



**Cynulliad Cenedlaethol Cymru
The National Assembly for Wales**

**Y Pwyllgor Cynaliadwyedd
The Sustainability Committee**

**Dydd Mercher, 15 Gorffennaf 2009
Wednesday, 15 July 2009**

Cynnwys
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Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal,
cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee.
In addition, an English translation of Welsh speeches is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Lorraine Barrett	Llafur Labour
Mick Bates	Democratiaid Rhyddfrydol Cymru (Cadeirydd y Pwyllgor) Welsh Liberal Democrats (Committee Chair)
Angela Burns	Ceidwadwyr Cymreig Welsh Conservatives
Alun Davies	Llafur Labour
Rhodri Glyn Thomas	Plaid Cymru The Party of Wales
Leanne Wood	Plaid Cymru The Party of Wales

Eraill yn bresennol
Others in attendance

Paul Bates	Gwasanaeth Tân ac Achub Canolbarth a Gorllewin Cymru Mid and West Wales Fire and Rescue Service
Nigel Brinn	Cymdeithas Llywodraeth Leol Cymru Welsh Local Government Association
Ceri Davies	Asiantaeth yr Amgylchedd Environment Agency
Barrie Evans	Asiantaeth y Môr a Gwylwyr y Glannau Maritime and Coastguard Agency
Sue Evans	Cymdeithas Tir a Busnes Cefn Gwlad Cymru Country Land & Business Association Wales
Tony Glover	Y Gymdeithas Rhwydweithiau Ynni Energy Networks Association
Uwcharolygydd/Superintendant Martyn Hubbard	Y Gymdeithas Frenhinol er Atal Creulondeb i Anifeliadaid The Royal Society for the Prevention of Cruelty to Animals
David Jones	Ymddiriedolaeth GIG Gwasanaethau Ambiwylans Cymru Welsh Ambulance Service NHS Trust
Bernard Llewellyn	Undeb Cenedlaethol yr Amaethwyr National Farmers Union Cymru
Lieutenant Cynrol/ Lieutenant Colonel David Lowles	Swyddog Cyswllt Gwrthsefyll ar y Cyd ar gyfer Cymru, Pencadlys Brigâd 160 (Cymru), y Fyddin Brydeinig Wales Joint Resilience Liaison Officer, HQ 160 (Wales) Brigade, British Army
Chris Mills	Asiantaeth yr Amgylchedd Environment Agency
Phil Pickersgill	Asiantaeth yr Amgylchedd Environment Agency
Dr Jean Venables	Cymdeithas yr Awdurdodau Draenio Association of Drainage Authorities
George Whitworth	Bwrdd Draenio Mewnol Powysland Powysland Internal Drainage Board
Colin Williams	Sefydliad Cenedlaethol Brenhinol y Badau Achub Royal National Lifeboat Institution
Tim Williams	Pennaeth Cynllunio Asedau, Dŵr Cymru Head of Asset Planning, Welsh Water

Uwcharolygydd/ Heddlu Gogledd Cymru
Superintendent Bob Wilson North Wales Police

Swyddogion Cynulliad Cenedlaethol Cymru yn bresennol
National Assembly for Wales officials in attendance

Dr Virginia Hawkins Clerc
Clerk
Meriel Singleton Dirprwy Glerc
Deputy Clerk

Dechreuodd y cyfarfod am 9.12 a.m.
The meeting began at 9.12 a.m.

Cyflwyniad, Ymddiheuriadau a Dirprwyon
Introduction, Apologies and Substitutions

[1] **Mick Bates:** I call the committee to order as our first witnesses come to the room. I will make the normal housekeeping announcements. In the event of a fire alarm sounding, you should leave the room by the marked fire exits and follow the instructions of ushers and staff. No test is forecast for today. Please ensure that all mobile phones, pagers and BlackBerrys are switched off, as they interfere with the broadcasting equipment. The National Assembly operates through the media of Welsh and English. Headphones are provided, through which the simultaneous translation may be received; for anyone who is hard of hearing, they may also be used to amplify the sound. Interpretation is available on channel 1 and the verbatim feed is on channel 0. Please do not touch any of the buttons on the microphones, as that can disable the system, and ensure that the red lights are showing before speaking. I have received apologies for absence today from Karen Sinclair, Brynle Williams and Lesley Griffiths.

9.13 a.m.

Ymchwiliad i Lifogydd—Sesiwn Dystiolaeth
Inquiry into Flooding—Evidence Session

[2] **Mick Bates:** We are sitting an unusually long distance from our witnesses, given that we are occupying two committee rooms this morning. Good morning to you. There are two parts to our session today. It is my pleasure to welcome representatives of the Environment Agency again, now that we have taken evidence from all parts of Wales and from key stakeholders, who gave us oral evidence. Our second session will be with witnesses representing a much wider group of people, namely those who are directly engaged in the command structures, in delivering responses and communications, and who look at it from a practical business point of view. Later this morning, we will also announce the terms of reference for our inland water inquiry and the consultation that is to be launched at the Royal Welsh Show ground at our official meeting on the Tuesday of that week.

[3] To turn to our inquiry into flooding, I will invite our guests and witnesses this morning to introduce themselves for the record, but first we will watch a video of the evidence that we have received. After that, if you have a brief opening statement to make, I will accept that, provided that it is brief. We will then move to questions from Members, a custom that you are familiar with. We will now play our evidence to give you a flavour of what it has been like gathering evidence from all around Wales over the past six weeks. You may know that we have tried something innovative this time. We often sit here and listen to

evidence in this ‘bubble’. I see that you do not like that word, but we sit in this environment and, very often, our constituents have very different views on the delivery of all services, particularly so in relation to this inquiry about flooding. So, we have taken evidence from constituents in public meetings and we have a short presentation to show—although if it does not start playing soon, I will have to describe it to you.

[4] **Rhodri Glyn Thomas:** It is going on a bit.

[5] **Mick Bates:** Yes, I thought that it was. Well done, Rhodri, for spotting that on this Wednesday morning. Here it is, thank goodness. Here we go.

Dangoswyd DVD. Mae'r trawsgrifiad mewn llythrennau italig isod yn drawsgrifiad o'r cyfraniadau llafar ar y DVD.

A DVD was shown. The transcription in italics below is a transcription of the oral contributions on the DVD.

[6] *Each time we have a flood now more and more of the garden is being washed away into the stream and the bank is deteriorating.*

[7] *I do not think that anyone can describe the aftermath of a flood. It just knocked us for six and we were out of our house for nearly a year.*

[8] *The water went right through the school and caused over £45,000 worth of damage, which we can replace through some recompense by the insurance companies. We cannot recompense children who might lose their lives due to the amount of water that came through the school.*

[9] *I have had trouble with water and sewerage coming up in my yard since 1986. When there is heavy rain, thunder and lightning and there is a power cut, or the pump packs up for some reason, the water and sewerage comes up in my yard and I have been waist deep on some occasions in sewerage water among other stuff.*

[10] *Perhaps twice a year the river bursts its banks, water comes up people's toilets and sewerage paper is found in the roads in the morning.*

[11] *What we have done to help ourselves is that we have put drainage pipes though our garden. We funded that ourselves.*

[12] *I was concerned about flooding in the area but felt that, if planning permission had been gained by the builder, then everything was okay. Unfortunately that does not appear to be the case.*

[13] *Water goes into a smaller drain. Once that is blocked, it goes everywhere. We have spoken to various people about it but, instead of getting better, it actually gets worse.*

[14] *I watched the water coming up the road towards my house so, at 4 p.m., I phoned the National Floodline to say that I was going to be flooded. I was told to telephone my nearest builder's merchant to get some sandbags. This was at 4 p.m. on a Sunday afternoon, so that is about as much use as a chocolate teapot.*

[15] *In years gone by, we did not have as much of a problem with flooding, because there were the old-fashioned roadmen who used to keep their own lengths clear and used to take great pride in cleaning out the culverts and the ditches.*

[16] **Mick Bates:** As you have seen, we have put together the key issues that were raised

throughout our evidence gathering. Would you like to introduce yourselves?

[17] **Mr Mills:** I am Chris Mills, director, Environment Agency Wales.

[18] **Ms Davies:** I am Ceri Davies, head of the strategic unit Wales, Environment Agency Wales.

[19] **Mr Pickersgill:** I am Phil Pickersgill, the flood risk manager for south-west Wales.

[20] **Mick Bates:** Thank you very much. Do you wish to make a brief opening statement?

[21] **Mr Mills:** Yes. At your last committee meeting, I got the impression that the Environment Agency was being portrayed as an organisation that was slightly out of touch with some of the things that we have just seen on those video clips. I would like to reassure you. The effect and impact of flooding does not diminish in any way as a result of this, but we do have regular contact with people on the receiving end of flooding. During my career, I have attended many public meetings and I know all about the distress and anger that people feel. However, we then need to move on to consider what we can do to make that a lot better.

[22] The first thing that I feel I must say, because it is the honest thing to say, is that, as much as we might all like to, none of us can guarantee that we can prevent all flooding. That is a reality of life that we have to work with. We are clearly looking to minimise flood risk, but none of us can guarantee that.

9.20 a.m.

[23] We are also concerned at the amount of criticism levelled at the Environment Agency. Where that is justified, for main river and coastal flooding, I am fully accountable. I would like to make sure that that is absolutely clear. However, to put things into context, with regard to the record for property flooding from rivers and the sea during the last five years—I asked my staff to go back to look at that—and the flooding for which we are responsible, a total of 214 properties have been flooded from rivers and 30 from the sea. That is 244 too many, but we need to put that into the context of a single event on 6 June this year in north Cardiff and Pontypridd, where, in under two hours, 100 properties were flooded from surface water. If there is no other message, it is that surface water and related sewerage flooding is the area of risk that is rapidly increasing and where we do not have the organisational arrangements to properly deal with it. This must be put right in the draft flood and water management Bill. This is the key opportunity to get those roles and responsibilities right.

[24] With regard to the evidence that you have received, there is clearly a great deal of confusion among the public regarding who is responsible for what. We all need to play our part in removing that confusion and misunderstanding and providing clarity. There are four areas for action that, from my analysis, are exactly the same four areas that you are picking up on: clear accountability, better co-ordination, better communication and better prioritisation and local focus. If I may, I would like to say a very quick word about each.

[25] **Mick Bates:** I do not think that I will give you that opportunity, because we are limited by time, as I said at the beginning, and many of the points that you have mentioned can be raised in your replies to Members' questions. So, I will call Angela Burns first.

[26] **Angela Burns:** Thank you for your opening statement and for coming here today. I want to deal with responsibility. I have two questions on this subject. We have received a lot of evidence from ordinary members of the public stating that they would like to be able to phone the Environment Agency when they have a problem, but that they are always put through to a Cardiff number. They want to speak to someone local and to have a local

response team that they can speak to. What are your views on that?

[27] **Mr Mills:** We need to recognise that the Environment Agency has an office in Cardiff and three area offices. We are not located in every local community. This comes back to the option that is being put forward by the Welsh Assembly Government. People need information, they need a signpost to show who to go to for the information that they need, and the Government has proposed that that should be the local authority. I think that, in general terms, that makes sense, but we have to look at its practicality. In our experience, particularly during a flood, and if something is serious, people phone 999 and look for the fire service or the police. So, if you are going to give this responsibility to the local authority, there would have to be a considerable awareness campaign and sufficient resources are needed, because people would have to be resourced, particularly during a flood event, on a 24-hour basis.

[28] This comes back to my earlier point about the lack of clarity around surface water flooding, for which the agency is not responsible. If it is river flooding, we have an incident room that will be open 24 hours a day for whatever period of time it takes. However, we will not have one in every city or every town in Wales. It will be within our area office or at our head office in Cardiff.

[29] **Angela Burns:** Thank you. I wish to continue with the topic of responsibility for a moment. You talk about having clear accountability, which is at the heart of responsibility. I have two concerns. The first is that, in the draft flood and water management Bill, as an example—and there are a number of examples that I could give—you will be given the responsibility to report on flood and coastal risk and its management, yet Welsh Ministers are also proposing that local authorities will have the job of assessing and managing coastal erosion risks. Those are quite similar things; I suppose that a pedant could put a piece of paper between the two, but it is very confusing for anyone who is not in the game. How does that tie in with having clear lines of accountability and responsibility to the general public?

[30] Secondly, there is a high likelihood that the Bill will not make the statute books before the general election next year. I am scared that that will leave Wales in the position that we are in now, with no clear lines of authority and responsibility for resolving what is a significant problem.

[31] **Mr Mills:** We have to distinguish between roles and accountabilities. From a technical point of view, the Environment Agency is the organisation that is best placed to advise on flood risk. So, we have the technical expertise on the mapping and the modelling, and we do most of that work. We provide the information to local authorities, the Welsh Assembly Government and to the public. So, with regard to roles, we are best placed to do that. On accountability, we have got to get to a point where, for different types of flooding, there is clear accountability. I have already made it absolutely clear that, for river and coastal flooding affecting people and property, it is the Environment Agency. The bit that is not clear, and I stressed this in my earlier evidence, is surface water. There are at least three organisations or sets of people who have some responsibility—the local authorities, the water companies and, in certain cases, private individuals or companies. That is the bit that needs to be clarified. As I also stressed, that is the flood risk that, at the moment, is increasing—we are seeing it daily—and that is having a greater impact.

[32] **Angela Burns:** I take on board what you say. I just want to read another sentence from the draft Bill, because I want to be very clear on this. It states that the role of the Environment Agency is to,

[33] ‘collect, store and share technical data relating to flood and coastal erosion risk management’.

[34] It also states that the responsibility of the local authority is to

[35] ‘collect, store and share technical data relating to flood and coastal erosion risk management’.

[36] How does that set out lines of authority and clarity, because I am not clear?

[37] **Mr Mills:** I do not know precisely which part of the Bill you were reading from, but if that is correct, it is not clear and we need to make it clear. To pick up on another point that you made about what would happen if the draft Bill were not to go ahead, I totally agree with you that, if it does not go ahead, we have to find another way of sorting this out. That may not be a legislative way, but it seems to me that it is entirely within the power of the Welsh Assembly Government to direct clearer accountability and responsibility.

[38] **Mick Bates:** Before we move on from this issue, this sort of confusion permeates the whole of our inquiry about responsibilities. As Angela has just highlighted, there are statements that add to that confusion by not clearly identifying the body responsible. Although I understand that you are not able to give an opinion, which would be the most effective body to handle surface water problems?

[39] **Mr Mills:** Given the very localised nature of that type of flooding, and the importance of drainage systems in terms of capacity to take that water away, our belief is that that can be effectively managed only on a local basis, probably by local authorities. However, life is not always simple, and you have already heard evidence that shows that one type of flooding can end up being a different type of flooding. So, you need to have these connections. In particular, for surface water flooding, the connection with sewerage is a very important relationship that needs to be sorted out. To answer your question, we think that this should be the responsibility of local authorities.

9.30 a.m.

[40] **Mick Bates:** Right. I hope that the Welsh Local Government Association agrees when its representatives come in.

[41] **Mr Pickersgill:** You mentioned sewer flooding, but when we talk about surface water flooding, we have to understand that surface water flooding can happen from a multitude of sources. Trying to predict where it will happen will be very difficult. So, apportioning that responsibility to one body will be very difficult. Even with the technology that we now have, it will be almost impossible to predict exactly where surface water flooding will happen. That is the problem that we face for the future. There are no simple answers at present.

[42] **Mick Bates:** That is something that we are considering in our recommendations, to try to suggest to the Government how we can overcome those issues. You have just mentioned the sewerage issue; do you think that Welsh Water, for example, should be a consultee on all planning applications, or just some?

[43] **Ms Davies:** I know that this is something that Welsh Water asked for in its response. For certain types of connections, Welsh Water has been identified in the draft flood and water management Bill; for sustainable urban drainage systems, for example, where it might need to discharge, it would be a consultee. At present, Welsh Water is a consultee but not a statutory consultee. I think that we would support the fact that it needs to be consulted on and involved in connections into the sewerage system.

[44] **Alun Davies:** Should it be a statutory consultee?

[45] **Ms Davies:** We would support its calls for being statutorily consulted.

[46] **Mick Bates:** Could you briefly outline the process? When an application comes in and you have concerns about surface water, what happens? If you have a big application, where you know that there is a lot of hard standing, what would you do? Do you contact Welsh Water or the local authority?

[47] **Mr Pickersgill:** If an application comes to us, it comes into our central planning service. It then goes out to all different parts of our organisation to collect views. With a massive development, we would normally ask that the run-off from that development represents the green field, effectively, that it previously sat on. In other words, the run-off from that area should be no greater than the green field that was there originally. Therefore, we try to restrict surface water run-off from any development—whether it is in the flood plain or not.

[48] **Ms Davies:** The draft flood and water management Bill picks up this point about promoting sustainable urban drainage in such situations, encouraging developers to look at those sorts of options, rather than keeping to the current situation.

[49] **Mick Bates:** The evidence that we have gathered seems to suggest that this issue of planning is crucial, because people were saying, ‘We knew that that field flooded, yet they built houses all over it’. That only adds to the problem, because of the hard standing. We have technical advice note 15—which was quite revolutionary, in many ways, when it was implemented—but do you think that it needs to be reviewed?

[50] **Mr Mills:** I will take you back to the evidence that we gave previously, that our advice is now taken up in 97 per cent of cases. In the early days of TAN 15, there was a very difficult period where planning developments that were already in the pipeline, which had been started before TAN 15 came in, caused all sorts of problems. They were already happening. Since those developments have passed through, and have either been built or not built, we are much more effective at being able to influence to try to prevent inappropriate development in the flood plain.

[51] **Mick Bates:** For the record, if you disagree with an application, what powers do you have to stop building taking place if a local authority overrules your advice?

[52] **Mr Mills:** We can ask the Welsh Assembly Government to call that matter in.

[53] **Mick Bates:** Therefore, the matter of whether it goes ahead or not ultimately rests with the Minister.

[54] **Rhodri Glyn Thomas:** Yn eich sylwadau agoriadol, Chris, yr oeddech yn awgrymu bod y pwyllgor hwn yn dweud nad oes gennych gysylltiad â phobl yn eu cymunedau. Fodd bynnag, y bobl yn y cymunedau hynny sy'n dweud wrthym nad oes gennych gysylltiad â hwy. Un pwynt a godwyd gyda mi oedd, o ran ardaloedd lle mae'n amlwg bod problem gyda llifogydd a lle mae llifogydd cyson, oni ddylech flaenoriaethu'r ardaloedd hynny, gan sicrhau bod gennych gysylltiad agos iawn â'r cymunedau lleol a'ch bod yn gyson yn trafod

Rhodri Glyn Thomas: In your opening remarks, Chris, you suggested that this committee was saying that you have no contact with people in their communities. However, it is the people in those communities who are telling us that you have no contact with them. One point that was raised with me was that, in areas where it is apparent that there is a problem of flooding and where there are regular floods, should you not prioritise those areas, and ensure that you have close contacts with the local communities and that you discuss regularly

gyda hwy y math o broblemau a all godi, er mwyn eu helpu i ymateb i'r sefyllfaoedd hynny? the kinds of problems that can arise, in order to help them to respond to those situations?

[55] **Mr Mills:** The short answer is 'yes'. As to what are we doing about it, this goes back to a point that Angela made at your last committee meeting, about looking at high-risk areas as a priority. As we have gathered a lot more information about where the flood risk is, we have now identified high-risk communities, in order of priority, all over Wales. The next step, which I emphasised at our last evidence-giving session, is that the Environment Agency has to get much better at community engagement. There has been a resource issue in relation to that. Over the next two years, because of increased funding from the Welsh Assembly Government, we have nearly £1 million to spend on that. So, the plan is to go to those high-risk communities and to actively engage with them, first of all by making them aware of their flood risk, but then by working with them to come up with solutions. We already have some examples of that. If I may, I will ask Phil to talk about what we have done in Solva. I would stress that every community will have different needs.

[56] **Mr Pickersgill:** When we come to a community that has a problem, we try not to just go in and say, 'This is your solution'. We go to it and say, 'This is the problem we face. How are we going to get around it?' In Solva, there was a community that was suffering from surface water flooding, tidal flooding and river flooding. There was not a capital scheme that could be undertaken to solve all those problems. Over a six-month period, we ended up discussing with the community as to the best way to deal with it. We have come up with individual property protection, which gives people their own gates. We have shown them how to put them in; we have given them instructions on how to do that, and we have registered every gate with the Environment Agency as an asset, so it is inspected every year. That gate stays with the house, and in times of flooding, when they get a warning from us, they are responsible for putting those gates in place. All of a sudden, they are responsible for their own destiny. We put them in about 18 months ago and they have been used twice in anger: once for tidal flooding and once for surface water flooding. It has worked.

[57] **Mick Bates:** May I just interrupt? Who paid for the installation?

[58] **Mr Pickersgill:** We did. Effectively it was a trial that was about saying that we can do a lot of talking about flooding, and we can spend an awful lot of time doing investigation strategies and so on, but we were very conscious that we wanted to do something on the ground.

[59] **Rhodri Glyn Thomas:** Croesawaf hynny'n fawr iawn, ond fel y gwyddom, mae Solfach yn bentref bach iawn yn sir Benfro. Mae ardaloedd yn fy etholaeth—ac mae Phil yn ymwybodol iawn ohonynt—sy'n dioddef llifogydd yn gyson. Pryd y bydd y cynlluniau hyn yn cael eu cyflwyno ledled Cymru, fel bod pob cymuned sydd dan y math hwn o fygythiad yn cael pethau gweddol sylfaenol fel y giatiau hyn, a fydd yn amddiffyn eu heiddo rhag llifogydd? A oes gennych gynlluniau pendant ynglŷn â datblygu hynny ledled Cymru?

Rhodri Glyn Thomas: I welcome that very much, but as we all know, Solva is a very small village in Pembrokeshire. I have areas in my constituency—Phil is very aware of them—that suffer from flooding on a regular basis. When will these schemes be rolled out throughout Wales, so that every community that is facing this kind of threat gets those relatively fundamental provisions, such as these gates, which will protect their properties from flooding? Do you have any definite plans to roll this out throughout Wales?

[60] **Mr Mills:** Absolutely. To re-emphasise, what was appropriate for Solva will not be appropriate for everywhere. We have a—

[61] **Rhodri Glyn Thomas:** For anyone who suffers flooding, the gates are a basic requirement. They protect the property, wherever the water is coming from.

[62] **Mick Bates:** Thank you, Rhodri. May we hear the answer, please?

[63] **Mr Mills:** We have a forward capital programme for Wales. As Phil said, in many situations it is not about individual property protection; we are providing a flood defence scheme for that area. We have a forward programme, not just for this year but for forthcoming years. One has to recognise that there is a finite amount of money. I stressed in previous evidence that our capital investment has gone up from something like £4 million a year in 2000 to over £16 million this year, and we try to target that at the high-risk areas. That has been going on for quite a long period of time. What we are trying to describe here is that we are trying to respond outside of that formal capital programme to other things that we can do.

9.40 a.m.

[64] Again, we have to be mindful of resources. Our work at Solva was quite groundbreaking, but there were some risks with regard to the expectations of others and whether or not we could resource the process. We are trying to reach the point that all of you highlighted, namely that we need to respond to individual communities and their needs. So, we are going in that direction, but it will take time.

[65] **Mr Pickersgill:** The important point is that gates will not be the correct solution for many places. If a property is at significant risk, and we are talking about first-floor-level flooding, you do not want to keep those people in their house. So, by installing a gate, you are giving them false security. They will think that once they are behind the gate, they will not be flooded. So, the whole analysis of flooding needs to take into account the velocity and depth of flooding and the level of service required and so on before deciding on what is appropriate.

[66] **Rhodri Glyn Thomas:** I accept that point, but households that are prone to flooding have basic requirements. It seems to me that nothing is happening on the ground to provide those—at least according to evidence that we have received. There seems to be a lack of communication on this. I do not, for a minute, suggest that your work is easy. I accept the difficulties that you face as an organisation for all sorts of reasons. However, on basic communication with the community, you talked about the mapping and modelling process. No-one understands that; I do not understand it. I have tried to have meetings with the Environment Agency about that. In Carmarthenshire, your mapping and modelling processes tell me that water travels uphill. You draw a line on a map, indicating an area that is prone to flooding, irrespective of the lay of the land. What are you doing to communicate with local people who know and understand the communities in which they live and know where flooding is likely to occur?

[67] **Mr Pickersgill:** Our modelling of rivers is now probably one of the most accurate in Great Britain at the moment. In Wales, we have far superior modelling expertise on predicting where floods will occur. We have flown all of our main river catchments with a system called LiDAR, which provides digital terrain modelling that is accurate to within two inches.

[68] There are three things that you need to tackle when flood modelling: the digital terrain model, the flows and the modelling technique. Over the last six years, we have vastly improved our ability to do that modelling correctly. This is a case of evolution. It is getting better; those anomalies that you mentioned are becoming fewer. We are concentrating on our main rivers at the moment, but it will be applied to our ordinary water courses, which is also the councils' responsibility.

[69] **Mr Mills:** Can I chip in at this point? Your question on how we communicate this is a fair one. I am a little surprised by my colleague's response because he is at the forefront of this. One way in which Phil has been trying to provide this information is by making it visual. Could you say a few words about that, Phil? It is difficult to present information to people on maps and so on and to talk about models. I would be delighted to show the committee some of our groundbreaking work on translating that into something that people can see, for example, how a flood develops, where it goes and the extent of it. Would you like to say a few words, Phil?

[70] **Mr Pickersgill:** Yes. We now have a technique called 'two-flow modelling', which shows a flood as it develops—it shows where the water will go, what street it will go down and its velocity and depth. We have used that modelling to great effect in Ystradgynlais. We had a question over the flood map that indicated that people were not quite sure about it. The Assembly Member, Kirsty Williams, was involved in this. As a result of our modelling techniques, we have reduced the extent of the floodplain there, which has allowed a development to go ahead in a hospital and has freed up space in schools, which we thought were originally at risk. We are going to more and more pinch-points in our catchments, where we are not convinced that our modelling is correct and we are doing that level of modelling.

[71] **Mr Mills:** We are also making it visual so that people can see it developing in front of their eyes.

[72] **Mick Bates:** That sounds like a tremendous development. I will move on now because I am mindful of the time and other Members have questions. Alun will come in on communication, then Lorraine on infrastructure and finally we will hear from Leanne on community resilience.

[73] **Alun Davies:** Over the last few months, a message that we have been receiving—to some extent, we have seen a picture of that this morning—is that people have lost confidence in the ability of the EA to fulfil its remit on this issue. One thing that I found quite striking was the evidence that we have received from different parts of Wales on the EA being an organisation that does not communicate effectively, that does not work well with other public bodies and local authorities, and does not appear able to fulfil the responsibilities allocated to it.

[74] Mr Pickersgill, you mentioned Ystradgynlais. You have showed me those maps and techniques and they are very impressive, but there were failures in the relationship and failures to speak to the people in Ystradgynlais and the upper Swansea valley over many years. We are still waiting for you to get back to us about Caehopkin. People are still waiting for issues to be resolved in that community after a visit in December last year. Do you not understand and appreciate the very real feeling that you are letting people down? The people that we met in December were all fired up that the EA was actually going to do something. I am still getting correspondence from people, asking when they are going to hear back, seven months later. That is an example of letting people down. You have that small community that is feeling a personal disappointment and then you have the wider policy, political and managerial relationships, where people also feel that the EA is not fulfilling its role as a partner organisation.

[75] **Mr Pickersgill:** I will respond on Caehopkin first, to put the record straight. At Caehopkin, it is an ordinary watercourse problem associated with mine workings from the past. So, theoretically, it is out of my remit, but because it is something to do with flooding, I got involved in it. I have been in touch with the county council, which was having extensive talks with the mining company to see whether it would contribute to the work. I have made it quite clear to the county council that I think that our operations delivery department could make a huge difference there within a week. So, the solution is obvious: the issue is getting

the individual parties to that solution to sing from the same hymn sheet, and that includes the coal board. So, we are making progress on that. I apologise if the local people feel that they have been let down, but they have not. If you were to speak to the people who are dealing with it in the council, you would find that the onus is on them to call me back when they have finished the negotiations.

[76] **Alun Davies:** Do you appreciate that replying to correspondence would be a good start?

[77] **Mr Pickersgill:** Absolutely.

[78] **Mick Bates:** Chris, do you want to come in on that?

[79] **Mr Mills:** Yes. On the broader points, you have talked about people losing confidence in us, us not working well with partners and not communicating. I think that there are always two sides to every story. We could put forward many examples where people feel that we have done well in all of those areas. Equally, I accept that there are times when we have not done as well as we need to in those areas. I would point out, however, that a lot of the evidence that you have received relates to quite a long time ago—we went back as far as Towyn in 1990, 19 years ago. Things have changed and moved on. Also, I think that there was a lot of confusion about the point that we are talking about here, that is, who is responsible for what? We probably will not communicate well on surface water flooding, for which we do not have responsibility, and will have only some involvement in—usually because we are trying to help. I think that we have to get that into some kind of balance, to get a true picture of what is going on.

[80] **Ms Davies:** I will come in on the partnership working element. We work through TAN 15 with the local planning authorities and the local authorities generally. Also, the local resilience fora bring together organisations such as ours with local authorities and other organisations that are responsible for dealing with flood management, and we work regularly with them and have a range of groups in place to look at such things as the impact on utilities and infrastructure. So we are using all opportunities to work with our partners to deal with all forms of flooding.

9.50 a.m.

[81] **Alun Davies:** How do you propose to improve the way you operate? In many ways, in answering the questions, you have largely restated the points that were made in the introduction. Taking the example of Ystradgynlais, as Rhodri Glyn was saying, some of your maps—I accept the point about them being the ones that you were originally using, rather than the recent ones—were clearly inaccurate, as they had water running uphill. The local residents, and other people who understand and know that valley and its community, were telling you for many years that your maps were wrong and that there were issues that you were not addressing. I was newly elected at that time, but I was struck by the tone—by the mood music, if you like—and that left me with the impression that the EA did not really give a damn about what people thought or felt. It seemed to be a case of, ‘We’ve got our maps; we know best. Don’t you little people come and tell us how to do our job’. It was a very high-handed sort of approach, and I felt it to be inappropriate from a public body as it did not respect the views and knowledge of the people who live in these communities.

[82] **Mr Pickersgill:** With regard to the modelling situation that you talk about, our maps were originally put together from the records of floods that had occurred, and, effectively, were pencil lines drawn on a piece of paper by individuals. Clearly, that was not sustainable, as we could not get a full understanding of risk from it. So, national flood mapping was done, and yes, I admit, there were some anomalies. They were due to the digital terrain model that

we talked about not being accurate enough, and the modelling technique was not as good as the one we are using now. So, all the things that I mentioned earlier were not all in place.

[83] Those people who came to us and said, ‘Now look; we think this is ridiculous’—we had a similar situation in Llechryd, where we had properties that were at 30m and which were clearly out of the floodplain—we went along to those communities and we did more detailed modelling to ensure that we got it right, but we cannot do all of those places where those mistakes were made in one go. I would say, however, that national modelling at that time was about 80 per cent correct, so we are only talking about 20 per cent there.

[84] **Mr Mills:** Picking up on your broader point, we are not there to be high-handed or out of touch. We must do better. In those circumstances where it is proven to be the case, we will try to do better.

[85] **Alun Davies:** Thank you for that. I understand what you are trying to say, but do you accept that it is perhaps an issue to do with your corporate culture and your approach? How do you address that issue? In many ways, the people who are affected by the flooding see an organisation that is not bothered. How do you address that issue of corporate culture, which I think sums up a lot of the things that we have heard over the last few months?

[86] **Mr Mills:** Let us start at the top. If we are talking about corporate culture, then I am the person who is responsible for the Environment Agency in Wales, and I am certainly bothered. I care deeply about flooding, because I recognise that, of all the things that we do, this is the thing that kills people, and it has a profound impact on people’s lives generally. As far as the signals that I give to my staff go, they are that I am bothered.

[87] Equally, on my staff, as with most large organisations, we have a range of people. We have people who are absolutely excellent, and I can only praise them, because they will be out at public meetings until 10 p.m., way beyond the call of duty. They are prepared to pitch in—remember that in flooding situations, we work around the clock. So there is that side to it, but there are also times when we let ourselves down. As I have already said, I am determined that we will do better in those areas, and one of the things that I certainly intend to do is to share some of the videos and the results of your last committee meeting with all my flood risk management staff. So, if any of them are not aware of the impact of this on people’s lives, they soon will be.

[88] We cannot do this within 40 minutes, but I can make this offer. With any of the issues that you or your constituents have raised, I am prepared to follow them up, personally and with my staff, to look into them to see what more we can do. That will have to take place outside this meeting, obviously, but I am very happy to do that.

[89] **Mick Bates:** On that note, I draw this session to a close. We can return to issues of infrastructure and community resilience in our upcoming stakeholder session. Thank you again for your attendance and for the closing comments that you have just made to us. The recognition of the need to get to a local level and deal with the issues that we have discovered through this inquiry is a positive way to move forward. I am still concerned, however, that Phil’s answer on the issue of Caehopkin was that the local authority had not got back to you. I have the same issue in another place, and I think that we also need to find a way of ensuring, with the issues that you have addressed, that there is someone in control who can say, ‘Get the response out now, please’. Otherwise the delay only adds to the frustration and the perception that we are not doing enough to protect people’s property and lives.

[90] There will be a slight break now as the next witnesses come to the table.

Gohiriwyd y cyfarfod rhwng 9.56 a.m. a 9.57 a.m.

The meeting adjourned between 9.56 a.m. and 9.57 a.m.

[91] **Mick Bates:** I welcome you to the Sustainability Committee's second session this morning. Thank you for your attendance. I think that one or two others may arrive shortly. As you are aware, the Sustainability Committee has been conducting an inquiry into flooding in Wales, and we have very much approached it from the stakeholders' position and looked at how flooding impacts on the lives of people in Wales. I have part of the evidence that we have gathered around Wales to show you all this morning. Our approach has been to talk to people to identify the key issues. My aim in inviting you here to give your views on this is to assist us with our process, after taking our evidence, of making recommendations to the Government. Around this table, I am certain that there is a great deal of extremely valuable knowledge. Given the numbers that are here today, I call on you all to make your statements as brief as possible, including Members when asking questions and making comments; it is always tempting for politicians to talk too long. If you have other bits of information that you wish to forward to us, as the Environment Agency did, please do that after the meeting.

Dangoswyd DVD. Mae'r trawsgrifiad mewn llythrennau italig isod yn drawsgrifiad o'r cyfraniadau llafar ar y DVD.

A DVD was shown. The transcription in italics below is a transcription of the oral contributions on the DVD.

[92] *Each time we have a flood now more and more of the garden is being washed away into the stream and the bank is deteriorating.*

[93] *I do not think that anyone can describe the aftermath of a flood. It just knocked us for six and we were out of our house for nearly a year.*

[94] *The water went right through the school and caused over £45,000 worth of damage, which we can replace through some recompense by the insurance companies. We cannot recompense children who might lose their lives due to the amount of water that came through the school.*

[95] *I have had trouble with water and sewerage coming up in my yard since 1986. When there is heavy rain, thunder and lightning and there is a power cut, or the pump packs up for some reason, the water and sewerage comes up in my yard and I have been waist deep on some occasions in sewerage water among other stuff.*

[96] *Perhaps twice a year the river bursts its banks, water comes up people's toilets and sewerage paper is found in the roads in the morning.*

[97] *What we have done to self-help ourselves is that we have put drainage pipes through our garden. We funded that ourselves.*

[98] *I was concerned about flooding in the area but felt that, if planning permission had been gained by the builder, then everything was okay. Unfortunately that does not appear to be the case.*

[99] *Water goes into a smaller drain. Once that is blocked, it goes everywhere. We have spoken to various people about it but, instead of getting better, it actually gets worse.*

[100] *I watched the water coming up the road towards my house so, at 4 p.m., I phoned the National Floodline to say that I was going to be flooded. I was told to telephone my nearest builder's merchant to get some sandbags. This was at 4 p.m. on a Sunday afternoon, so that is about as much use as a chocolate teapot.*

[101] *In years gone by, we did not have as much of a problem with flooding, because there were the old-fashioned roadmen who used to keep their own lengths clear and used to take great pride in cleaning out the culverts and the ditches.*

10.00 a.m.

[102] **Mick Bates:** As you could see, we travelled throughout Wales to gather that evidence. It has given us a great challenge to find ways of improving the quality of people's lives when flooding impacts on them. To begin this session, given that we are a large group, I would like you all to introduce yourselves by name and position, and give your main responsibility in just one sentence. I will start with Paul Bates—no relation.

[103] **Mr Bates:** Good morning. My name is Paul Bates and I am the assistant chief fire officer of Mid and West Wales Fire and Rescue Service. I represent the three fire and rescue services in Wales, and I am the Chief Fire Officers' Association lead for flood rescue across Wales.

[104] **Mr T. Williams:** I am Tim Williams, head of asset strategy and planning for Dŵr Cymru Welsh Water. My main responsibility is to ensure that we have investment plans that address the needs of our customers over the period 2010-15 and beyond.

[105] **Dr Venables:** I am Jean Venables. I am the chief executive of the Association of Drainage Authorities. We are a membership body and my members are internal drainage boards. I would like to draw your attention to the fact that, although we are focusing on flood risk, we should also be looking at water level management in areas of special drainage need.

[106] **Mr Glover:** I am Tony Glover from the Energy Networks Association. We represent the electricity and gas network operators throughout the entire United Kingdom. We have been involved in preparing a special engineering technical report on flood resilience. The main finding that we found from our report and our work for the UK Minister for energy is that we do need to take a UK-wide approach to this issue. Water does not know a boundary and it is important that we consider that.

[107] **Mick Bates:** Thank you for that and for your paper.

[108] **Mr Hubbard:** I am Superintendent Martyn Hubbard from the RSPCA. I guess that our role is to alleviate and to prevent animal suffering either directly or by helping the owners of animals and other authorities in flooding events.

[109] **Mr C. Williams:** I am Colin Williams from the Royal National Lifeboat Institution. We provide a voluntary response to assist the other main emergency services in the event of flooding where there is life risk.

[110] **Mr Wilson:** I am Superintendent Bob Wilson. I am a North Wales Police officer. However, I am currently seconded and I am the emergency services civil contingency co-ordinator for Wales.

[111] **Mick Bates:** Thank you for your paper, as well.

[112] **Mr Wilson:** Actually, there is an inaccuracy in that paper, which I spotted this morning. Where it says that there is statutory responsibility, it is wrong. It is a typing error and should read 'no' statutory responsibility. They are just two letters, but they could spell the end of my career. *[Laughter.]*

[113] **Mick Bates:** We hope not.

[114] **Mr Mills:** I am Chris Mills, director of the Environment Agency Wales.

[115] **Mr Evans:** I am Barrie Evans, the regional resilience co-ordinator for the Wales and west of England region of the Maritime and Coastguard Agency. We are responsible for co-ordinating search and rescue services in UK waters on the coastline and on certain inland waters, such as the Thames, the Norfolk broads, four of the lakes in the Lake district and some of the loughs in Northern Ireland.

[116] **Lt Col Lowles:** I am Lieutenant Colonel David Lowles. I am the joint resilience liaison officer for Wales. I am the military representative to all the local resilience fora and the Welsh Assembly Government so that, in the worst-case scenario of military assistance being required in a severe incident, I would be the point of contact to facilitate any support that the military could provide.

[117] **Mr Brinn:** I am Nigel Brinn, representing the Welsh Local Government Association. I am employed by Rhondda Cynon Taf County Borough Council as a service director with responsibility for highways, transportation and strategic projects. That includes emergency planning and land drainage.

[118] **Mr Jones:** I am David Jones, from the Welsh ambulance service. I am a regional staff officer with emergency planning responsibility, and I represent the three regions of service.

[119] **Ms Evans:** I am Sue Evans, the Welsh policy adviser for the Country Land and Business Association Wales.

[120] **Mr Llewellyn:** I am Bernard Llewellyn. I am the chairman of the National Farmers' Union Cymru's rural affairs board, responsible for lots of things other than the production of animals. I am particularly concerned that we are last on the list and about the relative lack of comment about agricultural land this morning and during this inquiry.

[121] **Mick Bates:** Thank you for those comments. I will start by asking a direct question based on one of the papers that we received from the fire service. Paul, your paper states:

[122] 'Recent discussions around a potential future Fire and Rescue Service statutory duty for responding to major flood events, has unfortunately served only to cause confusion and misunderstanding, both within the Service and for other major stakeholders'.

[123] Could you briefly tell us why you made that statement?

[124] **Mr Bates:** The issue around flooding rescue is not clear, and of that we are absolutely certain. There is no current statutory duty for any single agency to rescue persons trapped in a flooding environment. We are a little disappointed that there seems to be scant mention of this in the draft flood and water management Bill. The issue of who is in charge needs to be clarified. We have the statutory power to respond, which is conferred on us by the Fire and Rescue Services Act 2004, but we have no statutory duty to do so. A statutory duty would give us the ability to engage more formally and properly with a whole range of different rescue partners, such as the RNLI, the MCA and other agencies. If we were to have a statutory duty, there would be a requirement for funding to perform that role, for logistics, equipment and training. Until Government clearly outlines what the fire and rescue service's role is in relation to flood rescue and flooding response in its broadest context, this confusion will continue.

[125] **Mick Bates:** I have just received a note asking me to remind you please not to touch

the microphones. That is all taken care of by someone who is watching and turning them on at the right time. As we proceed, my intention is that certain Members will lead questions on certain areas. In a moment, I will call Angela Burns, who will talk about responsibility. If you feel that you would like to join in with a brief comment, you are welcome to do so. However, I remind you that we have an hour and a half of the session remaining. Your contributions are welcome, but please keep them to the point.

[126] **Angela Burns:** I have to say that I am completely confused now because, having read the papers that we received, I was under the impression that the police force was the lead co-ordinator of any response to a flooding incident. Can you clarify what you said in your statement as to who is the lead when it comes to the physical rescue of a person? I picked up that the police head up the gold command team. Could that be clarified first?

10.10 a.m.

[127] **Mr Bates:** You are right. The police are in charge of the whole incident, but there is no single agency that is statutorily responsible for carrying out the rescue of persons from floods. Clearly, there is a significant public expectation that the fire and rescue service would take a major role in that, and it would as a first-responding organisation on the ground. We would like to be there at the very early stages of an incident, but we have no statutory duty to do that.

[128] **Angela Burns:** I would just like to explore that—

[129] **Mick Bates:** The point has been made. Perhaps Bob Wilson would also like to comment on that.

[130] **Mr Wilson:** I support Paul's comments. It is fair to say that a response to flooding draws together the command, control and communication strategies of a number of different events. There is not a great deal of difference between how that structure is pulled together for a natural event, an industrial accident, or a malicious attack. It will generally be the same people who sit around the table and respond to those different events. As I said earlier, we do not have a statutory responsibility to chair the strategic co-ordination group. However, the Civil Contingencies Act 2004 lays out roles and responsibilities and clearly points towards the police to lead on many co-ordinated operations. As I said in my paper, that is what we do in practice. We co-ordinate, and it will generally be a chief police officer who chairs the strategic co-ordination group. It does not have to be the case, but it tends to be.

[131] **Mick Bates:** I note that you say in your paper that 28 organisations were involved when you responded in Gloucester. At some stage after this meeting, could you send us a list of those organisations to help us?

[132] **Mr Wilson:** I can get that from Gloucester, yes.

[133] **Angela Burns:** This is quite an important issue that I would like to flesh out a little more. It seems to me that, in theory—and I am quite sure that the human drive within us would not allow it to happen in practice—if someone were drowning in a flood situation, there is not one organisation that is charged with going in there to try to save them, no matter what.

[134] **Mr Bates:** That is the fundamental crux of the problem.

[135] **Angela Burns:** Right, okay. My second question is this. Could you define, if at all possible, the responsibilities for, or tell us where you would draw the line between, rescue and help? Help might be a situation in which an elderly lady is in a house that is being flooded,

and she needs someone to get the sandbags or the boards for her door so that the water does not come in. So, that is help. At the point when the water comes into the house, she then requires rescue, because you need to get that person out of the house. Is there a line in your command structure that says that these people need rescuing, and those people just need help? If so, who carries out the help? Is it the Environment Agency, local authorities—

[136] **Mr Bates:** On the ground, the fire and rescue service, like all emergency services, is a humanitarian service, and we will do whatever we can to help members of the public who are in danger or distress. Of course, we will continue to do that. The issue with flooding—and the committee rightly recognises it—is that it is a type of incident that we would respond to more often. If we are responding to that more often, we need to have the capacity and the full capability to work with other agencies to perform that role. That brings with it additional responsibilities and work for the fire and rescue services, and a requirement for additional funding.

[137] **Angela Burns:** I am sorry to keep going on about the responsibilities, but it is quite important, not just for us at this end, thinking about who needs to go to sort out a problem, but also for the public's perception. To date, the public on the ground appear to be very confused. Members of the public are confused about who to go to to say, 'Help! We are being flooded,' or 'We are about to be flooded', or what have you. There also seems to be a lot of anecdotal evidence that, when they are in the middle of a situation, quite often, they cannot get the emergency services to reach them. I note that, as a general rule, police personnel will avoid driving or walking through flood water, but if you have somebody who needs rescuing, how do you manage that? This is about trying to get a clear line of communication, because we need to be able to help the Government to formulate a direct policy that the general public can understand. Anecdotal evidence says that ambulances or police officers go through the water in cars, they spread out the water and the water then floods the houses. It is about getting to the nub of it so that we can say, 'Please will you'—whoever it may be—'be the people who everybody can look to and ask for help?'

[138] **Mr Wilson:** In practice, I have been the branch commander on several flooding incidents in north Wales and I recognise that plea about not driving through water, so that it does not go over the sand bags. I said in my paper that, in general terms, we will not deploy resources. We will not do it, as managers, because we have a responsibility to our staff and flood water is dangerous and we are not equipped to deal with it. We do not have a training programme for flooding for police officers or for our police staff, our PCSOs. However, in practice, our first duty is to save life and our officers do wade in and get in there. That is the point. There is also no flood rescue service.

[139] **Angela Burns:** I put it on the record that I think that to be flooded must be a very scary experience, beyond belief, and that I think that people recognise and appreciate the support that they get from all of our emergency services. I know that, if I were in trouble, my heart would soar with joy if I were to see any one of you three turning up to help, because I would believe that there was then somebody tougher and more knowledgeable than me who was going to sort out the problem. I want to say that this is not a blame session, pointing the finger because no-one is responsible; this is about trying to make the situation better. I am sure that we, as a committee, recognise the amazingly good work that you do during moments of deep despair for people or in times of tragedy. I would like to formally say 'thank you' for that. I am still not convinced, however, that we have a good command-and-control structure in terms of understanding that there is to be one organisation. I think that your evidence has been very illuminating, because I certainly had not picked that up before, so I would like to thank you for it.

[140] **Mr Brinn:** In relation to the help aspect of the question, I think that that quite often comes back to the local authority, when it comes to dealing with the old lady who is on her

own, for example. In recent events, we have undertaken a door-knocking exercise, looking at social and welfare-type issues and trying to help where we can. Every circumstance is different, but I would see that help or recovery phase probably coming back to the local authority.

[141] **Mr Mills:** I think that you have missed out a really important stage, which is evacuation. I have certainly participated in exercises where, with the police, we have gone and either suggested or insisted that people evacuate before flooding takes place, if we have strong enough evidence that there is going to be severe flooding. Sometimes, you do not get that warning and people have to be rescued, but in an ideal world, you will evacuate them before that happens.

[142] **Mr Wilson:** May I just pick up on the evacuation issue? There is no power for the police to demand that people evacuate their premises. That power does not exist in a flooding incident. We can advise it, we can ask them to do it, but we cannot make anybody do it.

[143] **Mick Bates:** How would you receive information that evacuation is necessary and under what circumstances? Who would provide that information to you?

[144] **Mr Wilson:** That would happen in a number of ways. Ideally, we would know, if it was a rising tide event, what the impact would be, what it was going to do and whether or not there were vulnerable people or premises, such as care homes and hospitals, in the area, and then a decision would have to be made to evacuate. It is a very difficult decision, because in some circumstances, if the situation is serious enough and people are ill, which means we are talking about hospitals, if we evacuate, people will die, and if we do not evacuate, people will die. That is an example of the sort of decisions that some of our gold commanders have to make. It is difficult.

10.20 a.m.

[145] Generally, however, if we think that your premises are going to be affected, because you live in a bungalow that lies below the river line—I have experience of a similar scenario—we would ask you to consider moving out. People do not do that; they move up to the bungalow attics.

[146] **Mick Bates:** Thank you; that is very interesting. A similar process arises. We have representatives of the agriculture industry here. How does the RSPCA receive information that it then passes on about moving animals from an area that will be flooded?

[147] **Mr Hubbard:** We receive information from the Met Office, and we are in contact with fire and rescue control rooms. If we have warning of a potential flood alert, we would, at the first stage, put our officers on stand-by duty. If the risk is more imminent, we would move officers into the area. We do not have a system by which we inform or alert landowners or livestock owners of impending flood events, however. That is not part of our response strategy at present.

[148] **Mick Bates:** Okay. Sue, would you like to come in on who is responsible for informing landowners?

[149] **Ms Evans:** To begin with, many of our landowners receive valuable information and warnings from the Environment Agency about when floods are going to happen. We have discovered that farmers are now beginning to rely on that information, and we have had instances in which a breakdown in equipment has resulted in warnings not being given and farmers finding that their livestock has been flooded out without them having any knowledge of it. From discussions with the Environment Agency afterwards, I understand that the

Environment Agency is not required to notify; it is just something that it does out of the goodness of its heart. The problem is that people begin to rely on such information instead of going out to check for themselves, and this has caused problems and loss of animal lives.

[150] **Mick Bates:** I put the same question to the representatives of the RNLI, the armed forces and coastguard. How do you receive information? Let us rephrase that: who is responsible for giving you the information that you have to take action? Can we start with you, David Lowles?

[151] **Lt Col Lowles:** It is very similar. The fact that we are all sitting here is indicative of how the system works. My job is to ensure that my role is integrated fully with the local and regional services and any SCGs as appropriate. A flooding event, generally, is not instantaneous, so you have a bit of a lead time.

[152] **Mick Bates:** What is an SCG?

[153] **Lt Col Lowles:** It is a strategic co-ordination group. For example, for swine flu, there are currently four SCGs sitting in Wales, as well as the emergency co-ordination centre Wales and the Welsh Assembly Government. I am a part of all of them. I will get a very early warning of an incident, probably from superintendent Wilson, and I will then attend the gold command—if the situation is severe enough to warrant setting it up—and I would warn the Ministry of Defence chain of command that I am deploying to a gold command for a flooding event. My job would then be to gather information, and if it looked like the emergency services were going to be overwhelmed at some stage—clearly, there is a threshold beyond which they do not have the resources to deal with the situation—by keeping my chain of command informed, I could give them a heads up about the sort of support that may be required, and they would start scoping to see what is available. In flooding events, for example, helicopters are very useful. We all know from the news that there are not many available at the moment, and most of those that we do have are in Afghanistan. So, the MOD does not have a remit to use its resources for environmental incidents or any other resilience incident. We will just use whatever is available. It may well be that there is not much to hand, and in most cases it will be manpower.

[154] **Mick Bates:** Colin from the RNLI, I would like to ask you the same question. Who informs you?

[155] **Mr C. Williams:** We have provided guidelines to every chief police officer and chief fire officer in the country regarding the criteria under which the RNLI would be prepared to respond. Primarily, it is where there is risk to life or where a significant forecast indicates that there could be risk to life. We would generally be involved in the major incidents. Going back, things would have been a bit more ad hoc, but, a few years ago, we provided guidelines to the authorities to assist them.

[156] **Mick Bates:** Could you reiterate for us that ‘the authorities’ would mean ‘the police’ in this case?

[157] **Mr C. Williams:** The police, the fire service and also the coastguard—in normal circumstances, our coastal deployments would be through the coastguard, so there is often liaison between the police, the fire service and the coastguard before we are brought in.

[158] **Mick Bates:** Barrie, would you like to comment, as a coastguard?

[159] **Mr Evans:** Most of our information comes from the Met Office. We are particularly interested in coastal issues, such as tidal surges and so on, so the information that is received from the Met Office is specific to the coastline. We do not receive a warning from the

Environment Agency about rivers bursting their banks, because that is not our remit.

[160] **Mick Bates:** Where does responsibility end in an estuary?

[161] **Mr Evans:** That is interesting. There are cut-off points. Tidal waters are generally regarded as the limit, but, in the Bristol channel, we go up as far as various locks or weirs, beyond which we would not be able to operate. The interesting point is that we operate in the Thames, specifically because of the Beau Belle incident, so we provide co-ordination of search and rescue there. We would assist wherever possible if it was within an estuary and we were able to co-ordinate the response. The facilities that we have at our disposal are the RNLI and other independent life boats. We also have the use of the Royal Air Force, Royal Navy and coastguard helicopters and our own coastguard rescue service, which is volunteers who are dotted around the coast. They are specifically for coastal rescues and they are mainly trained for things like searching, cliff rescues and mud rescues. They would assist wherever they could in other circumstances, but they are not trained or equipped for swift water rescue.

[162] **Mick Bates:** When would swift water rescue come into action?

[163] **Mr Evans:** Generally, in fast-flood water in rivers and so on. They are not trained for that, but we have some teams that are trained and equipped. In the north-east of Scotland, some teams are equipped for that type of rescue: they have dry suits and small rafts for rescue. They have been trained specifically because they are in an area that is susceptible to flooding and the communities are so widely spaced out. They are few and far between. Again, it comes down to what the fire service said about statutory duty and the finance that follows it.

[164] **Angela Burns:** My last question is on responsibility, which you highlighted, Sue. I am interested in any comments that you might have about the responsibility of the individual. You have all talked about your responsibilities to the individual and your responsibilities to each other, and some of you talked about your responsibilities to Government, but no-one has talked about the responsibility that an individual may have to alleviate their issues.

[165] **Mr Hubbard:** The view of the RSPCA is that there are some areas where there are regular and repeated flooding events, and there is an onus on livestock owners in those areas to provide for those animals and to move them away from flooding events. We would take the view that there may have been offences in some cases where that was not done. We are aware of repeated occasions where animals are lost because livestock owners will not move them. We believe that there is an onus on the owner to care for their animal.

[166] **Mick Bates:** Before we leave the strategic issue of responsibility, do any other witnesses wish to make a comment? We have also been joined by George Whitworth, who represents an internal drainage board. Welcome to the meeting.

[167] **Mr Whitworth:** I apologise for my late arrival.

[168] **Mick Bates:** Not at all. Do any witnesses wish to make any other—I see that you want to come back on this, Angela.

[169] **Angela Burns:** I think that everyone is being a bit polite.

[170] **Mick Bates:** Polite?

[171] **Angela Burns:** Yes. All these people have witnessed flooding and have had to go in to help people to prevent flooding, whether it is a small, big or cataclysmic flood—however you wish to describe it. Do you not have views on what the individual can do to help to

mitigate their exposure to flood risk? For instance, if you know that you will be regularly flooded, you should get one of those boards for your door, or you should not pave every square inch of your garden with tarmac.

[172] **Mick Bates:** You have prompted many responses there.

10.30 a.m.

[173] **Mr Brinn:** Householder responsibility, personal responsibility and so on is a significant area. We have difficulties relying on that. We have examples where people who live near a culvert grill clear it on a regular basis, keep an eye on it, and let us know if there are any problems. However, we cannot rely on that because that individual might be away for a fortnight or an afternoon when there is a flash flood. So, that is a significant area, but it is very difficult for us to rely on that individual or a group of individuals.

[174] **Mick Bates:** Thank you. George Whitworth would like to comment, and then Paul and Chris. I hope I have not missed anyone out.

[175] **Mr Whitworth:** I am catching up on the conversation a bit, but I am a resident of Pool Quay district—which suffers from upper Severn fluvial flooding. The first effect that floods have on our district is to cut off the two roads to the houses that are affected: one cuts off some 30 homes and the other some 10 homes in Pool Quay and Llandrinio. During the 2007 event, a fire tender was called to a pregnant woman, and it got stuck. Boats were called and they got stuck. The point that I wish to make is that the most significant flooding is at the most important access point. It is a highways matter and is due to the assignment of resources, I am sure. However, that is the fact.

[176] **Mick Bates:** In that case, a helicopter would have been useful. Was the helicopter called?

[177] **Mr Whitworth:** No. One of the farmers was sent in, with the tractor nearly floating, to rescue this woman, who was due to give birth within days. It was quite scary at the time. However, the point that I wish to make is that the matter could easily be put right.

[178] **Mr Bates:** Bob has made the point about evacuation, and the fact that the public sometimes ignores the advice to evacuate. When we have a warning that significant flooding is likely to occur—from whatever source, but usually from the Environment Agency—we deploy resources, because we want them there before the floods happen. If there are floods, we will not be able to get them there. Would it not be nice if the public was able to do the same when given pretty solid information that major flooding is likely to occur and the police ask them to evacuate; if people evacuated, there would be no need to rescue them.

[179] **Mr Mills:** It could be done through the media, through literature and in a variety of ways. You are right to raise this point about individual responsibility. First of all, people need to be aware. They need to sign up for flood warnings, they need to be prepared, they need to have a simple action plan about what they are going to do should they be flooded. Lastly, they need to look out for others, such as elderly people and so on. So, there are some very simple things that not only the Environment Agency but other organisations, including local authorities, should be stressing to people who are at risk of flooding on a frequent basis. It will take constant reinforcement to get people to change behaviours and do these things.

[180] **Dr Venables:** Those individuals who live in areas of special flood risk, the low-lying areas, pay a local levy to the Internal Drainage Board. It operates the drainage in that area on a daily basis. So, many individuals pay a levy in addition to their council tax and other payments towards what needs to be done in their locality. We should look at those as

examples and look at the local democracy and the local action that is taken in response to local needs.

[181] **Mick Bates:** Thank you very much. Now that we have discussed the responsibility issues, we will move on to discuss the general areas of planning response communications infrastructure for the next hour. It is sometimes difficult, because the subjects overlap. I would like to ask Rhodri Glyn to introduce the discussion about planning. I trust that everyone is familiar with the translation equipment.

[182] **Rhodri Glyn Thomas:** Hoffwn ofyn dau gwestiwn penodol ynglŷn â chynllunio. Tybiaf mai cwestiynau i Asiantaeth yr Amgylchedd a Chymdeithas Llywodraeth Leol Cymru yn benodol ydynt. Hoffwn ganolbwyntio ar ddatblygiadau newydd. Dywedodd cynrychiolwyr Asiantaeth yr Amgylchedd, yn gynharach yn eu tystiolaeth i'r pwyllgor, mai'r bwriad oedd sicrhau, wedi i ddatblygiad gael ei gwblhau, bod y safle'n cael ei ddychwelyd i'w statws gwyrdd blaenorol o ran ei effaith ar lifogydd. Clywsoch yn y dystiolaeth fideo un sylwebydd yn dweud ei fod yn rhagdybio, unwaith y bydd datblygiad yn digwydd ac unwaith y caiff yr holl ganllawiau eu gosod, na fydd problemau. Fodd bynnag, nid dyna'r realiti ac, yn sicr, nid dyna'r dystiolaeth a glywais i yn Rhydaman.

Rhodri Glyn Thomas: I would like to ask two specific questions regarding planning. I suspect that they are primarily questions for the Environment Agency and the Welsh Local Government Association. I would like to concentrate on new developments. The Environment Agency representatives said earlier in their evidence to the committee, that the intention was to ensure that, after a new development has taken place, the site is returned to its previous green status in terms of its effect on flooding. You heard in the video evidence one commentator saying that it is taken for granted that when a development takes place and when all the guidelines are put in place, there will be no problems. However, that is not the reality and that was certainly the evidence that I heard in Ammanford

[183] A dderbyniwch fod diffyg cydgysylltu o ran sicrhau nad yw datblygiadau newydd yn cael effaith ar y system garthffosiaeth, drwy orlwytho'r system honno a chreu problemau newydd o ran dŵr wyneb, sydd, o ganlyniad, yn achosi nifer o sefyllfaoedd o lifogydd sy'n gallu effeithio ar yr ardal?

Do you accept that there is a lack of co-ordination to ensure that new developments do not have a detrimental effect on the sewerage system by overloading that system and creating new problems relating to surface water, which, in turn, causes a number of flood situations that can affect an area?

[184] **Mick Bates:** Chris, would you like to start on that? Others involved in planning, and I am looking at Welsh Water in particular, can also answer that.

[185] **Mr Mills:** A number of issues are wrapped up in that. The first relates to what we said earlier: when the Environment Agency provides advice to local authorities on flood risk, it tries to ensure that the new development does not add to flood risk. However, you have to put that into perspective. At the end of the day, the planning authority has to base its decision, not only on flooding, but on a variety of issues.

[186] Sewerage is an issue for the water companies and, no doubt, Tim, as the Welsh Water representative, will want to say a few words about that. In our earlier evidence, we discussed making Welsh Water a statutory consultee to the planning process, which might help in that respect. Welsh Water is currently obliged to provide sewerage and water resources to a new development, but, at that point in time, it may not have the infrastructure in place. So, it needs a stronger voice on how that comes about.

[187] **Mick Bates:** I will now invite Tim to speak.

[188] **Mr T. Williams:** I do not want to repeat the evidence given to you in early June by Nigel Annett and Chris Jones, when they spoke before this committee. On planning, we have a duty to protect our existing customers from flooding from our surface-water and foul-water network. On our responsibility as a planning consultee, we have said, and continue to say, that we would like our position to be strengthened so that, when new discharges or developments take place that could impact on our network, we take into account what is happening and report back on it to the local planning authority. That has already been said, and we would be consulted under the Bill on the sustainable urban drainage situation. However, on new connections to our network, we should be consulted not only on the quantity of connection, but also on the location of the connection.

[189] Secondary to that is paving over gardens and land, which again leads to increased surface-water run-off into our network—in the majority of cases without our knowledge. I would therefore urge that controls be put in place that, not necessarily restrict, but control the paving over of what was a permeable surface. Such paving adds to the quantity of flow going into our network and when surface water is mixed with foul water, it all becomes foul and we then have a duty to protect our customers. Over recent years, we have found that the increased quantity of surface water run-off as a result of gardens being paved over and increased parking on water-permeable surfaces has led to more of our customers experiencing flooding, who were not experiencing flooding previously.

[190] **Mick Bates:** What sort of data do you use to assess any application that you get?

10.40 a.m.

[191] **Mr T. Williams:** If a planning application is passed to us, we talk to the Environment Agency and to our operations teams. Over the majority of our area, we have sewer models, which reflect the capacity of the network and the capacity of the receiving treatment plant. Therefore, we look at the quantity of water that will enter the network and where it leaves the network, and model whether we can receive that. We can then respond.

[192] **Mick Bates:** Does the same thing occur with surface water?

[193] **Mr T. Williams:** It depends very much on the design of the development. Therefore, we need to get involved in developments at the front end, if we can, and work with the developer on whether we need to put sustainable drainage systems structures in place, which will attenuate flow out of the sewers. We can then understand what the foul flow is.

[194] **Mick Bates:** How advanced is that system of attenuation? There does not seem to be a lot of knowledge about that.

[195] **Mr T. Williams:** I agree with you. The system is in more than an embryonic state. It is moving ahead more quickly than it was two or three years ago. For example, we are working with a developer in Gatewen in the Wrexham area to put such structures in place to understand the maintenance needs of these assets and how they work. They have been in place in various other parts of the world for the past 10 to 15 years. Parts of North America have been using such structures for a long time. We need to work with the local planning authorities and developers because if you look at the flood and water management Bill, you will see that there are issues arising in relation to ownership of the structures. We need to understand the barriers to ownership to ensure that the developers do not go back to doing what they have been doing due to the potential barriers.

[196] **Mick Bates:** I have several other witnesses who would like to contribute. I will start by calling Tony from the Energy Networks Association.

[197] **Mr Glover:** I am sorry. I was not—*[Inaudible.]*

[198] **Mick Bates:** I am sorry; I was passed a note saying that you were first.

[199] **Mr Glover:** I think that Jean is first.

[200] **Mick Bates:** I am sorry. I therefore call on Jean.

[201] **Dr Venables:** I would like to say that the internal drainage boards work closely with local authorities and use their local knowledge to give advice to developers about the form of development that could take place, how the drainage could be managed, and to come up with solutions for those developments. Therefore, there is a lot of input relating to local knowledge, and the internal drainage boards spend a lot of time on development control. Also, because they do a lot of active management and maintenance of watercourses on the ground, they will be well placed to take over the responsibility of sustainable drainage systems if necessary, provided they are properly funded. The crux of the matter is to look at the future funding and maintenance of sustainable drainage systems.

[202] **Mick Bates:** Could you take us back one step to the first part of your response? Who asks you for your input? Is it the planning authority, which is aware of your business, that asks you to comment on sustainable drainage systems for a particular development as an internal drainage board?

[203] **Dr Venables:** Yes. The internal drainage boards work very closely with their local authorities on planning matters, certainly on those relating to drainage.

[204] **Mick Bates:** I see. Are you a statutory consultee?

[205] **Dr Venables:** No; we are a statutory body with a great deal of local knowledge about the drainage in a particular locality.

[206] **Mick Bates:** Are you automatically one of the consultees when a planning application is received?

[207] **Dr Venables:** Yes, in most places.

[208] **Mick Bates:** When you say ‘most places’, could you expand on that slightly?

[209] **Dr Venables:** As we are not statutory consultees, one cannot say for certain that we are always consulted. In the majority of cases, we are consulted and it is very successful when it happens.

[210] **Mick Bates:** Thank you very much. You provided us with a paper in a previous evidence session, which we noted.

[211] I will now turn to Nigel on this planning issue, and then to Sue. We have heard about the engagement, for example, of the internal drainage boards. Is this standard procedure from your side?

[212] **Mr Brinn:** I cannot speak generally, but from the comments that I have heard so far, where applicable and appropriate, I would expect the planning authority to be in consultation with the drainage board. It does not apply to my authority, therefore I have no direct experience of that. However, there are one or two comments that I would like to make in relation to the question.

[213] **Mick Bates:** Yes, of course; you may carry on.

[214] **Mr Brinn:** It is a very broad-ranging question. There clearly needs to be a robust approach to land-use planning. In relation to flooding and flood risk in particular, it is a very complex area. I would like to raise a few points. There is the potential for direct flooding. New properties or premises that are developed could flood, as well as the indirect impact further downstream. We could probably all provide examples of that, and such issues are well publicised. We now have a far greater understanding of flood-risk management, and we have greater technical knowledge, through things such as TAN 15 and the modelling that I mentioned earlier that was presented to the committee. There are also areas where the goalposts have moved slightly in the sense that we are looking at different data now. Things that were presented 10 or 15 years ago, which we might consider to be fairly recent developments, might be looked at in a different light now that we have a greater understanding of the issues.

[215] We also now take into account climate change, so we are looking at different parameters again. It is a bit of a moving landscape, I suppose. One of the key issues, particularly with respect to surface water, is maintenance. A design could be put together and it might be acceptable, but there is a big issue with regard to ensuring that whatever is put in place is adequately maintained. So, that is a host of responses to a broad-ranging question.

[216] **Mick Bates:** It was a broad-ranging question. In the draft Bill, local authorities are given an increased role of co-ordination. Do you think that that is the right place for this increased co-ordination responsibility?

[217] **Mr Brinn:** Inevitably, it would make an awful lot of sense, because, as mentioned in some of the earlier evidence from the Environment Agency, having that local knowledge and presence is critical. I would add the standard caveat that that role would need to be suitably resourced. There is a great deal that we could do as a local authority, but, obviously, we would need to have the resources to undertake any additional responsibilities.

[218] **Mick Bates:** What work has the WLGA done in preparation for this extra responsibility?

[219] **Mr Brinn:** I am afraid that I am not aware of what the WLGA has done in that respect.

[220] **Mick Bates:** Neither am I. I am a bit worried about that.

[221] **Mr Brinn:** I guess that we are at the stage of trying to digest the draft Bill. Local authorities feature significantly in the draft Bill, which I would generally welcome, but I am keen to see some hypothecated funding or an additional resource for undertaking what could be very significant pieces of work.

[222] **Mick Bates:** I think that you are quite right to say that it is significant, and we would welcome something of a forward view of your responsibilities and the requirements, if you were to be given the responsibilities suggested in the draft Bill. Really, they are all recommendations from the Pitt report. That information will be very welcome. Sue, I believe that you want to comment on the planning issue.

[223] **Ms Evans:** I want to comment on having Welsh Water as a statutory consultee. Our discussions up to this point have been mainly about urban situations; I can understand your concerns about that. However, I would say that 99 per cent of our members have their own private drainage systems, whether they are septic tanks, waste stabilisation ponds or reed beds

to assist in cleaning water. I have great concerns about the vilification of septic tanks, because when they work well—as a chartered surveyor, I spend a great deal of time with my head down them—they are wonderful pieces of equipment that are very environmentally friendly. Compare them with water authority works; there is one going in in our village at the moment and it is going in on a floodplain. We have a septic tank, which is well above that with plenty of land to drain into. Welsh Water has a completely different remit. It has to make rural sewerage systems viable, and so it would concern me that it would request that people should be put onto a mains sewerage system when there is no need for that and where it would, in fact, be better for the environment for them to have their private drainage system.

[224] **Mick Bates:** Thank you for that comment. Rhodri, do you wish to come back on that?

[225] **Rhodri Glyn Thomas:** Mae gennyf dau sylw. Mae llawer o bobl wedi cyfrannu at y drafodaeth, ac yr wyf yn ddiolchgar am eu sylwadau. Yr wyf yn ddiolchgar iawn i chi, Gadeirydd, am gymryd yr holl gwestiynau atodol a rhyddhau aelodau eraill o'r pwyllgor o'r cyfrifoldeb hwnnw.

Rhodri Glyn Thomas: I just wish to make two comments. Many people have contributed to the debate, and I am grateful to them for their comments. I am particularly grateful to you, Chair, for taking all of the supplementary questions and releasing other committee members from that responsibility.

[226] Fy mhwynt cyntaf yw, er bod llawer o ymgynghori, mae'n ymdadangos nad oes llinellau clir o gyfrifoldeb yn y maes hwn. Mae'n ymddangos bod gan wahanol fudiadau flaenoriaethau gwahanol. Nid yw hynny bob tro o gymorth yn y sefyllfa hon. Felly, byddaf am weld mwy o eglurder ynghylch hynny. Derbyniaf, o ran yr holl fudiadau, ac yn enwedig llywodraeth leol, fod y cwestiwn o adnoddau yn sylfaenol.

My first point is that, although a great deal of consultation takes place, it does not appear to me that there are clear lines of responsibility in this area. It appears that different organisations have different priorities. That is not always of assistance in this situation. Therefore, I would like to see more clarity in that respect. I accept that, with all of these organisations, and particularly with local government, the question of resources is fundamental.

10.50 a.m.

[227] Yn ail, gyda datblygiadau newydd, oni ddylem anelu at beidio â chynyddu'r pwysau ar garthffosiaeth ac ar ddŵr ar wyneb y ddaear? Yn hytrach, oni ddylem ddefnyddio sefyllfaoedd fel datblygiadau newydd i leihau'r pwysau hynny drwy roi systemau newydd mewn lle, o ystyried yr hyn sydd yn digwydd o ran ein hinsawdd?

Secondly, with new developments, should we not be looking to avoid increasing the pressure on sewerage and on surface water? Instead, should we not use new developments as a means of reducing those pressures, by putting new systems in place, bearing in mind what is happening to our climate?

[228] Symudaf at yr ail gwestiwn sydd yn ymwneud â'r mapiau cynghori ynglŷn â datblygiadau a nodyn cyngor technegol 15. A yw'r bobl sy'n rhan o'r broses hon yn credu bod angen adolygu nodyn cyngor technegol 15 yn benodol ynglŷn â datblygiadau newydd? A ydych yn credu bod y mapiau cynghori ar ddatblygiadau sydd newydd gael eu diweddarau yn ddigonol i ymwneud â cheisiadau am ddatblygiadau newydd? Yr wyf yn sôn am ddatblygiadau cymharol fawr

To move to my second question, which is about the development advice maps and technical advice note 15, do the people who are part of this process believe that TAN 15 needs to be revised, specifically regarding new developments? Do you believe that the development advice maps, which have just been updated, are adequate to deal with applications for new developments? I am talking of relatively large-scale and significant developments, not a few houses

a sylweddol, nid ambell dŷ yma a thraw. here and there.

[229] **Mick Bates:** I am looking at the local authority representative, Nigel, and at the Environment Agency. We would like to hear both your responses.

[230] **Mr Mills:** I have to say that the DAM maps—

[231] **Mick Bates:** Those damn maps. [*Laughter.*]

[232] **Mr Mills:** As you rightly point out, they have just been updated. I would like to stress, however, on the Environment Agency's advice on flood risk, that we have updated our maps on a regular basis right from the beginning of TAN 15. So, our maps will be updated as and when we get new information, and we use the latest and most up-to-date information. One of the recommendations that we have made to the Welsh Assembly Government is that the second generation of DAM maps, which will be considerably more accurate than the originals, should be updated on a more frequent basis. The last time was about three or four years ago. There is no reason why they could not be done annually, which would mean that you would get the balance between the administration of changing them and having the best and most up-to-date information available for the TAN 15 system.

[233] **Mick Bates:** Nigel, would you like to comment on TAN 15 and its possible revision?

[234] **Mr Brinn:** I can check with the WLGA whether it has a particular view on looking to update it in relation to new developments, but I am not aware of one. It is clear that this is a complex area, because when we look at local development plans, our development sites and so on, flood risk is taken into account, but, I have to stress that, as has been mentioned a few times, these are complex issues.

[235] **Rhodri Glyn Thomas:** Dylem fabwysiadu sylw Chris fel pwyllgor, sef y dylid diweddarau'r mapiau hyn yn flynyddol. Mae angen adolygu nodyn cyngor technegol 15 yng nghyd-destun datblygiadau newydd. Clywais dystiolaeth gref yn Rhydaman bod datblygiadau newydd yn creu problemau enfawr o ran carthffosiaeth a dŵr ar wyneb y ddaear.

Rhodri Glyn Thomas: As a committee, we should adopt Chris's comment, namely that these maps should be updated annually. There is a need to review TAN 15 in the context of new developments. I received strong evidence in Ammanford that new developments create huge problems around sewage and surface water.

[236] **Mick Bates:** Before we leave the issue of planning and move on to Alun Davies's question, I will bring in Tony from the Energy Networks Association. Thank you for your paper, in which you describe the audit that you have undertaken about adding greater resilience to key power supplies. Can you go through that process and, if possible, relate it to anything that may be necessary in Wales?

[237] **Mr Glover:** Following the floods in 2007, we were asked by the UK Minister of State for Energy to pull together a group to look at how we can address the resilience of the electricity networks. The first thing that became clear from bringing everyone together was that there was a disjointed approach to some of these key issues. To give an example, in terms of the networks, it was crucial that Ofgem, the UK energy regulator, was brought into that process. There are clearly cost implications, but Ofgem had not even considered the possibility of a cost issue for network resilience in terms of flooding. So, it was important in that context. We brought together the Environment Agency, the Scottish Environmental Protection Agency, the Department of Energy and Climate Change, the Met Office and the Pitt review team and we submitted a report to the Minister for energy in March last year. As a result, we have produced what is called an engineering technical report, which is in draft form

at the moment. The engineering technical report is a standard for the entire industry. It will be crucial in establishing the way in which we go forward.

[238] As to what we have been doing, we have clarified the position with regard to information from the Environment Agency. We fully support the flood forecasting centre initiative; it has been absolutely crucial, and our network companies now receive daily e-mails on this issue, so that we are kept up to date. We have also looked at developing a risk analysis across all the UK network installations. That has been a very important exercise in relation to bringing forward a holistic approach. One of our key concerns, however, has been that there has been a disjointed approach in relation to regions. We have found that the information of the Environment Agency and its partner in Scotland, the Scottish Environment Protection Agency, is sometimes quite patchy. We think that a co-ordinated, UK-wide approach to this issue is absolutely essential. As I said earlier, water knows no boundaries; we are an island, and there are impacts across the UK, which cut across different countries. We need to be able to address that issue. My plea would be that, in everything that we do going forward, we bear that in mind.

[239] On other particular issues, such as climate change, which was discussed earlier, as an energy sector, we are acutely aware of the importance of that and of our responsibility. On adaptation, we have been cited by the Secretary of State for Environment, Food and Rural Affairs—I do not know whether that is an accolade to some of you, perhaps to others it may not be—as one of the industries, if not the industry, at the forefront of addressing the issue of adaptation. We are working very closely on that issue with the Government and with other agencies.

[240] **Mick Bates:** What preparations had you made before 2007?

[241] **Mr Glover:** ENA represents all the network companies across the UK. Network resilience has always been a crucial issue. We are, to some extent, almost an emergency service ourselves; we are an essential service in respect of providing the fundamental infrastructure for the UK and keeping things running. An essential part of that has been ensuring flood resilience, and we have always taken steps to address that issue. A key issue that came out of the 2007 floods, and from the Carlisle report a little earlier, was that information has been patchy. That has been something that we have wanted to address. We have had learning points from what has happened in Walham in Gloucestershire. In essence, it is not about addressing the issues relating to the protection of our infrastructure; it is about ensuring that we have the correct information in order to make informed decisions.

[242] **Mick Bates:** Thank you. Does the Environment Agency want to respond to that?

[243] **Mr Mills:** I have not heard that issue about SEPA before, and I will certainly take that back and investigate it. I will carry on on the theme of integration, as we are not just talking about energy here in respect of infrastructure; we are talking about water supply, roads, telecommunications, and so on. About a year ago, we organised a conference on flooding and critical infrastructure, and what that clearly revealed was that individual utility companies and the owners of different parts of critical infrastructure have very different appetites for risk. I think that I have used this point before, but just to reinforce it, it is no use defending a water treatment works against a 1-in-200 chance of flood if the electricity supply that feeds it has a 1-in-100 chance of flooding. To me, the big challenge here relates to who takes the strategic oversight to make sure that all of our critical infrastructure is protected to the right degree. In all these discussions, this is one area that can have a massive impact, as we saw in the 2007 floods. They could have been so much worse than the very severe impacts that we saw. So, the big question hanging here is who will take the strategic oversight?

11.00 a.m.

[244] **Mick Bates:** Tony, would you like to suggest who will do that?

[245] **Mr Glover:** I would echo the need for that strategic oversight. That is absolutely essential, as is taking the holistic approach and bringing everyone in.

[246] In the energy sector, we have the Energy Emergency Executive Committee, which is a UK-wide organisation that brings together the UK civil contingencies secretariat, the Department of Energy and Climate Change, and a range of other agencies, such as representatives from the emergency services. That is a valuable organisation in addressing a range of network energy resilience issues. It is absolutely essential that that be reflected right across all the utilities. I agree with you on the need for that. The UK Government, the Welsh Assembly Government and the Scottish Government need to take a lead on these issues. As I said earlier, we need a UK-wide approach to this. So, in essence, it probably has to stop with the Westminster Government.

[247] **Mick Bates:** In your discussions, Tony, who from Wales represents the Government? You mentioned a Westminster Government department, but I did not hear you mention a Welsh Assembly Government representative.

[248] **Mr Glover:** As part of our work on the report to the Minister for energy, the flood resilience work and the task group, we were in discussions with the Welsh Assembly Government. Initially, it was very interesting that it was felt that there was little need for the Scottish Environment Protection Agency to be involved, but its involvement was important. So, it is interesting that there has been a localised way of looking at this, but we think that it is more important that there is a UK-wide way of co-ordinating this. So, yes, Welsh Assembly Government representatives were involved. I cannot say exactly who they were, but they were involved.

[249] **Mick Bates:** Was anyone else involved beyond the Government?

[250] **Mr Glover:** It was through the Environment Agency, which would have been represented through the national Environment Agency. However, we are very aware of that.

[251] **Alun Davies:** One thing that is constantly being brought to our attention, as politicians, is the human impact of all this strategising that we hear about, the planning and the response to flooding incidents. However, when those whom I represent have contacted me, in Llanelli, for argument's sake, their response is that they know that all these structures exist, but when there is a flood, none of them seems to work. Sandbags arrive after the flood is over or during it, but they are just dumped. When the flood recedes, there is no-one to take them away, and they could be contaminated with all sorts of different things. The co-ordination and the management of flooding events during the event itself are poor. Who is responsible for that? Where does the buck stop?

[252] **Mick Bates:** I do not see anyone volunteering to answer at the moment. [*Laughter.*] I will start with the local authorities, followed by George and then Jean.

[253] **Mr Brinn:** On the response, there is an emergency response from the emergency services and the local authority, to put emergency planning arrangements in place. You mentioned sandbags, and they are probably put out by the local authority. There is a range of responders. There is no one-size-fits-all approach to the response. Depending on the particular circumstances, if it was a main river that was flooding, we would look at EA warnings, which would be cascaded through the normal process. I am afraid that I am probably going to say the same thing again; it is a very complex area, and—

[254] **Alun Davies:** It is not that complex, though, is it? It is not new. We all know the story about Noah. It should not be rocket science. I ask where the buck stops and I get silence. I have never seen so many witnesses in front of a committee before. I want to know who is responsible for ensuring that the people I represent are safe during a flood event, that they receive the support that they need, and for helping them to clear up afterwards. That is not difficult.

[255] **Mr Brinn:** The easy answer is that no single agency has the responsibility for that.

[256] **Mick Bates:** Other people want to come in on this point, so we will go to George first, then Jean and then Chris.

[257] **Mr Whitworth:** I will be quick. I think that this is, essentially, a local issue. If a response is organised remotely, it is likely to fail because local people are unlikely to have confidence in it. The internal drainage boards are made up of local people. The role of the IDB should be expanded and taken advantage of.

[258] **Dr Venables:** In response to the question of what happens in the event of a flood, I would say that an awful lot is happening. Many people, including engineers and practitioners, are actively managing the event to reduce its extent and duration. If it were not for a lot of people in the Environment Agency and internal drainage boards, and many other organisations such as water companies, actively trying hard to limit the extent of the damage occurring, the situation would be even worse. A lot of activity is going on behind the scenes. I have certainly visited organisations that work around the clock, are dedicated, and work flat out to manage the situation.

[259] This also comes back to the point about individual responsibility. For example, if you live in a flood-prone area, what action have you taken to adapt your property suitably, such as getting sandbags ready for use? An element of individual reaction can play a part in this. Just because there is a multitude of responses, that is not necessarily wrong. Many organisations are involved because there are so many causes of flooding, and they are so wide ranging. You cannot say that that will affect the standard of response, but it does mean that it is difficult to say who is responsible for any one particular flood.

[260] **Mr Mills:** I am in danger of repeating myself and others. During a major flood incident, the police will set up a command structure, through the use of gold and silver commands, and will co-ordinate and lead the response to flooding. However, I want to make two points. These are emergencies and they do not happen in one location. When a major flood event takes place, I can be watching it unfold in multiple locations simultaneously, so that could be in west Wales, south-east Wales and north Wales. We are getting confused by asking who is responsible, because the responsibilities lie all over the place. For example, the responsibility for building in the wrong place is that of one organisation, and the responsibility for not delivering the sandbags to the right people on time is that of another organisation. The process for managing a flood incident is well practised and well exercised, and it is led by the police, who have vast experience and who do an extremely good job, the Environment Agency, local authority representatives, the fire and rescue services, and a host of other organisations. They will all be at gold and silver command and will respond to the direction given by the police.

[261] We should not kid ourselves: the process that is in place is a good one. Quite understandably, what falls out of that are all the issues that arise, particularly after a flood, such as people asking, 'Why did this or that not happen?'

[262] **Mr Glover:** Briefly, one other crucial issue is the exchange of key information in advance. One thing that we have done, through ENA member companies, is establish a

memorandum of understanding with local resilience fora and the regional response teams. It is crucial that, when everyone comes together in advance of these emergency situations, key information is shared so that there is some understanding of how people will respond, along with the key information that others may have. So, sharing that information in advance is very important.

11.10 a.m.

[263] **Alun Davies:** I understand the answers and the points that are being made, but I hear this too often from too many people who are at the sharp end, whose homes or businesses are affected by flooding, to believe that we have structures in place to manage flood events adequately. I have been an elected Member for only two years, but, in that time, I have picked up a number of different feelings and emotions from people, and I have seen that the people whom I represent and am supposed to serve feel let down repeatedly, in different ways. One reason I was anxious that we, as a committee, investigate this issue was because we do not appear to have the management structures in place to prepare and manage flood events adequately. I understand what is being said about the processes, but they do not appear to work. That is my experience as an AM, as somebody who speaks to the people who are affected by these events. It happens too often. I can understand that, where there is a particular emergency, it is a case of asking, ‘What is going on?’ and that is fine. I can understand that there may be faults in particular instances. However, when that happens repeatedly over different territories, it leads me to believe that there is systematic failure. This is what I am trying to understand. I am not sure that the responses that I am hearing are helping me, but they are certainly confirming my suspicions—and that is probably a help to me, in some ways. It appears to me that the co-ordination is missing, and people in the communities affected by flooding see that it is missing. It is not in place. That is a real concern because flooding is not a new phenomenon, and we really should have these structures in place.

[264] **Mr Brinn:** I am happy to respond to that quickly. My particular local authority has had two quite significant flooding events in the past 12 months, on 5 September 2008 and 6 June 2009. If we had had some 24 hours, or even 12 hours’ advance notice of that exact event, there would have been an awful lot that we could have done to improve our resilience and co-ordination, although it may not have allowed us to prevent the flooding, because the rainfall events were very severe and covered a wide area. On 5 September, we were particularly badly hit in Aberdare, where we had a number of blocked culverts, which were completely inundated. More recently, the flooding was in Pontypridd. If we have any form of advance notice—to repeat the point—we can improve our co-ordination past the point of sandbags and so on. I think that that would reassure an awful lot of people, but I do not necessarily think that we would be able to stop the particular flooding incidents that I am talking about. To my mind, there is a bit of a differentiation between the two.

[265] **Alun Davies:** I appreciate that you cannot prevent it, but you have to manage it, and I am not sure that we are getting either of those things right. Mr Mills, the Flood Forecasting Centre has been set up. How do you think that that will impact on our ability to prepare communities for potential flooding?

[266] **Mr Mills:** Once again, I have to draw a distinction between different types of flooding. I tried to do that in the initial evidence that I gave to this committee. Flooding varies. With some of our large rivers, we can have hours or even days to forecast that the flood is rising and is coming, but, with some of our steeper valleys’ rivers, it is only hours. With surface water flooding and the summer thunder storms that we have been experiencing, it may be minutes. The Flood Forecasting Centre is trying to start the process of improving accurate forecasting for these high-intensity rainfall events. It is in its infancy, to be quite honest with you. The combination of better computers and better radar capability means that

we are beginning to be able to predict for fairly broad areas the probability of heavy rainfall.

[267] At the moment, that information is passed on to all category 1 and category 2 responders, so that they can at least be prepared. Having said that, the rain might not fall over Cardiff; it could fall over Swansea. As time goes on, we will refine it, but what it has done is increase levels of alertness. There is a slight downside to that, particularly during these sorts of periods when I and other category 1 responders can be sitting in our offices, and we may get, for a single event, up to 20 pieces of paper. There is a slight danger that people will be inundated with this information.

[268] We have to go down this route, however, to actually reach the point at which we are increasing levels of alertness. As in the point that Nigel made, however, there may be a very short time in which to respond. With river flooding and coastal flooding, there is much more time to respond.

[269] I can only think of one way that might persuade you that we have a well-rehearsed and good system in place to manage major flood events, and that is to invite you to join a gold control when a flooding event is taking place.

[270] **Mr Wilson:** It is 29 agencies or people, and not 28. We can add to that.

[271] **Mr Mills:** That might persuade you, but it might not. These events are prepared for in exercises—I have a list of the exercises that have taken place over the past year and a list of those forecast to happen. So, an awful lot of work is being done on that. We have to recognise, however, the difficulty with managing and reacting to surface water flooding in particular.

[272] **Mick Bates:** I think that we will give Alun the task of co-ordinating the members of this committee to get to the gold response.

[273] **Mr Whitworth:** I would put it to the committee that each region of Wales needs a local flood risk management team. My submission as the IDB player, following the Pitt report, is that the Environment Agency is not the only strategic top-drawer player; there is also the local authority. In addition to a technical unit, there are local flood-risk managers. I underline the point that I made to Alun earlier that the key word is 'local'. At the moment, this is what is missing from the draft flood and water management Bill.

[274] In response to Chris, the local players who attended the flooding event in the upper Severn in July 2007 were caught on their way south—that is, deserting our local players—hijacked, and sent downstream to urban England. I do not say that out of any sense of jealousy; it points to the fact that, to have success and confidence, we must have local teams. The bigger, national agencies are unable to deal with local flooding.

[275] **Mick Bates:** Thank you for that comment. We will come to local resilience in a moment.

[276] **Mr Wilson:** I hear your comments. I will take a slightly different tack, because you also said that you had never seen so many witnesses in a committee. That is indicative of the fact that, when a flood happens, it is not as easy as you say it is to deal with it. It is, actually, rocket science. It is very difficult to co-ordinate the many different agencies during events that happen over a wide area. There is a reason why I did not put my hand up to the question of who has responsibility. Clearly, the police have responsibility for their area of business, but I also read into your question a desire to know who has accountability. Every agency represented at this table has accountability for its performance in responding to a flood, but that relates to their performance in that response, and no one person or agency can direct

operations or say to anyone ‘You have to do this’ or ‘You have to do that’. Believe me, in my world, it would be great if that was how it was, because that is often how we do business, but this is truly a partnership approach. That has to be taken into account when responding to flooding.

11.20 a.m.

[277] Mr Mills is right; it would be beneficial for you to see how a gold command is set up. There are also silver arrangements, and tactical considerations are taken into account. So, strategic and tactical decisions are being made and operational actions are carried out by many people across the board. Co-ordinating all that is difficult, particularly when we do not have the ability to see everything that is going on. There is no single IT system that will tell us which agency covers a particular street, because, to be frank, the investment has not been put in.

[278] The bottom line for the emergency services—I am talking on behalf of the police—is that we need to know when flooding will occur and what its impact will be. We need to know what the impact on critical infrastructure will be and we need to know whether we can do something to assist vulnerable people, either by getting them out or by getting support to them. It takes time, but it will be useful.

[279] Before we leave this topic, I would like to say that there should be more people sitting here, including the emergencies branch of the Welsh Assembly Government, which plays a significant role and may have been involved in your earlier conversation. A lot of work is going on in local resilience fora, there is quite a lot of work going on with local authorities, and a lot of partnership work is going on with the Environment Agency; it is just not visible.

[280] **Mick Bates:** Thank you for those extremely useful comments. The offer for us to attend one of the gold or silver responses is very welcome and we must do it if we can, before we publish our recommendations, if possible. I am sure that there will be a flood somewhere.

[281] **Mr Wilson:** I will try the rain dance later.

[282] **Mick Bates:** No, do not do that. [*Laughter.*] I call on Jean to speak on this finally before coming back to Alun. Lorraine will then ask a question on the follow-up of communications and on community resilience, which we must talk about, and infrastructure.

[283] **Dr Venables:** I will briefly repeat the comment that a lot of activity goes on during the course of a flood, by a whole range of organisations, to limit its effects. We can always learn after every event, because we never get it perfectly right, but an awful lot of effort is made.

[284] On the other side, we have to manage public expectation. I have attended public meetings at which people have been extremely cross about the response, and when you speak to them personally, which I have tried to do on many occasions, you discover that it was because no-one was there to lift the other end of their sofa when they wanted to lift it. Why people are concerned about the lack of response matters. What is the public expectation? As Chris has said, it is not always possible to give a flood warning. Thunderstorms can occur anywhere with very little notice. It is very hard to predict them. So, again, we must manage expectations regarding how much warning we can give. We are working on it, but there is much more work to do. We must appreciate what is being done by all the professionals and put our hands up when it goes wrong, but we must also try to manage public expectation.

[285] **Mick Bates:** Thank you for that comment. Alun will come in briefly and then we will move to the question from Lorraine.

[286] **Alun Davies:** I think that we have to manage public expectations upwards rather than downwards, because people have a right to expect the people who are paid from the public purse to respond and to help them. I can understand and appreciate that a lot of stuff goes on elsewhere during emergencies, but, at the end of the day, all that has a purpose, namely to support and help the public and the communities affected. If that does not happen, all that work is almost irrelevant, because it does not have the impact that it must have. People have the right to expect public authorities and public bodies to deliver on what they are paid to do.

[287] I will respond very quickly to the points that you made, Mr Wilson. I have some experience of planning emergency responses: I used to work in the nuclear industry and, as you can imagine, we spent a considerable amount of time on these issues—you will be pleased to hear that, possibly. It appears that there are too many organisations involved, with too many people managing their own organisations and not enough emphasis placed on overall management and co-ordination. You say that we should have more people here, but perhaps we should just have one or two organisations and say, ‘You are in charge. It is up to you’, and everyone else does what they are told. You paint a picture of an almost chaotic management system, where you have different organisations responsible to different people and being co-ordinated by people who are, themselves, responsible to another organisation altogether. As I have worked in devolved set-ups in Scotland and in Wales prior to being elected, I understand and appreciate the different competing pressures of accountability, but it appears that we have too chaotic a system of management and we do not have a centralised or sufficiently strongly co-ordinated system. I do not necessarily mean ‘centralised’, I also mean centralised locally. Do not worry Mr Whitworth; I am not saying that we should have it operating from Cardiff or London. During an emergency, it appears that there are too many organisations with too many cooks.

[288] **Mick Bates:** I will not ask for any comments on that.

[289] **Alun Davies:** That is fair enough.

[290] **Mick Bates:** However, I will just point out that I think that recommendation 42 of the Pitt review calls for strategic command to be placed with the police. Therefore, there are some recommendations that may move towards that. I think that it is an important concept that we try to make sure that there is someone in control.

[291] **Lorraine Barrett:** We have heard a lot about what happens before and during an event, and we have just started to talk about afterwards. Dr Venables mentioned talking to people who are angry because certain things did not happen. What sort of debriefings take place between you all—not just internally—to review whether we could have done this or that differently, or confirm that something worked? A lot of it does work but I would love to come out, if at all possible, during one of your operations. I am thinking of debriefing almost with local people on simple issues, where one might say, ‘I would not have thought of that’. Whose responsibility would it be to go in to help someone lift a sofa when others are outside, rescuing people and animals, dealing with the ferocious side of the flood? Someone’s sofa may not be as important to the emergency services, but to that person it could be the third time that he or she has lost a sofa. How do you communicate with people afterwards? How are lessons learned or good practice taken forward?

[292] **Mr Jones:** I will make two points. We hold inter-agency debriefing sessions on a regular basis. On the first point about lifting the sofa, perhaps it is a case of getting back to a good neighbour policy; we have flu friends, but perhaps we should have flood friends. With respect to all of those people who are in a situation where the flooding has gone through their houses, there may be 30 or 40 houses and we may only have five or six people on the ground. Fire service colleagues are trained to do mass pumping—they try to assist and rescue people

—and colleagues from the police are doing their job. We do not have the people to be able to go to do what people expect. We cannot be an individual, personalised service.

[293] **Mick Bates:** Do you also have a questionnaire that you circulate, or is that simply from an internal debriefing?

[294] **Mr Jones:** We do an internal debriefing and then we go to joint debriefings with the other services where lessons are learned and picked up. Yes; there are people who will never be satisfied with what we do. To some people, we will never be able to give them the service that they want or that we would wish them to have. It is purely about logistics and numbers.

[295] **Mick Bates:** Are questionnaires sent out to the people who are affected, as part of the learning process after an event?

[296] **Mr Jones:** Not from our service.

[297] **Mick Bates:** Is there any service that goes back to the area that was flooded to ask how it all worked?

[298] 11.30 a.m.

[299] **Mr Brinn:** The direct answer to that question, Chair, is ‘yes’. Clearly, I am speaking from a Rhondda Cynon Taf perspective as opposed to that of 22 authorities across Wales, where we have had significant flooding events, we have gone to the areas affected, knocked on all the doors and taken some feedback as quickly as possible afterwards. We have a public meeting in Rhydyfelin next Thursday evening, which anyone is welcome to attend, to consider the issues arising from the floods on 6 June. That is something that we have initiated, but, being realistic, if we had not done so, it is quite possible that groups of people would have got together and called a meeting and invited us. If it had not been them, it would have been done through their elected members—Assembly Members, MPs and so on. Lots of different levels of meetings are called, so the direct answer to your question is ‘yes’.

[300] **Mick Bates:** I am pleased to hear that.

[301] **Lorraine Barrett:** I wondered how feasible that service would be. You talked about the strategic command, and I am not suggesting that every single person involved should be contacted—by the time you had done that, you would be getting ready for the next flood—but there should be some sort of feedback from the village, from the community council perhaps. Perhaps you could take that issue back and look at it.

[302] **Mick Bates:** It is a valid point.

[303] **Mr Mills:** Our experience is that, in a severe flooding event, the local community will want a public meeting—quite rightly. People also write to us, either directly or through their MP or AM. If it has been a very severe flooding event, it can go to a public inquiry, so there is a great deal of scrutiny after every major flooding event. You have raised the interesting and important point that there could be better co-ordination to get feedback, across the various aspects of flooding. That could be co-ordinated by one organisation. I have noted that, and it is worth investigating.

[304] **Leanne Wood:** I wish to pick up on the point made earlier about infrastructure. As a committee, we visited Gloucester and met with various key personnel involved in the gold operation there. One of the major problems was that they lost their water treatment works—the situation could have been much more severe than it was. I noticed in the evidence given by the Energy Networks Association that Gloucester was given as an example of where

certain measures had been put in place. However, that has happened after the flooding. I would like to know to what extent key infrastructures in Wales are located in flood-risk areas and what can be done to ensure that they are safe in the event of a flood. Is there a map of risky installations? Earlier, someone mentioned that there is no strategic responsibility for this. Is there an action plan? If so, who does what?

[305] **Mr Glover:** We have placed our energy infrastructure onto these maps, insofar as we have mapping, which is provided by the Environment Agency. We have looked at what falls within the areas of risk. We do not have a great deal of information on depth, which is critical in managing the protection of the infrastructure. As Jean has said, you always learn after events. One thing that we have learned as a result of what happened in Gloucester is that we need to have more information on depth. We have ways of protecting the infrastructure, whether it be permanent protection or an inflatable, temporary protection. We are rolling that out where there is a risk.

[306] We have also been very clear about applying the fullest implications of societal and community risk with regard to other infrastructure. We are very clear about the cost-benefit analysis. We are an industry that is regulated by Ofgem; we cannot spend anything without being held to account, so we are very conscious of that and of having to justify that expenditure. It is something that we are doing, which we were doing beforehand, to be honest, but we know that some big learning points came out of the flooding at Gloucester.

[307] **Mick Bates:** I think that Chris would like to comment on that.

[308] **Mr Mills:** Last week we published 'Flooding in Wales—a National Assessment of Flood Risk'. In that document there are all the different types of infrastructure that are at flood risk. We have all the background data to that, so we know exactly how many different elements, such as railways, major roads, electricity infrastructure, hospitals, prisons, and so on, are at risk of flooding throughout Wales. All that information is available.

[309] **Leanne Wood:** Is there an individual action plan for each one? Do you have an idea of what would need to happen—

[310] **Mr Mills:** That goes back to the comments that I was making earlier. The responsibility for doing something about that lies with the owners of the various types of infrastructure. The bit that is missing is the strategic overview of the protection of the whole lot.

[311] **Mick Bates:** Thank you for those comments. Tim?

[312] **Mr T. Williams:** In respect of water supply infrastructure, prior to May 2007 we began to assess all of our assets, both water and waste-water treatment and pumping assets, on a map against information provided by Chris's team on flood overlay and flood storm frequency return periods. So, we know where our assets are in relation to pluvial, fluvial and tidal flood risk. We have an action plan for each of the assets that are in high-risk areas—particularly for the water supply. We plan to invest around £5 million between 2010 and 2015 to protect our water supply assets. Whitbourne water treatment works, which lost supply on 21 July, at the same time that Severn Trent Water lost supply at Mythe, has since been protected against inundation to the tune of about £350,000. There is a plan over the next five years to protect other key assets.

[313] **Dr Venables:** Speaking as an engineer, I would like to see flood risk being looked at on a catchment basis and for the individual operators to work together with the catchment flood management plans. I fear that a lot of money might well be spent on protecting individual establishments, whereas we should be looking at what we can do to manage the

whole catchment, and perhaps get wider benefits. I would like to see some co-ordination on that basis. Also, because of the catchment principle, I have a concern that the Pitt review and the flood and water management Bill are putting responsibilities on local authorities, and local authorities' boundaries are not the same as hydrological boundaries. I am concerned about that because local authorities will have to work very closely with their neighbouring organisations to deal with water, because water will flow across those boundaries.

[314] **Mick Bates:** Thank you. That is a very good point.

[315] **Leanne Wood:** Could you tell us what would happen if, say, a police station were in a flood-risk area, and that building was needed in an emergency? What would happen then?

[316] **Mr Wilson:** We would relocate. Some of our police stations are in flooded areas. I have stood in one while it was flooded. We are looking at our new builds; we would take into account whether new builds are in flood-risk areas. The reality is that we cannot defend a police station in a way that is any different from how anything else can be defended. So, we would relocate, and look to ensure that responders, no matter what agency they came from, gathered outside the flood area. It is a difficult situation, and it does occur from time to time. Towyn is a prime example. Towyn police station was flooded, and part of Mold police station was flooded during the Mold floods in 2000, along with the fire station and the ambulance station.

[317] **Leanne Wood:** Where did you relocate to?

[318] **Mr Wilson:** We went to the next town, Buckley.

[319] **Leanne Wood:** We have received evidence that culverts, soakaways, drains and other water courses are not being maintained regularly, and that that can exacerbate problems with flooding. Who is responsible for ensuring that the required maintenance is completed and how can the co-ordination of maintenance tasks be improved to ensure that the work that needs to be done is completed effectively in the risky areas?

11.40 a.m.

[320] **Mick Bates:** I am looking over to Nigel from the WLGA.

[321] **Mr Brinn:** I can respond to that. In general terms, if it is in public ownership, it is the local authority's responsibility; if it is in private ownership, it is the private landowner's. I am generalising, but that is the situation. If we are looking at an inlet—the screen or trash grille that covers that inlet—that is on private land, it would be the private landowner's responsibility to clear that. What happens in practice is that the critical ones—the ones that we know create problems—are inspected on a regular basis.

[322] **Leanne Wood:** You say that they are inspected on a regular basis. Would that inspection be done by the local authority?

[323] **Mr Brinn:** Yes. If a problem is found, we would encourage the landowner to take the necessary action. If necessary, we could take action under the Land Drainage Act 1994, which is, unfortunately, quite cumbersome and takes some time. We would be likely to just go and remove the material. However, if you take the flash flood event, it is difficult to cover a large area in a short period of time.

[324] **Leanne Wood:** You said that you have some powers to force landowners to clear, and that that takes time. Do you have any powers to go in and do it yourself and then bill them?

[325] **Mr Brinn:** Yes, very much so. We could do that retrospectively.

[326] **Leanne Wood:** We have also heard evidence that suggests that local residents would like someone in their community—and this comes back to the point made by Alun Davies earlier—to be appointed to deal directly with the Environment Agency and the other bodies who share responsibility. Do you believe that the old lengthsman, who used to clear roads and ditches and so on, should be reinstated to solve some of these issues, to ensure that there is communication and that the maintenance takes place? If you do not think that the lengthsman should be reintroduced, who else should do that work? How else could those issues be solved?

[327] **Mick Bates:** Again, it is back to you, Nigel, on this.

[328] **Mr Brinn:** I am getting all of the easy questions this morning. There is a benefit from local knowledge and ownership of the task. We talked about personal resilience and responsibility earlier, and that would be of benefit. However, in reality, we now work in a far more sophisticated environment with regard to how we deal with matters and the equipment that we use and so on, so it would be difficult if we had an army of individuals tackling a flood or rainfall event. Again, with regard to checking culverts and so on, we could not be sure that they would have the skills and the equipment to deal with what they see in front of them. Therefore, the principle of having, for example, some sort of local warden sounds good, and that intelligence is critical. If we are aware of a problem, that is brilliant, but there are limits to how we can react to that. That is a bit of a fudged answer to your question. There are benefits, but perhaps we need to look at it in the round.

[329] **Leanne Wood:** You said that local knowledge is crucial, and you are right about that. So often, we speak to people who say that no-one knew officially that they were at risk of flooding, but that, for example, their 80-year-old auntie down the road remembered that the area had been flooded 50 years ago. That flooding might not have appeared on any map. How can that local knowledge be utilised if you do not have the local link on the ground? It seems that everyone is operating at a certain level and that local knowledge is not being utilised all of the time, although I accept the points that have been made that suggest that improvements are happening on that front. It seems that we can make much better use of that local knowledge.

[330] **Mr Brinn:** Much has been made of the potential role of local authorities going forward. We play an important role at present. I would say that we are probably best placed to tap into that local knowledge, but we do so anyway because we are dealing with customer complaints, or calls from members of the public who may be concerned about particular circumstances, such as erosion, or whatever it might be. We send out our engineers, as would any other local authority. It is all about intelligence gathering. If there are particular issues, we may refer them to the agency, the drainage boards, or other partner organisations. So, I would not want to give the impression that we are not already doing that.

[331] If we get lots of complaints from a particular area, we will then investigate. If there were a scheme to be developed to alleviate that problem, we would look at it. All of our flooding hot spots are well known to many of our partner agencies. We know where they are and we know where the problem culverts are. We are probably pretty good at obtaining that local knowledge at present. What is difficult, perhaps, is offering a solution to some of these problems, because significant capital investment is required. I could rattle off a dozen places in your areas that are known flooding hot spots, but the bill to alleviate those problems would be in the millions.

[332] **Lesley Griffiths:** Okay. That is it. Thanks.

[333] **Mick Bates:** Are you happy with that response, Lesley?

[334] **Lesley Griffiths:** Well—

[335] **Mick Bates:** In our evidence a lot of people said that there was a lack of local maintenance, which local people knew about. They felt that if someone, as used to be the case, were responsible for going around the community council area, say, with a shovel, to clean up the autumn leaves, that would alleviate many problems. Given your reply, it seems that that already happens in your authority.

[336] **Mr Brinn:** There is a distinction there—if it is an entry to a culvert that is in private ownership, it would be the landowner's responsibility to do that.

[337] **Mick Bates:** I understand that, but I am talking about the highway.

[338] **Mr Brinn:** On highways, as is the case with other authorities, we have priority culverts and priority inspection routes and so on. So, in terms of high rainfall, staff have designated routes and they know where to check. Clearly, given the scale of our infrastructure and the sort of events that we are talking about, it is an imperfect situation. We would have to have an army of individuals suitably trained and qualified to tackle all of these situations.

[339] I hate to come back to the issue of resources, but I am almost duty-bound to do so. If I had a blank sheet of paper, or, more importantly, a blank cheque, my approach would be to lead on the local response by having suitably tooled-up and trained individuals. However, we are not there, so there are gaps in the current system.

[340] **Mick Bates:** I do not wish to labour this point, but many put it to us in our evidence-gathering sessions that spending money on local knowledge and local maintenance of the highway would, in the long term, be better than having to deal with all of the problems that arise from flash flooding.

[341] **Mr Brinn:** I would not disagree, Chair.

[342] **Mick Bates:** Would anyone else like to comment on that?

[343] **Rhodri Glyn Thomas:** I would like to comment quickly on the point that Nigel raised. He raised a fair point on local authorities' resources. We may be pulling together three different responsibilities under one hat. One would be the responsibility for daily general maintenance. Then you have the maintenance of culverts, for which you would need additional skills and additional equipment to deal with. An ordinary lengthsman would not be able deal with those. Then you have the local point of contact—a local person who is able to co-ordinate things in their own community. Those are three distinctive roles and responsibilities. The lengthsman may say that they have moved on from these issues and that the situation is far more sophisticated now, but there is still a basic need for someone to do the general clearing work, but you also need the additional resources. Clearly, local authorities do not have those resources now and Government must consider that.

[344] **Mr Llewellyn:** I was beginning to wonder how relevant I was to this group, but I can see now that the emergency services are of primary interest in terms of what you are looking for this morning. I was heartened by the story about the guy on a tractor who rescued a heavily pregnant woman.

[345] You are the Sustainability Committee after all, and we perhaps need to consider what could be done to alleviate some of these problems in the longer term. I know that you will be

aware of the work going on in Pontbren on how trees are planted and so on.

[346] **Mick Bates:** I should quickly declare an interest, in that I am a founding member of that group.

[347] **Mr Llewellyn:** Certainly things can be done and farmers and landowners will play a vital part in what can be done to alleviate problems in the future. We talk about all of the things being done to alleviate the problems of homeowners and so on and I have huge sympathy for them, but we seem to forget that there are also consequences upstream from that. Several comments have been made on whether a local authority or catchment should control this. I know that Montgomeryshire farmers are concerned about flood defences in Shrewsbury. What is going on in Shrewsbury is having a fairly dramatic effect on what goes on further upstream.

11.50 a.m.

[348] As a Sustainability Committee, perhaps you should be looking a bit further than this belt-and-braces approach. I know that it is all-important and vital, and that it is what most of you are concerned with, but we need to be looking at what can be done a bit further on. I started to make this comment in response to the comment about the lengthsman, which I think is very relevant. I have an issue with the Environment Agency as far as dredging rivers is concerned. Dredging is not in vogue now, but dredging rivers worked for the lengthsman in the past. Let us look to the future and look at what could be done to alleviate some of these problems.

[349] **Mick Bates:** Those were very valuable comments, especially about the issues of attenuation in the hills. As you quite rightly point out, there is a project that has been assessed for its scientific value and its value in retaining water in the hills, called the Pontbren project. I think that it is a model that has been suggested in our recommendations on land use, Bernard, as a way in which agri-environment schemes can assist with regard to the speed with which water leaves the hills. Thank you very much.

[350] **Mr Whitworth:** I would like to endorse what Bernard said. I feel that farming floods is the key. It is a rural matter and particularly relevant to Wales. The key is not only farming floods in upland areas, but also farming floods and water in valley bottoms. There are many possibilities and none of them have yet been addressed. I did not stick my pencil in the air to indicate that I wanted to respond to that point particularly, but I would just like to add that comment.

[351] I have to say that I think that local government is ill equipped to deal with flooding, and often incompetent in doing so. I have just heard a long list of excuses, which are pretty thin. To take a particular issue, if the local flood risk management team were involved in designing culverts, it would design in an overspill. I am not criticising the highway engineers, and I do not know the exact details, but say that a culvert design is effective for a one-in-10-year flood or a one-in-20-year flood—you cannot have culverts that are any size, because that would be just impossible. Flood risk is concerned with 1.3 per cent of flooding—a one-in-75-year flood—because that is the insurance thing and therefore there is a gap between meeting that one-in-20-year flood and the one-in-75-year flood. Without being too long winded about it, if you were to consider that in relation to culverts—you and I looked at Tregynon, which is a case in point—if local flood risk management teams were designing culverts, they would design in overspill. They would take account of the risk or they would design in some attenuation, which would take account of the fact that any culvert is never going to be big enough. These matters are resolvable, but I do not think that local government officers are the people to do it. Pitt has oversimplified it. I can see that local government is at the sharp end, but I think that it is hopelessly ill equipped to do it.

[352] **Mick Bates:** It is very fitting that the last comment will be from someone who is an engineer and who looks after the levels of water in our country.

[353] **Dr Venebles:** I would certainly support George's comments that all walls and culverts ought to be designed for exceedance. When we are managing risk, we can reduce it, but we can never eliminate it—there will always be a bigger event than we have designed for. At the same time, what we must do—it is desperately unfashionable and low key—is maintain the assets that we have. If we keep the capacity of our assets and maintain them thoroughly, we will reduce the number of incidents. We will never eliminate them, but we will reduce the frequency of the incidents and perhaps even the severity of them.

[354] **Mick Bates:** Thank you very much for that comment. I close this session by thanking you all for your answers today and Members for their questions, which has highlighted a great many issues. Although it appeared at first that this session would be a bit unwieldy, I think that it has been very valuable in identifying many key points. When we undertake our inquiries, it is very difficult to get everyone in for an individual session, so it has been extremely useful. You will each be sent a copy of the draft transcript, and if you feel that something should be changed, you can inform us. I repeat my plea that if there is information that you feel this committee needs for its inquiry, please forward it to us as soon as you can.

[355] Thank you again for your efforts, and I wish you every success in your work. I hope that we will get to see a gold incident being dealt with. As I say, the challenge is for Alun to co-ordinate all the Members to get them there. Do you not want the challenge, Alun?
[*Laughter.*]

[356] 11.55 a.m.

[357] **Ymchwiliad i Ddŵr Mewndirol—Cytuno ar y Cylch Gorchwyl a'r
Llythyr Ymgynghori
Access to Inland Water Inquiry—Agreement of Terms of Reference and
Consultation Letter**

[358] **Mick Bates:** This item is just to draw the committee's attention to the agreement of the terms of reference and consultation letter for our next inquiry. Are there any comments? I see that there are none.

[359] 11.55 a.m.

[360] **Cynnig Trefniadol
Procedural Motion**

[361] **Mick Bates:** I move that

[362] *the committee resolves to exclude the public from the remainder of the meeting in accordance with Standing Order No. 10.37(vi).*

[363] I see that the committee is in agreement.

[364] *Derbyniwyd y cynnig.*

[365] *Motion agreed.*

[366] *Daeth rhan gyhoeddus y cyfarfod i ben am 11.56 a.m.*

[367] *The public part of the meeting ended at 11.56 a.m.*

