

Environmental Audit Committee

Oral evidence: [Heatwaves: Adapting to Climate Change](#), HC 826

Wednesday 6 June 2018

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Members present: Mary Creagh (Chair); Colin Clark; Mr Philip Dunne; Mr Robert Goodwill; Kerry McCarthy; Dr Matthew Offord; Alex Sobel.

Questions 364 - 479

Witnesses

I: Steve Brine MP, Parliamentary Under-Secretary of State for Public Health and Primary Care, Department of Health and Social Care, Dominic Raab MP, Minister of State for Housing, Ministry of Housing, Communities and Local Government, and Lord Gardiner of Kimble, Parliamentary Under-Secretary of State for Rural Affairs and Biosecurity, Department for Environment, Food and Rural Affairs.

Examination of witnesses

Witnesses: Steve Brine MP, Dominic Raab MP and Lord Gardiner of Kimble.

Q364 **Chair:** This is our final evidence session into heatwaves. We have a fine selection of Ministers with us today. You are all very welcome. I think the fact that there are so many of you here shows some of the issues that we are finding with heatwave planning and policy. For the purposes of *Hansard*, would you please introduce yourselves, starting with Mr Brine?

Steve Brine: I am Steve Brine, Public Health Minister at the Department of Health and Social Care.

Dominic Raab: I am Dominic Raab, Minister of State for Housing and Planning.

Lord Gardiner: I am John Gardiner, Minister for Rural Affairs and Biosecurity.

Q365 **Chair:** Thank you all very much indeed for coming. Perhaps I can start by looking at the structure of how we handle adaptation. We have DEFRA leading on climate change adaptation policy, and the Department of Health and Social Care leading on heatwave policy. Who is responsible for ensuring that policy across all Government Departments considers heatwave risks?

Lord Gardiner: Can I open by saying that my Department has responsibility for adaptation and, therefore, although we have ownership of certain policy responsibilities, our task is to co-ordinate and act as the host and co-ordinator across the piece. That means the production of the actual risk assessment, working with the Met Office on climate projections, the national adaptation programme, all of this and the co-ordination of reporting by infrastructure providers. Our task in DEFRA is to act as the conduit, in close collaboration with other Departments. That is why we—and I use the word “we”—organise the domestic adaptation board, which has a director who chairs that with senior officials across all Government Departments, so that the strategic input and direction for things such as the programme and the risk assessment cover all the Departments and the work accordingly. That group meets regularly. There is also a working group, particularly on overheating, which again DEFRA hosts, which a number of Departments are engaged in. It meets regularly—at least every three months. We see our role, with responsibility for adaptation, as being to produce the reports but also to work in very close collaboration across Whitehall with all Departments.

Q366 **Chair:** Are all Departments represented on that domestic adaptation board?

Lord Gardiner: I am pretty certain that they are. I do have the full list—and it is a very long list—if you would like me to provide it. I am pretty confident that all Departments are engaged. I have a feeling that the



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overheating group might not involve the FCO, for instance, but the domestic adaptation board is for all Whitehall Departments.

Q367 **Chair:** We would be grateful to see that, and the dates of its meetings over the last year would also be helpful. Thank you.

Lord Gardiner: Yes, of course. It does meet regularly.

Q368 **Chair:** Is it the Department of Health and Social Care's responsibility to ensure that heat health risks are accounted for in urban environment policy?

Steve Brine: No. I should say, just further to what Lord Gardiner has said, that we are the policy lead for extreme weather and health and then the response to it, but it isn't just Government Departments; Public Health England, for which I have ministerial responsibility, and NHS England—the two big arm's length bodies created by Parliament in the 2013 Act—are the operational leads for the heatwave plan.

Chair: We heard from them two weeks ago.

Steve Brine: I know you did. I think it is worth saying that on top of that, the Cabinet Office, through the civil contingencies secretariat, runs something called the summer resilience network, which meets every fortnight during the summer window. My PHE officials sit on that, of course, and that works across Government.

Urban design is not directly within the remit of the Department of Health and Social Care, but we are clear—and I am clear as the Public Health Minister—that the design of the built environment is beneficial to physical and mental health right across the board. Of course that does not just exist in times of extreme weather, so that includes good-quality housing, which of course was in the original portfolio of the original Health Secretary, and access to green space—I was in Maudsley last month looking at their smoke free hospital work. Green space is very important to mental health trusts.

The Parliamentary Office of Science and Technology has recently written a POST note, which I will provide to the Committee, summarising the physical and mental health benefits of natural spaces in urban areas. I can provide that to the Committee if you are interested.

Q369 **Chair:** Yes. We will be asking questions about how you are providing that in hospital new builds later on.

Perhaps we can turn to you, Minister Raab, and the question of who is responsible for building resilience into decisions on road building and on buildings. Is that your area?

Dominic Raab: It is certainly part of it, depending on where in the piece it falls. Planning and building regulations, for example, certainly fall within the responsibilities of my Department.

Q370 **Chair:** But there are no specific building regulations that stop buildings



from overheating?

Dominic Raab: Until recently, of course, there was no standard method for modelling new homes in order to assess overheating. You are probably aware that in 2017 the Chartered Institution of Building Services Engineers published a document, TM59, with a design methodology for assessing overheating risk in homes. Then you had the 2018 CIBSE TM60 on the good practice and design of homes.

We have now commissioned some research to better understand overheating risks in new homes. We did that last year in 2017. It relies on the TM59 research as its starting point and, of course, once we have that research back we will be in a better position to feed that through to policymakers.

Q371 **Chair:** Does DEFRA have someone working on health concerns in your adaptation team?

Lord Gardiner: We work very directly with officials in the Department of Health and Social Care, because they are feeding in and working collaboratively on the production of the second NAP—I have just seen an early draft of it—which absolutely requires the collaboration of officials in other Departments.

Clearly, for all the Departments represented today there are risks flagged up that cover our responsibilities, whether it is the natural environment, health or whatever, so I can absolutely confirm that there is a very strong working relationship with officials in order to bring forward apposite elements of the NAP that have been identified through the risk assessment.

Q372 **Chair:** Right. There is nobody specifically working on health concerns in DEFRA's adaptation team? You are relying on colleagues from other Departments to bring that expertise?

Lord Gardiner: I will absolutely check that. These are DEFRA officials who are working with the experts in the Department of Health. I would need to check whether there is a specific official working on the NAP who has direct responsibility for the health-specific conduit. I would not want to mislead you, but certainly there is a direct connection with our team in DEFRA and all the Departments, because in the end they have the specialist knowledge. We are the co-ordinator and we need to make sure that the NAP includes all the risks that are identified and how we are going to adapt to those. But I will check specifically on that.

Steve Brine: That goes to the point I was making about PHE. Yes, it is an arm's length body of the Department of Health and Social Care, but it works across Government and it provides advice across Government. Having talked with my officials there ahead of this session, I am very keen for them to talk to the RHS. I was at Chelsea last month talking to the RHS, which is very interested in having an input into urban planning



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and urban design and the public health impacts across the board of good green space.

There is a very interesting piece of work by a lady called Goh in Chicago. She has written a paper—it is yet to be peer reviewed—which looks at twin tower blocks. They have taken one car park away and replaced it with green space, and they have left one car park at the other. PHE officials are very interested in that kind of academic research, and that is shared across Government Departments, so they might be my officials but they certainly support Lord Gardiner's officials and Minister Raab's.

Lord Gardiner: Absolutely. I am sure that we will get on to that but, in terms of cooling and trees and the natural environment in urban areas, planting the right sort of trees is absolutely crucial, which again the RHS has opined upon. Obviously a lot of thought goes into how we can adapt, whether that is tree planting in the right places, in terms of the importance of cooling and shade.

Q373 Chair: The Committee on Climate Change has recommended that more action is needed, specifically on the risks to human health and wellbeing, because we know that there are going to be more heat-related deaths as the climate warms. Even with fewer excess winter deaths, we are going to end up with more weather-related deaths overall, as there are predictions of more heat-related deaths. How do you intend to strengthen your governance in the light of that recommendation from the Committee on Climate Change that more action is needed?

Lord Gardiner: We in DEFRA have taken what the Adaptation Sub-Committee has said, as I know all Departments have. I do meet the Adaptation Sub-Committee—I have been invited to some of their meetings. We do take their expert advice and we have commissioned them to produce an evidence report for the third risk assessment. It is very important and we do take their recommendations extremely seriously. Overheating and heatwaves is an area that we need to think about very strongly in the new NAP. The profile has been on flooding—sometimes flooding is a consequence of humidity and a heatwave—but, absolutely, I think one of the reasons why we have a working group on overheating is because it is a very important subject.

Q374 Chair: We have heard a lot of evidence in this inquiry about how some of the planning and structures that were put in place to plan for climate events have been dismantled. The Environment Agency had a Climate Ready project that provided guidance on adaptation to local authorities and to the private sector. That was closed in 2016, so what is the alternative mechanism for co-ordinating now?

Lord Gardiner: I am glad that has been raised, because I did quite a lot of research into this. The Climate Ready service was designed for a three-year programme when all of these matters started. In the last year it was £1.6 million. All of this was to produce material that is now readily available on networks. It was about, for instance, providing expert advice



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to local authorities on sustainable development, on heating and so on. All of that is available.

This was never designed as a long-term programme and obviously we have—it is very important that local authorities are engaged—the Local Adaptation Advisory Panel, which we organise. It is chaired by an official at Gloucestershire County Council, but a number of other local authorities are involved and the LGA is a member. I have been to one of its meetings—I am going to one in July which, as I say, DEFRA hosts.

It is absolutely imperative that local authorities have all this information, which is readily available. The Climate Local website for the LGA has a lot of the material that was produced during the £6.5 million of investment by the EA in climate readiness. All of that, as far as I am aware, is available and current. I know that there has been concern about this programme stopping, but it was to produce material that is readily available for local authorities to use.

Q375 Chair: We did not get a single piece of evidence from the LGA or a local authority on their planning for heatwaves. We have the Department of Health planning through a slightly fragmented structure, NHS England and Public Health England, working with local resilience forums, which we heard about last time, done not on a council but almost on a county-wide basis. We have local authorities saying to us, “We don’t have the ability to contribute to your inquiry,” so it appears that there is no lead from local authorities on this and that this is done simply by Public Health England and NHS England looking at the local heatwave plans and saying yes or no. Do any of you have oversight of what is being planned at the local level, either at local authority level or at health level or at a DEFRA level?

Lord Gardiner: As I say, from DEFRA’s point of view—and I have the membership of the Local Adaptation Advisory Panel—there are some very significant local authorities on it, and MHCLG and BEIS are also represented. That is meant to be an interface between central and local government. Again, I am very happy to provide the membership of that. I wonder whether LAAP was approached in any way by the Clerk of the Committee, because—

Q376 Chair: We approached the Local Government Association, which is where those very significant authorities would be members.

Lord Gardiner: Yes.

Chair: The LGA has people responsible for winter readiness. What we could not get was anybody to talk to us about summer readiness.

Kerry, did you have a supplementary question?

Q377 Kerry McCarthy: Do you know how frequently it meets?



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Lord Gardiner: LAAP certainly meets regularly. I attended a meeting last November and I am attending one in July—I don't attend every one. I said I would like to go again but—

Kerry McCarthy: It would be useful if the Committee could be sent details.

Lord Gardiner: Yes.

Dominic Raab: They are quarterly.

Kerry McCarthy: Quarterly?

Q378 **Chair:** There is no website for the LAAP, so there is no area on the Government website that shows who is on it and how to access it.

Dominic Raab: Madam Chair, can I assist you?

Chair: Sure.

Dominic Raab: I am very happy to write following up on all of the details, and feel free via your Clerks to let my officials know. The panel is chaired by an official from Gloucestershire County Council. It has other members: Wessex Water, the Environment Agency, Greater Manchester Combined Authority, the Greater London Authority, and Hull, Hampshire, Kent and Cambridge councils.

Effectively, DEFRA facilitates the Local Adaptation Advisory Panel. We participate at an official level. There are quarterly meetings and they can provide updates and advice as necessary. I think there are three things that they do that are really important. The first thing is the strategic steer on local government adaptation issues, which allows that interface between national and local government. Secondly, it makes sure that at local government level there is an integrated approach. Thirdly, it looks for areas where we need to build local government capacity. I am relatively new to this job, but my reading of it is that those are the three key things that the LAAP does.

Q379 **Chair:** Thank you. That is helpful, and if you could share those, we would like maybe to follow up seeking some evidence from the county councils you mentioned. That would be very helpful.

Steve Brine: Chair, it is worth remembering that since 2013 all local authorities are also public health authorities, because directors of public health—they are directly responsible to their local councils and their local electorates and work through PHE, through me—are responsible for improving and safeguarding public health in their areas. They play a huge role in this, and if they don't they should.

Q380 **Chair:** But those public health officials co-ordinate through the local resilience partnerships, which are an aggregator of those.



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Steve Brine: That is how it should be. The public health system is place-led and locally-led, exactly as Parliament designed it. Then we can argue whether it should have been that, but some do.

Q381 **Chair:** Yes. It is certainly very different from winter readiness. That is one thing we have observed—it is very different.

Steve Brine: Maybe, but I think the desire is to move from separate hot/cold plans to a single adverse weather plan. The “more action” that you referred to comes from the Committee’s report from January last year, doesn’t it? It is that that is fed into the second draft of the NAP. I think this Committee has seen the early drafts of that. That is how the system is meant to work.

Q382 **Chair:** No, we haven’t seen it; they have not shared it with us.

Steve Brine: Okay.

Lord Gardiner: I don’t think you would yet because I have only just seen it.

Steve Brine: I thought you had seen it.

Q383 **Chair:** We do not want to be ahead of a Minister, although sometimes we are.

Steve Brine: I gave you an exclusive that you hadn’t had.

Lord Gardiner: It will come. Could I also say that I think there are some very strong examples of urban local authorities engaged in the whole issue of greening? For instance, only a couple of days ago Bristol City Council announced that they are looking to increase their tree canopy from 15% to 30% by 2050, precisely on the back of cooling shade. Greater Manchester is discussing being a city of trees—grassland trees, in fact, because that is a better way of cooling the city.

I have other examples of urban environments where overheating is being addressed. It goes way beyond ascetics, because it is very important in addressing rises in temperatures and the potential for heatwaves.

Chair: Thank you. We all want cities where people can move and people can breathe. We will turn now to a Bristol MP to follow up some of those points.

Q384 **Kerry McCarthy:** It is always a pleasure to hear Bristol cited as a trailblazer in these things, and we often are. You have already concurred that local authorities play a pivotal role in trying to address this, as was said in the 2030 national adaptation programme. None of you would disagree that dealing with it at a local level is pretty crucial. I think that is a given, is it? Okay.

As the Chair has already said, the Local Government Association did not feel able to submit evidence to the inquiry, and none of the individual councils felt that they could do it either. We have already mentioned the



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Climate Ready programme being scrapped, but they particularly mentioned that funding resources for Climate Local had been withdrawn at about the same time, at the end of 2016. You have already said that Climate Ready was about putting all the information in the public domain as an online resource. But the LGA's indication is that, in order for the local authorities then to be able to use that as a resource and to carry forward programmes, Climate Local was pretty crucial. Could you explain why Climate Local was scrapped? It was an Environment Agency and DEFRA responsibility.

Lord Gardiner: As I say, I looked into this because obviously I thought it was crucial to get my head around it. This was designed as a three-year programme, precisely to furnish better information as to how local authorities—

Q385 **Kerry McCarthy:** That is Climate Ready. Is Climate Local something different? I think that is something different.

Lord Gardiner: Yes, it is.

Q386 **Kerry McCarthy:** Why was that scrapped as well?

Lord Gardiner: Climate Local was something from the LGA I thought.

Q387 **Kerry McCarthy:** The Chair of the LGA wrote to us and described it as, "An LGA initiative supported by the Environment Agency Climate Ready service that was intended to drive and support council action on climate change", so it was launched in June 2012. "The aim is to support councils both to reduce carbon emissions and to increase resilience to a changing climate", so it is a bit different from the Climate Ready, which was about making the resources the information available. This was about driving forward action using those resources, so I wondered why it was deemed that that could end in 2016 as well. I don't know whether the Minister from the Department—

Dominic Raab: That money was provided by DEFRA as well, but that money was there to support and develop the Climate Local platform. I think, similar to what Lord Gardiner has already said, it was always intended as a starter funding opportunity. Officials from DEFRA discussed maintenance of the platform with the LGA once the funding ended, but the LGA did not take that forward. That is my understanding.

Q388 **Kerry McCarthy:** Are you saying the LGA did not make any bid for continuation of the programme? You seem to be implying that they had other priorities. They were not interested in taking this work forward.

Dominic Raab: No, it is just my understanding factually of what happened. It was originally intended as a starter funding opportunity. It was not intended as a permanent fund, but there were discussions once the funding drew to a close. As I said, I think it was DEFRA that was the interface.



Lord Gardiner: Yes, as I say, all of this—the climate readiness service—was intended at the beginning of the process when everything had started. We thought that, through the Environment Agency, there needed to be an investment in helping local authorities know what was the guidance, and so both at Climate Ready and Climate Local, which was also part of that, all of that information—I have the detail of all the different elements of Climate Local and Climate Ready and the pieces of work that are available on the LGA website and the EA website. There are a number of websites on which all of this information is readily available, if councillors or local authorities wanted to use it. For instance there are councillor briefings on sustainable development.

Q389 **Kerry McCarthy:** It just sounds as if the ball was dropped at the end of 2016. Maybe the Government's view was that councils ought to have carried on running with it and should expect the analogy—

Lord Gardiner: No, I can—

Kerry McCarthy: In terms of action, was there any attempt to follow up to see whether the councils, having been given this jump start, having been given this information and this funding for three years, would then be carrying on doing their own thing, or was it just assumed, "We have given them resources. It is up to them whether they do anything or not"?

Lord Gardiner: There are a number of responsibilities, clearly, that have been outlined that local authorities have to do in terms of resilience. They are part of the local resilience forums. Under various Acts of Parliament, the local authority has a responsibility. As I say, Climate Ready and Climate Local were starter programmes; they were never intended by the Environment Agency to be a continuing information resource. This was the information that it was felt was required to address some of the issues that were part of local authorities' responsibilities, much of which is set out in other legislation.

Q390 **Kerry McCarthy:** So it was assumed that the work would carry on? That was the intention?

Lord Gardiner: Well, it has to. When I say it has to carry on, again, the examples of authorities—and there are many examples of local authorities—where climate resilience is very strong: West Midlands Combined Authority and environment strategy with climate change resilience, Greater Manchester Combined Authority, Liverpool, the Mayor of London, all of the resilience and adapting to climate change are a part. I have used those four because they are very large authorities, but the LAAP membership includes rural counties and other non-metropolitan areas.

Q391 **Kerry McCarthy:** But none of them felt that they had anything to say to this Committee, and the LGA specifically said, "We do not feel that the LGA has sufficient information to make a helpful contribution to your inquiry. In particular, we do not have a bespoke work programme on climate change adaption". They did not seem to be aware of other



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councils making progress on that issue either, so—

Lord Gardiner: I am obviously intrigued—I think that is the word. I have not had a direct conversation with the LGA. But, for instance, the LGA is a member of LAAP and it does attend, so I am intrigued. I am intrigued, but the Environment Agency investment was devised and designed to be was a starter programme to help local authorities fulfil their responsibilities.

Q392 **Chair:** The LGA sits on this Local Adaptation Advisory Panel, yet it is unable to give a parliamentary Committee any evidence about what it is doing. It seems that there is a disconnect here, isn't there?

Dominic Raab: Are you saying that the LAAP cannot give you any evidence directly or the LGA?

Chair: The LGA that sits on the LAAP that—

Dominic Raab: I cannot speak for the LGA, but we can give you details of the LAAP.

Q393 **Chair:** That would be useful: which councillors from which authorities are sitting on it and, in particular, who from the LGA?

Dominic Raab: I mentioned the local authorities and the other non-local authority agencies on there, but I am very happy to write to you with a fuller list.

Chair: Yes, it would be useful if we could get some evidence even at this late stage.

Q394 **Kerry McCarthy:** When the CCC reported to Parliament in 2015, they said, "Since 2013, the LAAP has produced and disseminated material to local authority officers and councillors to highlight climate risks and the actions councils can take" and there was something about workshops and training. It does seem that the general pattern is that the Government sees their role as putting information out there, but what then seems to be lacking is any follow up action, any monitoring, any conversations with local government or encouragement as to actually put their own plans in action. But you are saying that the LAAP is to do more than just give information; it is to—

Dominic Raab: That is not correct. The LAAP is there and it has been working and will continue to work to do three things: first, to give a strategic steer on what is going on at national level, what the national priorities are on adaptation issues; secondly, to make sure within the local government field we have a joined up process as we strive to do it at a national level; and thirdly, and crucially—I think this is germane to your point—to build up local government capacity.

Obviously I do not know enough about the funding streams in this area particularly. I can go back and check if you need me to, but normally when there is central funding support for local initiatives it is a bidding process that comes in from them because we want to be locally driven for



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these things. I don't think it is quite right if you are suggesting that it is one-way traffic. The LAAP is there to ensure it is a two-way street.

Q395 Kerry McCarthy: If a local authority isn't taking action on this and isn't drawing up a plan, does central Government have a role to play? Is it through the LAAP that you would chase them up, or through an enforcement mechanism?

Steve Brine: Central Government has a role to play. We don't just put it out there and hope people will follow it. Public Health England is expected to and does support local authorities, so their centre directors and their regional teams work directly with chief executives and directors of public health on access to the evidence, the research and the intelligence and the plan that we put in place. I am intrigued too that no chief executives have given evidence to this. One takeaway I will take from this, Chair, is that I will get Public Health England to clarify their regional networks—

Q396 Chair: Does the LAAP, which meets between DEFRA and local government, input into your heatwave plan as a body itself? You have said local authorities and local resilience. We are into spaghetti, aren't we? We are into the alphabet soup.

Steve Brine: PHE is a national organisation that takes the lead from Ministers—

Chair: Yes, I understand that. I am asking whether the LAAP feeds into your heatwave plan?

Steve Brine: I want to say yes.

Q397 Chair: So the LAAP, which is the central Government co-ordination between DEFRA and local government, do they feed into the health heatwave plan?

Steve Brine: I would be astounded if they didn't, Chair.

Q398 Chair: But you don't know?

Steve Brine: I cannot give you 100%, no.

Chair: Could you find out?

Steve Brine: Yes, of course.

Chair: That would be enormously helpful, if you could have a chat, just so we feel that all the dots are being joined on this. So the local resilience partnership does, but is this being co-ordinated centrally? Thank you.

Q399 Dr Offord: I felt that it was a good time to ask whether the two Departments—Health and Social Care, and Communities and Local Government—can actually give some concrete examples of where the national adaptation plan has brought about examples of heatwave resilience.



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Steve Brine: There are probably two main health objectives from the 2013 NAP, Dr Offord. There are dozens of actions and sub-actions that sit under that. We may come on to the complexity of the number of actions, which I know was a criticism of the first NAP.

The first one was "To reduce the risk of death and illness associated with severe weather events and climate change, and increase preparedness and resilience to the impacts on public health". What have we done behind that? First, there is research between Public Health England and the Met Office and the University of Reading, which is working with us on this to redesign the hot and cold weather alert system. A new prototype of that has been developed and is being heavily tested now before it is introduced.

Secondly, PHE's national study of flooding and health generated new evidence as a result of that objective on the medium-term mental health impacts associated with flooding in extreme weather, so the exposure data that is collected from that is very helpful in aiding our understanding of what data is useful for future health studies.

Thirdly, I would say there is an integrated PHE and NHS England social marketing campaign, "Stay Well This Winter", which was launched in 2015 and was repeated again in winter 2016 and 2017, and then the formal independent assessment of the heatwave plan for England is underway at the moment and that will report to us later this year.

The second main objective from the Department of Health and Social Care was, "To promote climate resilience within the NHS, public health and social care system to ensure continuity of services and resilience of assets and estates, including the ability to deal with the increased demand for services associated with severe weather-related events". A load of actions have been taken underneath that main objective: annual reviews of the plan, latest research and guidance in the annual heatwave seminars, new supporting resources for public and frontline professionals. That includes the "Beat the Heat" information leaflet, the poster material and the overheating check list for domestic properties. That was published in 2016 as a result of the 2013 NAP, and then existing advice on reducing heat risk for early years settings in schools were made more accessible by publication of standalone material in 2015, and there is quite a lot more.

What I would say is that that is the detail but my own public health warning in all of this I would say that five years is not a long time in the world of public health evaluation. It may be the new standard for health secretaries but it is not for public health Ministers. The time limited health and wellbeing actions that I have mentioned there were all completed for the first NAP, although I would say it is very difficult to measure the public health impacts of these actions because of the many variables: the relatively short timeframe of five years but also, despite a prolonged period of increased temperatures, the impact of the 2013 heatwave on



mortality was not large and was lower than what had been predicted based on the 2003 or 2006 patterns.

I don't think that could be taken as a measure of effectiveness of the heatwave plan, because it is too early to say that at the moment. There are possible explanations for why I say that. There was a prolonged period of winter mortality in winter 2012-13, which we know—there is no subtle way of putting this—probably reduced the number of vulnerable people who were then impacted the following summer. The heatwave plan evaluation that is going on at the moment, which we hope will be reporting to us in November this year, which the London School of Hygiene and Tropical Medicine is helping us with, will be very important for us in understanding the effectiveness of the heatwave plan.

Q400 Dr Offord: Before we go any further, that is useful to have on the record, but what I actually asked you was this: what achievements have you actually had rather than your objectives? You mention that there has been a leaflet produced and you said there was also advice to schools, so what actual achievements have you introduced—

Steve Brine: I listed the alert system, which has been very successful, and the prototype of the new one, the flooding and health studies that I talked about, the social marketing campaigns that we have done and the various other stuff that I listed.

Q401 Dr Offord: Okay. That is fine. The social marketing campaigns.

Steve Brine: Yes.

Dominic Raab: I would pick out three things. First of all, I have given the example of the research in the context of the building regulations that we are doing. That piggybacks on the recent work by CIPSE and that is important. That is a good illustration of how we are making sure, in the building regulations sphere, that the latest evidence is up to date and that we have a set of regulations that are fit for purpose. The national planning policy framework has been out for consultation with a revised draft. It has some important new elements in it that will reinforce our position in this area.

You asked for some concrete illustrations, so let me just read these out, for example: "Local plans should take a proactive approach to mitigating and adapting to climate change" and explicitly later on in that paragraph, "and the risk of overheating from rising temperatures" and then subsequently, "policies should support appropriate measures to ensure future resilience of communities and infrastructure to climate change impacts". That is quite a good example of where the national planning policy framework will provide better, stronger, clearer guidance to local authorities.

I think the third aspect—I am not quite sure whether it falls within your question, but it is worth saying—on the resilience side is through the local resilience forums, making sure that the same kind of planning and co-



ordination, which we do in tandem with our colleagues across Government for flooding and flooding risk, is in place for overheating and the other end of the weather spectrum.

Q402 Dr Offord: That is great. That is exactly the kind of answer I want. But is there anything you have actually learnt from the past five years that you need to address in the next NAP?

Dominic Raab: The research is quite a good illustration of something we clearly need to pick up on the work that has been done by the chartered institution in the way I have described, but the truth is in this area the science is—I will not say changing because I don't want to dip my toe into murky waters—becoming clearer and providing us more information that is actionable. That is what you are looking for I think: you are looking for the action we take based on the science, so that is probably quite a good example. We hope to be in a better place to inform the building regulations, based on the research that we have done but, of course, there wasn't a standard methodology available for that research until relatively recently. That is probably a good area where we are poised to learn some pretty important new evidence.

Steve Brine: I would add that the first NAP report was criticised. It contained over 370 actions, yet it was criticised for not being ambitious enough. I think the lesson that I have learned is that it is probably about greater ambition, but probably through fewer actions that are robust and more measurable. I am sure colleagues will want to add to it.

The other thing that is important to say is that there is a public education exercise that I think we need to do here through Public Health England because, in terms of heatwave advice, heat alerts tend to be seen as barbecue alerts, as opposed to there being a risk. I think the public are quite well trained for cold weather alerts being about a risk, but of course there is also a great risk in heat alerts and public education is important there to look out for the person next door who is elderly and vulnerable and lives on their own. That is a lesson for me from the first NAP, and I want to see it as a running thread as well as those tighter ambitions.

Q403 Dr Offord: Brilliant. Lord Gardiner, my understanding is that you are responsible for the plan and so, going forward with the construction of a new plan, what mechanisms will you have in place to ensure that provisions are there? As conditions change and as temperatures increase, how will you be able to accommodate those changes?

Lord Gardiner: The first thing is that I think it is very important that in the risk assessment the different percentage of degrees is understood and accommodated, but the lessons to be learned from the first NAP have already been described, I think. It probably was not fine-tuned enough—not focused enough. We need a more measurable account so that we can test ourselves and, as I say, not only test ourselves but this goes well beyond central and local government. If we are to adapt well, this has to



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go to every part of the country and civil society and way beyond just Government, although Government has an immense responsibility.

What we are seeking to do is to bring forward a second NAP that is going to be more finely tuned and more focused, with a measurable outcome so that we can judge ourselves better. As I say, the importance of flexibility clearly is that we are working steadily to adapt and of course mitigate, but that the adaptation is such that we can demonstrate—because, for instance, if I go back to within our Department with the natural environment, there is lots of research that is suggesting that green spaces bring down the temperatures. There is very interesting science—Glasgow has undertaken some, and there are a number of cities—where you can say that if you were to have a more green city you would bring down the temperature.

There are all sorts of ways in which we want to bring forward something that, obviously under public scrutiny, will enable Government and everyone else to do their job. We have a programme that, at the end of it—and certainly with the reported progress that the Adaptation Sub-Committee has to undertake precisely to keep our feet to the fire, which is that we need to perform because this is a hugely important task that we are all having to deal with.

Dr Offord: Perhaps “feet to the fire” is the wrong analogy.

Lord Gardiner: In this case, yes, absolutely, it may well be. But knowing Lady Brown and her team, that isn’t inaccurate either.

Q404 Mr Goodwill: To pick up on what Minister Raab said about the way that building design will evolve to deal with higher temperatures, we have heard about a number of ways that can be done in terms of the way a building is constructed, but often the default mechanism is air conditioning being installed. Of course, that has an impact on electricity consumption and, therefore, on CO₂ production. Has any analysis been done looking at the impact of air conditioning on the overall carbon footprint of the UK?

Dominic Raab: I don’t know. I will have to check. I am very happy in my letter—I have a little list here—to add that to it. But you are right, and obviously, within the context of the NPPF and building regulations, we are always looking for the knock-on effects that try to deal with one social challenge and what it means for another, so we inevitably end up taking a balanced approach and try to deal with the competing policy priorities and pressures that we have. That is what we are there for. That is what regulations and guidance is ultimately trying to do is arbitrate between the different pressures there are, but I will check about the air conditioning.

Q405 Mr Goodwill: Yes, it would be worrying if architects think, “Well, we will just stick a box on the back of the building. That will cool it,” and not try to build in a little bit more innovative.



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Dominic Raab: Yes, agreed.

Q406 **Mr Dunne:** I am going to focus my brief questions on health, as I am afraid I have to step out shortly. Minister, the Chair has touched on the increasing estimates by the Committee on Climate Change of greater deaths, estimating from heatwaves an additional 5,000 by 2040 from 2,000, mitigated slightly by fewer deaths from mild winters—I think fewer by 1,000. Does the Department recognise those figures?

Steve Brine: Yes, that work was funded through the NIHR. As a former colleague in the Department, Mr Dunne, you know well the Health Protection Research Unit arrangements, and that was undertaken in collaboration with my scientists at PHE, so yes we do recognise those figures.

Q407 **Mr Dunne:** Is there any intent to follow up the introduction of guidance over winter pressures, to have some guidance over summer pressures?

Steve Brine: Yes. I did say that one of the intentions is to bring together a single adverse weather plan across summer and winter and other extreme events? So there are a number of specific resources as part of the heatwave plan for England, which provides guidance for frontline staff.

As well as that, as you well know from your previous job, there are plenty of systems in place to respond to individual incidents and outbreaks. Declared heatwaves are mercifully rare, but the NHS is very good at systems and we have those in place to deal with the incidents that can deal with any hazard, whatever that might be, including extreme heat. Within each of the organisations that we are responsible for in the Department out there in the NHS there are governance processes for establishing the systems and making sure that they kick in, and there are tripartite arrangements between NHS England, Public Health England and us in the Department, where we co-ordinate across the health system, and that is all about implementing the heatwave plan when necessary. Does that answer your question?

Q408 **Mr Dunne:** Yes, thank you. One of the features of winter pressures is that there tends to be a pretty clear timeframe from the introduction of cold weather to the health impact, and that tends to be over a period of days to weeks. Whereas, in contrast, heatwaves can have a much more immediate impact in the first 24 to 48 hours of significant unexpected increases in weather. Have you looked at adaptations to the plan that you might need to have for that? One of the things to follow up from that is we were given evidence that the Met Office warnings apply from, I think, 1 June. Whereas this year we had some very hot weather in March and a couple of years ago the same applied, which falls outwith the Met Office warning.

Steve Brine: You are right. I would say that reminds us that the latest evidence that I talked about is so important, to then support the robust, new alert system that I talked about. You are right: in stark contrast to



cold snaps, the rise in mortality in heat snaps happens more quickly. It tends to be worse when it happens early in the season, because people have not acclimatised basically. Yes, I think the alert system is very important.

The challenge of this job is often that you are not a doctor, but it is not dissimilar. That is where it is not the same but where it is the same is that mortality in heatwaves tends to be due to cardiovascular and respiratory causes, so basically extra strain on the heart. Health impacts: moderate temperatures, mid-20s degrees Celsius you would start to see heat rash and heat oedema or swelling and fainting, salt loss becomes worse as the heat goes up and heat cramps then develop in muscles. That puts pressure on the heart. That is then what drives the mortality. Therefore, I think it is all about the alert system and making sure that that is as sharp as it possibly can be, and as known as it possibly can be and then implemented.

Q409 Mr Dunne: Do you have a timeframe for introducing a plan going beyond winter, so a year-round plan?

Steve Brine: No, but my intention would be to work it alongside the second NAP. That would make logical sense. We need to talk about that with officials.

Q410 Mr Dunne: That would be helpful. In terms of informing the health system of the plan, such as it is—we have had some evidence that the resilience across the system for the impact of heatwaves is not especially good and, in particular, some concern was expressed about GPs not really knowing what to do—have you started to provide information across the system?

Steve Brine: Not started to; it is quite old. I have a paper here. As you know, I am responsible for primary care and this is a paper from the Royal College of General Practitioners in July 2013, which they update. It goes into great detail, with a lot of words that I cannot pronounce, and conditions that I don't know—welcome to my world. It gives advice to GPs, so those alerts are there. The alerts are for health and social care professionals. There are about 6,000 people, including just under 3,000 NHS workers that are signed up to those alerts. That is really important.

You asked specifically about the GPs, didn't you? Primary care list management is where it is so important. I suspect you have heard good examples and bad, as I do all the time when I am out in the primary care world. There will be excellent examples of where the list is being managed well and where the vulnerable people on those lists are being contacted. It is also the even wider primary care community that needs to be involved here.

We have a maxim in the health service called "making every contact count," as you will remember. I have a passion for community pharmacy, and community pharmacy has a great deal of contact with our



constituents on a daily basis. They will spot when Mrs Smith who comes in every day is not in or when she seems to be struggling, so I think that “making every contact count” agenda is very important.

But the alert system is for professionals, which is why that needs to go hand in hand with that public education job. Public Health England are very good at their media work, and I think they do an awful lot of that when the alerts aspire to talk to the general public about, “Look out for Mrs S next door.”

Q411 Mr Dunne: With the Department’s new responsibilities for social care, we had evidence from the social care sector that they were much less well informed than healthcare professionals. Does the alert system extend into the social care network? Did you give 3,000 as figures for social care? Was it—

Steve Brine: It was 3,000 NHS workers, so just under 6,000 people signed up to the alert. Yes, I know that one of the last evidence sessions you had—I confess I haven’t read it all—was with some care home owners. I noticed that a couple of them said they received the alerts and they act on the alerts. Could we do better with that? Always. Would I like everybody to be signed up to that? Yes. Do I have any ambition to do better? Always.

Q412 Mr Dunne: Thank you. Air pollution has now become one of the heatwave plan’s issues for advice. Can you give us any evidence of what is being done to help notify people about areas of particular air quality issues?

Steve Brine: It is probably one I should pass over. The heatwave plan does not contain specific guidance on air quality, but it is critically important. Unfortunately, air quality challenges are not just an issue during heatwaves. Air quality is one of the biggest public health challenges I face, which is why I work so closely with my opposite number in DEFRA on the 25-year environment plan and the clean air strategy that they have just brought out, by which point I should probably exit stage right and hand over to Lord Gardiner, who knows far more about that than I do.

Lord Gardiner: Obviously, in the same way as this, the most important thing with air quality—and particularly thinking about young people, vulnerable people and the elderly—is the alert system. What I am very happy to do is to set out all the varying stages of the alert system, particularly with schools, for instance the interconnection and knowledge, so that the teachers running the school and the parents are aware of these things.

Obviously there is a job of work we have to do, which is sorting out air quality, but we need to ensure that, in those areas where air quality is not good, there is an alert system when there are particularly worsening situations so that asthmatics, young people and the elderly are alerted.



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Again, the same sort of principle of a cascade system and also the varying places that this information is put out, because obviously the more people that know about it the more they can safeguard their own wellbeing or the people for whom they are responsible.

Q413 Mr Dunne: A final question from me. You have touched on the tripartite relationship between PHE, NHS England and the Department of Health. With the local authority responsibility for social care providers, as the Chair said, we have been slightly disappointed by not having much evidence from local authorities. Can you give us any reassurance that co-ordination does extend across health into local authorities?

Steve Brine: Yes, in a sense. I said that all local authorities are now public health authorities and that directors of public health have a direct responsibility to have due regard to the health of the population, so yes.

Q414 Mr Dunne: Are there any mechanisms in relation to heatwaves specifically alerting local authorities to health problems through their public health responsibilities and, if not, is that something you would be prepared to look at?

Lord Gardiner: Also the local—

Steve Brine: Yes, the LRFs again.

Lord Gardiner: That is a key part of that because they have a responsibility to warn and inform the public, of which obviously local authorities are a part.

Q415 Chair: Can I just come back on the heatwaves? I have been trying to check on my social media feed. On 7 May there was an air quality emission alert put out for Bournemouth, but not one put out for London. How do your air quality alerts feed into the Met Office, because not everyone is scanning the DEFRA website on a daily basis to see if their area is polluted and their asthmatic child should go to school or if their asthmatic partner should cycle to work?

Lord Gardiner: To give the full picture, I would like to set out the architecture of this, because there are varying places in which this information is available, so that we have on the record all the cascade of—particularly when there is an air quality incident—how that is promulgated. There are varying parts of how that is done. It is not just on the DEFRA website, so it will probably be more helpful to the Committee if I set out in detail the various places, particularly with an air quality incident, that will be promulgated.

Q416 Chair: If you can write to us with that.

Lord Gardiner: Yes, of course.

Q417 Chair: But my point is that it did not happen in London. It did happen in Bournemouth but not in London, so there are problems with your alert system, because I had Clean Air London tagging me on Twitter and



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trolling me and saying, "This hasn't happened." I am sure they were tagging and trolling you as well, if you are on Twitter.

Perhaps we can move on, Lord Gardiner. This is all about minimising risk. You have talked about the Climate Ready and Climate Local services. Obviously both services are now closed. Are you confident that local councils can now map vulnerable people to ensure that they are cared for during a heatwave? Do they have the tools for the job? Are they tasked and finished and everything is okay now?

Lord Gardiner: On the cascade of vulnerable people, clearly if we are talking about heatwaves, the trigger is the Met Office engaging on a daily basis with PHE and the information, and then the information on heatwaves comes through the mechanism that has been described. If we are talking about the heatwave plan, that is how it would be undertaken in a cascade system: the Met Office liaising with the PHE and then the trigger points for the varying sources of information.

Q418 **Chair:** Yes, I am asking about local authorities mapping vulnerable people. You have described two funding streams—Climate Local and Climate Ready—that were put in place for three years until 2016 to help councils map their vulnerable and often frail elderly populations to help them deal with a heatwave. Are you confident that they have the tools to do that and they are able to do that?

Lord Gardiner: Yes. All the tools that we secured by that starter programme were specifically—and I want to reemphasise this again, this was never intended to be a continuing investment; this was about a starter programme to provide the information and to assist local authorities fulfil their responsibilities. It was a total investment of £6.5 million. It was never intended—and so the direction of travel that without this everything would stop or would not be possible is simply not the case. It was never designed to be that. It was a starter programme.

Q419 **Chair:** You are confident that the councils are able to map their vulnerable populations and can deal with them swiftly in the event of a heatwave? Because swiftness and speed is of the essence because that is when deaths occur.

Lord Gardiner: Absolutely, yes. Obviously within the system, whether it is through the local resilience forum or through health and social care, there is all the mechanism and all the information that is required to do that. If you are asking me: can I guarantee to you today that every single local authority in the country is fulfilling their responsibilities? You would think I was unwise to say, "Absolutely, I can guarantee that." But there is the ability with the information they have, and with the cascade system, for local authorities to do the task that it was intended for them to do.

Q420 **Chair:** Minister Raab, we have 1.2 million older people living with an unmet care need in the UK. That is a social care need. We know from the mortality figures in the Paris heatwave that the most vulnerable



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population are the over-75s, and particularly women living alone. We all have people like that in our constituencies that we know and in our families, so what has been done to ensure that social care provision is prepared for the risk for more frequent heatwaves? These things are going to happen more frequently. This is an increasing climate risk. What is your Department doing on the social care front to mitigate that risk?

Dominic Raab: The social care fund is obviously the health—

Q421 **Chair:** So, hold on, social care is delivered through local authorities, is it not?

Dominic Raab: Yes.

Q422 **Chair:** So what is your Department doing?

Dominic Raab: The element of it that is delivered through local authorities—

Q423 **Chair:** We are talking about the people who are not getting social care but who are frail elderly, so these are not the people getting the care package three times a day—

Dominic Raab: You mean in their own homes?

Chair: We are talking about the unmet needs in local communities.

Dominic Raab: Can you give me an illustrative example that you—

Q424 **Chair:** I have spoken about a frail, elderly 75-year-old woman who is able to live on her own and can cook but who—

Mr Goodwill: My mother-in-law.

Chair: Okay, Robert's mother-in-law, or my mother. They are not on the council's list of people who are having a care package delivered, but who might struggle with daily needs, because evidence shows that these people who live alone are the most at risk from heatwaves, because they don't have somebody in the house saying, "Take your cardie off, turn the heating down, take your hat off and drink more water."

Dominic Raab: Absolutely. I still think that technically the policy lead is the House, but obviously through the local authorities, and we keep a watching brief. I don't know whether you want to touch on that.

Steve Brine: I touched on it earlier when I was talking about the "making every contact count" agenda within the health service, and use of GPs—GPs managing their lists—and the wider primary care structure. I talked about community pharmacies and the massive contact that they have daily with our constituents. I think that and the media, because the alerts—

Q425 **Chair:** Are you saying that community pharmacists should be ringing up their prescription people?



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Steve Brine: No, I am saying that GPs manage their lists and there are very good examples of GPs who do that. In the same way that power companies have lists of vulnerable customers and they will contact them when a bad weather alert is given, good GPs who are managing their lists well, and there are lots and lots and lots of examples of them—

Q426 **Chair:** Some GPs don't have lists of vulnerable patients. One third of GPs don't have a list of their vulnerable people or do not contact them when—

Steve Brine: Two thirds do and, as I said earlier to Mr Dunne, we want to do better but there are—

Q427 **Chair:** How are you going to improve it then? How are you going to get that one third of GPs who don't have a list of vulnerable people or, if they have it, do not contact them? What are you doing as the Minister?

Steve Brine: This is a whole big subject for your Committee, which I discuss with the Committee a lot. This is about integrated primary care in the community, and community pharmacies are absolutely about integrated primary care. They are not about ringing up their customers but they do have a lot of contact with our constituents, and that is important and that is a huge part of that. So what are we doing? Well, we are supporting GP services where they are maybe small and where they are more stretched to work in collaboration with other partners in the community or other GP services in the area, to come together, form federations to make sure that they are able to manage their lists, they are able to make better use of the "make every contact count" agenda. So, yes, a third are not but I would much rather it was a third are not than two thirds are not, and it is good progress.

Q428 **Chair:** You said earlier in response to a question that air pollution wasn't a specific action from the 2013 national action plan, but it was.

Steve Brine: Okay. I stand corrected, Chair.

Q429 **Chair:** What actions have you take in particular on the air pollution side of things?

Steve Brine: We don't lead on that area, but PHE and I work very closely on that with Minister Coffey in DEFRA and Minister Gardiner. That is why we were very pleased to see the clean air strategy that was brought out last month and that is a real step forward. But that is not just about heatwave moments. As I said, the air pollution challenge is a national challenge and it is one of the public health challenges that we face as a country.

Q430 **Chair:** You talked about the community pharmacy. I am keen on the community pharmacy.

Steve Brine: Me too.

Chair: I want you to tell me how they are going to help their vulnerable patients when the heatwave strikes.



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Steve Brine: They do it all the time. They are helping vulnerable patients right now and they do it all the time.

Q431 **Chair:** I know they do it all the time, but I am asking you about heatwaves. Our inquiry is heatwave related. Is there any messaging from your Department to community pharmacies about heatwaves?

Steve Brine: Is there any direct special messaging? Not that I—

Q432 **Chair:** Should there be?

Steve Brine: Yes, there probably should be, but just because I cannot specifically refer to something doesn't mean that there is not. I am the first to say that I do not know everything that goes out from the Department to community pharmacies.

I think the old traditional view of community pharmacies, which is that they are people who mix up pots of tablets, is way out of date. Community pharmacies are now sophisticated parts of what I call pre-primary care. They are about keeping people out of primary care, where GPs are already struggling under a great deal of workload. The vast majority now are Healthy Living Pharmacies. They have—

Q433 **Chair:** What role do they play in reducing heatwave risk to frail elderly people?

Steve Brine: They would get the alerts and a lot of them are signed up to the alerts and—

Q434 **Chair:** What do they do when they get that?

Steve Brine: One of the actions I will take from this is to speak to the Royal Pharmaceutical Society and see how many of their members are signed up to the alerts, and if they are not we can do a major push on that. That is a very good idea. They see people who come in, they get the alert and they see that the hot weather warning has been given. They often have daily contact with their customers and they would then be able to say to them, "Are you aware there is a real bout of hot weather coming? Make sure you drink enough. Make sure you have enough meds so you don't have to come out to pick up meds during the heatwave." It is just a very laborious, boring daily management job, but it is something that community pharmacists do very well. I have a soft spot for them, as is well known. I think they are a very unsung part of the health system.

Q435 **Chair:** I am not sure that they see people every day. I think they get people in six-weekly or people collect their medication perhaps on a weekly basis, perhaps on a monthly basis, but not on a daily basis unless they are methadone users.

Steve Brine: No. I visit a lot of pharmacies and a lot of pharmacies see a lot of their residents regularly.

Chair: Regularly is not daily, though.



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Steve Brine: Possibly every day, Chair, because there are about 11,500 community pharmacies in England and they are within walking distance of the vast majority of the population. For a lot of elderly and vulnerable people they are a great source of social contact. They are also a great source of medical contact. We don't use them enough.

Q436 **Chair:** Let's move on to care homes. Why does NHS England not seek assurance that nursing and care homes are compliant with the core standards of emergency preparedness?

Steve Brine: I guess this probably refers to NHS commissioned beds in nursing homes. I, and I am sure the Secretary—

Q437 **Chair:** Written evidence from the Government says, "There is currently no central data set on care and nursing home preparedness against which to judge the risk of overheating during heatwaves". We are paying for this as taxpayers. We are not judging whether they are safe or not.

Steve Brine: I see this as a patient safety issue. I read your exchange with NHS England, and one of the biggest areas of mortality in the last big heatwave was in care homes. The Care Quality Commission is responsible for the safety of patients in any setting, including in care homes. NHS England are working with them and us to extend the EPRR assurance process for social care, but they have had—I think the term that Mr Groves used was capacity, wasn't it?

Chair: Yes.

Steve Brine: I saw that in your exchanges and I saw your response to him, which was slightly incredulous. But they have had a lot of other challenges with the acute trusts and all I can say is that our Department is working with the arm's length body, including CQC, to develop measures to improve patient safety. It is a patient safety issue without question, to increase the resilience in heatwaves in our care homes. This must be prioritised and I can tell you that I have instructed officials that it should be so. Is it good enough yet? No, it is not, but I would also say, Chair, that we—touch wood—have not had an event like 2003 since, and so—

Q438 **Chair:** We have had 2013.

Steve Brine: Yes, but it wasn't as bad. The 2003 event has not been repeated, so many of the improvements will have been made. We just haven't seen them yet, and in many ways I don't want to test it, but it is easy to suggest that it is all bad. There is plenty more to do on this and I know that your Committee is going to come up with a series of recommendations, and if it came up with some recommendations around an improved role for the CQC in this area, I think that would be very interesting to me.

Q439 **Chair:** We heard from people working in care homes, some of whom had signed up to the alert system, but we heard also that there is a low



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awareness on heatwave from frontline staff. Who is responsible for monitoring and improving that staff awareness? Is it NHS England or PHE?

Steve Brine: It depends on who commissions the beds.

Q440 **Chair:** If the council commissions the beds it is PHE and if the NHS commissions the beds it is NHS England?

Steve Brine: Correct. You are probably thinking that seems a bit fragmented, Chair—

Chair: You seem to be thinking it as well, Minister.

Steve Brine: I put words in yours and my mouth at the same time, which is quite a new trick.

Q441 **Chair:** Do you see where we are coming from on all of this?

Steve Brine: I do see where you are coming from. I think the heatwave plan contained a lot of resources for social care, including the “Beat the Heat” campaign, which I mentioned earlier, which is for use in social care settings. I am not the Care Minister, but when I visit care homes in my constituency I often see a green space that is part of that, which is where we started this discussion this afternoon. I think that is very important too, but I just would caution against them all being tagged as the worst are. I suspect—

Q442 **Chair:** Nobody is tagging anybody. We are exploring the gaps where we think people will fall through. Can I move on—

Steve Brine: This is a vast system and I suspect there are very, very good examples and not so good examples.

Q443 **Chair:** Well, we don’t want to test them in a heatwave situation, which is why we are doing this.

Steve Brine: Correct.

Q444 **Chair:** The Estates Return Information Collective found that in 2016-17 there were nearly 3,000 instances of overheating in hospitals.

Steve Brine: Yes.

Q445 **Chair:** You have spoken about the Maudsley and trees there. Do you intend to make the CQC inspect for overheating in hospitals and care homes?

Steve Brine: I cannot say that we intend to do that, but I will look out for your recommendations with interest. The NHS providers are required by contract to have sustainable development management plans in place that cover climate adaptation. Some 71% currently have adopted plans and NHS Improvement and NHS England are working furiously with the rest to make sure that we get them up to the standard of the best, but a lot of our—



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Q446 **Chair:** At the moment resident safety is compromised. We did not had a heatwave in 2016-17 but we had 3,000 overheating instances, so that is a problem for when the heatwave comes, isn't it?

Steve Brine: It is a shame that Mr Dunne is not still here, because he would remember it very well, but a lot of our estate is unfortunately ageing. Where you have new hospital buildings, of course you have different standards and you have much, much different heat temperatures recording that.

Q447 **Chair:** There are no standards to prevent overheating in buildings, are there, which is something that—

Steve Brine: No, there are not. That is true.

Chair: We are going to move on to that right now. Colin.

Q448 **Colin Clark:** I was thinking about the Minister's answer. Back to the point. Minister Raab, the head of adaptation at the Committee on Climate Change told us that your Department has been "fairly emphatic" that building regulations are not designed to protect health. Would you agree?

Dominic Raab: Are not designed to protect health? I don't think that is quite right, because the 1984 Act gives the power to make building regulations for any purposes, "Securing the health, safety, welfare and convenience of persons in or about buildings". While the building regs do not explicitly protect people's health with regard to high temperatures, the overarching enabling power clearly envisages that. The reason the building regs have not directly addressed this issue was because of the reason I mentioned earlier in my evidence about there not being a method available to assess overheating in new homes accurately and, as I also described, based on the work that has been done by CIPSE we have already, back in 2017, commissioned research to better understand overheating risk in new homes, and of course we want an evidence-based approach to policy and deregulation. That will help inform it.

Q449 **Colin Clark:** You would not introduce a specific requirement on preventing overheating in building regulations because of the difficulty of measurement?

Dominic Raab: We want an evidence-based approach and, as I said, until recently there wasn't a standard methodology available. I don't think it is quite right to say that the building regulations don't have anything to say on this. If you look at part L of schedule 1, they set requirements for energy performance standards, and one of the factors is the effect of solar and other heat gains in the summer on indoor temperature, and the purpose there—it comes back to something Mr Goodwill said earlier—is to reduce the need for air conditioning. I think your Committee has already looked at appendix P of the standard assessment procedure, which is the methodology used. I appreciate there is some criticism of that, so we are going to consider those criticisms as part of a consultation on changes to part L of the regulations, and that is scheduled for the end of 2018. That is an—



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Q450 **Chair:** I am sorry to interrupt. Is part L the bit about overheating?

Steve Brine: Part L is on conservation of fuel and power, so it is about energy performance standards, but one of the factors relates to overheating.

Chair: Thank you, Minister. Sorry to interrupt.

Colin Clark: We have covered off that the building regulations could be used to protect health if they were more evidential. What other options have you looked at to ensure people's health is protected from overheating in buildings?

Dominic Raab: The one that I have described, but we recognise that, first of all, the evidence basis for the regulations is inadequate. That is why we have commissioned—and I also recognise, in the way that I described, that part L needs to be looked at again. We are going to be consulting on it at the end of 2018, so I think it is fair to say, based on the state of play of the evidence, that we do not have direct explicit regulation in this area, but we want to take an evidence-based approach and that is why we are taking the course we are.

Q451 **Colin Clark:** We have heard evidence regarding the dynamic thermal modelling test to identify the rating of buildings was removed from building regulations in 2010. How is overheating defined in its absence? What has replaced that?

Dominic Raab: I do not think that is quite right, Mr Clark, but let me hopefully set out the position and you can pick holes in it, if you feel that that is warranted. The approved document for the building regulations never required dynamic thermal modelling tests. The guidance in the 2006 version of the approved document for new non-domestic set out that the dynamic thermal modelling test could be used to assess indoor temperatures and, again, for the purposes of reducing the need for air conditioning. Later versions set out a simpler test, limiting solar gain performance for glazing that should be achieved.

The reason that was done was basically to make the guidance more user-friendly for those using it. However, the approved document does provide illustrative examples of ways of complying with those regulations. As I say, those are set out in the document but they are not exhaustive. Compliance can be achieved through dynamic thermal modelling tests if preferred; we have an illustrative list but it is not exhaustive. No one is saying that dynamic thermal modelling is not a legitimate way of addressing the regulation requirements.

Q452 **Colin Clark:** Minister Brine, you are responsible for managing the health risks from overheating. Would that be easier if buildings had to meet a minimum standard?

Steve Brine: You have heard what Minister Raab has said. I do not really have anything to add to it but, yes, the Crown estate is exempt from the building regulations, but it is not just for us about the built environment.



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Green space in the NHS estate is monitored as one of the models in the SDA and reporting of green space and the protection of green space and the increasing green space activity is mandatory in the annual sustainability reports that we expect trusts to produce. It is published in our annual reports and it is signed off by the board. As I said at the start of the session, the beneficial impacts of outdoor green space in the NHS goes much, much wider than dealing with weather events. It is a proven link to better mental health and better outcomes.

Colin Clark: I am glad to hear it.

Q453 **Chair:** Can I just go back to this dynamic thermal modelling test? It was CIBSE that told us about this. Anastasia Mylona came in and said the test looked at hourly summertime performance, how many hours above 28 degrees, and then if it reached that temperature for more than 1% of times, it was overheated: "It is a simplistic approach, but it is much more thorough than having nothing or than what we have at the moment". These are the engineers that you have asked to do the research telling us that this test is de facto not used.

Dominic Raab: It is not explicitly set out as required, but as I said before—

Q454 **Chair:** If it is not required, will housebuilders or people building care homes, hospitals and schools use it?

Dominic Raab: If it is a more effective means of assessing compliance, I think that that of course is open to developers. The point is that the approved document sets out illustrative ways to comply. There are other routes for compliance, including the dynamic thermal modelling test, if they are preferred. The guidance sets out illustrative ways of ensuring compliance.

Q455 **Chair:** This is happening in Government buildings. The Ministry of Justice had 497 complaints about overheating in 2016-17, so the Government is building and paying for buildings and refurbishments, which are then leading to overheating in non-heatwave years.

Dominic Raab: Look, I totally accept the need to have smart regulation in this sphere. I think what tends to happen, in my experience in this area and others, is that we alight on one thing that needs to be prescribed, either positively or negatively, rather than looking at the result as a whole that needs to be achieved. What we tried to do is retain clear standards, but more flexibility as to how they are achieved, which is really what you are talking about with thermal modelling tests.

Q456 **Kerry McCarthy:** I want to ask about cities and urban heat islands. We know that temperatures can be up to 4 degrees higher, but we also know there are some really interesting ways in which you can reduce the heat in cities and we have heard about the Bristol example. I just wondered what examples the Minister for Housing could give of imaginative things that are being done in cities through the planning process, through new



build, to try to address this, other than green spaces and trees.

Dominic Raab: There is some interesting work going on in the various mayoralities. Mayor Andy Street in the West Midlands Combined Authority published an environment strategy covering 2014 to 2019, and they have a report that they published in 2017 on building climate resilience. I think that is worth looking at for some of their innovative illustrations of what is going on in Birmingham, in that wider area. The Mayor of London's environment strategy sets out proposals for adaptation to climate change and some hotter temperatures that we see. There are other networks, such as the Rockefeller Foundation and Bloomberg Philanthropies, which are doing quite good work. West Midlands have a resilience plan in place, and Liverpool have prepared resilience good practice guidance. I do not think there is one answer to all these things, and of course it depends on the local geography in those areas, but there is quite a lot of evidence there, and I cited some of the reports that it would be worth mining.

Q457 **Kerry McCarthy:** Now that Climate Local is no longer in force, where would local planning authorities best go to find out this information, trying to hear about what other people are up to? Is there a central portal for advice at all, or is this LAAP again?

Lord Gardiner: All that was in existence remains in existence. All the information that came from Climate Local and Climate Readiness is available. I just want to make sure that the information is as widely available as it should be, because clearly if a local authority or councillors want to be thinking about this far more closely, then I agree, they need to have the resource. As I say, both those initiatives were about providing information.

Picking up the urban island point—the greening—I thought it was very interesting that the DEFRA/ONS natural capital scoping account for urban areas was suggesting the cooling effect of woodland parks to be—and this was conservative—0.42 degrees Centigrade. It just shows what the cooling effect is if your City of Bristol gets from 15 to 30. Some of the other examples are not just trees; obviously roof gardens and living walls are very effective ways, planting in the right places, all of that sort of agenda for the urban built environment that can also be green and much more sustainable, all of that does have a direct positive impact in cooling.

Q458 **Kerry McCarthy:** Is there a particular stream of Government funding available for any of that, though? I just wonder, in terms of encouraging cities to go down that path, do they just have to find that money from their everyday budgets? It is a genuine question: is there a pot of money available for greening inner cities to deal with overheating? Presumably not.

Lord Gardiner: I think that this comes generally through local budgets, but clearly in terms of DEFRA's push for more tree planting, urban trees, as I say, the recognition of what cooling from a green agenda can do is obviously something that should be very strongly encouraged and in fact



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maybe a relatively cheaper way of helping cooling than, shall we say, some of the hard engineering and built stuff.

Dominic Raab: Of the various streams of central Government money, of course it depends what and how the local authorities prioritise. For example, in the West Midlands Combined Authority there is a £15 million low carbon fund so, if you are looking at pots of money, that is a good example of where Andy Street and the WMCA have pooled resources that are available to them to make sure that they can provide that. You asked originally as well about specific things that we are doing. One thing we are proud of in MHCLG is that we provide the secretariat for the Parks Action Group, which convenes specific meetings around what is going on at the local level, which can spread best practice and learn some of the positive lessons that are available in the way Lord Gardiner described.

Steve Brine: Could I just add to that, Ms McCarthy? There is the built environment but then there is obviously the green environment adjacent too. I sometimes bore myself in keeping on about this one, but social prescribing is the big buzzword at the moment within health and primary care. I recently launched an accord between Public Health England and National Parks England, and what that is about is using the beauty and breadth of green space that there is in our national parks across England for the health benefits. There are all sorts of projects that go on around how they support people recovering from illness, recovering from living with mental illness, but also obviously they are the green lungs and they could be used a lot better. National Parks England, to their credit, have come on board with us as the health service and are working closely with the PHE on that.

Kerry McCarthy: That is good, yes.

Lord Gardiner: If I could say in collaboration, as I am a supporter for national parks, both in national parks and areas of outstanding natural beauty, but the countryside generally, the green prescription from a wellbeing point of view is something that is in the joined-up nature of seeking to enhance mental and physical wellbeing. I think there is so much to be said for the green prescription in both urban and rural.

Q459 **Kerry McCarthy:** I think we do all agree with that, but on the overheating thing specifically, the national planning policy framework does not include any detailed advice on how to reduce urban overheating. I do not know whether the Minister could say anything about that.

Dominic Raab: I touched earlier on the revised NPPF, which has been out for consultation, which explicitly includes language—and I read it out before, so I will not test the Chair's patience—but on top of that there is guidance that sits underneath the NPPF, and it has various strategies to keep people cool in hot weather, including heatwaves. There are references in the guidance to maximising natural ventilation in buildings, which can help keep them cool in summer, avoiding solar gains in



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buildings, which leads to higher indoor temperatures. There is detailed substantive guidance that sits underneath the NPPF.

Q460 **Kerry McCarthy:** If I can just ask the Public Health Minister, Public Health England have recommended that hospitals create and extend green spaces on their estates. Is that something that you are encouraging and monitoring?

Steve Brine: Yes, absolutely. Again, without testing patience, I referred to the green space sustainable development ambition, which is absolutely part of all of our partner trust's work and appears in their annual report.

Q461 **Kerry McCarthy:** That is specifically attached to hospitals as well as a sort of wider thing?

Steve Brine: Correct.

Q462 **Kerry McCarthy:** How does that sit with the financial pressures on hospitals? Again, I do not want to stray too far from the scope of this inquiry, but in terms of NHS Property Services and—

Steve Brine: That is out of my brief as well, but I would say that—no prizes for this one—hospitals are about making people well and green spaces are a proven part of making people well, especially where mental illness is concerned. They always have to balance that, don't they? My hospital in Winchester has sold old bits of estate to the University of Winchester, which has created a lovely garden, which is part of its wellbeing agenda. It is not like the school playing fields issue, where you have this big plunk of land on the edge there that is tempting. The hospital in my constituency in Winchester has a lovely little courtyard garden that is in a quad in the middle of the buildings, which was just a bit of dead brown-filled space that has been turned into a beautiful green space by some green-fingered volunteers. It is really valued by the trust and by the patients.

Q463 **Chair:** Can I just follow up on this NPPF issue? The Committee on Climate Change found that, despite a requirement in the NPPF to include adaptation measures, most local plans do not include any reference to overheating risk, they are all focused on flood risk. Obviously it is a big issue up in Yorkshire and a review of the local plans that the Adaptation Sub-Committee did in 2015 showed that 42% had a climate strategy, but two-thirds identified river or water flood risks, but only a third of local authorities were taking heat into account. Do you think that needs to be more explicit in the local plan?

Dominic Raab: Yes, it does. That is why in the revised NPPF we have explicit language that, "Plans should take a proactive approach to mitigating and adapting to climate change" and explicitly, amid the other list of things, that they ought to include the risk of overheating from rising temperatures. That is new. I hope that squarely addresses your concern, Chair.



Chair: It does, thank you. Matthew, we are going to move on to water.

Q464 **Dr Offord:** Yes, one of my favourite areas. Lord Gardiner, the issue of water supplies, particularly water supplies projected to reduce anything between 4% and 7% by 2045, that means obviously that the amount of water available to each of us individually will be reduced. What is the role of water efficiency in that context?

Lord Gardiner: I attended a water summit last week and clearly one of the things that we have to do is use less water; we have to reduce the leakages and we have to be much more efficient. It is interesting to see some of the successes with the investment of some of the water companies. I was talking to the Anglian Water director, for instance, and they have had a population increase of a third in recent years but they are not having to put as much water into the supply as they did when there was a third less, because of efficiencies and a reduction in leakages. Water efficiency is clear in terms of continuing investment, but wise use of water is going to be critical. Then of course the whole issue of the use of natural capital in terms of our work with the agricultural community in the future in terms of clean water and public objects, which are clearly under consideration.

Water efficiency—the wise use of water—is a key element and our work with the water companies and DEFRA and so forth is precisely to ensure that there is a sufficient water supply for all the ranges of uses that we need, but much more mindful that we need to use less of it and be more efficient about it, whether it is water metering, wiser use of water, reducing abstractions, sustainable supply. Although droughts and heatwaves are distinct, clearly a heatwave does not help a drought. It is really important, whether it is food production in the countryside or what we need for hospital and domestic use and industry; all of that is why we need to be wise users of water throughout the year.

Q465 **Dr Offord:** You mentioned Anglian Water and that is quite useful, because Anglian Water told this inquiry that 110 litres of water per person per day should be the default standard—that is the maximum that people should use. I ask you and Mr Raab particularly if you intend to make this optional standard in the building regulations mandatory.

Dominic Raab: You probably know, Dr Offord, that all new homes have to meet the minimum national standard, which is set out in the building regs, which is 125 litres per day per person. That is in part G of the reference. In 2015 we started taking a new approach, which enables and empowers, rather than being mandatory, or requiring local planning authorities to set water efficiency requirements that are more stringent than the national minimum standard, so at 110 litres per person, in the way that you described. We think that should be done on an evidence basis locally and the primary source of evidence for the local authority determining that will be the Environment Agency water stressed areas classification. I hope that gives you a sense that it is not mandatory. I accept that, but we have already moved to enabling and indeed requiring



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local authorities to consider this and the evidence is there for them to refer to.

Dr Offord: Lord Gardiner, do you wish to add or clarify?

Lord Gardiner: No, that is fine.

Q466 **Dr Offord:** I will move on to another area that I have written about: sustainable drainage systems. They do have a role to play in reducing urban heat islands, but the draft NPPF does not require new developments to have SuDs, so I wanted to ask, why is that?

Dominic Raab: In the revised NPPF, which we consulted on until 10 May, we proposed that SuDs are required in all major developments as well as in any application in a flood risk area, unless there is clear evidence that this would be inappropriate. We are obviously looking at the responses and we will take into account the view of this Committee, but I think that is the right approach. What we are trying to do is have smart guidance, enough flexibility for the area in the local circumstance, but giving a clear lead.

Dr Offord: I think that answers it.

Q467 **Chair:** We had the Flood and Water Management Act in 2010 and here we are eight years later still talking about sustainable urban drainage. Is there any reason why the Government has not implemented this, eight years after that Act?

Dominic Raab: At least in relation to Dr Offord's suggestion, I think the revised NPPF is taking this on board. If you think it is inadequate, we have held a consultation and we will look at your views again.

Q468 **Chair:** Scotland and Northern Ireland are making SuDs mandatory in all new builds; Wales is making it mandatory from next month.

Dominic Raab: As I said, we have tried to take a tailored approach, an evidence-based approach, and I have explained the way we have approached it in relation to major developments or flood risk areas. I am always a little bit nervous and reticent about straitjacket approaches that do not have enough flexibility in them—I appreciate that they may deal with your concern but they may have knock-on effects, which is why we want to try to keep the regulations smart. If you think that the balance that we have struck is wrong, or that it needs to be reinforced in a certain way, obviously I would want to look at the evidence you have provided, very clearly, Chair.

Chair: Large amounts of the country are areas of flood risk, so I think it is something that the water companies are extremely concerned about. The risk is outsourced to the water company and to the taxpayer and the builder walks away, having passed that risk on to the water company and to us as consumers through our bills, but perhaps that is a question for another day. We are going to move on. Robert.

Q469 **Mr Goodwill:** I would like to ask some questions about transport.



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Obviously I am conscious that we do not have a Transport Minister with us but, Lord Gardiner, you pointed out at the start that you have overarching responsibility across Departments. The 2013 national adaptation programme recognises the potential economic consequences from local transport failure. Have Government Departments undertaken any work to quantify how the economy is affected by disruption to transport during heatwaves? I think we have a lot of experience through snow and wind and other types of disruption, but heatwaves so far have not really impacted to the same extent, but could that be more of a problem in future?

Lord Gardiner: Certainly from the point of view of DEFRA. The overarching point is that we have dialogue with the Department for Transport and the Department itself is working with industry and operators, whether it is Highways England and local highway authorities, Network Rail and light rail—

Q470 **Mr Goodwill:** If I may interrupt, Network Rail and Highways England have said they were not aware of any studies, although I suspect Network Rail are probably looking at the disruption on the Northern network and they do not need to do a study; they can just see it happening at the moment.

Lord Gardiner: I had better take that. The first thing is that resilience, whether it is extreme weather, whether it is hot or cold and climate change, should form part of any highway authority's maintenance programme, if we are talking about maintenance rather than capital and new build. That should form a key part of any decision making. On the maintenance, that is absolutely key. My understanding—and of course I will check on this—is that DfT recognise their responsibilities in building adaptation into major plans and strategies, but also in terms of the whole infrastructure, design of transport infrastructure, large and small, that it must accommodate and understand the risk caused by increased temperatures.

If I may, I will take away what my brief suggests, which is that there is working with industry and infrastructure operators, because clearly readiness, whether it is for extreme weather or heatwaves, is absolutely part of ensuring that passengers, whether they are going by road or rail, can continue their journeys in difficult circumstances.

Q471 **Mr Goodwill:** To be fair, we did have evidence from Network Rail talking about the effects of heat on continuous welded rail and the effect on the train.

Lord Gardiner: Buckling and that sort of thing.

Mr Goodwill: Highways England were talking about changing the recipe for tarmac—that is the way a layman would describe it—adapting to temperature. I think it was the studies on the economic impacts that we did not feel were really there to the extent that maybe the Committee would have liked to have seen.



Lord Gardiner: Certainly. I do not have it at my fingertips, but I thought I remembered that there was a recognition that the 2003 heatwave had a considerable economic impact. I do recall that after 2003 there was a recognition that the heatwave had caused considerable economic loss. But if I may, again, I will find out what the figure was, or whether I am incorrect in that regard.

Q472 **Mr Goodwill:** Thank you. We heard from the Committee on Climate Change that there is an evidence gap on the risks posed to public transport outside London. Has any analysis been done to quantify the resilience of transport beyond London in terms of the actual transportation systems, as opposed to the infrastructure it runs on?

Lord Gardiner: Again, my understanding is that this is an area that the Department for Transport fully recognise. It is not just in London that we want the transport system to work; we want it to work throughout the United Kingdom. Obviously whether we are talking about overheating, climate change of extreme levels, we need to have a resilient and robust system across the country. Again I will take this back, certainly in terms of the NAP and the DfT contribution to this, as this Committee hearing has triggered some points that I would definitely want to think very strongly about. There is one other on loneliness and vulnerability I also would want to take back. I am most grateful, Mr Goodwill, because I will take that back.

Steve Brine: I suspect that if Minister Jesse Norman were here, he would reference his cycling and walking strategy, which is a whole-country strategy; it is part of keeping the country moving, and of course it does it bit to cut down on emissions, which helps us all.

Q473 **Mr Goodwill:** We heard in an earlier line of questioning from Kerry McCarthy that the Climate Local initiative was never designed to be a multi-annual continuous programme—after three years it ended. In that case, now that Climate Local has ended, is there an alternative body to ensure that councils are adequately prepared for the effect of heatwaves?

Lord Gardiner: I have spoken about a number of places, whether it is the LAAP or the continuing resource of Climate Local, for instance. If I could just say, it is still available online, our councillor briefing, points that arose from Climate Local, so on sustainable housing, resilient communities, healthier communities, and a webinar presentation specifically on overheating in homes; these are all available online on the LGA website. Again, I was “intrigued,” but these are all resources specifically through the Climate Local feed, and also of course the responsibility that local authorities have in terms of the local resilience forums or through the civil contingencies.

There are all sorts of ways in which central and local government, civil society, the voluntary sector and emergency services are all intertwined. Certainly in terms of emergencies and the set-up, then almost every feature I have raised will have a locus, whether it is voluntary and



loneliness and vulnerability, which I think is a key area. The trouble is when we do not get to people because they are remote, isolated, they do not go to hospital or they are not on any medication or whatever. I am interested in seeking to get to people who do not have the current mechanisms, because I think that is where the gaps lie and where I think community and the voluntary sector have a very important and influential role to play.

I would like to take that back as well, because I think that in terms of communicating about overheating, general community spirit rallies at a time of bad weather, snow, the farmer getting the roads going with the tractor. We possibly do not think and trigger about overheating in quite the same way as we do if there are floods and extreme winter weather. What we need, I think, is a much better communication and awareness that there are many ways in which everyone within the community should help vulnerable people when we get to a heatwave situation.

Q474 Mr Goodwill: I think specifically in the case of local roads, we were a little concerned that Highways England, who manage 3% of our network, which carries a lot of the traffic, they were well on top of the situation and were planning for higher temperatures. But we did not seem to have that same feeling about local authorities and local roads. I just wondered if we have any evidence as to whether local authorities are indeed carrying out parallel work or whether there is information out there for them to use. It did seem an area that we picked up that did not have clear answers for us.

Lord Gardiner: Local resilience means what it should mean, which is that it is not just the motorway or the A roads; local resilience is about enabling people to go about their daily lives and their daily business. What again I will take back, if I may, is that yes, there obviously is the major infrastructure and arterial routes of this country, but a lot of traffic and a lot of business is done within the minor roads sector. We need to be thinking about that in terms of its maintenance, if it is roads, and indeed the branch lines and so forth, which are very important for getting about the country.

Q475 Mr Goodwill: For example, in north Yorkshire, in my area, the local authority are still using the surface dressing and chipping system for resurfacing roads. That is certainly not something that Highways England do on their networks and maybe that is something that needs to be revisited.

Lord Gardiner: Again, this goes into a lot of technology and a lot of the areas that we are probably going to deal with, whether it is the clean growth strategy in technological advances, but any new information and understanding about better road surfacing, as I think as you heard in an earlier evidence hearing, this sort of knowledge should be replicated. One of the things I want to take back is this sort of information to say that local authorities that have a lot of minor roads that need to be resilient to extreme weather and heatwaves, is the information and new techniques



used on the minor roads system and what are the cost implications? I am afraid I do not know about the cost implications of it, but clearly in terms of readiness and preparedness, we need to be ensuring that the road network and the rail network can function and accommodate increasing temperatures, whatever that degree will be.

Mr Goodwill: That is very helpful. Thank you, my Lord.

Q476 **Alex Sobel:** Turning to the tech sector, the national adaptation programme asked the Environment Agency's Climate Ready service to mitigate IT-related interdependencies, based on their focus area 4. Now that Climate Ready no longer exists, who carries out this work?

Lord Gardiner: I am starting to think that Climate Ready is seen as the only vehicle by which anything can be done. As I said before, Climate Ready was an initial starter programme to provide information that is still readily available and is still there for local authorities, through the Climate Ready work and Climate Local, as I explained, and specifically the details of the information that is available. In terms of any refreshment, my understanding is that the pieces of work that were undertaken for both Climate Ready and Climate Local are current and perfectly useable now and do not need refreshment.

What I will take back and look at is whether for any reason any of that information is starting to look dated. That is not my information, but given the concern of members of the Committee that Climate Ready has not continued—as I say, it was never intended to. I think again that there has been a fear that everything was going to stop because suddenly this £1.6 million for producing material stopped. First, it should not do, because that information is all readily available, but also it furnishes local authorities, with the continuing responsibilities they have. Whether it is in the Departments and the connections with not only the three Departments here, but the other Departments that we have obviously spoken about in terms of transport and others, local government is absolutely key to some of the fulfilment of adaptation and indeed mitigation, after all.

I will take back the concerns of the Committee, but I do want to say that I think that there has been an over-emphasis, in my opinion, on no longer having Climate Ready and any more resources. It should not in any way suggest that local authorities therefore do not have the ability to make sure that they fulfil their responsibilities in the areas that we have discussed. But I will take this back, because I think it is very important: clearly if they do need refreshing or if there is anything from it that I should discuss with the Environment Agency, or indeed when I attend the LAAP meeting in July, with your permission, I would like to raise the fact that this has come up at this hearing. I will have with me all the information from both Climate Ready and Climate Local and say, "What more do you think local authorities need in terms of the information to take them through this very important journey?"



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Q477 Alex Sobel: Turning to datacentres, the Committee on Climate Change and techUK noted the risk to in-house datacentres—that is datacentres within companies—which are unknown. What understanding does the Government have of the heatwave resilience of in-house corporate datacentres? What information does the Government hold?

Lord Gardiner: On the digital sector, or telecoms sector?

Alex Sobel: Yes, so a big company that has a datacentre in-house rather than outsourcing it. Obviously there are risks for them holding that data if there is an event—flooding or heat or whatever—and obviously that is an issue of resilience to UK infrastructure.

Lord Gardiner: Yes, of course. Again, my understanding—and carrying the ring for DCMS in this case—DCMS work with the telecoms sector specifically and particularly in this regard with the electronic communications and response group, because that group are reporting on climate change issues. That is all about their resilience, the telecom resilience. Obviously there are enormous technological developments in that sector, but my understanding so far is that this is equipment that is common around the world, where temperatures are generally much higher than here, so in the middle east or other parts of the world, where temperatures are consistently very high.

The most important thing is that this group are reporting in on the impact to the sector of climate change and, in this case, overheating. My understanding specifically is that the sector do not see heatwaves as one of their most crucial concerns, because their equipment is universal and used around the world and therefore is in a position to withstand the sorts of temperatures that in this country we are talking about. Again, that is my understanding from both the group and DCMS, but I will take that back.

Q478 Alex Sobel: techUK had a different view: it felt that there were risks and particularly for things they classed as critical national infrastructure.

Anyway, moving on to waste heat—and this is something I have some experience in from local government—waste heat from air-conditioning units, which are widely used in datacentres, can exacerbate the urban heat island effect. Has the Department done any feasibility studies on utilising waste heat in the environment, say through combined heat and power, which some places locally have done? Have the Government done any work on this?

Lord Gardiner: I am speaking on behalf of BEIS, if that is all right, but the Government does plan to introduce a support programme, the industrial heat recovery support programme. This is about identifying opportunities to recover and reuse waste heat. The Government has consulted on plans to introduce an £18 million programme that is specifically designed to allow industry to reuse heat onsite and sell it to a third party. We want more efficient productive use of energy, leading to lower fuel bills, but also a reduction in carbon emissions, but clearly also



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contributing to using this in terms of heating and so forth. There are a number of phases of that. Again, if it would help the Committee, I have a pretty full note on this programme and heat loss.

Particularly as Mr Raab and Mr Brine have raised air-conditioning, all of this is obviously clearly interconnected with reduction in use in air conditioning and more efficient use. Again, with technological advances, I think this is an area that we will see a lot more and why BEIS is progressing this.

Q479 Mr Goodwill: I saw an article in the news this week where Microsoft took over their data storage units. It was about the size of a big shipping container and they put it in the sea in Orkney, so they were using the seawater to cool the unit and using the wind-generated electricity to power the whole thing, which seemed a good innovation. I guess the fact I have used the word "Microsoft" in this Committee will mean that somebody from Microsoft will send us all the details so we can put it in our report. If anyone spots their name being used anywhere, it will be Microsoft, won't it?

Lord Gardiner: Honestly done, Mr Goodwill.

Chair: Thank you all very much indeed. Ministers, it has been very interesting. We have learnt a lot and I think maybe you have too.