



Cynulliad Cenedlaethol Cymru The National Assembly for Wales

S

Y Pwyllgor Amgylchedd a Chynaliadwyedd The Environment and Sustainability Committee

**Dydd Iau, 5 Gorffennaf 2012
Thursday, 5 July 2012**

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Cynnig dan Reol Sefydlog Rhif 17.42(vi) i Benderfynu Atal y Cyhoedd o'r Cyfarfod
Motion under Standing Order No. 17.42(vi) to Resolve to Exclude the Public from the Meeting

Yn y golofn chwith, cofnodwyd y trafodion yn yr iaith y llefarwyd hwy ynddi. Yn y golofn dde, cynhwysir trawsgrifiad o'r cyfieithu ar y pryd.

In the left-hand column, the proceedings are recorded in the language in which they were spoken. The right-hand column contains a transcription of the simultaneous interpretation.

Aelodau'r pwyllgor yn bresennol Committee members in attendance

Mick Antoniw	Llafur Labour
Keith Davies	Llafur Labour
Russell George	Ceidwadwyr Cymreig Welsh Conservatives

Vaughan Gething	Llafur Labour
Julie James	Llafur Labour
William Powell	Democratiaid Rhyddfrydol Cymru (Cadeirydd dros dro) Welsh Liberal Democrats (Temporary Chair)
David Rees	Llafur Labour
Eraill yn bresennol	
Others in attendance	
Steve Cook	Rheolwr Strategaeth, Rheoli Llifogydd a Risg Arfordirol, Asiantaeth Amgylchedd Cymru Strategy Manager, Flood and Coastal Risk Management, Environment Agency Wales
Phil Dyke	Cynghorydd Morol ac Arfordirol yr Ymddiriedolaeth Genedlaethol National Trust Coast and Marine Adviser
Dr Susan Gubbay	Aelod o Gyngor Cefn Gwlad Cymru Countryside Council for Wales Member
Greg Guthrie	Royal HaskoningDHV
Graham Hillier	Rheolwr Llifogydd a Risg Arfordirol, Asiantaeth Amgylchedd Cymru Flood and Coastal Risk Manager, Environment Agency Wales
Emlyn Jones	Canolfan Monitro Arfordir Cymru Wales Coastal Monitoring Centre
Kevin Owen	Atkins
Louise Pennington	Canolfan Monitro Arfordir Cymru Wales Coastal Monitoring Centre
Marcus Philips	Halcrow
Dr Nicola Rimington	Gwyddonydd Ffisegol Morol ac Arfordirol, Cyngor Cefn Gwlad Cymru Marine and Coastal Physical Scientist, Countryside Council for Wales
Neville Rookes	Swyddog Llifogydd a Dŵr, Cymdeithas Llywodraeth Leol Cymru Flood and Water Officer, Welsh Local Government Association
Kath Winnard	Atkins
Swyddogion Cynulliad Cenedlaethol Cymru yn bresennol	
National Assembly for Wales officials in attendance	
Lara Date	Clerc Clerc
Catherine Hunt	Dirprwy Glerc Deputy Clerk
Lisa Llewellyn	Y Gwasanaeth Ymchwil Research Service

*Dechreuodd y cyfarfod am 9.02 a.m.
The meeting began at 9.02 a.m.*

Cyflwyniad, Ymddiheuriadau a Dirprwyon Introduction, Apologies and Substitutions

[1] **William Powell:** Bore da, bawb. **William Powell:** Good morning, everyone.

[2] Welcome to this meeting of the Environment and Sustainability Committee. In the event of a fire alarm, you should leave the room via the marked exits and follow the ushers' instructions. There are no tests forecast for today, so if an alarm sounds, it is the real thing. Please ensure that all mobile phones, pagers and BlackBerrys are switched off, as they tend to interfere with the broadcasting equipment. The National Assembly for Wales operates a bilingual policy. Headphones are provided through which simultaneous translation may be received. Those who are hard of hearing may also find it useful for the amplification of sound. Interpretation is available on channel 1 and sound amplification is on channel 0. Please do not touch any buttons on the microphones, as that can disable the whole system. You should ensure that the red light is showing before you speak.

[3] Are there any declarations of interest? We can take them now or as they occur. I see that there are none. We have two apologies this morning—from the Chair, Dafydd Elis-Thomas, and from Llyr Huws Gruffydd. There are no substitutions. I hope that we will be joined by our colleagues a little later.

Ymchwiliad i Ddiogelu'r Arfordir yng Nghymru: Tystiolaeth Lafar Inquiry into Coastal Protection: Oral Evidence

[4] **William Powell:** I welcome Louise Pennington and Emlyn Jones from the Wales Coastal Monitoring Centre, who will lead on our first evidence session. It is great to have you with us this morning. Thank you for joining us. Could you please introduce yourselves briefly for the record and, to set the context, explain to committee members your role and the role of your organisation in informing flood and coastal erosion risk-management processes in Wales?

[5] **Ms Pennington:** I am Louise Pennington, project co-ordinator for the Wales Coastal Monitoring Centre.

[6] **Mr Jones:** I am Emlyn Jones, project director for the Wales Coastal Monitoring Centre.

[7] **Ms Pennington:** I work on the project full time. It is a three-year project funded by the flooding and coastal risk management team within the Welsh Government. I started in this post in January 2010 and the project is currently funded until the end of March 2013, the end of this financial year. We are looking to centralise the collation, storage and analysis of data with regard to how the coastline of Wales is physically changing, looking at where its erosion hotspots are and where it is accreting. With regard to how we directly inform flood and coastal risk management, we are at a very early stage of the project, but we are trying to bring coastal practitioners in Wales together to share experience and knowledge. We hosted a workshop in November and we have a second planned later this month. Through knowledge exchange, we are looking to try to improve standardisation and consistency with regard to the way in which those data will be collected and interpreted in future and to use the analysis from those data to grow a greater evidence base and improvement in our understanding of these processes around the coast.

[8] Effectively, we are trying to get a grasp of how activities are happening at present and looking for efficiencies to improve the way forward. So, in the long run, I would like to think that the Wales Coastal Monitoring Centre can provide a growing evidence base to inform and

advise decision makers around the Welsh coastline with regard to flood and coastal risk management activities.

[9] **William Powell:** How confident are you that the increased risks of coastal erosion and tidal flooding associated with climate change are being recognised and well understood at the various levels of government?

[10] **Mr Jones:** In the ever-changing and quite often ambiguous areas within which these issues arise, slowly but surely, strategies and methods of dealing with the threats that will invariably be posed by climate change and everything that goes hand in hand with it are being developed quite well in terms of 'smarting up' the issues and informing local authorities what needs to be done and how they need to do it. Now that we have a national strategy, the issue is being progressed even further.

[11] **William Powell:** Finally, do you feel that current policy developments are sufficient to manage the increasing frequency of coastal erosion and flooding events combined with the prospect of climate change?

[12] **Mr Jones:** With regard to policy addressing the frequency, I am not sure how much you can do. We have a period of time, starting from the time when issues such as these were made obvious, to the present day, in which we look at the frequency of events, be those storms or rainfall events, increases in run-off through development and so on. Personally, I think that it has more to do with intelligent policy making and being open to the fact that policies need to be reviewed even more often when you are dealing with such a movable feast of a problem.

[13] **David Rees:** On that point, your organisation informs on flood risk and challenges ahead. You talk about intelligent policy making. Are we now identifying greater risks along our coastline than has been the case in the past? Or is it the case that those risks are the same but that some are yet to be addressed, shall we say?

[14] **Mr Jones:** With regard to the outputs of the monitoring centre, which is what I think you are talking about, and our role in managing those, we have to put this in the context of the relatively embryonic status of the centre. With regard to delivering the centre, it was put out for active competition among the maritime local authorities that would develop and host the monitoring centre. That was for the initial three-year period, which we are still in. Gwynedd local authority is quite active in terms of coastal monitoring and land drainage issues and has quite a significant department in that respect. It was successful in that competition and, therefore, we are hosting the monitoring centre. However, in terms of serious outputs of the monitoring centre, similar to what you are talking about, which would be really good, we are just not there yet. We are still in a phase where we have all the maritime local authorities doing certain things in certain ways, with different nuances and the elements of parochialism that invariably creep into how people do things. We are now at the stage of finding out exactly what people do and where and why and how they are doing them. That will then inform the monitoring centre to expand, to take that information and rationalise it and possibly come up with more standardised versions for gathering data so that you are comparing apples and apples as opposed to apples and pears.

[15] **David Rees:** But you are not there yet.

[16] **Mr Jones:** No, we are not there yet.

[17] **Vaughan Gething:** I have a slightly different point. I understand that, as well as looking at what is currently happening, you also have in a role in forecasting the likely patterns for the future. Turning to a rather different subject, Severn tidal power, if there were

either a lagoon scheme or the often-talked-about big barrage scheme, what impact would that have on coastal defence and flood-risk management, not just within the area of impoundment but externally, or are you not aware of the impact that that could have on other coastal environments?

[18] **Mr Jones:** I would not have a handle on that sort of regional impact of a specific project. It is certainly something that we would like to aspire to in terms of having a coherent approach towards managing the coast in Wales, which, again, we can, hopefully, achieve with the coastal monitoring centre, which will build in that sort of information. However, at this stage, I would not even know where to begin to give you a sensible answer on that.

[19] **Vaughan Gething:** That is fair enough.

[20] **William Powell:** David, did you have a question on this point?

[21] **David Rees:** It is a similar point, going back to my earlier question. Are you therefore involved in shoreline management plans and the development of those for maritime local authorities or do you just simply evaluate those and consider where they could be strengthened and look at whether they are meeting policies in national frameworks and strategies? I need to know where you are coming from.

[22] **Ms Pennington:** We have not been involved directly in contributing to the SMPs, but I have been involved in attending the regular coastal group meetings that happen around Wales. So I have been party to ongoing discussions and presentations from consultants on the development of those things. So, there has been an opportunity to contribute to the development of those SMPs, but we have not provided a direct lead in that sense.

[23] **David Rees:** I notice from your 2010-11 report that there is a serious concern about the number of local authorities that have a low allocation of resources to this subject area. I wondered whether, particularly with regard to those local authorities, you were involved in helping them to produce SMPs.

[24] **Ms Pennington:** For the audit review that I undertook, I spent a day with each of the maritime local authorities trying to get a grasp on their skills, roles and responsibilities. From memory, I think that only three out of the 15 coastal local authorities would, at that point in time, have said that they had more than one full-time equivalent individual devoted to working on coastal activities. In many cases, it can be a sole individual who is dealing with inland fluvial issues, that is, matters of land drainage and coastal protection, and that person would potentially also be entering into some elements of environmental management in a wider arena. As far as I am aware, those resources have not changed significantly since I undertook that assessment.

9.15 a.m.

[25] **William Powell:** We will have an opportunity later to speak to the Welsh Local Government Association representative, and perhaps that will help to get an all-Wales perspective.

[26] **Mick Antoniw:** As someone who represents a landlocked constituency, this is not something that hits me on a day-to-day basis, other than in terms of the fact that it is, of course, an issue for Wales overall. Could you perhaps outline to me some of the mapping work that you are doing, what you see at the moment as the scale of the challenge now and whether there are any indicators as to the scale of the problem over the next decade or two? Are there any indicators at this stage?

[27] **Ms Pennington:** In terms of the project itself, we have not been in a position as yet to generate new, fresh data to bring to the table. It has very much been a case of absorbing information and developments by our environmental partners, that is, Environment Agency Wales, the Countryside Council for Wales and the maritime local authorities. In that sense, I do not think that we can directly comment. Obviously we are trying to collate as much information as we can to get as good an understanding of the present risks as possible. In four particular locations on the Welsh coast we have had quite active local authority beach survey campaigns in the past. In some instances those campaigns have been undertaken for up to 20 years, so, although they are quite isolated, localised beach assessments, their duration means that they are starting to indicate trends in localised beach profile change. In the future, I would like to think that we can work with other partners, and there are potential opportunities on the horizon that we are investigating, such as procuring a LIDAR flight of the entire Welsh coastline with the support of the Environment Agency's geomatics department. Also, the Maritime Coastguard Agency is planning to do a bathymetric survey of Cardigan bay waters in the summer of next year. So, we are really trying to get a grasp on people's future intentions and then see whether we can gain as much added value from those ventures as possible through promoting partnership working. Hopefully, it will be through future data accrual that we will get a growing appreciation of where the risks are evolving and changing.

[28] **Mick Antoniw:** Are the data that you have so far indicating that we are perhaps underestimating the scale of impact and change arising from erosion? Erosion has always been there, and coastlines are always changing. Is this something that you think is increasing incrementally as a result of climate change or whatever and so is an area where we need to be more forward-looking in terms of a changing or increasing impact over coming years?

[29] **Ms Pennington:** It is certainly an area where we need to consider greater investment into the future. As I have said, the trends that we have are very early stage at the moment, and they are often looking at topographic conditions rather than water level variations and that sort of thing. There is a lot more than can be done. We are really trying to put the plans in place for the future of the centre to try to grow and get a better evidence base.

[30] **Julie James:** Just following from that, we have a couple of European directives that will impact directly on the coastline—the habitats and birds directives and some of the maritime stuff. We also have the new bathing water quality directive coming in, and so on. Are you looking to co-ordinate activity around some of those directives? You have something about the habitats directive in your paper, I know, but I do not really understand how you plug into those sorts of developments.

[31] **Ms Pennington:** Again, I would say that the initial feed that we can offer is that, on a quarterly basis, the Wales Coastal Monitoring Centre reports to a project board, and the membership of that board comprises representatives of the Welsh Government, the WLGA, the Countryside Council for Wales and Environment Agency Wales. We would really be looking for our steer from CCW, primarily, in some of those cases, and from the Environment Agency as well. As part of our proposals to try to grow the centre into the future I am currently starting to prepare a business case for submission to the Welsh Government in the autumn to look for a five-year extension to the project from April 2013. It is the input from those partners through the project board discussions that will, hopefully, offer evidence to inform such directives in the future.

[32] **Julie James:** Is that tied up with some of the complexity of the funding information that you have given us, which is quite staggering?

[33] **Ms Pennington:** Funding is obviously a big concern for everybody. From the coastal monitoring perspective, we are mostly concerned with future monitoring activities on the coast, primarily by maritime local authorities, and there seems to be a historic, established

variation in the extent of funding that each individual local authority is eligible for. Clearly, everybody would like access to future funding, but, from our perspective, there is scope to simplify the grant aid application and eligibility process and perhaps rationalise it so that it is a bit more uniform across the board.

[34] **Mr Jones:** We also talk about risk on the coastline. We would like to develop a model—when we say risk, we are not automatically thinking of infrastructure and buildings, but of national heritage, the environmental side of things, ecology, habitats and so on. We have a vision of that sort of goal, so that, when we say ‘a risk-based approach to managing the Welsh coastline’, it acknowledges not only the hard socioeconomic risk that we are always aware of, but the environmental risks as well.

[35] **Julie James:** How does that link with privately-owned beaches and coastal properties? I am from Swansea West and the Gower has a large number of beaches in private ownership. There is always a bit of an issue with some of them. How do you link with those private owners? The National Trust is a big owner, I know, but we also have farmers and so on who own substantial tracts of the coast.

[36] **David Rees:** And the steelworks.

[37] **Julie James:** Yes. How does it work? Do you rely on local authorities to be able to deal with those?

[38] **Ms Pennington:** Yes.

[39] **Mr Jones:** Yes. [*Laughter.*]

[40] **Ms Pennington:** In all honesty, we have a quite good working relationship with the National Trust, and we are growing developments with Network Rail and Welsh Water, which are some of the key landowners or private asset owners in that sense. When it comes down to local individuals, however, we would still rely on the avenue through the local authority officer.

[41] **Julie James:** You are working with the bigger owners, are you? The port authorities and so on.

[42] **Ms Pennington:** We certainly have contacts. The centre sits on all the coastal groups and the Wales Coastal and Maritime Partnership. We try, where possible, to have a presence and to build communication avenues with different partners.

[43] **William Powell:** Staying with funding, back on 8 May, the Deputy Minister for Agriculture, Food, Fisheries and European Programmes announced in a Cabinet statement that there was to be a presumption in future against the use of EU funds for extensive climate change mitigation measures. Do you anticipate that that decision is likely to have an impact on your work?

[44] **Mr Jones:** I guess that we will find out when we put the business case in for the five-year extension.

[45] **William Powell:** It will be just another factor to be taken into account.

[46] **Mr Jones:** Presumably so. I would not have any opinion on that. It is the first that I have heard of it.

[47] **William Powell:** It certainly did cause some concern on the day that the

announcement was made, and, clearly, we need to take it on board.

[48] How well do you believe the objectives and risks associated with coastal protection in Wales are currently being communicated?

[49] **Mr Jones:** Quite well. Is that an answer? When we talk about this moving problem and new problems and variations of the problem, communicating that, even to landlocked constituencies, is imperative. None of these issues can be looked at in isolation; they are completely linked in all forms. You will have rivers in your constituency and they flow somewhere, come out somewhere, and that has an impact somewhere. So, it all cascades, and that is where it needs to be joined up. That is where the communication element comes into it in the form of local flood strategies, national strategies, increasing resilience and that sort of thing. It is about communicating to people. Simply knocking on doors and saying to people, 'I think that you might have a problem with flooding' and then leaving is not, in my opinion, a way of increasing resilience. Communication is absolutely fundamental, and it is a key issue for us in the centre. That is why we have these workshops with stakeholders. We are trying to get everyone on board with approaches across everything, including communication.

[50] **William Powell:** I imagine that would also include education, with things such as the Eco-Schools programme and so on.

[51] **Mr Jones:** Absolutely. There also are the academic links with the centre.

[52] **Mick Antoniw:** On that point, my comment was a bit tongue-in-cheek, but we have serious flooding issues in my constituency. Those problems have been exacerbated and there are several multimillion pound projects aimed at resolving them. As you said, there is an issue with rivers. People's primary concerns are about the issues that affect them, but there is a broader environmental concern. However, are you saying that the strategies we have are quite fragmented in the way they are presented and communicated to people?

[53] **Mr Jones:** This is nothing more than a personal view, but flood risk management has historically been disjointed because we try to segregate elements of the problem that are inexorable. However, we tried to segregate them in order to apportion responsibility and accountability. I have said this 100 times, but you really do not care whether the water you have in your lounge contains any salt. The only thing you know is that you have water in your lounge and that, quite probably, it contains sewage. That is the problem we have. You cannot disaggregate the sewage element, the saline element or the fluvial element. The approach needs to be more coherent and more robust as a consequence. That is my opinion. I would like to be able to give you an answer to this, but I cannot.

[54] **Mick Antoniw:** As an aside, is it your perception that planning is operated more astutely and better with regard to flood and erosion risk? Is that an unfair question?

[55] **Mr Jones:** It is a fair question and a sensible observation. It is difficult to know. Our experience from our studies in our local authority area is that the issue is about when you draw the line when it comes to making that step change in policy, whether it is in planning or anything else. The guy next door might just have had his planning permission for something but, as soon as the guillotine comes down in terms of that step change in policy, you might not get the same permission. It is a difficult thing to communicate to the public. It is a difficult thing to get the public to grasp the immediacy of the problem when we are always talking about 20 years' time or 25 years' time and hence. It is an unquantifiable problem. Not only is it hugely complex in that everything is associated with everything else, but you are dealing with a timescale that means people cannot get their heads around the issue.

[56] **Vaughan Gething:** I appreciate that we are straying into a couple of different areas,

but on this point about the timescale, we have received other evidence papers, one of which is from the Cardiff School of Earth and Ocean Sciences. It is a shame that it is not here to give evidence, but it suggested that there is a need to update some of the technical advice notes that deal with development on the coastline. I want to find the reference to this, because in its evidence paper, Halcrow uses a specific example of a town, where I know there are lots of caravans—I have friends with a caravan there. It is talking about the issues involved in holding the line for a period of time, then allowing the coast to deal naturally if those defences fail.

9.30 a.m.

[57] Many people in that area would see those as being quite immediate timescales. If you are trying to sell a home or are thinking about buying somewhere, the work that you are doing to forecast what is likely to happen is really important. Do you see your work as being joined up with that type of development profile? How easily or how well is that information being shared, bearing in mind that there is now a national strategy?

[58] **Mr Jones:** There are examples of where people have issues where a degree of immediacy sits alongside. The examples we have are small in number, so it is difficult to manage a national approach and gear a national strategy and national policies based on the few immediate examples that we have. I am not saying that they are unimportant—on the contrary, I am validating their importance—but it is difficult to get everyone to buy into the national scheme in terms of directing policy. It is also quite difficult to do in terms of elements of community engagement on even simple elements of surface water flooding. You have quite high frequencies of people's property being flooded, but the work that needs to be done to alleviate that might often affect other people in different ways. It is difficult to bring all those elements together.

[59] **Keith Davies:** Dair wythnos yn ôl, cawsom gyflwyniad yn Llanelli—rwyf yn dod o Lanelli—i'r Gweinidog gan Asiantaeth yr Amgylchedd a Dŵr Cymru. Yn ôl y cyrff hyn, y ddau fan gwaethaf o ran y perygl o lifogydd ar yr arfordir yw Prestatyn a Llanelli. Y rheswm am hyn yn Llanelli yw bod carthffosiaeth a dŵr glaw yn mynd drwy'r un system. Mae Dŵr Cymru yn dweud mai'r ateb o bosibl yw eu gwahanu, ac felly mae'n mynd i wario miliynau o bunnoedd yn Llanelli ar gynllun peilot i weld a wnaiff hyn weithio. Roedd Vaughan yn sôn am TAN 15 a TAN 14. Oni ddylai'r rheini fod gyda'i gilydd, achos yr hyn sy'n digwydd yn Llanelli o hyd yw bod pobl yn gofyn am ganiatâd cynllunio i adeiladu mwy a mwy o dai. Mae adeiladu mwy a mwy o dai yn gwneud y sefyllfa'n waeth—mae'r perygl yn cynyddu bob tro mae tŷ yn cael ei godi. A ydych chi yn rhan o'r broses o edrych ar geisiadau cynllunio o gwbl?

Keith Davies: Three weeks ago, we had a presentation in Llanelli—I come from Llanelli—for the Minister from the Environment Agency and Welsh Water. According to these bodies, the two worst areas in terms of the risk of coastal flooding are Prestatyn and Llanelli. The reason for this in the case of Llanelli is that sewage and rain water flow through the same system. Welsh Water says that the answer may be to separate them, so it is going to spend millions of pounds in Llanelli on a pilot scheme to see whether this works. Vaughan mentioned TAN 15 and TAN 14. Should these not be combined, because what happens in Llanelli is that people ask for planning permission to build more and more houses? Building more and more houses makes the situation worse—the risk increases every time a house is built. Are you part of the process of looking at planning applications at all?

[60] **Mr Jones:** Mae elfen yn y Ddeddf newydd ynglŷn â rheoli llifogydd a systemau draenio cynaliadwy, sydd fod i leddfau problemau o'r fath. Felly, yn lle cael dŵr yn

Mr Jones: There is an element within the new Act regarding flood management and sustainable drainage systems, which are meant to alleviate such problems. Therefore,

rhedeg oddi ar y tir yn gyflym, rydym yn ei arafu a'i arwain i leoedd eraill. Felly, nid ydym yn ei hel yn y lle cyntaf. Dyna yw hanner y broblem efo dŵr; rydym yn dueddol o'i hel, ac wedyn mae'n dod yn broblem. Y tric yw peidio â'i hel yn y lle cyntaf. Pan mae rhywun yn datblygu, mae'n rhaid delio efo dŵr wyneb a charffosiaeth, ond, yn sicr, mae'n rhaid delio efo nhw ar wahân. Mae elfennau yn y Ddeddf yn trio gwneud hynny.

rather than having water running off the land quickly, we are slowing it and diverting it to other places. So, we are not collecting it in the first place. That is half the problem with water; we tend to collect it, and it then becomes a problem. The trick is not to collect it in the first place. When someone is developing, they must deal with surface water and sewage, but, certainly, they must be dealt with separately. Aspects of the Act attempt to do that.

[61] I ateb eich cwestiwn o ran y sefyllfa yng Ngwynedd, rydym ni mewn cysylltiad efo'n hadran gynllunio. Bydd pob cais sy'n dod i mewn yn cael ei herio gan arbenigwr—rwy'n dweud 'arbenigwr', ond mae'n faes mor newydd fel bod hynny ychydig yn annelwig. Bydd pobl yn cael eu hyfforddi ynghylch beth yn union ddylai SuDS fod a sut y dylai gael ei wireddu. Dyna rydym ni'n mynd i'w wneud yng Ngwynedd. Fedra i ddim ateb ar ran neb arall.

To answer your question about the situation in Gwynedd, we are in contact with our planning department. Every application that comes in will be challenged by a specialist—I say 'specialist', but it is such a new area that that is a bit ambiguous. People will be trained in what exactly SuDS are and how the system should be delivered. That is what we are going to do in Gwynedd. I cannot answer for anyone else.

[62] **Keith Davies:** Ond rydych yn ganolfan genedlaethol, onid ydych?

Keith Davies: Are you not a national centre?

[63] **Mr Jones:** Siarad â fy het Gwynedd ar fy mhen ydw i nawr.

Mr Jones: I am speaking with my Gwynedd hat on.

[64] **Keith Davies:** Onid ydych yn credu y dylech chi gydweithio â siroedd eraill yng Nghymru pan maen nhw'n edrych ar gynlluniau i adeiladu yn yr ardaloedd lle mae perygl o lifogydd?

Keith Davies: Do you not think that you should collaborate with other counties in Wales when they look at proposals for new builds in those areas where there is a real risk of flooding?

[65] **Mr Jones:** A ydych chi'n cyfeirio at y ganolfan fonitro, felly?

Mr Jones: Are you referring to the monitoring centre?

[66] **Keith Davies:** Ydw. Dyna pam roeddwn i'n sôn am TAN 14 a TAN 15 gyda'i gilydd yn hytrach na'u bod yn cael eu hystyried ar wahân.

Keith Davies: Yes. That is why I mentioned the need for TAN 14 and TAN 15 to be considered together rather than separately.

[67] **Mr Jones:** Rwy'n eu gweld yn ddau beth ar wahân ar y funud; rwy'n gweld y gofynion deddfwriaethol ar awdurdodau lleol yn un peth, wrth ddelio â chynllunio ac ati, ac rwy'n gweld rôl Canolfan Monitro Arfordirol Cymru yn rhywbeth, nid ar wahân, ond gwahanol. Yn y dyfodol, efallai wir, bydd angen cael trosolwg o elfennau amgylcheddol yr arfordir, ac nid yw cael llif o *combined sewer* yn mynd i afon yn mynd i helpu yn hynny o beth. Felly, mae'r cysylltiad yno

Mr Jones: I see them as being separate at present; I see the legislative requirements of local authorities as one issue, in dealing with planning and so on, and I see the role of the Wales Coastal Monitoring Centre as perhaps not a separate issue, but a different issue. In future, you may need this overview of the various environmental elements on the coastline, and having run-off from a combined sewer into a river is not going to help things in that respect. So, there is that

ond, o safbwynt gweithredol, mae'r ddau ar wahân ar hyn o bryd.

interconnection but, operationally, both are separate at present

[68] **Keith Davies:** Mae llefydd yng Nghymru, fel Aberaeron, sydd o dan lefel y môr.

Keith Davies: There are places in Wales, such as Aberaeron, that are under sea level.

[69] **Mr Jones:** Yn hollol. Fel rhan o'r gwaith rydym wedi'i wneud o dan y Ddeddf yng Ngwynedd, rydym wedi cynnal cynllun peilot ym Mhwllheli, sydd â'r union broblem honno. Mae'n fater o fynd allan i'r gymuned i weld beth yw barn pobl, a ydynt yn ymwybodol o'r broblem, beth mae'r adran gynllunio yn mynd i'w wneud gyda'r wybodaeth rydym ni wedi'i rhoi iddi, ac a oes unrhyw waith traddodiadol, peirianyddol y mae rhywun yn mynd i orfod ei wneud. Rhaid ceisio dod â'r rheini i gyd at ei gilydd i ddelio â'r problemau mwyaf yn ymarferol yn awr, a mynd â'r cyhoedd gyda ni ar y daith honno, ond sicrhau hefyd fod pethau fel cynllunio yn delio â'r broblem ac yn lleihau'r broblem wrth fynd ymlaen i'r 20 neu 40 mlynedd nesaf.

Mr Jones: Yes, exactly. As part of the work that we have done under the Act in Gwynedd, we have carried out a pilot scheme in Pwllheli, which has exactly the same problem. It is a matter of going out into the community to seek people's opinion, to see whether they are aware of the problem, what the planning department is going to do as a result of the information that we provide to it, and are there any traditional engineering works to be done. You have to try to bring all those elements together to deal with the major problems on a practical level now, and take the public with us on that journey, while ensuring that things such as planning deal with the problem and mitigate it as we move forward over the next 20 or 40 years.

[70] **David Rees:** To take that point further, do you think that the strategy looks enough at coastal erosion, because there is a flood and coastal erosion issue? We know that coastal erosion is worse on the east coast of the UK, but recently we have seen the impact of coastal erosion in Barry. Do TAN 14 and TAN 15 and the shoreline management plans look at the coastal erosion aspects, and the impact that has on planning applications along the coast?

[71] You are silent; I think I have stumped you. *[Laughter.]* We talked about flooding an awful lot, but there is also this element.

[72] **Mr Jones:** I think that they need reviewing. I do not think you will find anybody who works in this field who would say that they do not need reviewing. I do not know what the timescale is for reviewing those documents; the only thing I know is that they do need reviewing. Again, it is about how you deal with the community impact side of reviewing such guidance notes. That is where the issue sits, and that is one of the problems that might exist in reviewing them in terms of informing that change in process and making sure that the communities affected are part of those changes rather than being subject to them.

[73] **David Rees:** Let me put it this way: do you think that local authorities are taking these issues seriously enough in their planning aspects, because that is one of the issues that we need to look at?

[74] **Mr Jones:** No.

[75] **Julie James:** To follow that up, where I live in Swansea, there is a coastal defence along the front of the city. Near the centre of the city lies Sandfields—the clue is in the name; it is at sea level or 0.5m above it. It is clear that the coastal defence there is protecting the vast majority of the town, which is built on the plain. My understanding is that the local authority pays for that as part of its general maintenance; there is a road along part of it, for example, and so on. There have been examples of properties throughout Swansea over the years—I can

think of one notorious example—that were crumbling into the sea. There was a big argument about who should pay for the shoring up of the coastal defence and so on. How are we to deal with that in future? That was a big argument with the insurers of that particular property, the local authority and, in that particular instance, the local landowner. It seems that a lot of places in Wales are reliant on those kinds of heavy coastal protection schemes. My colleague David Rees is from Aberavon, which has a similar scheme along its front. Presumably, there is an ongoing maintenance issue for all those sorts of things. Are we taking that into account when we are looking these schemes, or is it taken for granted that they will be maintained by the local authority? I am sure that there are other examples across Wales.

[76] **Mr Jones:** There are hundreds of examples. When you develop a scheme and hand it over, there is the responsibility for that scheme and the maintenance of any structures that you have built to consider. The structures would have to be subject to a routine inspection and a cyclical maintenance routine. The cost does not finish once you have built something and have left.

[77] **Julie James:** Getting the sand off the road is a big issue.

[78] **Mr Jones:** Again, it is the old recurring discussion—you can defend and defend up to a point. If we acknowledge that climate change is happening, along with the impacts and changes that will occur as a consequence, we are not going to be able to change these communities into bowls. There has to be an end to it sometime and I would say that the community needs to be part of those sorts of decisions. We have such a wonderful coastline in Wales, and areas that are local to me are idyllic: Porthdinllaen, for example, is fantastic. Those areas are at risk, but what are you going to do? You are not going to build a 15 ft concrete wall in front of Porthdinllaen, are you? It would not be a very nice place as a result. It might be a safer place, but it is not necessarily going to be a nicer place.

[79] **David Rees:** Following on from that, Julie James mentioned the costs of maintenance across these developments. A lot of your submission was focused on funding issues. We had the Minister in last week, who has recognised that and we noticed that the budget line for flood issues is decreasing over the coming years. What is your position on that? Do you feel that that is a retrograde step and that we need to look at stabilising the budget for flood defences and coastal erosion at least, or are innovative methods going to be required to fund these projects in future?

[80] **Mr Jones:** On the funding side, at the monitoring centre, we believe that we have a role in optimising the value that we get from the money that is spent on monitoring and on doing any works on the coastline. There is certainly room there to achieve more bang for our buck. However, moving forward, knowing what we know, and if we accept the impact of climate change, there is an inherent cost in managing that. I am not necessarily saying that we take 360-degree excavators out everywhere and start building stuff. Other costs are associated with community-engagement-type things; they are not cheap exercises to undertake, in terms of making sure that the communities are fully engaged and aware of the issues.

9.45 a.m.

[81] So, there are savings to be made and more value to be added to the money that has historically been spent. I think that we are okay with that statement, but certainly, in terms of the future, it needs appropriate funding to the degree of risk to which the Welsh Government puts on flood and coastal erosion risk management.

[82] **David Rees:** On that point, your paper also mentions that there is great expectation that maritime local authorities will be required to contribute to these aspects, and, obviously, they have to fund them themselves. Have you come across a view that that will be a problem

for MLAs, in the various meetings that you have had so far?

[83] **Ms Pennington:** With regard to the monitoring campaigns that have happened in the last decade or two in Wales, they were largely instigated by the proactive individual local authority offices, based on the appreciation that they could learn more about their assets and better manage their coasts by knowing how the prevailing conditions were affecting them. There are other parts of the coast where a local authority has never done any topographic beach profiling work. That has been, perhaps, because the individual in post did not have a historic interest, and, primarily, because that local authority would have to apportion a contribution to that from its revenue funding.

[84] One of the issues that the centre needs to consider for the future is how we can get a more uniform distribution of data collection, or a more prioritised distribution according to risk. However, it may well be that there are local authority areas at the moment where we have no beach data. So, we may be suggesting and recommending through the Welsh Government in the future that that local authority needs to start doing it. However, they will have to find funds that they have been using elsewhere at the moment. So, at present, we have been working with everyone, but it is the existing practitioners and the doers that are sharing the information, and the others are standing back, observing, awaiting future direction. The funding will be the first barrier that we have. It is all well and good to say that we need to get a better physical understanding of the risks in your area, but the automatic response we get is, 'Well, more resource and funding and we will do it'. That is unavoidable.

[85] **Mick Antoniw:** With funding being the issue that it is, is it really the case that the strategy, to some extent, if you are not in a position to manage protective measures, is one of managed withdrawal from certain areas? Is that a realistic strategy, or an increasing strategy, in terms of what we can do?

[86] **Ms Pennington:** I would like to think that we will take a pragmatic look at things and study things such as the shoreline management plans, where we have management recommendations: hold the line, advance retreat, that sort of thing. Hopefully, to some extent, there might be a review of existing practices, and it may be that under efficiencies, where we have data at present, we may be able to reduce that data intensity, because we have determined the prevailing risk with the facts and figures that it is not as severe as it could be. So, there may be an opportunity to do an efficiency review to reallocate and redistribute the spatial expenditure of funding, but, at the end of the day, the sector really needs to secure more funding, because, as we say, the risks will increase under climate change in the future.

[87] Touching on the funding, in the written evidence that I submitted I mentioned some of the recent English approaches, where you have partnership resilience funding where the communities, or those benefiting from the defences, are now, effectively, trying to contribute funding, or being asked to do so. That has to be an inevitable way forward—personally speaking.

[88] **Mick Antoniw:** The determinant of the direction and effectiveness of policy is ultimately the resources that are available. So, that determines the strategy really, does it not?

[89] **Ms Pennington:** Yes.

[90] **Mr Jones:** I can see what you are saying and I agree with you; however, on the national strategy and the funding that is allocated to the issue as it stands today—similar to what Louise said—you can optimise and prioritise that spend, but I would say that the national strategy is not tailored towards current spend. I do not think that the national strategy does that. However, it has one eye on the community contribution elements, which Louise was talking about, and on additional elements, such as community resilience and the

inevitability of events at certain locations, subject to climate change and sea level rises.

[91] **William Powell:** Our next evidence session is with colleagues from the Countryside Council for Wales and the Environment Agency. We are in a time of change, moving towards the single body, and the work of that natural resources body will have a great impact on what you are doing and on the business case that you are putting together. What would your message be for the new organisation going forward? What particular priorities would you like to see being taken forward in this area of coastal protection by that single body?

[92] **Mr Jones:** I would like it to be as seamless as possible, please, with as few changes in terms of people and existing associations as possible. Apart from the sorts of hands-on elements, those are the only things that I would like to see. I would not like, in a year's time, to go to the project board, with which we have worked so well with over the past couple of years, and not to know anyone there. That would not be productive. So, on the practical side, I would like to see as little change in personnel as possible.

[93] **William Powell:** So, you want to retain expertise and the knowledge capital and to ensure continuity.

[94] **Mr Jones:** Yes, and their allocation as well to the issue that we are predominantly dealing with in terms of the coast.

[95] **William Powell:** Are there any final points that you want to share with the committee this morning? You have provided us with comprehensive evidence and some full answers, but are there any final points or appeals that you want to make to us?

[96] **Ms Pennington:** I have two very quick things to mention. First, in relation to the single body, as far as I am aware, of the three bodies, it is only the Environment Agency at present that has personnel working on flood and coastal risk management. I would like to see, through the merger into the single body, that responsibility not being comparatively dissolved within a greater being, but growing a stronger single voice within that organisation.

[97] Secondly, with regard to the earlier reference to communications, while there is a great deal that can still be done in terms of raising awareness, if we look back over the recent couple of years, we will see that quite a lot of progress has been made through public consultation on the shoreline management plans, through the launch of the national coastal erosion risk-mapping project that has gone live on the Environment Agency website, and through the public consultations involved in the recent delivery of European-funded capital coastal defence schemes in the likes of Borth and Tywyn. So, public awareness is growing, compared with where it was, but there is still a lot more to be done, particularly in terms of gaining the long-term perspective. Seeing machinery physically delivering a capital coastal defence scheme is progress—you are physically seeing signs of your community being protected—but trying to get buy-in and a long-term appreciation of the risks and how they will intensify is a definite challenge for the future.

[98] **David Rees:** What is your working relationship with the world of academia, perhaps with Bangor University, Cardiff University and other institutions that are looking into these fields and maybe into the changes in climate and weather patterns? What is your working relationship with those bodies? Are you able to gain from that?

[99] **Ms Pennington:** At the moment, I have a contact or several contacts within each of the main Welsh universities. For example, they are invited to attend our workshop in a couple of weeks' time. Cardiff and Swansea are already due to attend, I think. However, at the moment, these are very much initial contacts—it is a case of awareness sharing. I am aware of some of their European projects, such as IMCORE, the innovative management for Europe's

changing coastal resource project, which has been worked on recently. Subject to the extension of the coastal monitoring centre project, I hope that there will be definite scope for joint ventures in the academic sphere, drawing upon research and development expertise. We have not been able to pursue that fully as yet, but I would certainly like to embark on it in future.

[100] **William Powell:** Diolch yn fawr **William Powell:** Thank you very much for iawn am y sesiwn heddiw. today's session.

[101] Thank you very much indeed for everything that you have brought us this morning. Have a safe journey back.

[102] We are just waiting for our next set of witnesses.

[103] Bore da i chi i gyd. I welcome you all to the Environment and Sustainability Committee. Please could you all introduce yourselves briefly for the record? Then, I will ask you to lead on explaining how both your organisations play a role in the ongoing work on coastal protection in Wales.

[104] **Mr Hillier:** Bore da, bawb. My name is Graham Hillier. I am the flood risk manager for the Environment Agency in Wales.

[105] **Mr Cook:** I am Steve Cook. I am the flood and coastal strategy manager for Environment Agency Wales.

[106] **Dr Rimington:** I am Nicola Rimington. I am a marine and coastal physical scientist for the Countryside Council for Wales.

[107] **Dr Gubbay:** I am Susan Gubbay. I am a board member for the Countryside Council for Wales.

[108] **William Powell:** Thank you very much. Can you now expand on the roles that you play in this field?

[109] **Mr Hillier:** The Environment Agency has three broad roles, I suppose. One is to operate flood defences, such as coastal defences. We have a number of flood defences across rivers and the coast. The second element of our work is to do with regulation, so, if you wish, we can be consulted on consents. The third element is to do with advising. We provide an advisory role to Welsh Government and other parties that have an interest in flooding and coastal erosion.

[110] **Dr Gubbay:** We in CCW also have an advisory role. We are advisers to Government, and we cover a number of areas relating to the coast, including biodiversity interests and coastal access. We are also involved in comments on planning applications and issues relating to protected areas on the coast. That is very broad. We then have a more detailed involvement in the development of shoreline management plans, where we feed in CCW expertise to the development of those plans.

[111] **William Powell:** Thanks very much. Looking first at the overall national strategy, do you consider that progress on its delivery is consistent with the timetable set out by the Welsh Government in it?

10.00 a.m.

[112] **Dr Gubbay:** It is quite early days on that, so it is hard to see how it will pan out in

the end. However, at this stage, it is fair enough to say that things are going forward at a pace that you would expect. The key point is to keep up the pressure and ensure that the national strategy is linked in to some of the other documents issued by the Welsh Government, such as a 'A Living Wales', and to ensure that we make those linkages. There is much more work to be done on that element as the national strategy is rolled out.

[113] **Mr Hillier:** I would support what Susan has said. It is early days, as it was launched in November 2011. However, it sets out a clear vision and identifies the role that each party needs to play. I certainly support the principle that the benefit will be in using it, in making sure that it is a live document that is used to implement some of those policies, and in joining it up with other policy areas. The key is to identify that it sets out the scene for flood and coastal risk, but there are many other impacts that interplay with that, so we would very much like to see it embedded in other policy developments, such as for the economy and regeneration and so on.

[114] **William Powell:** How successfully do you feel the objectives of the national strategy are integrated into areas such as the shoreline management plans and the development of local risk-management strategies at the current time?

[115] **Mr Hillier:** Again, it is a question of timing. The shoreline management plans were well under development at the time the national strategy was launched, so there is definitely an alignment between them. It is good that they take an integrated view of the management of that coast. On the local strategies, again, it is early days for how the local strategies are developing, but they are developing. Each local authority that has a coastal interest is working on its local strategy, but it is still early days for how those will develop.

[116] **Dr Gubbay:** It is a similar situation with us.

[117] **Russell George:** Good morning, all. I have a question for the Environment Agency Wales first, following the Chair's opening comments. In your paper, you talk about the Welsh Government setting the direction for how you and coastal local authorities should manage coastal flood erosion risk. You then go on to say that, in England, the role is undertaken by the Environment Agency. What are the differences between Wales and England in the process for approving the plans?

[118] **Mr Hillier:** There are a couple of differences in the oversight role, if you like. In England and Wales, the Environment Agency has a similar oversight role for all sources of flooding. However, in Wales, it is a Welsh Government strategy, while, in England, it is an Environment Agency strategy. We play a key part in both. When it comes to the approval of coastal schemes, we have now been given the role to give consent and approval to those schemes in Wales. I do not know whether Steve can give a little more detail on some of those differences between England and Wales.

[119] **Mr Cook:** In England, the whole process for the allocation of funding for local-authority-led schemes is overseen by the Environment Agency, which includes options appraisal, quality review and then the allocation itself. That role in Wales is undertaken by the Welsh Government, but it is considering where that best sits for the future, as indicated in the national strategy. In Wales, it is Welsh Government that carries out the approval process for the shoreline management plans. In England, that role has been delegated from the Department for Environment, Food and Rural Affairs down to the Environment Agency. So, on the overall vision and approval, here, it is the Welsh Government that sets out the vision through the national strategy and approves the shoreline management plans; in England, that role has been delegated from DEFRA to the Environment Agency.

[120] **Russell George:** Do you have an opinion on which system is better—that in England

or Wales? There are obvious advantages and disadvantages to both. Could you comment on that?

[121] **Mr Cook:** England and Wales are quite different. Here, we have 22 local authorities, for example. There are 154 lead local flood authorities in England plus all the water companies. So, the scale of delivering the national strategy in England, given the number of people and organisations involved, is very different compared with Wales. The key is what makes the best and most optimal way of delivering a tangible reduction in flood and erosion risk. As we see it here in Wales, the Welsh Government giving that steer to the relatively small number of organisations that have the influence to deliver seems to be the best approach that we have.

[122] **Russell George:** Are there any comments from CCW on that?

[123] **Dr Gubbay:** To add to that, beyond the process side, which has been described, on the actual content of the plan, the science and the data and that side of things, the same guidance is used to underpin the shoreline management plans. There is also a peer review process, so you should not worry about any differences in quality between England and Wales, or in the approach to the science in drawing them up. There is a resources issue, I think.

[124] **Dr Rimington:** This is really an opinion and an observation, but on the resources to take forward the work in Wales to deliver the best approach to risk management on the coast, at the end of the day, they are finite across all the bodies that have a responsibility, and so it is important to make sure that they are used to best effect. We are conscious of the move towards a single body in Wales and of some capacity issues that may arise, because the EA has been able to draw on EA national in the past. How the single body is taken forward in Wales by the Welsh Government or whoever in the future is perhaps unclear at this stage, but it is nevertheless an important point to make sure that we can continue to do a robust job.

[125] **Mr Cook:** To add to that, although the details of how the single body will operate have yet to be worked out, in Wales, we have a finite amount of resources and skills in the various delivery organisations and the Welsh Government. The key for the future is making sure that we use those resources in the most effective way possible. So, for the unique role of policy development, this is obviously one for the Welsh Government, and delivery and interaction between the national and local level is a role that Environment Agency Wales and CCW could play quite strongly.

[126] **William Powell:** Absolutely. The last question that I posed to the representatives from the Wales Coastal Monitoring Centre earlier was on the issue of the potential impacts of the single body. The strong message that they emphasised was their desire for continuity, particularly in respect of the Environment Agency colleagues with whom they have been working on various project boards. They very much wish to retain that, where possible. So, that was certainly a key message that came from them.

[127] **David Rees:** I would hope that you would be using resources efficiently and effectively, anyway. However, on the question of the SMPs, there are four coastal regions, two of which are cross-border. Are there difficulties as a consequence of the EA in England being responsible and maybe setting its own strategy while the national strategy in Wales is set by the Welsh Government? Is there any conflict, or is it actually able to work well?

[128] **Mr Hillier:** I am happy to offer a starter view, which is that it works well and there has been no conflict with the policy or the strategy. Rather, as Sue was saying earlier, the principles that sit behind them and the guidelines that we follow are the same in England and Wales. There is a lot of integration in the team effort that goes into compiling each of those

shoreline management plans that cross the England-and-Wales boundary. So, I would say that—from my perspective, anyway—there has been no conflict in developing those plans.

[129] **David Rees:** I read in the papers that some of the SMPs 2 were being developed before the strategy was released and, as a consequence, you needed to go back to look at them to make sure that they were in compliance, effectively. Will that have an impact, because you may now have slightly different strategies?

[130] **Mr Hillier:** Again, I think that the national strategy in Wales is consistent with the messages that sit behind all four SMPs that affect Wales, not just those entirely within Wales, but those that cross the boundary. So, there is a good deal of consistency there. That is my observation.

[131] **Dr Gubbay:** May I add something on cross-border issues? We are trying to look at the whole of estuaries and sections of the shoreline as operating as systems, so it is important to take an integrated approach and to look at whole ecosystems, so that whatever decisions you make within that estuarine system, regardless of whether there are different local authorities or national authorities involved, they are effective management proposals for those areas looked at in the round. So, we are trying to take an ecosystem view, and that means co-operating and partnership working, as part of cross-border working.

[132] **William Powell:** Moving the focus for a moment to issues around Welsh planning policy, the submission from the Environment Agency states that significant issues are at stake around the revision of TAN 14, and that was echoed by the National Trust in what it had to say. I wonder whether you could elaborate a little on that, as to which aspects of TAN 14 you would wish to see developed and revised.

[133] **Mr Hillier:** One of the points that I touched on earlier was about looking to see the national strategy adopted in and integrated into a broader range of Government policy areas. That is at the macro level. Looking then at the planning level, TANs 14 and 15 would benefit from a review in light of the national strategy to take on board some of the principles therein. The strategy identifies that, and that is one of the development areas that the Welsh Government has said it will work on. We see that very much as a need—to integrate those planning guidance documents, TANs 14 and 15, to accommodate some of the general framework and the steer given in the national strategy.

[134] **Mr Cook:** I would just add that, at the minute, TANs 14 and 15 primarily focus on coastal and river flooding, and obviously the national strategy asks all the players to consider all sources of flooding and coastal erosion. So, for example, having the planning system take account of surface water flooding and coastal erosion would be a particular thing that is needed for the future. The other thing that I would add is that, obviously, a lot of the different policies across Government are encapsulated at a planning application level. Currently, where you have conflicts between socioeconomic policy and flood and coastal policy, for example, that is only ever brought together to be resolved at a planning application level, which is very late on in the whole decision-making process. What we would like is for the planning system and the wider policies to be reconciled as much as possible at the national level, so that there is a much more effective use of resources and speed in the application process later on.

[135] **Vaughan Gething:** I will go back briefly to cross-border issues and the Severn estuary, and then I would like to pick up on some comments that were made on the future of coastal management. The CCW paper refers to the figures on likely losses if the sea level continues to rise as it is and as is predicted. I do not really completely understand what the figures that you provide for the Severn estuary mean. I have an idea that they are significant, but I do not understand them. These are in paragraph 1.3.5 in your paper, where you refer to 5,737 ha being lost in the Severn estuary over 100 years. I am interested in what that looks

like. Are we talking about the current estuary environment receding and being changed as the coastline goes back? What will that look like? How far up the Severn estuary are we talking about?

[136] **Dr Rimington:** I will try to answer that for you.

[137] **Vaughan Gething:** I am just interested in having a proper idea of what that might look like if nothing was done.

[138] **Dr Rimington:** Just to give you some context, when you drive over the second Severn crossing and look seawards, if it is low tide you can see that there is a very large sand bank that is a big part of the inter-tidal sand and mud feature of the estuary. Within the estuary as a whole there are about 20,000 ha of inter-tidal habitat, so 5,000-odd ha is about a quarter of that. It is also important to say that figure in the paper is very much a summarised figure, because there are all sorts of figures in the report that I refer to. That is a 100-year picture and it takes the worst-case scenario across the whole estuary. The other pattern that we see is that, as the estuary tries to respond to sea level rise, it wants to move landwards and upwards, so you tend to see predictions of more erosion in the outer parts of the estuary and more accretion in the inner parts of the estuary. It is not a constant picture around the whole estuary in terms of what the science is telling us.

[139] **Vaughan Gething:** Could you explain the term ‘accretion’, because I am not sure that I understand it? I think that I understand, but I would rather ask than not.

[140] **Dr Rimington:** The shore will be eroded at the outer part of the estuary, so you will lose width of foreshore, lose some mudflat and maybe some salt marsh at the outer parts of the estuary, which is the pattern that we see in areas around Cardiff like Lamby Way—those areas that are under increasing pressure of erosion. Further up the estuary towards Gloucester you might see sediment moving up the estuary and the mudflats getting bigger.

10.15 a.m.

[141] **Vaughan Gething:** I thought that was what you meant, but I wanted to ask. I am interested in moving on to the next section in your paper in which you cite that part of the national strategy about looking for

[142] ‘new, sustainable and innovative approaches required to ensure that in future we move beyond defence and drainage alone and find ways to work with natural processes.’

[143] I am interested, again, in what that means in practice. We understand it, as it has been a comment that has been featured in a lot of the evidence papers that we have had—about moving beyond, holding the line, or doing nothing. I am interested in what you would see as examples of how you would expect to find ways to work with natural processes. We can all think of examples of where current erosion means that current structures are either maintained or areas lost—the obvious examples are caravan parks or, potentially, historic buildings, which could be lost if the sea defences disappear and we do nothing about erosion. I am interested in what you see as being those innovative ways of working with natural processes that we can find to do something about it.

[144] **Dr Rimington:** With regard to working with natural processes, a couple of papers have been produced, as Department for Environment, Food and Rural Affairs and Welsh Government initiatives, which I can certainly make available later. The examples in those papers are things such as looking at realignment schemes. For example, say you have a defence line that is under pressure—you have salt marsh that has been eroded in front of it, and the defence structure itself is beginning to be undermined. You could look at an

engineering solution to improve that defence and make it secure. However, you could, in the sense of working with natural processes, look at a realigned position, which will give you a greater width of natural habitat in front of it and then, the salt marsh, for instance, contributes to the defence function as well as providing a habitat, an amenity, arguably, and other ecosystem services. That is one of the key examples.

[145] Another example that we see on various sections of the Welsh coast, and the north Wales coast is one that is at the forefront of my mind, is where the shoreline, despite all the efforts in shoreline planning processes today, is still compartmentalised. So, you have structures that prevent the movement of sediment along the coastline and, therefore, while you may solve the problem in one area, you are creating one in the next or the next one to that and so on. There is an opportunity for Wales to take a step back and look at what the shoreline management plans are telling us is the right way to go. However, that, of course, is only setting the policy direction. The way that we deliver that policy may still be to hold the line, as it may still be that it is important to protect these assets, but how we go about protecting those assets could be through a different approach. For example, it could be feeding a beach—adding sediment to a system at one end and allowing it to feed along the shoreline and, ultimately, land up in a dune system at the other end.

[146] **Dr Gubbay:** One interesting thing about using natural processes is the issue of maintenance of coastal protection work because, obviously, where there are man-made defences, there is a maintenance issue and a cost associated with that. One of the ideas with using natural processes is that it is more of a self-sustaining system, so the salt marsh grows and the mudflat accretes and there is less required in intervention for maintenance. That is quite an important element.

[147] **Mr Hillier:** What has been said is absolutely right. The other element of that maintenance angle is that salt marsh, for example, is a very good mechanism for dissipating the energy in wave attack, whereas a structural defence simply reflects that energy back again. So, that all adds to the argument that there are some longer-term sustainable options in these natural processes.

[148] **Vaughan Gething:** Clearly, there are consequences for coastal communities as well. There are lots of figures in the papers that we have had about the number of properties that are already at risk, even without further sea-level rise. You talk about communication, and I am interested in how you would expect engagement with people to work. I guess that there is always this challenge in going and telling people that they are at risk and them being scared and in how you tell them that you want natural processes, which means that the environment around them will change, and in the scale of movement. Obviously, some of our communities are really quite large. You cannot really talk about moving Swansea. However, there are smaller residential areas. Does this mean that we are talking about a managed move? Are we talking about moving communities or are we talking about natural processes that could protect and sustain those areas?

[149] **Dr Rimington:** From my perspective, it could be either. I completely agree. Thinking of the north Wales coast, there is a huge number of assets that come right against the shoreline—road and rail infrastructure, as well as communities that are set behind it. So, a policy of managed realignment was completely unfeasible and did not meet the economic criteria within the shoreline management plans. However, in front of those assets, there is quite a substantial sea defence, which is being improved in a number of locations, and a lowered beach environment. However, the beach environment is very important to the communities that live there. It is an important tourism amenity and the sediment supply along the coast is important for all those sections of coastline. At the end of the day, there is going to come a point where you cannot keep building higher and bigger structures and you will need to look for an alternative approach. That does not mean that you are saying that you

have to set back all the assets in that location, but maybe a different approach is required such as beach nourishment. In other areas, relocation of assets would need to be seriously thought about.

[150] **William Powell:** On that point, I have to call Julie James, the Member for Swansea West.

[151] **Julie James:** I am glad to say in public that there is no suggestion of moving Swansea. [*Laughter.*] Swansea is a good example of a city with a sea defence built in front of it with a large road. That is a hard sea defence. Along the coast, we have the Loughor estuary and the Gower beaches, some of which have huge fluctuations in sand and pebbles. I am interested in how that is monitored. There has been controversy for years over whether the dredging in the channel is affecting the sand on the Gower beaches. I have a large number of constituents who feel strongly about either side of that argument. I feel strongly myself about one side of it. What are the processes for monitoring and deciding on a change of strategy for something like that? Nature has long been trying to change Swansea back into a dune, and enormous amounts of money are spent removing the sand from the road all the time. Naturally, it clearly wants to be a dune system. What other strategies are there other than building higher and bigger coastal defence structures?

[152] **Dr Rimington:** On monitoring, I think that you have already heard from the Wales Coastal Monitoring Centre. There are a variety of monitoring initiatives done locally through a local authority and there are some EA initiatives. I hope that the further development of the Wales Coastal Monitoring Centre will bring those disparate sections of monitoring effort together to develop a consistent approach and to make sure that the data that we are collecting are robust to underpin decisions about a way forward. The very fact that we have a centre, and that we all recognise that we need it and that there is much work to be done, means that what we have is perhaps not as robust as we need it to be. Picking up on your question on Swansea, that falls within the Swansea bay/Carmarthen bay coastal engineering group, which does some strategic monitoring, which, alongside any monitoring that is required to be done under a licence for aggregate extraction, for instance, would help inform management decisions, but, personally, I would argue that we do not have enough data to inform robust decisions at present.

[153] **Julie James:** There are a large number of potential developments being suggested, such as lagoons, tidal energy systems and so on. I am being told by a number of people that there are not sufficient data to know what those would do to the way the bay operates. My colleague from Aberavon has a similar interest in the whole area. How can we best use those assets, both for the protection of the community, but also for such things as renewable energy? I think that we fully agree that we need much more monitoring.

[154] **Dr Rimington:** There is a challenge in dealing with those kinds of applications on the basis of the available information.

[155] **Mr Cook:** The way that the coast is currently being managed, and in the face of climate change, the current approach is unsustainable. That means that big decisions will have to be taken, and we think that a big, robust database is needed to help underpin the big decisions for the future of Wales over the coming 50 to 100 years. So, we certainly support the need for a robust, consistent monitoring approach for Wales.

[156] I would add that the big changes will be coming up over 30 to 50 years onwards. At the moment, the planning system is looking at a much shorter time frame. The key thing, going forward, is to enable the planning and wider policies to look beyond their current time frames to a much longer term, to take account of what has been identified within the shoreline management plans that have been put together by the local authorities and coastal partners.

There is already engagement in and agreement on the vision for the coast in the long term; translating that into future policy will be a key step in moving forward.

[157] **Dr Gubbay:** I would just mention a couple of things that will be relevant to the monitoring at a higher level. Marine spatial planning is on the horizon, and that is going to require us to look not only at the marine area, but at the link with any coastal land-use planning. There is also the marine strategy framework directive, which has an awful lot of things in it that will require monitoring in the marine environment. That should feed in. I can imagine a body like the Welsh data centre taking the data and putting them together with other relevant data for coastal planning and management. So, we have a few big things coming up that will boost the data needs and the monitoring needs and which may be helpful.

[158] **William Powell:** David Rees is next.

[159] **David Rees:** Actually, Julie James asked most of my questions in asking about the monitoring. [*Interruption.*] It is all right. [*Laughter.*]

[160] I am interested in dunes, which you mentioned in your paper. The two areas that you mentioned are in my constituency—either side of the Neath estuary. They are slightly different, because one is an extension of a promenade area and I see that more erosion takes place in that area, whereas the other side, which does not have an extension of a promenade, has less erosion. I wanted to ask about monitoring. You mentioned the £199 million-worth of defences there; what is the current planning situation? You mentioned long-term planning, but what is the current planning situation for protecting those natural defences so that they stay in place? They are working, and it is important that we look to keep those in place.

[161] On the issue of erosion and dredging, a former colleague of mine, Professor Mike Phillips, would say that it does not have a particular impact, but I would disagree with him as well.

[162] **Dr Rimington:** The shoreline management plans are the key documents in that respect. They identify appropriate policies to ensure that dune systems are managed effectively, to perform the function that has been identified. That is, they need to keep on doing what they do now. So, management actions either side of a dune system need to take account of the impact that they may have on that dune system and the function that it may perform. It is critically important, and that should be taken into account in other decisions around it.

[163] **David Rees:** You have mentioned things that need to be looked for before a planning application comes in. Are we seeing those considerations in any of the applications coming in? Are they looking at the SMPs to see how we manage the natural resources?

[164] **Dr Rimington:** It is early days. The SMPs have not been signed off yet.

[165] **David Rees:** There was an early version, though.

[166] **Dr Rimington:** There was an earlier version. It is perhaps outside your area, but there certainly were other examples, such as Morfa Dyffryn, where we have designated sites and protection works to caravan sites, in those instances, to the south. Also, there is sediment transport to the north, to the dune systems that could have been interrupted by those defence works. Certainly, from an environmental perspective, we were involved in the planning decisions with regard to what was and was not appropriate and whether it would have an impact. I appreciate that it was not necessarily a defence function that the dune systems were performing, but it was a consideration.

[167] **David Rees:** As I say, it is important that we keep those natural defences operational. I want to make sure that planning ensures that that takes place.

10.30 a.m.

[168] **Keith Davies:** Ar y dechrau, Graham, roeddech yn sôn mai un o'r pethau rydych chi fel asiantaeth yn gyfrifol amdano yw ymgynghori. Mae paragraff yn eich papur yn sôn bod lefel y môr yn gallu codi metr ar adegau o lanw uchel, pwysedd isel a gwyntoedd mawr. Rydych yn dweud bod traean o arfordir Cymru wedyn mewn perygl o lifogydd mawr. Yr hyn nad ydych yn sôn amdano yn y fan honno yw'r hyn sydd gennym yn Llanelli, sef bod y system carthffosiaeth a'r system dŵr glân gyda'i gilydd. Mae hynny'n effeithio yn syfrdanol ar y perygl yn yr ardal. Fel ymgynghorydd, faint o sylw sy'n cael ei gymryd o'ch sylwadau ynglŷn â'r perygl o lifogydd gan yr adran gynllunio pan fo cais yn cael ei wneud ar gyfer adeiladu mwy o dai ar yr arfordir?

Keith Davies: At the beginning, Graham, you mentioned that one thing that you are responsible for as an agency is consultation. A paragraph in your paper mentions that periods of high tide, low pressure and high winds can mean that the sea level swells by a metre. You say that a third of the Welsh coastline is then at risk of significant flooding. What you do not mention there is what we have in Llanelli, namely linked sewage and clean-water systems. That has a striking effect on the risk in the area. As a consultant, how much weight is given by the planning department to your comments on the flood risk when there is an application for building more houses along the coast?

[169] **Mr Hillier:** Mae'n flin gennyf nad wyf yn gallu ateb yn Gymraeg, Keith.

Mr Hillier: I am sorry that I will not be able to answer in Welsh, Keith.

[170] The question is excellent. A distinct combination of factors affects Llanelli in terms of tidal inundation, surface-water flooding, river flooding and sewer flooding, as you have mentioned. There has been some degree of progress, I am pleased to report, in terms of working co-operatively with both Dŵr Cymru and the local authority in Llanelli to try to manage that situation and stop it from getting worse. So, a memorandum of agreement was established a couple of years ago, for example, that identified that there should be no further development until or unless there was sufficient capacity in the system to accommodate that, bearing in mind all of these pressures. The idea that Dŵr Cymru is now working on is to try to take out of the sewer system the large volumes of surface water—essentially clean water—that ends up causing that overcapacity. So, I am confident that there is a good degree of collective thinking to resolve the problem. It is a shame that it has developed for as long as it has—it should have been done many years ago—but, that being the case, we are on the right track collectively with the partners who can make a difference.

[171] When it comes to individual planning applications at the moment, I am not familiar with all of the details in Llanelli, but I am aware of some that have had to be held back until such time as they can be properly accommodated so as not to make that situation any worse. So, I think that that memorandum is working. There is clearly a good deal of work, and I do not suppose that it will happen overnight. The likes of Dŵr Cymru would need to invest in taking that surface water out of the system and, in the meantime, our advice to the planning authority is going to be based on the system as it currently stands. However, as and when the situation improves, we would still want to inform the authorities in terms of what the risk is likely to be. With the climate change factors that we have discussed, we know that it will not get easier in the future. So, we still want to reinforce that longer-term view, so that any decision that is made now is sustainable in the longer term. However, in Llanelli, there has been some degree of progress and it is working better now than it has before.

[172] **William Powell:** In the light of that answer and Steve's earlier comments around

planning and aligning the local development framework with the longer-term developments, do you have any views on the merits or otherwise of a more regionalised approach to planning and whether that would bring any benefits in taking on board the issues around coastal protection?

[173] **Mr Hillier:** There are—again, it picks up on a number of comments that have been made before. There is a spatial planning level where we should identify what needs to be developed where in Wales and where we need to think about steering some of those initiatives. That aligns closely with the idea that, at a Wales national level, shoreline management plans take into consideration the impact somewhere else of making a decision at a local level. So a broader-scale planning system would be exactly the right way forward.

[174] **Mr Cook:** To add to that, all communities operate at a local level, but they are dependent upon regional infrastructure—road, rail and telecommunications. Again, the shoreline management plans identify where the risks are to those, so taking a wider approach, such as national or regional infrastructure planning, has a lot of merit. I would add that Environment Agency Wales would be happy to be involved in that at a much earlier stage than at present so that we can advise Government departments well in advance of the potential opportunities or risks of some of the decisions that they might make, so that they can make informed decisions. The fact that we have been looking at scenarios 20, 50 and 100 years hence means that we will, hopefully, be able to impart some extra information to help.

[175] **Russell George:** My question is for Mr Hillier. Are there any conflicts in working with water companies? I am thinking of Welsh Water and Severn Trent Water. Behind my question is the potential for conflicts in managing reservoirs and dams. There is obviously a conflict in that water companies want to retain as much water as possible, but what, if any, conflicts arise with regard to joint management plans for coastal flooding with Severn Trent Water or Welsh Water?

[176] **Mr Hillier:** I can see that there is potential for conflict, but from my experience of working primarily with Dŵr Cymru Welsh Water—I cannot speak with any degree of knowledge on the relationship with Severn Trent Water—the relationship is fairly solid. Again, there are areas of conflict outside of the flooding arena; for example, in our role as regulator when it comes to pollution incidents. There is a clear line, and we have prosecuted Welsh Water for pollution offences and will continue to do so where it crosses that line. However, it is a reasonably mature relationship, and both parties understand their roles. There is a great deal more that can be gained by working collectively with Dŵr Cymru on things like the Llanelli solution, for example.

[177] In my experience, I have noticed that that relationship has allowed us to work pretty co-operatively together to try to find those longer-term solutions. At the end of the day, I have not detected that Dŵr Cymru would want a different solution to us anyway. It has often reiterated the different model that it operates—it is not a shareholder-based organisation, and it is reinvesting its profits back into Wales. One of its key arguments is that that then allows it to invest in its environmental improvement programme, for example. We are, perhaps, fortunate in Wales, and I think that there has been a good deal of work between both organisations to try to foster a very co-operative relationship, notwithstanding, as I say, that there are some times when we have to take a different stance.

[178] **Julie James:** On the planning front, I have a few questions on whether small measures are worth doing or not. I am speaking of my own constituency, but I am sure that there are other examples, where properties have been built on the coast without adequate provision for run-off waters through the properties; as a result, they have erosion behind a retaining wall. I know that retaining walls are a problem all over Wales for that reason. However, we have other issues where things have been built at the top end of a flood plain

and so on where no mitigating measures have been put in—there are no rainwater-capture systems and they have allowed hard standing to be put in front of all of the houses. Is it worth insisting on those sorts of measures, or do they not make enough of a difference for it to be worth the battle to have them put in? I know that some London authorities, for example, are refusing to allow people to pave over front gardens for parking, because of the increased run off that you get; you have to put in water-permeable materials and so on. What is your view of that kind of mitigation measure? Is it worth it or not?

[179] **Mr Hillier:** My opinion is that it is worth it. In the past, we have seen that the compound effect of all of these interventions is significant. If we take no action at that level, the situation will continue. Pilot studies are going on, some of them in Wales in combination with the likes of Dŵr Cymru, to see whether or not we can retrofit into a community a more sustainable drainage pattern, or take out some of the hard standing and replace it with vegetation, ponds and so forth. We know that it works in other countries, and I think that there is a growing sense that taking action on a small scale can be effective if you get enough people behind you. It would be helpful if the planning system promoted that, and perhaps there is an opportunity to look at that in the future development of some of the local plans; that is my view.

[180] **Dr Gubbay:** I want to extend that into the coast protection side, similarly, so that smaller measures add up to bigger measures and contribute to the whole. The important thing with the small measures is that they are not based on decisions made in isolation. The coast protection needs to be linked in with schemes for the whole area or region, so that it is functioning as a unit. You can undermine a lot of work with one small measure in the wrong place in the coastal protection scheme, if you have not looked at it as part of the bigger picture. So, small measures are important, but there is a need to see how they fit into everything else, because they can do harm as well as good.

[181] **William Powell:** We will move for a moment to the important issue of the habitats directive and the wider issues around that. I wonder if you could comment on your view as to whether the national habitat creation programme process is sufficient as the primary mechanism for delivering the required compensatory habitats that may be necessary.

[182] **Dr Gubbay:** It could be. I am sorry that is not a definite answer, but there is scope for it to provide that; we have yet to see whether it is going to deliver on that front, but there is no reason why that cannot be the basis for looking at habitat creation schemes.

[183] **Dr Rimington:** It has been identified by the Welsh Government, as we understand it, as the primary delivery mechanism for compensatory habitat, to offset impacts that would arise if the shoreline management plans were implemented. We want to see a commitment from the Welsh Government, as part of the sign-off of shoreline management plans, to deliver via the national habitat creation programme or whatever other mechanism it identifies—that seems to be the mechanism that is up and running and it is already doing some good work at the early stages of identifying the issues and the potential solutions. So, CCW is working with the Environment Agency and others at various levels.

[184] **William Powell:** What time implications does the requirement for an imperative reasons for overriding public importance—and its associated acronym, IROPI—have in the wider context?

[185] **Dr Rimington:** Do you mean in terms of the timescale for the process?

[186] **William Powell:** I meant in terms of the timeline and the time implications of that requirement for the imperative reasons of overriding public importance.

[187] **Dr Rimington:** The IROPI—let us call it that. In terms of signing off a plan, it needs to be tested against the habitats regulations. The plans have identified that there would be an adverse effect on European designated features if the plans were implemented. There is a process to consider whether the plan should still go ahead, in spite of those adverse effects, and if it does there is a requirement to provide compensatory habitat. The provision of compensatory habitat has to relate to the time period of the plan. So, if it is a 100-year plan, the provision of compensatory habitat needs to have a game plan for the 100 years, accepting that shoreline management plans are likely to be reviewed numerous times in that 100-year period. So, that will have to be revisited alongside those reviews.

[188] In terms of carrying of the process of the IROPI case, I guess that is a matter for the Welsh Government to be confident that it has gone through all the checks and balances that it needs to sign up to the commitment to the delivery of the plans, as appropriate—and to the delivery of the compensation that is required along with it. That is not something that we can comment on. The sooner the better in terms of taking forward sustainable management of the coastline.

[189] **Mr Cook:** The natural habitats along the coast are beneficial for two reasons: they are a beneficial to biodiversity and, as we discussed earlier, they are beneficial to flood-risk management. We do not want to see in terms of timing is a loss before we do the recreation, because it is a threat to both biodiversity and to flood and coastal risk. So, that is a timing issue.

[190] From our point of view, we are leading the habitat creation programme for Wales on behalf of the Welsh Government. At the minute, we are at a strategic phase. We are looking at identifying all the losses that could occur from any source around the coast of Wales in the next 100 years. We are also looking to identify potential sites where habitat could be recreated. That is the profit-and-loss situation.

10.45 a.m.

[191] The next phase will be the delivery phase. That is where the challenge comes in with regard to whether the recreated sites that we have identified can actually be delivered, in terms of cost and landowner co-operation, for example, and be achieved within the timescales that have been outlined. Therein lies the need for the policy framework to be there to allow us, on behalf of all of Wales, to identify what comes in in terms of landowner use, agriculture, flood risk, affordability and biodiversity. There is a huge amount of inter-meshing between policy angles on this one. If we are to deliver the habitat creation programme, we are committed to doing so, and having that policy framework aligned and in place will allow that delivery to happen. Without it, we would do our best, but significant challenges would remain.

[192] **Vaughan Gething:** I want to turn back to a question raised previously. A point has been raised about renewable energy schemes and their impact. Obviously, I have a constituency interest, but I have a wider interest in the Severn tidal power scheme. The two options talked about are lagoons and a barrage. We spoke earlier about the fact that, if a barrage is built, some of the estuary will potentially be lost in any event. If you build a barrage, you fundamentally change that environment, and I know that that is a possibility. However, I am interested in whether, at this point, you have any idea about or view on what the consequences of a barrage would be for flood defence and coastal communities. Would it change wave patterns? Would it have an impact around the rest of the coast and, if so, do you have any idea what that would look like or what it could look like? We have the example here in Cardiff of a small barrage and we know what it has done in terms of protecting houses further up the rivers Taff and Ely. Therefore, I can see that there may be benefits for people on one side of the barrage from the point of view of flooding. However, the port of Bristol

might not be so happy. I will not talk too much about deep ports, but I am interested in the coastal impact across the rest of the coast of England and Wales.

[193] **Dr Gubbay:** I will start to answer this one. There will be changes, but it is quite difficult to be specific until you know what scheme is going ahead and the detail of the scheme—whether it will be lagoons or a barrage. However, what we know is that we have to try to gather as much evidence and data as possible in order to model the possibilities, so that we go forward with as good an understanding as possible. I think that that is the most I can say about it. We will not know exactly, but we can try to model it as much as we can. There will be changes. That is fairly inevitable.

[194] **Vaughan Gething:** Do you have an idea of the sort of changes there will be? Whatever scheme comes—and I hope that there is a Severn tidal power scheme, although I will not tie my colours to the mast of any particular scheme—I do not think that anyone would disagree that we want the best information possible about what the impact of that scheme might be on the estuary environment, the coast or the tidal patterns. Do you have any idea what that might look like or what the potential consequences are?

[195] **Mr Hillier:** I can offer a recollection from some of the studies that have taken place. So, this is what I remember and it is not necessarily accurate. As Sue said, a lot of research and modelling has gone in to this. There is not necessarily agreement on any model as to what the impacts would be, but I think that it is fair to say that, if it is a hard barrage, upstream, there would be a very significant regulation effect on water levels. Therefore, flood risk on the low-lying levels upstream of that barrage could be better managed—at least flood risk from the sea. However, it brings into question whether, if you maintain the levels behind the barrage at a consistent level and do not allow it to drain out as much as it does naturally, you are increasing the risk of flooding by water coming down the rivers because there will be less flow on it and it will have less space to move away from the river.

[196] **Vaughan Gething:** Is that not the same principle as the barrage that is a few hundred yards away?

[197] **Mr Hillier:** Yes, but it would be on a much larger scale and on much larger rivers because the rivers that come into Cardiff bay do not have anything like the flow capacity of the Severn and the Wye.

[198] **Vaughan Gething:** I appreciate that.

[199] **Mr Hillier:** Nonetheless, downstream of the barrage, some of the modelling suggested that, because of wave reflection, some of the energy would be reflected back into the estuary and the water would have less opportunity to migrate further upstream up the estuary, which would tend have an impact on sea levels downstream of the barrage, such that they would be higher under extreme events. They would not necessarily be massively higher, because it is obviously being shared across a much larger area. However, they would be measurably higher. Therefore, when we are starting to talk about flood defence design around the coast of Wales, even as far as the north-west coastline, there are modelled impacts of an increase in flood risk as a result of putting a barrage across the Severn. What I remember from this is that there is very little agreement between the different parties, who have polarised views on this, in terms of what the quantum would be. All I would suggest is that if a decision were made to go ahead, it would have to be considered carefully because the last thing that anyone would want is to see an increase in flood risk elsewhere as a result of protecting someone in the upper Severn area.

[200] **William Powell:** As we draw towards the close of our session, are there any key messages—

[201] **Julie James:** May I ask one more question?

[202] **David Rees:** I have another question as well.

[203] **William Powell:** Sorry, I had not spotted you indicating. Julie, go ahead. Have you pinched his question again? [*Laughter.*]

[204] **David Rees:** We have not actually discussed funding.

[205] **Julie James:** That is where I was going as well.

[206] **David Rees:** I pinched a question—

[207] **William Powell:** That is probably what I was inviting as well.

[208] **David Rees:** Both of you have highlighted the issue of funding. Last week, we saw the budget figures and the possible reduction of funding for flood and coastal erosion risk management for the years ahead. We have also been told by the Deputy Minister that it will also be more difficult to get European funding. What are your concerns about the current levels of funding and about the consequences of the Minister's statement? What difficulties will we face in the future and where should our priorities be for the future?

[209] **Julie James:** That was four questions. [*Laughter.*]

[210] **Mr Hillier:** I will try to address Julie and David's concerns in my response. To set the scene, on the announcement that was made recently on the reduced funding level, my interpretation of the figures that the BBC quoted was that they were not necessarily comparing apples with apples. So, some misleading numbers have been broadcast. From our experience, the funding over the last few years has been broadly consistent. There are ups and downs, but they are relatively minor differences, particularly once in-year funding has been ironed out and the opportunities for European and WEFO-funded projects come in. However, having said that, we have identified that we will need significant investment in coastal erosion and flood-risk management; Wales is no different from many other parts of the UK in that respect. Even to stand still, in terms of the level of risk that we have—as one of our previous reports identified—we would potentially need three times as much money to maintain that current level of risk over the next 25 years. If we want to reduce that level of risk, then clearly it will be even more than that. We recognise that that that will be very difficult, given the economic climate. So, yes, there is a likelihood that Wales may not secure the same level of European funding in the future that we have had in the past. We will still try, but we are alive to the fact that there is a risk around that source of funding.

[211] So, we need to do a number of things. Part of that is pretty obvious, but we need to ensure that we are prioritising the money that we have and are spending it on the right things in the right places. That links closely with the comments that we heard earlier on that longer term planning. We do not want to invest in a short-term scheme to solve an immediate problem that will only exacerbate some problems later or incur a long-term maintenance liability that cannot be sustained. Through the national strategy, there is an opportunity to look at combining that prioritisation across all sources of flooding throughout Wales, regardless of who is responsible for delivering that. So, there is an opportunity there to ensure that we are putting that money to best use and in the right places.

[212] There are a couple of other things that we can do collectively. I am sure that we can identify other beneficiaries and third-party partners who we could approach for partnership funding because there is a fairly strong campaign for that in England. We could adopt a

similar model in Wales. There are wider beneficiaries. We need to think about flood-risk and erosion management in its wider context, for example, in terms of tourism, infrastructure and the economy. All of those other departments would potentially benefit from these defences.

[213] Also, at a fairly local level, we would welcome a longer term financial settlement window than that of the current year—in-year, those changes can fluctuate. If we had a longer term window of funding, we could probably be considerably more efficient and effective in how we deliver those schemes that we manage.

[214] **David Rees:** [*Inaudible.*]—in England.

[215] **Mr Hillier:** It might be three or even five years. I appreciate that it is difficult, but I am sure that we would see greater efficiency if that could be arranged.

[216] **Dr Gubbay:** To reinforce that point, we have clearly raised funding as an issue in our submission. Having third-party contributions is an interesting idea; it is worth exploring to see whether there are other ways of securing contributions to supporting coastal protection works, given that the benefits are much wider. There are benefits to tourism, access, biodiversity and a lot of other things. So, a little bit of investigation into that would be helpful.

[217] Another element to consider in terms of funding is to have some flexibility in how it is going to be used—whether it is for using natural processes-type coastal protection work or hard defences. So, we need to think how that existing smallish pot of money is going to be used as well as seeing whether there are any good ideas that would allow us to be more flexible.

[218] **Julie James:** May I ask a tiny follow-up question? You both mention in your papers problems with specific schemes being funded in tight envelopes—ranging from EU funds to, presumably, Welsh Government funds. I understand that the funding comes in an envelope—do not get me wrong about that—but what I do not understand is whether you are working up those schemes once you know that there is funding, or whether it is possible to work up the schemes and then, if the funding comes, they are ready to go. I understand the problem with the timescale with regard to the funding, and that you are unable to change the European funding timescales, for example, but could you get the schemes going earlier?

[219] **Mr Hillier:** That is a very valid question. A lot of effort goes into trying to manage the capital investment programme. In fact, we have a 15-year programme that we are working to at the moment, and, within that, we are trying to do some of the early planning, thinking and the investigation into potential schemes that might not come to fruition for that length of time. The problem is that you can do so much on that, but we are concerned that if we invest another £100,000, for example, in more detailed modelling of what a solution might look like, we might find that that sits on the shelf for 10 years and will undoubtedly need to be redone. That is wasting that sort of investment upfront.

[220] It is a juggling game and the European funding opportunities also come with a restricted window of opportunity to build on them. So, what might happen is that we have a set of schemes that we have lined up in case we do not get the European funding. The European funding comes in for another scheme, so we have to accelerate and fast-track that European scheme and put on hold those we would otherwise have done in order not to lose that European funding contribution. It is like playing chess, at a four-dimensional level. However, you are right, we are trying to advance schemes, and when money and underspends come through from other departments—often at short notice within the year—we very much want to be in a position where can capitalise on that, and say, ‘We’ve got this ready on a shelf; it is ready to go and we can deliver that in six months’. However, it is difficult and there are some schemes that just do not lend themselves to responding that quickly.

[221] **Keith Davies:** Yn y dystiolaeth a gawsom gan gynrychiolwyr Ganolfan Monitro Arfordir Cymru yn y sesiwn gyntaf y bore yma, roeddent yn feirniadol nad oedd awdurdodau lleol a Llywodraeth Cymru yn gosod digon o bwysau. Dywedasant fod adnoddau dynol yn wan iawn yn Llywodraeth Cymru ac yn yr awdurdodau lleol. Credaf mai'r ffigur a gawsom oedd mai dim ond tri awdurdod lleol oedd â mwy nag un person cyfwerth ag amser llawn yn gweithio ar y broblem. A ydych chi'n cytuno nad oes gennym ddigon o adnoddau dynol yn ganolog yn y Llywodraeth ac yn yr awdurdodau lleol?

Keith Davies: In the evidence that we received from the representatives of the Wales Coastal Monitoring Centre in the first session this morning, they were critical that local authorities and the Welsh Government did not bring enough pressure to bear. They said that human resources were very weak within the Welsh Government and in the local authorities. I believe that the figure was that only three local authorities had more than one full-time equivalent member of staff working on this problem. Do you agree with that assessment that adequate human resources are not available centrally within Government and within local authorities?

[222] **Mr Hillier:** I can give you an overview of that, Keith. The skilled resource that we are talking about is limited. There is no doubt that it is limited in Wales. However, there are some pockets of that resource across the different organisations—the Welsh Government, our organisation, CCW and the local authorities. The solution is in taking a more of a team Wales approach, so that we can complement one another's areas of expertise, rather than try to man-mark or duplicate that.

11.00 a.m.

[223] There is a good deal of skills development and training happening. For example, we have been running workshops fairly recently with the local authorities on skills and capacity building around some of the surface water flooding issues that they are looking to resolve. I am not trying to pretend that there is not a skills limit. We would much prefer to have more. However, it would not be fair to say that it is at crisis level. That would be my view. I cannot really comment on the local authority element of that. I do not know whether Steve wants to contribute.

[224] **Mr Cook:** It is a challenge. They are taking on new responsibilities. They are skilling up, and we have been supporting them. We should give credit to the local authorities for doing some of the initial assessments on the surface water flood risk, which they did last year. However, it is a challenge going forward. Flood risk is one of the few environmental issues that can kill people. Therefore, just as you look at it with environmental health, for example, this is an issue that needs to be taken seriously by all the people and organisations involved. We are certainly helping. As Graham says, we think that a team Wales approach is the right way forward. It makes the best use of things. For example, we have helped to create three groupings of local authorities where they will meet round the table with us—one in the north, one in the south-west and one in the south-east—to look at the new issues that they have got to deal with in the new duties and so on. So, we can help them from our previous advice about managing flood risks and to help them to help themselves to understand the new duties, share good practice and so on, which we are looking to take forward. As Graham mentioned, we are also helping with workshops on technical issues, such as the one today in Llandudno for all the local authorities in the north about the new set of duties that will come in over the coming months. The solution that we see is very much a team Wales approach.

[225] **William Powell:** That is certainly a message that we can take forward in our next session with the Welsh Local Government Association. I want to check one final point, which relates to the frequency of reference to European funding in response to David Rees's questions. It also relates to the ministerial announcement on 8 May by the Deputy Minister

for Agriculture, Food, Fisheries and European Programmes that there would henceforth be a presumption against major European investment in climate change mitigation measures. I wonder whether you have had the opportunity to study that statement and consider its implications and whether you have any message that we should potentially take back when we next have the opportunity to scrutinise the Minister on this area.

[226] **Mr Hillier:** Thank you for the opportunity. It would be extremely helpful to us if we could explore the avenue that we touched on earlier of some of the interventions we are talking about that require European support being seen in the wider context. They are not just flood defences. They are not just about protecting a community. They are protecting tourism opportunities and protecting massive infrastructure in some cases, for transport and the economy. While I can see that it may not be directly attributable to bringing in new investment in a particular site for an industry, for example, or whatever may well be the priority, it should also be looked at in the context of the cost that you are avoiding by so defending. We have seen just how costly it can be if you do not provide appropriate investment in some of these defences. Maintenance has been touched on. In those locations where the SMPs identify 'hold the line', the cost of not doing that could be much more significant than the loss of that inward investment.

[227] **William Powell:** Exactly.

[228] Diolch yn fawr am y sesiwn y bore Thank you for this morning's session.
yma.

[229] Thank you for your contributions and your full answers. We look forward to continuing our work with you on this important area.

*Gohiriwyd y cyfarfod rhwng 11.04 a.m. ac 11.16 a.m.
The meeting adjourned between 11.04 a.m. and 11.16 a.m.*

[230] **William Powell:** Bore da. It is great to welcome Neville Rookes of the Welsh Local Government Association this morning. I should note my previous membership of the WLGA council and co-ordinating committee. At that time, I represented a land-locked authority and a Welsh national park that have not been at the forefront of this issue, but nevertheless I take a keen interest in this issue. I ask you to introduce yourselves briefly for the record and then to explain the role of the WLGA in relation to coastal protection issues.

[231] **Mr Rookes:** Thank you very much for the opportunity. I am Neville Rookes, the policy officer for the environment, which takes in climate change, biodiversity and marine, flood and water responsibilities. I recently took up that post. Prior to that, I was the flood and water officer, hence my title on the agenda. The role of the WLGA is very much to ensure, as you will well know, the transference of good practice and good governance throughout Wales in all 22 authorities, and we have the affiliation of the fire and police authorities as well. So, the opportunity exists for us to make sure that good practice in flood and coastal erosion risk management is shared between all the authorities. We also have links with England, so any best practice that is emerging or developing there can feed into Wales. We are doing things in Wales that also go across the border.

[232] I must make an apology; I am here by myself. Other colleagues who chair the flood and coastal groups are, unfortunately, all at a national flood group forum meeting in London today. I will endeavour to answer the questions from our point of view, but if there are any particular issues that require their input, I understand from liaising with the clerk that it is possible for us to make arrangements for some of them to be available on 19 July if you need specific details.

[233] **William Powell:** Yes, there is space, and that would make eminent sense, given that other colleagues are promoting this cause elsewhere. That is fine. May I continue with a question on the national strategy? Is it your view that the national strategy is clear in terms of its policies, objectives and the measures that are in place?

[234] **Mr Rookes:** The four overarching objectives are clear. They cover all potential aspects of the people, the investment and the businesses involved in the communities, all of which are key to this. There is no single element—and this has probably emerged in the evidence given by my colleagues earlier this morning—or no one body or group of people that can work in isolation. This national strategy brings that together and focuses on the fact that everybody has a contribution to make. The measures within it are clear, and it is possible to indicate ‘yes’ or ‘no’ as to whether we have achieved those measures, and how far we have achieved them. So, in that respect, the answer to your question is ‘yes’.

[235] **William Powell:** Mick Antoniw, do you have a question on this?

[236] **Mick Antoniw:** No, not on this. There was another specific point that I wanted to raise.

[237] **William Powell:** Would you like to lead on to that? I have concluded my questions.

[238] **Mick Antoniw:** I want to ask specifically about the funding situation with regard to local authorities and Welsh Government funding. It seems to me that, whatever plans are being put together, the perception of those plans and the length of time that they run for, at the end of the day it all boils down to money and priorities. Perhaps you could set out what you think are the key financial challenges, and the impact of those challenges on being able to put forward viable and sustainable plans.

[239] **Mr Rookes:** If we look at this from the perspective of the shoreline management plans, they look at periods of 20, 50 and 100 years, so are looking further forward than, say, the local strategies, which have a 15-year programme. So in some respects the fact that the two are out of sync does not help. In terms of the funding, there have been too many conflicting projects from different sources. Of the funding that comes out of the Welsh Government, a large proportion is allocated to the Environment Agency for its capital programmes, and it works along its risk register to identify which communities are most at risk, and therefore where the allocation of funding should go. There is a smaller pot available for local authorities, and unfortunately that funding has to be competed for by different authorities, which does not help. The funding arrangements are such that the pot is perhaps too small for some of the larger schemes that local authorities want to institute, and it may not quite fit the criteria that are laid down for match funding that might otherwise be available through Europe.

[240] Something that is happening at the moment is that we are working closely with the local authorities, the Welsh Government and the Environment Agency to identify and deliver a single investment programme whereby the whole pot of money is available. A risk register is being developed that would identify all the communities identified by local authorities and the Environment Agency that need funding and prioritisation. The benefit of having this single investment programme is that it will actually encourage closer co-operation between the Environment Agency and local authorities. If a local authority has a project that is funded by competing along a separate track, as we do at the moment, and that project is in a similar area to an Environment Agency project, the benefit could be that the two projects use the same contractors rather than employing them twice. So, the overall costs could come down per project by working together through the single investment programme.

[241] **Mick Antoniw:** I can see that there would be considerable benefits to having a more

comprehensive strategy, a better plan, and making better use of those particular resources. I know that, in my own constituency, which is landlocked, there are some major flood issues, and flood prevention actions are under way at this very moment. We know that European money would possibly become more difficult to access, and we know, from the information that we have had from the Minister for Environment and Sustainable Development, that there are limits on the amount of money that will be available in future as a result of the Assembly's budget. I understand what you say, that it is about looking at how we use the money better and at priorities, but do you think that the plans that local authorities and the various environmental bodies are required to put together, and the expectations of those plans, are unsustainable in the current financial climate?

[242] **Mr Rookes:** If I could pick up on one word there, it would be 'sustainable'. The sustainable development Bill is going through the White Paper consultation stage at the moment. That is looking to balance the community side, the social side, the economic side and the environmental side. By pulling them together, it recognises—it seems to be a phrase at the moment—the three-legged stool approach. None of the three elements, or legs, can stand by itself, so the answer to your question is 'no', it is not sustainable. We need to work outside of what is, I dare say, a silo mentality. I said at the beginning that we cannot work on the basis of each individual body or organisation trying to work in isolation. A key to it is to ensure that the various departments in each organisation work together and benefit from a shared approach to planning that recognises the impact on the environment and the economics of the area, and the impact that it could have on the social side.

[243] **Mick Antoniw:** Further to that, would you say that the plans that you are required to develop and the objectives that are set for you by the Welsh Government and so on properly recognise the major difficulties in achieving that? I think that where I am heading in all this is the point that, quite frankly, if you can only afford to do so much, no matter how well you use the resources available, you must have a strategy that recognises that, to some extent, you are managing what almost amounts to a withdrawal from certain areas, and it is about being realistic. Do you think that the strategies at the moment are realistic?

[244] **Mr Rookes:** The guidance that is available in the national strategy—the overarching objectives—and the local strategies that are currently being developed by local authorities in respect of flood and coastal erosion risk management do have the principles of looking after the environment and the health and welfare of communities. There is no way at the moment that we can afford to build everything high enough, wide enough and long enough to defend every single community from flooding. The planning needs to take account of that fact.

[245] One of the overarching objectives is to make people and communities aware that they are at risk—so that they are risk aware and flood aware. In that respect, action may be taken, but such action may need to be withdrawal, if that is the most beneficial route to take, economically, socially and environmentally. By engaging with the communities, however, you are working with them, so it will not come as a shock when they hear, 'Day 1, we are going to move you; day 2, you're gone'.

[246] **Mick Antoniw:** It begs the question of whether we are creating false expectations in communities about what is achievable and sustainable.

[247] **Mr Rookes:** Going into them initially may raise expectations, yes. However, continued communication with those groups will find the best resolution, and I use that term from the point of view that, at the moment, there may be a perception or culture among the public and local authorities that local authorities have all the answers. Unfortunately, they do not, and there needs to be a culture of communicating with the communities, so that if we know that there is a problem, we want to work with them as best we can to get the most effective and efficient resolution to their problem.

11.30 a.m.

[248] People living in the at-risk areas have their own perception of what is happening and what may happen, and, on that basis, we want to have that input. We want to tell them what is available and what we may or may not be able to do, and we want to share our resources; the Environment Agency previously mentioned that those resources can come from the community, from the local authority and from the Welsh Government. We must all work together to manage the expectations and to recognise that people have a view—they may have lived in those areas for generations and that must be respected—but we need to ensure that their expectations are managed. If that means withdrawal, then that is the direction that we must unfortunately take with the funding that is available.

[249] **William Powell:** There is one further question on that before moving on to Russell George. In your paper, you and your colleagues emphasise the importance of European programme funds being available for this area of work. On 8 May, when local government was fairly busy settling down after the recent elections, the Deputy Minister for Agriculture, Food, Fisheries and European Programmes announced that, going forward, there would be a presumption against harnessing European funds for climate change mitigation measures. Have you had the opportunity as a body to consider the implications of that and to respond, or would you encourage us to send any messages up the track in terms of that issue?

[250] **Mr Rookes:** To be honest, I have not had the opportunity to work with my colleagues on European funding, so I am probably not in a position to answer that question.

[251] **William Powell:** Perhaps you could take that back to your colleagues in order for them to provide us with an answer.

[252] **Russell George:** Thank you for coming to the committee. You spoke earlier about funding and, in your evidence paper, you state that local authorities have not always been clear on how Welsh Government funding works. Could you expand on that?

[253] **Mr Rookes:** As I said, a certain amount of funding gets allocated to the Environment Agency and other funding is then allocated to local authorities for bidding for their projects. From the Environment Agency perspective, I think that Graham mentioned before that we may need to jump through many hoops to get particular projects ready to go, but the match-funding may come from Europe in such a way that those particular projects have to be shelved. On the other hand, you may have underspends from other departments and projects must almost then need to be in the starting blocks ready to go given the timescales. When money becomes available, there may be only two or three months in which to spend that money, so the projects need to be primed from the moment that they get on the list to be able to go forward. So, there are then many questions to be asked, such as ‘Do we go or not?’ and ‘Is the funding going to be available?’, and the answer sometimes will be ‘Yes, go’. From that point of view, it makes it difficult for local authorities to, first, budget and, secondly, to plan and evolve projects.

[254] **Russell George:** What is your suggestion so that that can be resolved?

[255] **Mr Rookes:** That might help in terms of the route that we were talking about with the single investment programme, in that there will be standard criteria for EA, local authority and combined projects, which will create a list, and we will all agree that that is the priority order in which those projects will be approached, so there will be consistency with the at-risk register. In many instances, the local authorities may not be following something along the lines of an at-risk register on the same sort of basis as the Environment Agency.

[256] **Russell George:** How balanced is the funding between inland protection projects and coastal protection projects?

[257] **Mr Rookes:** A lot of the money that comes from Europe tends to be for coastal protection as opposed to inland protection. I cannot give an honest estimate of the percentages, but I can speak on the basis that a greater proportion of the funding allocated by the Welsh Government to the Environment Agency is for use on its projects, which in many instances are either for the main rivers or coastal areas, while the local authorities will more often be working on inland projects.

[258] **Russell George:** So, are you agreeing with other evidence that we have received that EU spending rules place additional restrictions or constraints?

[259] **Mr Rookes:** Yes, I am.

[260] **William Powell:** I want to ask about human resources and the allocation that is brought forward by local authorities. The burden naturally falls on those local authorities that are exposed to danger from coastal erosion and flooding issues, but is there a case, at an all-Wales level, for top-slicing to a degree, to share the burden and bring a bit more to the table regarding the overall Welsh economy and sharing those responsibilities? Would there be any merit in that approach, given the impact on more inland areas, such as Pontypridd, Powys and others?

[261] **Mr Rookes:** It may evolve through the single investment programme, by focusing all flood risk. The definition of flooding from the local strategy perspective includes surface water, ordinary water courses and groundwater, while the Environment Agency's perspective covers main rivers and the coast, so, in that regard, you have two separate approaches. However, a single investment programme means people moving together to look at flooding in its broadest contexts, in the same way, I suppose, as is indicated by the national strategy, in that it is a national strategy for flood and coastal erosion risk management. The national strategy is there, and the single investment programme will, hopefully, contribute towards that direction.

[262] To pick up the point about skills, there is a shortage of skills and capacity throughout Wales and throughout local authorities. We are working closely with the Environment Agency and with local authorities to share best practice and expertise. As I think Graham mentioned, there are capacity-building workshops specifically co-ordinated and run by the Environment Agency that are helping to build up knowledge, understanding and capacity in local authorities.

[263] Unfortunately, we come down again to the funding element. People are leaving and there is not necessarily a succession programme. On that basis, information, expertise and knowledge are possibly being lost through retirement and natural wastage, as opposed to there being that succession programme that will cling on to and share the information that has been gained through several years of experience. I wish that we could have a USB stick that we could plug in the side of the person who is about to leave to download all that, and then plug it into someone else, but we are not in that situation.

[264] **William Powell:** That makes it all the more critical that the message that we heard earlier from the Wales Coastal Monitoring Centre about a smooth transition to the natural resources body happens in practice.

[265] **David Rees:** In its survey and annual report last year, the WCMC highlighted that only three marine local authorities have someone of more than 1.0 full-time equivalent looking at this aspect. In fact, I looked at the report for my own authority, and it was quite

fractional, to be honest. Has that improved? Is the need to develop local strategies forcing local authorities to face up to this aspect, and to develop and input the resources? The fact that somebody leaves is poor planning, to be honest. It is a poor approach to it. Therefore, is the national strategy and the requirement to produce local strategies as a result of it forcing local authorities to take this issue more seriously now than they have in the past?

[266] **Mr Rookes:** The local and national strategies are probably raising the profile. The recent flooding incidents and effects that we have all seen have raised the profile. It is an area that local authorities certainly need to address and recognise that they need to address. Perhaps the focus is on the recent floods and on the national and local strategy guidance that they are following. Developing the local strategies highlights the particular areas where skills and capacity are low, which prompts local authorities to try to address that, whether within the local authority, on a regional basis or even perhaps on an all-Wales basis. There are certain skills that may not be needed 100% of the time and which could be shared by having a resource at a regional or national level.

[267] **David Rees:** Could you supply some information to us from the WLGA on which authorities are doing what, and whether they are forming collaborations or going it alone? It would be helpful to know in which direction individual local authorities are going so that we can focus on certain areas.

[268] **Mr Rookes:** I can give you a broad illustration. When the Flood and Water Management Act 2010 came in, the flood risk regulations under it required the development of, in the first instance, preliminary flood risk assessments. We worked closely with the Environment Agency and three networks were established: one for the six counties in the north, one for the six in the south-west, and another for the 10 in the south-east. Those three regions—the north, the south-west and the south-east—were based loosely on the Environment Agency's three regions in Wales. Within those groups, there are small working groups or task and finish groups that meet on a regular basis to share best practice and understanding of the broader issues, the strategic issues, as well as to discuss the delivery of the specifics in the preliminary flood risk assessments or, as is now happening, to work towards a local strategy.

[269] There is collaboration in that respect, which is identifying the key skills that people across the regions have. In my role as flood and water officer, I ensure that there is cross-fertilisation between those three groups, too. There is a sharing of resource, as there is recognition that there is a skills and capacity deficit and this is one way of trying to address it. It does not solve every single problem, but it highlights some areas that we have to address through the local strategies. The local strategies require you to talk with other risk management authorities, which are your neighbouring authorities. On that basis, as well as the general strategy for how you will manage the flood risk, it is the resources and so on behind that that will help you to manage that flood risk.

11.45 a.m.

[270] **David Rees:** I assume, therefore, that we are talking about senior officer involvement in these plans and strategies.

[271] **Mr Rookes:** Yes. Each of the projects to deliver the local strategies has a senior management representative either as its chair or sponsor. It is a local strategy on behalf of the whole local authority, not just of the drainage or highways departments. So, yes, there is senior officer input to those.

[272] **Keith Davies:** Drwy lwc, nid yw **Keith Davies:** Luckily, David Rees has not David Rees wedi gofyn fy nghwestiwn i, ond asked my question, but it is along the same

mae ar yr un trywydd. Ddoe yn y Siambr, clywsom gan y Gweinidog Addysg a Sgiliau y byddai gwasanaethau ymgynghorol ar y cyd yn gweithio yn awdurdodau addysg Cymru o fis Medi. Y rheswm am hwnnw yw diffyg arbenigedd. Rydym wedi clywed y bore yma bod diffyg arbenigedd yn yr awdurdodau ar y pwnc hwn, ac efallai nad yw'r awdurdodau yn credu bod hwn mor bwysig â phethau eraill. Fodd bynnag, os oes modd mynd i'r afael â'r diffyg arbenigedd yn y maes addysg drwy benodi ar y cyd, pam na allwch wneud hynny yn y maes hwn? Pam na all yr awdurdodau weithio gyda'i gilydd a phenodi arbenigwyr ar y cyd? A yw hynny'n digwydd? Rydym wedi clywed y bore yma, o blith yr awdurdodau arfordirol, dim ond tri o'r 15 sydd â mwy nag un person yn gweithio yn y maes. Felly, byddwn yn meddwl ei fod yn fwy naturiol gwneud yr hyn a wnaed yn y byd addysg, sef penodi arbenigwyr ar y cyd.

lines as his. In the Chamber yesterday, we heard from the Minister for Education and Skills that joint consultation services would be working in education authorities in Wales from September. The reason for that is a lack of expertise. We have heard this morning that there is a lack of expertise within authorities on this issue and perhaps authorities do not believe that this is as important as other things. However, if you are able to address the lack of expertise in the field of education, by making joint appointments, why can you not do so in this area? Why can authorities not work in partnership and appoint experts jointly? Does that happen? We have been told this morning that, of the coastal authorities, only three out of 15 have more than one person working on this subject. So, I would have thought that it would be more natural to do what has been done in education, namely appointing experts jointly.

[273] **Mr Rookes:** One issue with that is that education issues and problems have evolved over time. On flood and coastal erosion risk management, it is really the floods in 2007 that prompted the Pitt review, which, in turn, prompted the development of the Flood and Water Management Act 2010. Going back even further, in Europe, the development of the flood directive was only in 2007, which became the Flood Risk Regulations 2009 in the UK. So, only recently has flooding and coastal erosion risk management come to the fore, prompting the Westminster Government and the Welsh Government to establish the national strategy for flood and coastal erosion risk management. Given the requirements of the national strategy and the local strategy, only now are those issues being raised and only now are those skills shortages being identified.

[274] On the example that you quoted in education, there are probably lessons to be learned in the approach that local authorities take to addressing the skills and capacity shortage. That may be about bringing groups of authorities together based on regions, to work together to purchase expertise on flood and risk issues. If so, let us get out of the silo and learn those lessons. There is no reason why we cannot follow that particular route. The Simpson review suggested that local authorities collaborate. However, in some respects, because flooding is in its infancy—well, it is not in its infancy because it has been happening for years—or because the recognition of flooding is only in its infancy, perhaps as a result of the Simpson review, this is a prime opportunity to be able to implement its recommendations with regard to flooding, because we are not trying to break down any arrangements and we are not going to a dedicated officer in an authority to say, 'Sorry, your role is going to change'; we are in a position to be able to go straight ahead and evolve into a collaborative approach.

[275] **William Powell:** How feasible is the suggestion in the national strategy that local authorities may need to factor in, in their future budgeting, additional expenditure to make possible effective risk management in this area?

[276] **Mr Rookes:** Coming back to the point that flooding and flood-risk management are in their infancy, historically, social services and education have had the bulk of funding. However, unfortunately, we have now seen the effects of coastal erosion, flooding and surface water flooding in areas that previously did not have flooding and that were not anticipating flooding. Maybe it has raised the profile of the idea that there are communities at

risk and, if you take the last couple of months, everybody is potentially at risk of flooding. Once we raise the profile of that, people might realise that they do need to put something aside just in case, and that they cannot assume that because they are not in a designated indicative flood-risk area, or an area that is susceptible to coastal erosion, it will not happen, and that they need to be prepared. That is the fourth overarching objective: ensuring that investment is appropriate and effective, and if that is having the investment available to meet the needs, so be it.

[277] **William Powell:** To secure the buy in, and political and popular support for that, how critical is it that we raise the game in terms of communication and strategies to educate the public as to these dangers?

[278] **Mr Rookes:** At the moment, you have the Environment Agency for river flooding, and there is the flood awareness Wales programme that is working on identifying those areas and communities. The engagement with those communities is ensuring that they recognise that there is a risk, and that is probably the key to it. They need to recognise that they cannot rely totally upon local authorities to deliver, or to get them out of the risk, and that they have some contribution to make.

[279] It is not the ideal situation because of the economic and social difficulties that we have in areas of Wales. For example, in Cockermouth in Cumbria, you may recall that we had some severe flooding there. They took a referendum of the local population. There was something like a 45% turnout for the referendum, and it came forward with a three-to-one agreement to increase, or have a levy put on, their council charge, to be focused on flood risk and flood-risk management. That is easy to say in an area where the population may be slightly more affluent than in some areas of Wales. It almost leads to a two-tier approach: if you have money and can afford to put money in, you will get better flood-risk management than others. So, it is about raising the profile, engaging with communities, and trying to work with the communities and with whatever other bodies there may be, whether it be Dŵr Cymru, the Environment Agency, national Government or whomever. We will work together as local government with those communities to ensure that we can deliver the best flood-risk management.

[280] **William Powell:** Just to be clear, was that a town council or a principal local authority that was involved in the referendum that you referred to?

[281] **Mr Rookes:** In Cockermouth, I think that it was a town council.

[282] **William Powell:** So, that was ahead of precepting, and to make some sort of contribution. That is interesting. We are probably drawing to a close, and we are grateful to you for having covered such a wide range of questions. Is there one action that you would urge the Welsh Government to take in making it possible to effectively implement the requirements of the national strategy and the shoreline management plans? If you had a magic wand or a message, what would it be?

[283] **Mr Rookes:** The key thing, which I alluded to earlier, is that we can work closely with different organisations and bodies, such as local government working with the Welsh Government. Flooding can also be addressed by not seeing it in isolation and by not thinking that, by putting funding into only that, you are solving the flooding problem. If I mention the silo mentality, and broaden that out, there is money available for regeneration, perhaps, that could also have a flood-risk management approach. Could not some of the funding that is available for education be earmarked for flood awareness and flood education? You would then be saying that money could be allocated across the board. We need almost a holistic approach to say that we as communities and as a country are at risk of flooding, and we need to work together with every means possible to manage that risk.

[284] **William Powell:** Thank you. That draws together the strands very nicely. Thank you again for your contributions this morning. We will be back in touch with a couple of points for you to share with the wider team ahead of the meeting on 19 July. Thank you and all the very best.

[285] **Mr Rookes:** Thank you.

[286] **William Powell:** We will reconvene at 12.45 p.m.

*Gohiriwyd y cyfarfod rhwng 11.58 a.m. a 12.45 p.m.
The meeting adjourned between 11.58 a.m. and 12.45 p.m.*

[287] **William Powell:** Helo, a chroeso **William Powell:** Hello and a warm welcome to you.

[288] Welcome to you all today. Thank you very much for attending this meeting of the Environment and Sustainability Committee. I welcome Marcus Philips, Kath Winnard, Kevin Owen and Greg Guthrie, who will form the panel this afternoon. I will ask you to introduce yourselves, just briefly, for the record. Immediately afterwards, perhaps you could explain to the committee your particular distinct roles in the development of the shoreline management plans for Wales. We will start with you, Kath.

[289] **Mrs Winnard:** I am Kath Winnard. I am a marine environmental scientist with Atkins. My role in the development of the Severn estuary shoreline management plan was as deputy project manager. In the development of the policies, I was involved with stakeholder engagement and liaison with environmental organisations.

[290] **Mr Owen:** I am Kevin Owen. I work with Kath at Atkins. I am a chartered engineer. I am personally not involved in the shoreline management plans, but I am involved in the wider coastal protection and flood-risk management aspects of both Wales and the wider UK. I did lead and project manage one of the catchment flood management plans; therefore, from the river side of things, there are similar aspects, and I am well aware of the SMP process, at least.

[291] **Mr Philips:** I am Marcus Philips. I am a coastal engineer. I was the project manager for Lavernock point to St Ann's head SMP2, which is the south Wales SMP. Therefore, I was involved in all aspects of the development of it.

[292] **Mr Guthrie:** I am Greg Guthrie from Royal HaskoningDHV. I have led the development of the west of Wales SMP. I have also been on the national quality review group for the north-west SMP and the south Wales SMP. I also developed SMP1 for the Ceredigion coastline. So, I have been around a while.

[293] **William Powell:** Thank you very much, and thank you for joining our proceedings this afternoon.

[294] To what extent are the identified increased risks of coastal erosion and tidal flooding associated with climate change recognised and well understood at the different tiers of government, in your experience? I do not know who would like to lead on that, because you all have relevant experience.

[295] **Mr Guthrie:** It is not just with climate change that there are present risks. The coast is very dynamic; it is changing and we have to recognise that. On the west of Wales SMP we looked at the Department for Environment, Food and Rural Affairs' recommendation for sea

level rise, which effectively said 1m over the next 100 years. However, we also looked at the 2m scenario—the ‘H++’ scenario—and that gave a more continuous perspective of the risk. I feel that the coast erosion risk tends to be underestimated, particularly in terms of the very close association between communities and the way in which the coast performs. Therefore, it is that interaction that I think has really come to the fore in SMP2.

[296] **Mr Philips:** During the development of our SMP we produced a series of maps showing the risk of coast erosion along each of the frontages with a range of uncertainty, because I think that that is the critical element. There are a number of factors that affect the rates of coast erosion, and there are quite significant uncertainties. Also, in some places, there are not very good records of what the historic rates of coast erosion have been—not that you can just simply extrapolate them through. However, we did present that information to the local authorities and we discussed it. Subsequently, in parallel with the development of the SMP, Halcrow developed the national coast erosion risk management database, which is now available to the public on the EA website. It is also available to planners to provide them with more detail so that it can inform future developments.

[297] **William Powell:** Perhaps we could also hear the Atkins perspective.

[298] **Mrs Winnard:** Within the Severn estuary, coast erosion is not a huge issue. It is sea level rise, flooding and storm surges that are the major issues within the Severn estuary.

[299] For that particular SMP, it was not a great element that you had to try to communicate. Where there were risks of flooding or sea level rise, they rapidly overtook any amount of erosion. Just to build on what Greg and Marcus have said, if erosion rates are expressed over a 100-year period, there would apparently be a very small change every year. However, erosion does not work like that. You will have nothing, and then, all of a sudden, you will have a large amount. Communicating that as one figure that is a rate may not be the most appropriate way, in that it might not necessarily be the best way of doing it. An erosion rate over the first 20 years may be very small, but you could have an event that could overtake that.

[300] **Mr Guthrie:** It is also the form of the coast that must be considered, in that erosion rates tend to focus very much, if you like, on the cross-shore profile. Actually, it is also a matter of how the whole area of coast is moving. Therefore, you have a headland that controls the erosion, and you have movements and accretion. Even further out, the way in which it interacts with the banks is a matter for consideration. It is an area problem, not an individual section problem, if you like.

[301] **Russell George:** Good afternoon. Thank you, all, for coming here today. I wish to ask a question on communication. The National Assembly for Wales’s Public Account Committee’s concluded in 2010 that:

[302] ‘communication needs to be improved and the government must inject its approach to addressing flooding risks with a sense of urgency.’

[303] In your experience, what is being done to communicate objectives and risks associated with coastal protection in Wales?

[304] **Mr Guthrie:** Shall I start again, from this end?

[305] **William Powell:** Please do.

[306] **Mr Guthrie:** First, Wales starts with a very strong team. I have been working in the area for 20 years alongside local authority engineers who very often have been in place over

that 20-year period. They are communicating, on a daily basis, with the communities that they represent. When I am out with them, we talk with individual people and they know the actual issues. They also talk with councillors. Therefore, there is a lot of background communication taking place. There is the problem, when you come to the more strategic view, that you can get a community fired up in discussing things about the future, but then you wonder, apart from the discussion in the pub in the evening, whether it then drifts back into the background. One of the key issues about communication is that you can get people to understand, but it is a matter of maintaining the momentum and the mechanisms by which there is a continual discussion at the community level.

[307] **William Powell:** That is an interesting point. Out of that, it occurs to me that one or two of our previous witnesses have referred to the possibility of the loss of knowledge capital as individual long-serving staff members move on. From your personal point of view, do you think that that is a danger, or is there evidence of local authorities actually having some regard to that, making sure that there is a mix within the teams that are approaching this?

[308] **Mr Guthrie:** I think that there is a degree of regard, but there is also a degree of accident that has been fortuitous: once you are captured by the coast, it becomes your life. Therefore, there is continuity. Where you see people or structures changing, there can be a difficulty when you bring new people in. From our perspective, as consultants, we are often involved over a longer time period and we have to go through a process of re-education.

[309] **William Powell:** I wonder whether other colleagues would like to reflect on that in the light of Russell's earlier question.

[310] **Mrs Winnard:** Succession planning, in terms of local authority and Welsh Government staff moving on, is maybe not as good as it could be, and there is a general lack of resource in terms of local authority coastal engineers. The recent Wales Coastal Monitoring Centre report—its first annual report, the year before last, I think—indicated that, in most coastal local authorities, there is fewer than one full-time equivalent.

[311] However, in terms of communication, it is much easier to engage with people when they know that there is an issue or an immediate, imminent risk—something that has to be addressed. It is much harder to get people to engage with something if you are talking about a very high-level strategy like the shoreline management plan, which covers large areas of coast over 100 years. It is difficult for people to engage at a level where they are talking about what might happen in 20, 50 or 100 years' time when they may or may not live there, and their children may or may not live there. It is also a very emotive issue for landowners, particularly in agricultural or rural areas, where their families have lived for hundreds and hundreds of years.

[312] Different methods of engagement need to be used for the different types of communication. In general, I am talking about communicating with the public, but then you also have the communication between the coastal engineers. They are very genned up and technically knowledgeable about coastal planning, risk management and the engineering side of things, but if you are trying to reduce future risks or plan for dealing with future risk, you have to engage with planners who are not necessarily so technically minded or knowledgeable in terms of what the future risks might be. Their planning horizons are different. We all talk about 50 or 100 years, no problem; those are the sorts of timescales that you have to talk about in terms of climate change and coastal erosion, but local development plans are all done on a 15-year basis. There is a mismatch between those time horizons, and you as politicians have a different time horizon as well, which is five years.

[313] **Russell George:** Did you say that there was a lack of communication or an issue between local authorities and the Welsh Government? Did I pick that up, or did I

misunderstand you?

[314] **Mrs Winnard:** It is more that communication between planners and coastal engineers seems to be dependent on the personalities. They speak a different language; planners speak planning, and coastal engineers speak coastal engineering. If you have a planner-friendly coastal engineer, then they have a great relationship and are much better at sharing that knowledge and understanding.

[315] **Russell George:** Are they not all friendly?

[316] **Mrs Winnard:** They need some help to reach a common language to help them communicate with each other and then with the public.

[317] **Mr Philips:** Our SMP planning group was useful; it involved engineering representatives and planning representatives, and they could talk through the issues in a forum similar to this.

[318] **William Powell:** And that had real benefits.

[319] **Mr Philips:** Definitely, and hopefully they will continue with the coastal group. Just to reflect the comments about the fact that it is quite difficult to engage the public on shoreline management plans, we advertise widely in the papers and in a number of other locations and the numbers of people who come through are very limited, whereas on a more specific scheme—the Penclawdd tidal alleviation scheme—we advertised locally and got a massive response because, as Kath mentioned, it is closer, more imminent and more specific. It is more relevant to people, so they can engage a lot more closely, whereas a high-level strategy that extends over 100 years—

[320] **William Powell:** That would seem remote from them.

[321] **Mr Philips:** Absolutely, and the response in many cases was, ‘Beyond 20 years, it is not my problem’. That was an interesting response that we did not quite expect.

1.00 p.m.

[322] **Mr Guthrie:** There are different levels of communication. In our SMP and, I am sure, in other SMPs, there are some big national issues coming up that will need to be dealt with. There is the future of the Cambrian railway running through the Dyfi estuary and numerous areas right up to Pwllheli. That is going to need national input, and I do not think that it is part of the national focus, and neither are issues such as the one at Fairbourne, where our SMP states that, depending on the rise in sea level, over the next 35 to 60 years—because it depends on water level and not time—there are 400 properties and a community that it will not be sustainable to defend. How does that feed in? That is a major social issue that I think needs to be addressed at the national level, but there are no mechanisms at the moment for dealing with it at any level.

[323] **Vaughan Gething:** This comes back to the discussion we had this morning on the different attitudes and on potential ways of going about it. There was the point about holding the line, doing nothing or going for managed moves, and what a managed move means for the coastline. You have just given an example, and the Halcrow paper talks about Amroth and how much longer its sea defence will survive in its current form and what will happen afterwards. There are financial costs to doing something, and there is a financial and a social cost to those coastal communities in movement.

[324] I am particularly interested in the example that you gave of the railway. Having gone

to university in Aberystwyth, I have used many railways in Wales and have seen a lot of the country through train carriage windows. However, I am interested in your perspective on where we are with the national strategy that has been produced, how that does and does not link in to the choices that we have to make—we will do a piece of work here that we hope will add focus and attention on this area with regard to the real choices for policy—from a policy perspective, and what that means in financial terms and the social impact, if we are talking about moving communities, be they small, medium or large.

[325] **Mr Guthrie:** One of the problems that SMPs throughout England and Wales have had is that our initial task was risk management. The management of the shoreline has a fundamental impact on society and communities. Our starting point in west Wales was the Wales spatial plan, because it sets out the larger vision for hubs of communities, transport routes and dependencies between areas. We found that a very good steer for what we as engineers were trying to manage. Engineers can do anything, and I am sure that you are aware of that fact.

[326] **Vaughan Gething:** Anything?

[327] **Mr Guthrie:** However, it is not we who should be defining what we do. You need spatial planning to give us a steer, for us to tell you what is possible and what you might be daft to do.

[328] **Vaughan Gething:** Obviously, at present, we know that budgets are reducing in pretty much every area of capital spending, including coastal flood defence. Taking the example of Amroth in the Halcrow paper, if we are saying that we want that to continue, assuming that we do not ignore the problem on the grounds that it is 20 years away, what sort of expenditure are we talking about in that one scheme? You can take the figure for that and multiply it, because there will be a number of communities. In each of the evidence papers, there are hints at a variety of coastal problems. In the Halcrow paper, you talk about 12,000 residential properties that are potentially at risk at present, and there is a multiplier effect, depending on how much the sea level rises. So, I am interested in all of those capital schemes. There is no point pretending that we will suddenly have a big rush of capital funding in the next five years, because that will not happen. So, what does that mean for the realistic choices that you would say we have to make?

[329] **Mr Philips:** I think that this is where DEFRA Pathfinder started the process. There have been schemes on the east coast where potential has been found for people to redevelop their properties further inshore from the coast, where this issue is imminent, because properties are falling into the sea at the moment. You are right; there are costs involved and there are difficult decisions to be made. How you tally the coastal engineering and the political and social aspects is a difficult decision. There are some options out there, but I do not think that we are there yet in any shape or form. Some kind of adaption plan needs to be in place from year 0, as you say, so that every action taken in relation to each of those sites is in keeping with the long-term policy, so that you are not continuing to patch up the defences when you know that, ultimately, they will be allowed to fail. However, it is difficult. It is a difficult decision to sell to the local community and to the people affected. At the moment, they are not entitled to any compensation for the loss of their property.

[330] **Mrs Winnard:** Every local community is going to want to continue to remain where it is.

[331] **Vaughan Gething:** That would be the starting point. They will all want to stay. We all understand that.

[332] **Mrs Winnard:** Every politician, local councillor, Assembly Member, Member of

Parliament or Member of the European Parliament is going to want to support their constituencies. So, hard choices have to be made. There is not enough money to protect all of those places. Even if there were, the engineering solutions for some of them might lead to them being places in which you would not want to live anyway. In some cases, communication has started with the community. For example, Borth, on the west coast, which is the SMP area that Greg has worked on, has just had some works completed on a coastal defence scheme. However, the local people understand that Borth is not going to be there forever and that this scheme is the last scheme that will go ahead and it is to give them time to move or redesign their community. There needs to be engagement with the community on how people would want to move, to where they would move and where you redevelop. You cannot just say, 'Okay, we'll build a whole load of new houses up on the cliff out of the way' and just let the others wash away; you have to demolish the existing houses in a safe way. Electricity and water and all of those services have to be removed safely in time to allow the shore to change as well. An awful lot of planning has to go on. That has started in terms of the discussions that the local authority has had with the local community about the future, but it is about taking those next steps. It is those next steps, where you really start to plan, that make it all real.

[333] **William Powell:** There is also the difficulty arising from the impact of the sterilisation of property on property values and people's ability to make those moves.

[334] **Mrs Winnard:** As soon as you say, 'We're not defending this place' or 'We're going to move this place back', what happens to the value of the properties? You do not have people coming in; people do not want to move there, because they know that the community is not going to stay there.

[335] **Mr Guthrie:** There is a popular misconception about SMPs, which we have had to correct as we have done the consultation, that we are talking about time steps. Yes, we look at epoch 1, 2 and 3, but what we are trying to do with them is to get us from where we are to a position in 100 years' time where we are in a better position to manage the next 100 years. This is a continuous process, and not a case of 'Get your SMP, put it to one side and review it in 10 years' time'. The SMPs should form the basis of a continuous process, in the same way as planning is trying to go. I was talking to a planner earlier in the week, who said 'I've done a number of plans, and then we have been told that we have a different set of guidance and that we now have to do it this way'. However, the underlying thought process has not changed. It is about this evolution of thought and not about revising and changing everything.

[336] **Mr Philips:** I have been involved in a scheme recently and it was quite a difficult one because it was a long frontage, there was a scattered population and a very limited cost-benefit ratio. People were not happy, but they understand that funds are reducing. What was useful in that case, because it was in England, was that we could present the partnership scoring system to show them the guidelines that the Government had laid out for funding schemes, and tell them that, if they came up with some contributions, then we could potentially make the scheme viable. They were unlikely to be able to raise that amount of capital, but it gave them confidence about where they stood in the national scheme of things. They understand that the Government wants to reduce the risk of flooding to properties, people and infrastructure and that was a useful framework for explaining it. Having said that, the scoring system is slightly complicated and is a little bit grey to explain when you get down to the detail, but the underlying concept was a really important and useful tool that we used during the discussions.

[337] **William Powell:** A couple of Members have indicated that they want to come in, but I want to raise one brief point linked to what Marcus has just said. There are a number of cases where the English experience is important. Given the forthcoming uncoupling of the Environment Agency Wales from its English counterpart, would you make a recommendation

for minimising the impact of the loss of experience of the English arm to ensure that things can move forward positively?

[338] **Mr Philips:** I would be surprised if there were a complete separation between the two organisations. Wales has always made its own decisions and led its own way, but the English experience, I am sure, will continue to be of benefit and the research and development done will obviously be taken into account. So, I would not have thought that that would be significant. Something that struck me, when we were starting out on this SMP, was the social concern that came through in the Welsh Government documents, whereas in England, it tended to be more about capital.

[339] **William Powell:** That is interesting.

[340] **Julie James:** That leads me nicely to my question. All of your papers mention moving away from a focus on coastal or flooding defence to looking at the wider social context and the impact on tourism and infrastructure and so on. In the Royal Haskoning paper, for example, I was struck by the example of Aberystwyth and what thought processes might go into wanting to continue to defend a town like Aberystwyth. I am obliged to say that Swansea, which I represent, was included in that list. My colleague earlier suggested that we might need to evacuate it at some point; I would like a timescale for that—not in the next fortnight, I do not think. [*Laughter.*]

[341] **Mr Philips:** I was born and raised in Swansea and it has an interesting frontage because there are few risk assets along it. From a normal coastal protection standpoint, there is no benefit to doing anything there, but obviously there is tourism and social—

[342] **Julie James:** That is the point that I am trying to make—that it is not just about coastal defence, but about amenity. I think that Kath said earlier that if the engineering scale of the coastal defence has to be so great that you would not want to live there anyway, it takes the point away. To turn that on its head a little, are we not missing a trick in terms of getting in other funding streams in order to make the coastal defences tourism magnets?

1.15 p.m.

[343] **Mr Guthrie:** More than that, we have seen various schemes in England where coastal protection risk management has been the trigger for making enhancements, for example, in Blackpool and Weston-super-Mare. Those are areas that have had quite a strong argument for risk management. In other at-risk areas that we are now looking at under the new funding arrangements—towns such as Clacton—the amount of national funding might only be about 30% of what is needed, which is about £60 million over the next 50 years. To do a scheme, we have to stop thinking about risk management. It was good to move from defence management to risk management, but we now need to start to look at an area and ask, ‘What is the vision for the area in terms of regeneration, tourism, amenity and social aspects?’ Then, we need to plan the area and look at how we bring in risk management within that far bigger picture. At the moment, we are looking at risk management and then trying to feed in amenity and other aspects. We have to turn it on its head and start planning, even at a local, community scale, what the vision for the area is and how we feed in the risk management elements. That will potentially open up other sources of funding. One of the alternative sources of funding will be the risk management pot, because the focus on risk management is no longer your driver.

[344] **Julie James:** I was struck by the examples given in the papers of Solva and Newgale in Pembrokeshire. Even a complete lay person like me can see that removing the pebble defences along Newgale would be a major problem. I am very keen on Newgale, and I would quite like it to stay there. It is obvious that it is not just about keeping your sea banks, but

ensuring that the very important tourism industry continues to function. It is a major employer in the area. I was struck by that as a good example of it not being about coastal protection alone.

[345] **Mrs Winnard:** Coastal protection is not just about building big engineering structures, although engineers might disagree with me.

[346] **Julie James:** Newgale is a pile of pebbles, to be fair.

[347] **Mrs Winnard:** Yes, and even at Borth, part of the new defence is about putting a whole load more beach on the beach. That is done in the Netherlands: their offshore sandbanks are fed so that the sandbanks then feed the beaches to keep them wide enough to provide protection. If you are talking about coastal tourist towns, people go there for the beach. If you build an enormous wall that causes the beach to erode or, when the tide comes in, for there to be no beach, people will not want to go there. Whether you have protected the town or not, it has lost its economy, because the driver is tourism. However, currently, it is difficult to access those pots of money for something that is seen as coastal protection or defence; people do not think that it should come out of their pot of money, whether it is sustaining the economy of a particular area or not.

[348] **Mr Philips:** That is right, because I worked on the first stage of the Blackpool central area scheme. At that time there was massive regeneration; people thought that it would become the Atlantic City of the north-west, so that was an easy win. However, in other strategies, I have had to talk to highways departments to ask whether they would look into replacing the highway, which had become part of the defence. You get blank looks. In other locations, you get all the key stakeholders around the table, tell them what you plan to do, but, when you ask whether anybody has any money, you get a horrible silence, because, as you say, they think it is only coastal defence and not their problem or for their budgets.

[349] **Julie James:** We have raised with the other people who have given us evidence today the issue of dealing with private coast owners, if that is the right expression. There are examples—I am sorry to use Swansea again, I just happen to know more about it than anywhere else—but, if you know Caswell bay, a hideous apartment block has been built where there were major problems with the defence. However, it was not to defend the building from the sea but to stop it from falling down onto the beach. The arguments around what pot of money the funding for that defence should have come from, whether it should be done on insurance from the landowner and so on, went on forever. I wonder whether that is factored into the shoreline management process, because it is a good example of a costly scheme—an unsightly scheme, depending on your point of view—to defend a particular property.

[350] **Mr Philips:** With regard to private frontages and where people will be liable for issues, there are certainly issues in other locations along the Gower. The biggest issue is the availability of public funding; that is the biggest uncertainty that we have found in the SMP.

[351] **Mr Guthrie:** One of the issues that we have found in Suffolk in relation to the policy was that a no-active-intervention clause in the policy covers a range of sins. You can have a no-active-intervention policy because you do not want anyone to muck around with a bit of coast, given the negative impacts. You may have a do-nothing policy because no-one has any interest, or you may have a do-nothing policy because there is no funding. You are, therefore, saying to the landowner that no-one is going to step in, but if they want to, they would not mess up anyone else. The difficulty with the SMPs is that they are big documents and you have to read them to understand the issues.

[352] **Julie James:** It is that ‘would not mess up anyone else’ issue that I was getting at. In

the particular case that I mentioned, for example, one of the issues was that the building that had been built had stopped the natural run-off. I am no engineer, but there was a big problem with the retaining wall because it was full of water and stuff underneath; it was a poor engineering solution in the first place. That leads me to ask about the link between the planning regimes that allow buildings of that sort and coastal planning, because it is not coastal defence; how does that link work?

[353] **Mr Philips:** I think that we are dealing with a legacy. In the cold light of day, there is no way that you would develop a block of flats in that sort of location in Caswell bay. However, the fact is that it is there. That is why we sought to involve the planners during the development of the SMP. There are complicated issues that need to be dealt with, but we are trying to prevent development—

[354] **Julie James:** I was not really talking about that specific case, but about whether you think that there is adequate interlinking between the SMPs and whatever other planning guidelines and the planning process, to prevent that from happening—

[355] **Mr Guthrie:** The situation is improving. Under the Coast Protection Act 1949, any development that may affect a bit of coastline should go through the coastal protection authority, which should comment on whether it is going to impact on anyone else. We have hit problems with the Suffolk and north-east England SMPs in trying to stop someone from doing something, where you do not want people to do something even if they could afford to do it. You have the powers under the Coast Protection Act 1949 and you have planning guidelines, but it is still a grey area, because people are raising the issue of human rights and matters like that.

[356] **Mr Owen:** You also have the issue that in the majority of Wales, with the exception of the Pembrokeshire coastline, the planning authority and the coastline management authority are the same—they are the local authorities. It is only in the national park area of Pembrokeshire that the situation is, possibly, different. In essence, the coastal authority has already been consulted as part of the planning application.

[357] **Julie James:** Sometimes, I think that that might be part of the problem.

[358] **Mr Owen:** It may well be. There is also a resource issue, possibly.

[359] **Mr Guthrie:** I believe that it emphasises that coastal management is very much at home with the local authorities, because they at least have the opportunity to combine planning and management.

[360] **William Powell:** The national park/local authority split manifests itself elsewhere in Wales with regard to public protection being vested in the local authority.

[361] **Mr Owen:** Even where the planning authority and the coastal authority are one and the same, the acknowledgement is needed that planning departments have discussed the situation with a coastal engineer, and have understood the implication. That is evident in the example given, and is probably apparent elsewhere around the country.

[362] **Mrs Winnard:** One of the aims of shoreline management plans is that they inform planning. Some of them do; I think that the first SMPs did not. They are not supposed to be documents for coastal engineers alone. They are supposed to be documents to help planners make decisions about LDPs. So, they are about plans, but they are also about individual applications.

[363] **Julie James:** The Government has already announced its intention to introduce a

planning Bill for Wales. It would be interesting to know whether you think that there are specific things that you would like to see strengthened if we were going down that route, in terms of the role of SMPs or other coastal planning documents, or whether you think that it is fine as it is.

[364] **Mrs Winnard:** It is not fine. [*Laughter.*] However, I am not sure that legislation is necessarily the answer. You cannot force people through legislation to communicate with each other and to understand each other. You can have duties and such like, but that does not necessarily improve the situation from where it is now. You need people who have an understanding of both sides to help them come together and understand each other better, so that planners understand why coastal engineers are saying, 'No, really, do not build there,' or 'Do not build houses there; build something else that is temporary and only has a lifetime of 20 years'. If someone wants to build a hospital or a university, the planning horizon is 15 to 20 years, but those things last hundreds of years, potentially; they are not thinking beyond their own horizons.

[365] **Keith Davies:** Mae Julie yn dwyn fy nghwestiynau. Yn ardal Porth Tywyn—rwy'n eithaf plwyfol—mae safle ffatri Grillo Zinc Oxide, lle mae datblygwyr eisiau creu ystâd o gannoedd o dai a siopau ac yn y blaen. Mae'r unig gwynion lleol wedi bod am lygredd, oherwydd beth oedd yn y ffatri o'r blaen, ond, wrth gwrs, yn yr ardal honno, mae llwybr arfordirol y mileniwm, ac rwy'n gwybod bod y llwybr wedi gorfod cael ei symud oherwydd effaith y môr. Wrth i'r cyngor sir edrych ar ganiatâd cynllunio, a oes raid iddo edrych ar erydu arfordirol, ynteu a all ddweud 'Wel, rydym eisiau datblygu fan hyn a dyna ni', gan fod yr unig gwynion wedi bod am lygredd, ac nid am effaith y môr?

Keith Davies: Julie is stealing my questions. In the Burry Port area—I am quite parochial—there is the Grillo Zinc Oxide factory site, where developers want to build an estate of hundreds of houses and shops and so on. The only local objections have been about pollution, because of what used to be on the site, but, of course, the millennium coastal path is in that area, and I know that the path had to be moved because of coastal erosion. As the county council looks at planning permissions, does it have to look at coastal erosion, or can it say 'Well, we want to develop this particular site and that is it', because the only complaints have been on the issue of pollution, and not on the impact of the sea?

[366] **Mr Guthrie:** That whole area of Burry Port is fascinating, with the nose coming round from Pembrey and the whole interaction. You look at the way in which the Burry inlet has developed over time, and the training bank down at Llanelli had an impact 10 km away at Broughton dunes, because it shifted the whole way in which the entrance channel to the Burry inlet worked. Any development work at Burry Port must understand the whole interaction of that area and the way the coast functions. Coastal processes and engineering is very simple. Getting a full understanding of it, which gives us our reason for being here, is another thing, but you can explain processes to planners, and when you do, they suddenly say 'Oh, yes.' These are the key determining factors. Yes, planning must take account of the coastal processes, accretion and the whole way in which the coast functions.

1.30 p.m.

[367] **Keith Davies:** We have a monthly flood forum in Llanelli because of these issues, and coastal erosion has not arisen once in the debates that we have had.

[368] **Mr Owen:** Again, I think this comes down to communication. Going back to the earlier question, it is about the level and what is important. In Llanelli, going from Sandy Water park heading west, we know about its historical industrial workings. To use the example of Llanelli, everyone knows about it. River flood risk is quite an issue in Llanelli at the moment because of the Stradey park development and the knowledge in the town and the

area is heightened because everyone understands that it is at risk of flooding.

[369] **Keith Davies:** Perhaps I should declare that I was the county councillor for the Stradey park when planning permission was given, and I fought it.

[370] **Mr Owen:** On that point, the tidal flood risk in Stradey park is very much ignored. Again, that comes back to coastal erosion risk. As you said, the millennium walk has been redone at a number of points along there—it has been set back. Consultation and discussion probably do happen, but public awareness obviously drives local influences, as it naturally does. Are the shoreline management plans statutory documents?

[371] **Mr Guthrie:** No.

[372] **Mr Owen:** That is another issue.

[373] **Mr Guthrie:** If the SMPs were statutory documents, they would set up policy that was potentially in conflict with the statutory planning process, and that was why, under the guidance, it was decided that they should not be statutory documents but advisory documents that are taken into account.

[374] **Mrs Winnard:** However, you have technical advice notes 14 and 15. TAN 14 may be extremely old, but it says that you should not build anything on the coast unless there is a good reason for putting it on the coast. There is not necessarily a good reason for building a house on the coast, other than having a nice sea view, but you cannot really build a port or a marina inland. They have to be on the coast.

[375] **Mr Guthrie:** At the moment, we are behind the game line. We are getting applications that quite clearly show that people have not read and understood the issues. Would it not be nice if a planning application came in that said, 'We've got an idea for a development that will feed into your ideas for managing this section of the coast in a more sustainable way'? That is the ideal position that we need to be getting to.

[376] **Mrs Winnard:** We have all mentioned examples and, as I think Marcus said, we are dealing with a legacy situation here. With new applications coming forward for new developments, you do not want to create a new legacy, a bad legacy, like the one that we are dealing with now. It is important that it is not a case of just saying 'No', but 'No' to that particular thing that might stay there for an incredibly long time and then be at risk. We would say 'Yes' to something else. It is about being appropriate. It is always difficult when there is a decision based on economic regeneration, particularly in these times, but these are hard decisions to make. They are hard decisions for individual planning officers, for councillors to back up, and for Assembly Members to stand up for. This requires a strong political will as well as technical understanding.

[377] **William Powell:** This has been a really rewarding session. Time is running against us now, as we have gone a few minutes over. Is there any final message that you would like to leave with us, perhaps particularly to feed in to our session with the Minister on 19 July? Is there anything that we have not covered? Perhaps there is not, but it could be useful in drawing the strands together if you have a final statement or message that you want to leave with us.

[378] **Mr Guthrie:** From my point of view it would be that we need to get the message across that how we manage the coast is vital to Wales, to the economy, to tourism and everything. Too often, with shoreline management, we get comments such as, 'That is just about a sea wall, is it not?', but no, it is most about one of the most important assets that Wales has.

[379] **William Powell:** The importance of vision and joined-up thinking has come through in a number of your contributions. Thank you for your time, your contributions, and your full answers, based on your experience, which are really what has made it such a good and useful session.

[380] I now say hello, good afternoon and welcome to Phil Dyke of the National Trust. Phil, will you introduce yourself for the record and then, as an initial opener to set the context, explain your role in respect of coastal protection issues in Wales?

[381] **Mr Dyke:** Of course. Thank you, first of all, for the invitation to come to give evidence. My name is Phil Dyke, and I am the coast and marine adviser for the National Trust. I work across England, Wales and Northern Ireland. My principal role as it relates to the inquiry today is in relation to coastal change management. I do other work in marine management, too, and I am quite involved with the Welsh Government in developing the marine planning side of marine conservation zones, but I will focus today on coastal change management.

[382] On the trust's role, it owns 20%, which is about a fifth, of the Welsh coast, including some pretty iconic places such as Rhosili, Porthdinllaen in north Wales on the Llŷn peninsula, and large sections of Pembrokeshire's coast. So, we are a big player. The importance of that for coastal change management is that we own virtually every type of coast: hard coast, soft coast, low-lying coast, salt marsh, and sand dunes. So, our experience, through looking after these places, is that we see these changes unfolding on a day-to-day basis. It is not just about natural places but also about places in which people and communities live. Porthdinllaen is a good example as a tangible community that exists there on the shoreline of the Llŷn peninsula.

[383] I will flag up a few things by way of general background to the evidence that we have submitted. To help you, I was hoping to come at these issues by way of promoting an active approach to planning for tomorrow's coast as, to date, traditionally, it has been largely the case that we have been reactive in planning for the future of the coast. Climate change and sea-level rise certainly bring some new challenges, and I will touch on those in a moment. Shoreline management planning is a really good thing, but it is the start of a process, so I will say a few words in a minute about that and where we think that that may go next. Then, there is the issue of communities impacted by coastal change, now and in the more distant future, and how we work with people to raise their understanding and awareness of what is coming in the future, and of the probable reality that some communities will not be able to be protected in the future. So, there is a bit of a reality check there. Generally around that, to support that awareness within specific communities, we also need to be thinking about raising general public awareness of coastal change management because, obviously, the money to sort out the engineering solutions, if that is the route that we go down, comes from taxpayers.

[384] That is the approach that we are taking in managing our places at the coastline. We are very much trying to start from a point of the impacts of climate change, what it means for the future and what it will bring. We are building that into our thinking from the start. For us in the trust, we are keen to work as much as we can with natural processes, so very much avoiding the need to go down the route of hard engineering solutions, which are time limited in their durability, and pursuing approaches that are about managing a natural coastline, which is not without challenge. I will say a little bit more about that shortly, as well.

[385] In the Wales flood and coastal erosion strategy, which I think is a great document, some assumptions are made about the impacts of climate change. The one thing that I would say about climate change research and science is that a lot of the predictions and projections are made on the basis of a scenario of our putting out medium-level emissions into the

atmosphere, but we are patently not in a medium-level emissions world; we are in a high-level emissions world. So, it seems to us at the National Trust that we are leaving ourselves open to being a hostage to fortune by taking a median line approach, given that we are pumping more carbon dioxide and other gases into the atmosphere. We are going to be warming probably faster than what current science can agree on—because there is a political trade-off between science and what is palatable for politicians. So, there are some specific examples of what that means.

[386] One of the great uncertainties at the moment is the contribution of ice-melt from continental ice caps to sea level rise in the future, and, frankly, that is not being factored in at the moment. We are really talking only about the thermal expansion of the oceans, largely—it warms and the ice melts—and given that the science has not yet been nailed, quite, we are not able to have accurate figures. However, some work is going on at Swansea University looking at the Greenland ice sheet, which stores about 7m-worth of sea level rise. That will not break down rapidly, but there are signs that it is breaking down, so that contribution needs to be factored in. So, I guess that I am just offering a word of caution by mentioning the whole uncertainty around the predictions and projections that we are working with. I suppose that we tend to take a more pessimistic view within the National Trust.

[387] The consequence of that is that we will see in the future a breakdown of the existing engineering defences and an increased footprint for the coastal risk zone. In 2005, and in 2007 in Wales, we launched a document called ‘Shifting Shores: Living with a Changing Coastline’, which tried to do a number of things, one of which was to promote the natural-processes approach towards working with the coast. It was also to do with working in partnership—because although we own quite a lot of land, the solutions do not lie within our gift as the landowner, and neighbouring interests must often be taken into account—working with natural processes, and thinking and acting in a wider context, which means thinking along longer-time horizons.

[388] The advocacy side of the work on ‘Shifting Shores’ was based on evidence from a coastal risk assessment that we undertook within the trust. In Wales, we looked at every one of our coastal properties, and assessed them for their vulnerability to flooding in the future, based on a 1m sea level rise, and the erosion risks that they face, based on a 1m sea level rise and the erosion data from DEFRA’s Futurecoast projects. Of about 80 or so properties in Wales that are at high risk, we have identified that there is probably about 10 or a dozen that are at significant risk. Our approach now is to work with those places, and with the communities that are affected in those places, to develop coastal adaptation strategies. That word ‘adaptation’ is the key for us, because if we are saying that we do not want to defend through engineering solutions, what is the alternative? Adapting and potentially moving out of the risk zone and moving infrastructure away from the risk zone is the key to that. However, that takes a long-term view and approach.

[389] We have some really good examples that we are keen to share, and a couple are included in the evidence for Aberreiddi, recently, and for Llandanwg near Harlech. We see that there are solutions and we would like to start working with other people to put them in place, but, at the moment, the strategy does not quite enable us to get to that point. The idea of more local flood strategies are going to be really important in the future to get local communities directly involved. There are other examples of sites that we own, such as Cemlyn on Anglesey, where we have major impacts. There is a saline lagoon there, and it is an important area for tern nesting, and there are impacts on the historic site at Rhosili on Gower, where a medieval village is being exposed as the cliff erodes. So, it is not just about people or the natural environment, as historic environment interests are also important.

[390] I hope that you all received a copy of the coastal risk assessment report, which summarises some of the things that I have been talking about. We are using the information

that we have gleaned from thinking about the problems that we face as a landowner on the coast to try to develop broader-based strategies to manage coastal change in the future—and this report is a classic example of how we are doing that. So, we are feeding it into the shoreline management planning process, doing advocacy work like this. It is a really good opportunity to be able to come here today and do that. I am particularly pleased, because it is the Government's role to provide leadership in some of these areas. At the moment, there is a sense within the trust that, while we have a good strategy—which is great, is real progress, and is something that we have been working on with the Environment Agency and others to help to promote and support over the last couple of years—there is a lag between having the strategy and seeing some of the practical applications come through. So, it is not just about practical schemes or about protecting or not protecting, there is also the whole issue of raising public awareness and making sure that everybody understands as best they can, with the uncertainty around the science that I mentioned, what is likely to come at us in the future.

[391] **William Powell:** Thank you for such a comprehensive overview and thank you for the fullness of your written submission. Russell will fire off.

[392] **Russell George:** What aspects of technical advice note 14 and 'Planning Policy Wales' do you think should be revised?

[393] **Mr Dyke:** TAN 14 is interesting, because it is quite old now. What underpinned TAN 14? Where were we with climate change thinking and science when it was being written, and where was the National Trust in its thinking in 1998? All that was not on our agenda, frankly. So, there are two issues. The first is the context, which provides the basis for whatever the advice is through technical advice notes, and the other is that it is pretty much locked into a straightforward engineering solution, and if there is not an engineering solution, then there is no solution at all.

[394] What is missing from TAN 14 includes some of the more creative policy instruments that we could develop that would help us, for example time-limited planning consent, so that when a particular community faces coastal change and loss through erosion, but the decision is made that there will be no defence, that community does not fall apart overnight. It could be decades, in fact, but what tends to happen in those situations is that vital community infrastructure starts to be lost. We see this quite a lot on the east coast of England, where the village hall or the graveyard is the first thing to go. To maintain the viability of those communities as we adjust and adapt out of the risk zone, there is a case to be made for time-limited planning permission, to enable communities to function cohesively but on the basis that, at some point in the future, the sea will erode back to that point. That is one example. There are others around roll-back, where you can have planning consents that allows communities to roll back over time.

[395] For me, probably the most important one that is missing is the connection between the inshore marine environment and the terrestrial environment. TAN 14 is very much terrestrial in its view and approach and, of course, the sediment that provides the vital beach recharge and natural defences for a lot of our coast is actually in the inshore marine environment. One of the things that would be worth exploring would be to develop a layer in the planning system that took into account both the terrestrial bit, the immediate bit of the shoreline, and the hinterland areas according to the type of coast, but also connected to the inshore, marine area where the sediment is, and viewed that as a whole. It is that exchange of sediment between the marine and the shoreline that is critical to a lot of the solutions, and frankly that sort of thinking just is not in there at the moment. That would be very helpful.

[396] **William Powell:** One strong message that came through our last session with Atkins, Halcrow and Royal Haskoning was the importance of an overall vision, and balancing coastal erosion on the one hand with the economic, environmental and social issues on the other. To

what extent do you feel that the national strategy currently achieves that?

[397] **Mr Dyke:** We are probably stronger on protecting nature and thinking about the needs of nature than we are on protecting the interests of coastal communities. It is something I am very conscious of within the National Trust, because my colleagues tend to train as land managers, natural scientists, and so on, and that is where the emphasis tends to go. We are very conscious within the National Trust that we need to upgrade our skills and approach to what you might call the social science side of managing people's expectations, but also raising capacity and skills within coastal communities. I know that the Environment Agency has been doing a lot of work on this, trying to develop a toolkit, if you like, for good engagement around coastal change management. So, I think that we are weaker on the socioeconomic side than on the wildlife and habitat side of things, because so much of that is set in European law and driven through. People rightly feel vulnerable in coastal communities.

[398] **David Rees:** Just to go back to the previous answer, you mentioned that there needed to be some different thinking around TAN 14, in your view. Is there any evidence—because TAN 14 is guidance, effectively—to show that that different thinking is taking place now in the planning process, or is that thinking not part of that planning process?

[399] **Mr Dyke:** There is a very poor link between planning guidance being put through into planned development, and the reason that happens in coastal change management is because it is still regarded as the preserve of engineers within local authorities. It tends to be a technical issue with a technical fix—‘Ah, there is a problem with coastal erosion, but we can build a defence if we can get the money’. It is a technical services issue, and is not really seen as a mainstream, plan-making, forward-planning issue. The Royal Town Planning Institute in Wales is very keen to work to support, develop and improve competency in planners in Wales to become the focal point for driving coastal change management strategies, not taking it away from engineers, but seeing engineering as part of the package of measures that is available. However, the plan-making process, going forward certainly, is a weak link at the moment. That is not just in Wales; it is all over, if that is any comfort—it is the same in England.

[400] **David Rees:** As we said before, it is more of a rounded package, with more options available—thinking outside the box, rather than through the box.

[401] **Mr Dyke:** Absolutely, it is about putting that plan-making process at the heart of the approach, rather than what often looks like retrofitting planning to decisions that are made by engineers, and then you get into a sort of downward spiral.

[402] **David Rees:** That would not be TAN 14, in a sense, because TANs are technical advice notes at the end of the day, so we are looking at some other aspect of planning guidance.

[403] **William Powell:** One of the themes that has come up time and again today is the importance of raising our game in terms of communicating the risks and some of the associated issues, and also building that into education. What do you feel needs to be done to achieve some practical improvements in that area?

[404] **Mr Dyke:** If you separate the issue of raising awareness within specifically affected communities, and if we are now talking about the broader public awareness, I think there are a number of things that we can do. We have been running—not in Wales, to date, but elsewhere—some public participative arts projects. Engagement in shoreline management planning is very poor. I have heard a lot of accounts. Last winter, as the shoreline management plan dotted its way around the coast, my colleagues would turn up at public

meetings in the middle of a winter evening to find one member of the public there. People are not excited by or engaged in something that is really important. We need to excite them and to get them engaged in it, because it is vital.

[405] One of the ways in which we can do that is by using different approaches, and the arts are a good way to do that. It might sound a bit off the wall, but at Birling Gap in East Sussex, on the chalk cliffs, an arts group got lots of people who happened to be on the beach that day to get together and pick out on the beach, in white pebbles, where the coastline was 100 years ago. After lunch, they went up to the top of the cliff and used white flags to mark where the coastline will be in 100 years' time. It is a very visual approach to telling a story of change. We know that the coast moves and that it is dynamic, but we can tend to think of it as being static. So, there is a whole load of stuff we can do there.

[406] There is a really important job to be done in terms of straightforward education in schools. As climate change kicks in, that is the generation that is really going to pick up the pieces, and they need to have that sort of thinking built into the curriculum now, I would suggest. Actually, it would probably be quite pleasant to drag kids off to the seaside for the day to talk about coastal change. It sounds fun, does it not?

[407] **David Rees:** There are people who think that coastal change is not happening, and it is about educating those as well, is it not?

[408] **Mr Dyke:** Absolutely.

[409] **David Rees:** The coastal trail is obviously the National Trust. I have a problem in Swansea bay, where there are a lot of arguments. There are some who say that this is about the impact of dredging and sand shift as a consequence. Do you see that having an impact on coastal erosion? We tend to think of coastal protection in terms of flooding, more or less, but we forget coastal erosion issues.

[410] **Mr Dyke:** Yes. On sand extraction specifically, Gower is a good example of where we have had some real concerns in the past about licensing for dredging activities for marine aggregates. It is really important to the economy of south Wales—I think that 80% or more of the aggregates for south Wales come from the Bristol channel and its approaches. However, the sediment is also vital to maintaining the beaches that are an important driver for the tourism economy of Gower and other places. It is a finite resource that was put down between 10,000 and 15,000 years ago by glacial activity and there is no more of it. It is pretty much a finite resource, and if we are taking it out, we need to be extremely careful about where we take it from.

[411] On the recent round of licensing, I think that things are progressing in the right direction. There is a greater note of caution being sounded around aggregates licensing, and I think that the Crown Estate and the aggregates industry itself are much more aware of the issues than they were in the past. However, there is still uncertainty around it, and I think that we need to be vigilant in marine aggregate extraction to ensure that it does not interfere with the process of the exchange of materials in the inshore marine environment to bolster and protect the shoreline in the future, because there is no more of it in the pipeline, as it were. There is no more to be had.

[412] **Julie James:** Sorry to interrupt you, David, but I would just like to say that I live on the Gower, just to make sure that my interest is registered, because I did not realise that we were going to talk specifically about it. I live on the Gower peninsula, and I concur with quite a lot of what you say. You can watch the sands shifting around some of the most iconic beaches—I live opposite Three Cliffs bay, and the sand has shifted quite perceptibly in the past two or three years.

[413] **Mr Dyke:** I am not suggesting that that is not a natural occurrence as well because, over time, stuff does move around, but wherever you take material out of the system, which is effectively what we are doing, it will not be there to be moved around and come back again in future. That is the problem.

[414] **Julie James:** I take your point entirely. I just wanted to make it clear that I live there.

[415] **William Powell:** That is on the record; that is fine. Let us move for a moment to consider shoreline management plans in the round. What activities were undertaken in the consultation process that led to the shoreline management plans to discuss the likely changes and impacts on coastal communities? You mentioned earlier that you feel that, overall, there is something of a deficit in taking on board the wider community perspective of some of those that are enshrined in European legislation.

2.00 p.m.

[416] **Mr Dyke:** I would not want to be perceived as criticising the efforts that were put in to try to engage with people in coastal communities about the writing of the shoreline management plan, because, to be fair, everyone went out of their way, including the Environment Agency, to try to get people thinking. It is rather like with planning on land: people only get animated by the planning system when it impacts directly on them in a specific place. It is very much the same with shoreline management plans. A lot of effort was put into trying. There was not much success, from what I gather from colleagues who attended many of the meetings around the coast of Wales over the winter during the last couple of years. This is where there is a link between the shoreline management plan and what happens next, and the idea of developing more local flood and coastal erosion management strategies. Shoreline management planning works on quite a broad scale. It is quite difficult for folk to be engaged with a whole coastal cell-wide geographical area.

[417] When it comes to a local plan that has been developed in response to resolving particular problems in the locality in which those people have an interest, one would hope that people will get a bit more animated about it and get involved. In fact, they need to get involved, because in some of the work that we have done in England it has become very evident that local people hold a huge amount of knowledge. We can have the consultants who were here earlier coming in with high science and stuff, and telling us how it is, but on a number of occasions we have had more useful observational information about how beaches move and change from local people. That is absolutely key. It will be the next phase of planning—the local strategies—that enable that to happen.

[418] **William Powell:** To what extent do you feel that the Pathfinder pilot projects that you mentioned in your written submissions could play a part in that exercise?

[419] **Mr Dyke:** I think that they could. DEFRA is still evaluating the Pathfinder programme. We were involved in seven out of the 16 Pathfinders around England, and it was tremendously helpful to the trust to have some resource available through Pathfinders, which were run by local authorities, but from which we could benefit, to do more of the less tangible things such as engagement activity, developing understanding and agreeing longer term approaches to coastal management. Our view is that they were a good thing. It was a pilot; they were not all successful. There were big underspends in some areas where the local authority and the communities could not get going on what they were trying to do. It was very short time frame stuff. The money was released and it all had to be spent within 18 months, but engagement and winning trust take time, so the timescale was against them. However, there is a lot to be learnt from them that could be applied in particular locations in Wales, in support of the development of local strategies. So, it is about the approach that it is okay to

invest in things that are not just about pouring concrete into the sea to build a defence, and that it is potentially a sound investment to engage with people to develop trust and understanding. That is probably a better foundation for whatever solution that the community will have going forward. Even though it is not a Pathfinder programme as such, the investment in the social science side of it was important.

[420] On the education front, the Dorset Pathfinder, which was relatively small—I think it was about £0.25 million—undertook some fantastic engagement work with local schools. It got the schoolchildren to go out and talk to granny and grandpa about what the beach used to be like, video it, make a film and bring in their recollections. All that stuff is so vital. It is not very fashionable at the moment, because in tough economic times you want to be perceived as putting the money where it is best spent, and it often looks like pouring concrete is the best solution, but I do not think that it always is in the long term; it is also about the softer stuff.

[421] **William Powell:** Could you remind us about the timescale of the DEFRA evaluation?

[422] **Mr Dyke:** I keep hearing that it is still evaluating it; it may be out, but I keep a fairly close track on these things.

[423] **William Powell:** It would be useful to check that because it would be useful for us to feed into our department that deals with the environment side of things as well as the European programmes in case that was potentially something that could attract some funding support to make the difference between it happening and not happening.

[424] **Mr Dyke:** The other benefit of the DEFRA programme was that it looked at different coastal typologies, including, for example, hard coast, soft coast and high cliff. In Hastings, there was a project that was not about erosion, but about accretion because the fishing boats that work out of Hastings are beach boats and the accretion of shingle on the beach meant that the sea was getting further and further away, making it more difficult to sustain what is a nice, benign local fishery. So, there was a range of stuff and you could draw on some really good examples.

[425] **William Powell:** Aside from the potential support for a network of Pathfinder projects, what is the single most important action that, in your view, the Welsh Government could undertake to achieve some tangible improvement in its approach to coastal protection?

[426] **Mr Dyke:** It is down to that relationship between planning, in terms of the terrestrial plan-making process, and ensuring a sound link between marine and terrestrial planning because of the issue of exchange of material at the shoreline. However, fundamentally, it is about putting forward planning at the heart of coastal change management and using technical engineering people to provide the solutions to feed in, but vesting the responsibility in the planning system and offering a few more tools for the planners to play with, going back to the point about TAN 14. As I have said in my written evidence, we are stuck with the ‘defend or do nothing’ view; we need to think in terms of ‘defend or do this or that’. We need a whole range of policy options that we can start to develop in the future.

[427] **Russell George:** In what ways could coastal protection funding be improved in Wales?

[428] **Mr Dyke:** I would say that it is partly unhelpful that it is called ‘coastal protection funding’ because it takes you straight down a single route of being about putting in a physical barrier. I think that it would be hugely improved if some of that resource were ring-fenced. That is what we have been arguing with DEFRA in England because the coastal Pathfinder has finished and it does not look as though there will be Pathfinder 2 or anything like that. So, it would be good to ring-fence a percentage of the protection budget in order to look at

providing non-engineering solutions. As I said, it is not palatable in today's economic climate and it does not look like good value for money, but in terms of sustainability for the long term and of building a good foundation, we should take a small 5% or 10% and apply it to innovative and different solutions that may involve adaptation and roll-back and time-limited planning applications as well as community involvement and engagement in local plans. It would be good to do that, accepting the fact that the bulk of it would obviously still need to be spent on providing solid defences for those places that need to be protected.

[429] **William Powell:** Thank you for the comprehensive overview that you have given and for dealing in detail with the committee's questions. Thank you for joining us and I am sure that we will stay in touch, particularly ahead of our session with the Minister on 19 July, if there are any issues that we can usefully raise with him that tie in with the evidence that you have provided.

[430] **Mr Dyke:** Thank you very much for this opportunity.

2.09 p.m.

**Cynnig dan Reol Sefydlog Rhif 17.42(vi) i Benderfynu Atal y Cyhoedd o'r
Cyfarfod
Motion under Standing Order No. 17.42(vi) to Resolve to Exclude the Public
from the Meeting**

[431] **William Powell:** I move that

the committee resolves to exclude the public from the remainder of the meeting in accordance with Standing Order No. 17.42(vi).

[432] Are all Members content? I see that you are. Therefore, that brings the public session to a close.

*Derbyniwyd y cynnig.
Motion agreed.*

*Daeth rhan gyhoeddus y cyfarfod i ben am 2.10 p.m.
The public part of the meeting ended at 2.10 p.m.*