environmental net gain and so on. Is it right that the Government support environmental net gain but you are not so keen? Is that right or have I got that wrong? What about the Group Against Reservoir Development, which states that "putative gains from a project, without designs or costs" should not be used in the calculation of net gain. That sounds entirely reasonable to me. It cannot be just putative, can it? We have a completely new planning system power that gives a great deal of power to the centre. You have to prove your case, have you not, if you are going to start building reservoirs everywhere?

Richard Aylard: The case is proved in two ways. First, the reservoir needs to be tested against the other options. That is where net gain can be assessed, when you are looking at things in the round, in the plan. That is being done and it is in our water resources management plan. There is a detailed analysis of the environmental consequences.

- Q38 **John Grogan:** They should not just be putative gains. They should be fully costed and designed, do you not think?

Richard Aylard: There is a question as to how much detail you present at the water resources management plan stage.

John Grogan: It is a pretty big decision. I would hope there would be quite a lot of detail.

Richard Aylard: There should be sufficient information.

- Q39 **John Grogan:** There should be full design and costs, presumably. What is sufficient?

Richard Aylard: It should be enough for the Secretary of State to make a decision or to decide whether they want more information. The full design does not take place until you have consulted with the community via the development consent order process.

- Q40 **John Grogan:** I am glad you have mentioned the community, because you have not much before. Do councils have any role in this? None of you have mentioned local councils yet, but I will give you a chance to do so.

Richard Aylard: Thank you very much. As I said, I took the Thames Tideway Tunnel super-sewer through the DCO process. It started with detailed consultation with local people about what the consultation should look like. We had a statement of consultation, which we could then be tested against. We then did the consultation, refined that plan and put that plan to the examining authority, the Planning Inspectorate. It then looked at the consultation to see whether it had been done properly or



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not. If it had not been, we would have been back to the drawing board. Then it got on to looking at local impact reports.

Q41 **John Grogan:** Is there a role for councils in this?

Richard Aylard: Yes, the local impact reports are prepared by the councils. Those local impact reports go to the planning inspector and they are worked through in great detail. Local people can also appear and represent themselves at the inquiry. A detailed inquiry was held and a lot of changes were made to the routes that vehicles would take, noise, vibration and compensation policies. All those local impacts were looked at, with the impact reports from the 14 councils, so there was a good opportunity for local people to make their case in front of the inspector, and she supported them in a number of places and changes were made.

Hannah Stanley-Jones: I hope it did not come across that we do not support environmental net gain, because that is not the point that I was trying to make. It was more around assessing the broader objectives of the overall benefit that the scheme would deliver. In developing one of these schemes, we would be able to reduce abstraction from other environmentally sensitive sites that, in the round, would deliver net gain, rather than potentially assessing it at a project-by-project scale.

I am glad you mentioned local councils, because the project that I was specifically talking about was looking at the potential to develop a reservoir in south Lincolnshire. As part of our water resources management planning process, we directly engage with the councils. We will go out and see the councils, talk to them about the process, explain the process and highlight to them any potential developments in their area. We also talk to them to make sure we are fully aligned in understanding population growth numbers, for example. For the future reservoir option in south Lincolnshire, we are closely engaged with the council on that issue. There is a group set up called the South Lincolnshire Water Partnership, and the council sits on that. We are applying for grants for projects together with the council to look at ways we can improve the management of water in the catchment, so they are fully integrated in the process.

Trevor Bishop: I echo Hannah's point, with apologies if anything I said indicated a negative feeling about net gain. That is absolutely not the case. To be clear, we would do it even if it were not mandated for us to do. It is an important thing, and we do it through strategic environmental assessment already, although it could be done better if we can work on some guidance, with Government and regulators, on that point about being broader than just a local footprint. It is difficult to demonstrate net gain in the local footprint for a desalination plant, for example, but if you look at the wider context, potentially right through to the circular economy, you can show an awful lot of benefits from doing the right thing.

Q42 **John Grogan:** As I understand it then, the debate is between whether an



environmental net gain for a particular project is about the impact in that area of environmental gain and benefit, or in the wider context. I appreciate that, but if you were having a reservoir built next to you, to go back to an earlier point, you would presumably want the fullest design and costs, so that those calculations could be made properly. It has to be more than a wing and a prayer, or a back-of-an-envelope job.

Richard Aylard: Of course it has, and I say first that we have discussed this regularly with Oxfordshire County Council, the Vale of White Horse District Council and South Oxfordshire District Council, so they know exactly what is going on. We are also in regular dialogue with the Group Against Reservoir Development, which will be at the water resources forum being held tomorrow. They always are and they make valuable points. When our plan gets to the Secretary of State, one of the options he will have is to call a public hearing or inquiry, which has been done in the past to tease out these more detailed questions of a local nature. We will have to see whether that happens.

Chair: Thank you very much. Can I say both to Hannah and Richard if we could have some sort of figures in writing on the present leakage, and the percentage of leakage that you are going to reduce over the next five, 10 and 20 years, please? It is important to get that absolutely correct. If there is anything else that you feel, when you leave, that you would like to have said to us, please also furnish us with that in writing. We thank you for your evidence. Trevor, again, if you have anything you want to add, please do so. Thank you.

Examination of witnesses

Witnesses: Hannah Freeman and Rob Lawson.

Q43 **Chair:** Starting with Hannah, please, would you like to introduce yourselves, then Rob and we will carry on with the questioning? Thank you for joining us this morning.

Hannah Freeman: I am Hannah Freeman. I am senior policy and advocacy officer at the Wildfowl & Wetlands Trust, and I am representing the Blueprint for Water coalition of environmental NGOs, of which I am chair.

Rob Lawson: I am Rob Lawson. I am chair of the water resources panel for the Chartered Institution of Water and Environmental Management.

Q44 **Chair:** I will start with the first question. The NPS encourages three specific types of water resources infrastructure projects. Are the types of projects and the deployable output targets the right priorities to meet the supply challenges we face? Rob is nodding; you may start.

Rob Lawson: The ones included are the right ones, but CIWEM was disappointed that effluent reuse was not included as one of the scheme types in the NPS. The justification was that effluent reuse has many components and they might not individually fall within the criteria as



defined, but our view is that that argument could equally apply to other schemes, such as reservoirs, transfers or desalination. Excluding effluent reuse potentially excludes an opportunity to use water. It goes back to the point you were making in the previous session, Mr Chair, about use of water closer to the tidal limit or coast, because effluent is often a large proportion of flow that point, in certain catchments. Including effluent reuse would meet some of those observations as well.

Q45 Chair: Hannah, a question I put to the last panel was if there is a better way we can use land and hold water within that land for human consumption, potentially, but also as far as environment and biodiversity are concerned. It is over to you really.

Hannah Freeman: We broadly support the three main options that are covered under the NPS. We are not entirely clear about how, because the National Planning Statement will streamline the planning system towards these measures, we make sure it does not disincentivise the other options on the table—such as effluent reuse and the smaller no-regrets options, such as rewetting areas of land and using natural flood management to store water—and also incentivises options that are not currently on the table, such as working in partnership on grey water or rainwater recycling, for which there are currently no incentives at all.

Q46 Chair: When you say rainwater recycling, is that off buildings?

Hannah Freeman: If there are new large-scale community developments, there are currently few incentives to put in place large-scale, community-scale rainwater or grey water recycling. We might want to incentivise new or small innovative options such as those. Understanding the scale of the issue, if you put in landscape-scale or strategic-scale options around natural storage, what is the potential there? How do you use it in combination with supply-side schemes, so that they meet the need that is necessary?

Q47 Chair: In New Zealand, partly because a lot of houses are well away from any natural pipework, a lot of water from roofs is stored and used in those houses. Without leading you too much, there must be a lot of water that runs off our roofs, both from domestic properties and industrial buildings, which could be used much more.

Hannah Freeman: There certainly is. We have around 20,000 combined sewer overflows a year, which is where the sewers are at capacity and are allowed to be released into the river system and out to sea, as you mentioned before, without being treated. A lot of that is through surface water. We can store the surface water to reduce flooding, through natural flood management, sustainable drainage systems and rainwater recycling systems, taking a strategic approach and doing it at a large scale. I would like to better understand how much that could deliver.

Q48 Chair: Bringing Rob in, does the National Policy Statement say much about the separation? In a lot of the old sewerage systems, a lot of freshwater and rainwater goes into the systems, then they overload and



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you have pollution problems. Also, there is the fact that you have wasted this freshwater, in a way, by mixing it with foul water. Does it say anything about that?

Rob Lawson: It does not, no. The issue is that this is specific and precise in its definition of what is a nationally significant infrastructure project for water resources. Hannah and yourself, Mr Chair, have hit on the point that water is an integrated system. The man-made aspects of the water cycle are integrated, so there are opportunities within that cycle to capture water that would otherwise be lost or contaminated, as you said. Although the National Policy Statement that we are discussing today might not be that direct vehicle, there are other policies, and our written response says this needs to be taken in the context of those other policies and regulations to make sure that those issues are dealt with. Water companies are now developing drainage and wastewater management plans on a similar footing to water resources management plans, which may become statutory. That is being consulted on at the moment. Those sorts of things need to carry on alongside the National Policy Statement.

Chair: Just as our three previous witnesses are sitting behind, can I comment that Thames Water made the point that it has a big population, but of course you also have a lot of roofs and the potential to harvest more rainwater. Trying to kill two birds with one stone, can you give us a bit of written evidence on that, while I think of it? Thank you for those first answers.

Q49 **David Simpson:** The NPS relies heavily on the WRMPs to support development consent applications. Does the current statutory process ensure plans have the right balance between demand and supply?

Rob Lawson: In principle, yes, it does. The challenge is that there is flexibility in how water companies deliver the water resources management plans. There has been a greater development of a framework around that flexibility, through the last set of plans that was developed for WRMP19. It is our expectation that, should plans include schemes that go through to development consent orders, they would need to attain the highest technical level required within that framework, in the proper characterisation and risk-based assessment that takes place within the water resources management planning process. It is also important to recognise that WRMPs intrinsically contain a lot of uncertainty, in the population forecast, property forecast and how much water people are going to use in the future, and also what the best options are at any one given time. It needs to be reflected in how plans go forward that the best technical approaches have been carried out for the schemes that go forward into development consent orders, under this National Policy Statement.

Q50 **David Simpson:** As we heard from the previous panel, what is your relationship with the local councils when it comes to development and the applications? Is there a good relationship and partnership there?



Rob Lawson: It could be improved. The challenge from my professional experience is that population forecasts are critical to water resources management plans. The current guidance relies on a mix between the local authority forecasts and those from the Office for National Statistics. Also, local authority forecasts of properties and population only tend to go out 10, 15 or 20 years, but as you probably know, Thames Water's water resources management plan goes out to 2100.

The consultation that is ongoing through Defra at the moment, on other areas of water resources and water management improvements, is talking about how local authorities can become more directly involved in that water resources planning process. That can only be a good thing. If you are able to identify not just the gross increase in population across a water company area, but also specific points within that area that will be the focus of development, it will help the water company identify their infrastructure needs in those specific areas and will also help things that we were just talking about, such as how rainwater harvesting, flood management and capturing runoff so that it does not go into sewers can all be part of the solution.

Hannah Freeman: The water resources management plans, on their demand management options, vary hugely across the water companies. Some have ambitious demand management plans and others do not. The NPS assumes that the water resources management plan delivers ambitious demand management, and we do not think that the water resources management plan process guarantees this. I will give you some examples.

Before the Government asked water companies to meet a leakage reduction of 15%, few water companies were proposing this in their draft water resources management plans. It was the Government target that drove an increase in reducing leakage targets. Because there is no equivalent around per-capita consumption, some water companies are proposing ambitious reductions in per-capita consumption, but some are not. Around 10 water companies, for the next round, are still above 130 litres per person per day. The National Infrastructure Commission suggests that we can reach 118 litres per person per day by 2040, but it is our understanding that only about five water companies are proposing to meet this target. Given that balance, we would like the NPS to set out what it would like to see from a twin-track approach, what the ambition looks like and a set of criteria, so that water resources management plans can show they meet those before we put forward supply-side schemes.

Q51 **David Simpson:** Finally to finish, Rob, when I asked the question about local councils, you said that it could be better. How do you see that improving? What would you like to see? From my days on the council, I understood that councils were there to help and facilitate business, and make it easier for business. To finish, what is your view on that?



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Rob Lawson: A good example would be the water cycle studies that were part of the landscape around development planning 10 or 15 years ago. They provided a good platform for water companies and local authorities to work together around the man-made water cycle, in water resources, drainage and sewerage. Particularly in areas of large development around the Thames Estuary, Cambridge and Oxford, they delivered a lot of benefits in greater efficiency for the whole water management system, so I would like to see those reintroduced in areas where there are significant developments to make sure that there is a holistic solution to water management, which involves local authorities, water companies and other stakeholders, such as developers and other local wildlife groups.

Hannah Freeman: This is only to mention that CIRIA is currently developing guidance on integrated water management. Their proposals are that integrated water management studies are an important part of the process, and of course integration and collaboration between councils and water companies, but also other stakeholders.

Q52 **Chair:** From an environmental point of view, do you both support more metering of water? I am a great believer that people should know how much water they are using if they have to pay for it directly. Have you made any comments about this to the NPS?

Rob Lawson: We have not directly to the NPS, but as part of our evidence to the session on the regulation of the industry that you held last year. We state and maintain that full metering would be the best way forward. That would require some new legislation around water scarcity status. Water companies are moving forward from around 50% now to something like 84% over the next 25 years, and that is to be welcomed. Certainly things like Thames Water's smart metering programme is also positive, because ultimately that provides the water companies with much greater information on their system information and it provides the householder with information on what they are using directly. It enables the ability to introduce things like tariff, so more metering is very welcome by CIWEM.

Hannah Freeman: We will be proposing in the current Defra consultation for compulsory metering to be widened from just water-scarce areas. From a national strategic infrastructure project perspective, water is a national resource, so to limit the options for metering means that you have one rule for one area and another for another area. We should be considering it as a whole.

Q53 **Chair:** Water companies that have brought in a lot of metering have found that water consumption has reduced. It is a case of having social tariffs and making sure that you can help those people who are genuinely struggling with bills. For the usage of water environmentally, meters have to be good.



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Hannah Freeman: Yes, they definitely are. We would like to see more linkages being made between tariffs around social vulnerability and environmental water scarcity, as well.

Q54 **Kerry McCarthy:** You were both here to hear the previous panel answer the questions about net gain. What are your views on the criteria in the NPS and whether they are sufficient to do what is intended?

Rob Lawson: Our main point is that environmental net gain is welcome and should be part of the requirement, but we ask that biodiversity is ring-fenced and is not diluted by trading it off against other areas. From my point of view, there is potentially a slippery slope around the scale and boundaries that you define and where you draw the limits of your net gain. In the past, not specifically related to water resources but to other large schemes, the one I know quite well is the Cardiff Bay Barrage. There was a significant loss of wildfowl habitat by flooding Cardiff Bay and there was compensatory habitat created quite some distance down the coast in Newport. That always seemed a bit tenuous and was a source of serious objection by environmentalists. That is the kind of risk that you run by setting your boundaries too wide. I am sure Hannah could speak more expertly than I can on that.

Hannah Freeman: We are supportive of an environmental net gain principle. Again, I support Rob's comments. We want to ensure that biodiversity net gain is safeguarded, so that we avoid trade-offs for other ecosystem benefits, considering that the whole point around environmental net gain and the 25 Year Environment Plan is to halt biodiversity loss, which we are seeing and the targets for which we are not meeting. The environmental net gain needs adequate monitoring before a scheme goes ahead, so that we understand what exactly is going to be lost, and it also needs adequate monitoring and long-term management afterwards.

Q55 **Kerry McCarthy:** If I come in there, that has always been a concern of mine whenever they have talked about things like biodiversity offsetting and, now, net gain. It is one thing, at the planning stage, to say there is going to be a loss here but we are compensating elsewhere. Once you have got through the planning process, who would monitor, not even in the long term but even in the short to medium term, that what is promised actually happens and whether it has the outcomes? Nature is quite difficult; it is not as straightforward as saying we are going to build a building of a certain size. You can get your tape measure out and check out. If you are promising that a certain number of living creatures or trees are going to grow in a certain way, it is quite difficult. How do we get around that?

Hannah Freeman: That is one of the questions that is under discussion with the wider environmental net gain that has recently closed for consultation from Defra. The answer is not easy. It requires resources, experience and knowledge to be able to monitor what is being delivered in the long term and also a set of options for ensuring delivery. If you do



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not see delivery, what remedies are available to you, the council or whoever the reinforcing party is?

Kerry McCarthy: That is also a question because, if you are some distance away, that land could become somebody else's responsibility over time.

Hannah Freeman: Defra is currently consulting on conservation covenants, as well. If it is a large national infrastructure scheme, that option might be available, so there is a legally binding agreement that this land will be used to deliver. We fundamentally want to see mitigation plans.

Q56 **Chair:** Would that covenant include a sum of money to look after that land and increase the biodiversity? Do you know how the covenant would work?

Kerry McCarthy: It usually means that you cannot transfer the land, as part of the agreement.

Chair: That is right, but we are talking about trying to get a biodiversity gain here, are we not?

Hannah Freeman: My understanding is that, at a local planning level—so, looking at a development, between the councillor and the developer—there would be an agreement of a fixed sum, over 25 years or so.

Q57 **Kerry McCarthy:** Priced into the deal is a covenant that has certain obligations or restricts certain things. Basically you are okay with what is in the NPS, but there are a lot of questions about whether it actually means anything.

Hannah Freeman: There is a lack of clarity. The mitigation hierarchy asks to avoid damage first, to mitigate damage on site and then to compensate. We emphasise the need to compensate locally, but within the NPS there is no detail around what compensatory habitat means and, at the moment, there is no guidance in the National Planning Policy Framework around biodiversity, compensatory habitat and whether they are like-for-like habitats. There are good existing requirements under the European birds and habitats directive around what compensatory habitat needs to do and how it fits, so we support the NPS following a similar approach, but there is a lack of clarity there.

Rob Lawson: It relates a little to one of the questions that was set out in the previous session regarding the standards and requirements around the clarity of what the water resources management plan does and what supporting evidence is required to associate with those water resources management plans. As one of the previous witnesses said, schemes are at an early planning stage during the water resources management planning process, but there is also a need to have some identification of how these environmental issues are going to be addressed, recognising there is uncertainty. If you build wetlands habitats around a reservoir, for



example, are birds and other flora and fauna actually going to happen? As Hannah said, there needs to be ongoing management of that to encourage those sorts of habitats and biodiversity to emerge. Those things need to be more strongly linked between the water resources management plans and the NPS to help make sure that those things happen.

Q58 Julian Sturdy: This is slightly connected, but it is environment-related. I want your views on what a number of water companies are doing now, when they are investing or paying farmers or landowners to do trials. Yorkshire Water is doing it in my constituency; they are doing trials with cover crops and the idea that they can either reduce sediment run-off into the water or uptake phosphates and nitrates, so reduce leaching into the watercourses. Ultimately, cover crops provide an environmental benefit in their own right. Do you think that has a role to play in the national planning policy meaning that water treatments can be reduced, going forward? How big a picture can that play in the process?

Rob Lawson: As one of the previous witnesses said, that area of catchment management has grown significantly over the last couple of planning rounds and is only going to continue in that direction. There are companies now that are not just doing payment for ecosystem services to farmers, as you described, but doing their accounting on more than just the financial capital that they deal with as a water company. They are looking at social and environmental capital as well.

Q59 Julian Sturdy: Is that ticking that box for them?

Rob Lawson: It is one of those things that goes in the round with lots of other guidance, policies and other methods, which are part of the water management process and need to be maintained around the National Policy Statement to make sure things continue in that positive direction. Water companies are doing payment for ecosystem services, because it is proving to be more cost-efficient for them to deal with the pollutants, as you describe, in the catchment rather than treat them at the end of the pipe. There is a financial incentive there, but the more that companies approach how they deal with the natural capital they have to deal with, the better, and there are other policy vehicles that will help enable that to continue. The current NPS must not be detrimental to those other areas of policy. They all have to continue together in step.

Hannah Freeman: The NPS lists potential mitigation measures, should we see a project, for example, potentially causing water quality or environmental biodiversity issues. It has an incomplete list, but examples of what mitigation measures could be put in place. One of these mitigation measures that we could see is creating wetland habitats to treat water. Wetlands are good at taking phosphates, nitrates and metals out of the system, so by creating wetlands, you could improve the water quality in the area, but it has to be mitigation that delivers that in the same catchment.



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Q60 Julian Sturdy: There are different types of catchments. That was my point, really. There is a lot of work being done on wetlands; I agree with you. The Chairman spoke about upland areas, but there is new work being carried on what would be classed as quite intensively farmed land. You might have a four-to-five-month fallow period, if it is being spring-cropped, where the land is technically bare. But now work is being done to use that fallow period over the winter to green it and to produce a cover crop, and that is reducing those sediment run-offs that we know water companies have so many problems with, and also uptakes those key phosphates and nitrates. Well, it is not uptake but holding, so basically reducing leaching.

Hannah Freeman: It would be difficult to make a direct link to the National Policy Statement.

Chair: That is a really good point there, Julian.

Julian Sturdy: I think Rob answered it. Basically what you are saying is that water companies are saying there is a financial benefit for them doing this. There is the environmental benefit on one side, but they are all seeing a financial benefit as well.

Chair: They have to extract all this from the water.

Julian Sturdy: That is my point; it is reducing their potential extraction. Talking about infrastructure, it might technically reduce that going forward.

Chair: We might be able to put a note on our response, when we do the report, Julian. We had better move on, if you do not mind.

Q61 Julian Sturdy: We know it may be months or years before regional or national frameworks for water resources are in place. We have heard that already this morning, so what potential implications are there if the NPS is finalised before then? The likelihood is it will be, so what are the potential implications going forward?

Rob Lawson: I am not sure on the legal basis, but in practical terms, I see the status of bodies like Water Resources South East, which you heard from in the first session, and also Water Resources East, being sufficiently developed in a technical sense, in their preparedness and the technical depth by which they address and model the water resources challenges in those areas to provide the regional context. I know there are other more embryonic regional bodies in other parts of the country, but at the moment, they are not in sufficiently advanced a position to take that more regional approach. Where the water resource pressures are the greatest in the south and the south-east, the regional planning framework as it stands and with the additional resources that have come, for example with WRSE over the last few months, should provide that kind of structure to enable regional decisions to be taken in an effective manner.



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Hannah Freeman: We slightly disagree with that, in that our understanding is that there were some outcomes around the best options going forward at a regional level that were not adopted as the preferred options within the water company water resources management plans. As the National Policy Statement relies on the preferred option within the water company water resources management plans, as the option at a national and regional level, we see that they do not quite marry up. We do not believe that the current water resources management plans that are being put forward will deliver the preferred options at a national or regional level, because that is not what they do statutorily; they are at the water company level. If the NPS comes in before the regional or national framework comes into place, there is the potential for the NPS to require the applications to highlight or follow how they meet the national and regional needs and requirements.

Rob Lawson: I do not completely disagree with what Hannah has just said and I do not think I am contradicting myself either. As I said, the technical standard of delivery, planning and analysis that is done at the regional level by WRSE and WRE at the moment is strong, but it would help if their planning was put on a statutory basis, and enabled or mandated water companies to pay much greater attention to their solutions.

Hannah Freeman: I agree with that. An additional point is around cross-border issues. The NPS needs more clarity around expectations and roles for schemes that cross borders.

Q62 **Chair:** Do you mean across water companies or across nations?

Hannah Freeman: I mean between Wales, England and Scotland.

Chair: We need more Scottish water down here. That leads me neatly to welcome Alan.

Q63 **Alan Brown:** Welcome. You probably heard this question earlier, but it is just to ask how effectively you think Defra has consulted with stakeholders on the draft NPS.

Rob Lawson: I will take that. It has been an exemplary consultation. There have been several phases and stages at different points through the process, and stakeholders have had an opportunity to respond within a good window. CIWEM commends this as a good example that we would like to see followed in other policies.

Hannah Freeman: I agree with all of that.

Chair: You are all being very nice to Defra this morning.

Hannah Freeman: We understand that some of our points have not been adopted or have found their way into the National Policy Statement, but it has been an engaged and consultative process, which we would like to see more of.



Alan Brown: That is refreshing, but it is hard to ask a follow-up question on the back of those answers.

Q64 **Chair:** I suppose the question is that it is interesting for Defra to have to deal with. You have the water on the land and the management of it, but then it is how it fits in with the water companies, which are not directly responsible to Defra, and how the Environment Agency and everybody else fits in. Do you think it all fits in through the whole consultation process? I do not know if anyone wants to have a go at that or if it is a wider question.

Rob Lawson: Referring back to the earlier session, I agree that it has come at the right time, because there is a critical mass around how we manage our water resources over the next 25, 40 or 50 years in this country. I also agree with what Trevor said earlier on the volume of material that has been produced by various bodies over the last 12 months, from the National Infrastructure Commission and so on, which has provided the impetus so that Government and regulators recognise that it is a time for change. This is a part of that jigsaw, as Trevor said, but it needs to be accompanied by advances in the widest possible definition of the water management process.

Q65 **Chair:** It is probably difficult for Defra to approach it in this way, but has the consultation process talked about a new agriculture and environment policy? These are probably early days, but this policy framework will go on for some years, so have they consulted on that as well? It is probably difficult for them at the moment.

Rob Lawson: I am not sure that it has. That is not one that we have been directly involved with. There has been consultation on some agricultural aspects in the past and my policy colleague from CIWEM can probably give me the details on that, if you wish. Obviously land management, farming and the whole agricultural context are critical to water, as your colleague was saying earlier.

Q66 **Chair:** We will change agricultural policy to have a much more environmental basis. One of the obvious things to look at is how that will affect water supply, water catchment, water processing and not so many nitrates, phosphates and chemicals in the water. Is any of that being discussed?

Hannah Freeman: The regional groups will be an important part of that, because they are not just water companies and councils. They include all stakeholders, which includes agriculture, the options available and what agriculture needs. We are missing a long-term understanding of what the environment needs, as a result of climate change, regarding water, the consequential impact of abstraction on that and how it will be influenced by users of water. We still do not have that understanding around the environmental needs, given climate change, so that gap will need to be filled. The wide engagement that the regional groups are looking at is important.



Q67 **Chair:** Putting my farming hat on, there will always be pressure in the future in certain parts of the country where water is in shorter supply. You still need water to grow good vegetable crops and you will always need water for human consumption, so if you are short of water, unfortunately—and I can understand the need for priority—you will stop growing crops, if you are not careful. We need to do both, not only from an environmental point of view, but we have to look at the need for water across the whole base. I do not know whether the National Policy Statement does that or if it is part of its job.

Hannah Freeman: We would like the National Policy Statement to do that more. It is only about water companies; it does not talk about other water users. A consideration of how other water users come into it would be useful. We talked earlier about the options for natural storage of water, and I hope any new environmental land management schemes that come up are able to support farmers and other land managers to store water as a public good and to grow their food. The NPS only focuses on water companies.

Chair: Thank you very much for your evidence this morning. Again, as I said to the last panel, if there are particular things that you would like to add to your evidence, let us have them in writing. We appreciate your time this morning, as it will all help. We will give our opinion on the National Policy Statement probably next month or early May, so thank you very much for your evidence. It is very useful to us.