Environmental Audit Committee

Oral evidence: Climate change adaptation, HC 453

Wednesday 5 November 2014

Ordered by the House of Commons to be published on 5 November 2014.

Written evidence from witnesses:

– Climate UK

– Local Adaptation Advisory Panel

Watch the meeting

Members present: Joan Walley (Chair); Peter Aldous; Neil Carmichael; Martin Caton; Zac Goldsmith; Mike Kane; Mark Lazarowicz; Caroline Lucas; Dr Matthew Offord; Mrs Caroline Spelman; Dr Alan Whitehead; Simon Wright.

Questions 1–74

Witnesses: **Martin Budd**, Environment and Climate Change Strategic Adviser, Kingston upon Hull City Council, **Kristen Guida**, Director, Climate South East, Climate UK, **Alex Nickson**, Deputy Chair, Local Adaptation Advisory Panel, and **Paul Crick**, Director of Environment Planning and Enforcement, Kent County Council.

Q1 Can I start off by welcoming all four of you to give evidence to what is the first session that we have this afternoon on the adaptation inquiry? We appreciate that you represent very different organisations in one way or another but all with a common theme. Given that this is our first session, we thought it would be useful to start off by inviting you each—I don't know who will go first—to give a summary of the issues that you see as important and the role that you play in carrying those out, whether it is at the local authority level or the wider level as well. I do not know who wants to go first. Kristen, would you like to go first?

Kristen Guida: Yes, sure. I am Kristen Guida from Climate UK, as you know, and we are the umbrella body for nine regional English climate change partnerships with links to our counterparts in the devolved Administrations as well. We work to support organisations across sectors in understanding the impacts of climate change for themselves and their communities and their services and in developing appropriate responses by working in partnership. We do that by facilitating knowledge exchange, developing and disseminating tools, research, guidance and so forth, providing training and trying to also make links between the scientific and the academic research community and the community of decision makers that could potentially benefit from that kind of research.

We can scale that up through Climate UK to national levels to deliver national programmes that have real granularity in terms of local priorities and local understanding. We have been working with DEFRA since DEFRA established an adaptation team and we have been working more recently with the Environment Agency on its Climate Ready Support Service. That is an introduction.

As far as the issues, I think they are largely about the types of things that were set out in the Adaptation Sub-Committee's report, but also largely for us the major issue is capacity and that is capacity in terms of people, understanding and resource.

Alex Nickson: Good afternoon, Committee. My name is Alex Nickson. My day job is as Policy and Programme Manager for Resilience and Quality of Life at the Greater London Authority. My job is to try to keep London safe from extreme weather and climate change. However, I am appearing in front of you today as the Deputy Chair of the Local Adaptation Advisory Panel. This is a panel convened by DEFRA in 2011 to act as an intermediary between local government and DEFRA with regards adaptation. Our steering group is comprised of local council officers, representatives from Government, local government associations and other adaptation-focused partners—Climate UK, for example. What we bring is expertise and knowledge with the aim of furthering and supporting the adaptation agenda in the local government sector. The views I will be giving today are those of LAP rather than my own, but I will try to bring in some London flavour as well from my day job.

One of the things I wanted to highlight at the beginning is I think part of our problem with adaptation and why we are not making progress on it is that we are taking a very opportunistic approach. We see a problem. We try to remedy particularly a local solution to it. We find out that we do not quite understand the business case fully enough or we are going up against a very well-informed business case, say, on carbon reduction and, therefore, we do not make headway. What we need to do is set an adaptation target—for example, the risk tomorrow should be no worse than the risk today—and try to work out what the adaptation budget is. How much adaptation do we need to be delivering year on year on year to maintain that risk at an acceptable level and what is the best way of developing it? We need to be learning—it is a bit like the mitigation world where we have carbon targets, we have ambitions and we are incentivising different sectors to deliver it. At the moment, I am afraid it is a bit of a war of attrition and we are not making the headway we need to.

Q2 Chair: Those targets that you referred to that you would like to be there, where would they come from?

Alex Nickson: I can give you an example. In London one of the projects we are working on at the moment is called the London sustainable drainage action plan, for want of a better title. Essentially what we are trying to understand is how much space there is left in London's drains to cope with a population growth of 3 million more people, the development that comes with supporting those people and the heavier rain that we expect climate change to bring. If we know the sewers are nearly at capacity, how much more capacity do we need to have available and is it about making the sewers bigger or is it about trapping and absorbing and using rainwater before it gets into the sewers?

If we can calculate how much water we need to manage in the system and turn that into an annual programme, we then know if we are reaching our risk management target or not. We also have the understanding if we miss the opportunity, say, to put a green roof on that building because it is not cost-effective or we have put solar panels or something on it, then we are either accepting a high level of risk or we are walking towards a more expensive solution, for example a major tunnel or something.

Q3 Chair: I am still not exactly clear how your organisation works in partnership with the water companies or with the Environment Agency. What is the organisational infrastructure, the terms on which you operate?

Alex Nickson: Essentially I think water companies particularly increasingly have to work with local authorities. Local authorities are the key delivery body on the ground and, if you are a local authority and you want to improve the water efficiency of your consumers, working in partnership with a borough or a local council is a very effective way of doing it. We see ourselves playing a very enabling role in helping other partners target and work in synergy with others to deliver adaptation.

Q4 Chair: You referred just now to water efficiency. Is that a stated target of the water companies?

Alex Nickson: For most of the companies in the south-east who are facing serious water stress, they recognise that demand reduction is an important measure to balancing supply and demand. I think pretty much all of them have water efficiency within their business plans, both for the five years and for the 25 years.

Q5 Chair: Thank you. If I could perhaps move on to City of Hull and get down to local authority level. Hull presumably is working flat out for the City of Culture in 2017.

Martin Budd: We are.

Chair: I must say, as an ex-graduate of Hull University, I am very pleased about that. Does it have the same kind of priority to take up these environmental issues? How does your work on the ground link not just to the specific outcomes on floods but link to the wider agenda of the local authority?

Martin Budd: I am Martin Budd. I am the environment and climate change adviser for Hull City Council. The work within the city, as you say, is very much focused about what we can do within the city to ensure that it is resilient and it can be effective. We are doing a lot of work obviously around flooding because that is the major issue within the city that we have experienced over the past number of years, for instance 2007. It is about how we learn from that and enable our city to be more resilient going forward and how also, as a city, we understand what the wider impacts are of adaptation; how climate change will affect us; and how we drill that down into the experience of services and customers and residents from the city and businesses.

Our focus has been around understanding what those strategic risks are within key services areas—so within our transport infrastructure, within our housing services and, coming back to the City of Culture, within our tourism services as well—to understand how vulnerable they are to climate change, how that will affect them going forward and, therefore, understanding the level of risk, how we can start to develop approaches in the way we deliver the services and the way we design services, but also understanding what level of research we need to do to get a better idea of, when risks start to become higher, at what point we start to make intervention or need to consider what we need to do. One of the biggest challenges we have is understanding the level of risk on that local level. How vulnerable are we on a local level?

Flooding for the city is very well understood. We have had a number of experiences, most recently obviously in 2013 with the tidal surge. The vulnerability is very well understood and the work that we need to do as a city to address that is quite clear. On other adaptation issues, the more subtle ones, I think that is an area that we need to develop a lot more on and understanding that granularity is quite challenging for the local authority, particularly in the current climate where there are reductions in funding and capacity and there are choices to be made about where funding should go.

Q6 Chair: You talked about research. Is that something that the city of Hull would expect to be doing or is that something that you will be doing in conjunction with universities or with a local enterprise partnership? Is it very much something that is seen as a priority just for the council or is there a stakeholder group you are working with on this?

Martin Budd: It is a priority for the city first, also for the LEP and for the university, but with outside organisations such as the Joseph Rowntree Foundation as well.

Q7 Chair: There is a focus on water efficiency and on flooding?

Martin Budd: Yes. The Humber LEP has put match funding in for flood defences along the estuary front within the city as a result of what happened in 2013. We have been able to match fund that improvement. Because of the significant threat that flooding places to the economy of the city, we need to able to ensure its resilience and its viability going forward so we can provide a stable city for inward investment and enable the city to grow and transform.

Chair: Thank you. Last but not least, we will come down to the south-east to Kent County Council and the Kent Local Resilience Forum.

Paul Crick: Good afternoon. I am Paul Crick and I am Director of Environment, Planning and Enforcement at Kent County Council. There are number of roles that Kent County Council has to play with adaptation and climate change and they all seem to fall under my remit, fortunately. There is a number that I will list through.

Lead local flood authority: Kent has the highest collective flood risk in the UK and our role as the lead local flood authority is absolutely key in understanding, as Martin said, the vulnerability at a local level to our communities and to our businesses. We have responsibility for climate change mitigation and adaptation at a local level: working with businesses, making them more efficient and reducing their costs—residents' health benefits from having warmer homes, for example. They are key projects that we work with residents and businesses on at a local level. The Civil Contingencies Act and emergency planning: again, Kent County Council is the authority responsible for responding in emergencies and recovery and we have a key role to play in resilience.

All of those facets mean that we work closely with a range of partners, particularly the Environment Agency, water companies, utilities, police, fire and rescue service, in delivering services to our residents and businesses in Kent. I think the key thing we have done since the severe flooding events from the winter of 2013 and 2014 is there are an awful lot of lessons learned that we have been working on over the spring, summer and autumn period to put in place preparedness for the coming winter as well.

Q8 Chair: Can I go back across the table to ask: if there was one issue that you thought was the most important aspect of this whole subject of adaptation that needs to be addressed from your own organisation's perspective, what would it be, just so we get a feel of your priorities?

Paul Crick: I think the increasing severity and frequency of severe weather events and the pressure that puts on resources that have been significantly cut over the last three years. For example, my budget has been cut 50% since 2010 and there is an increasing pressure on resilience and adaptation and, again, it comes back to that vulnerability at a local level. Increasingly residents and communities look to the county council for help. They look to district councils for help and we have a diminishing resource with no lifeboat in the future to come and rescue us from that.

Q9 Peter Aldous: Mr Crick, in your local resilience forum who is the lead authority? Is it Kent County Council or the Environment Agency?

Paul Crick: In the Kent Resilience Forum, it is chaired by Kent police but the partners around the table range from district councils, police, Kent fire and rescue, other partners such as ambulance and coastguard—the usual category 1 and category 2 responders. What we have done in Kent, and I think we are probably more advanced than anyone, is set up a joint Kent resilience team. So it brings together Kent fire and rescue, Kent police and Kent county council staff responsible for emergency planning and resilience in one team based at fire and rescue headquarters. Because partners have seen the benefit of that emergency agency working, the Environment Agency now sit within that team two to three days a week, as do public health now with the public health potential issues that could be on the horizon. Partners are beginning to join up in creating that one big team. It is very much a multi-agency approach.

Q10 Peter Aldous: From what you know of what is happening outside Kent, is a similar model being pursued elsewhere with the police taking the lead?

Paul Crick: Yes, it is. I spoke at a national conference in Leeds a couple of weeks ago that was hosted by DCLG and other authorities are looking to create a similar model because, I think, they have seen how effective it is in Kent and others are rolling it out. In terms of communication and working together, it is a real first-class example.

Q11 Chair: My colleague Caroline Spelman will perhaps look at that in a little bit more detail later on. Just sticking with the main priorities, Kristen?

Kristen Guida: Just building on what Paul was saying, I think I would agree just in terms of the increasing frequency and severity of severe weather, but then combining that with the issues around capacity and accountability. As Alex mentioned before, we have devolved a lot of responsibility down to local areas, which are haemorrhaging in terms of resource, and we are going to have to monitor this adaptation programme at some point. We have the national adaptation programme, the climate change risk assessment and the Adaptation Sub-Committee's indicators, but at the moment the mechanisms for local areas to feed into that national picture are either non-existent or voluntary and so there is a humungous gap there in terms of capacity and accountability.

Martin Budd: I think I would echo what Kristen and Paul have said in terms of the challenges at a local level. The other element for us is the adaptation issues beyond flooding. When you get down the granularity it becomes a lot harder to try to understand how we deal with those and how to get the capacity and the knowledge within service areas around some of the more subtle elements of adaptation that need to take place, around some of the impacts of heatwaves and some of the smaller elements as well to understand how they affect us. The focus on large engineering solutions for flooding that is required has tended to take the focus away from the other elements of adaptation that need to be addressed; some of the smaller elements around road surface manufacturing, how those can be altered; the role of SuDS, how you get those into much smaller levels, community levels, to try to affect local insurance impacts. That, for us, is how we get that knowledge down much deeper into service and professional areas.

Alex Nickson: I would say it is about how we mainstream delivery. Government has brought about a very unifying focus on growth and jobs. All of us in our day jobs are looking at how our particular policy or project delivers growth. In the same way, I think perhaps if we have the same approach with adaptation, we could implement at a far greater rate. Am I missing an easy opportunity to deliver some incremental adaptation here? What is the disbenefit of me not considering it at this moment? If we just mainstreamed it and stopped believing that adaptation is going to be delivered through enormous great concrete barriers on the Thames or new tidal reserves or something like that, it is about small incremental adjustments with a view to the longer term. If we could just mainstream it at that level I think we would make significant headway. That would be my recommendation.

Q12 Chair: I am sure you have had all had a chance to have a look at the Adaptation Sub-Committee's report that was published last July and there will be a further report coming through this summer. In terms of the assessment that they made, do they have it right? Do they have it wrong? Should more weight have been given to various aspects? I would like your feedback on that report, please.

Kristen Guida: From our perspective, we welcome the Adaptation Sub-Committee's analysis and the role that it plays in terms of scrutiny. Among our stakeholders it is also very well respected and it is findings are well respected and so I think we are broadly in agreement with them regarding accountability around flood risk management, about understanding better around the economic benefits potentially from adaptation goods and services and so forth, but also around the need for lots more information about how well, for example, emergency services can cope with current extreme weather and so forth. There should perhaps be a more spatial aspect to it because it tends to be very sectoral. Maybe this a question for the climate change risk assessment they are going to be doing for 2015, but, thinking about how not all of the UK is affected the same way by extreme weather, I think that is useful to know.

Paul Crick: I would agree and I particularly welcome the Committee's recommendation to review capacity now and in the longer term. Just building on the spatial planning point, we know we have a growing population and an ageing population and, if you look at how we are going to provide resilience and adaptation to our communities at a local level with reduced resources in an increased number of incidents, I think that is a key issue that needs to be addressed. That is a particular recommendation that we would welcome at KCC.

Martin Budd: Just following on from Kristen, we welcome the report. I think it gives some interesting and useful analysis for us at a local level and provides us with the arguments in terms of the discussions we are having and provides an evidence-base for discussions we have within the local authority. I would echo that there is that spatial element in terms of how climate change will affect different parts of the country and, therefore, how different parts of the country need to prioritise their actions and understand what adaptation subtleties they need to have. That is an interesting discussion that we need to have and I think the work of the ASC is important in us understanding that and being able to make those interpretations.

The emphasis around well-being within the report and the economic implications of adaptation is quite vital at the current time when growth is so important for our cities, and certainly for Hull and the opportunities that we have within the city and the transition to a lower carbon economy going forward. Understanding how adaptation can enable that to happen can be a benefit and the opportunities that effective adaptation solutions can provide in terms of creating jobs and ensuring inward investment I think is very important.

Q13 Chair: Are there any disagreements with the conclusions of the report?

Martin Budd: No.

Chair: All right. Thank you. Mr Nickson?

Alex Nickson: I would say I am okay with what my colleagues have said. I think it is good that they are doing what they are doing in the way they do it. It is interesting they are not accepting evidence at face value. They are digging behind stuff, and that raises some interesting inconsistencies that I think this Committee is interested to explore further.

The only minor comment would be I think their reports are sometimes difficult to follow up on. There are a lot of recommendations and if they were written in a way where the recommendations or the key points were made more clearly, we would be able to see who they are assigned against and how those bodies are following up and reporting on them. If they could be easily monitored they would have a greater impact.

Q14 Mike Kane: From one Select Committee Chair to another, Margaret Hodge is in *The Daily Telegraph* today on the Public Accounts Committee saying that current levels of spending are not enough to maintain flood protection going forward and that 5 million homes are at risk. How many homes are at risk in Hull, Kent and London particularly? What has been your level of cut in terms of this work?

Martin Budd: In terms of Hull, all of the homes in Hull are potentially at risk. Every home in the city is either classified as medium or red in terms of its risk. Because the city sits in a bowl, everything from the outside drains towards Hull, so that is an issue for us.

In terms of investment, we have done quite well out of the investment that has been available. We are quite well-defended. The tidal surge in 2013 showed what significant weakness we have on the front and that project has been prioritised by the Environment Agency and our LEP has put some match funding in there to ensure that issue is resolved.

I would have to come back to the Committee with figures in terms of how much money has been potentially been cut from the Hull area specifically. I do not have those figures with me, but because of the strategic importance of Hull as a city we are quite well-defended from the estuary and certainly from the River Hull as well. I think you are quite right, and the points that were made by the NAO today, that constant maintenance is the key thing going forward.

Paul Crick: Yes, certainly. I mentioned earlier that Kent has the highest collective flood risk in the UK, which we knew when we did our strategic flood risk assessment. About 70,000 properties are at risk from some sort of flooding, whether it is coastal flooding, fluvial flooding, groundwater flooding. In the winter of 2013-14, 929 homes or businesses were flooded as a result of the storms. I do not have the details with me as regards specific budgetary numbers but—I would say this, wouldn't I?—there is nowhere near enough money to provide the flood defences that we need for those 70,000 properties, so we are spreading the jam extremely thinly.

> **Q15 Mike Kane:** In terms of the Flood and Water Management Act 2010, to ask a more positive question, in a time of austerity what innovative programmes have you brought forward to improve flood defence?

Paul Crick: Certainly in Kent, it is a shame it is not ring-fenced, but there is money nevertheless from DEFRA to implement our flood risk management strategy. One of the benefits is that we work much closer now than we ever have done with the Environment Agency, with utilities, with district council partners in developing flood defence schemes and bringing forward different programmes—flood defence grant-in-aid programmes and programmes where partners collectively put money together to deliver schemes. Gone are the days of 100% funding for flood defence schemes. There is an awful lot of innovation going on, to put heads together, to put money together, to bring forward flood defence schemes that we are doing as a result of undertaking the flood risk management strategy in the first place. There are local plans in place in all different parts of Kent—I think there are five in all—which feed into the flood risk management strategy and we are implementing plans as a result of that.

> **Q16 Mrs Spelman:** Am I right that as local authorities you cannot answer this question about whether there was more money in 2011 versus 2013-14? You were cut because it is a bidding process into a pot and the money spiked upwards in 2011 but was projected to fall by 50% after that. You mentioned the partnership schemes. Are there schemes that you as local authorities have been able to unblock as a result of the change in funding? I am just interested to know whether the change in the way flood defences were funded has enabled you to get schemes out of the blocks that previously you could not get funded.

Paul Crick: Yes, it has. I do not have the data with me, but I know it has. I have been at Kent since 2010 and we have delivered and are delivering more schemes than we have done in the past as a result of this joint working. It has really raised the profile, being a lead local flood authority, undertaking the strategic flood risk assessment, understanding what the issues are and how vulnerable people are at a local level has raised the game. I would say we can deliver an awful lot more schemes and I have a list as long as you like of flood risk schemes that would protect a lot of people from flooding, but it is about maximising resources and where the greatest bang for your buck is, effectively, which is what we are doing all the time.

One of the issues is in some instances we are bidding against the Environment Agency for flood risk money where they are the final arbiter of where the money goes. That is an issue that perhaps the Committee might wish to explore further.

Martin Budd: We have been able to use RDF funding as well for some of our schemes.

Chair: Can I ask you to use the microphone just a little bit closer?

Martin Budd: Sorry. We have been able to use the RDF funding for some of our SuDS schemes outside the city and really partnership working is integral to addressing flooding within the city. We are a very tightly-bounded city and all of the water from the outlying villages within the East Riding of Yorkshire flows into and through the city and out to the east. That has to happen, so the SuDS schemes were developed within the East Riding and we share the houses that we can use in terms of counting towards the funding.

The one issue that we do have within the city is you can only count a house once for a particular type of flooding. If we use it for village schemes, very few properties within the village would be assisted but obviously a lot within the city and we have within the city four different types of flooding that we have to try to provide some adaptation against. Therefore that is certainly an issue for us and certainly a concern that we have within the authority. In discussions with the East Riding and the Environment Agency, we feel that at some point we will run out of houses that we can count towards flood scheme in terms of mitigation. I think that is quite an issue where you have cities where there are multiple flooding sources and you have that limitation.

The other element is in terms of the funding. The number of houses it included stops at 2012 in terms of what you can count. As we have an agenda of growth, we need more housing within the city and more business development. How do you enable those to be counted within mitigation and the adaptation process that you are doing? You need to be able to pull in a new development into your adaptation and to be able to count those as well, because while the properties will be built to new building regulations there is still a threat there from some of the flooding sources that are out there.

Alex Nickson: I had a couple of comments I wanted to make about the partnership funding mechanism. Our key problem with it is the way that it values infrastructure and businesses. In the cost-benefit analysis model they are valued at one-fifth of the value of a home. So in London, for example, we have done all the easy flood risk management projects. The ones that are left are the really difficult ones that are expensive or need to be delivered as part of a regeneration of an area, and even though we have the most properties at risk when you take 33 London boroughs as opposed to a county council, we do not secure the amount of money we need in proportion to the risk we face. Part of that is we are slow in developing a pipeline of projects. Moving to a six-year flood budget rather than an annual budget is a big step forward, but you need the capacity within the boroughs to develop those projects to take them forward.

The other thing is the valuation. It seems to be ridiculous that projects that have a 6:1 benefit value do not get funded, whereas in other areas of the UK we happily fund projects that are 2:1 cost-benefit analysis. Increasingly what we are looking at is not just delivering flood defences as a comforting concrete wall between you and something wet, it is about using green infrastructure that enhances businesses, enhances quality of life, attracts and retains inward investment. Some of that is just not captured and valued because the partnership funding score's ancestry is in coastal flooding and it is designed to reduce the total number of homes, so it is about quantity rather than perhaps the quality of flood risk reduction.

Q17 Mike Kane: The point I am getting at is that if you are bidding to European regional development fund agencies, Government and environmental agencies, you also have pressure on your local government resources. How much of those bids are ring-fenced or are there moneys being diverted to other areas of local government? Being a Mancunian MP, I am particularly interested in how budgets are devolved down to local authorities in this area.

Martin Budd: Certainly within the RDF we set the agenda at the moment with our Local Enterprise Partnership. Certainly within our LEP strategy flooding was identified as being a key issue for businesses within the viability of the city, so we have been able to get match funding through the LEP. That feeds in through into our ERDF strategy and our approach to European funding—flooding is a key source of income that we need to bring in, and that should be focused around and linked to the growth agenda.

I think within local authority we try to draw in as much funding as we can and whatever partnerships that are out there we will work with to try to pull in funding, and try to ring-fence it because it is such an integral part of the viability of the city and its future.

Q18 Mike Kane: I will push on. My final question is: in the last few years has co-operation between local government, local authorities, flood defence authorities and emergency services improved?

Paul Crick: Absolutely. From my perspective without a doubt, and certainly when you have an emergency situation over a long period of time you do get a case of everyone pulling together. Since we became the lead local flood authority in 2010 the relationship with those authorities has really blossomed. Personally, I have a very good relationship with all the agencies, as I know my team have, and it is a real positive to come out of this.

Just on the budget thing, if I may, I mentioned earlier about the flood risk management budget that we have passed to us from DEFRA. That is un-ring-fenced and I have to fight to make a case for that every year. I have succeeded every year in getting every penny that has been allocated, but the fact is un-ring-fenced does present a real challenge.

Alex Nickson: I just wanted to make a comment about resilience partnerships. They do a wonderful job, but they are response-focused. Their raison d'être comes from the Cabinet Office and the Cabinet Office's definition of resilience is how quickly can we pick up the pieces and get back to normal. For me resilience is about how we can avoid or limit the damage, respond to it effectively and then return to a more resilient place afterwards so that we are more resilient again to the next event. A lot of resilience forums are more about emergency response than they are focused about limiting the original risk. I think that goes back to one of my earlier comments about how we can mainstream adaptation back in. That for me is going to be a major challenge because all of those organisations that sit around the table are themselves resource-challenged. If we are going to reduce risk it is better to start at the front rather than look at how effectively we can sweep up behind.

Mike Kane: If we could only do that with the health service.

Q19 Caroline Lucas: I wanted to come back to funding, I am afraid, and to press you a little bit more particularly around the changes in Environment Agency funding or the impact that has on the local authorities' adaptation work. On the one hand there are some fairly horrific headlines around 800 staff gone—20% of the flood defence staff. I know at the same time there has been some temporary funding—£270 million that was given after 2013-14. Can you give us a sense of what the net impact is so far in terms of what is happening in the Environment Agency?

Alex Nickson: I do not think we can, because the restructuring has not bitten yet. The restructuring becomes operational from early next year, so we have not seen the impact of it. I would have some concerns around losing that middle strategic tier where you need to have a strategic perspective around water resources, so both flood risk management and the provision of water resources. There is a vital critical capacity there you need. If that is centralised at the national level that is fantastic, but you do need to retain that core local competency to be able to develop and deliver the projects. The Environment Agency put a lot of effort into creating what they call partnership support officers who are people who work with the local authorities to help them identify and develop schemes, and then those are the schemes that then go forward for bidding for the national flood pot. It is how well those schemes are justified as to whether they go forward or not. We need capacity across that whole range, from local officer to strategic perspective, and as long as that occurs then that is fine, but we do not know the impact of the restructuring yet.

Paul Crick: I was just going to enhance or agree with what Alex was saying. It is right in that capacity at local level is absolutely key. We need that capacity within the Environment Agency. We need that strategic local capacity in order to develop flood risk management schemes.

Q20 Chair: Is the capacity there?

Paul Crick: It is there in pockets. I think there could be more but certainly in helping us to develop flood risk management schemes that we are responsible for, but also flood risk management schemes working with the Environment Agency on fluvial schemes, which they are responsible for, that we want to also see implemented to protect our communities. We need that capacity and it is there in pockets, it is very thin at the moment and I would certainly not wish to see it eroded any further.

Martin Budd: As Alex and Paul said, it is where we are at the moment. We have always been very successful in terms of flooding, in terms of being able to work very closely with the Environment Agency to develop the schemes that are required for the city, but there is certainly a concern that, as the changes start to take place, capacity will start to disappear. More of that will fall back on to the local authority to try to find the resources to do that. We certainly are developing skills around the modelling that we can do and the justification to benefits, but we still need that capacity within the Environment Agency to do that.

Q21 Caroline Lucas: My second question was about how well the Environment Agency allocates funds to projects in a way that reflects local priorities.

Martin Budd: Certainly within Hull our view is that at the moment they allocate them quite well. We have benefited quite well from the funding that has been available, particularly the responsiveness from the tidal surge of 2013 and after the floods that we had in 2007 as well.

That has galvanised changes within the Environment Agency but also within the statutory providers like Yorkshire Water, who are responsible for a lot of the pumping in the city. It is very key for Hull because we have no gravitational flow, so we need pumps to move all of the shared rainwater and sewage around the city and out to the pumping stations. That is critical for us, that relationship, and it is more than a relationship within the Environment Agency, it is a relationship with the statutory providers, and with Yorkshire Water in particular.

I think there are certainly some concerns we have in the city around Yorkshire Water, in terms of their teams and the ability for them to have a holistic approach about how their sewage moves and is operated in the city—linking the pumping teams with the pipeline teams and bringing that all together. The investment that we need is not just about preventing flooding in terms of the big schemes that the EA is responsible for, it is also how we deal with sewage problems going forward in the city as well and with the growing population and housing.

Alex Nickson: Until we see the autumn statement so we know what projects are being funded nationally, it is a difficult one to call. I would suggest that, at the moment, a lot of the burden is on us to develop good schemes that have a high confidence in deliverability. In London we have had this partnership called Drain London, which was a project that brought together the 33 local authorities to try to understand surface water flood risk in a shared approach. We have been very successful in identifying projects, but it is a lot of work getting them off the ground, particularly in complex, dense, urban environments. We are very reliant on local authority funding but also what is called the Local Flood Levy, which is the local authority contribution towards Environment Agency funding to top up and enable those schemes to happen, to get them off the idea in someone's head into a solid funding bid with community support and delivered cost plans behind them as well.

Paul Crick: I would say the biggest issue is around the partnership funding, where there is gap funding. If you recall I said at the start that the Environment Agency very rarely now 100% funds schemes, so where does that gap funding come from? Where schemes are to protect residential properties they get a higher benefit-cost ratio than if they are to protect business premises. So flood defence schemes that are there to protect business premises require a far greater proportion of partnership funding. It is a real challenge to get that partnership funding, whether it is through perhaps additional precepting, which certainly is not popular locally, certainly with members, as you would expect. Is it through development? Again, there are so many burdens on developers through 106 and through CIL and everything else, or is it through maybe LEP funding? There are pressures elsewhere on the single LEP growth funding sector, so it is a real challenge to meet that partnership funding gap, and I would say that is a key issue going forward.

> **Q22 Peter Aldous:** On that point, bridging that gap, where you are looking at where a business benefits from a particular scheme, where that scheme has community benefit, is there any means you might encourage the business to invest in that scheme themselves in return for some sort of fiscal incentive or tax deduction?

Paul Crick: Yes, that is always possible, but what we are talking about here is multi-million pound schemes and for generally small and medium-sized businesses—that is an awfully big ask for them to do. Yes, we do ask businesses. We work with them, and there are certain schemes I am thinking of along the Medway valley catchment, but there is no way that businesses would be able to fund £17 million, for example.

Q23 Peter Aldous: But making a contribution towards it in return for some tax advantage to them?

Paul Crick: Absolutely. We mentioned earlier about innovative ways of looking at funding, European funding and all sorts, and anything that we can do to try to meet that funding gap. As I say, we work with businesses, we work with partners, district councils and so on. That is definitely something worth looking at and worth pursuing.

Q24 Mrs Spelman: Just on that, around the country partnership schemes have got out of the blocks with the partnership with water companies that would have to protect their clarification plants for drinking water from sea water inundation. You are surrounded by coast, as you point out. They have offered multi-million pound contributions to those schemes. Do you have partnerships with the water companies?

Paul Crick: Certainly in Kent we do not have any big schemes. I think it is about a £50,000 scheme. It is all very small-scale stuff that we have done with water companies so far. We have good working relationships with our water companies in Kent, of which there are five, but we do not have any multi-million pound partnership funded schemes off the ground at all.

Q25 Chair: On that whole issue of funding from a local authority's perspective particularly, how much are you in competition with other capital projects and how much weight is attached by the chief executive and the council as a whole towards these schemes? Are they in competition with other capital schemes in terms of money for that gap funding, and how does that play out in terms of the politics of it and awareness of local authorities as to the importance of this particular agenda?

Martin Budd: Within Hull the threat of flooding is quite significant, and therefore there are agreements within the authority at a political level across-party that flooding needs to be addressed and that funding needs to be made available for that. That is reflected through into our local enterprise partnership as well and their understanding of how important it is to make the city resilient to flooding—and is represented by the match funding they have put in—but also in the wider Humber context, and the challenge that that presents across the whole of the Humber area. So it is quite key to our economic growth and the support is quite clear. That is one thing that we do not have any issue with, within Hull, is that common agreement around funding for flooding and the priority that it has within the organisation.

Alex Nickson: It is also down to the capacity of officers. We have at least two boroughs in London where there is no flood officer, so there is no one developing projects. In the next six years they do not have any projects. We hope that they will be able to get some officers in and start to respond to that, but at least for the next three years they are not going to get any national flood funding because they have no projects to offer.

Q26 Chair: Is leadership an issue?

Alex Nickson: Yes, at all scales.

Q27 Chair: My understanding is that the ERDF programme has just recently allocated something like £82 million in respect of Thematic Objective 5, which is climate change for flood risk management. Is that opportunity that exists very much on the agendas locally in terms of trying to download that money?

Kristen Guida: Yes, definitely, I think everybody and his brother is trying to reach them for that funding. It is also important to note that it is not just about the climate change budget. Thinking about business support and innovation and other areas, you can make some of those links as well.

Q28 Martin Caton: Alex, in your submission you point out that there are potential opportunities from climate change adaptation. What are the main opportunities and how would you like to see them promoted?

Alex Nickson: That is an excellent and complex question. The main thing is we will see a gradual reduction in winter temperatures over the century. At the moment, winter deaths are a very significant health burden upon the country, so we should expect to see a reduction in that. Some of that will also be used for reduction in fuel poverty. We should see the ability to grow more varied crops. The extreme weather masks how successful we will be on that but presumably we can adapt our growing systems. Those are the two that stand out, but I would suggest that most adaptation benefits are not going to fall in our laps through no action of ours. We have to progress schemes and make opportunities available to reach the full benefits of them.

Q29 Martin Caton: How could local businesses best be assisted in adapting to climate change?

Alex Nickson: This is a very tricky one. All on the panel here struggle to reach SMEs on every level or on any particular issue. They are head down, fighting day-to-day and it is really difficult to attract and retain their attention. We were speaking earlier about the use of European funding to support businesses. There are a plethora of organisations out there that are able to offer support on energy efficiency programmes, waste minimisation and so on, and they struggle really hard to access SMEs. A few are starting to make headway, but on adaptation there is no good offer on the table from providers to come in and do a resilience audit for a business or to look at their supply chains and say where there is competitive advantage, for example. This is something we had hoped to see appearing through the ESIF—European structure and investment fund—strategies that the LEPs are producing, but I am not aware of any LEP having really encouraged that or money going to any of them.

Q30 Peter Aldous: Have you involved the insurance industry in that?

Alex Nickson: That is a difficult one. Insurance is a bit like a casino. The house never loses, does it? Yes, I think the problem with the insurance sector is that the next year you may choose to go with another insurer, and that is one of the benefits, say, for Flood Re. We finally have a pool of properties that are consolidated in a way they cannot jump to a different insurer next year, so it makes sense to invest in property level flood protection, for example, because they will stay in that pool and they will be reinsured through the reinsurance pool. With a business there does not seem to be any incentives and I find this very perverse. Insurance companies own about 17% of the UK stock exchange. You would think it would be in their interest to drive resilience through the assets they own and the people they insure to enable more predictable claims, and yet we are not seeing that happen.

Q31 Martin Caton: Climate UK has launched the business resilience health check website. What has that been created to do, and how successful has it been?

Kristen Guida: Yes, it was created in partnership with business in the community as well, a while back, and it helps to answer your previous question. It is an online interactive checklist that goes through business resilience as a whole, so thinking about climate change and potential weather issues but in the context of wider business resilience. We found that that is a lot more useful in terms of talking to businesses. Any organisation, any business can go through it, tick the boxes and then you can get a bespoke report that talks about the areas where you might want to look at insurance and protection measures and so forth, the types of things that might be helpful to you. We have used that in terms of trying to connect with smaller businesses and so forth. We have used that in various different ways. One strategy that we have had is to work with hub organisations, so we cannot talk to every SME but we work with people like the Chamber of Commerce, BITC, the Federation of Small Businesses and other local groups. In Kent, I think they are using it as part of their EU-funded business support programme.

We also created an accredited qualification for business advisers in how to use the health check with their smaller business clients, to help them to figure out how to incorporate that into their wider support to small businesses. It is a free tool, it is available on the Climate UK website and we just encourage people to use it. I cannot remember offhand, but we have had I think nearly 2,000 hits on the website. It is part of the wider programme of business support that we provide.

Q32 Peter Aldous: If we just look at the split of responsibilities when it comes to adaptation, do you feel that that split between local and central government is clear at the present moment? I can see some shaking of heads, so I might just move on and say what can be done to improve it?

Kristen Guida: I already mentioned earlier about the fact that there is a huge accountability gap there, and I do think there needs to be some incentive. We have local areas supposedly having responsibility for adaptation but there is no real explicit responsibility anywhere. If you look at organisations in the health sector—health and wellbeing boards or other types of organisations—they all may have a role to play with regard to adaptation, but there is no explicit responsibility there. Thus, there is no monitoring of what is going on or no collection of information. I think that is really what needs to happen, there needs to be incentives, either carrots or sticks, to make that happen.

Q33 Peter Aldous: Who should be taking on this role?

Martin Budd: There is an element there for Government to lay out how adaptation should be addressed throughout the country and who should have responsibility for it. The NAP sets out very clear responsibilities around areas, but unfortunately our view is that it does not have the teeth that it could potentially have. It has some very good actions in there and it very clearly sets out the programme of work that we need to do to address adaptation, but because there is no compulsion upon organisations within there to take action, there is certainly a weakness within the NAP at the moment, and certainly an element of monitoring and clearer time scales would be really effective.

Once organisations know what their responsibilities are it is much more likely they will take action. Certainly within Hull we have used the NAP around health and wellbeing boards to open that discussion of health and wellbeing with our public health colleagues to say, “This is what is in the NAP. You may not be aware of it. These are the responsibilities that fall out of this for you. How can we work with you to help support and develop those actions?” Once it is much clearer, then the action will follow, but at the moment it is unclear.

Kristen Guida: But that depends on having somebody like Martin who can make that connection, and that is where we have a problem. It is not a coherent strategic approach. It is quite piecemeal because what we are looking at is all voluntary, and you are not going to solve problems like this with a voluntary way of doing it.

Q34 Chair: On that point, is there an issue in terms of DCLG and funding to local authorities in terms of this increasing trend that local authorities are only there to do what is absolutely compulsory for them to do? Is that part of this whole debate?

Kristen Guida: Absolutely.

Alex Nickson: To deliver adaptation, if you are a business, you could say that your job on adaptation is just to make sure you do not store your stock below the level of the flood line. You have done your bit to check your suppliers are doing their bit, but adaptation is a network of networks. You have to believe that your energy company is making sure your energy supply is robust, your water company can provide you water when you need it, and your local authority’s emergency services know that you are a vulnerable person living in a vulnerable household. It is a network of all these really complex interlinkages and the general assumption is that it is just happening. People are not in the streets demanding, “What do we want? Adaptation. When do we want it? Before the next statistically significant event.”

There is this general assumption that it is happening and it is there and the problem is it is only during extreme weather we find that it is tested. We pat ourselves on the back when we have a great emergency response, but it is paper thin and at times of economic stress it is gossamer thin. This is our problem. For people like Martin and I, our job is to spot where the critical interdependencies are, where the real vulnerabilities are, and to work on those. It is like the economy, it reaches into every bit, and therefore it is a diffuse and very tricky thing to enable.

Q35 Peter Aldous: Have you made these concerns known to Government and if you have what response did you receive?

Alex Nickson: The exact role of the local adaptation advisory panel is to talk about these things. The problem is you cannot nail down a lot of it and say, “Person A is responsible for this vital connection here,” except in a few instances where there are obvious ownerships, and generally those are picked up through the adaptation reporting panel.

Kristen Guida: It is another important point that you are sitting here with three councils that are a couple of standard deviations above the mean in terms of their capacity around climate change, especially around adaptation. That is an important point to make—there are loads of others out there that do not have the willingness, the capacity, the political will, money or the resource to put into this. That is why the voluntary approach of the national adaptation programme, while it is really impressive that we have it already, is a problem.

Martin Budd: At the moment there is not a clear understanding of how far the tentacles of climate change reach into all service areas and within other parts of society and that is part of the problem. So much of adaptation and of climate change is at such a small level in terms of experience and how it affects the subtleties of services that the flooding becomes almost the easiest adaptation to deal with, because you can see it affects lots of people all in one place and you can find a big engineering solution for it.

When you move on to things like heatwaves, it becomes much more individual households spread across a wide variety and how you define an adaptation response within that is a lot harder. That is part of the challenge of adaptation once you move into the much smaller elements, it is that subtlety and how you find out what those linkages are, how you draw an organisation together to address them. That is the real challenge that we have.

> **Q36 Peter Aldous:** Adapting to climate change is not a peculiarly English and British problem. Are there any lessons to be learned from elsewhere?

Kristen Guida: Yes, I feel lucky enough to have come to the UK at a time when the UK is leading on adaptation to climate change. It has been seen internationally as the pioneer in this field, but other countries are starting to catch up quite a bit, I think. New York City as a matter of fact has some really good stuff going on, but what is happening is that they are learning from what has happened in the UK. The partnership model Climate UK has been adopted in other countries as well. The flexible adaptation pathway approach has been used in other places but what is happening is they are taking these ideas, putting resource to them and making stuff happen.

> **Q37 Peter Aldous:** The final question I have is what links do your respective organisations have with national infrastructure network providers and are you able to influence their adaptation plans?

Martin Budd: Certainly for Hull we have a very good relationship with Yorkshire Water. Northern Powergrid have changed their business model to have more area-based teams and are making their facilities a lot more resilient. Certainly we feel we have a good relationship with them that we can build on and then develop projects going forward.

Paul Crick: I would agree with that. From organisations such as the Highways Agency, protecting road infrastructure, we have a nuclear power station so in terms of protecting that—which is obviously very key—yes, we have excellent working relationships with the key infrastructure providers.

Alex Nickson: I would say mixed. Some of them are great and very open. Some of them hide behind national security as soon as you start to probe the problem. I think our greatest problem is understanding the interdependencies between things, where we are likely to see cascade failures. So London Resilience and London climate change partnership ran a series of workshops they called Anytown, which was an effort to bring together the different emergency responders and utility providers and run through scenarios to say, "Right, for four hours we have had no power. How is everyone doing? What about eight hours, 12 hours or 32 hours?" to try to understand these interdependencies. It is a lot of work and a lot of agencies say, "Well, you just have to trust us that we will make our system resilient and we will trust our regulator to allow us to fund it". As I think the Adaptation Sub-Committee report picked up, the energy companies are doing better than some of the others. This is a key concern because it is very difficult to get behind them. They just have to say, "You just have to assume there is no power, no water, no telephonics and plan for that. You let us worry about how we protect ourselves" and I am not sure that is a comfortable position for someone to be in.

Q38 Chair: One further question on this from me. Who do you report to? Are you required to report to anybody? How do you report what progress you are making locally?

Alex Nickson: Shall I kick off with that one? At the Greater London Authority, we published an adaptation strategy and we are about to update that, and we volunteered for the adaptation reporting power, so we will be submitting a report to DEFRA saying how we have moved on from where we were in 2011.

Q39 Chair: So you report directly to DEFRA?

Alex Nickson: We would report to DEFRA, but through the strategy we will publish a public update report that will be available to the public and all our other stakeholders.

Q40 Chair: So would all local authorities be doing that?

Alex Nickson: No. The adaptation reporting power is now voluntary, so not everyone has to do it even if they signed up to do it in the first round.

Q41 Chair: Would it be helpful to have it across the board, with everybody doing it?

Alex Nickson: Certainly when we had the local area indicator, that required boroughs and local councils to report on things there seemed to be a lot more focus on it.

Kristen Guida: It was happening previously under national indicator 188, which was about planning to adapt to climate change. It was the adaptation reporting power for local government, effectively. I think progress on it was quite patchy, but at the same time it definitely created a lot of activity, a lot of experimentation, a lot of capacity building.

Paul Crick: In terms of our accountability, it is to our members. We have a flood risk management committee, but also I have to produce reports for my cabinet and my county council just on progress with our role as lead local flood authority.

Q42 Dr Whitehead: What is your experience with the Environment Agency and advice on development applications? Have authorities closely followed the Environment Agency advice or have there been deviations as far as development applications are concerned?

Martin Budd: Within Hull we have very closely followed the advice of the Environment Agency, because the city is so vulnerable there is that understanding that the advice the EA provide is important. Certainly our planning colleagues are very closely linked up with that and follow that guidance within the decisions that they make.

Q43 Zac Goldsmith: I am barging in very early on my question, but I wanted to ask in respect to an earlier question whether a local authority that does not take the advice of the Environment Agency has a measurable impact in terms of insurance? Does it make it harder for the new homes that are built against EA advice to be insured?

Martin Budd: To be honest I am not sure. Within Hull there is an issue around insurance within the city because of the vulnerability of the city. Even properties that are built within EA guidance still have that challenge because of the way the city is classified and the level of vulnerability that the city is exposed to. Yes, there are people that make a decision not to be insured because the excess is so large that it becomes meaningless. The same applies to the business sector as well within the city.

Q44 Zac Goldsmith: Does anyone else know?

Alex Nickson: I thought that any property built against agency objections on the grounds of flood risk would not be liable to go into the Flood Re pool and therefore would have to go to the private market for insurance, which would be very expensive. I think that was any property since 2009, but I am not dead certain on that one.

Paul Crick: We are an upper tier authority, so we are not the local planning authority, but I do have a little bit of information here. The EA in Kent do not have a track record of objecting to planning applications and when they are silent that is taken as acceptance. As I say that is purely anecdotal evidence from the district councils. We are not a local planning authority; we are just an upper tier authority.

Q45 Dr Whitehead: Do you have any information about how your districts are doing on this?

Paul Crick: I know that when the EA do comment then the district councils do take those comments on board and tend to go with the EA's advice, but the issue is the EA rarely comment. Certainly they generally comment on applications of a certain scale and not all applications.

Dr Whitehead: You have anticipated my next question.

Paul Crick: Yes, so they generally only consider sites over 1 hectare outside the flood plain, and anything less than that is standing advice.

Q46 Dr Whitehead: Yes. That does indeed anticipate the thrust of my next question, which is this: what is the point at which a development becomes a minor development and therefore is unlikely to receive any kind of EA advice, even if they are remaining silent in general? To what extent is there any question of review of cumulation of those minor developments so that they may have an impact? I note in the Committee on Climate Change adaptation report that they say that cumulative impact on new development and future flood planning are assumed to be zero for the purpose of investment planning but is in fact unknown. Is that your understanding?

Alex Nickson: I think you make a good point. We do not worry about the big ones because they get very closely scrutinised and they have the resources to model flood risk in great detail, but it is the cumulative small ones that are breaking the back at the moment. Thames Water Authority are working with us on a project and they reckon in London over the last 30 years we have seen a 20% loss of permeable space. So this is the front gardens being used for parking, with patios and conservatories on the back, which individually no sane person would object to, but cumulatively they add up to many Hyde Parks of concrete, and that is now all drained into a combined sewer that was designed and built in 1850 for a city with one-quarter of the population of today, where showering was done once a month rather than as a daily pastime to relieve the stress of urban existence. We face some very significant challenges and the focus on fluvial and tidal flood risk has served us well for many decades, but we now need to bring the same level and perhaps more focus on sustainable urban drainage, surface water, groundwater and sewer flooding.

Paul Crick: I absolutely agree with Alex. The cumulative impact is not necessarily where the development is. Often it is downstream in communities that have not perhaps had any development for years and years and yet the impact of the additional development upstream, the lack of sustainable urban drainage systems or the lack of adequate water catchment then impacts on those communities downstream. It is a very pertinent question that you have raised, because it is a key issue.

Martin Budd: I think certainly for Hull, we are at the end so to speak. As a city, we are very tightly-bounded, so we do not have huge areas for development, and where development is, it tends to be large-scale development. But all the water of the surrounding villages in the East Riding flows in to and through the city. That is the problem we had in 2007—we did not have the capacity within the sewers for the water that was falling on the city, never mind the water that was flowing into the city from the surrounding villages. We are developing some quite large SuDS schemes on the edge of the city to try to hold some of that water back so that the city can cope with what falls on it, and then allow it to flow through. It is a key thing. I think that catchment approach is at the heart of having an effective drainage approach, and with the small developments here and there it all adds up.

Q47 Dr Whitehead: Following Zac Goldsmith's intervention, does that have an effect on insurability? Everyone seems to have done the right thing in the size of the development but cumulative developments that have taken place makes for a problem that no one is monitoring or reporting on.

Martin Budd: Yes, I think you are right. That is not taking place. One of the issues as well in terms of the insurance industry is how they can change the way they assess risk. If we develop large-scale SuDS systems within the city to protect a number of properties how can that be built into the way they assess the insurance for those particular properties? They are a small-scale scheme but they can have quite a significant impact, and therefore we have adapted those properties in a different way, particularly with existing properties that are maybe are not built to existing heights, and therefore can be seen as more vulnerable than new developments. We can still take steps to protect them, but how do we build that into insurance and make it affordable to live there and affordable for businesses to set up and operate?

Alex Nickson: I was going to say the good insurance companies either use the Environment Agency's flood risk maps or have their own maps, and that is what they base their premiums on. The not-so-good ones base it upon historical claims and then there are some others who must base it on augury or something else. That is how the system works. I think we are heading towards an interesting test case where a new development built at flood risk goes ahead, gets flooded and then there is going to be a determination of who was responsible. Was it the local planning authority who granted planning application, was it the Environment Agency who did not step on it, or was it the developer who went ahead? We are heading towards an interesting test case and that will set a new precedent in insurance direction.

Q48 Mrs Spelman: I have just a small supplementary to that. You just said flood risk maps inform the insurer's approach to their clients in certain areas.

Alex Nickson: The better ones, yes.

Mrs Spelman: The better ones. Is there any evidence among the better ones that they go as far as prompting the clients in those areas to take the equivalent of target-hardening measures against the risk of flooding that then would reduce their premium, as with crime?

Alex Nickson: I am not aware of any. You are quite correct. If you are insuring your car for example the insurance companies say, "Do you park off the road?" and you would be like, "Yes, I do." They say: "Oh, marvellous, then we can offer you a 70% discount". Do they say, "Have you fitted fit-and-forget flood resilience measures to your property?" No. I think there are a couple of specialist ones who do that, but the changes tend to be minor in terms of reduction in the premium and may be more about the excess you might pay should there be a claim—so your excess is £1,000 rather than £5,000. That comes back to my earlier point about insurers not doing enough to incentivise the market.

Q49 Dr Whitehead: Just briefly, Paul, you mentioned that, usually, the Environment Agency do not comment, even on major developments, provided they are outside the flood plain. Is that because everything is fine so they do not comment, or is it your impression that that may have to do with what resources the Environment Agency now have to respond to anybody in particular and whether there is any impact on commenting on the cuts that have taken place in the Environment Agency resources?

Paul Crick: My understanding is it is a resources issue.

Dr Whitehead: As simple as that?

Paul Crick: Can I go back five minutes to where we talked about cumulative impact—I just thought of something? One of the things that we are doing as a strategic authority is this. When the districts are preparing their local plans—let us say they are looking at another 25,000 homes in 2031—a company would then give infrastructure delivery plans and we are increasingly now insisting that flood defence measures, or whatever, form part of district's IDPs. Then, of course the IDPs, inform the CIL charging schedule, so that is one way of us addressing the cumulative impact of minor developments—20 homes here, five homes over there. They all individually, through CIL, through roof tax, contribute towards funding flood defence schemes. It is just something I thought of and thought would be worth bringing to the Committee's attention.

Alex Nickson: I was going to say one thing that local authorities could do to their local flood risk management strategies is to almost identify where they have flood risk hotspots, where they know that the drainage capacity is very little and almost declare flood conservation areas. In the same way we have historic conservation areas you could argue that no new development would be allowed in the flood conservation area unless it was almost rain positive—it would absorb water to reduce the risk to others. These are the sort of innovative options we are going to have to take in the future if we want to have development and a net reduction in flood risk against population growth and climate change.

Q50 Zac Goldsmith: We have heard that the Environment Agency has been objecting to fewer developments and fewer applications since 2009. Is that also a cost issue, a funding issue, or is there another reason for it? Apologies if that was asked before, I came in late, but just following on from Alan's question, is that a funding issue or not, or is that even true?

Martin Budd: I am not too sure, to be honest. I think I would have to come back to you on that in terms of Hull.

Paul Crick: I do not know. What I do know is that the Environment Agency does not have a track record of providing evidence at an inquiry.

Chair: Sorry, they do not have a track record of?

Paul Crick: They do not have a track record of providing evidence at a public inquiry. So, let's say a district council refuses a planning application on EA advice. The EA then rarely back them up at a PI. That then creates issues for district councils themselves. Do they take the Environment Agency's advice and refuse a planning application to then fight it out without the backing of the Environment Agency at an inquiry and perhaps get stung for costs? That is again an issue. I am generalising on anecdotal evidence, but I do not know why the Environment Agency does not do that. Perhaps if they did that more often, if they had the resource to do that, then some of the decisions that have been approved where developments occurred in the flood plain may not do in the future.

Zac Goldsmith: To your knowledge there has not been a downturn in the number of objections being lodged? That is not something that any of you have noticed?

Chair: We must move on to the National Planning Policy Framework.

Q51 Neil Carmichael: The National planning policy framework is a very important document to some—or to most, I hope. It says it aims to meet the challenge of climate change, flooding and coastal change. Do you think it does, and does it have enough power? Who would like to go first? Kristen?

Kristen Guida: Yes, from what I remember of it, it has some quite high-level stuff around being prepared for climate change, flooding and so forth. I think it would be great if the criteria for viability of developments would consider the potential costs around severe weather and climate change or future climate change impacts and the benefits of adapting.

Martin Budd: Certainly within Hull one of the challenges that we have is low land values and therefore additional adaptation costs may be above what is statutorily required, which puts significant pressure on developments. It is a question of whether we develop or do not develop. Across the UK there are a number of local authorities where they have low land values and it affects the viability of developments. Therefore that creates, I suppose, a step in terms of some areas in the south-east where there are high land values but high opportunities with those land values. In areas that have low land values, that becomes quite a key issue for us.

Q52 Neil Carmichael: That point you say about low land values has an impact on agricultural land for flood defence issues, so what are your thoughts about how the value of that land is calculated against the cost of defending it?

Martin Budd: I am probably not the best person to answer, because Hull is an urban city that has no rural hinterland at all.

Q53 Neil Carmichael: Who has a bit of agricultural? Paul, you must have.

Paul Crick: Yes, we have. I do apologise, would you just repeat the question, please?

Neil Carmichael: As a follow-on from Martin's observation about low land values, agricultural land would be lower value than high-level development land, so that raises the question of flood defences and the cost of those against the value of the land.

Paul Crick: Yes, but Kent is a mixed urban and rural county. There are parts of Kent, particularly east Kent, which have considerably low land values. Other parts of Kent, predominantly west, have very high land values. I would echo what Martin was saying. Where there are low land values, including agricultural land, it is very difficult to levy additional burdens of responsibility in terms of funding infrastructure on developers. Certainly, agricultural land would include that in the mix.

Q54 Neil Carmichael: Right. Back to the NPPF. The key thing about the NPPF is that it only really works if there is a local plan. I would like you all to comment on the validity of that statement I have just made, but also the possible role the local plan might have in making sure that we are adapting to climate change. Alex?

Alex Nickson: That is a good question. We are very fortunate in London that we have the London plan, which is very strong on climate change. The NPPF contains all the right words in the right places. The problem is that planning is essentially a process of compromise where you are trying to achieve the highest common denominator across a number of constraints. It is about how well that is applied. In London, we are very fortunate that perhaps our land values are too high to enable some things to happen. Where there is a clear impact of flooding we are doing very well on managing it. The strategic large land developments that come to us we are seeing at least a 50% reduction in rainfall run-off, and sometimes as high as 70% or 80%. The local plan and the national plan are working very well there. The concern is at local level. When you get into individual units, generally if they fit the basics they go through. This is where the incremental war of attrition is being lost.

Paul Crick: A key issue is lack of five-year land supply, which a lot of districts do not have. Where they do not have a five-year land supply, then we get planning by appeal. Where we have planning by appeal, often then things like mitigation for climate change and certain standards like that get cut out by the developer because there is no requirement on them to provide it if they win by appeal, and that is a big issue. Certainly, I cannot remember which year it was, I think it was 2012-2013, 2013-2014, only one authority in the whole country had a local plan approved. There was a year's extension given, wasn't there?

Q55 Neil Carmichael: We are nearer 73% now. My question follows on from what you have just said given that you have 12, I think, district authorities in Kent, haven't you?

Paul Crick: Correct, yes.

Neil Carmichael: Or at least a lot. How are they looking in terms of the progress in making their local plan?

Paul Crick: If my memory serves me correctly, six of those 12 have a local plan in place and the other six have not.

Q56 Neil Carmichael: Right. What is the difference between the six that do and the six that do not in terms of the way in which they are dealing with adaption strategies?

Paul Crick: The six that do, most of them are well on their way to developing a CIL charging schedule, infrastructure delivery plans. They are proactive. They are on the front foot in terms of what they can insist on as part of a development. Included within that would be climate change mitigation strategies for new development. The six that do not, as I say, are very much on the back foot and reacting to perhaps the applications that come forward in advance of a plan being finalised. They are less in control.

Q57 Neil Carmichael: Your essential point is that they are less in control and need a plan?

Paul Crick: Correct.

Q58 Neil Carmichael: Martin, how are things going in Hull?

Martin Budd: At the moment, we are out for consultation with our local plan. The last one we submitted was thrown out because of the questions around housing numbers and the ability to deliver those, but we have existing policies in place around adaptation within the current framework. We are working on our local plan at the moment. It has just finished being out for consultation, so we are progressing on that. Adaptation is a key part of what is within the local plan.

Q59 Neil Carmichael: Kirsten, do you want to add something?

Kirsten Guida: Yes. I just wanted to make the point that Climate UK has just completed a series of training events for planners and other built environment professionals that we did all over the country. Obviously, the local plan in this regard or in any regard, I suppose, is only as good as the capacity of the planning officers to evaluate and deliver. That is where we have seen serious problems in terms of cuts to local authorities having detrimental effects to skills and experience within planning departments. There are obviously different pressures coming from all over the place, and planning officers are saying, “This is something we cannot really look at. It is too expensive.” It is these types of problems. That is an issue clear across the board.

Alex Nickson: I was going to come back. You said, “How good is the adaptation plan within the local plan?” For most local plans there is not one. Most local plans will not have an adaptation plan within the local LDF framework or whatever it is. They will touch on adaptation issues. They will almost certainly talk about flood risk and they will have the sequential test and various other things. They will talk potentially about overheating and they will probably have some nice words about green roofs and sustainable drainage.

Q60 Chair: What use is that if there is no action follow-up?

Alex Nickson: Yes, that is it. They are hooks to hang things on but when it comes to the actual planning application and you are negotiating around affordable units or lifetime homes and other sorts of things, the adaptation measures are normally the ones that get squeezed out.

To further that, I would also question the degree to which development control follows up at the end and checks that the promises made about what would be delivered are actually delivered. We know this because we have tried it. We have tracked one of our London plan policies and we have said this is when we implemented it. We made sure it was a long-standing policy and that there was time for it to be implemented. We followed it up. Yes, it went through at planning. Yes, it went through construction. But it is very, very difficult to find out whether the green roof that was approved on the planning application was delivered.

Q61 Neil Carmichael: Enforcement is the issue there, isn't it?

Alex Nickson: Well, I am just saying you can have all the policies you want at the front end, but if they are not being delivered and no one is following up at the end and they are signed off, then it does not matter how good your forerunning policy is.

Q62 Neil Carmichael: The NPPF says meet the challenge of climate change, flooding and coastal change. Now, the only real way you can do that is have a local plan that does that.

Alex Nickson: Yes.

Neil Carmichael: That is the point. The question is this: are authorities that have a local plan doing that? If not, how do you think this Committee can respond to that problem by making some recommendations?

Alex Nickson: Well, I would say that practically everyone will have to have done a strategic flood risk assessment to support their local plan. Where you have high flood risk areas, developers will have to be undertaking a site level flood risk assessment. There will be a comparison between the two. I think on flooding the story is probably for larger developments generally good, but you said an adaptation plan within the local plan. I would suggest for anything else it is probably not happening.

Q63 Neil Carmichael: Is that your experience, Paul, down in Kent?

Paul Crick: My one recommendation with tongue firmly in cheek would be bring back the structure plan.

Neil Carmichael: You are speaking as a county councillor.

Paul Crick: As a county councillor, absolutely, yes.

Neil Carmichael: So I am not surprised.

Paul Crick: Absolutely, but those policies were enshrined in the structure plan and, as we know, you cannot take a narrow-minded view or a very, very local view when it comes to flooding because of the impacts across the whole county of coastal flooding, fluvial flooding or whatever. Certainly, adaptation needs to be, in my view, on a far wider spatial basis than a district level.

Q64 Neil Carmichael: Right. Okay. Has everybody answered my questions on that subject?

Martin Budd: I would echo what has been said in terms of it is the enforcement that becomes a key element in terms of the building inspectors being able to not just do the building but to do the whole spatial area of the development. That is quite key.

Chair: I am very conscious of time. There are a very few quick things we must get in before the end. May I turn to Caroline Spelman and then we will catch up if we can?

Q65 Mrs Spelman: Just very quickly, you mentioned that local risk management strategies were too reactive. What would help them become more proactive?

Chair: Who wants to answer? We are running out of time.

Alex Nickson: Seeing as I said it, I suppose I should at least offer a solution to it. It comes back to my original point about adaptation being a network of networks. You would be looking at identifying where your high-risk areas are, whether it be flood risk, overheating and so on, and having a forward investment plan to tackle those. It is not about having a plan about how you go round and pick up the pieces afterwards. It is about identifying who is the best placed person or body to deliver that adaptation action to reduce the risk ahead of having to respond to it should the worst happen.

Martin Budd: I think it is a change around in the way we view risk in emergency planning. It is not about what we do when everything goes wrong. It is how we stop things going wrong or how we slow down the rate at which they go wrong so you have more time to prepare and enable. That is the change I think needs to happen.

Q66 Mrs Spelman: Then, just quickly, can I have a couple of clarifications from Paul? You mentioned your resilience forums. Do you work with adjoining authorities because the floods do not stop at Sussex? What is your resilience connection like to your adjoining local authorities?

Paul Crick: Yes, we have a network of resilience forums. The Kent resilience forum is set up on the police boundary so it includes Medway unitary authority as well, as are the other authorities in the south-east. We have fora where we work collectively across that. Certainly, they are looking to replicate what we have done with our Kent resilience team because it has been seen locally as being successful and as good practice. Yes, we do have a crossover with our other authorities.

Q67 Mrs Spelman: Then you mentioned, rather tantalisingly, you have a nuclear power station in your backyard—which is obviously a national asset—that has been decommissioned, Dungeness. Do you get the right support and advice from central Government when dealing with a national asset of that kind in relation to climate change risks?

Paul Crick: We have to date, yes.

Mrs Spelman: Okay, that is great.

Q68 Peter Aldous: I will be very quick. The Adaptation Sub-Committee’s progress report early this year pointed out that the majority of people who live in areas that are vulnerable to flood risk do not actually know that is the case. Does that mirror your views? Does it cause problems in bringing policies into practice? How would you improve the situation?

Kirsten Guida: That does mirror my own experience, although I think it is improving. The Environment Agency is quite good in that regard about being that stopping place for really good information in terms of maps and alerts and so forth. There have also been a lot of really good projects going on trying to raise community awareness—everything from working with local resilience forums that are thinking about how to communicate better with their communities to DEFRA's pathfinder projects. There is a really good one going on in Southampton at the moment. The Coastal Communities 2150 project is happening in Kent and Sussex and Hampshire. We are seeing it improving a little bit, but yes, I would probably agree that at the moment that is what it looks like.

Paul Crick: I will give you an example. Generally, people that live in the flood risk areas are only interested in whether they are flooded or not. I will give you an example. Prior to winter last year, one in four people in the 929 properties or the communities where those properties were flooded were signed up to the Environment Agency floodline direct warning; 90% of people who live in those areas now are. That just gives you an indication of what stimulates people to take an interest in it.

Martin Budd: Obviously in Hull everybody knows that they are in a flood zone. There is an issue around people that are signed up to the Environment Agency warnings. Even when you have experienced a flood it does increase, but also there are those that are not signed up until it happens again. There is also an innate human survival technique that kicks in. At the point of flooding, you are very concerned about it and very aware of it, but within a number of years you forget about that experience and how bad it was because you need to get on with your life. It is very similar to when you have a car accident. You are very conscious of how you drive for the next few weeks or few months and then after that suddenly you are driving how you used to and forget about the fact you had an accident. I think it is the same with flooding. There is that issue.

There are certainly challenges in adaptation, particularly around SuDS and approaches like people's approach to the threat that open water places to children when they are out playing. You have to have those discussions with communities so that they understand why you are putting in SuDS, the benefit of them and the lack of threat that they pose to the local communities. It is very much a local discussion that you need to have and you just take the opportunities when they arrive.

Chair: Right. I am conscious that we have two possible questions still to come. I will bring in Dr Offord first of all.

Q69 Dr Offord: This afternoon we have focused a lot on flooding, but this inquiry is actually about climate change itself. I wanted to take it to the other extreme to talk about hotter weather and the effects upon vulnerable elderly people. What is your assessment of the Government's heatwave plan and its effect upon vulnerable local people? That is particularly directed towards the local authorities, perhaps more Mr Crick than Mr Budd.

Paul Crick: I am going to struggle with that one. I have not read the Government's heatwave plan, I am afraid, so I do not really feel equipped to answer the question.

Alex Nickson: Shall I come in on that one? The first one was published after the 2003 heatwave and every year they have become improved and more targeted. However, they all rest on a couple of key beliefs: first, that there are vulnerable people out there who can be clearly identified, and unfortunately vulnerability to heat is something that changes day to day depending on how you are feeling, whether your carer is in, and so on; secondly, that doctors are able to somehow know who these people are and keep tabs on them when most GPs have many thousands of people on their practice and it is difficult for them to communicate to them at the best of times; and thirdly that the people who are themselves vulnerable consider themselves vulnerable and know what to do. The London School of Hygiene and Tropical Medicine looked at the advice given to vulnerable people. I remember an 87-year-old lady going, "Well, I am not vulnerable because old people are vulnerable and I am not old." We have this cognitive dissonance challenge there.

For me, I think tackling heat is going to be like tackling flood. You need a community-level response in many ways. You need people to look out for vulnerable people and help them because the heatwave plan is going to largely come into force to help those who really need it most. What we need to start doing is making sure new development we build is designed to keep people cool in summer as well as warm in winter. We need to make sure our retrofit schemes are doing the same and we do not save granny from a cold death to then cook her in the summer. We need to make sure that where air conditioning is required people are able to afford to run it, so the lessons of Paris where there were people in top floor flats with air conditioning but they were too afraid of the cost of using it. I think we have to recognise that people will air condition and we should be allowing people to air condition in the same way we allow people to heat their homes when it gets cold. We have to make sure that they are able to afford it so we do not end up with a cool poverty to balance offsetting of the fuel poverty.

Q70 Dr Offord: It is interesting that you moved slightly on to one of my next questions, which is about building regulations. A lot of them focus upon keeping homes warmer rather than cooler. You mentioned the example in Paris as well. What advice or suggestions do you give to local authorities about that consideration? I am really asking you to expand slightly on your previous answer.

Alex Nickson: We are working with the Zero Carbon Hub at the moment to tackle that exact question, to work out why we are building hot, airtight little boxes that look very good on paper, particularly keeping people warm in winter, but are potentially causing risks in summertime. We are trying to work out what it is. Is it the planning guidance that is not working? Is it that people do not do proper modelling, dynamic thermal modelling, on the developments? Is it that local planning authorities do not think heat risk is an issue enough to want to tackle the developers on? I suspect it is a range of those issues.

Q71 Chair: Can I just come in on that? You say that you are having those discussions. Is that just relating to domestic properties or would you be looking, for example, at commercial properties or public buildings? For example, where there are plans being brought up at the moment, say, for new schools or retrofit of older buildings, are you factoring in the importance of not ending up with buildings that are unworkable because of all the glass windows?

Alex Nickson: All of the above, Chair.

Chair: Yes, you are?

Alex Nickson: Sorry, the Zero Carbon Hub focus is specifically around homes. BRE are doing some work on overheating of non-domestic dwellings. There is a lot more opportunity there to look at low carbon measures of cooling as well as to not need cooling in the first place.

Q72 Dr Offord: Finally—I will be very quick because I realise there is going to be a vote soon—do the panel members have a sense that the health and wellbeing boards that local authorities are a part of are considering the heat factor?

Martin Budd: Within Hull that process is starting. We used the consultation by the NHS sustainable development unit into its future strategy to bring in the responsibility within the NAP and to start a conversation with them at that point. It was not a factor that was included within their work programme. We are working with them on an adaptation risk assessment of their work and of the whole public health service so they understand what those vulnerabilities are and build them in.

I think it is important that what we do as an authority is we move away from having an affordable heat strategy to an affordable comfort strategy that takes into account the heat as well as the cold because that is where we need to move to and understand. That becomes very localised because, as I said, the experience of a heatwave within London is very different to that within a rural village in Hull that has two large waterways moving through it, which provides an element of cooling. I think that becomes much more specific in terms of what responses we can do.

Alex Nickson: We have produced some guidance for the 33 local authorities looking at all the adaptation issues and how they could factor them into their joint strategic needs assessments and the joint strategic needs strategies. The issue with heat is heat does not necessarily kill directly per se. What it does is it makes existing underlying conditions worse. Most health and wellbeing boards have their priorities and they tend to be alcohol, obesity, heart disease, smoking, and so on. Therefore, unless you can show practical ways where managing heat helped to tackle those issues, it does not really make much progress.

Dr Offord: Okay. That is good, excellent.

Paul Crick: We have a subgroup of our health and wellbeing board specifically looking at the impacts of climate change and adaptation. It includes, like you say, heat as well as flooding and so on. They have a subgroup that is chaired by the director of public health, which specifically looks at that.

Kirsten Guida: I was just going to say it is patchy, I think, and Kent is a really good example of where there is a good joint strategic needs assessment that is considering these things. We are working with various national partners to try to spread out some of that good practice and help different councils and different local bodies learn from one another on those things. I am quite optimistic about it.

Chair: Okay. We have time for our last question from Simon Wright.

Q73 Simon Wright: It is a question for Climate UK because your submission is quite critical of the national adaptation programme. I wonder if you could summarise your main concerns and what you feel needs to be done to improve it.

Kirsten Guida: Yes. I think we have touched on a bit of it already. First of all is just to step back and say the fact that we actually have a national adaptation programme at all is a credit, and something that we need to be proud of. In general, the objectives and the vision in it are quite sound, even if it starts to get a bit fuzzy with regard to the details. You have to give all credit to the DEFRA team who were able to achieve a level of commitment from the organisations who are named in the document considering that they had very little in terms of statutory or financial or any sort of drivers, any carrots or sticks, really, to persuade people to take action other than asking nicely for people to volunteer. It is what I mentioned before. I think a voluntary approach is necessarily going to be piecemeal. It is not going to have strategic coherence and it is also not going to recognise you have that coalition of the willing and able there, but it really does not reflect the needs of all the organisations out there that do not necessarily have the capacity, cannot necessarily make those connections and do not have any explicit responsibility in terms of climate change adaptation.

We also mentioned earlier about the spatial aspect of it. There should probably be a better spatial aspect of it. I think we also need to be considering the importance of social justice aspects. We are working with the Joseph Rowntree Foundation at the moment on turning their mapping of social vulnerability and climate change vulnerability into a useful tool for people, for planners and decision makers. It is mostly those issues from before, I think, but it is the lack of teeth. It is the lack of that coherence across policy.

We were talking about development earlier. I think we have all recognised that development will revert to the minimum requirements, but that is why things like getting rid of the code for sustainable homes is going to cause problems with regard to resilience. You are not going to have the transformational change with a voluntary approach.

Q74 Simon Wright: Could I ask a question very quickly, before we run out of time? The NAP is primarily for England, of course. I just wonder if you feel there is sufficient co-ordination and consistency in approach with the devolved Administrations.

Kirsten Guida: From my own perspective, we try to co-ordinate a bit with them. We try to exchange knowledge and good practice with them. We see that things are going quite well, for example, in Scotland, where there is a lot of commitment and even a Government call-down service that they provide looking into adaptation. The Northern Ireland programme I know is starting up. I have been speaking with them a lot about what their priorities are and how we can help support them. Yes, we do try to make those links. It is not always as easy as working with the other English authorities.

Chair: Okay. On that note, the bell has called time for us. Can I thank all four of you for coming along and giving evidence this afternoon? On a personal note at least, I really hope that Kingston upon Hull, when it comes to have the City of Culture, will look at ways of reinforcing some of these issues into the work that is done. For now, can I thank you very much indeed for giving evidence this afternoon?