Environment, Food and Rural Affairs Committee

Oral evidence: Winter floods 2015-16, HC 666

Monday 11 January 2016

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Watch the meeting

Members present: Neil Parish (Chair); Chris Davies; Jim Fitzpatrick; Simon Hart; Dr Paul Monaghan; Rebecca Pow; Ms Margaret Ritchie; David Simpson; Angela Smith; Rishi Sunak

Questions 1-142

Witnesses: **Keith Little**, Cabinet Member for Highways, Transport and Flood Protection, Cumbria County Council, **Rob Johnson**, Chief Executive Officer, Cumbrian Chamber of Commerce, **Lynne Jones**, Homeowner in Keswick and Chair, Keswick Flood Action Group, and **Heather Shepherd**, Community Support and Flood Recovery Specialist, National Flood Forum, gave evidence.

Q1 Chair: Thank you very much for attending the meeting this afternoon on floods in Cumbria. Would you like to introduce yourselves, perhaps starting with Keith? Then we will fire away with questions. We are really very grateful to you for travelling this vast distance down here to London, so over to you. If you do not mind, are you quite happy with Christian names?

Lynne Jones: Certainly.

Keith Little: Yes, absolutely. I am Keith Little, county council member for Maryport, and portfolio-holder for highways, transport and flooding.

Rob Johnson: I am Rob Johnson, Chief Executive of the Cumbrian Chamber of Commerce.

Heather Shepherd: I am Heather Shepherd from the National Flood Forum.

Lynne Jones: My name is Lynne Jones. I am the chair of Keswick Flood Action Group. I have a guesthouse in Keswick, and I have been flooded three times in the last 10 or 11 years.

Q2 Chair: Our sympathies are with you and your community. My first question is a very broad one, really. How were local communities affected by floods in early December?

Lynne Jones: Fairly catastrophically, I would say. Speaking from Keswick's point of view, we would probably have flooded back on 15 November had Thirlmere reservoir not had space in it, and there was storm space. Before the floods of 5 December, the telemetry was down on the reservoir so we did not know what the levels were, but we could see from the river that was coming out of it that it was already overflowing and there was no storm space.

You are looking at Hazard Manager and all the Environment Agency advice; you know what is going to come. You can get your sandbags in, but in the end there is not an awful lot to stop it. The devastation that has happened throughout the county with bridges down, and particularly the A591, with that route going through Cumbria, is a disaster for a community that is dependent on tourism and people getting from one side of the Lake District to the other. There are an awful lot of mountains in the way, so businesses need an awful lot of support in our area now.

Q3 Chair: Is the state of the road bad now, after the floods have gone through?

Lynne Jones: The state of the road is just horrendous. It has been washed away in so many places. There have been an awful lot of landslides, so that has added to the problem.

It has also meant that the water has been an awful lot muddier than it would have been. In previous floods, we just had dirty water through; this time, we had about three inches of mud right through the town, everywhere. People are insured to get their houses back together, but their gardens are not insured. You are left with all this filthy mud everywhere that you have to bag up.

Rob Johnson: From a business perspective, we have some experience of this, sadly, but this was at a scale way above what we have seen previously. We are looking at almost 10% of business in Cumbria being affected either directly or indirectly. The economic impacts are pretty significant.

To put a number on it, that is over 2,000 businesses directly affected and almost 4,000 indirectly affected, with supply chains. As my colleague suggested there, certain key sectors now find it very difficult to function because of the infrastructure issues around it. It has affected businesses directly, through direct flooding and as part of supply chains, and indirectly through losing custom, business and the ability to service the market. It is pretty significant: almost 10% of our economy has been impacted in one way or the other.

Keith Little: We had a total of 94 communities affected this time. That is going to take a lot of putting right. One person actually lost their life in the floods and many rescues prevented any further fatalities or casualties. The main affected areas were the towns, really: Appleby, Carlisle, Cockermouth, Kendal, Keswick and Glenridding. Some of them got it more than once, to be honest.

The flooding resulted in approximately 6,500 properties being flooded, and almost 20,000 people were affected by it. It has been a horrendous situation just before Christmas. The heavy rainfalls that came through the gales came on top of two months of pretty normal rain for Cumbria, but the ground was just absolutely saturated, and therefore it came much more quickly and heavily than we expected.

Lynne Jones: We have had three near misses since 5 December as well; 22 December was pretty close. We were advised that the Boxing Day floods were going to come over Cumbria; in the end, they went to Yorkshire, but we were all prepared for it. We were lifting furniture up again. When we got to 30 December, we nearly got it again. We have been living with our nerves on edge for a long time.

Heather Shepherd: This was a particularly devastating flood, but, affecting the north, it was very widespread as well. The difference I saw was it hitting communities that had not been affected in the past. New communities have been affected, as well as the ones we are familiar with.

Q4 Chair: Keith, you mentioned some very beautiful villages there. Of course, tourism is very important to you, probably even through the winter months, I imagine.

Keith Little: Yes, the lakes are always popular. For anybody who has been there, wintertime is particularly popular for people. That gave us an added difficulty, because, with all these people being taken out of their own properties in late November and into early December, many of them were able to go into vacant rooms in hotels, boarding houses, cottages and stuff like that. But, within two weeks, some of them had to move back out again, because all those rooms and beds had been sold to the tourist trade. Some people have been churned around with all of this as well, which does not add to their mental health and their capacity to deal with these situations.

Heather Shepherd: Also, the volunteers, agencies and authorities moving up there to help, of course, exacerbated that situation. Hotels were full, to keep the rescuers as well.

Chair: Yes, people came to help, but they also take up room. I understand.
Heather Shepherd: Yes

Q5 Chair: I have another supplementary question I would like to ask you. How did the December flooding compare with past events you have had in recent years?

Keith Little: As far as the county council were concerned, it was much worse—really much worse this time. As I said earlier, these storms came in. Perhaps if we stop naming these storms, we might end up with a better situation, because ever since we started naming them we have had nothing but problems with them. I understand Gertrude is the next one, so we do not know, but, through Abigail, Desmond, Eva and Frank, they were all falling on wet ground. As my colleague from Cockermouth says, the one that caused us the main problem was Desmond. It broke all records for Cumbria County Council and Cumbria itself: the heaviest rainfall nationally over a 24-hour period and the heaviest rainfall over a 48-hour period. It was absolutely horrendous.

Although we were well prepared, we had systems to deal with it and we have put mitigation processes in place over the years following the 2005, 2009, 2010 and 2012 floods, this was just over the top. Our systems were overcome by the amount of water coming down.

Q6 Chair: Did you have something like 13 inches of rain in 36 hours?

Keith Little: We had something in that region, yes. The average rainfall in the

Lake District for December and January is in the region of 200 to 220 millimetres. What was coming down at that time, as an average across the Lake District or Cumbria, was 250 millimetres in those 24 hours, but larger in certain areas.

Lynne Jones: I was at a meeting with the Environment Agency a few days ago. They said that Cumbria experienced 300% of the December rainfall and that equated to the whole of the county being inundated with 16.1 centimetres of rain, and we have a very big county.

Chair: Yes, I understand. Thank you.

Q7 Angela Smith: Can I ask a very quick supplementary question and extend my sympathies as well to the people of Cumbria? South Yorkshire was badly affected in 2007, but your suffering has been heartbreaking. I just wanted to say that.

Lynne Jones: Thank you.

Angela Smith: I wanted to focus on the response given by Rob in relation to the impact on the supply chain. I would like a little bit detail about that, because I know we have some nationally important economic infrastructure in Cumbria: BAE Maritime and Sellafield—I nearly called it Windscale. I wondered about the impact on those nationally important pieces of infrastructure

Rob Johnson: That has been quite interesting, because businesses like that, and some of their tier 1 and tier 2 suppliers, have quite dynamic relationships with their supply chain and have been working quite hard to develop a local supply chain, so the impact has probably been greater. You have small businesses distributed around the county that were key suppliers into some of those key industries, which have been seriously impacted.

The key thing we are concerned about is the future investability. When this happened once, that was an issue. We have a lot of larger businesses that are part of an international group, which would have to justify further investment. It is not even the local ownership issue; it gets really complicated in terms of investability. We have tried to be very careful in the message on this, because clearly we do not want to give the message that Cumbria is not investable in, but we have a real issue of investability here that did not exist previously. That manifests itself in a large 400-person business, for example, but it is exactly the same for a small engineering company on a local industrial estate that is part of that supply chain.

The investability issue is much more important this time than previously. As we said earlier, the impact on the volume of businesses is much greater. One thing we are really concerned to get out of this—rather than pointing fingers and blaming—is to understand what we have to do in certain areas to create the resilient environment for businesses to invest. That could be to look at an industrial park and say, "That is not viable. It needs to move somewhere else locally, so we can maintain the local employment and the local skills. Let us not pretend that that is going to recover. It might come back and trade again, but the future investment is not going to be there."

If you take that all the way through the supply chain, you can see the investability becoming an issue. That might be with a larger firm. With a small, specialist engineering firm that might be heavily geared and heavily borrowed, it is an even bigger issue from the bank's perspective as it is not insurable. The same challenge goes right the way down the supply chain.

Q8 Angela Smith: In other words, when we are talking about the economic impact of flooding, we need to think beyond the immediate cost of repairs and recovery. We need to think about the potential long-term impact on investment in manufacturing.

Rob Johnson: Absolutely, yes, and that is not just for Cumbria. It is going to impact everywhere across the UK where this happens. That is why we think there needs to be a much more mature approach to this than previously. It is so different. One-off costs can be recovered.

Also, a lot of larger businesses or businesses that operate in a very competitive arena do not want their customers to know they are in difficulty, because that creates an opportunity for the customer to move into their selling environment. We have to be very careful as a chamber, when we lobby on this, to make sure we are not creating a problem by saying, "Company X is seriously at risk." We have to work with them in the background, to try to help them get the recovery in, which we have been doing.

It is quite a complex situation and it requires all the local partners to work together with the local authorities, ourselves and others, and to understand the challenges in each community, because some of these businesses are fundamental to the sustainability of the communities. We are talking about tourism, but it also goes across engineering and others that you mentioned.

Lynne Jones: We run a guesthouse that is across the road from the river. One of the big problems we are going to have is that, when Flood Re comes into being, the statement of principles will no longer exist and we will be open to market forces for insurance. My insurance was extremely high. My excess is 25% of the claim. They are looking at a claim of something like £90,000, provided somebody agrees that they are going to dig up the tanked floor that I had that did not work.

The truth of the matter is that the smaller the business you are, the more you are going to be hit. Flood Re does not count for people who own businesses. I have lost my home and my business. The ground floor of my property is only a business from about 8 o'clock in the morning until half past 9. Other than that, it is my home. I really do not think I will get insurance come June, when my insurance is due for renewal.

Chair: Thank you for that. We decided before we started today that we are going to have further inquiries into flooding. Insurance, Flood Re and those businesses that are outside of Flood Re are important too, and we will discuss that further to put to Government. You make a very good point.

Q9 Chris Davies: May I say how sorry I am for what you have all been through? I represent an upland constituency in Wales, and it is very similar in lots of Wales to your areas. I say "thank goodness" for my constituents, who managed to get away with it this time, but we sympathise enormously with what you have been through.
It was something that Lynne mentioned about the flood capacity of the local reservoir. Can water companies play more of a role in this? If they heighten and lower the flood capacity and we are aware of what is coming, can more be done there?

Lynne Jones: Yes, absolutely. We had meetings with United Utilities, which operates Thirlmere reservoir, which is above Keswick. What I am saying really relates to what happens during flooding for Keswick, Cockermouth and Workington, but it relates to everybody who lives underneath the reservoir.

One of the things we need is for there to be a statutory duty on water companies to manage reservoirs for flood alleviation, not simply so they can hold on to water. I understand they are penalised if there are drought conditions, but they can move water around an awful lot more easily than they do to prevent flooding. That has to be at the forefront of their operation. There is not much hardship in not being able to use a hose, but we see 475 properties in Keswick and the area around Keswick alone being flooded.

I have a response from United Utilities to us begging them to do some over-pumping to give us some more space, before the end of the last storm that we had a near miss on. I am told that they might be able to let out 500 megalitres a day; they are looking at it. I know I need probably nearer to four times that amount to make a meaningful release to help protect properties like that.

They start telling me that we have to remember there is a problem with releasing more water from the reservoir, because people need to use it for fisheries and there is also the Habitats Directive. It is a sensitive site, they tell me, which is one of special scientific interest. Actually, if you saw the site of special scientific interest and you saw the boulders, the rubble and all the mess that is there, you would know that the environment cannot cope with the kind of flows we are getting now. We need managed flows to be able to protect ourselves and the environment. This is just preposterous. Something has to change.

United Utilities was telling us it was expensive. It was going to be £1 million to put in a new valve and to do some extra work on the reservoir. You are talking to the same company that has to put in a £300 million pipe to protect some freshwater mussels at Ennerdale. Please, what is the point of all this? Who should you be protecting? My sympathies to the mussels, but I need my community protected. If I get an agreement with United Utilities, suppose they get bought out by another company, the Chinese or someone. Do I have to go through an agreement again? Without some sort of legislation that controls these reservoirs, we are all at the mercy of the water that comes down that river.

Chair: Thank you for that. Again, it brings the water companies in, which, when we are looking at a wider inquiry, we will also be looking at.

Q10 Ms Ritchie: First of all, I would like to offer my sympathies to you and your ordeal, because floodwater is quite difficult. The first question is to the local authority representative, Keith. Were you warned in good time about the floods by the Met Office, the Environment Agency and other statutory bodies?

Keith Little: We were. We were advised by both of them that we were on yellow alert. However, their predictions were slightly out. Nevertheless, we were able to cope with those kinds of predictions. The first rainfall came to us on 3 January, when my own village flooded. The town below me, Maryport, had some flooding there. That enabled the county council to set up command fairly quickly.

When Abigail and stuff started to come in, we were already set up and ready for that. The predictions were reasonably accurate, but it just overtopped everything, as we said earlier: the heaviest rainfall in 24 hours and the heaviest rainfall in 48 hours, already falling on sodden ground.

Chair: Just for the record, you meant 3 December, did you not? You said 3 January.

Keith Little: Sorry, yes. I apologise. New year plays havoc. Yes, 3 December was when it first happened to us. From then right up until 31 December, we were almost in an emergency situation completely.

Q11 Ms Ritchie: This question is to all of you. Therefore, are you saying that the flood warning system was clear and easy to understand and act upon?

Rob Johnson: No.

Keith Little: I would say yes, as far as the county council is concerned. We work closely with the Environment Agency. It is one of our statutory partners in all of this, and they were sitting at the table with us. We knew that the weather was coming in; what happened was that it stayed a little longer than they expected and it was heavier than they expected. That is how Cumbria County Council felt.

Q12 Ms Ritchie: The problem is around the area of predictions in terms of the actual weather forecasting.

Keith Little: That is something that needs to be considered. I think the Environment Agency would say that themselves. It is getting more difficult for them to be totally accurate with their predictions, because of the fluctuations of El Niño, as they say. There were two further storms that caught Lancashire and Cheshire out and then moved up into Scotland. If they had only been 10 or 12 miles in a different direction, it would have swamped the whole of Cumbria. My sympathies go out to those other two communities, but thank God they did not drop in Cumbria and went elsewhere, because we would not have been able to move around in Cumbria.

That is the difficulty for predictions at the moment. We keep hearing about one in 30 years, one in 100 years or one in 1,000 years. That is good for modelling and prediction purposes, but people started believing this kind of stuff. Colleagues sitting at the end of the table will tell you this is the second or third time in three or four years. You cannot predict for that kind of rainfall.

Rob Johnson: The reason I said no—because we actually do agree on certain criteria—is that I would ask the question differently. Did businesses know what to do at the time of the forecast, when yellow and red warnings were put out? What we have learned out of this is, no, they do not. They do not, either as a group or industrial park, or as individual businesses. That is something that needs to be played into the work that is done immediately following this. For example, should we have a process in a particular area that is prone to flood risk where there are proper information packs on how to respond?

I got some of my team to do some research this morning on follow-through. As an organisation, when we respond, we have a plan for what we do. We go out and talk to businesses very quickly, as quickly as we can, with our staff. We were surprised when we went back and asked them, "Did you understand what to do? Did you have a plan in place? Was that around your industrial park? Was that a group of businesses?" That was not the case.

Significant work needs to be done to understand how a group on an industrial park, for example, or in a town centre can act as a group to respond to a warning. I do not want to oversimplify that by saying yes or no, but we have learned that there is work to do around planning, strategic planning and the response that could come into play. That does not decry, also, that businesses need to have ownership of their own problem and register for the Floodline in response to that. But it is interesting, and we will find more information, as we move forward, on what would have helped if we had had some better resilience plans in place.

Heather Shepherd: There is room for improvement, but I think the Environment Agency realises that. Again, it is about resilient communities, who have such fantastic local knowledge. Communities themselves, generally speaking, are so aware of how it will work. Every flood is different; every flood attacks a community differently. They are never the same all the way around. But, generally speaking, people's local knowledge is immense, and that really does help. It also supports the Environment Agency, in trying to get those warnings as accurate as possible.

Lynne Jones: My experience is totally different. Because Keswick Flood Action Group has been very active over the last 10 years since its inception, we have a really good relationship with the Environment Agency. They phone us up; we are on first-name terms with each other. I know these people; I have met them. We were quite well prepared, because we have access to the Hazard Manager site, so we have the accurate rainfall information that is coming through and I can see that. The Met Office civil contingencies emails come through to us as well. We are well prepared and we have regular EA updates.

Before all this was happening, we asked Cumbria County Council to make quite sure that the additional pumps we have were ready and that they could bring extra pumps in. I am very grateful to Cumbria County Council that they did everything they should do to give us as much protection as they possibly could before this event. We had the Environment Agency close the floodgates well before this all came in. We knew what was going to happen. We were as prepared as we could be. We went round knocking on doors, making quite sure that people who were tourists could get their cars out of the way. A flood group actually saves the insurance industry a massive amount of money, and we did that.

When the Yorkshire thing was happening, it was better to be prepared than not. The day before it was going to happen—I think it was Christmas Eve—the Environment Agency phoned me in the morning and said, "I would urge your community to take every precaution, because of this next storm." We leafleted every property that we thought was at risk to tell them it might be happening again. Yorkshire took the brunt of it, and I feel terribly sorry for them, but we were safe. But we were ready. We had the sandbags ready. We had done everything we possibly could to make sure that life and property was safe. Communities really rely on having a good flood action group in place, which has all that knowledge and can work on it.

Q13 Ms Ritchie: Therefore, apart from Lynne, do you think the Floodline warning system was sufficiently accessible to local residents, particular those who would not have access to SMS messages or to the internet?

Keith Little: I would say that it works very well for those who have signed up to the scheme and those who have been flooded before. We have 32 community emergency plans in Cumbria and we have another 15 in the process of taking place at the moment. Those take a little time to develop, but they are developed very much with the community. You have just heard how those community plans are put together. The community drives those community plans and, therefore, they are able to act. Eleven of the community plans were activated at this time.

The system works, provided people buy into it. That is something we need to consider with businesses as well. It is mainly tied in around properties, because the finance that follows the flood usually looks at protecting properties. We can work with businesses, if businesses bring some funding forward. In Carlisle, we have worked with a business right along the river for the last two years. They have funded some of the protection and that protection has worked on this occasion, and that business has been saved. We need to get businesses more involved in working with the Environment Agency, so they get on to the warning systems as well.

Q14 Ms Ritchie: It is community and business interaction with the Environment Agency. In that respect—I will finish with this one—do you have sufficient resources to deal with a particular issue, given that you have to implement a plan and also that you are now probably assessing potential flood risk?

Keith Little: Cumbria County Council does not have that capacity, I am afraid. It takes us a long time to do that. Over the last five or six years since we have had the Flood and Water Management Act, we have got to 32 plans at the moment, across a wide area. As I said earlier, something like 94 communities have flooded. From 32 now, to get to 94, hopefully, is going to take us another five years.

We are working with the Environment Agency. We are looking for a little funding from the Environment Agency to help us achieve that. We are going to have to write at least 70 Section 19 reports. It is going to take 12 months for Cumbria County Council to write those, but they will have to be done. Time and manpower have to be dedicated to doing that.

Heather Shepherd: There are communities that feel they would like to have better and more accurate warnings on the ground. That is spasmodic across the country, but we also need to bring up the fact that resources are short within agencies, as we have just heard, both for the Environment Agency and for councils.

We need to have a really, truly community-led approach. I was very involved with the floods in 2009 in Cumbria. I was there for 16 months supporting grassroots communities. In that time, I set up 22 flood action groups. These flood action groups now lead the way for their area. We need to empower communities to lead resilience in their area. We need to give them the power to do that.

Q15 Chair: Rob, further to the question there and a point Lynne made, how could we embrace the business community more, especially those businesses that might find it difficult to get insurance?

Rob Johnson: You have to look at the businesses as different business-type groups. If you are looking at businesses in town centres, they will be part of that group, I would hope, and part of the community group. I am entirely supportive of colleagues' positions on that, and we would support that. My concern is the need to understand that, on traditional industrial parks that have been built beside rivers and have grown up over the years, there are quite unsophisticated businesses, with food businesses and things now, which have real issues about how they go forward. We would ask for very quick, very immediate support to look at those.

If you look at one estate in the Kendal area, for example, it flooded in a very different way than it had done previously, so the technical modelling and technical knowledge needs to understand how to cope with it. The point I made in opening was the fact is that, as of now, businesses are recovering. We are doing phenomenally well and I am immensely proud of the recovery, how people have approached this and how the organisations have worked on it. It is a tremendous thing to see, but the concern I have is the investability. People want to know now: "If I get my factory up and running, which I will do, when I make my investment next year, where do I make that investment at every level?" That is why we need some answers very quickly on plans that are really quite local to areas. That requires technical knowledge and more resources.

Q16 Ms Ritchie: Did the flood warnings provide an accurate picture of the risk?

Lynne Jones: If I can speak for my community, the flood warnings you get are quite good, but we get them fairly regularly—"There is going to be a flood"—and it is one of those things you zone out of. It would be so much better if, when there was going to be a flood warning given, instead of saying, "This is a flood alert from the Environment Agency", it said, "We have just noticed that the weather is going to be really bad between 12 midday and such and such a time. The river might get up to this level. You need to do something." Now, you think, "Oh, it is a flood warning." It is a bit like, "You need a new boiler." You zone out. It happens so many times.

Chair: It is a little like crying wolf.

Heather Shepherd: Yes.

Lynne Jones: They need to get the accurate information that they know at the very beginning out in a friendly voice. Maria from the Environment Agency is great. She will phone me up and say, "We think the river is going to peak at such and such a time. We think it is going to be okay. We might have to do the warning for so and so." We need to get that into a people-friendly voice so it is not: "Oh, it is another one of those. We might be alright."

In Keswick, we were okay. We were getting the right warnings. When I get any of this information, I have a huge amount of people who I email, businesses as well as local people, so I can disseminate as much accurate information to them as possible. Emails are going out regularly, plus I am looking at what is going on, so we have got it sorted.

Sue Cashmore, who is chair of Cockermouth Flood Action Group, did not know that she was going to flood until one of her neighbours phoned up and said, “You have to come home; you are flooding any minute.”

It was a bit hit and miss, but, from my experience in Keswick, it worked well. We have pushed people to sign up for those warnings. I would love them to be specific to an event. Sometimes they just do the usual thing, and then they say something more specific to the event at the end of it. It needs to be front-ended.

Chair: It needs to be the other way around. That is a fair point.

Q17 Rebecca Pow: I have a very small point on the business angle. I come from Somerset. Half my constituency was in the flood, so many lessons were learnt. I have enormous sympathy with you, because people thought Somerset was shut for business for a year afterwards. I just wanted to ask this. We are allocating more development land and industrial land, and it often seems to be on flood plains. Do local authorities do enough to highlight to the businesses that they must put these flood action plans in place? It must be part and parcel of getting planning permission if it is ever granted in these areas.

Rob Johnson: That is a very good point. There is a range of measures to get ownership of it; that is the thing that is coming out to me. Is a particular historical site relevant to continue to invest in? It is a bitter pill in some cases to say, “No, it is pointless.” If you want to improve the quality of your businesses and there are going to be more high-tech businesses, they cannot be there anymore. Therefore, you are going to have to close that down in a measured way.

There might well be a bit of support for businesses to move into other areas. As I said earlier, we talked to some larger businesses and they say, “This is a real challenge to us. The reinvestment might not be from the UK; the reinvestment might be from overseas, because we are part of another organisation, but we would like to stay here, because our workforce is good.” What can we do to help them stay here, quietly, in a way that does not shake their customer base?

Q18 Rebecca Pow: Should Government, from the top, and local authorities be leading the way in saying how you can do this?

Rob Johnson: Yes.

Rebecca Pow: That is a fundamental change, really.

Rob Johnson: But it needs to be an evidence-based approach. We need all the partners to work together so it becomes a more sophisticated proposition for moving. We are talking about 10%, £1 billion a year, of productivity that is at risk here, and this is just from one event. It happened previously, in a smaller way. The lessons are: manage the situation while you can, apply some intellect, remove the politics and the arguments from it and say, “We need to create a resilient infrastructure to grow our business on. If we do not do that, we will not grow our business.”

Keith Little: With regard to the planning, Cumbria County Council, as a strategic planning authority, is consulted on all developments over a certain criteria. Our flood officers sit there and go through that, and implement means by which water has to stay on the land where the houses or the development is being built or has to be released at a rate that is acceptable.

Perhaps we need, following such large amounts of water, to look at the remodelling of that, as to how much we need to retain and, to be fair, where some of it is going to. In Cumbria, most of it starts off on the high ground and ends up going into the Solway Firth. If the Solway Firth is in and it is being held by a force 10 gale, then the water will stay longer, for one, two, three or four hours. For some of our communities, such as Appleby and Carlisle, which both sit on the River Eden, there is a 12-hour difference between water that flooded Appleby leaving Appleby and it arriving at Carlisle. Very quickly, within 10 minutes, we can tell Carlisle, "You will suffer flooding", because you have the same water coming down, plus you have 60 miles of tributaries feeding into it, so it is getting bigger all the time.

That is an issue. Sometimes it is 74 and sometimes it is 96 hours after the rain has fallen on the high ground that it starts to make its way down to places like Keswick and Cockermouth. If Keswick floods, that gives us an earlier warning to Cockermouth and an earlier warning to Workington.

Chair: You raise a good point. If you take Somerset, for instance, a lot of the water that floods the levels comes off the hills and into the levels. That is what people do not necessarily recognise, do they? If they are a long way from the flood plain, they think, "We do not have any effect on it." But their run-off water might be going there. Perhaps we do not look far enough upstream as to what is happening. Again, that is something we will look at.

Q19 Rishi Sunak: Thank you for being here. Some of you touched on the warning. I wanted to move on to the response from the emergency services and ask for your experiences of that response. How effective did you find it? Are there any lessons to be learned? If you do not mind constraining your answers to the emergency services, one of my colleagues is going to come on to the Environment Agency response afterwards.

Keith Little: From the county council's perspective, we are the lead authority on flood. Our staff are on standby. We know where problems are likely to be. We put people out in those strategic areas. There will be people out in Keswick; there will be people out in Cockermouth. There will be people from the south of the county out in Appleby.

You mentioned earlier the nuclear industry down in Copeland. If I said to you that Allerdale, which is the constituency I live in and which Sue Hayman represents, was almost devastated, in Jamie Reed's constituency over this whole period we had one tree blown down, and that is eight miles away. That was the difference. Eight miles away we had virtually no rain and one tree blew down. In Allerdale, we were devastated, from the Dunmail Raise right through to the coast. That was the difficulty.

From our perspective, our crews were alerted; our children's services staff were alerted; our elderly care people were alerted. They are all brought into command to sit there and make the decisions. For our highways staff, that is the day job; that is what they do as a day job. They would class that as their day job. We are prepared and our staff are on the ground.

Rob Johnson: We work with the county council, and the chamber does the business response, which is our own response that we have developed—it started off with foot and mouth, sadly—for disasters. We work with other areas. We were talking to Manchester this morning about how they can address it. Our response is to get in and get the support mechanism on the ground as quickly as possible. We talk to businesses on the ground. We are working with 350 at the moment. We have 700 on file that we are working with. It is not perfect by any stretch of the imagination, but I am pretty proud of what the team do there. We have worked with other people.

That is slightly different, though, to the resilience argument. Yes, we are quite good at responding and we can do things. In this particular case, the Government response of making funding available gave us some comfort that we could go in and lay the ground for grant funding to go into businesses, which is tremendously useful, because a lot of these very small businesses have no cash, so they are living quite close. There are a lot of very small SMEs, and it is quite important, if they are going to survive, that we can get cash into those businesses quickly. We have set up some standards and operations around there.

You have to bear in mind that this is something we do as an organisation because we feel the need to do it. We are not statutorily written in to do that. We are happy to share that experience with other areas. It is not perfect by any stretch of the imagination, but we were able to get 70 people operational within a couple of days. The difference, though, is what you do to mitigate it. That is the conversation I have been trying to put forward: that that mitigation and the plans around it are missing.

In terms of working with other agencies, we are really comfortable with the county council. We have no real relationship with the Environment Agency. That has come as a little bit of a shock, because, when you do some analysis on this, we are not part of any warning systems that are coming out of there. If we are going to work with some of the other businesses that are part of communities in isolated spaces, we need to review that and work out how we do work with them.

I am with Lynne: I have a couple of personal interests in holiday accommodation. My phone pings constantly, telling me there is a flood alert; and it pings to tell me there is not a flood alert. Wearing two hats there, I can concur with that position.

Lynne Jones: Our police station and court rooms are now a Wetherspoon. We could not find a policeman on the night, I do not suppose. The police are supposed to close the bridge that runs through the middle of the town, because the River Greta goes through the middle of the town. We had two identified rescue centres so that we did not have to evacuate people over a dangerous bridge, which we thought was going to be closed by the police. In the event, it was not closed until afterwards. It was not reopened again until something like 16 December, because they had to wait for the river to go down before they could see whether the foundations were okay. In terms of a police presence, it is not great, because we just do not have any policemen anymore.

We still have a local fire service, which is a retained fire service. They are fantastic. I hope to God they are never forced to close, because we need those people desperately. I have the personal telephone numbers for people like the chief fire officer for our area, some of the people at the county council and so on. The county council and the

Environment Agency were out on the ground. They would not dare not be, because I am on their case if they are not, so they know they have to come.

Of course, Keswick is very lucky, because we have a mountain rescue team. We have these guys who are swift-water rescue trained. The ones like my husband whose house is being flooded are not allowed out, but we actually have these people as well, with their equipment, whom we can call on. From an emergency services point of view, speaking about my community, we are very well off, and we all know what is going to happen. We can see it. We have lived here long enough.

Q20 Jim Fitzpatrick: The question is directed at Mr Little, but thanks to all of you for being here and sharing your difficult experiences. Following up on what Mr Johnson said, despite all the complimentary comments about the response from the Environment Agency, emergency services, local authorities, community groups, the army and the rest of it, one suggestion has been made that the fire service should have a statutory responsibility to deal with floods—as they do for fire prevention, fire precautions, road traffic crashes and the rest of it—so there is another lead emergency agency that has a duty under law to help communities prepare for this. Has the county council considered this at any time or might it be on their radar to look at in the future?

Keith Little: You are probably talking to the right person. I was a professional firefighter with Cumbria County Council for 27 years.

Jim Fitzpatrick: I was firefighting for 23 years with the London Fire Brigade, which is why I am asking you.

Chair: There is a pact going on here.

Keith Little: Absolutely, so you know as well as I do that, when people have a flood, the first person they call is the fire service, because we have the means of dealing with it and we know how to deal with it. As colleagues have said, the fire service was out there; they were out in Carlisle. There is very little the fire service can do when water is coming faster than you can pump it out. You just become somebody else who is driving through flooded water, pushing it into people's properties, so there is a balance there.

Within Cumbria County Council, they are first alerters. When a call comes in for flooding, it goes to the fire service and they deal with it. As far as highways are concerned, if it is on the highway we will deal with it, because that might mean us cleaning drains or something like that. Yes, Cumbria County Council uses the fire service as a means of dealing with floods.

Q21 Jim Fitzpatrick: What about placing a statutory duty on the service across the country?

Keith Little: The statutory duty is to do with fires, protect property from fires and save lives. Road traffic accidents are not part of that, but we do that. Flooding we do as well. If you put a statutory on there, it just means they are still going to deal with it. That is all.

Heather Shepherd: Generally speaking, from around Cumbria, the feedback we have had from communities is that some of them felt the response was slow and some areas felt forgotten. That is the sort of feedback we are getting. At the moment, we are also getting feedback on the ground that, when people are in a crisis like this, the focus needs to be on them and their immediate needs. They feel that the needs are seen to be getting a questionnaire out and filling it in, and it probably is not an appropriate time to be doing that when people have nowhere dry they can put a sheet of paper down to be able to start ticking boxes. That is another thing that is coming back very strongly.

Rob Johnson: To add to that, the feet on the ground thing is really important. We are relying more and more on technology. We use a lot of that to get messages out, but the best feedback we have had from people is that we get on the ground and we go and talk to people. It is an arm around the shoulder. People are quite distressed, and it really is important to mobilise and get out there.

Lynne Jones: We have a well organised voluntary response that comes into play before a flood.

Chair: We hear you, really loud and clear.

Q22 Angela Smith: Can I first of all support Lynne in what she said about mountain rescue? In my area, Woodhead, mountain rescue played a really critical role in the flooding situation we faced. Their role in these situations is totally underestimated. My question is about the perception that residents and businesses in Cumbria had of the varying roles of the different authorities in responding to the floods. You have the police, fire and rescue, local authorities, the Environment Agency and the army all intervening as public-sector agencies. Do you feel they were all quite clear about what their roles were and that their work was well co-ordinated?

Lynne Jones: It never comes across as though there is any leadership, really. I am not the best person to ask about this, because when there is a flood on I am in my house, trying to protect my house. I do not surface for a few days, but this is what I understand from what other people have said. It is very difficult to criticise because it is a huge event. It is chaos; it is the middle of the night; it is pitch black; it is pouring with rain. It is not easy to deal with it, so, in some ways, it is criticising people who are prepared to go out and do the best they can.

But the actual identification of the leadership—the person they say "wears the white helmet"—is the key thing. Co-ordinating that during and afterwards is really, really important. One person needs to have an overview to target resources and to work something through. It is like fighting a war in 12 hours. It is very difficult for them to do that, I appreciate, but leadership and a clear idea of who is the leader is important. Is it the chief fire officer? Is it the highest person in the police? Who is taking responsibility for this? Who deals with this?

Q23 Angela Smith: Although you have gold command, that is way back in some office somewhere.

Lynne Jones: Absolutely.

Angela Smith: There is no sense on the ground, particularly, of the white helmet, as you put it, someone whom you can go to and say, "You are in control", and have confidence in everybody knowing what their role is.

Lynne Jones: We are pretty cut off. One thing we said when we did practices with Keswick Flood Action Group was that we want to be able to stand alone. We want to be trained to use our community pumps. Cumbria County Council has agreed to train us to use our community pumps; we have not had that yet. We need to be able to make quite sure that we can close the Environment Agency gates. They have now allowed our fire service to close the flood gates for us.

We are supposed to get this magic box that comes to the rescue centre so we have all our forms and everything. In two floods, we have never had the box turn up. I would rather that we, as volunteers, knew exactly what we were supposed to do and got on with it, because we are not fettered by red tape. We know what we need to do and we can get on with it. They say, “You cannot do that. What about this? What about that?”

Q24 Angela Smith: Perhaps the perception of the businesses, from Rob, would be interesting on this.

Chair: I am mindful of time. Can we keep our answers a little tighter, please?

Rob Johnson: Again, that is the lesson we are learning. This particular time, we have channelled it all through our growth hub. Although the chamber is doing it, the chamber runs a growth hub in effect, so we have made it one telephone call, one number, and we then manage it. That includes things like business-to-business brokering services. We try to say, “There is one number to call on this”, and make sure the constant message goes out through all the media coverage. That has made a little bit of a difference compared to previously. It is important, if you are in an area like business, that there is one business number. You have to bear in mind that we are operating in a remedial way as opposed to a proactive way and some of those businesses will be part of other communities. But it is important, to summarise that, that there is one telephone number to call.

Q25 Chris Davies: Can I ask what funds were made available to you in the immediate aftermath of the flood? Can I ask how that compared to your previous floods?

Keith Little: Immediately, £500 was made available for every household that was flooded. That was managed by the district councils. By 22 December, 85% of that had been paid out to those people whom we knew had been flooded. There is £5,000 for each household that has been flooded, but that can only be used to provide flood resilience. Many of our properties will be private, but the greater part will be rented properties through social landlords, so the social landlords will claim those back. We will work with them—the county council as the flood authority—to see, if they are applying for that, what they are actually doing with it.

Then we have the community fund that has been set up. That has £3 million in it at the last count, which I think was two days ago. They are looking to get £6 million, but only £750,000 has been bid for that. That is to help people who have lost furniture, whether they are insured or uninsured. You are probably going to look at insurance, but the number of people who are not insured this time is much, much greater than in 2009, because of the reasons people have been talking about.

Funding has been made available. For Cumbria County Council, of course, we have to hit the ground running. In the first three days, we spent something like £200,000 on bringing staff in. It just continues to grow after that.

Q26 Chris Davies: Thank you. That is the county council's response. Can I ask for the communities' response? How did it feel? Was money available for you?

Lynne Jones: The £500 has been coming through very quickly, and that is really good. The £5,000 flood resilience money does not come in until about the middle of January, so nobody really knows about that. In terms of what flood resilience costs, my husband and I spent about £30,000 protecting our house from flooding. We have had a flood wall built around the outside of the house. We have a sump pump and a generator. We had our house tanked. Unfortunately, the tanking had some cracks in it and the water has come through.

You are looking at somebody who, four plus weeks after the flood, does not know what the situation is with the insurance company because of the fact that I had had the house tanked. If I still had ordinary floorboards, somebody would be coming in and helping me. Now I am in a situation where somebody is saying to me, "Perhaps your floor has not been built properly. Maybe you need to sue the builder, because you would not have known it was flood resistant until the flood came." I am quite sure the builder is going to turn around and say, "It was groundwater pressure that caused the cracks. That is why water has come into your house." I still have an argument with that.

To go to bed every night for 35 nights, I guess, not knowing whether the insurance company is going to pay or how much it is going to cost, and knowing, at the end of it, you will have to pay 25% of that because that is what your excess is, is really not much fun.

Q27 Chair: You raise an interesting point with excesses, because one of the things we talk about is affordable insurance. The one thing we have not really dealt with is the excesses that insurance companies can put on, which are almost worse than the premium itself sometimes.

Lynne Jones: Absolutely. Up until now, we had a £6 million river defence, which was overtopped. We had spent £30,000 on our house. We were reasonably confident that we were okay. Within our property, we lost only two carpets and a settee, because I just was not strong enough to lift those upstairs. I had got everything else up. You thought the insurance company would come in and say, "Well done. You spent all this money; you did your best. You sit down and have a cup of tea. We will look after you." No chance, no chance.

Q28 Chris Davies: Can I ask about the final point I had? You told us about the response this time. Has that improved from previous times or was it the same response on the previous flooding?

Lynne Jones: It is the same. The general impression of everything that has happened after this flood for Keswick is that has been loads worse, but we had so much mud, which was an additional problem, and there was so much more water. So many more properties have been flooded. It is our worst nightmare. Even when I thought we would never be able to fold the water that fell outside the river into the river, get it around three bends and through a bridge that needs to be taken out, I never in my wildest dreams expected the amount of water we had that day. It was just phenomenal. The rain was so intense for so long. It was about 30 hours. It was the kind of rain that you get for maybe 10 or 20 minutes in the Lake District before it stops, but it just did not. It just did not.

Rob Johnson: For businesses, it has been quite different. During previous floods, we had the regional development agencies in place and they were able to target funding very quickly. We had a real concern this time, because we knew how important it was to get cash flow into small businesses and to get recovery plans in place so businesses that were turning around could do advertising and marketing. We were quite pleased this time that the Government were quite quick to respond and made £5 million available. We were paying money into bank accounts by 17 December, so we are quite proud of what we managed to achieve there. We were really struggling.

Chair: That was Government money coming in by then, was it?

Rob Johnson: Yes, through the county council as the accountable body. We worked very closely with them. We basically took the plans we had been working on off the shelf and did it. It has been quite stressful. The challenge we are now going to have, we think, is that that is not going to be enough, looking at the numbers that are coming through. Last time, we paid out about 280 grants. These grants ranged from a couple of thousand pounds to £10,000, depending on need and activity. The reason they have to go through a process is quite important, because we cannot displace what an insurance company would pay. There has to be a process of making sure that it is not something that is a displacement. We are getting quite good at that, to be fair.

Yes, we were pleased to see a response made quickly. We had a process in place to pay out, but we are concerned that, in this particular case, the demand is going to be much greater than £5 million, if we are going to make that available to everybody. From a business perspective, it is working reasonably well.

Heather Shepherd: Focusing on the flooded communities, there is this £5,000 grant to put towards making your home resilient, but what Lynne has said proves that £5,000 is really a drop in the ocean when it comes to trying to get your home resilient. I am also hearing an awful lot that focuses on how we need to get people to get property-level protection and resilient homes in place. This concerns us greatly, because—I see this very much across the country, as well as hearing it from Lynne—it simply does not work. It is really good for certain kinds of flooding, but it is not the answer to everything.

We need to think about this package. We need to include major flood defences, catchment management, updating of drainage infrastructure, upstream storage and more resilience in communities. We need to think seriously about whether we should be building on flood plains and making space for water. It is not just new builds, either, that need the resilience. It is the knock-on impact on builds that already exist. We need to think seriously and holistically about how we approach tackling floods.

Chair: That is a good point.

Q29 David Simpson: I am going to be brief. Moving on, can I also express my sympathy for the difficulties you have had? Of course, some of our constituencies in Northern Ireland have been hit very, very badly, but not in comparison with what has happened, although we have yellow warnings out tonight for more flooding, so that is another story. The message I get from my constituents when I visit them—and you have heard it today—is that the expression of sympathy is genuine, but it does not get the job done. That is the message I get.

We have heard today about funding from the PM, £40 million and all the rest of it. From a council's point of view, for future funding, what needs to be in place to try and resolve the issue? Have those figures been done? I was disappointed to hear that the relationship between you and the Environment Agency is not that good. Surely there needs to be a cocktail of everyone working together to resolve the issue. On the funding aspect, has the council any vision or any figures as to what would be needed to resolve the issue in the Cumbria area?

Keith Little: Off the top of my head, £600 million.

David Simpson: Is that all? Do you want a cheque now?

Q30 Chair: Do you have any process for feeding that back to Government?

Keith Little: We have been very fortunate in Cumbria. We have had a number of Ministers come up and speak to us. I have hosted two Ministers: Robert Goodwill, who was very keen to see what the problem was, and, a week ago, the Minister of State, who came up and spent the day with us. Again, I have to say, he was pretty shocked at what he had seen at Pooley Bridge, Keswick and Cockermouth. He has invited the senior director of Highways England to come and have a look at the A591 and asked him to take over that piece of road, repair that on behalf of Government and then hand it back to Cumbria County Council. That is going to be a major piece of work that needs to be done. The infrastructure is devastated.

I would also like to say that there is one area we perhaps have not touched on, which is our farming community. We have 630 farms that have been affected by this. A number of sheep and cattle have been lost. One particular cow travelled 21 miles down a stream and got out on to a golf course. It could not find a golf club, but it would have been okay, I am sure, if it was that lucky. They have been devastated. They have lost huge amounts of land. Some of that land will be absolutely saturated until well after planting season; they will be unable to put any cattle or sheep on there. That is a big worry for a county like Cumbria, because farming is a huge employer and a huge part of our economy.

Q31 Chair: Livestock is not insurable, basically. You talked about these other funds that have been put together. Will the farming community be able to tap into any of those funds for livestock?

Keith Little: I believe Prince Charles has made some funding available particularly for the farming community. I have no idea whether Defra is making any funding available for them. I know, in some cases, it is going to cost them £7,000 to £10,000 just to take the amount of debris away from their fields. Some of them have hundreds of tonnes of debris on their fields. That is a commodity for us. It does not want to be tipped away; we can use that. But the farming community have suffered greatly as well.

Q32 Chair: I see that Defra has been offering up to £20,000 per farm, but this is for infrastructure rebuilding, I suspect, more than livestock.

Keith Little: There is an awful lot of land that gets washed away by the river, changing its course. Unfortunately for us in Cumbria, a lot of that ends up down in the port of Workington, which is going to be about a £7 million dredging operation to get it all back out again, because the port is closed to shipping at the moment, as it was in 2009.

Chair: We will be talking to the Environment Agency in a little bit about dredging, I suspect.

Lynne Jones: With the farming community, as much as anything else, it is permission to get all the rocks off your land. It is working with the national park authority and the planning board, if you have to have a new bridge for access into your property. There is all the red tape that goes with it. It is the inability to get rid of the soil and rubble that is about. The Environment Agency kept saying, "Do not put it back in the river." Well, that is where it came from.

When I left Keswick on Monday afternoon, there were still lots and lots of these orange bags around people's properties. We had had to put up to 25 kilograms of soil into these bags so they could be taken away by Allerdale Borough Council. There were still mounds of trees and bits and bobs that came out of the river on to the road, and have been taken on to private property so the road was clear. Allerdale Borough Council are not supposed to move that. It is Cumbria County Council's responsibility to take the detritus away, but if it is on private land they will not deal with it. You look to the insurance company, who obviously do not insure the outside of your property; it is just the house. It is the stupidity of how to deal with it afterwards that is so frustrating to people when they have just been devastated.

Heather Shepherd: Thanks, David, for that question. It is a fantastic question for us at the National Flood Forum to answer. We would like the message to go to Government that flooding should be made a national priority. As we have seen, there has been non-stop flooding for the last four years. There have been major events. We need to make flooding a national priority; we need some sensible investment that can start making a difference to people's lives.

Q33 Chair: You raise an interesting point. As the Chancellor deals with rebuilding and building up infrastructure, flooding is surely very much part of that, in terms of protecting what you have put in place. I suspect that will be something we will look at in the future.

Heather Shepherd: To be able to approach it holistically needs investment.

Lynne Jones: And some speed to get things done.

Chair: Yes. Every time we have a flood, hopefully we learn some lessons, but we need to learn more, more quickly, if we can.

Q34 Rebecca Pow: Very briefly, really, because we have covered so much of it already, how do you think you will be affected in the long term from now on, business-wise and as communities? Can you withstand any more of this? Shall we go to the business community first?

Rob Johnson: The resilience of business is tremendous. Most businesses get up to make their business work every morning. It is a very positive group of people in most cases.

Sometimes it is difficult to say that, but it is true. There is a drive there, so we will do it. I guess what we are saying, going back to my original point, is that we need some action, some plans in place that we can invest against, to make us confident that that investment is going to be secure and we will get a return. That has to happen quickly. That is the point, really. It has to happen quickly—and very quickly.

This is so different now to the first time for that simple reason. If you are not getting that business investment, you are not getting the underpinning of your economy and your society that makes the whole machine work, really. Cumbria is a microcosm of the rest of the UK. Yes, we have a big tourist sector, but we have a manufacturing sector. Thirty per cent. of our business is manufacturing. They are at risk. Food and drink has serious issues with the risk of flooding. We need answers quickly, and not blame, and we need plans in place that we can invest against as part of that infrastructure. My answer is, yes, business will move forward, but there is real risk now if we do not take action and we do not give some strong, powerful messages, as colleagues are saying, that this is a national priority and it will be built into thinking.

Rebecca Pow: Quickly, what is the community view?

Heather Shepherd: Communities themselves, particularly those that have not flooded before, do not realise that we need to recognise that recovery is a long-term process. It is not after the lights have gone and the emergency services have disappeared. As I said, I worked for 16 months in Cumbria and I intend to work for a similar time here. At the National Flood Forum, we find it takes at least 18 months on average. As we have seen in places like Hull, it is sometimes two years and beyond. There needs to be an understanding that recovery does not just finish; it has a long-term effect on people's lives.

Q35 Rebecca Pow: You have talked about the holistic approach, which I think is absolutely the right approach to take. Do you think the Government should now be saying, "Right, let us have a complete rethink. Let us separate the Environment Agency; let us put it in charge of just flood defence. Let us have another whole organisation that does all this holistic approach to the way we manage our land, factoring in water"?

Heather Shepherd: I would. I am very much a believer in partnership working. Yes, I think we need to have all those people in the room who deal with water, everybody, including water companies, looking at innovative ways to manage water better.

Keith Little: Cumbria is very fragile at the moment. Our people are very tired—not only the people who have been doing the work, but our residents are very tired as well, because they are involved in all of this. Some of our responders are also victims here. Therefore, they are dealing with two situations: trying to get into work and do their day job and having to deal with flooded properties at home.

After the 2009 floods, the health authority was telling us that, up until 2012, people were still coming forward with mental-health issues. We must be very mindful of that. You have heard some of the personal stories that people have gone through. I lost bits and pieces in it, but nothing compared to what some of these people have suffered, and they have suffered it two or three times now. Appleby suffered it twice in two or three days. Some people will be out of their houses from now until Easter. They were out for 18 months last time; some of them will be out for longer than that. The long-term effect of this for people in Cumbria will go on for a number of years yet.

Rebecca Pow: I understand fully, because it was very similar in Somerset.

Heather Shepherd: I do feel we need to include the Environment Agency. They are part of managing it.

Rebecca Pow: Yes, I was not suggesting that they should not be.

Heather Shepherd: You spoke about them just managing the flood defences.

Rebecca Pow: They have so much knowledge.

Heather Shepherd: Yes, exactly.

Lynne Jones: We should have a "Department of Flood Victims", in large letters, "the environment" in smaller letters, and so on and so forth. You have to put the emphasis on protecting human lives and property first. There are an awful lot of properties in Keswick that are now unsellable. We are all trapped in our homes. There is no way that we will be able to sell. My property has been up for sale for a year. We have just taken it off the market; there is no point. No one is ever going to buy it. I have to live with flood risk into my dotage. It is not fun.

There are an awful lot of people who lived in my area who did not get insurance because the Environment Agency flood-risk maps that were passed to JBA Risk Management were showing the wrong risk. They were still showing that we had a one in 50 risk of flooding when, in fact, with the river defences, it was one in 75. I have a real issue with the Environment Agency mapping being accurate, because, had it been one in 75 before the event, more people might have been able to afford to have insurance and they would not be destitute now with absolutely nothing. I hold the Government responsible for the fact that that flood mapping was wrong.

There is a beck behind me that was rerouted in the 2012 river defences, which is still in a list for Defra to identify as being rerouted. I have spoken to JBA and we have got the managing director to speak to the Environment Agency, accepting that our risk is now one in 75. It is going to take until next September or October before their maps, which the insurance industry uses, are updated. Then it will take about another six months for that to filter into benefits for people with insurance. It is just not good enough.

Q36 Chair: The point we will need to deal with is very much about the reinsurance, because we can argue about the flood maps and whether they are accurate, but you do seem to be getting more regular flooding than you should be.

Lynne Jones: Absolutely. It is not going to be one in 75 now.

Chair: We have to have a system in place where you are able to get insurance, not just as a domestic property but also as a small business.

Q37 Angela Smith: In relation to Heather's point about catchment-scale response—which is another way of saying holistic response: we need a catchment-scale response—it is suggested that we would have catchment boards, which would be partnerships of not only the Environment Agency and local authorities. The point about whether you split the EA I do not think is of particular relevance here, because nobody has mooted that so far. But I wanted to ask you whether you thought that it would also be important to include the farmers and the landowners, as well as the water companies, along with people who live in the area and local businesses. Is it that kind of partnership you mean?

Heather Shepherd: Very strongly so. We particularly need to look at the communities that have that local knowledge and tap into that. We also need partnership with the community, because, if the community is happy with what goes forward, should anything happen, it almost becomes a joint response, as the decision has been made jointly. We very much need to involve communities as the lead, in terms of the vision they have for the area where they live. That is extremely important.

Q38 Rebecca Pow: Can I follow up on that? In the last report this Committee did—called *Managing Flood Risk*, in 2013—it was highlighted that local knowledge was crucial. You are referring to it all the time. Did they listen to you? Did they listen to that report? We are two and a bit years on.

Chair: We will have to remake it, I suspect.

Rebecca Pow: For the record, it was down there. Clearly, you are saying that it has not been listened to.

Heather Shepherd: No. Generally speaking, if I am talking nationally, because I cover all of England and Wales, at grassroots, no, I say there is still not enough focus on listening to communities and working with communities. Often, three solutions are given and the choice is whatever is the cheapest. Actually, we do not need to come to communities with the solution. We should be working towards that solution with them.

Chair: I want to wrap it up now, if I can.

Rob Johnson: To be very brief, I support that. There should be no sacred cows in the conversation. A lot of the conversation is: "You cannot touch this. You cannot talk about dredging, because that is not acceptable." The reality is that farmers are not fully engaged, and they are the guys and the women who run the land anyway. They are a group we get a lot of pressure from them, saying, "Our voice is not being heard here."

That concept of the stakeholder group is right; it is how you manage the stakeholder group to make sure you get the right stakeholders and the conversation is had with all the issues on the table, not taken off because it is not politically acceptable to address that. It is so fundamental.

Heather Shepherd: The right stakeholders for us would be the people who are on the ground affected by it, the people who are flooded.

Keith Little: I do not disagree with anything that has been said, but can I just reiterate that Cumbria has 32 community plans, which were developed with the community? We have 15 others taking place at the moment, and 11 of those plans were put in place by the community in these floods. There is no way we ignore the community.

Lynne Jones: In the end, it is all very well having all the meetings and all the plans, but something has to happen speedily. One thing we have needed to have addressed, which we identified 10 years ago and are still campaigning for, is surface water flood risk in one part of Keswick, at Penrith Road. It was not addressed when the river defences were put in, because the lead local flood authority was Cumbria County Council, whereas the Environment Agency were just building the river defences.

The only joined-up thinking we had was that the river defences were built with a flap valve so the surface water, which they knew would be trapped behind, was put back into the river afterwards to help it drain. The river came through that. I have waited a long time to get this sorted out. I do not want any more excuses over money and, "Let us look at the figures again." I want this to take place as soon as possible. I need the things we have been promised.

It is just ridiculous. I spoke to the chair of the Regional Flood and Coastal Committee. He thought that this plan had been put into action and it has not. I have been on Cumbria County Council's case over this for a long time. I need it now.

Q39 Chair: Thank you. Can I say to you that you have all given us very good evidence? You have really painted the picture of what is happening. Like I said, our sympathy goes out to you, and hopefully a little more than sympathy. My grandfather used to say an ounce of help is better than a tonne or sympathy, and it is true here. We will do everything we can to help you. It is about local people being able to act. We have the Environment Agency or whoever mapping the flooding, but, when it comes to dealing with flooding on the ground, we have to involve local people more and more and get money through to businesses.

I lost a lot of sheep in 1981 with sea floods. As a farmer, I got no compensation. I understand exactly what the farmers are going through as well. I think we need to have a system where farmers get paid to take the water, rather than loss of income; then you will find you further encourage them to do it. Like Jim, I probably ought to declare an interest, as he did on the fire brigade, as far as being a farmer is concerned.

Thank you very much. I hope you feel that it has been worth your while coming down today to present us with evidence. If you would like to sit back, you are most welcome to listen to the rest of the proceedings. I am going to invite the Environment Agency up. But, if you have to catch a train, we understand.

Examination of Witnesses

Witnesses: **Sir Philip Dilley**, Chairman, **Sir James Bevan**, Chief Executive Officer, and **David Rooke**, Deputy Chief Executive, Environment Agency, gave evidence.

Q40 Chair: Welcome, gentlemen. For the record, would you like to start by introducing yourselves? Then we will carry on with the evidence session. Thank you.

Sir James Bevan: I am Sir James Bevan. I am the Chief Executive of the Environment Agency.

Sir Philip Dilley: I am Sir Philip Dilley. I am the Chairman of the Environment Agency.

David Rooke: I am David Rooke, Deputy Chief Executive of the Environment Agency.

Q41 Chair: Thank you, gentlemen, very much for coming to our inquiry. It is a very important time and, of course, a very difficult time with the amount of flooding. My first question to you is: can you give us a summary of how Cumbria, Yorkshire and Lancashire are, following the floods in December and early January?

Sir James Bevan: The overall situation in all three of those places is gradually improving. Obviously, we are still watching the weather very carefully. We still have very saturated catchments, which means they respond very quickly to any rainfall, so there is a higher flood risk now than there might normally have been. We are particularly vigilant, of course, about further rainfall that might be coming towards us over the next few days and weeks. We are continuing to monitor that, and we will carry on issuing flood warnings as necessary. Right now, we do not currently expect any widespread or significant flooding in the next few days, but, as I say, things can change quickly.

In those parts of the north that were so badly hit by the floods, our primary focus is on repairing the flood defences that were damaged in December and on helping the communities themselves recover. We have teams out again today across the country, pumping away any flood water that remains, inspecting and repairing a lot of the damaged flood defences, monitoring those river levels and offering advice and support to flood-hit communities.

Our teams have now visited almost every community that has been hit by the December floods, whether it is in Cumbria, Lancashire or Yorkshire. I was in Yorkshire yesterday. Some 130 of those communities have now been visited by our people. Yesterday I was in York and Leeds in the Calder Valley to talk to local councillors, MPs and local people, and to look at the work that is taking place on our flood defences. I have to say that it is heartbreaking to see what has happened to those communities, to people's homes, to businesses and daily lives. It is not just damage to buildings; it is clearly damage to people and to the economy. Some quite fundamental damage has been done there. That is heartbreaking.

It is also very inspiring—I certainly find it inspiring—to have seen the community spirit across the north in dealing with these issues. Personally, I also find it inspiring to see the spirit of our own staff, who have been working 24/7 for the last month to help people, first, to prevent flooding and then to get back on their feet after that.

Finally, I want to say, by way of introduction, that I agree completely with what your previous panel just said. We face a very big challenge now in dealing with flooding in an era of more extreme weather, and the way to deal with big challenges is to deal with them together. I very much want to see the agency, under my leadership, ensure that we work in partnership with local communities, businesses, farmers and local councils, because the best way to deal with a big problem is to deal with them together.

Q42 Chair: We would echo the support and thanks to all those in the Environment Agency and the emergency agencies who have worked so hard through this period. We would like to put that on record, as well as you. Thank you for that. There are going to be some detailed questions, but there is one question I would like to ask you. In places like York, where the pumps failed, one of the things we talked about in the Somerset floods in the last Parliament was to have large mobile pumps such as the Dutch brought over. Do we have these pumps? Do we have enough of them? Can we not move them around the country much more quickly than we do? I thought that was one of the lessons we learned. Where are these pumps? Do we have any?

Sir Philip Dilley: We did buy 10 such pumps after the Somerset floods. Most of them are still in Somerset but, in fact, at the Foss Barrier, which is where you are talking about, the pumps did not fail. There is a story attached to that. David, you are probably best to tell it, if there is the time.

David Rooke: First of all, my sympathy to all those who have been flooded. Like James and Philip, I have been and seen, in Yorkshire and Cumbria, the impacts of those floods.

In relation to the pumps, following the Somerset floods, we bought 10 big pumps, like the Dutch. We moved one of them up to Cumbria, which we used to pump water out in parts of Cumbria. When the pumps at the Foss Barrier were overwhelmed by the sheer volume of water coming down and we raised the gate, which allowed floodwater to go into the River Ouse to alleviate flooding on the River Foss, had we left the gate in its down position, it would have formed a dam and, because there was so much water coming down that the pumps could not cope with, it would have just built up. It was very unfortunate that 600 properties flooded, but, by taking the action we did, we saved a further 1,000 properties from flooding.

We also had problems with water getting into the Foss Barrier pumping station, which caused us to switch off the pumps and to isolate the electricity supply before the water met the 11,000 volt supply. We considered whether we should bring up some pumps from Somerset, but the pumps at the Foss Barrier are enormous compared to the mobile pumps in Somerset. The best plan, which was implemented, was to co-operate and work with the military. Using a Chinook helicopter, we brought in generators and we managed to get all eight pumps working again, which meant that we could then close the gate and get the water out of people's houses.

Sir James Bevan: To add to that, we also did move pumps from the south of the country up to the north throughout December in order to handle the situation. There were 40-odd pumps going north to deal with that, five kilometres of temporary flood defences to provide greater protection, thousands of sandbags, and a lot of our people. We also made sure that it was not just the teams who were sitting in the north from the Environment Agency who were dealing with the crisis, but that we moved staff as well.

Q43 Chair: I do not want to labour this point too much, because there are lots of other questions, but we seem to be getting more flooding happening; we seem to be getting flash flooding happening. We surely must need more pumps to be able to move around. It is lovely to have them in Somerset, but the idea is that you have to have enough pumps so you can move them across the country. I know it will not solve all problems, but it will solve some. Will you be looking at that again?

David Rooke: It is striking that we work very closely with the gold commanders, and we met all the asks of gold commanders in terms of pumping requirements. As James has said, we brought 45 pumps up from different parts of the country—some were our pumps and some we hired in from contractors—and we met all the needs. Certainly, both of us were on many Cobra calls where gold commanders were consistently asked whether they had the resources and equipment they needed and, working with the military and local authorities, we were able to meet those needs.

Q44 Rishi Sunak: I have a very specific follow-up on the pumping station and the River Ouse. My constituency is 30 miles north of there. I am not directly aware, but what I was being told or I heard from people was that they were frustrated that the pumping station was going to fail or perceived to be failing when the river levels were not as high as they were back in 2000 when the pumping station ran for 10 days continuously. There was a lot of irritation and anger at that and wondering what was going on. It would be great to have an explanation on that point.

David Rooke: I can totally understand the frustration and the feelings. I was there in York in 2000. I went into the Foss Barrier when we were operating it in 2000 and was assisting in our response in York in 2000. The river level on the Ouse was higher in 2000 than it was this time by about four inches. What was different this time was the amount of water coming down the Foss. We had much more rain on the Foss catchment. The timing of that rain against the timing of the levels in the River Ouse meant there was so much water that the pumps were overwhelmed and they just could not cope.

The river levels started to rise on the Foss very quickly. We issued flood warnings and then we took the decision, when the level on the River Foss was more or less equal to the level on the River Ouse—in other words, the levels either side of the Barrier were more or less the same—to raise the gate and allow free discharge into the Ouse from the Foss.

Sir James Bevan: To give you a flavour of how much water was coming down the Foss that afternoon, on Boxing Day, the levels were constantly rising in the Foss and the team in the Foss Barrier, which I was visiting yesterday, had all our eight pumps working at full capacity. Normally, when you do that, it takes the level down. The level just kept on rising, even though every second these eight pumps were taking out the amount of water that fits in a large oil tanker. It is a very large amount of water being taken out, but it was not making a difference to the Foss getting higher and higher.

Sir Philip Dilley: The story in many places is that the defences we had were tested beyond their design. Quite often, they were overtopped. They did not fail. They stayed there; they protected properties against flooding that would have occurred had they not been there; and, most importantly, they gave a lot more time to people to rescue precious possessions and get out. They undoubtedly saved lives.

Q45 Jim Fitzpatrick: I have a small technical question. As part of national resilience, the fire service was purchased high-volume pumps based mostly at Moreton-in-Marsh and the national Fire Service College. Some other brigades purchased them. How do they compare to your 40 pumps? Are they similar? Are they much less powerful? Do you have a call on them? Do you liaise with the fire brigade or are they just not suitable for this type of flood?

Sir James Bevan: I will ask David to give you a technical answer, but it is certainly right that they have some very impressive capacity and we work very closely with them. For example, in Croston in Lancashire, where we had a failure in the wall of one of the defences that goes alongside the riverbank, a lot of the way we have been managing the flood risk to prevent further flooding has been using fire service pumping as well as Environment Agency pumps.

David Rooke: Fire service pumps are available to gold commanders. The chief liaison officer for the fire service attends Cobra meetings, like we do, and makes sure that national resource is available to gold commanders to add to the resource we make available in terms of the pumping, so all the needs of gold commanders are met.

Q46 Jim Fitzpatrick: Are the pumps similar, your pumps and their pumps, in terms of power?

David Rooke: Our ones in Somerset are much bigger. They need a low loader and all sorts of equipment to move. Moving those pumps is a massive operation. We have some smaller ones in the fire service and we have some much bigger ones. Collectively, there is a good resource available nationally that can be mobilised to where the need is the greatest.

Q47 Chris Davies: You said that pumps were left in Somerset; some pumps were moved up north and some were not. Who actually makes that decision?

David Rooke: The ask comes from the gold commanders, who provide the strategic leadership for responding to a particular event.

Q48 Chris Davies: Who makes the decision in the Environment Agency?

David Rooke: We make our pumps available and then we decide where to move them in response to requests from gold command.

Sir James Bevan: To add to that, we have a central crisis operation that is looking at the country. As I was saying, we took an early decision to send more pumps and flood defences to the north, because we thought we would want that capacity. We divide it into local areas. Each area makes requests for the kind of capacity it needs and we answer those requests. In terms of the deployment and the need, as David said, it is the gold commander—usually the police chief—sitting in the strategic co-ordination group who decides, on our advice and the advice of the emergency services, what he or she needs.

Q49 Chris Davies: Who in the Environment Agency is the "we", in answer to my question? Who is the "we" who makes the decision?

David Rooke: It is the Executive Director of Operations. They are responsible for the operational response.

Q50 Chair: Where are they sitting?

Chris Davies: Are they here with us now?

David Rooke: No. Out of hours, we have a national duty manager, so we can provide a 24/7 service in terms of making those decisions.

Q51 Chris Davies: As the three heads of the organisation, as far as we are concerned, you do not make that decision.

Sir James Bevan: The Executive Director of Operations reports to me, as one of our executive directors. As David says, he is in charge of ensuring that our operations are running effectively and that we provide the capacity we need to deal with operations, including in crisis.

In practice, what is happening every day and what has been happening for the last month is that I, David and all of our senior leadership are sitting in at least daily conferences to decide what the situation is on the ground, what we may need to do to improve our resilience for the future. We are aware of those decisions and, where necessary, we are helping to take them, in order to get the resources where we need them.

Q52 Angela Smith: It is not just the Environment Agency, though, is it, that has responsibility for water courses? The Canal and River Trust, for example, local authorities, drainage boards and so on all have a role to play. Particularly in relation to the River Ouse, the Canal and River Trust is a major partner in the management of a river like that. What role did they play in helping to manage this situation?

David Rooke: I do not know the exact details in terms of their day-to-day operation in the flood, but we can provide a note. I am aware of past events where Canal and River Trust resources have been deployed through silver and gold commands to ensure there is a co-ordinated response.

Q53 Angela Smith: From having worked with them and seen what they do in South Yorkshire to help manage water flows, surely they are part of the planning process. I would expect the agency to be on top of what exactly the Canal and River Trust is doing to manage its own waterways and to co-ordinate with the agency in doing this work.

David Rooke: We work very closely with them on a day-to-day basis. I thought your question was about the emergency, and I do not know that particular detail.

Q54 Angela Smith: I would have thought the day-to-day working fed the emergency response itself. Some written evidence on how you work together and how you respond in an emergency would be appreciated.

David Rooke: We are very happy to do that.

Chair: Can you add something to that written evidence? If, for instance, you do not have enough pumps, how quickly can you get them from the Netherlands? They came to Somerset, but it took quite a while to get them there. They were vast pumps that I saw. They absolutely emptied the river faster than water would get into it. Some of those pumps could do a lot of good if you moved them in time. I am not convinced the pumps are not necessarily big enough. There are some very big pumps out there. Do we have them? Do we need to get them? Can we get them from the Netherlands if we need them and can we do it quickly? That is the answer. When it floods, you need to deal with it very quickly, and I am not certain that we are moving quite fast enough.

Q55 David Simpson: You are very welcome, gentlemen. Sir James, at the start, you outlined what you are currently doing in relation to the difficulties in affected areas. Looking into the future, you have heard the evidence previously, and, unless I picked it up wrong, the folk giving the evidence made it clear that they believed there was not a close enough working relationship with the Environment Agency in relation to the difficulties. I suppose your agency is somewhat like Defra: it covers a wide remit of issues right across the whole of the United Kingdom. Is flooding a big enough priority within your organisation? You do cover a large remit. Working with communities, the areas at risk, how can you improve that to give the residents the confidence they did not seem to have today?

Sir Philip Dilley: I will start with that, and James might want to follow on. We work very closely with communities. One of the differences between us and Defra is that we have a strong area structure. A lot of our resources are in areas and offices around the country. Those offices and the leaders there have developed close contact with communities. I also heard the evidence, of course, and there are some lessons to learn. We will certainly go back to these people and pick those up, but, generally speaking, I would say that a lot of effort goes into creating those community arrangements.

Sir James Bevan: Is it a big enough priority? The answer is yes. Every one of the 10,000 people who work for the Environment Agency is clear that the top priority for us is the protection of lives and property. We spend more than half of our total budget on managing flood risk and protecting people as far as we can from flood risk.

I am increasingly interested in using more and more of our staff who are not on a day-to-day basis dedicated to flood risk management, being able to flex those staff and ensuring they are well trained so they can join the effort when we have flood crises. I am absolutely clear that our top priority is people and I am absolutely clear that the organisation needs to be fit to deal with the kind of crisis we have seen over the last month. That is going to be one of my priorities.

Q56 David Simpson: Finally, it is good to hear that you are working with community groups, but community groups, farmers and people on the ground who have lived there for generations know the area and the lay of the land. Is the information they feed into you taken and acted upon? They would have the experience of how the water flows and all those things over a generation. Is that taken on board?

Sir James Bevan: My answer would be yes. In my short time as Chief Executive, one of the things I have learned is that the secret of successful flood risk management is not concrete, but relationships. It is about having close relationships between us, the other professionals we have heard mentioned today and those local communities.

On the basis of what I have seen in five weeks, I am satisfied that it is a top priority for all our area managers, all our teams in the areas concerned, including the three we are talking about today. They make it their business to have relationships with the local authorities, with the local communities and with people, like your witnesses earlier today, who are leading local flood action groups. They have relationships with flood wardens in local communities, where they can ensure that they both listen to what they are hearing from the community and help the community understand what their flood risk is and how to manage it.

We will never be perfect, and we must constantly strive to enrich those relationships, but I am satisfied that we are very clear that one of our primary weapons in the fight against flooding is those strong relationships with local groups.

Q57 Simon Hart: In the 10 seconds before we vote, possibly, on that very point, I just wondered, in the communication of all of this, whether you are satisfied that the distinction between risk management and risk elimination is fully understood by everybody you have to communicate with, including the media, for that matter. The basis of the evidence you have given us is that you are never going to be able to have flood-alleviation machinery on the ground, movable or immovable, that can cope with the sort of weather conditions you had. Therefore, it is about managing expectations. Are you where you need to be as far as that is concerned?

Sir James Bevan: As you say, Mr Hart, we do need to be clear that there is no such thing as 100% protection against flood for everybody. We are in the territory of managing risk not preventing floods. I do not think we have yet managed to convey that message sufficiently. That is another task for me and the whole of the agency.

Just because we cannot prevent all floods, it does not mean we should not try to lower the risk to the lowest possible level. One of the ways to do that is what we do in terms of building flood defences, warning and informing communities when they are at risk. Another part of the solution is for local communities, like the ones who were interviewed here this afternoon and others around the country, to take ownership of their own flood risk and work with us and the other actors on the local scene to manage that risk.

Simon Hart: Your colleagues presumably share that view.

David Rooke: If I could add to that, we recognise that there is a real issue in terms of the communication of risk. We undertook a science project called Sciencewise. We had a number of focus groups, including one in York, which gave us really good feedback and evidence in terms of how we might improve the language we use in communicating risk. We will be using the findings from that research, which was quite recent, to improve the way we communicate.

Q58 Simon Hart: You gave a warm welcome to working in partnership with various other organisations, volunteer groups and professionals. Is that the starting point? Are those relationships reasonably sound at the moment? We have been talking about the Cumbrian scheme, for example.

David Rooke: Relationships are absolutely essential so we can build trust with communities and work with them to find solutions that they want and have ownership of. It is absolutely crucial.

Rishi Sunak: On that point, it is great to hear you say you want to do that. More often than not, I hear that that is not the feeling that people on the ground are getting. It still feels like it is too remote from them; it is too far away; there is no one person who is the local champion they can speak to.

Chair: It is top down rather than bottom up.

Rishi Sunak: Yes, exactly. It is good to hear that there is willingness on your end to do that, but I would suggest there is probably more work to do to make that a reality for people on the ground. Some of them you heard from this afternoon, but in my area as well they would want more of that. But we must vote, and then we will be back.

Chair: Yes, we will adjourn now and be back in about 15 minutes. If you do not mind hanging on, democracy needs to take its course.

Sitting suspended for a Division in the House.
On resuming—

Q59 Jim Fitzpatrick: I have a small clarification. Sir James said in his answer a moment ago that the Environment Agency is not about preventing flooding; it is about managing risk. Can I just ask that that be qualified? Surely, it is partly about preventing flooding where you can, but managing risk where you can. Perhaps you would just correct that and get the balance right?

Sir James Bevan: It is about protecting the largest number of people against flooding. I am just saying that you cannot protect everybody all the time.

Jim Fitzpatrick: I wanted to give you the opportunity to clarify that, because it was too much one-way in the answer you gave previously.

Q60 Chair: I have one final question. The evidence that was taken with the last witnesses was, if you have a one in 50 year flood and it happens twice in five years or 10 years, surely, in theory, you should not flood there again for another 100 years. People are not really buying this, are they? What is the alternative?

Sir Philip Dilley: We touched on the issue of communication earlier. It is quite clear that most statisticians understand that, but most members of the public do not, and you can have a one in 100 year flood or rainfall this year, and you can have it again next year. Just because you have had it, there are not 99 years to wait for the next one. We have gone away from using those forms of statistics. It is quite difficult. We now talk about percentage probability, which is arguably easier to understand, but maybe not. There is more explanation to do there. In a way, the more important issue is, if you look at a one in 100 or one in 50 year event, you are looking backwards; you are looking over the last centuries.

Q61 Chair: If you were doing percentages, one in 100 would be 1%, and so on, so that in a way is almost exactly the same, is it not? If it is a 1% chance of flooding, and it floods this year and then five years later it floods again, it is still the same system.

Sir Philip Dilley: I have some sympathy with you, because I agree. I do not think it is very easy to understand. But, arguably, you can have a 1% chance every year, which is slightly better.

Chair: Not necessary in the same spot, surely.

Sir James Bevan: There are two points. First, nobody understands it, so by definition it is no good. We want people to understand in order to act, so we need to drop it. Most people want to know, "Is my house going to get flooded, and what do I do about it?" We need to focus on ensuring that people have that information so they can act.

Secondly, it might be wrong, because, as we experience greater, more violent weather, we may find that the old ways of calculating flood risk are out of date. That is one of the reasons why the Secretary of State, Liz Truss, announced the National Flood Resilience Review, which is going on now and we are participating in. One of its tasks is to look at precisely this issue of how we model and calculate flood risk, and what conclusions we draw from it.

Chair: As I said at the beginning of the meeting, we will be looking again in the near future at flooding and long-term flooding, as well as what is happening now, so we will be asking you back again, I suspect. By then, I am sure you will have all the answers. We shall look forward to that.

Q62 Dr Monaghan: Sir Philip, at your pre-appointment hearing before this Committee approximately a year ago, you suggested that your personal response to a crisis would be to "turn up in wellingtons very early on". Why did you not return to the UK from holiday when it became clear that the recent storms were going to have a catastrophic effect?

Sir Philip Dilley: I was in the UK, and I was in Cumbria, of course, during those events. I was away, as you are well aware, over the Christmas period, and the severity of the flooding became apparent to us and to me on Boxing Day, the 26th. I was in regular contact with both the Chief Executive, James, and my own deputy, a woman called Emma, very regularly, quite often more than once a day. I started looking at opportunities to return on the 27th, and I actually returned on the 29th, overnight, arriving on the 30th. Could I have come back earlier by one or two days? In hindsight, do I wish I had? Yes, I do, but I do not feel guilty of leaving it many weeks.

Q63 Dr Monaghan: Do you think the general public have a right to expect you to turn up in wellingtons, after you promised that to the Committee last year?

Sir Philip Dilley: It is important for me to visit these affected areas, to talk to communities—I have done a lot of that since I have been back—and to see first-hand the kind of devastation that has taken place. We have all said it, but I would like to take the opportunity to say that my sympathies, of course, go out to those people too, and mostly those whose homes and businesses have been flooded.

But another key point here is that we are an organisation where Sir James Bevan is the Chief Executive. He is in charge, ultimately, of all the operations. I had and still have every confidence in Sir James and his team. My role, on the other hand, is the non-executive Chair of the agency. It is to chair the board, of course; it is to get the board working as a team; it is to set the agenda; and it is to hold the executive to account. I believe we have been doing that very effectively. Through my regular communication with the agency all of the time I was not in the UK, not just after the flooding, I felt that that was going suitably well. It was only after the severity of the floods became apparent that I felt that the right thing to do was to come back.

Q64 Dr Monaghan: I think we all understand the difference between governance and operations. Since you have returned to the UK and you have been out there in wellingtons—travelling around England in the main, looking at the devastation—what difference have you made to the response of the Environment Agency?

Sir Philip Dilley: I heard the evidence earlier. My view is not just a narrow view; it is a view taken by talking to a lot of individuals who have been affected, both businesspeople and residents, and going to some of the worst-affected areas. I have been to the Upper Calder Valley, to several places; I went to Leeds; I have been to a range of places, and earlier to Keswick and Cockermouth. The general impression that I get, and the stories that I get told, are that we deliver a very effective operation on the ground. The people on the ground, as I said earlier, who come from our area offices are well connected with those communities. They are very often known by some of the local people involved in the flood activity, and the arrangement is very effective.

Having said that, of course, I am not complacent; we need to look harder at how we can do things differently and better. We already had a plan—it is something that I instigated some months ago—to strengthen our areas; to give them more autonomy; effectively to put more emphasis on the local content of what we do, which is a really important way forward. Of course, we will be pushing that very much after the current issues have calmed down.

Q65 Dr Monaghan: What lessons have you learned from your visits?

Sir Philip Dilley: In Cockermouth, for example, I met a wonderful couple who run the local toy shop. They had been flooded before, and when they were flooded before they put back their shop in a way that is much more resilient to flooding, recognising—exactly as Mr Fitzpatrick was saying—that we protect them from floods, but we are not always going to be able to protect them.

They realised that it might happen again, and they have reassembled their shop in a way that is very resilient. They have waterproof plaster; they have concrete floors; they have electrics raised above flood level; and they even have the shop fittings arranged in a horizontal pattern, so that, if some of it gets damaged, you can take it off without losing the whole wall. Now, they were very grateful for the advice that was given on previous flooding, and very grateful for the help and the warnings that the agency gave during that time. There are little stories like that, and there are plenty of them, where we can take snippets and pieces of advice and spread and share them with other communities.

Q66 Dr Monaghan: That is a very localised example of a lesson that you have perhaps learned, but, in strategic terms, what lessons have you learned from traveling around England over the last few weeks, looking at the devastation that has occurred?

Sir Philip Dilley: The rainfall was exceptional. The Met Office confirmed today that it was the wettest month ever recorded in the whole of their history; that is virtually a century, I think, so it was absolutely exceptional. There is a very big lesson about what we do in the future, and how we handle these situations in the future. We need to look at this afresh, and you have heard already about the review that the Prime Minister and Secretary of State have set up in order to look at that, so that is one very big lesson: how are we going to cope with these kinds of events when they have exceeded some of our previous expectations and predictions by a long way, not by small amounts? That is one very big lesson.

The other one is one that you might say was substantially learned already, but one of the stakeholders or support teams that I spoke to was the army. I have spoken to one of the commanders there on the ground, and they were, at the time, sandbagging parts of a town in the Upper Calder Valley. He was saying that this is much better organised this time than he has experienced in the past. We brought the army in, or we recommended the bringing-in of the army, effectively on day one, whereas, in previous events, the army has been brought in as a last resort when other things are not quite working.

There have been lessons learned. Now, I am quite sure that this is not perfect everywhere. Again, we need to work out from the communities what their response is and what their belief is, and next time we will do it even better. But there are some positive things that we can take forward, as well, and make sure we do those even more.

Q67 Dr Monaghan: What are those positive things?

Sir Philip Dilley: As I have just described, for example, bringing in the other services very early. We have a little internal motto, which is "think big, act early", which we instigated this time. As I say, we just need to make sure that where that did not happen—and there will be examples where it has not gone as smoothly as it might—this is spread even wider.

Q68 Jim Fitzpatrick: Sir Philip, I am sorry to labour this a trifle, but the PR and the spin around where you were became almost as much of a story as the floods, which was unfortunate, because we wanted to focus on the floods. But when you appeared in front of us previously, following the criticisms of Lord Smith, you did say, "Wellies on, seven days a week, even though it is only a part-time job." To a certain extent, you made a rod for your own back with those very positive commitments. You are entitled to a holiday; you are entitled to go abroad. You are the Chairman; you are not the Chief Executive or deputy, and therefore you are always criticised, but this was a PR disaster for you personally, was it not?

Sir Philip Dilley: Yes. As I said, in hindsight, it would have been much better if I had come back as early as I could, which was one or two days earlier. That is quite right.

Q69 Jim Fitzpatrick: But the first answer from the Environment Agency as to your whereabouts was that you were at home with your family. It was 24 hours before that was qualified to say that you were in Barbados at home with your family, and then a further 12 hours before it was, "He is in Barbados at a family home." That handling, that lack of transparency, almost made you a target for days in the media, when the real examination should have been of the floods, the agency's response, the Government's preparations and the rest of it.

Sir Philip Dilley: Yes. Indeed, one of my biggest regrets is that that focus on me has detracted from what really matters, which are the people that you heard giving evidence earlier and all those other people who have been affected, so that was indeed unfortunate. As to that expression that was put out, lots of things are written for me and sent to me for agreement, for approval. I saw it; I approved it, so it is my problem. But I also probably should explain that I have two homes. My wife is from the Caribbean; we have a home there, and I spend some time there over Christmas, particularly. When I am there, I do not feel I am away; I feel I am at home, because I am equally at home there. As I said earlier, I keep in regular contact; I work from there. It was more of a holiday because it was Christmas, but in normal times I work from there, and I keep in very regular contact with all the people who matter. I know that none of my actions or inactions detracted from the performance of the agency, but I agree with you: the communications effort would have been much better if it had been different.

Q70 Jim Fitzpatrick: Planning for next year's winter holiday break, it might not be abroad, perhaps.

Sir Philip Dilley: I do not have any plans yet. I will see, but, as I just said, we will learn some lessons.

Chair: I do not want to carry on too long on this.

Q71 Angela Smith: I have two or three questions, if you do not mind, Chair. That distinction, Sir Philip, about what a home is an interesting one, but I have heard that you were advised by your officials, in fact, not to go abroad, if I can put it that way, at Christmas. Is that true?

Sir Philip Dilley: No, it is not true. I did not have any such advice. I have heard that rumour as well, and we have had some media asking that very question, but it is not true.

Q72 Angela Smith: It is not true.

Sir Philip Dilley: Indeed, we put plans in place, as we always do, because I was to be away, as to who was responsible for what, as we will one day when Sir James goes on holiday.

Q73 Angela Smith: Your distinction, as my colleague pointed out, between the corporate and governance functions of the agency is also interesting. On that basis, do you regret your criticism of Lord Smith?

Sir Philip Dilley: I have not looked at the transcript of that session, but my recollection is that I did not criticise Lord Smith. I said that, in hindsight, it would have been better if Lord Smith had come back rather earlier.

Q74 Angela Smith: Well, according to my information, you said that he arrived a bit late after the crisis and that you would not make the same mistakes. Do you believe you have made the same mistakes?

Sir Philip Dilley: This is difficult to judge, because clearly the same kind of reaction and media issue has arisen and, therefore, you could argue I have made the same mistake. I do not think it was quite the same circumstance. The Somerset floods were of long duration, very slow draining—hence the pump questions that came earlier—and Lord Smith was a long time in arriving. As I said, it was evident to me that there was a big issue that needed to be dealt with on Boxing Day. We talked about that. I spoke to my deputy and the Chief Executive and I started looking at possible options to return, which I did on the 29th. I do not think it was a long delay.

Q75 Angela Smith: On the basis of what I have heard, if I broaden this slightly for one minute, it does not require a long answer, but you are a very recent appointment, as you have just stressed. Given the problems we have had with floods in recent years, given the 24% cut in staffing resource since 2010 and the 28% cut in funding from the Treasury for the environment overall, what on earth made you take this job on? What persuaded you? Who persuaded you to take this job on?

Sir Philip Dilley: Is that a question you would like an answer to?

Angela Smith: Yes, I would, very much.

Sir Philip Dilley: The Environment Agency, despite the criticism it attracts, is a very professional organisation. I thought that before I took the job on, but it has been reinforced to me in all the journeys I have done. I have travelled the country very widely; I have been to all our 16 areas, many of them several times. It is a job that is important. It is a job that is supportive of communities. It is giving something back. It is something where I can use some of my technical knowledge to support the agency. When I moved from a full-time executive role to a series of non-executive roles, I was advised to only take things on where you like the people, and the people are terrific.

Q76 Angela Smith: It was not the Prime Minister or anybody else who persuaded you to take it on then.

Sir Philip Dilley: No.

Angela Smith: No, nothing at all. You were not asked to take the job.

Sir Philip Dilley: I did not speak to the Prime Minister about this appointment prior to taking it.

Q77 Chris Davies: I was delighted to hear, Sir Philip, that you have confidence in Sir James. I shall not ask Sir James if he has confidence in you as Chairman, but I shall ask Sir James: we have already heard from Mr Fitzpatrick that the debacle, the PR disaster that happened, happened under your watch. The statement regarding Sir Philip’s whereabouts came out while you were in charge of your department. Why did that happen?

Sir James Bevan: It did and I take responsibility for that because I am the Chief Executive. What I would say is, with hindsight, should that statement have been clearer? Yes, it should, clearly. You are absolutely right. What I would also say is that, that day and every day before and since, I was not focused on drafting statements for the press; I was focused on ensuring that the organisation saved lives and protected property. I was working 24/7 with my staff to make sure we got the right people and the right equipment into the right places, sitting in Cobra to make sure that we were co-ordinated with the Government, with the military, with the local authorities and making sure that we did everything we could to help people in need.

Q78 Chair: There is one final point from me. Sir Philip, one of the problems is that you may well have weakened the role of Chairman, because basically, if you have the Floods Minister, the Secretary of State, they expect to see the Prime Minister and I think people would have expected to see you there. That is a problem, but you have made your position clear and, in hindsight, I do not think you would probably let this happen again. I think that is fair to say, is it?

Sir Philip Dilley: I travel abroad probably more than average, partly for pleasure, partly for business, and I cannot guarantee that there will never be a flood event while I am away. If indeed there is, I will liaise with my colleagues and work out the right thing to do. The point about this event was it was totally exceptional.

Q79 Chair: I do accept that, but you have to also accept that, if a head of state leaves the country when there is a crisis, he may not be head of state when he returns. That is putting it quite bluntly, but you have to accept that the role of Chairman is there because you are seen to be in charge. If there is a moment of great flood, then we expect you to be there. I do not think it is unreasonable, and the people who are suffering in the north of England also do not think it is unreasonable, that you should be there.

Sir James Bevan: I would add that the Chief Executive also needs to be there. I was there. I was the person responsible. I remain the person responsible for managing this crisis. The team have done a fantastic job. I was there on Boxing Day with the Secretary of State Liz Truss. I was there the day after. I had been up in Cumbria at the beginning of December and I was in Yorkshire again yesterday and on Monday. The leadership of the Environment Agency was present on the ground and will remain present on the ground wherever we need to be.

Q80 Rebecca Pow: Sir James, were you not irritated that your Chairman was not beside you and that he was having a holiday?

Sir James Bevan: No. I am the person who is responsible for the operational response. I was leading the operational response and I think that was the right approach.

Q81 Chair: Okay. We are in danger probably of overplaying this, but I think you can realise how seriously we take the situation. I move on now, and this question really links back to the evidence we had earlier on. What role will the EA have in the Cumbrian Floods Partnership? We talked a lot about how we can build a partnership on the ground from the bottom up, so what ideas have you on that?

Sir James Bevan: Minister Rory Stewart has been nominated by the Prime Minister to lead the Cumbrian Floods Partnership. Obviously, he is a local MP. He has been incredibly active since day one in this. He knows everybody and is very committed to ensuring that Cumbria gets the best possible protection in future against flooding.

What role will we play? First, we are hosting the Cumbrian Floods Partnership; it is having its meetings in the Environment Agency's offices in Penrith. Secondly, we will play a key part in contributing advice to how the partnership can best operate. Thirdly, we will be a key partner in delivering with others—the local authorities, MPs, local communities—the conclusions that the partnership comes to.

Q82 Chair: Right. What we found with the Somerset floods and others is that the Environment Agency is always very keen to work with local people at the time. I just rather fear that, when the water recedes, so do your ideas of working with everybody and dredging and other things—we will not talk about dredging now because there is a question on dredging—and you go back to your old ideas and do not necessarily listen to the grassroots enough. Do you think you are learning that lesson?

Sir James Bevan: I have only been in this job for a few weeks, but, in between trying to run the crisis effectively, which I think the agency has done, I have been seeking to go out and visit every single one of the 16 areas that the agency has across the UK. I have done five or six. In every one of those areas that I have been to, the area manager and the staff who run our operation in that area are absolutely clear that, for everything we do, not just flood protection but promoting biodiversity, ensuring that businesses do not pollute the environment, the key is to have strong relationships with the local communities. On the basis of what I have seen, I am very satisfied that the agency is committed to doing that, not just in times of crisis but as part of business as usual.

Q83 Rebecca Pow: This is addressed initially to David Rooke, please. You said recently that you thought we should have a complete rethink of the UK's flood preparations. I wonder what you meant by that. What exactly were you referring to?

David Rooke: What I mean in terms of a complete rethink is that we need to look, first of all, at the historic data we are using and ask ourselves if that is still valid to predict the future. The Government's review will look at exactly that question. We need to look at our models in terms of how we predict floods and how we forecast for them. Again, the Government's review will look at that, and we will play a role in it.

We then need to look at how we respond when we get these extremes of weather, so making buildings and houses more resilient—as the Chairman said earlier, solid floors, waterproof plaster, moving electrics up the wall, etc.—so that, as a country, we are more resilient to these extremes of weather. We need to look at a catchment approach to managing water, which would include floods, so that we work with nature rather than work against nature. We need to improve our warning systems and our mapping systems, so that people have a better understanding of the risks they face and we can give early warnings that are accurate and timely such that we save lives as well as people's livelihoods and their homes. That is what I meant.

Q84 Rebecca Pow: That is very interesting. Given that we have had major flood issues up in Cumbria previously; we have had the big Somerset levels flooding, were you not feeding all these ideas through? That is over at least five, six years. Were you not already starting to think perhaps your modelling was a bit outdated; perhaps your reaction was reactive rather than proactive?

David Rooke: We have made significant investments not just in defences but also in modelling and mapping. The National Audit Office 2014 review acknowledged the improvements we had made and the value for money we were providing. What is different now is that we are seeing these extremes of weather, which, certainly at the start of my career, I would have expected to see once in my lifetime, and we are seeing them every two or three years. That, to me, is the significant shift, and that is why we need this rethink, just to recalibrate how we manage flood and coastal risk management in England.

Q85 Rebecca Pow: Maybe one of the others would like to answer this. What seems to happen often is that we get terrible extreme weather and these awful human consequences, and then we react quickly. It is like a sort of sticking plaster effect: let us build a dam, let us dredge a river. Is it not all back to front?

Sir James Bevan: We need to react quickly in the immediate to ensure that we protect lives and property, and that we help people rebuild their lives, but you are absolutely right that that is not a substitute for long-term strategic thinking. David is absolutely right. Everyone I have talked to in the affected communities says the same thing: "Something is different. We have never seen anything like this before." That means we need to think differently.

That is why the National Flood Resilience Review, which the Secretary of State announced a few weeks ago, will be thinking very differently and very long term. Do we have the models right in an era of climate change and more violent weather? What does that mean for our critical national infrastructure? We had big problems with some of our major infrastructure as well as with our flood defences in the last month. What does all that mean for the kind of flood defences we are going to need in not just the next five but the next 10 or even the next 100 years? It will be a very comprehensive, very long term and very strategic review, and I think that is absolutely right.

Q86 Rebecca Pow: How quickly do you think we should move on this?

Sir James Bevan: The intention on the part of the Government, who are leading the review, is that we will have conclusions by the summer.

Rebecca Pow: So relatively quickly. Thank you.

Q87 Rishi Sunak: You will have seen—there is very clear commentary in the newspapers and from people involved in active flood management—the perception that there is not enough dredging going on and that is contributing to some of the problems we have seen. No one on this Committee is saying it is a universal solution. Indeed, the last Committee hearing said that specifically, but it does have a role and can alleviate problems. What would be your response to the more general allegation that there is not enough dredging going on, first of all?

Sir James Bevan: Dredging is a core part of our armoury in dealing with flood risk, and we will do it where it can make a big difference to reducing flood risk and where it is value for money. Where those two conditions are satisfied, we will do it. There are places where it works and there are places where it does not work or is not value for money, but it is definitely going to be part of our approach over the coming period. It already is. In the last couple of years, we have spent £20 million on dredging. I have seen the effect in Somerset. I visited the Somerset levels a few weeks ago and saw what we have done in the Parrett and the Tone. I talked to local communities; they told me it was working well.

Rebecca Pow: We were going to meet, but it has been postponed. I look forward to the meeting.

Sir James Bevan: Done in the right place it works, and where it works, where it is value for money, we will do it.

Q88 Rishi Sunak: On the Somerset example, the perception is that the Environment Agency was essentially instructed to do that, after a crisis, by the last Secretary of State. People are then worried: is it not happening anyway? Why is it not happening? Why did it not happen beforehand and where is the next problem? The £20 million is not to be sniffed at, but in the context of a budget that is several hundred million—I am not in the best place to judge—is it the right amount? Is there a possibility to have more transparency around the annual spend on dredging and miles that are dredged, for example? People keep asking us where the number is, and we cannot find the data. I guess there are two questions there.

Chair: Can I add to that before you answer? For years, we have all been saying in Somerset the rivers need to be dredged. I was an MEP back in 2001 and I was told by the Environment Agency, "The capacity of the rivers does not matter, Mr Parish. You can let them silt up." Therefore, like I said, I am not convinced that the Environment Agency has necessary changed its philosophy. When you had the Prime Minister down in Somerset twice, saying, "The rivers will be dredged", the rivers were dredged, but is the Environment Agency really changing its spots? I am not convinced it is.

> ***Sir James Bevan***: I am the new Chief Executive. I am interested in what works. Where things make a real difference to people's flood risk, we will do them. I am clear already that dredging is part of that menu, and we will do it where it works and where it is value for money.
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> There is another myth that the Environment Agency does not care about people; it just cares about wildlife. That is a myth. I am very clear, as I have said before this Committee, that our primary duty is the protection of lives and property, and I will make sure that we adhere to that. I am equally clear that, if we do this right, we should not have to choose. People want to live in places where there is good wildlife, where the water is clean, and it is in our interest that we can do that.
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> I have seen very good examples of where the Environment Agency already has managed to combine those things. For example, there is a chalk river, the Bulbourne, which flows through Hemel Hempstead. In the 19th century, it was turned into a straight drain. The Environment Agency, with local partners—it is a great example of community engagement—is turning it back into a natural chalk river, which, as you know, is very sinuous. That is good for wildlife, which is worth doing; it is good for people because it creates a nicer environment for them to walk through; but it is also a better way to do flood defences because it slows the flow and helps protect people. For me, that is a great example of what we should be aiming to do. Of course people come first, but let us try to find ways in which we can create a better place both for people and for wildlife.

Q89 Angela Smith: You said, Sir James, what works and what is value for money, and I was glad to hear that you qualified that slightly by pointing out that, actually, it is what is appropriate and that we need catchment-scale responses to this. That is really important as well. Going back to the review, I asked the Secretary of State yesterday whether or not she was prepared to make the review an independent review. Her response was to say that, as long as it is open and transparent, everything will be fine.

You have committed to a comprehensive and strategic approach. Are you confident that it will be open and transparent? Has the work started, for instance? Nobody around this table knows whether the work has started. Nobody knows who the partners are who will be involved in the review. Nobody knows what the terms of reference will be. How confident can this Committee be that it will certainly be open and transparent, and that we will be satisfied that it is indeed comprehensive and strategic? I have to say I have no confidence so far that that is going to be the case.

Sir James Bevan: It is important that it is open and transparent and strategic, as you say. A statement was issued when the Secretary of State announced the review, which sets out what the review is seeking to do. I have explained that the idea is to complete the review by the middle of this year; I think that is the right timing. It is right that it is led by the Government, because the conclusions we reach, whatever they are, are things that the Government are going to have to lead the implementation of, whether it is about modelling, whether it is about critical national infrastructure, whether it is about how we manage flood defence in the future.

I also think that it will be a better outcome if we have regard to the voice of independent experts. I am certainly very interested in hearing from independent experts about what we need to do on those issues and I am confident that other members of the Committee will also be interested in that.

Q90 Angela Smith: I do not take the point that, because the Government are involved in implementation, they have to lead the review necessarily; otherwise the infrastructure commission would not need to do its work independently, but there you go. Is there a commitment from the Environment Agency to make sure that the review understands, as I believe, that members of this Committee would want to see openness and transparency, and that we want to see evidence of that very quickly?

Sir James Bevan: We will certainly be open and transparent with you. I sit on the review with David. The review has had its first meeting already; we did that before Christmas. We are very keen to hear from you and other stakeholders your views about the issues that we are discussing and will be very happy to reflect those as we go forward with this review.

Q91 Angela Smith: When can we expect to see the terms of reference and the scope of the inquiry?

Sir James Bevan: That is a matter for the Government. It is led by the Government, so that is a question you need to put to the Government.

Chair: We can put that to the Secretary of State when she comes in on the 26th, but we look forward to working with you in this great openness and transparency that you are offering us. We will decide whether it is transparent enough.

Q92 Rebecca Pow: Do you think the way we calculate what to spend on flood defence, the methodology, is right for that? We suddenly react and spend lots of money on these big defence projects. Are we doing that the right way based on the right information?

Sir James Bevan: The primary consideration when we are calculating where to spend money on what is the numbers of properties and people that we can protect. I think that is the right starting place. The formula also includes other things, though, that are very important: businesses, farming, critical national infrastructure. They are all weighted in the way that we make these calculations. I think that is right too. But, as I said earlier, our top priority is the protection of lives and property. David is the expert. Do you want to add something?

David Rooke: We need to look at this as part of the review, because it depends upon how frequent the flooding is in terms of the economic analysis that we undertake. If the frequency of flooding is changing rapidly as the result of a changing climate, then we need to ask ourselves whether it is still valid to do it in that way.

Chair: That is very necessary.

Q93 Rebecca Pow: Everybody tiptoed around the climate change aspect for weeks, and suddenly you are now mentioning that climate change might have something to do with all this. Are your scientists and your evidence suggesting that that is part of it and we need to factor all that into our climate change strategy?

Sir James Bevan: There are two points. First, there is a difference, obviously, between climate and weather. I cannot say personally whether the extreme events that we have seen over the last month are climate change, but I am quite clear that climate change is happening. The Government are clear about that, which is why, along with 140 other Governments, the Government signed a deal in Paris a few months ago to try to combat it. It is happening and we need to have regard to it.

The second point is that our calculations of the kind of flood defences that we need already factor in projections in relation to climate change. As David says, we may need to go back and look at those again and ask ourselves whether they are still valid.

Q94 Rishi Sunak: I have a more technical question. Obviously your budget is split into revenue spending and capital spending. Given the kind of work you do, it is a slightly arbitrary distinction in some respects; I think the last Secretary of State referred to it as a grey area. Do you think you would benefit from that distinction not being there, essentially, in giving you more flexibility to allocate between the two? Does the distinction force you to make decisions that may not be in the best interest of flood defence, but you need to because of the budget split?

Sir James Bevan: I was going to say that the classic distinction between capital and revenue is inherent, as you know, in the way that government operates. That is just how government financing works. What I would say is that, for us, we are in a decent position with capital. As you know, we have this commitment for £2.3 billion over six years to invest in protecting 300,000 new houses. That is a good commitment. That is a real terms increase. Ministers have also been clear that they will sustain in real terms the spending on maintenance of flood defence. Those are important commitments, which I welcome.

Q95 Rishi Sunak: You do not see any major need for there to be greater flexibility for you. Take the example of dredging. My understanding is that the Somerset dredging operation was classified as capital because it was very large, at one time, but thereafter essentially the same activity done on an annual basis is revenue. It is the same thing.

Sir Philip Dilley: The vast bulk of what we do is quite clearly revenue or capital, but there is this grey zone, as you imply, in the centre. If the Somerset levels had been dredged a little bit at a time over many years, it would have been maintenance, so there is a bit of scope there. I come from the private sector, so I am not used to revenue and capital separation. Therefore, I think it would be easier not to have it, but I do not believe it is something worth dying in a ditch over; it is too difficult to achieve it.

The good news on the capital settlement is that we have this six-year programme, which not only gives us certainty but enables us to let contracts more efficiently; we can look forward beyond the end of year. There is a benefit beyond just being certain of the money; it gives us the ability to be more efficient in the way we let contracts.

Q96 Chair: Sir Philip, you hit the nail on the head there, because it is a capital project to dredge the river and then you need the maintenance money to keep the river dredged. Do you have that in the Environment Agency? Do you need more drainage boards? How are you going to deal with that? It is a big issue.

David Rooke: What we want to do is to work even more closely with local communities. Where we are prioritising our resources, if we do not have the funding that is needed to fund everywhere, we need to work more with local communities who are willing to pay, who are willing to work with us. We have some really good examples of working with internal drainage boards, where we are looking to hand responsibility over for main rivers to them.

Q97 Chair: When you hand responsibility over, are you thinking about handing over any cash at the same time?

David Rooke: What the Government have done, in terms of setting up the Somerset Rivers Authority, is to enable it to raise money locally, so there is a local choice by local people as to their willingness to pay for the maintenance of flood defences. The maintenance that we have talked about in terms of the dredging in Somerset will be funded locally in the future. That is exactly what we need to do.

Q98 Chair: The answer is no; you are looking for it to be funded in some other direction. Is that the answer?

David Rooke: We will need all sources of funding, working in partnership, to provide solutions.

Q99 Chair: Do you not think it is right that the Environment Agency should give something towards it, rather than moving away from the responsibility?

Sir James Bevan: The best of all schemes are those that are designed in partnership locally, with local partners and, where possible, funded in partnership, because then everybody has a stake. I think that generates the best buy-in, the best projects and the largest amount of money to do what you need to do.

Q100 Chair: The Environment Agency would buy into it then, would it?

Sir James Bevan: We already are. This is our approach, but we need to do it more.

Chair: I am not sure you have answered the question.

Q101 Jim Fitzpatrick: We have the briefing, which tells us that the original flood defences in Cumbria, the Cumbrian Floods Partnership, is being revisited, reviewed and redone. Is that happening in other parts of the country as well or is it just Cumbria because of recent events?

> ***Sir James Bevan***: The Government have also announced that, in addition to Rory Stewart being the Cumbrian Floods Envoy, Minister Robert Goodwill will be Envoy for Yorkshire. I was in Yorkshire with him two days ago as he launched his mandate, so that is another good way to deal with the issues in Yorkshire. As you will have seen, the Prime Minister has announced some additional funding to repair the flood defences that were damaged over the Boxing Day storms.

Q102 Jim Fitzpatrick: Can I just get the architecture right? After the floods in 2007, the Pitt review recommended the Cabinet Sub-Committee to raise the profile, the importance, the significance of cross-government working to address flooding. In 2010, the coalition scrapped that Sub-Committee. In 2013, we had the floods. In 2014, Prime Minister Cameron reinstated the Cabinet Sub-Committee, but now we find out that it has only met three times in 22 months. Now we have an announcement from the Government that there is a review, which has basically reconstituted the Cabinet Sub-Committee to which you are invited. Is this going to be third time lucky? Are we going to get Government attention and support for the agency and the important work you are doing?

> ***Sir James Bevan***: That is a question that you are going to have to put to the Government.

>> **Jim Fitzpatrick:** Forgive me. You are absolutely right, and I will be putting that to the Secretary of State, if the Chairman allows me, but I was just wondering if the Environment Agency has a view.

> ***Sir James Bevan***: Am I satisfied that we are getting the support we need from the Government? Yes, absolutely. Does it feel to me as if the Government, the Environment Agency, the emergency services and the military are working together in the way they should to deal with the crisis we have had? Absolutely.

Q103 Jim Fitzpatrick: I suspect, given your new appointment and Sir Philip's recent appointment, Mr Rooke is the only one who has been around while the Sub-Committee was working previously. Does it feel similar? Does it feel the same? Does it feel different? Does it feel better? Are you more encouraged, more positive about the outcome this time, and that the Government are going to take it more seriously than perhaps they have?

> ***David Rooke***: I am encouraged and delighted to be invited to be part of that review. We will make a massive contribution towards it, along with others, so that the Government get the best advice they can to make the decision they need to make.

Q104 Chris Davies: How much has the Environment Agency spent on the storms and how much still needs to be spent to protect all communities from high flood risk?

> ***Sir James Bevan***: I am sorry; I did not catch the question.

>> **Chair:** How much has been spent on the storms?

Sir James Bevan: The honest answer is we are still counting the cost. What we have done is get ahead with the emergency repairs. In Cumbria, we have already got ahead and done a lot of the repairs that needed doing to our flood defences after the storm. We are currently going through the process of inspecting the defences in Yorkshire and Lancashire. I was up in Yorkshire, as I said, earlier this week talking to the teams that are out there doing the inspection. The £40 million that the Prime Minister has announced will allow us to get on quickly with those repairs and we will do that, including spending £10 million to repair and upgrade the Foss barrier that was mentioned earlier.

Q105 Dr Monaghan: You have answered some of this question, so I will rephrase it slightly. Sir James and Mr Rooke, you have talked about the review process that will be underway in terms of spending patterns and so on and so forth. Can you give the Committee a reassurance that, given that extreme events are increasingly becoming routine, funding emergency relief will also be dealt with as routine business activity rather than as a response to crises after they occur?

Sir James Bevan: That is another question that you should put to the Government, but in the last few weeks we have seen a very rapid response from the Government, both in terms of money that has helped us get on with our repairs in Cumbria, Yorkshire and Lancashire, and, as we heard earlier, in terms of money available to local communities to begin the task of rebuilding. As I say, I think the response from the Government has been quick.

Dr Monaghan: Perhaps we can put that question to the Government.

Chair: We can, because we have the Secretary of State in on 26 January, so that would be a useful question to ask.

Q106 Chris Davies: Members will certainly be putting questions forward to the Secretary of State, but I want to ask you, with the £40 million that has been announced and other announcements, in your opinion, as head of this organisation, is that enough to cover the high-risk flooding areas at the moment?

Sir James Bevan: The first thing we need to do is get on with spending that money so we can repair all the essential critical assets we need to repair to ensure that people are, once again, as well protected as they can be against flooding. We are doing that already. That is one of the reasons I was up looking at the Foss barrier a couple of days ago. It may well be that, as we inspect assets, which is only just beginning in Yorkshire and Lancashire, we find that the cost of repairing or replacing those assets is bigger than we had expected. But, if you look at the Prime Minister's announcement, he is clear that this is £40 million for us to start these repairs and that there may be more needed.

Q107 Chair: A slightly wider question than that—and we have talked quite a bit through this—is: in your view as the Environment Agency, do you feel the experience over the last few years has shown that the risks are greater than we believed them to be before and, therefore, the need to spend more on resilience is there?

David Rooke: It depends on what assumptions we make in terms of climate change. In 2014, we published our long-term investment scenarios document, which sought to look a long time ahead in terms of what the funding needs are, both capital and revenue, to manage and alleviate flood risk. The £2.3 billion that the Government announced for the six years—this parliament and one year after it—enables us to reduce flood risk by 5% and it is entirely in line with that long-term investment scenario document that we published. Clearly, in the light of changes to climate, we will need to review as to whether the assumptions we made about climate change are still valid and, if so, we will need to rework that long-term investment scenario document.

Q108 Chair: Whether it is climate change or not, what is happening is that we are flooding with more frequency. Climate change gets blamed for all sorts of things that it may or may not be guilty of, but what in practice is happening is that the one in 25 years, one in 50 years and one in 100 years floods seem to be happening every five years, not everywhere, I accept, but surely the evidence that you are gathering as an agency is that there is more flooding happening more frequently and, therefore, we need to do more about it. I do not feel you are being dynamic enough about it.

Sir Philip Dilley: If you had asked us that question on 1 December, I think the answer would have been that we are properly funded.

Chair: It was not raining then.

Sir Philip Dilley: No, but we have all the history up until the last month. In other words, for the long-term investment strategy that was developed in 2014, nothing was abnormal up until 1 December. Thereafter, the changes that we have experienced are potentially ones that need to adjust it. As of 1 December, there was no under-funding. We are happy with the amount of money we have and it is, by and large, the same amount of money that we recommend is necessary.

Q109 Chair: Are you not the agency that is deemed by Government to give us some idea of what might be happening? Surely you need to be a bit more proactive than just sitting there and saying, "Hands up, we do not really know."

Sir James Bevan: With respect, I do not think that is what we are saying.

Chair: No, I know. I am being slightly facetious, but what we are hearing does not sound very positive.

Sir James Bevan: Let me put it another way. The answer to your question is yes. You are asking: are we seeing more violent weather? Yes. Is that having more serious consequences for ordinary people, for infrastructure, for our country? Yes. Do we need to think differently about how we deal with that? Do we need to think bigger about how we deal with that? Yes. Should the Environment Agency be contributing to that debate? Yes, and we will be doing so in the context of the review that is now going forward.

Q110 Angela Smith: I am not sure the people of Leeds will be very much inspired, in terms of their confidence in either the agency or the Government. I have always been a defender of the agency, particularly in relation to the staff on the ground. Let me make that clear. But I hear that the agency has sufficient funding, and yet Leeds had its scheme cancelled and, in Sheffield, the funding and the work that we need to protect the city from floods, on the basis of the 2007 floods, is only just starting eight years later. How can you argue that the funding is sufficient?

Sir James Bevan: I was in Leeds on Tuesday.

Angela Smith: You must understand the anger that we all feel then.

Sir James Bevan: I do. I talked to people. I read the *Yorkshire Post.* I know how people feel. What I would say is two things. First, we apply the same criteria for deciding where we fund projects everywhere across the country. My staff are committed to doing their absolute best for everyone in this country, wherever they are. Secondly, in relation to the Leeds scheme, we have a position now where we have agreed with the local authorities on a scheme. It is going to cost £45 million.

Q111 Angela Smith: But it was cancelled. The question I am asking is about it being cancelled, not what you are doing now. Why was it cancelled?

Sir James Bevan: I was not in this job at that time, so I cannot give you an authoritative answer. What I will say is that we now have agreement on a scheme that will make a difference to the people of Leeds. I was there yesterday to see that it was beginning. We have already begun that scheme. It is quite likely that already, even though it is not yet complete, it protected some areas from flooding over the Boxing Day period. That scheme will be complete in 2017. Then we should sit down and ask ourselves what more we might need to do to protect the people of Leeds.

Q112 Angela Smith: You said there, Sir James, that we need now to rework that long-term investment scenario because everything changed at the beginning of December. In 2014, there was promised a similar reworking of the investment scenario on the basis of what happened in Somerset, and yet all that turned out to be was a clutch of Ministers gathering around a table for a cup of tea on three occasions, as far as I can gather. It is not really true, is it, that everything was okay until the beginning of December last year? We had had the Somerset levels experience; we were supposed to have a significant review on the basis of changing weather patterns then. It did not happen. The record here is not very good, is it?

Sir James Bevan: Again, as I said, that is a question you should be putting to the Government.

Q113 Angela Smith: The Environment Agency always passes the problem to the Government and the Government will pass it back to the Environment Agency. When is somebody going to give us an answer? You, as professionals, ought to be giving us a view on whether or not there were sufficient resources, whether or not the review in 2014 should have been completed and whether it should have led to significantly different decisions in terms of the investment needed. You should be able to give us a view on that.

David Rooke: Our long-term investment scenario document set out exactly what should be the optimum level of investment in flood and coastal risk management across England over a long period of time. It did that. It updated work that we did in 2009. Our first report, which was advice to Government as to the long-term funding needs for the country, was set out in 2009 and a range of options were presented. In 2014, we did a major update, using much better information and much better modelling, to give a much more confident assessment of what the long-term funding needs are for the country. The SR13 settlement for the £2.3 billion capital programme is entirely consistent with what we set out in our long-term investment scenarios and we expect that it will reduce flood risk by 5% over the six years.

Q114 Angela Smith: But that decision in 2014 was based on a recognition that funding had been cut when it should not have been, between 2010 and 2014.

David Rooke: It was entirely separate from any funding decisions that had been taken in the past. What it did was to set out for the future what the long-term funding would be and the £2.3 billion settlement that the Government gave us to provide better protection to 300,000 households was entirely consistent with what was set out in that document.

Sir James Bevan: Just to add to that, if you track the line of investment spending in flood defences over the last two or three parliaments, it goes up. From 2005 to 2010, it was an investment of £1.5 billion. From 2010 to 2015, it was £1.7 billion and, as we have said, in this period of the parliament, these six years, it is going to be £2.3 billion. It is an increase in real terms.

Q115 Angela Smith: Forgive me, Sir James, but that is a civil servant response. Of course we all know it had to go up, to some extent, because of the experiences in 2007 and 2009 and the Pitt review. That was one of the reasons why investment had to be secured. What we are saying now, as a Committee, I hope, is that recent experiences are demonstrating that the responses we are getting so far from the Government and the professional agencies are not really sufficient.

Sir James Bevan: Well, we have the money that we have from the Government and that we earn from other sources. My intention is that we will use that in the best possible way to provide the maximum protection for the maximum number of people. I am confident that that £2.3 billion over six years will allow us to hit our target of providing better protection for 300,000 properties. It is not enough on its own, which is why, as David is saying, we have this partnership approach and we need to pull in another £600 million or so from our partners, from local authorities, from businesses, in order to hit that target. It is not just the £2.3 billion, but I am confident that we will be able to do that over the six-year period.

Q116 Rishi Sunak: To go back to the dredging, in this era of transparency and openness, can you provide for us, for the past few years or however far back it is possible to go, an annual spend on dredging, and, if it is possible, miles dredged as well? There is a lot of misperception or concern in this area, and having the numbers and the data would make that a more productive conversation for everyone to have.

Sir James Bevan: Yes, we will tell you what we spent each year, where we spent it and what it did.

Rishi Sunak: That would be great. I would urge you, on a go-forward basis, if there is no reason not to do it, you might as well, because it will make these conversations more productive for everyone.

Chair: You will provide that for us in writing.

Sir James Bevan: Yes.

Q117 Angela Smith: This is a question that relates to the funding that you just referred to. What role does the Environment Agency have to play, do you think, in sourcing partnership funding and how successful has it been in Cumbria?

Sir Philip Dilley: As Sir James has said, the £2.3 billion settlement comes with the expectation that we will attract £600 million of partnership funding over that six-year period. We have had some good successes, in our recent history, in attracting partnership funding so far. Of that £600 million, we believe we have secured £250 million already and we have identified sources, without reaching agreement yet, for something like 95% of it, so we are on track. I cannot promise we will get there, but I can promise it is our intent to get there.

A lot of that partnership funding is brought about through discussions, communications, negotiations between our people and the local people providing the funding, so it is not, generally speaking, James or David or me. It is people on the ground developing those relationships that we talked about.

Q118 Angela Smith: Of course. I understand that £61 million of the £250 million is from the private sector.

Sir Philip Dilley: The sources of partnership funding are various. Of course, there is a substantial potential contribution from the public sector through county councils, local councils and so on. We would like and expect to get, and have some examples of getting, funding also from the private sector. For example, if a developer wants to develop some land that is currently subject to flood risk, if a scheme can prevent that from being subject to flood risk, then there is a potential benefit for him to pay into the scheme.

I would quite welcome the idea of exploring doing similar things and this whole partnership idea with some of the infrastructure providers. I am completely making this up, but, if Network Rail needs to raise a rail line to make it flood resistant, then maybe they could put that money into something that we can do jointly to prevent that need. There are opportunities that we are looking at.

Q119 Angela Smith: Can you confirm the figure of £61 million?

David Rooke: I think it is of that order, but we will confirm that.

Q120 Angela Smith: As to the remaining £400 million that you are looking for and that you are working towards securing, as you point out, you are looking for a mix of private and public sector funding. Do you have a target for a percentage of that to be from the private sector? What is your target for private sector investment?

David Rooke: We do not have a target. We are negotiating on a case-by-case basis.

Q121 Angela Smith: If you do not achieve the private sector investment, because that is very much about partnership working, will you be looking to the public sector in its various guises to make up the shortfall?

David Rooke: We will be looking to communities, looking to local authorities, looking everywhere in terms of being able to secure the funding such that the schemes can proceed.

Q122 Angela Smith: Are you confident that you will get there?

David Rooke: We have the first two years of the programme fully funded, which gives us four years in which to secure the deals we need to do to enable the rest of the schemes to be completed.

Q123 Angela Smith: Do you recognise that local authorities in particular are finding it incredibly difficult nowadays to find resources for this kind of work?

David Rooke: We recognise that absolutely.

Q124 Chair: I talked before about the role of drainage boards. Should there be a greater role for internal drainage boards in carrying out flood management work?

David Rooke: Yes.

Q125 Chair: How are you going to facilitate that?

David Rooke: Through partnership working. We have already what we call "public sector co-operation agreements" with internal drainage boards. These are where internal drainage boards can do work on our behalf; we can do work on their behalf. There are some really good examples up and down the country, particularly in Lincolnshire and elsewhere, where there is very good close co-operation. It is bringing local benefit and doing it in a very effective and efficient way.

Q126 Chair: I know the Secretary of State is very interested in bringing more drainage boards into being. Would you see that as a good idea?

David Rooke: Yes.

Q127 Chair: Would you fully co-operate?

David Rooke: Absolutely.

Q128 Chair: In your co-operation, would that mean a certain amount of money as well as just talking to them?

David Rooke: It would depend on how they are set up. We have been working closely with communities that want to set up internal drainage boards, and that will continue.

Q129 Chair: What does that answer mean?

David Rooke: It means that we will continue to co-operate with them and work closely with them.

Q130 Chair: I thought I was the politician. You can talk to as many people as you like, but in the end the Environment Agency has a role in protecting us from flooding. The drainage boards can carry out quite a lot of that work, I suggest, on a local basis possibly more cost-effectively and more efficiently, because of just getting people through from a centralised position with the Environment Agency. When you are talking to them, surely it is not just about talking to them, it is also about sharing some of the resource as well that you have.

David Rooke: That is exactly what we do through these public sector co-operation agreements. If we need some work doing and internal drainage boards are doing work nearby, they are doing that work on our behalf, so everyone benefits.

Q131 Ms Ritchie: On this issue of the internal drainage boards, should they be able to raise money from levies on local communities beyond flood risk areas, including those living in areas upstream?

David Rooke: Those are questions for Government, because it is a policy matter.

Q132 Ms Ritchie: With all due respect, you cannot say this is always an issue for Government. Surely you have a view, you have an opinion and the Secretary of State and her suite of Ministers would surely ask you for your opinion, and you would be giving those opinions in briefs and submissions to the Minister.

Sir James Bevan: The point is that, as we have said earlier, it is absolutely right that local people make choices that affect them, and they should be able to make choices about whether they are prepared to fund things that affect them. I am a big believer in devolution and that local choices are better than choices made in remote offices, so that would be my advice to the Secretary of State. As David says, the policy decision is a matter for her.

Q133 Ms Ritchie: From an operational point of view, you are saying you would not have any particular problem with drainage boards.

Sir James Bevan: No. We work well with drainage boards. We want to empower them. We want to find ways in which we can devolve more activity to them because, as I say, local decisions are likely to be better than centrally made decisions.

Q134 Ms Ritchie: How would you anticipate greater reliance on community levies to impact less economically well off areas?

Sir Philip Dilley: Could I make a point? You ask whether we have an opinion. I do, and I do think it would be a good idea if more of this money was collected locally in order to deal with the issues of flooding. As was touched on earlier in this Committee, the water that causes the flooding frequently comes from people whose properties are higher up the hill, and therefore the area that is potentially flooded is offering an asset to them; it is offering a place for their water to flow. One of the issues is who you charge for this, so it is an issue that needs to be dealt with, but it rightly ought not to be just those people who are susceptible to flooding.

Q135 Ms Ritchie: Flood funding is complex, with a tangle of funding flows between the various agencies, but ultimately local communities are paying, either through levies or their council tax or through central taxation. Do you think there is an argument for simplifying this so that people can better understand what they are paying for and what they get for their money, and so the hypothecation is properly explained?

Sir Philip Dilley: You are not going to like the answer, but it is necessary for Government to do that; it is a policy matter. Obviously, simplification and better communication, from the public's point of view, is always a good thing.

Q136 Ms Ritchie: I just cannot accept that you do not have a view or an opinion, because surely, in preparing a Minister to make decisions, you make recommendations, and many of us in that position would know that before.

How can planners be held accountable by tax and levy payers when flood defences have failed?

David Rooke: The flood defences that we saw in Cumbria and in Yorkshire were just overtopped by the sheer volume of water. It is really difficult when that happens, because clearly people have got used to being secure behind a defence, but, as we have said earlier, no country guarantees to protect all its people against all floods, which is back to the point about making properties more resilient, having warning systems so we can save lives. It is really difficult when defences are overtopped.

Q137 Ms Ritchie: How can planners be made accountable?

David Rooke: Our role in the planning system is an advisory one and so we advise in terms of flood risk. We publish maps that show what the flood risk is.

Q138 Chair: You can also object.

David Rooke: We do object and there is a good record: 96% of our comments to planning authorities are taken on board and listened to and provide sustainable development proposals.

Sir James Bevan: I will just add that lots of people design and build flood defences. Sometimes we do that; sometimes others do it with our advice. When we do it, I am accountable. It is my responsibility if flood defences fail, and I am happy to take that responsibility. I would also say that, although in December, as David said, we saw our flood defences as well as others overwhelmed and thousands of people flooded, and I have seen the misery that that causes, those defences protected thousands more people and they did not fail structurally. If they had failed structurally, people would have been killed.

Is this a good situation? No. I have seen the devastation and we must do better, but it is important to remember that the defences that the Environment Agency put in place protected many thousands of people and it is important to remember that the warnings we gave people in advance almost certainly saved lives.

Q139 Ms Ritchie: You said that the Environment Agency objected to various planning applications. On a proportionate basis, could you indicate, in those areas that witnessed the greatest level of flooding, how many planning applications for housing and other types of development you objected to because, in your opinion, there was a greater risk of flooding if there were unprecedented levels of rainfall?

Sir James Bevan: We will almost always object to proposals to build major new developments that are at risk on a flood plain. We provide that advice. It is for the planning authority to take a decision. In most cases, the planning authority will go with our advice. The latest statistic I saw is that 87% of new housing development is not taking place on flood plains. You can do the maths; that means that 13% is. Those are ultimately matters for local planners to decide, but our position is that we would almost always advise against those kinds of proposals.

Q140 Ms Ritchie: If there happens to be a planning approval given, is there a condition placed on it with an advisory note from the Environment Agency that there could be a problem further down the line in terms of years?

Sir James Bevan: When those decisions are made, the people who make them will have to have regard to the consequences. One consequence may be the difficulty of getting insurance if you are building on a flood plain.

Q141 Jim Fitzpatrick: I have a tiny aside, and apologies for taking up the time. "Overtopped" is a new word to me. Is that a technical term within the industry? It is very easily understandable because it is graphic: the water goes over the top. Is that the standard terminology?

Chair: We will answer them all together.

Dr Monaghan: Mr Rooke just mentioned the agency's role in terms of producing maps. We heard earlier today there is widespread dissatisfaction with the agency's mapping: that it is out of date; that it influences insurance, and all the rest of it. I would like to hear some undertaking that the mapping efforts of the agency will be reviewed and will be brought into line as quickly as possible.

Angela Smith: Sir James said that 87% of building is not on flood plains, but is it not the case that the rate of increase of housebuilding is slightly higher on the flood plains than on areas of land that are not on the flood plain? In other words, the rate of increase is higher on the flood plains.

Sir James Bevan: That I would need to check.

Angela Smith: That is a slightly different way of putting the statistic.

David Rooke: Yes, we use the word "overtopping", and it graphically describes what happens. The defences have not failed; it is just that the flood we have experienced is greater than the structure was designed to cope with.

On the mapping side, we are constantly improving our mapping. There is a lag between when changes are made, us being able to update our maps and then the insurance industry being able to update their systems. We do provide a service whereby householders can request a letter from us and we will state what the latest assessment of risk is. They can use that and take it to their insurance companies or brokers, so that they are informed in terms of the latest risk, even though our maps may not reflect that.

Q142 Chair: There is a final one from me. Sir Philip, you talked about the effect of development further upstream that brings water down into a flood area. You are a statutory consultee in a flood zone, are you not, as far as planning is concerned, but you would not be a statutory consultee when it is further upstream? Do you think that perhaps local government and the Secretary of State for Local Government should relook at that?

Sir Philip Dilley: What you say is correct: we are not a statutory consultee in those circumstances normally. I am hesitant to say that we should extend that, because it would potentially cover almost anything in the country, all planning, and that would be an enormous task needing funding.

Q143 Chair: Perhaps "areas that are at high risk further upstream", or is there any way of wording that?

Sir Philip Dilley: We should certainly explore it. It might be something where the responsibility is put harder on the local authority, because they are, after all, determining the application.

Sir James Bevan: We are all clear that part of the future is whole catchment management, managing upstream, slowing the flow. That involves a whole bunch of actors. It includes the Environment Agency. We need to be involved in this process; you are right about that, and we need to find ways to bring everybody into that process.

Chair: That is a very good position to finish our evidence in. Thank you very much for giving so generously of your time. We will be inviting you back, I suspect, again in the near future, because we have had a very good one-off session on flooding, but we will be coming back to it in a detailed form. I thank again those who came down from Cumbria today. Thank you very much for making the journey; it was well worth it for the evidence. Thank you, gentlemen, very much for your evidence this afternoon.