



Public Administration Select Committee

Oral evidence: Whitehall: capacity to address future challenges, HC 669

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Members present: [Mr Bernard Jenkin](#) (Chair), [Mr Nigel Evans](#), [Paul Flynn](#), [Mrs Cheryl Gillan](#), [Sheila Gilmore](#), [Kelvin Hopkins](#), [Greg Mulholland](#), [Mr Andrew Turner](#)

Questions 121-203

Witnesses: Professor Dame Sally Davies, Chief Medical Officer, Department of Health, Jon Day CBE, Head, Joint Intelligence Committee, Cabinet Office, Rear Admiral John Kingwell, Director, Development, Concepts and Doctrine Centre, Ministry of Defence, and Dr Campbell McCafferty OBE, Director, Civil Contingencies Secretariat, Cabinet Office, gave evidence.

Q121 Chair: I welcome our team of distinguished witnesses to this evidence session on future challenges facing UK Governments for the next 10 or 20 years. May I ask each of you to identify yourselves for the record, please?

Jon Day: I am Jon Day, Chairman of the Joint Intelligence Committee in the Cabinet Office. I also run the Government's horizon scanning process, along with the chief scientist.

Dr McCafferty: I am Campbell McCafferty, Director of the Civil Contingencies Secretariat.

Professor Dame Sally Davies: Sally Davies, Chief Medical Officer, Chief Scientific Adviser to the Department of Health.

Rear Admiral Kingwell: John Kingwell, Director of the Development, Concepts and Doctrine Centre, the MOD's independent think-tank.

Q122 Chair: Thank you all very much for being with us. We have quite a lot of written material from some of you. Can we keep our questions very short, Committee, and can we keep the answers short and crisp? But by all means feel free to interact with each other as we go through the session?

Q123 Paul Flynn: Could you describe the greatest triumphs of horizon scanning in your own experience in the last 20 years? These are forecasts made by the groups and predecessor groups that will be superior to someone staring into a crystal ball.

Jon Day: I will start with what I think is the biggest achievement of the current machinery.

Paul Flynn: I think the past machinery would give us some idea, surely, because we can see things that were forecast, begun and we can now make a judgment on them. Are there any great triumphs that would have occurred only because of horizon scanning forecasts?

Jon Day: From my own experience, which is primarily defence and security, I would say that in the last 20 years, an example is the work surrounding the change in the international environment away from one based on polarised blocs to a set of ungoverned spaces that generated terrorism.

Q124 Paul Flynn: The ungoverned spaces multiplied greatly, from one country to about a dozen countries. Who forecast the falling of the Berlin Wall; who suggested that looking for non-existent weapons of mass destruction in Iraq was not a good idea; who suggested going to Helmand in the hope that not a shot would be fired? Where was horizon scanning in forecasting those moves, all three disastrous?

Jon Day: Well, it depends how you define horizon scanning. In all of these circumstances, there was a great deal of policy work done on the potential consequences of these policy decisions. Whether you can describe that as horizon scanning, I am not sure.

Q125 Paul Flynn: Could I give another example to Dame Sally, which is something I have heard you giving evidence on to another Committee? That is, the H1N1 flu epidemic. Your predecessor forecast with some certainty the number of deaths in the United Kingdom at somewhere between 3,000 and a third of a million, and the figure he gave as a likely outcome was 65,000. We planned accordingly to spend £1 billion. The number of deaths in the United Kingdom of people who died with flu was 500. The actual number of those who died of flu was fewer than 150. In Poland, to give an example, they decided not to use the antivirals or the vaccines, because they didn't think they had been properly tested. They spent about seven zlotys on their campaign. The number of deaths per million of population in Poland was half the number that we had here. Is this a failure of those who were responsible for forecasting?

Professor Dame Sally Davies: No, actually. The modellers and infectious disease experts forecast that we will experience intermittent pandemics. A feature of a flu pandemic is that it spreads widely and that we in the community do not have immunity against it,

therefore it can wreak havoc with a lot of illness and deaths. That can have a secondary impact, first, on the NHS and on the workplace but through that on the economy. We were prepared and still are for H5N1 to come from Asia, where it is in the birds and it appears to have a significantly high death rate. We started thinking it was 80%. We now think it is about 50%. But we got swine flu and the original data that we had from Mexico showed that there was a significantly high death rate in the patients that they knew about. Our modellers therefore, as it came to our shores, worked out the variety of options and possibilities for us. We are prepared anyway for pandemic flu—it is top of the Government's risk register—and we had to get into action. What we wondered about but did not know until much later was whether there were other infections in Mexico other than those that they knew about, reported on, and gave us a death rate from. It turned out that there were. We saw the tip of the iceberg and we were prepared for something that was significantly more serious than, I am pleased to say, it turned out. That does not mean that we were not prepared.

Q126 Paul Flynn: Are you aware that the World Health Organisation changed the definition of a pandemic a month before it declared it a pandemic? It chose a definition that was based on geography rather than the seriousness of the disease. The epidemiology for Mexico suggests that there was one death per 1,000 people who had it. Are you also aware that the committee which decided to declare a pandemic was heavily influenced by those members who were in the pay of the pharmaceutical industry at the time? I suggest that it is about time we had an examination of what happened there. We need to examine our experience compared to Poland, and examine the role of those representatives of the pharmaceutical industry who stood to make a lot of money—billions, in fact—from the vaccines and the antivirals. Should we not look backwards, using not so much foresight as hindsight? We need to look at the disasters which have taken place when we have got things badly wrong.

Professor Dame Sally Davies: We should look backwards, and we have. Let me give you two examples. The first is the Hine review of how we and the devolved Administrations responded. A number of recommendations were taken on board, and we have since published a new pandemic flu plan for the UK and for each Administration.

The other way in which we looked backwards was by publishing peer-reviewed—I think it was in *The Lancet*—serial individual patient data of 26,500 patients, looking at the impact of oseltamivir, which is the Tamiflu that I think you are referring to. This showed that it did have an impact on patients, although this was not as dramatic as we had hoped. On average it saved a day in hospital. If you look at the defence of our stockpile which I gave to the Public Accounts Committee about a month ago, you will know that I believe that we have a sensible stockpile and we should continue with it, based on the scientific evidence.

Q127 Paul Flynn: Perhaps I could refer you to an article in the *British Medical Journal* in 2008 on the topic of “My dog ate my Tamiflu research papers”. It was based on the inability of the BMA, for all its efforts, to find hard evidence for the efficacy of Tamiflu. The FDA approved it, not because they could find any evidence of its doing any more good than a slight delay in the onset of symptoms, but so that doctors could give people something if there was an epidemic, rather than not being able to give them anything at all. The efficacy

of Tamiflu was never proved, apart from a very slight advantage over a placebo or over a couple of paracetamol. Yet we still continue believing that it is effective and worth spending millions and millions on. Is it not anti-scientific of you still to support Tamiflu?

Professor Dame Sally Davies: No. I have explained the evidence to the PAC, but let me go through it again. The Cochrane review shows that for children—of whom there were a small number in the review—there is a gain of about 27 hours less time with symptoms, and for adults about 17 hours. That, of course, is for seasonal flu, where people already have some antibodies and they are healthy. The data that we have to look at are the data I referred to a little earlier, which are the peer-reviewed individual patient data of 26,500 patients through the pandemic which looked at the impact of Tamiflu. Those data, which were collected very carefully, do persuade me and the flu experts that we are right to have a stockpile and to be prepared.

Q128 Paul Flynn: The Cochrane collaboration were very critical of what we did in Britain. Would we not be better off looking to an independent group such as the Cochrane collaboration? It does not have a vested interest—as I may say that all of you do—in defending the record. We need someone from outside to look at it. I do not want to spend too much time on this, but—

Professor Dame Sally Davies: Let me just highlight what I said about the Cochrane review, which—as a matter of fact—we fund from the R and D budget that I hold. It does not apply to pandemic flu. If you look at where the Cochrane reviewers have previously worked, they are less clean than I am on independence.

Q129 Paul Flynn: Perhaps I could go back to my original question, because I am not overwhelmed by the answers. What of the major triumphs in other witnesses' area, horizon scanning?

Jon Day: Having now thought about your question, from my perspective, over the period you are talking about the development of what we call defence diplomacy—which is the use of defence resources to prevent rather than fight crises—probably falls into that category. It led to a massive engagement with eastern Europe in the Balkans and it has led to upstream capacity building across a whole range of countries, from Sierra Leone through to Indonesia. Its implementation has sometimes succeeded and sometimes failed; but, based on the sort of analysis that we are talking about in this Committee, the principle was absolutely right.

Q130 Chair: Would either of our other two witnesses like to comment on basically what the point of horizon scanning is—is there a point to it and can it be objective?

Rear Admiral Kingwell: Certainly in DCDC's case, DCDC were tasked to establish a permanent global trends programme in 2001. A part of the work we do professionally is looking back at the gaps that have emerged in our thinking. So, for instance, in this year's version, looking back, that is to address 23 other areas of specific work. If I were to highlight from that very early report in 2001 two areas where I think we were absolutely correct in identifying the trends—noting of course that identifying trends is not predicting the future—I would highlight that in 2001 we were stressing the future of autonomous and automatic

systems on the battle space, and that we were right. If anything, we were slightly too conservative. We said that they would be on the battlefield within 30 years, but they actually appeared within 10. So it was a slightly conservative estimate, but the trend was correct. Secondly, we highlighted the role of social media in undermining certain autocratic regimes and others, and the importance of that. That was in the first report and we pulled this through into the current GS statement.

Q131 Paul Flynn: Did you plan the role of social media in recruiting people born in my constituency, educated here and being convinced by social media that it was right to go across to the other side of the world and execute people?

Rear Admiral Kingwell: The work highlights the trend of social media for the good and for the bad. So, absolutely. The import of it in shaping society and individuals within the state is also highlighted.

Dr McCafferty: In the field of civil contingencies, I think that the national risk assessment that came out of the disruptive challenges the country faced before 2004 is an example of successful horizon scanning. If you look at the foot and mouth outbreak and the costs to the country pre-2004 and compare that with what happened post-2004, it was a much more contained outbreak. At least in part, that was because the national risk assessment identifies a range of disruptive challenges to the United Kingdom and allows us to put generic capabilities in place at the local level to handle the disruptive challenges more quickly.

Professor Dame Sally Davies: Would you like a couple of positive examples? With genomics, we can see the positive advantage; the challenge is how we can get it into the NHS. So we have the 100,000 whole genome project. That arose out of scanning and saying we needed it. Gene therapy: with the opportunity and now, through careful funding, the nurture, we are leading the world in gene therapy for inherited blindness.

Q132 Chair: Dr McCafferty, you talk about the development of an understanding of risk. I have no doubt that our risk registers across Whitehall are comprehensive, but do the risks drawn up in one department understand the risks in another department? How do you ensure that atomised risks across Whitehall are not amplified by systemic risks of Whitehall because of the lack of understanding, and how do those risks deal with what one might call radical uncertainty, which of course brings in its own unquantifiable and unpredictable risks?

Dr McCafferty: The way we handle that, as I said, is that we have the national risk assessment, which is an across-government document where we bring in experts to identify the risks in their area, which we then assess for likelihood and impact. That is where we produce the national risk register from, so it is always done with a cross-government understanding.

We use a reasonable worst-case methodology so that our response is proportionate and we identify a number of common consequences of risks so that we can provide planning assumptions to the local area, because after the Civil Contingencies Act 2004, planning for risk and for response to disruptive challenges is dealt with at the local level. Those generic consequences and planning assumptions allow you to have a flexible response to things that aren't in the national risk assessment. We don't say that the national risk assessment is

predictive or is a crystal ball, as was mentioned earlier, but we believe that our generic capabilities and planning assumptions allow us to deal with a range of disruptive challenges.

Professor Dame Sally Davies: It actually works in practice. Let me give you an example. At least once a year, the chief scientific advisers sit down, look at the volume and do some cross-checking. We also sign off all the risks as they go forward, but we look at each other's. So, if you take anti-microbial resistance, it is not only on our risk register in Health, it is on DEFRA's, and we are working with civil contingencies to put it on to the national strategic risk register. We have a team that actually works on all of this and feeds in to different bits of the Departments, so I can speak to it working.

Dr McCafferty: To complete that cross-Government picture, we regularly review what's happening every quarter; you could argue that this might not be strategic horizon scanning. We take a six-month forward look which we share with Departments, around the table, to make sure that they understand, as Dame Sally says, not just their own risks but where they might play a part in the response to another lead Government Department's risk.

Q133 Chair: It may help if I say, briefly, why we are holding this inquiry. We are interested in how the machinery of government supports decision making by Ministers. For example, we heard earlier, in our pre-evidence discussion, how the wrong decision was made about foot and mouth quite early on. The travel ban was not imposed quickly enough to contain the spread of foot and mouth, which had fatal consequences for containment. We are concerned not only that the quality of work is done across all Departments in order to make sure there is the possibility that we know what we should know—that, as the Pentagon described to us, we can make some of the black swans grey; things that we should have known about—but that the machinery of government actually puts the right advice in front of Ministers at the right time. What are the shortcomings in the horizon scanning apparatus, the assessment and analysis apparatus and the ability to respond; what are the shortcomings in the machinery of government at the moment?

Jon Day: I'll start by briefly saying what the machinery is; I think it is quite important to say what it is before saying where the weaknesses are. Each Department has its own horizon scanning policy development machinery. If I were to indentify the first risk, it's that this work is stovepiped and inconsistent. It's better than it used to be, but there is inevitably the risk of stovepiping. The horizon scanning machinery that was set up two years ago and that I helped run was explicitly designed to deal with that risk. It reflected the conclusion that we needed to be more long term, we needed to give more thought to commissions, we needed better oversight, the work needed to be embedded in what Whitehall was actually doing, rather than just an academic exercise, and it needed to reflect customer needs.

What we set up was not a big, new machine but a better joined-up and cross-cutting machinery with a small co-ordinating core in the Cabinet Office. That's working pretty well. It's not the finished article yet. Thirdly, there is the Whitehall intelligence assessment machinery, based on the Joint Intelligence Committee, which produces a regular cycle of what you would call long-term assessments.

There are other Cabinet Office bodies, such as civil contingencies and the national security secretariat, which do this sort of business as well. There are arm's length Government bodies such as DCDC and the Met Office and a whole range of external links into think-tanks, the academic community and business. I can set out a list that we have.

Q134 Chair: That sounds ideal, but what needs to be improved?

Jon Day: It is not ideal.

Q135 Chair: So what is not ideal about it? That is what we want to get to.

Jon Day: The final aspect of this is senior direction. Jeremy Heywood provides direction of the horizon scanning organisation through his Cabinet Secretary advisory group. Kim Darroch does the same on the security agenda through the National Security Council for officials. I do the same on the intelligence side through JIC principals and Jeremy has a structure that brings all that together. But inevitably, the real problem about all horizon scanning long-term policy processes is the extent to which they gain the regular engagement of senior officials and Ministers on a day-to-day basis, that is, they inevitably have to battle with the current agenda.

Q136 Chair: So it is not ideal because the Ministers aren't listening?

Jon Day: It is not ideal because there is not always a mechanism to get this information to Ministers.

Q137 Chair: Does anybody else want to add to this? I am going to bring in Greg Mulholland in a second.

Dr McCafferty: All I would add is that the corporate response mechanism is multi-departmental, multi-agency.

Q138 Chair: That sounds a bit jargon-ridden. Can you explain what that means?

Dr McCafferty: Sorry, the Cabinet Office briefing room; it's the Government's Emergency Response Committee, which meets in the event that a response to disruptive challenges is required. But that mechanism starts before the disruptive challenge, so some of the stovepiping is broken down by getting Departments together to talk about the issues that are approaching to make sure that we can put together the best responses.

Q139 Chair: There are lots of things we know, such as the population is ageing; nanotechnology is about to explode; migration flows are going to increase; and whether we

think it is man-made or not, the earth is probably warming up and that is having very large consequences. How do we exploit opportunities from this, rather than just react to it?

Rear Admiral Kingwell: The first point to make is that the work that I do, although at arm's length because we are an independent think-tank, I would argue is cross-government. Because of the amount of engagement we have with other Government Departments, the work that we produce is global and long term in nature—2045. The question I would then ask, as an independent, is are we then maximising the use of that work across government?

Q140Chair: On a scale of one to 10, how are we doing?

Rear Admiral Kingwell: I can comment about defence. In defence, the work we are doing is being taken—

Q141Chair: You sound wonderfully cautious. Across government, how well do you think the rest of the Government engage with your work?

Rear Admiral Kingwell: We are certainly engaging with the work, producing the work, has been very impressive this year. GST5 is the best of class, best of its type in the last 10 in the amount of cross-government work and workshops and engagement. Therefore, when you see it, the focus is very much global, strategic, and not defence and security.

What I do know, having done the work within defence, is that the next step is taking it to 2035. The implications for defence and security are ongoing. Beyond that there will be deep dives and experimentation to consider the so-whats for defence and security. However, I would suggest that having invested so much in the global trends, it would be useful for other government Departments too.

Dr McCafferty: We use global strategic trends to inform the work that we are doing in the national security risk assessment, which will inform the next national security strategy.

We work very closely, as Dame Sally has already said, with the Department of Health. There are things in the national security risk assessment on the trends in anti-microbial resistance, climate change and the demographics that are identified in global strategic trends.

Jon Day: You will be able to put us to the test as far as the horizon scanning process is concerned, because later this month we will publish the first four studies undertaken as part of this process on big data, resource nationalism, the social attitudes of young people and demographic change in emerging economies. All of them come into the category that you are talking about. That will give you a sense of how effective and how successful we are. The example I was going to give about where this has worked is on big data, which we identified as a horizon scanning issue, and it was subsequently mainstreamed in the Cabinet Office.

Q142 Greg Mulholland: I hope that the panel can at least understand some of the cynicism that has been expressed this morning. Looking at some of the documents, some historic and some current, now it is all about horizon scanning—we have got to use that

word—trend analysis, road mapping, visioning, gaming and back-casting, and this morning we are being told that it is about stove pipes. It seems like a 2014 episode of “Yes Minister”. At the same time, the Academy of Social Sciences has said in written evidence: “We don’t have independent evidence about the effectiveness or value of Whitehall horizon scanning.” Professor Michael Clark told the Committee that the problem is “too many overlapping horizon scanning documents.” How did that ever happen?

What have we really learned from all this American jargon and management speak? That is the polite way of putting it; I can think of an eight-letter word that might equally be used to describe it. How have we really benefited, as a nation, from all this jargon? Compared with what is important, which is traditional strategic planning across Government and responding adequately on the basis of best information to situations including crises as they develop, how have we really benefited from all this?

Jon Day: I find it hard to disagree with anything that you have said.

Greg Mulholland: Now that really is “Yes Minister”.

Jon Day: The answer is yes. One of the ideas behind the initiative that Jeremy Heywood asked me to lead was the extraordinary degree of theology around what was horizon scanning and what was foresight. Frankly, you are absolutely right. What we are talking about is strategic, long-term thinking. We used horizon scanning because it was in common use at the time, but my report starts by saying that there is so much theology and what matters is what it achieves rather than how you describe it.

Dr McCafferty: I would agree with that. I believe that the national risk assessment is about strategic thinking that allows local planners and national planners to think about the whole range of risks that could impact on the United Kingdom and to put in place the preparations that allow us to respond to them.

Q143 Greg Mulholland: My question is why we have to have all this language and why we dress it up as something else. Which consultants, what training organisations and what public administration gurus are benefiting financially from this? How much are we, as taxpayers, paying to develop all these horizon scanning jargon terms and doing things in this way that, frankly, we should be doing anyway?

Chair: Jargon can be a substitute for real thought, can’t it?

Jon Day: It can, which is why we have tried to avoid using jargon.

Chair: So we will judge your four publications on how little jargon they contain.

Q144 Greg Mulholland: Perhaps not now, but could we have details of the training and the costs of teaching people to horizon scan and back-cast and all the rest of it? I would certainly be interested to see who is benefiting from all that. As someone who has a degree in

public administration, I can be sure that someone will be, and we have the right to know that that money is being spent wisely.

Chair: Could you give us something on that and on how you train your horizon scanners?

Jon Day: I can certainly talk about how we train analysts in the intelligence area, which is part of this process.

Q145 Chair: Yes, but you have a wider responsibility for developing horizon scanning capacity.

Jon Day: We do.

Chair: How do you train civil servants to think about that? Is it another role for the gifted amateur?

Jon Day: No. There is not, at the moment, a comprehensive Government-wide training programme for horizon scanning. Over the past two years, the policy profession has started to develop training courses on policy, which links in to this. Horizon scanning training courses have started on a fairly small scale at the moment, and they are led by the small Cabinet Office team that co-ordinates horizon scanning. In my professional head of intelligence analysis role we have now developed a range of training courses, but none of them would meet the description of a Government-wide, comprehensive training course, which is what you are talking about.

Q146 Chair: How many members of your horizon scanning team are arts graduates?

Jon Day: Absolutely no idea.

Q147 Chair: How many of them have degrees that would train them to think about really complex problems, such as microbiology, nuclear physics, systems engineering or brain surgery? I am talking about some of the stuff that really stretches intellectual capacity, as opposed to those of us who are arts graduates and who got through university by just writing a few essays.

Jon Day: Certainly in the intelligence field, the sort of people you are talking about are identified and trained. They have a basic training in their own specialty, but we give them a common framework for analysis, whatever part of Government they are in.

Q148 Chair: In your supplementary information, would you give us an idea of the academic disciplines from which your cadre of foresight analysts and futurologists are drawn? We can then make a judgment on the extent to which they are trained to handle real complexity, like advanced mathematicians are.

Jon Day: I can certainly set out the training. I am not sure that we would hold the information on academic disciplines, but if we do, we will pass it to you.

Q149 Chair: That is very interesting, because I would have thought that is quite an important capability indicator if we are looking at this field.

Rear Admiral Kingwell: As a fellow arts graduate, the way we approach it within DCDC is to have a very small team of eight. They are part of my strategic programme looking at global strategic trends, future operating environments and regional papers but, actually, the way we get expert advice is through a large network of academics and experts, who provide that input for us. I would be more than happy to provide that list to the Committee.

Professor Dame Sally Davies: I was going to pick up on how we use academic experts. For instance, we had a cross-Government strategy on antimicrobial resistance back in the early 2000s, but I brought together a group of experts to do a report with me on microbiology. I had not realised that they would then say, “You need to do something about this as CMO and as a Government.” The experts came up with it and showed me the data, which I took to Government and which have been taken on at the highest level. The other example I would use could be a pandemic. Ebola is going on at the moment, and we have three groups of modellers—academics—all working on the models and coming together to advise Mark Walport and me at the SAGE on what they can sign up to as the model and where the data are going. They are trying to give us guidance for the future. We use a lot of academics.

Q150 Kelvin Hopkins: We have a range of key witnesses today covering military, medical emergencies and civil contingencies, but there is one big gap, which is the economy. The one Department that seems to get things wrong big time is the Treasury. Apparently no one saw 2008 coming. There is now talk of the markets worrying about another major crisis, but what is being done about alternative scenarios for the future of the economy?

Jon Day: I was not conscious that the Treasury had been invited. Treasury officials sit on all the groups that I set out earlier on and play a major part in them. As I said at the outset, the core of the work is done in individual Departments, but it is a full part of the wider Whitehall machinery.

Q151 Kelvin Hopkins: A supplementary question. Clearly, you have a bearing on politics. Politics are short term. Markets are short term. The pressures are all short term. To what extent do the politicians play down or want to see played down certain risks because they might imply policy conclusions which they do not want to see or arrive at?

Jon Day: I can only say that from my own experience in doing this work over the past two and a half years, we have not come under any political pressure not to do areas of work.

Q152 Kelvin Hopkins: Is that because you are not suggesting things which do not tally with current prejudices?

Jon Day: No, quite the opposite. We have not consciously avoided difficult issues and the whole point of the horizon- process when it was established was to look beyond the current Parliament into the longer term. That was really the definition that we used for horizon scanning. We were consciously putting ourselves in a space where there were potential political issues but they have not emerged.

Q153 Chair: Before I bring in Dame Sally, can I press you on this point that probably the single biggest determinant of long-term Government policy is public spending control and how that is conducted? How is public spending control engaged with horizon scanning?

Jon Day: Through the Treasury.

Q154 Chair: Okay—well, that is a technical answer. How well is the Treasury engaged in this? One gets the impression that you have 25-year-old economists who finish up instructing the Ministry of Defence about what procurement programmes it should have, or instructing the Department of Health about whether a vaccination programme is worth having. That's the reality, isn't it? It is all very short term. We still don't have a 10-year planning horizon for defence procurement, because the Treasury does not want it.

Jon Day: The people who are involved in the work that I lead and the work in which I participate are not 25-year-old economists. They are senior officials. My impression and experience is that they are no more or less short-termist than other senior officials around the table.

Chair: I would love to believe you. Anybody else?

Rear Admiral Kingwell: Can I add that certainly with my trends work, the Treasury was involved and contributed to the chapter on money and global economies? Of course, trends are one thing—it is what policy makers then do with the trends that I would argue is important.

On the point about independence, for the future of DCDC, our independence is absolutely key, enabling us to challenge current thinking and to present papers that have that challenge function. We continue to do so.

Q155 Chair: But we are all scarred—I am looking at three defence people—by the 18-month delay to the carrier programme to save £150 million in-year, which added £650 million to the programme. This doesn't look very long term to me. Why is the Treasury happy with that?

Jon Day: I don't think it's for us to answer on behalf of the Treasury.

Q156 Chair: I think that is an acknowledgement that we have a problem, that the way the public spending round is conducted is destructive and short term. It is not fed by this long-term perspective.

Jon Day: Part of the reason for setting up a horizon scanning process was to ensure that the longer-term perspective was properly covered.

Q157 Chair: So you hope that you are having an effect? Well, I hope you are too.

Jon Day: Yes, and I think we are having an effect.

Q158 Mr Evans: I assume that after an overspend such as the one that Bernard has been talking about there are post-mortems and things are learned.

Jon Day: Yes, as Chair of the Joint Intelligence Committee we have an audit process which tests the judgment retrospectively. It's an annual process, but some of the issues don't become clear over a single year, so we have a flexible process which audits how effective and accurate our judgments have been.

Q159 Mr Evans: Forward thinking, horizon scanning, whatever you call it, seems quite sensible. Do you think the system really works? What changes would you like to see and how can you effect that?

Dr McCafferty: Again, from my perspective—we can argue about timeframes and whether what we do is really horizon scanning—I think that the process of using experts across Whitehall, using chief scientists, identifying the risks and then assessing them against likelihood and impact, allows you to put local responses in place so that you can deal with disruptive challenges as and when they arise, not necessarily involving national Government unless it is a wide-ranging issue. I think that that works. We talked earlier about barriers and we mentioned stovepipes as potential barriers. Dealing with things in a risk-management way allows us to see the stovepipe as a risk. We can't remove the stovepipes, but by working across Government as much as possible, by bringing in experts from across Government wherever we can, we can minimise the risk of stovepiping and encourage Departments to see their role in other Departments' risks and crises.

Q160 Mr Evans: I don't know whether this ever came across your desk, but the Icelandic volcano grounded a lot of airplanes wherever they were. Yet we have had Icelandic volcanoes go off since, when that hasn't happened. Is that because something was learned from decisions that were made in the past?

Dr McCafferty: I was at the Ministry of Defence at the time, so was involved in that process. There has been an improvement in our ability to predict where the ash plumes will go. The risk of volcanic eruption is in the national risk assessment. In part, it is about better prediction of where the ash will go and at what concentrations, but one of the key changes is that, until the volcanic eruption in 2009-10, the engine manufacturers had a zero-tolerance

approach which the airline companies disagreed with. They felt that flying in a certain level of ash was safe. At that time there was an agreement that we would move away from zero tolerance and there was a limit of ash concentration that was safe to fly in. That is what has changed the whole situation with volcanic ash.

Q161 Mr Evans: I am really interested in this. Is it that the people who are affected by the decisions you are making have a greater input and that people will listen? Because, clearly, there was a massive cost to the airline industry and to the people who were affected by the grounding of the aircraft.

Dr McCafferty: At the time it was run through the Cabinet Office Briefing Room, the emergency response committee, and the people who needed to be there were included. The Department for Transport had the engine manufacturers and the airlines in communication to drive what was quite a major change for the engine manufacturers. More recently, when we had the floods last year—again, this is more response than horizon scanning—because of the number of issues around rail travel in the south-west, Network Rail was involved in a number of the meetings.

Chair: We must move on.

Q162 Sheila Gilmore: I want to turn to civil contingencies work. We have covered some of this, but can Dr McCafferty tell us to what extent the civil contingency team works with the horizon scanning and foresight teams? Do you have examples of how that works in practice?

Dr McCafferty: Sure. We have a number of documents that we produce for Government to keep the expertise, so the national security risk assessment is a zero to 20-year document that we produce every two years. This time it will support the national security strategy. Within that document we have looked at the trends, as I have said already, from DCDC, and we have worked with the experts from around Government to identify the risk scenarios. The joint intelligence organisation that Jon runs is helping us assess the likelihood of those risks so that we can inform the risks that face the United Kingdom in that time scale, to inform the national security strategy.

The national risk assessment is a nought to five-year document, which we use to provide the planning guidance for the local level. The risks in that document are assessed against likelihood and impact. Likelihood: we bring together the chief scientists, the natural hazards partnership. For natural hazards you can look at past incidents and you can have a prediction of how vulnerable, or how likely they are in the future; but we also look at the economic impacts. We look at the social impacts. For those documents we bring in academic experts: the economists from around Government, the behavioural scientists from around academia. So at both of those levels we plug into cross-Government work that goes on to support our assessments.

Q163 Sheila Gilmore: The public, and I suspect the media as well, are always on one level going to be back-casting—in other words the judgment is what happens or does not happen. Do you make any effort in that respect to provide information about both levels and likelihood of risk, and how do you think as members of the public we can understand that process better?

Dr McCafferty: The documents I have talked about up until now are classified documents. They go into detail about the vulnerability that the UK feels it faces; but we do publish an unclassified version—the National Risk Register—which is on gov.uk. There is an obligation under the Civil Contingencies Act 2004 for local authorities and category 1 responders—police, fire and ambulance—to explain the local risk picture and the incidents and disruptive challenges that people might face in their own area.

I think it is difficult to get the man in the street to think about it until the incident has already happened, and it is a constant challenge for us to try and put that information out there. So, as I said, we do it by unclassified documents. There are a number of websites: the “Get Ready for Winter” campaign, which is all about informing people about the potential for accidents, and trip hazards, and things that happen during the winter—how they can stay warm. That is cross-Government, with the Met Office, the Department of Health, civil contingencies. All of these things: we are trying to put information out.

Q164 Chair: Can I just ask you about who does your mathematical modelling and probability analysis on things like tidal surges, and how is that peer-reviewed?

Dr McCafferty: That work will come from the natural hazards partnership, which is a group of scientists from the Environment Agency, the British Geological Survey, and is peer-reviewed. It is the same models that the Environment Agency would use, and it is peer-reviewed in that way.

Q165 Chair: So we had one major tidal surge in December last year on the east coast of England. What does a single incident like that tell us about the probability of future incidents?

Dr McCafferty: Arguably it is not just the single incident. We know a lot about tides.

Q166 Chair: The right answer is nothing at all.

Dr McCafferty: Well, a single incident will not tell you anything about future predictability, but we have more than just a single incident from December last year. There are high tides a number of times through the years.

Q167 Chair: So how are the high tide people, doing that work, peer-reviewed by people who are not in that world, in order to verify the quality of their work?

Dr McCafferty: The work is carried out by the Flood Forecasting Centre, which is a combination of the Met Office and the Environment Agency.

Q168 Chair: How is it independently peer-reviewed? Or is it just peer-reviewed by people who are already in the know and in the met world?

Dr McCafferty: There are a lot of climate change and weather scientists, so a lot of the material is independently peer-reviewed through scientific publication.

Q169 Sheila Gilmore: Would you say that there are any gaps in your readiness or contingencies?

Dr McCafferty: That is the eternal question and something that we do a lot of work on to try and identify things. Every two years, we carry out what we call the national capabilities survey, which is a survey of all the category 1 and 2 responders in the country. We ask them questions about the resilience planning assumptions that I talked about, such as whether health services have major incident plans and whether they are exercised. We gather all that evidence. The capabilities survey has just closed and we are in the process of analysing the responses, which is how we make an assessment of where the gaps are.

Q170 Sheila Gilmore: To some extent, this is where there is a link to other groups that are looking forward, because establishing where there is a gap is often something that only becomes apparent afterwards. How do you avoid the possibility that you are busily planning away for something that isn't going to happen and that something else may be coming up the side? This is a long-ago example, but my dad was trained during the war for fighting in snow. He did winter training for about three years and then got sent to Holland where he was wading through dykes and things, so he always thought that that was a complete waste of time. How do you establish gaps without waiting to see what happens?

Dr McCafferty: It is an up-and-down approach. As I said, we have the national capabilities survey, planning assumptions and capability assessments. I mentioned that we try to look at the common consequences of the scenarios, so there are several scenarios that will lead to mass fatalities and several that will lead to mass casualties. We look at the reasonable worst case and give some planning assumptions to the local level and then ask them whether they have plans in place to deal with them.

Q171 Chair: I mentioned grey swans. Isn't Ebola a classic grey swan? We knew that there was Ebola in Africa and we have enough epidemiologists and statisticians to tell us how Ebola is likely to spread in such a country, and yet the western world waited and did very little until Ebola became a major crisis that might even create deaths in our own countries. We are now spending billions trying to help those African countries contain the Ebola crisis. Why didn't we respond much earlier?

Professor Dame Sally Davies: Clearly, we knew about Ebola. It was in east and central Africa, but no one knew before this outbreak that it had moved to west Africa, probably in monkeys and bush meat. There was slowness from everyone, including the WHO and our international partners, to recognise how bad the outbreak was, because—

Q172 Chair: So was nobody saying, “This is very serious. We have to respond to this much more quickly than we are”? People must have been saying that.

Professor Dame Sally Davies: Yes, but what we expected to happen was the same as in the Democratic Republic of the Congo, where it starts in villages and they isolate it and contain it and it doesn’t spread. The countries involved were given that advice, but did not heed it in a way that had an impact, so it became out of control and from April we had people on the ground from Public Health England looking at what was needed, supporting and advising. DFID sent someone out at much the same time. We have been responding well.

Q173 Chair: I am sure we have and am not trying to challenge how we have responded as it has developed. What I am interested in is the methodology in Government that clearly was at fault. Was there a failure in the analysis and assessment of what would occur?

Professor Dame Sally Davies: No.

Chair: Or are we saying that we are simply a victim of what we could never have known?

Professor Dame Sally Davies: We did not expect it, but the minute it was diagnosed, it comes up on various databases, which are scanned weekly. We were aware, through Public Health England, which scans them—horizon scanning—of the cases, the incidence and the rise.

Q174 Chair: Okay. What do we learn from this admittedly retrospective and after-the-event analysis about how we analyse this kind of problem so that, next time, we are not behind the problem, but ahead of it?

Professor Dame Sally Davies: We clearly need reform in the WHO.

Sheila Gilmore: Can I ask if it’s political?

Chair: Can I just bring in Jon Day on this question? Then I will bring you in, Sheila.

Jon Day: The Joint Intelligence Committee has a “countries at risk of instability” process, which identified the countries we are talking about as potentially vulnerable to things like disease. What we have not done—this, I think, is a lesson we do need to learn—is to link in with what is happening on the health side to be much more detailed about the things that can provoke instability in countries of that kind.

Q175 Chair: Isn't this an example of where the assessment of atomised risks fails? The epidemiologists might not have understood that the political situation in Nigeria, for example, is very different from that in the DRC, or that the societal behaviour is very different—the economy is fast developing, and people have much more mobility. That compounded the epidemiological risk, but it might not have been understood by people who are not from policy backgrounds.

Jon Day: From my perspective, we have responded well, but as far as the stability of the region is concerned, we have been behind the curve, so I think you are right that—

Q176 Chair: So it is about synthesising these different bodies of knowledge. Isn't the problem in the risk register that we do not synthesise these analyses and produce a comprehensive risk assessment?

Dr McCafferty: Certainly, when Ebola broke, we had the forward look from March and April, and we were meeting across Government. I think it's the scale of the problem—

Q177 Chair: Okay, so what have we learned from this that can help us to improve our horizon scanning capability?

Professor Dame Sally Davies: I don't think our horizon scanning has failed. The issue is, at what point should outsiders have done things in those countries? The WHO only called this as a public health emergency—

Q178 Chair: Dame Sally, I have to press you on this. We failed to comprehend how the disease was going to spread in west Africa. What was the failure? We know a lot about Nigeria: it's a big country, and it's an important emerging economy. What did we not understand that we should have understood or could have understood if we had analysed this properly?

Professor Dame Sally Davies: I think that's what I am trying to explain.

Chair: I beg your pardon.

Professor Dame Sally Davies: We did analyse it effectively, and we saw what was going on, but we did not—it may be that we should have discussed it with the Joint Intelligence Committee—do more than give some support on the ground and advice until the WHO called it as an emergency.

Q179 Sheila Gilmore: My question, which is linked to this, is about the degree to which there is a political failing in the way in which we structure this decision making. The Ebola story was around, although in a sort of background place. Some people were aware of

it; they were beginning to talk about it and to ask why something had not been done. Is the failing not that it was not on your radar, but that it did not get into the political system?

Chair: Jon Day, is this a fair question for us to press you on?

Jon Day: I think it is a fair question, but there are two separate sets of issues. One is the health issue, where I agree entirely—I don't think this was a failure of horizon scanning. I think we need to look at our processes in Government to make sure they're as joined up as they should be so that there is a degree of integration between the work that goes on on the health side and the downstream work that we do on the implications for stability.

Q180 Chair: When did the JIC—what we call Cobra in the slang, which I hate—or the National Security Council first discuss Ebola?

Jon Day: I can't give you exact dates now, but I can write to you with them.

Q181 Chair: That would be very interesting; I would be very grateful to receive that information. But my guess is “too late”.

Jon Day: Probably not, actually.

Q182 Chair: Although without the right analysis and assessment.

Dr McCafferty: It was 7 August.

Chair: Too late.

Q183 Paul Flynn: Isn't it true that the history of the WHO is that when it is confronted with a situation that will make it huge profits from rich western people, it moves at the speed of a striking cobra, but when it involves poor people in Africa who can't buy expensive medicines, they move at the speed of an arthritic sloth?

Professor Dame Sally Davies: I disagree. On this occasion, it expected the African regional office to take control and sort it out once it involved more than one country; the African regional office did not. Therefore, Geneva had to come in and, sadly, because of that time lag when the African regional office should have done it, and it has significant funds, we lost time in those countries. But from the UK security perspective, 8 August was fine; from the perspective of those countries and what we could do to support them, it was late.

Q184 Chair: That is very candid. I am very grateful for that, because I think we can make recommendations around that, which will hopefully enhance the capability. Just on DCDC, Admiral Kingwell, why do you think that yours is the only one that looks as far ahead as 2045?

Rear Admiral Kingwell: I think it is probably as a result of the fact that defence is quite unusual in terms of its long-term spending plans, i.e. the equipment that it buys, or procures or thinks about procuring now won't come into service for six or seven years, and it will be in service for 30 or 40 years. That probably was the spark to do that long-term work.

Q185 Chair: This is a very defence-oriented panel, and defence tends to get tarred as, "Oh, these boffins who think they know everything come and tell us in other Departments what to do." But how can your methodology and perspective better infect other Departments and stimulate their thinking? What are you doing in that regard?

Rear Admiral Kingwell: I would point to the fact that this is the fifth edition of Global Strategic Trends, and this year we have had a level of cross-Government and cross-Department buy-in that has been, in many ways, groundbreaking in comparison with previous editions. Every Department has been involved in the work and having produced it, it has been a case of giving it wide briefing and exposure. We published Global Strategic Trends and we briefed the Joint Committee on the National Security Strategy; we briefed Jon Day's Horizon Scanning Oversight Group, or GOSH; we briefed the Permanent Secretaries; and every Department has had copies of the work.

However, what is equally important is the reputation of the work itself and we have achieved that via our extensive network, but also through international peer review, of course.

Q186 Chair: Can you tell us about strategy forum? What is it and what is it intended to achieve?

Rear Admiral Kingwell: Certainly. On behalf of the Chief of the Defence Staff, I run a new strategy forum, which meets three times a year. It brings together mid-seniority—in military parlance—one-star decision makers, i.e. the future thinkers. It also brings together thinkers from academia and industry, specifically to challenge the normal military thinking. And it also brings together identified potential future thinkers at Lieutenant-Colonel-type level who the services and the civil service have identified as being possible big-issue thinkers in the future.

Q187 Chair: But how do you involve other Departments?

Rear Admiral Kingwell: Other Departments are absolutely included.

Q188 Chair: Who sets the questions for discussion?

Rear Admiral Kingwell: The Chief of Defence.

Q189 Chair: Jon Day, why don't the Cabinet Office, or you, or the Cabinet Secretary, set some questions for this cross-departmental forum, for them to investigate and discuss?

Jon Day: John is hiding his light under a bushel. What happened in the last year has been a step change in terms of engaging effectively with the rest of Government as far as DCDC is concerned. It is fair to say that until the last year, most of Government had no idea it existed; they probably had no idea that DCDC existed. We have been able to use the horizon scanning machinery not only to brief but to inject what John's organisation is doing into the mainstream of planning across Whitehall. That is in large part because what John does goes well beyond defence, and it is now recognised that this is something in which the wider community needs to be involved. Part of that—we have discussed this—is the extent to which wider Government can task John's organisation to cover the sorts of things you are talking about. I see the horizon scanning structure as the vehicle for doing that, but there is a much greater degree of enthusiasm this year because people now understand what John can provide.

Rear Admiral Kingwell: On those specifics, I think it is an excellent idea. I will talk to Jon Day after the meeting about cross-Government agenda items.

Q190 Paul Flynn: Professor Michael Clarke gave evidence to us. He described the work of DCDC as distinguished, but he said that Governments do not take much notice of it. Parliament was faced on 29 August 2013 with going in to attack Assad—the deadly enemy of ISIL—with all guns blazing, but just over a year later we are going in to attack ISIL, which is the deadly enemy of Assad. What was DCDC's advice in those two situations?

Rear Admiral Kingwell: I suppose the first thing to say is that there is an interesting distinction between the thinking in *Global Strategic Trends out to 2045* and our report on the future operating environment in 2035, which gives the context for strategic policy makers and decision makers. I provide the context to inform their decision making. I think the space you are going into is, "What do the decision makers and policy makers advise Ministers and others?" That certainly isn't what I do. I provide the context.

Q191 Paul Flynn: Perhaps I could ask Mr Day the same question. What would your advice have been on attacking Assad?

Jon Day: I'm afraid that my advice is classified.

Q192 Paul Flynn: Okay, but you do have sessions where you assess your decisions over the last 20 years. They must be painful sessions when you have to have a look at a background where we made disastrous decisions on defence over the last 20 years. It is difficult to think of a good decision that we made.

Jon Day: My role, as defined by Lord Butler, is to provide all-source intelligence advice to Government. It is then for Government to decide what they are going to do with that.

Q193 Paul Flynn: You have been cheerleaders for every bad idea. We went into Iraq to chase non-existent—

Chair: Well, the answer is that we do not know, because we don't know what advice he has given.

Jon Day: Except that the advice that I gave last year was made public as part of the process.

Q194 Paul Flynn: The problem is that 632 British soldiers lost their lives because of bad decisions taken by politicians, presumably on the advice of the Joint Intelligence Committee.

Jon Day: We provide an intelligence picture. We do not say what the policy—the so-what—is from that picture. That is not part of my job.

Q195 Chair: Can I just ask John Kingwell about that very briefly? You mentioned the future operating environment, which is a publication you are about to produce shortly. What utility does that have for the rest of Whitehall? How should the rest of Whitehall use that document?

Rear Admiral Kingwell: The starting point was *Global Strategic Trends out to 2045*. We have done further analysis to try to capture what the operating environment will be in 2035, based on the evidence that we have gathered.

Q196 Chair: Why does that matter in the Department of Health or the Department for Communities and Local Government?

Rear Admiral Kingwell: The reason it matters is that, because of globalisation and the nature of the world in 2035, virtually no security and defence challenge will be addressed simply by the armed forces and defence. We are highlighting a whole range of issues that will require cross-Government thinking at least. To give you a feel, because of globalisation we assess that the world in 2035 will have a level of complexity that means that we really need to invest in understanding the world and our own critical vulnerabilities—that is not purely defence.

We also highlight, because of the overlapping trends between climate change, demographics and urbanisation, that there is going to be an increase in humanitarian disasters in that time frame. Again, the UK's role in addressing those disasters is not purely defence. We highlight three areas of technology, and here there are opportunities in our work, as well as threats. In the technology area we highlight the potential importance of unmanned autonomous systems, additive manufacturing—3D printing—and other new materials which, again, have implications not just for defence.

The other area that is key is agility. We have highlighted that the rate of change of some of these trends will be so fast that the apparatus of Government will need to be agile in its approach to addressing them, in terms of defence or procurement. There will be implications across Whitehall and internationally. It certainly will have implications across Whitehall.

Q197 Chair: My last question—we have taken longer than we should have done, but it has been fascinating—is to ask how important it really is that the output you all produce is for public consumption. Should you be doing much more for the private consumption, not just of Ministers but of the permanent and impartial civil service—particularly at the level of permanent secretaries, who give advice to Ministers—so that they are capable of providing long-term thinking, even when Ministers are dealing with short-term pressures, so that Ministers are being given the long-term strategic context in which they have to make whatever decisions they are making? How important is it that you do more work that is below the radar?

Jon Day: My personal view is that the work we are talking about essentially is for Government and is therefore, as you say, not just for Ministers but for senior officials. We now have in Government more and more effective fora for doing that. The key requirement is to be able to brief Ministers and senior officials about, as you pointed out repeatedly, some very complex issues. However, that should not mean that in the majority of cases the material cannot be made public as well.

Q198 Chair: Is the category of advice to Ministers sufficient protection for officials to give this advice, or does some of this non-security, non-defence, non-Foreign Office stuff actually require a higher degree of protection, so that frank and sensible advice can be given?

Jon Day: I think you are now moving into the territory of freedom of information, which is not our responsibility.

Q199 Chair: I am just asking you how restrictive it is. How does freedom of information inhibit your capacity—do you think before you give advice?

Jon Day: My personal view is that there is no distinction between horizon scanning and other policy work—the constraints are the same.

Q200 Chair: So it is all advice to Ministers?

Jon Day: Yes.

Q201 Chair: Do you agree that we should encourage you to provide more advice under the radar, particularly to permanent secretaries, not just Ministers?

Jon Day: I am not sure I would use “under the radar”, but with that constraint, yes.

Q202 Chair: Plenty of the risk register is not published anyway, is it?

Dr McCafferty: The underpinning analysis of the national risk assessment is not published but the overarching risks are published in the National Risk Register.

Q203 Chair: Is there anything anyone else wants to add?

Rear Admiral Kingwell: There was one thing I did not mention a few moments ago, when you talked about grey swans. I would highlight the fact that *Global Strategic Trends* highlights the number of swans. Pandemics, catastrophic climate change and rapid medical advancement could be game changers. Global financial collapse, major sectarian conflicts and the potential collapse of a major power are all in there, just to stimulate policy makers’ thinking.

Chair: How cheering. Thank you very much indeed. We will now end our evidence session.