

Public Accounts Committee

Oral evidence: Strategic flood risk management, HC 737

Monday 24 November 2014

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Members present: Mr Richard Bacon (Chair); Chris Heaton-Harris; Mr Stewart Jackson; Mrs Anne McGuire; Austin Mitchell.

In the absence of the Chair, Mr Bacon was called to the Chair.

Sir Amyas Morse, Comptroller and Auditor General, Gabrielle Cohen, Assistant Auditor General, National Audit Office, Matt Kay, Director, National Audit Office, and Marius Gallaher, Alternate Treasury Officer of Accounts, were in attendance.

Witnesses: Bronwyn Hill, Permanent Secretary, Department for Environment, Food and Rural Affairs, Paul Leinster, Chief Executive, Environment Agency, and David Rooke, Executive Director, Environment Agency, gave evidence.

Q1 Chair: Good afternoon and welcome to this meeting of the Public Accounts Committee. We are taking evidence on the National Audit Office Report on strategic flood risk management, and we are joined by the permanent secretary, Bronwyn Hill, by an executive director of the Environment Agency, David Rooke, and by his chief executive, Dr Paul Leinster. You are all very welcome.

May I start with you, Bronwyn Hill? This Report is reporting significant progress since the last time we looked at flood defences, which was three years ago, but that is in an environment in which you don't have as much money to do things as you would wish. You are doing pretty well, the Report says, with what you have, but you don't have enough. In that context, and given that some of the most recent funding that you had was extra emergency funding in response to last winter's floods, what can we expect to happen this winter?

Bronwyn Hill: I would assure you that we are prepared for this winter. We have had a big campaign called Getting Ready for Winter, which has been led by the Environment Agency with lots of local partners. We can tell you more, but we have put in place all the repairs to all the areas that were damaged last winter and, where we haven't been able to do a full repair, we have temporary repairs in place. So are we ready for this winter? I would say yes.

In terms of additional funding for the future, if you look at the tables in the NAO's Report, you'll see that we have actually been successful in getting not just the emergency repair money, but both an increase of £2.3 billion in capital investment programmes—the six-year programme going forward from 2015—and additional money for asset maintenance, which is £35 million in the current financial year, 2014-15, and will be £35 million in 2015-16. So against some pretty tight controls from the Treasury, we have been successfully—with the help of the Environment Agency, I must say—bringing the evidence to bear on the spending needs that we have.

Q2 Chair: Dr Leinster, what would be different this winter? What would look different? How would it feel different and look different this winter from last time, given that you are apparently more prepared?

Paul Leinster: As Bronwyn said, we have carried out the repairs, so the standard of protection is back to the standard that it was at before the storm surge and then the—

Q3 Chair: Which simply means that if the same happened again, they would be damaged to the same extent again. What I am really asking is what would look different this time that would make the public see that you are more prepared now than last time.

Paul Leinster: One of the big areas we have been working on is better liaison with local authorities and making sure that we are fully prepared. One thing we do ahead of all events is to get a good flood risk forecast five days out. We then make sure we go out and clear all the screens, make sure all the gates are operating, and that there are no blockages. The local authorities also go out making sure that all their assets are in good condition.

It is not possible to prevent all flooding. There will be events that will overwhelm the defences. It is not that the defences fail; it is that you get a level of flooding that exceeds the design standard of the defences, and in that case you can get flooding occurring. In those circumstances, again, we are working with local authorities and making sure that we will be able to be out on the ground, warning and informing people so that they can take appropriate action as early as possible to move their valuables upstairs and to put in any property-level defences they might have.

Q4 Chair: The additional funding referred to in figure 4 was because of the last set of winter floods. How much funding will be available this coming winter in case there is a repeat of what happened last time?

Paul Leinster: We still have some of that additional money. We have spent money on repairs, as Ms Hill said. The Treasury, through DEFRA, gave us an additional £35 million for revenue maintenance work to prepare for additional maintenance work, and that money rolls forward into next year as well. We had already had an additional £5 million of revenue funding to improve—

Q5 Chair: You said that money rolls over. I understood that you got £270 million over three years and that that was divided roughly into £30 million in 2013-14, £180 million in 2014-15—of which the £35 million is the red part in figure 4—and the balance to be spent in 2015-16. Is that wrong?

Paul Leinster: No, that is right.

Q6 Chair: So how much in total are you expecting to spend next year? Have you not spent all the additional money that you had in the first two years of this three-year funding?

Bronwyn Hill: My understanding is that the additional funding that has been allocated for 2015-16 amounts to about £60 million. That is in footnote 4 in figure 4.

Q7 Chair: Right, so £180 million and £30 million is £210 million, and the £60 million takes it up to £270 million.

Bronwyn Hill: Yes.

Q8 Chair: Right. Dr Leinster, you also said that some of the money was rolling forward. You implied that it had not all been spent. Is that correct?

Paul Leinster: No. It was that £60 million—out of the £270 million there were allocations for last year, this year and next year.

Q9 Chair: Right. Bronwyn Hill, you mentioned the spreading out of the planning cycle for capital expenditure over a longer period. Mostly here we are talking about additional revenue expenditure, maintenance and the orange section of the chart, which is revenue expenditure. Are you succeeding in your negotiations with the Treasury in getting a similar deal for revenue spending as you have managed to get for capital spending, to spread it out over a longer period?

Bronwyn Hill: We haven't got that yet, and as the NAO's Report properly points out, at the moment we have revenue budgets for all our work, including the Environment Agency's spend on flood risk, only to 2015-16, largely because that was the outcome of spending review 2013 for all Departments—for revenue spending, as far as I know. The Treasury has a broad approach. Obviously, how spending is allocated and for how long will be a matter for the next Government after the May election, but we are continuing to engage with the Treasury to provide it with evidence about the benefits, if you like, of a longer run at revenue funding.

Q10 Chair: That will remain the case whatever parties win the election, won't it?

Bronwyn Hill: It will, although it is true that if you look at this Parliament, obviously the initial spending round in 2010 went up to 2014-15, so it was a four-year period. While we will make adjustments to that year on year, let me give you an example of what it enables the Environment Agency to do. They have a particularly innovative approach in something called the Thames Estuary Phase 1 programme, which is taking a 10-year look at the asset maintenance requirements of a very important part of the Thames—forgive me if I get it wrong, but I always think of it as the Thames barrier and downstream. What they have been able to say is that although we have not allocated all the revenue for all of that period, they are sufficiently confident to procure a single contractor to work with them to optimise their asset maintenance plans. While they cannot do that for the whole

of their budget, I am very pleased that they have been able to take that approach to a very important part.

I guess that what you could say is that normally we would expect to get a spending round that gave us three or four years' certainty, but that is for the Government of the day to decide. I think it was rather exceptional in spending round 2013, because of the timing of the general election, that the Government's overall policy—certainly for revenue—was not to roll forward more than one year. Does that explain it?

Chair: Yes, it does. I wanted to pursue a related point about the long-term investment strategy, but I will ask the CAG to come in.

Sir Amyas Morse: I wanted to check: is that longer-term approach, in your view, the best way of optimising maintenance? I understand exactly what you have said—I am not contesting it at all—but is the desirable thing to take a longer view on maintenance plans?

Paul Leinster: Yes, it is. It enables a multi-year view, which will then enable us to bundle and programme work. It is through that longer-term certainty that you can drive efficiencies.

Q11 Chair: Right. That is very helpful, and it suggests that it might be sensible for this Committee to suggest, purely from a value for money point of view—if that is what you are saying—looking at allowing longer-term cycles for revenue spending than are currently permitted. That is essentially the problem you face, isn't it?

Paul Leinster: Yes.

Q12 Chair: Can I ask you about paragraph 2.18? The Environment Agency strategy, which I believe the Report says was being prepared from September 2014 onwards, says that “funding would need to increase by an average of £20 million every year, plus inflation, until 2035” if the current standard of protection is to be maintained. What does your new strategy say about the current level of protection? Is it finished yet?

Bronwyn Hill: Shall I explain the framework? It is quite right that we agree with the PAC and the NAO, who say that we need to update the 2009 strategy. That was your last Report. The Environment Agency has been gathering the evidence to do that updating. We have committed to publishing it alongside the autumn statement in about a week's time, so we don't want to pre-empt that or introduce new evidence, as it were, at this stage, but I believe—colleagues can talk further about it—that they have improved their modelling, had a look at different scenarios, including the issue of how to optimise revenue and capital, and learned from the experience of what has happened and what has been delivered over the last years. So they will be updating it. I am guessing, although I think we should properly say we don't know whether £20 million is the answer or not, that that will have changed. But I recognise that we haven't got the evidence to give you at the moment.

Chair: Dr Leinster, you were looking at Mr Rooke. Would you like him to come in?

Paul Leinster: Can I just say one thing? Then David can speak in more detail. One of the other things that we factored in was the greater efficiency that we have been able to deliver through

this period. One of the targets that we have had over this past spending review is to deliver a 15% increase in the efficiency of our capital programme. We are on track to deliver that additional 15% over this past spending review period. So with spending review 2010, part of the condition within the capital settlement was 15% efficiency, and we are on track to deliver that. From 2015 onwards, over the six-year programme, we also have an additional target of an additional 10% efficiency over that period. Partly by looking at those additional efficiencies, that is what gets factored into this new analysis that we are undertaking.

Q13 Mrs McGuire: What does a 15% efficiency look like, and what does an additional 10% efficiency look like? Sometimes we use the word “efficiencies” and it can mean different things to different people. I am interested to know exactly what it means.

David Rooke: What it means is that we are able to do more with less. The Cabinet Office quality-assures all our submissions, so we have to identify—

Q14 Chair: Who in the Cabinet Office? The efficiency and reform group?

David Rooke: Yes. We report to that committee on our efficiency savings, and the officials quality-assure our submission to ensure that it is consistent right across Government in terms of us not counting efficiency for other Departments, and vice versa.

Q15 Mrs McGuire: So tell me where you are doing more with less, as opposed to what people might be suspicious of, which is that you are doing less with less.

David Rooke: Where we have been doing more with less, we have a new what we call framework contract with our supply chain, so the tendered rates for the work that we are doing are less than previous contracts. In other words, we are able, for a unit cost, to get a cheaper price from our supply chain. We have been more efficient by using new technology—so we have been innovative with new technology, which is saving us money, but still enabling us to provide the same level of service.

Q16 Mrs McGuire: So if I am sitting in a floodplain today watching this broadcast, I can feel reassured that your efficiency savings will not mean that I am sitting there during a very wet winter worried about whether my house will be flooded.

David Rooke: We can never eliminate the risk of flooding—

Mrs McGuire: I know that. Within reasonable precautions.

David Rooke: But what we have been able to do with the savings that we have made is to reinvest them into further schemes, so that more people have better protection as a result of the savings that we have invested.

Q17 Chair: I hope you are correct that you are extracting greater efficiencies. Given what has happened with capital procurement in other parts of the public sector, such as in education, where

the cost of building high schools has gone down radically in the past five to eight years simply because there has been less money around, it would surprise me if it were not true that you were getting better value for money out of your capital spending. But it is also true that you are doing less because you have less, isn't it? It is a yes or a no—I refer you to paragraph 2.11: “some 1,356 asset systems with a lower benefit-cost ratio...are being maintained to a minimal level”, which is a lower level than was previously the case.

David Rooke: If I may explain the minimum need and the identified need, for our assets that protect people's houses, businesses and land we have identified what we call minimum need, which is the amount of money that we need to spend to ensure that their assets work and that they are operational. We then identify needs to ensure that the asset performs for its expected life. If we cannot afford to fund all that type of maintenance, then it brings forward the date at which we need to make new capital investment, so we are not getting the most value for money that we could out of the whole-life cost of the asset. That does not mean to say that the asset is going to fail or will not work, because if we identify that it will fail or not work, we carry out emergency repairs, which we fund out of the minimum need, and all of our assets are funded to their minimum need.

Q18 Chair: So it just means that net, over the long run, you are spending more money to get each bang per buck than you were, or would have been doing.

David Rooke: That is true in terms of capital; we would need to spend more capital than we might have done.

Sir Amyas Morse: This is difficult to explain, so it must be a difficult judgment to make at the margin. I imagine that it is a somewhat grey area, isn't it? Actually, it is about whether this is what you need in order to ensure that the asset is working, or whether it moves over into maintaining it properly so that it will last—it sounds like quite a difficult distinction.

David Rooke: It is. We could use the analogy of windows in your house. Minimum need is ensuring that the windows open and that they keep the rain out. Identified need is the fact that they need painting every five years, and if you don't paint them every five years they don't last as long and you need to incur capital to replace them earlier than you would have done. We are looking to optimise the whole-life cost, but if we can't do that we need to incur more capital earlier than we would have needed to.

Q19 Chris Heaton-Harris: On the unit costs in your framework contracts with your contractors, when did you start to get more bang for your buck, to bring that phrase back into the conversation?

David Rooke: We procured the new framework a couple of years ago. Obviously, we have a legacy of contracts under our old framework, but we are now getting all our new contracts on to our new framework and benefiting from those efficiencies.

Q20 Chris Heaton-Harris: Did you say a couple of years ago?

David Rooke: Yes.

Q21 Chris Heaton-Harris: Which would have been 2012.

David Rooke: Yes.

Q22 Chris Heaton-Harris: I am interested in why it wasn't done before that. When the bottom fell out of the construction market—I am assuming that the sort of contracts you have are with people who were affected by that—prices fell across government and the industry. Why didn't yours fall in 2008 or 2007 when everybody else's did?

David Rooke: We'd got a contract in place. We have to go through European procurement rules to tender for those projects. We were using that framework, and we were putting in place a new framework. Now that that is in place, the rates have generally come in quite a bit cheaper.

Q23 Chair: So you were locked into an old, more expensive framework contract.

David Rooke: We were using that—

Chris Heaton-Harris: Even for contracts that you were letting in 2009, 2010 and 2011? There would have been rules internal to your organisation, although the contracts might have been okayed by the Treasury. I don't understand this. The price, when you put it out for procurement, would have fallen, and you would have been getting more value out of the contracts that you let in that time period.

David Rooke: We look to have a commercial negotiation when we let any contract, but it is against tendered rates. We looked to get our supply chain to squeeze further efficiencies in its supply chain within the framework of the contract that we tendered.

Q24 Chris Heaton-Harris: One final question. Your new framework came in in 2012. When did the previous framework come in?

David Rooke: It came in six years before that.

Chris Heaton-Harris: 2006¹.

David Rooke: Yes.

Q25 Chair: Did you say that you are in the process of negotiating your next framework contract?

David Rooke: No, we're not. We've got a four-year contract with the option to extend for a further two years.

¹ Note from witness: The previous framework actually came into effect in 2007.

Q26 Chair: Sorry, when did that four-year contract start?

David Rooke: 2012².

Q27 Austin Mitchell: I may be getting a bit cynical, having been on this Committee for such a long time, but I always read efficiency savings and the promise of more money to come as pie in the sky—or, in your case, the mud. In the meantime, after the cuts of 2010, which decreased spending allocations, you have not been doing essential maintenance, which builds up a cost. How much damage and how much cost has accrued because essential maintenance has not been done and because you have maintained only the most important defences?

David Rooke: We have concentrated on the important ones because that is what gives you the maximum return to the taxpayer, in terms of value for money. In about half our asset systems, where we have been able to fund minimum need and some of the identified need, that covers about 75% of our assets. So 75% of our assets have had all their minimum need and some of their identified need funded. For the other 25% of assets, in about half the systems where we have not been able to fund identified need, we are able to do much more this year with the additional money that the Government gave us following the winter's flood, and we plan to do much more next year.

Q28 Austin Mitchell: In the meantime, the risk has increased, on the 2012 climate change risk assessment. You were estimating in 2009 that funding needed to increase by an average £20 million a year. How far will that be made good?

Let me take the plans for the Humber, where we have recently been told that there is a £1.2 billion spending plan over 17 years, which we will hear about either later this year or at the beginning of next year. But that is not only conditional on the Treasury, because it includes funding from other agencies, particularly local government. Now local government, in its present state of cuts and economies, will find it very difficult to provide extra spending to fulfil the higher spending and maintenance requirements of that plan. Are you going to be able to get the money from the other sources?

David Rooke: Getting the money from other sources is a real challenge. Within the six-year programme that we are putting together, the money came with conditions from the Treasury. The first condition was that we should provide better protection to 300,000 households over the six-year period. The second condition was that we need to find a further 10% of efficiencies, on top of the 15% of efficiencies in this spending review.

Q29 Chris Heaton-Harris: Is that extra households, the 300,000?

David Rooke: Some 300,000 extra households are better protected.

The third condition was that we have to find a minimum of 15% of contributions from both the public and private sector at a local level. That 15% equates to about £350 million. We are confident of achieving that amount, but to deliver the whole of the £2.3 billion that the Government announced last year for the six-year programme will require considerably more contributions than

² Note from witness: The new framework actually started in 2013.

that. We are confident about achieving £300 million and we have probably got medium confidence around the next £300 million. We have far less confidence about the remainder.

Q30 Chair: When we looked at this in 2011, the Department anticipated that the majority of external funding would come from private sources; that is in paragraph 2.21 on page 34. And yet essentially it has been mostly from public sources, hasn't it, in the end?

Bronwyn Hill: I think that is true, although some of the money that comes from local authorities, as the last sentence of that paragraph points out, comes from the community infrastructure levy, where some of that may be from private developers. I think our issue is that it is great that we have been able to raise additional contributions, almost wherever the source is, but it is quite difficult to predict exactly what the source will be. Obviously, over a period of six years that could change quite significantly.

Q31 Chair: You can say that the community infrastructure levy comes from private developers; of course, it is a private payment. But you could say, "Well, national insurance contributions or VAT paid by house builders on refurbishment are moneys that go into the Exchequer and then get spent." There is no difference between those moneys, from that point of view, and community infrastructure levy, is there?

Bronwyn Hill: I agree that it is required. I think the difference, though, is that if you go back to the report that Sir Michael Pitt produced following the 2007 floods, he was very clear—

Chair: Was that the eponymous Pitt review?

Bronwyn Hill: It was the Pitt review, indeed. He was clear that in this case the direct beneficiaries, who may well be developers building new homes who would benefit from defences, should be expected to contribute, as well as the importance of, as it were, local communities engaging more closely with the Environment Agency on both the design of those schemes and contributing to the costs. As the Report says, it is still early days, and I know that the NAO recommends that we do more work to find out where the money is coming from. So, we agree that there is a challenge there.

I think we have been pleasantly surprised that we overachieved in terms of commitments to date. So that is the £140 million contribution, which surprised us, as our assessment was of about £125 million. But it is something that we have to work really hard to secure.

The benefit, and the Environment Agency may wish to say more about this, is the simple fact that getting local councils, local communities and developers round the table when you're saying, "There's a flood risk in this area. What could we best do to mitigate against it?" helps people to focus on the right approach for the right scheme, rather than just thinking, "Well, the Government are just going to pay everything, so we will ask for everything."

Q32 Chair: Of course, the problem, which you said the community infrastructure levy can help to ameliorate, would not be nearly so acute were it not for the incessant desire to build on floodplains

in the first place. One problem has been that we have had—*[Interruption.]* I do not know how to translate your expression, Bronwyn Hill, into something that could appear in the transcript, but it looked like a resigned acknowledgment of the truth.

Bronwyn Hill: No, it was an acknowledgment that there is a legacy, which preceded the new rules that came in—

Q33 Chair: Are you talking about the new Flood and Water Management Act and the responsibilities that flow from that?

Bronwyn Hill: I think we have increased the extent to which the Environment Agency, through the planning system, has clamped down on building in floodplains. The point I want to get across is that there is a very important distinction to be made: some floodplains are well-enough protected to allow that development. Where we are sitting now is a floodplain. The good news is that we have the Thames barrier and other forms of protection. So that is, as it were, permitted development.

I think you are right that we need to be ever vigilant. I'm not sure whether the figures are in the Report, but the Environment Agency report annually on what they are doing to influence local authorities' decisions. If I remember the figures correctly, in 99% of cases where the Environment Agency comment to local authorities on planning for new homes, local authorities take on board that comment. So either the development gets withdrawn or it goes ahead only if it gets protection. The challenge is the legacy of previous development.

Q34 Chair: Indeed. I had an opposite thought, which is that local authorities do not appear to have enough sway. I have had examples in my constituency where a developer has wanted to come along and build, and the local authority has consulted the Environment Agency as the statutory consultee. On the basis of what is laughably called a "desktop survey", which means somebody sitting in an office 65 or 70 miles away, the Environment Agency has given the green light—at which point the local authority is powerless, because, if it refuses, it knows the developer will go to appeal and win, on the basis that the Environment Agency has said yes. So the local authority goes ahead, notwithstanding the fact that people locally, including neighbours, have said, "I wouldn't build there if I were you. It'll flood." But those people have been completely ignored and told, "Oh, you're just a nimby. You don't want anything in your backyard." In fact, that was not the case at all.

I have had the experience of standing in the back garden of such a property with somebody from the Environment Agency, somebody from the water undertaker—in this case, Anglian Water—and somebody from the local council, all of whom were arguing with each other as to whose fault it was that this poor woman's house had flooded and became a bowl of sewage every time it rained. She had to move out, and her marriage was broken by this particular crisis—all because the local authority and the Environment Agency were not talking to each other.

I know that the plural of "anecdote" is not "data", but people come to us as Members of Parliament only when they have a problem; they don't come to us when they don't have a problem. Your saying that giving the Environment Agency more power to influence local authorities is, from what I have seen, the opposite of what is needed, which is more power for local authorities to listen

to their local people and for the Environment Agency to listen to the people who know what is going on locally.

Paul Leinster: The local authority are the local planning authority—

Q35 Chair: But they can't resist you if you say yes. If you say, "Yes, it's okay to build there," they can't say, "No, we can't, because it'll flood."

Paul Leinster: We're only an adviser to that process. It is for the local planning authority to decide whether a local development should go ahead.

Q36 Chair: But, in planning law, if you advise that it's okay in flooding terms, the local authority cannot resist by using the potential for flooding as a criterion.

Bronwyn Hill: My view—it is only a view—would be that if I was the local authority and its officers in this case, and I had sufficient evidence, as in the case you mentioned, I would stick to my guns, get a good lawyer and say, "I am convinced as a local planning authority that I have good, solid evidence that where you are building will be subject to sewage flooding." That would perhaps be supported by Anglian Water—

Q37 Chair: Well, it became sewage flooding because the water rose so high. This is only one case in one particular house, but the point is that the balance of knowledge, action and decision-making power based on knowledge sits in the wrong place.

Bronwyn Hill: I think it could be in two places.

Mr Jackson: In fairness, Chairman, one of the issues is whether the local planning authority has a structure plan, core strategy or site allocations plan. A lot of them have not produced those, and developers therefore take advantage of that being between the local planning authority and statutory consultees.

Chair: That is true, too.

Mr Jackson: It is not necessarily always their fault.

Q38 Chris Heaton-Harris: Let us take it away from anecdote. The first paragraph of the summary says: "Autumn and winter 2013 and 2014 saw the wettest period in the south of England for 250 years." You, as the Environment Agency, have a scale of events; you have your one-in-100-year or one-in-200-year events.

I am not one to bang on about climate change—not in the slightest, in fact, because you mitigate for that and your job is to mitigate for any changes in climate. However, there are maps of the whole country with zoned areas which are the one-in-100-year and one-in-200-year events. How are they enforced by local authorities? How do local authorities take those into account?

David Rooke: They are a material consideration in planning terms. Our advice would be based on those maps. If we had better local information, we would also make that available to the local planning authority.

Q39 Mrs McGuire: But do you not think that this classification of one in 100 years, one in 200 years or one in 157 years—I saw that in the Report—gives a totally false impression of what is happening out there? People almost assume that, when we have had our one-in-100-year event, that is it—we are free. That is not the reality of the situation. While we were talking, I checked and there are 12 flood warnings in place at the moment, mainly in the Anglian region or the Anglian Water region.

Chair: I drove through five floods this morning to get here.

Mrs McGuire: Unusually, I was in Kent yesterday and it rained for 24 hours solid—not the rain we had in the good old days, but what my grandchildren call “fat rain”: thick, heavy rain. I am wondering whether the classifications that you use actually give a totally false impression and, indeed, give some comfort to people out there when the reality is different. I have never seen so many flood warnings in my life as I have over the last number of years.

Paul Leinster: It is something that we are working closely with the Met Office on, to understand whether what we are seeing is something different or whether we sort of remember something different. It is an active area that we need to look at. In any circumstances, though, you can only build defences and physical barriers to a certain level.

In terms of the return period, that becomes very difficult. It is very difficult to have a conversation with someone and say, “This was a one-in-100-year event,” when you then have another one-in-100-year event the next week. We absolutely need to find a different language to explain the situation.

Q40 Mrs McGuire: It used to be said that the military were always preparing for the last war. Are you guilty of always preparing for the last flood as opposed to anticipating what might be there in the future? Is there an element of complacency in how your future planning is developing? We are talking about minimum maintenance and standards, and taking some areas out of priority status. That might be the last flood as opposed to the next flood.

Paul Leinster: Can I just—

David Rooke: Can I—

Chair: Dr Leinster first; sorry, he pulls rank.

Paul Leinster: On occasion.

There are a couple of examples. People will remember that there was significant flooding in 2007 from the river, as well as surface water, on both the Thames and the Severn. Taking the example of the Thames, there were probably around 350 properties flooded in the Oxford area back in 2007. This past winter, there were very similar levels, but because of the action taken between 2007 and now, around 50 properties were flooded. It was dreadful that 50 should flood, but there

was additional protection for a number of other properties. Exactly the same proportions happened over in the Severn as well, but action taken since 2007 around places like Gloucester significantly reduced the impact of flooding in those places. So we do take action.

Again, looking at overall numbers, last year in the winter—from December and the surges all the way through to early March, and a bit longer when you take into account groundwater—about 11,000 properties were flooded. Over that period, more than 1.4 million properties were protected from flooding. So action is being taken to reduce impacts.

More can always be done and lessons can always be learned. For example, one of the big lessons from last year's flood relates to how we can deploy more temporary defences in places and use that approach. We are doing some further work. Last winter, we deployed temporary defences in various places that reduced the impact of flooding. We diverted the river above Winchester and the river above Romsey. So more can be done and we need to carry on learning.

Q41 Austin Mitchell: I take a different view to Richard. I wonder whether the Environment Agency should have more power, because it has the expertise to tell us about local flood risks. I will instance two things. We have a development about which I know nothing, except it is near Scunthorpe and it is called Lincolnshire Lakes, which makes me suspicious, but it has just been authorised. In that situation, planning committees surely have an interest in authorising development, because it brings in more rates and increases the revenue of the local authority, whereas the Environment Agency needs to make it clear whether the area is at risk.

Similarly in Grimsby. People from Lincoln came to visit me a year or more ago. They brought a map that showed my house under water, if there was a once-in-200-year flood. I hope to sell it before then, but if my house is going to be under water, so is the development that the council wants to build to replace the tower blocks, where the area is very flat and presumably at risk of flooding. Do you not need powers to say, "No, you cannot develop here," or, "It must be built up."?

Paul Leinster: My personal view is that we should be the advisers, but the local planning authority should make the decisions, taking into account our advice.

Q42 Austin Mitchell: Do they do that?

Paul Leinster: In the majority of cases, as Bronwyn Hill says, more than 99% of the new homes were built in this last period that we have—2013-14—and our advice was taken into account. Interestingly, on some of those developments, what you can do is build the floor levels higher. In some places, you can have steps up to the first floor. In other places—I have seen these developments—car parking is on the first floor. As long as the warnings are appropriate, people can remove their cars to a place of safety, but the living area is protected. So there are ways. Even in some floodplains, you can have houses and developments that are resilient and still allow areas to be developed safely.

Sir Amyas Morse: That all sounds very good. The fact that you were mitigating and preventing flooding is great. However, I was not clear whether you think the amount of flooding—in terms of days and square yards of ground flooded—is stable or going up or going down. Do you actually know that?

Paul Leinster: I do not think we know it just now. It is being reviewed. It gets complicated because of development. When land is under development, the flow of water is faster. One of the things we are seeing is that water gets to rivers faster and, because of that, the peaks are higher. If you can do things that slow the flow down, then you will reduce the peak of the flow and, therefore, you will reduce the impact. So it becomes quite complicated.

Sir Amyas Morse: I am not denying that, but what I was trying to get at was: supposing, for instance, there was more rain and a threat of flooding of one kind or another. Presumably, if water arrives at a faster rate, that has an attritional effect on flood defences. If it turned out that the model was moving in a particular direction, would that lead to faster erosion of flood defences?

David Rooke: Yes.

Q43 Mr Jackson: Richard mentioned earlier that the east of England is susceptible to flooding—so did Mrs McGuire—but it is also the driest of all the regions and, on top of that, it has significant proposals in the pipeline for residential housing development. My question is therefore slightly different. Does the Environment Agency have adequate strategic overview of water supply and provision in areas such as the eastern region, which is very dry and faces hundreds of thousands of new homes being built in Norfolk, Suffolk, Cambridgeshire and Northamptonshire over the next 20 years? Although that is not directly related to flooding, infrastructure is important to reduce the risk of drought as well as flooding.

Paul Leinster: The water companies are required to develop water resource management plans, which are a 25-year forward look at water resources. Those get reviewed and we are trying to tie in their review period to that of the asset management plans that water companies go through, and are going through just now. They go through a five-year cycle of asset management planning and water resources is a now a fundamental part of that. They are working with councils to look at what that future demand will be.

Q44 Mr Jackson: What is the legislative imperative? Was that beefed up in the Water Act?

Paul Leinster: The water resource management plans are a requirement, so they have to write those. We are doing a bit of work with DEFRA colleagues just now, looking at abstraction reform, and this will all form part of that abstraction reform.

There were also a series of actions which came out of the last drought in 2012—people will remember I was asked to chair the national drought group—and there were a series of actions around that, looking at greater resilience and interconnectivity between different resource zones, and there is a whole programme of work progressing.

Q45 Mr Jackson: The only reason I mention that is because a few years ago I had to step in on an intractable planning issue which revolved around Rutland county council and the wading birds directive at Rutland water. It was being held up for ages by a gentleman on the planning committee of Rutland county council, which is the smallest unitary authority in Britain. That may not seem that important, but Rutland water supplies most of north Northamptonshire, Milton Keynes and Peterborough with water and the people from Anglian Water said to me, “If we don’t get this logjam unblocked and we have a bad, dry summer, your standpipes will run dry in Peterborough.” That was

an example of people not talking with each other and collaborating and understanding how important that was. Are we in a position where that will probably not happen again?

Paul Leinster: I think it has improved. As you say, one of the issues is that it is in some of the driest parts—there is this thing called “effective” rainfall, which is how much rain falls per person, and we have some very high stressed water resource areas on that basis.

Q46 Mr Jackson: Norfolk probably being the most.

Paul Leinster: It gets tense around certain places like Norfolk—

Mr Jackson: Norfolk is different in so many ways.

Chair: It’s normal for Norfolk.

Paul Leinster: There is a lot of agriculture there, which depends on abstraction, and a lot of spray irrigation so one of the things that we are doing there with the farmers is looking at how they can use trickle irrigation and have more winter storage as ways of mitigating—

Q47 Chair: You mean winter storage of water?

Paul Leinster: Winter storage of water on farms.

Q48 Chair: I want to bring in Anne McGuire, but on this point—which you bring me straight to—the Romans were building aqueducts and controlling where water went 2,000 years ago. It is only two calendar years—admittedly nearly three years, in January 2012—when your then Secretary of State was saying to us all that despite the fact that it was January and winter, we would have a drought in the summer and we would have to be extraordinarily careful because we would need steady drizzle every day for 365 days to avoid an enormous problem. In fact, within 12 months, we had the most enormous problem of the other kind because everybody was under water.

It is now 45 years since we got a man to the moon. We are spending roughly £600 million a year; it is obviously more in 2014-15, but in 2014-15 the Red Book says that total public expenditure is around £744,000 million. This is between 0.08% and 0.1% of total Government spending. Some 99.9% of spending is on other things. We spend £40 billion on schools and £40 billion on defence—these are very rough and rounded numbers but you get my point. Is £600 million the right number? Should we not, perhaps, be thinking much more strategically to do more to control the water rather than it controlling us? Not only is 70% of the planet water, but we live on one of the wettest parts of the planet. We seem to swing from a crisis of drought to a crisis of superfluity, which I suppose is the right word, when with a bit more intelligent capital spending we could do a lot more to control our environment and probably have big economic benefits.

Bronwyn Hill: I think that Paul is looking at me because that point is probably more for me. He was describing the Environment Agency’s role in relation to water companies. We are due to look at the whole water pricing regime so the issue there is—

Q49 Chair: I am talking about more than just water pricing: I am talking about the whole infrastructure. You were talking about Gloucester and spending money wisely. I am thinking of Upton-upon-Severn in southern Worcestershire near the Gloucestershire border where I personally saw the barriers that have been put in. Why do we not have reservoirs where we need them at a strategic level—at the level of the capacity required—so that we do not have such problems and so that we have enough water whenever we need it for all our farmers?

Bronwyn Hill: That comes back to Ofwat's role in regulating investment by water companies and what that does to people's water bills. As Paul said, there is a five-year planning cycle—the price review period—which Ofwat is just coming to the end of and has announced initial determinations. That price relates to water companies' plans to do almost exactly what you say, which is to ensure that there is adequate water supply. There are different ways of doing that. One thing that it has been looking at is more sharing across boundaries because a challenge in this country and a lot of other countries—the Chinese have almost the same but the opposite problem—is that most of the water falls in the less densely populated areas such as the north and west, but most of the demand for the water tends to be in the driest areas of the south-east and up the coast.

The other problem, although it sounds a bit like “leaves on the line”, is that I suspect that most of the excessive water that the Environment Agency helps to defend us against either comes in from the sea, so you could do more desalination but that is expensive, or it falls in areas and at times when it is quite difficult to capture. We are not saying that it is impossible—as you said, we have put a man on the moon—but we are constantly getting that balance between what the taxpayer should pay for in terms of flood defences and what water bill customers should pay for in terms of investment.

Q50 Chair: I was really asking a deeper question. The fact that you answered it by immediately talking about the responsibilities of private sector companies illustrates the fact that you kind of missed my point. I know it is probably outwith the remit of the Committee, but I am asking where is the Napoleonic grip to try to fix this issue so that we, as a country, have what we need and the public sector and Government face up to their responsibilities to ensure that everyone is protected and that we have enough water when we need it? My question really was whether £600 million or 0.1% of public expenditure—meaning 99.9% is on other things—was anything like enough? Is it possible that that is, by a quantum, a long way out of what we should be looking at?

Bronwyn Hill: My personal view is that we could, as the Report suggests, get fantastic value for money if the Government as a whole could find, in a future spending review, more investment money for flood defences. However, I think you would have to have Nick Macpherson here. He decides on overall Government allocations. Is that the point you're making? We could spend more money, I think.

Q51 Chair: Nick Macpherson is the permanent secretary of the Treasury. He is responsible for the overall Budget with the Chancellor of the Exchequer, but he responds, as does the Chancellor, to pressures coming at him from across the system. He is a kind of arbiter depending on what bids come in. You are, very admirably, being remarkably reluctant to respond to my invitation for your budget in this area to be 10 or 20 times larger than it should be. Mr Rooke, you look like you wanted to come in?

David Rooke: The work we are doing on the long-term investment scenarios, which is being finalised this week ready for publication shortly, looks at a number of scenarios, including with and without climate change, how flood risks might change over time and what optimum economic investment levels would be needed when looking at overall investment. It does not go into the balance between, as we were talking about earlier, capital and revenue. It looks at the overall investment across the whole of the public sector, not just the Environment Agency.

We have had that work peer-reviewed by a professor from Oxford university. I think there will be a really good public dialogue and debate following the autumn statement when we publish that document, and that is really our evidence to create the debate around which I think you are asking us the question.

On specifics, in terms of joining up flood and drought management, we have a number of arrangements with water companies on the operation of their reservoirs. Their reservoirs can be drawn down in advance of heavy rain that has been forecast, so we are getting a much better management of the whole river system.

Q52 Chair: How much benefit are we getting from all the heavy rain at the moment?

David Rooke: We are getting benefit in terms of filling up reservoirs that are needed for next year for public supply and other uses. We are also getting benefit in terms of those reservoirs attenuating the release of water so we are not getting as much flooding as we would have done.

Q53 Chair: But if you were able to measure benefit with a benefit-measuring metric, what percentage of the total benefit that we could be getting from all this heavy rainfall are we actually getting? Do you have such a measure?

David Rooke: I have not got that figure.

Chair: Perhaps you should work on one.

Sir Amyas Morse: I appreciate, Chair, that you are referring to more strategic value for money considerations, but I am just going to pull us back to slightly less strategic ones for a second. Looking at the flood defence infrastructure, there is no doubt that while it might be attractive to manage short-term spending, if you do so at the expense of having to replace assets in the longer term, that can be bad value for money. If you do a net present value calculation, that is not some generalised statement, but a question of looking at it and seeing where it takes you to.

I want to test with you what assumptions you were making about assets falling out of the system. It makes a difference if you are assuming that when some of those assets degrade and the question comes as to whether they are going to be repaired you decide you are not going to repair them. You might say to the local population, "Would you like to come in and help us repair this?" but the answer is "We can't afford it, we don't want to" or, if they are a local authority, it is likely to mean further austerity for a few years to come, so they can't afford it.

Without asking for the details of the programme, in considering the affordability of maintenance, is one factor that you are going to be maintaining a smaller population of defences in future and that when those defences degrade they are not going to be rebuilt?

Paul Leinster: We do carry out that economic analysis. We have a protocol called the maintenance protocol. For a number of defences that we no longer believe it is economic to maintain, we have dialogue with local partners and others who might be in a position to take them on. We have done that in a number of areas and have identified something like 60 further areas. On probably fewer than 10 we have already come to an agreement with local authorities, landowners and farmers to take on the maintenance of those assets. We are currently in discussions on where we might hand over in about 60 other locations.

Sir Amyas Morse: Sorry, I can understand that, but I was driving at something slightly different. If they do not say, “Yes, we can take over the maintenance,” what then? Do you say to them, “We have decided not to continue to maintain this asset, so if you are not going to take over the maintenance, the asset is going to cease to exist”?

Paul Leinster: Yes, exactly. And that is what happens.

Bronwyn Hill: If I may go back to the Chairman’s point, I assure you that we put in to the Treasury the best evidence basis that we can at every single spending review, and in between. We are sometimes very successful; sometimes we are less so. I guess you could say that the good news shown in figure 4 is that there is a rising trend. The more that other people say independently that there is a strong argument, the more that strengthens our case.

Chair: Perhaps you should be bolder in the way that the Department for Transport has been with HS2: have your idea and then find the evidence later.

Q54 Chris Heaton-Harris: I want to ask about two things. First, the Chairman mentioned what happened in 2012-13 when the Secretary of State said that we were going to have terrible droughts and then we seemed to get quite a lot of water. A fantastic solution to all these problems is to appoint a Minister for droughts or floods earlier, because it always seems to solve the problem as soon as one of those people is appointed. The Met Office projects your weather, but who projects coastal surges?

Bronwyn Hill: It is worth explaining the Flood Forecasting Centre as well. The famous Pitt review recommended that the Environment Agency and the Met Office should work together more closely. To state the obvious, the issue is the interactions between where the rain falls, where the wind is and what is happening on the coast, and how all that affects the land. They set up the Flood Forecasting Centre, a joint centre that has done a hell of a lot to improve our understanding of exactly how a different combination of rainfall, temperature, wind and the North sea will affect things. That is where it happens. By the way, the centre is in Exeter, if anyone is interested. It is a fantastic place.

Q55 Chris Heaton-Harris: It seems to me that the Met Office is fantastic at predicting the weather for the next two or three days—the weather that it can see coming—but its ability to predict for any sort of long term is not so great. Have you looked for other partners, or are you completely obliged to go to the in-house meteorologists?

Bronwyn Hill: It is more a challenge of doing that prediction. We contribute to the Met Office’s funding, and my understanding is that it is the size of the computer that is important—that is my crude estimation—and they do have some pretty powerful computers. Whatever their best

endeavours, the system is so complex that it is incredibly difficult to predict. I am not an expert, but they tend to do it more on probabilities. The longer the range you go out, the more it is probabilities, influenced by things such as long-term sea level rises and so on. I am not sure whether Paul would like to say more about that.

Paul Leinster: On that point, the Met Office is world-leading. They are recognised worldwide as one of the leading institutes in this whole area and would be taking a leading role, along with other weather services. People would be looking to the Met Office for some of the cutting-edge work that is done in this whole area, so I think we are going to the best people for this work.

As Bronwyn says, the way it works is that the Met Office predicts what the rainfall will be like and we use that information to run our hydraulic models. We understand what happens when rain hits the ground and what drainage looks like, and we use the Met Office's information to feed our models to predict what flooding will occur in different places. David can outline how we deal with storm surges.

David Rooke: Specifically on tidal surges, the Met Office provides the weather inputs. The Flood Forecasting Centre, which is a joint venture between the Environment Agency and the Met Office, produces what we call ensemble forecasts, which give a range of forecasts on sea level based on astronomical tide and the weather conditions at the time. We translate that into warnings that we issue specifically to members of the public. That worked extremely well last December. We had the highest coastal surge on the west and east coast—on the east coast it was the highest for more than 60 years. With ourselves and the Met Office, we had a good indication six days ahead that something big would happen. We could not say exactly how big at that time, but we knew that it would be big. We were able to put local authorities, emergency services and other responders on alert so that we were well prepared two or three days out from that surge.

Q56 Chris Heaton-Harris: The reason for these questions is first that I do not like the Met Office. I think that it is as useful as powdered water. From what you are telling me and from the various stories of different floods at the back of the Report, I think that it is probably easier for you to say that there is a tidal surge coming a week ahead than it is to know where there will be floods inland. Is that a fair comment?

David Rooke: Again, one of the products that the Flood Forecasting Centre produces is what we call a flood guidance statement, which looks five days ahead at flood risk for England. That is sent to people in the Environment Agency, to local authorities and to other parts of the public sector. We publish the three-day-ahead forecast on our website, so that people can see exactly what will happen three days ahead. The Met Office also provides to the Government a three-month outlook. We get a monthly outlook from the Met Office that gives a broad indication of likely weather over that period and how it compares with the climate. In other words, that is whether rainfall, temperature and so on will be above average or below average.

Q57 Chris Heaton-Harris: What I am trying to get to, realistically, is whether it is better value for money to do coastal defences because there are fewer random factors that can apply; you know the high tides, the low tides and so on. You seem to be able to predict slightly better where these surges will come from in the long term. As a representative of an inland constituency, I am interested to know whether you are drawn to the coast.

Paul Leinster: You are drawn to both. The uncertainty of predicting the surges coming down is a matter of how low pressure is, the high tide—

Chair: You mean the barometric pressure.

Paul Leinster: Yes, the barometric pressure. You need to know where you are in the cycle of spring tides. You also need to know where the surge will happen and what direction the wind is coming from. The height of the surge will depend on all those things.

Q58 Chair: It is a relatively small number of variables, compared with water falling on a very complex land mass.

Bronwyn Hill: That is the point I was going to add. Our experience of last winter was that just because of its nature—it is not because one is a bigger priority; they all need different things—being able to do the flood warnings earlier for the coast was incredibly powerful. It meant we had to evacuate thousands of people down the east coast, but at least they were evacuated in time.

Q59 Chair: As a Norfolk MP, although my constituency was much less affected than some, they were heavily affected next door in Great Yarmouth and in the north, and we knew in advance. That was basically—

Bronwyn Hill: That is not to say that we don't take inland flooding as seriously. It is just that it is different by its nature. As you pointed out, the rain is falling on complex towns, the countryside and so on. Some of it will affect what we call surface water flooding, which can be affected simply by failing to keep streets or gullies clear, which is very localised and probably would not appear on the map other than as an increased risk. There is also groundwater flooding, which is about by how much the water table has risen and whether it is at risk of rising too high. All those things require different approaches to tidal surges. To be fair to the Environment Agency, they have had to get good at all those things, and they have had to be very good at engaging with local authorities and others, who are often the front-line responders to some of those events.

Q60 Chris Heaton-Harris: There were criticisms last year not about choices having to be made but because the Environment Agency is of a certain size and you had a number of big events going on in different areas of the country. I remember the lady from Datchet on the news, because she was pointing to stuff happening on the coast and stuff going on down in Somerset and she felt as though she'd been left alone. I just wonder how all that fits. You can see one thing coming five or six days off and another maybe two or three days off. Around me, where it is very agricultural, some farmers ploughed their fields in a different pattern from usual, which completely changed the water flow off the fields and through houses. That cannot be picked up until the water is down. How do you efficiently manage that?

Paul Leinster: Other factors also come into it. I am reminded of the Boscastle flood of 10 years ago in 2004 when there was a downpour over the Boscastle catchment area. If that had been 2 miles further west, an entirely different village or town would have been caught. During the 2007 floods, Hull was badly affected, but as that storm was coming in—I still remember it—it could have been Hull, Derby, Nottingham, Sheffield or Doncaster. It all depends on where the storm moves and

where it stays. So predicting over relatively short distances quite complex atmospheric conditions, taking into account the topography that the rain falls on, is complicated.

Taking the woman's case in Datchet, I had been on the east coast to see the effects from north Norfolk and up into places such as Boston and further north and I had been down into Somerset, but I was also in Datchet. We have local teams that are responding in each of those areas. We are sized to be able to respond to all of those at the required level. The event that happened last winter certainly did not exceed the Environment Agency's capacity to respond.

Q61 Mrs McGuire: Without letting you off the hook on strategic planning, I was pleased to hear Dr Leinster say that the Met Office is actually a world leader, which we sometimes forget. I disagree profoundly with my colleague Mr Heaton-Harris on that. I follow both the Met Office and the other coastal water forecasts on a regular basis. Like many in Britain, I don't go to sleep until I hear the weather report at night at 10 to 1. I just want to put that on the record, because it is quite easy to disparage them and we forget about the complexities that result from where we sit in a bit of the north Atlantic. We are only approximately 800 or 900 miles from top to bottom, but we have really complex weather.

Having said that and got it on the record, however, I want to bring you back to some of the issues that are raised in the Report, fascinating though the last part of the conversation has been, and ask about the partnership funding model. We have alluded to it a couple of times, and the NAO Report is probably gently critical of the partnership funding model, not as a concept but because of the lack of empirical evidence to prove whether or not it has been a success. I am just wondering—this is to Bronwyn Hill—how you know whether it has been a success or not.

Bronwyn Hill: I agree with what the National Audit Office says, that it is still early days. It was brought in in 2011-12, and a lot of it is planning for schemes in the future rather than for ones we are already delivering. We have done an early evaluation. I am not saying that that is the final word on the subject, because we will want to come back to it as we go forward, but it shows that we have, as it were, got more money in, or expect to—that is the table in figure 12—than we had anticipated previously, although by a modest amount, I agree.

The second thing is that that means we will be getting better early engagement from local authorities and others in the sort of schemes that are coming forward and the priorities. Our estimate—and this is very early, so I cannot say we can prove it yet—is that that is enabling us to increase the total number of projects to improve flood protection by possibly up to 25%. It is too early to say that that is a definitive result—it is something that we need to keep monitoring and checking—but the point is that it is enabling more schemes to go forward. One of the best examples is one of the case studies that the NAO has described in the Report, which is Morpeth. I think it is true that had we not had the partnership funding approach there, it would have struggled to get into the right priority for purely national funding.

I am not complacent. It is hard work, and requires a lot of effort with local partners, but I believe it is the right thing to do. However, I also believe that we need to try to improve the data we have to assess whether it is working.

Q62 Mrs McGuire: Was it a bit on a wing and a prayer, though? There were no targets set, certainly initially. I suppose that is the criticism of the NAO Report: how can you judge the success of a scheme when you did not actually set out any criteria for judging whether it was successful?

Bronwyn Hill: We set out objectives, which were to raise more money through this approach, get more projects going ahead and maintain value for money. I remember the previous Report, in 2011, was concerned that value for money might drop as a result of this approach, but I think we have sustained it. That is good. We keep an eye on value for money. The target is 8:1³, and we are still achieving that.

I disagree, as Amyas knows, on whether a target for the amount of funding that you raise would have been helpful. I know Amyas thinks it would be good if we had a target, but I worry that it would have made us chase the target rather than get the right schemes brought forward. My other concern was that it would be very difficult to set a target. We could easily have got it wrong, and then we would have been here today saying why I missed the target. It is an indicator. Anyway, the good news is that the Treasury only spotted this—as we said earlier—in giving us the new six-year allocation of capital investment from 2015 onwards, and it has set a condition for funding. I am not sure whether that is a target or not, but it has set the condition that we should achieve at least a 15% contribution from partnership funding. So if you like, that is a kind of target.

Q63 Mrs McGuire: Were you just not brave enough? Was it that if you set a target you'd be worried that you might be judged a failure because you hadn't met the target for funding? The reality—certainly according to the NAO Report—is that around 75% of the funding is coming from another part of the public sector, so there is a bit of smoke and mirrors here, frankly. It is public sector money, whether it is central Government public sector money or local government public sector money. Unless I have misread the Report, there does not appear to be any indication of how much of the local public sector money or involvement has been generated from a relationship between local authorities and the private sector. You can see that we are struggling as to whether you have achieved your internal financial targets, even though you never explicitly state them. Are you just not brave enough about all of this?

Bronwyn Hill: I think I was cautious. Am I allowed to be cautious? But I also think there is good news. I go back to what is the outcome. Are communities seeing more projects to improve their protection from floods coming forward? The answer is yes. That is my top criterion. The second, which is really important for value for money, is are we are getting the right people round the table looking at the design, development, planning and so on, to enable those schemes to come forward? Yes. Could we do better? It is quite challenging.

Sir Amyas Morse: Thank you for thinking about what my views on things might be. I do not regard targets as desirable in themselves. I am much more interested in understanding what is happening. That is what I am really interested in—sorry, forgive me. It would be nice to have known why it has been public sector money rather than private sector. I still think you need to know the answer to that. When you were bringing this policy forward you were thinking primarily of getting private sector participation. Actually, it would be great if you could get it in future.

³ Note from witness: What Bronwyn Hill meant to say was “the average rate of return on Defra’s total capital investment in flood and coastal erosion risk management is 8:1”.

You need to know what it is about the offer that has not so far hit that button, because that is what you meant. Back when you originally did this, the right people round the table would have been local businesses not just local authorities. It is desirable, as a principle of management, to set a goal, target or whatever, not so much so that you can be dragged in and asked why you did not do it or told off or anything like that, which is a waste of time, but more just to understand and not find that there is any wasted effort that is misdirected or going to waste in any way.

Bronwyn Hill: Can I have a final go at explaining this? I have thought a lot about this. Paul may want to come in. My philosophy is that you have to go where the flood risk is. In advance of doing all of that, and there is an awful lot of complexity around flood risk as we discussed earlier, I think you need to develop the schemes that address flood risk that don't, as it were, get some artificial target about the relationship between private and public sector funding. You go where the flood risk is. Then you say, "In this area, what are local partners capable of raising? Where are they going to get the money from?" You do not restrict yourself in advance to some notional split between private and public.

Q64 Mrs McGuire: You could do that with any project. You have to be out in the marketplace, surely. If you are going for a partnership funding model, the partners that you are hoping to attract need to know that you are in the marketplace to attract that money. The big insurance companies and financial institutions know, for example, that Government might be interested in them investing in infrastructure projects, because it is out there in the market.

If you keep it quietly to yourselves because you might be cautious or not brave enough—whatever words we want to use—to say that you want to attract real partnership funding, not just what is effectively public partnership funding between central Government and local government, notwithstanding all the other elements that you have to take into account about where the flood risk is, and nobody knows that you want to be part of this wider partnership, why would they bother?

Bronwyn Hill: I will have a final go on this point. Some of it depends on where you think the benefit is. Going back to the Pitt review, they asked, "Who is going to benefit from this?" I rather like the example. Let us take some of the areas where economic growth is involved, which is where you might find private sector companies interested—what is the benefit to them? You have to have a reason for them to take part. There was a place in Kent, in Sandwich, where Pfizer knew it was going to be difficult to sell a particular site unless they had a plan better to improve flood protection, so we got a contribution.

Mrs McGuire: I hope it was in place yesterday.

Bronwyn Hill: We are very commercial when we need to be. That is one example. If you look at some of the schemes that are coming forward as what I would call growth initiatives, where you need flood protection, such as in a development in a city like Leeds, there is an interest in the local authority or local enterprise partnership, or whoever has the interest of that city at its heart, in saying, "We are happy to invest some local public sector money, alongside whatever private contributions we can get, because we know that over the course of time if we get more development such as shopping and retail jobs, we will benefit, to the extent that we are able, from tax contributions, business rates and so on." I am just trying to explain that it works differently in different places, and it is quite difficult to predict accurately.

Sir Amyas Morse: That is a perfectly fair comment, and I do not find any of that difficult. There is no trap here; I am just interested in understanding. Dr Leinster, you thought that there were going to be more business-related private partnership schemes than have turned out to be the case. I am just curious to know your best opinion as to why it has been different from what you thought. I know that everything is mutable. I got that, but I am just curious to know what you think.

Paul Leinster: Just to be clear, we are the delivery body—

Sir Amyas Morse: I know, but you are intelligent people, in touch with it all.

Paul Leinster: What it has done is to change the nature of the local debate. The whole local discussion has been recalibrated from: “What are you going to provide for us?” to “How do we reduce risk? What is our contribution going to be and what is your contribution going to be?” That whole discussion, somewhere like Morpeth, has just been transformed. From a situation where most people were looking for central Government to do this, over the relatively short period of time that we have been in with partnership funding, the nature of the discussion has changed markedly, and I think for the better.

As has been said, you need to identify who the beneficiaries are going to be. In some circumstances, like with Pfizer, you can say they are clearly going to be a beneficiary of that. In some places around the country, water companies have been the beneficiaries. We have worked with United Utilities up in Warrington and Anglian Water in Lincolnshire. There is a big pooled approach in Lincolnshire. Supermarkets, in particular, have come forward. When you can identify them and they are large, they make contributions. Some smaller high street operators and businesses say, “We pay business rates, and that is what our contribution is” —

Chair: Which is fair enough.

Paul Leinster: Exactly. So it is a mere contribution.

The final point is around critical infrastructure. One thing that has happened around critical infrastructure is that going back to 2007, when there was quite an impact on critical infrastructure, we did some studies that looked at how much critical infrastructure was at very significant flood risk. The water companies, the electricity companies, other utilities and now Network Rail have done a significant amount of work protecting their own assets. Some of the protection of their own assets will have had a knock-on effect on to protecting households as well, but we do not capture that bit.

Q65 Chair: Can I come on to asset management? This leads neatly into the discussion in paragraph 3.9 about the fact that the agency “only has direct maintenance responsibility for 45% of flood assets. The other 55% is the responsibility of local authorities, internal drainage boards and private owners. Whereas there is only one risk management authority responsible for maintaining a watercourse, there are often many parties (including private individuals) responsible for managing assets, which adds to the complexity”. Paragraph 3.10 goes on to say: “The lack of awareness of who owns assets can have serious consequences.” It even gives an example of where a flood bank and earth bund were removed to improve properties, and the property owners who removed them said that they were not aware that the embankment and the bund were flood defences. That is pretty basic. You have spent money on a capital asset, or someone has, and it has been destroyed by someone who was wholly unaware that it was a flood defence, with consequences for lots of other people. That is basic communication, isn’t it?

David Rooke: It is a real issue, and the Flood and Water Management Act 2010 identified it as an issue. Parliament provided powers for the designation of flood features. Those are often mounds of earth, or sometimes boundary walls that act as a flood defence, not only to the person's property but to other people's property as well. The legislation was commenced in 2012, and we worked jointly with DEFRA to produce guidance. We and local authorities are working on the implementation of that legislation, and we have got a pilot going in the midlands. Some local authorities have already designated some features, which basically means putting up a notice for the land owner to say, "This mound of earth through your land is actually a flood defence." Legislation provides that the bund cannot be altered or removed without prior consent.

Q66 Chair: That is all very well until the landowner sells the next house, the next person comes in and they do not resubmit the notice. It is really a question of local awareness by everybody, isn't it?

David Rooke: The legislation provides that it is a charge on the land, so it would transfer on a change of ownership.

Q67 Chair: So these facts would sit with the Land Registry, where you would hope they should be anyway. That will happen in the future.

David Rooke: Yes, that will happen.

Q68 Chair: That is encouraging. More generally, what are you going to do as an agency to engage with other asset owners? If you are responsible for the maintenance of fewer than half of the assets, there is a big job to do with other asset owners, not just those who want to remove their bund.

David Rooke: We have arrangements in place whereby we regularly inspect assets using a risk-based approach. Not only do we inspect our own assets, but we inspect third-party assets. Those are the ones that are contributing, and for which we have no responsibility. If we identify issues with them, we have arrangements in place to notify the owners of those assets of their responsibilities and the issues that need to be addressed.

Q69 Chair: There is still quite a lot to cover, and I want to revisit a couple of points that we did not finish discussing. One is climate change. Paragraph 5 talks about the climate change risk assessment in 2012, which reported that climate change will significantly increase the flood risk in the UK. Plainly, if the flood risk has gone up, you would expect a commensurate increase in the level of investment to maintain the same level of protection. What assessment have you done of how much that is likely to cost? I am looking for the relevant paragraph—I think it is 2.2. There is the use of the word "may" in there. It talks about the increased operational costs over the medium to long term. What is your assessment of how much extra this is going to cost, given that you are talking about something that is going to take a long time to manifest itself?

Bronwyn Hill: This takes us back to our earlier discussion about the long-term investment strategy, which the Environment Agency is in the process of updating. You are right that it is a long-term issue. The next version of the strategy, which is coming out next week, will take us up to 50

years ahead and will revise our estimates. The impact of climate change, which for these purposes is largely sea levels rising and more intense rainfall for a longer duration, is factored into the way in which the Environment Agency assesses increased risk. It forms an important part of the long-term investment scenarios.

Paul Leinster: We take into account in the design of future schemes projected sea level rises and increases in flood risk from more intense rainfall. We have guidance from DEFRA, which already gets factored into the design of new schemes. Therefore, any new scheme that is built will contain a factor for climate change.

One of the things that we try to do—this is true of the Thames Estuary 2100 approach—is to take an adaptive approach, which means that we project scenarios of what we believe might happen so that we know what actions should be taken if we see that happening. For example, for a sea level rise, we have different scenarios for what action should be taken depending on the sea level rise that is observed. You don't want to invest too much and then find that you didn't need to invest that amount, so we have trigger points at which we know what we will do if we see a particular outcome.

Q70 Chair: One of the things you said earlier is that you have been working hard to build up the quality of your data. I wanted to ask you this question at the time. What are you doing to build up the extent of your contingency funding within your regular planning and budgeting cycle? This is a reference to paragraph 2.2, which talks about the fact that the extra funding you had allowed you to respond to emergency situations quickly, but being able to do that and to do it quickly ought to be a normal part of your operating business, because there will be emergencies from time to time. To what extent, especially given the very tight budgeting constraints you face, are you planning to, or able to, build up a contingency fund as a normal part of business?

Paul Leinster: We are not able to build up a contingency fund because we have annual allocations, so we need to be spending the money that we are allocated within year. What we then need to do is to have schemes in place if we have to do something. What the Government did last winter was to allocate us more money.

Q71 Chair: Indeed, but this goes back to my question right at the beginning. How will it look different next winter compared with last winter? I can see someone—perhaps you—standing in wellies in front of a television camera saying, “You know what, if only the rain had fallen 2 miles to the west or 2 miles to the east. But, rats, it fell right here.” That is what we are familiar with, and that is what we saw, and the Government responded with additional funding, but as we all know and we have all discussed, that produces lower value for money in the medium to long term than a more planned long-term approach.

Paul Leinster: Just to say what we did with the money we had, the £30 million last year was for repair work. There was a significant level of damage to close to 1,000 assets. We were running about 900 projects along with local authorities and IDBs to repair the damage that was caused during the storms and the extended flooding. The money that we had put those damaged assets back to the condition they were in before the damage occurred. That is where the vast majority of the money went. We then had additional money for revenue funding for routine maintenance—£35 million this year and £35 million next year—which will enable us to carry out more of the regular and routine maintenance work to ensure that our assets stay in target condition.

Q72 Chair: In some areas, but as the Report says in paragraphs 2.11 and 2.12, there are 1,356 asset systems where, because you have a lower benefit-cost ratio you have rationally chosen to deprioritise them and maintain them less. It goes on to say at the end of paragraph 2.12, not only that this leads “to a risk that some geographical areas will be disproportionately affected by the funding” cuts, but that “the risk of asset failure may increase.” Are you being fair to people in more marginal areas?

Paul Leinster: “The risk of asset failure may increase”—it is not “will”, and we are not sure it will. What we are doing is making sure that all assets have minimum needs allocated to them. We then have what we call target condition for the assets, and we maintain all our assets at that target condition. We seek to maintain 97% of assets in high-consequence systems in target condition, and for medium and low-consequence systems we meet a 95% target condition. Our plan is that that will be how we maintain the asset base going forward. That means that when they are needed, they work.

Sir Amyas Morse: Does that mean that if I happen to have a flood and a low-consequence asset is destroyed and, for whatever reason, perhaps because it is highly visible in the press, you have to spend money—you may have done that last year—you end up having to reinstate a low-consequence asset? So your plan works as long as you don’t have an emergency in an area, because you then spend the money on low-consequence assets.

Paul Leinster: We would probably have to spend capital money reinstating that low-consequence system.

Bronwyn Hill: Can I help here? I was trying to think about what this is like in reality. In our experience, flood defences are built to defend, so it is inevitable—the east coast storm surge is the most obvious example—they will occasionally fail. It’s not like most assets, where you assume they will never be attacked, as it were; they are built to be there when the storm hits, so it is inevitable that the Environment Agency will have to spend money filling gaps in sea walls. Actually, they did some of that in between tides last year; I remember arranging the helicopter to get the materials there in between tides. So your answer is that, if there is an emergency, they will fill in the gaps. We will do that if it is needed.

I think we are at risk of confusing the really big, dramatic things with maintenance, which, when I asked the agency, did involve cutting the grass or checking whether big earth embankments have lots of rabbits in them and doing something about the rabbits. So there is a huge spectrum, and I do not want the public and the media, who do tend to go with rumour rather than fact, to get the impression that people are suddenly more vulnerable than they were last year. They are not; that is absolutely definitive, and I don’t think there is any difference between us and the NAO on that.

It is this question of the risk-based approach. DEFRA sets key performance indicators for the agency, and one target I will continue to insist on is the one in figure 10, which deals with the high-consequence assets. Those affect, I am told, 92% of the properties—77% of the residential properties and 77% of the businesses—and about half the agricultural land at risk. Those are the ones where we say that 97% should be in their target condition⁴. Actually, that is an improvement,

⁴ Note from witness: This sentence should read “Those affect, I am told, 92% of the residential properties—77% of the non-residential properties and about half the agricultural land at risk. Those are the ones where say that 97% should be in their target condition.”

because I think the reports from the PAC and the NAO in 2007 said we had got things the wrong way up—the lowest consequence assets were better protected than the high. So we have switched that. There has clearly been significant damage over the winter, and the additional funding was to enable all the repairs that had to be done before the winter to be done, or to enable temporary repairs if it was not possible to do all the repairs in time. It was also to make sure that the Environment Agency is able to restore those assets to the target condition we have set. That is what the agency is now doing.

Q73 Chris Heaton-Harris: On the lower value assets you were talking about, we should say a big thank you to all the flood wardens out there, who are volunteers. You have a member of staff called Ben Thornley, who looks after my region. He's been out with me, and I have seen him in action with flood warnings. The partnership working that goes on is really impressive, and the flood warnings bring a lot of benefit. One chap in Nether Heyford, in my constituency, called James Arnold, was, until recently, our flood warden. He knew exactly where every drop of water was going to go; his experience and knowledge were quite remarkable. Working with Ben Thornley, he came up with plans for an area that was likely to flood, but it is being sorted out.

However, I want to go back to the big figures in figure 4. We talked about the £30 million you were given in 2013-14, which ended up being £31.2 million—fair enough. You have also talked about the additional £35 million for asset maintenance. I am interested in the £145 million in between those two figures. I can understand how you had £30 million of repairs. I can understand how you want £35 million for asset maintenance to maintain the standard. What is the £145 million for? Can you give us some assurance about value for money and how our money is being spent?

Paul Leinster: The £145 million is the majority of the money for the repair of the damaged assets. To give an example, a big breach happened up in the north-east, which put a chemical works at risk, and there were a few hundred houses at risk behind it. We brought a helicopter in to shore up the edges, and we have reinstated the embankment across there. That will have been one of them. Another example is a significant breach down in Boston that has been repaired. If you go to Devon and Cornwall, there are many damaged assets down there that have been repaired. That is the majority of the spend in that £145 million for both ourselves and local authorities. The local authorities and IDBs bid in to us for the funding for their work.

Q74 Chris Heaton-Harris: So you could say that the £31.2 million was for short-term urgent repairs.

Paul Leinster: Yes, it was.

Bronwyn Hill: Yes.

Q75 Chris Heaton-Harris: And then this is the backlog of other repairs that needed to be done.

Paul Leinster: Yes.

Q76 Chris Heaton-Harris: When you get the contractors in for this work, are the unit costs the same as when the contractors come in to do foreseen maintenance?

Paul Leinster: We were very mindful of value for money on this and of putting in processes to ensure that—we knew that this would be a question.

Chris Heaton-Harris: I'm glad I asked it.

Paul Leinster: Not only now, but in general, because there would be the temptation that you just throw money at things. We have a very good quality assurance approach, which we streamlined while still making sure that our procurement people were involved. We did value-for-money analysis on the approaches and also looked at comparisons with our framework contracts. It was mainly the framework contractors that were involved in carrying out the work.

Q77 Chris Heaton-Harris: Okay, so any exceptional repair is part of the framework contract.

Paul Leinster: Yes, it is.

Q78 Austin Mitchell: Now that I am retiring, I am beginning to get the impression that my successor should be Jacques Cousteau, or someone who spends a lot of time under water—such as Nick Clegg, for instance.

Aren't we talking about, as I understand it, a patchwork quilt of areas that are protected—primarily urban housing and the urban environment—and areas where the protection is weaker? That patchwork quilt is then complicated by fluctuations in funding that make it very difficult to plan ahead. As an alternative to that, should you not be considering what we are urging on the Humber: an estuarial development that takes into account the potential industrial needs, the potential for development, transport and trade needs?

When you look at the Humber estuary, which is of course the best part of the country, you see a patchwork quilt, because there are some areas that we would like to be protected to 0.5 AEP—whatever AEP stands for; I think that that means flooding with a one in 200 years probability—for industrial development purposes, but most places around the estuary currently have a standard that is lower than that, typically between 2% and 3% AEP. A number of places have 5% AEP, and in some locations it is as high as 50%. That is not good enough, is it? You have to treat the estuary as a whole, because the waters come sweeping in and just sweep all over the place.

We currently have a situation in which 19% of the defences around the estuary are in a poor to very poor condition, amounting to a total length of 43 km of defence that is in a poor condition. The areas assessed as poor to very poor are located near the industrial development areas, particularly around Grimsby, Immingham and Hull. Don't you need an estuarial development, rather than the parcel planning that we currently have, in order to combat that? Isn't that the way we should go?

Paul Leinster: I agree. One of the things that we have agreed is the Humber strategy, which looks at what we call flood cells. You can have different standards in different places, because the flooding that you get will be different in different places. There are discrete areas—

Q79 Austin Mitchell: Surely if it sweeps in behind the defences, it goes all over.

Paul Leinster: Not necessarily, because there will be high ground in places or a river in the way or something else. We take an overview—the Humber estuary is a good one—and then we identify the different flood cells and how protection should be developed for them. One of the things that we are doing in the Humber, along with an approach that we are taking in other places, is to talk to the LEPs. Talking to the local enterprise partnerships is a key way into not only the protection for people and property, which is essential, but also looking for—

Q80 Austin Mitchell: But that's to talk about their needs, rather than their need to put money in.

Paul Leinster: One of the interesting things is that overall, because of the work that we have been doing with the LEPs, they have identified some £200 million of future funding into flood risk management, which is as a result of the discussions. That is a really important area to develop.

Q81 Chair: Is that committed funding?

Paul Leinster: Not yet.

Q82 Chair: So how far ahead are you talking before any of that—

Paul Leinster: We see some of it. We have already started seeing LEPs investing in different places.

Q83 Chair: In the current round, LEPs were just given £2 billion nationally for a variety of different things based on bids. How much of that is the £200 million you are talking about?

David Rooke: We will do a note.

Q84 Chair: From what you are saying, I think most of the £2 billion is other things and that most of the £200 million is putative and in the future beyond that envelope. If I am wrong, tell me.

Paul Leinster: We will do a note on that.

We have also been looking at European and development funding in this area. Two years ago, the Government identified some growth funding for particular schemes that had the potential for growth. Specific money went into Leeds, Derby, Ipswich and Exeter to facilitate economic development as well as flood risk management schemes, primarily for households.

Q85 Chair: I have two or three other questions that I would like to ask; I am sure that colleagues will come in if they have others.

We were talking earlier about the management of assets and the fact that the agency is not responsible for more than half. There is plainly a responsibility sitting on local authorities to have adequate flood risk registers. What are you doing to ensure that their information and risk registers are high-quality and up to date?

David Rooke: We have a database called AIMS—asset information management system—which contains the records of all our assets. We make that available to local authorities. Most of them have their own asset management systems. In the next phase, we want to ensure that we can get a national asset base. There is a requirement under the Flood and Water Management Act that local authorities have a register of assets. We support local authorities in helping them to fulfil that duty.

Q86 Chair: Only 16% of strategic plans have been produced so far, according to paragraph 3.16. This is under the Flood and Water Management Act and I guess the duty that you refer to. It states: “By March 2014 only 16% of lead local flood authorities (24) had produced strategies.” Presumably that figure is higher now. Is it slightly higher?

David Rooke: It is higher—

Chair: But not much.

David Rooke: We collect that information each year and report to Ministers and to Parliament on the progress that local authorities have made.

Q87 Chair: What is the current number?

David Rooke: I do not have the up-to-date number, but far more local authorities are consulting on their strategies. They might not yet be approved, but they are certainly consulting.

Q88 Chair: The Report says: “A further 34 authorities have plans out for consultation, and 94 are in progress.” I suppose that that is good. What can you do as an agency to get local authorities to comply?

Bronwyn Hill: The Minister, Dan Rogerson, has written jointly with the Local Government Association to encourage and exhort those local authorities to get on with it and aim to have the strategies either out to consultation or published by the end of the year. I should stress that we do not have powers to require them—there are no penalties—but we do think it is in their interests to get on with that. We have seen signs that the work is being accelerated now.

Q89 Chair: But it is a legal duty for them to do it.

Bronwyn Hill: Yes, but we did not set a deadline for them to do it. They have to do it, but there is no legal deadline.

Q90 Chair: So presumably their failure to do it, if it is a legal duty, would be justiciable.

Bronwyn Hill: I don't think there are any specific penalties.

Q91 Chair: You don't plan to sue any local authorities for failing to do it

Bronwyn Hill: No. We would rather work with them and encourage them to work with the Environment Agency to bring those strategies forward.

Q92 Chair: Can you remind us when this duty first came into existence?

Bronwyn Hill: It would have been under the Flood and Water Management Act 2010. I suspect it may not have been implemented until 2011.

Q93 Chair: None the less, over the past three years only 16% have done this, leaving maybe slightly fewer than 84% who have not done it. You are writing to them, which is good, but you are basically saying that if they choose not to prioritise it—if they are under huge financial pressure and choose to do other things—there is nothing you can do.

Bronwyn Hill: Legally, that is correct. I do not want to sound as though we have done nothing to date. Towards the end of the NAO Report, there is quite a lot of coverage of how both we and the Environment Agency have been working to improve local authorities' technical capability to do that. We have had workshops and seminars. The Environment Agency has been seconding people into lead local authorities. We have done everything we can to support and encourage them to do it, but clearly we can't tell them to do it.

Q94 Chair: On this subject—and this is the last point that I had—the funding, the money that you have estimated that has come from local authorities, is £108 million. That is under paragraph 2.20 about partnership funding.

Under the partnership funding model, you estimate that you have had £108 million, but that is only an estimate. Paragraph 2.23 refers to that, pointing out that because “risk-management authorities do not have to specifically provide data on what contributions in-kind they receive that reduce the costs of projects”, and because it is only an estimate, “the Department cannot currently accurately track partnership funding given to local authorities until 2 years after schemes are completed, which impacts on its ability to accurately evaluate the success of the model.”

Would it not be better to have a rather firmer grip on those numbers?

Bronwyn Hill: It would be better if we could require the information sooner. If you read footnote 23, it says it is about wider Government policy about reducing the burdens on local authorities. So we have reached an agreement with CLG to require final statement of accounts two years after the schemes have completed. This is for schemes where the local authority is leading the delivery of the scheme, which is different from ones where the Environment Agency is, where they would have a much better understanding of the money that has been committed by partners.

You are right that we could improve it but we have agreed with CLG that we won't keep bothering local authorities more often than asking for this completed statement of account. This is for schemes that they are delivering, so they are very well incentivised to get that money in because otherwise they will not be able to deliver the scheme.

Q95 Chris Heaton-Harris: I have one final point that is a bit outside the Report. One big thing after a flood is getting reinsured. You come along and repair flood defences or build new ones. What information then gets passed to insurance companies, so that they get some knowledge that some new defence scheme has kicked in and therefore insurance rates do not need to be quite as high as they might be?

Bronwyn Hill: The Environment Agency shares flood-risk maps with the insurance industry. That should enable them to target their insurance premiums according to the level of risk that is actually happening.

Q96 Chris Heaton-Harris: When you build something new and when you fix things, how quickly do those maps get turned out?

David Rooke: It varies, but we do have a process in place where, if someone is finding it difficult to get flood insurance, they can come to us and we can provide a standard letter that they can then send to their insurance broker or company. That will inform them of the additional protection that we have provided from the completion of defences.

Chair: Thank you all very much, lady and gentlemen. This has been quite a good Report, indicating that, although you are under considerable financial pressure, you have done an increasingly good job as you have come under greater financial pressure. There may or may not be a broader lesson in that, but for now thank you very much.