

Public Accounts Committee

Oral evidence: Nuclear Decommissioning Authority, HC 1375

Monday 16 July 2018

Ordered by the House of Commons to be published on 16 July 2018.

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Members present: Meg Hillier (Chair); Sir Geoffrey Clifton-Brown; Chris Evans; Caroline Flint; Anne Marie Morris; Lee Rowley.

Sir Amyas Morse, Comptroller and Auditor General; Adrian Jenner, Director of Parliamentary Relations, National Audit Office; Zaina Steityeh, Director, National Audit Office; and Marius Gallaher, Alternate Treasury Officer of Accounts, HM Treasury, were in attendance.

Questions 1–144

Witnesses

I: Alex Chisholm, Permanent Secretary, Department for Business, Energy and Industrial Strategy; David Peattie, Chief Executive Officer, Nuclear Decommissioning Authority; Mark Russell, Chief Executive, UK Government Investments; and Paul Foster, Chief Executive, Sellafield.

Report by the Comptroller and Auditor General

The Nuclear Decommissioning Authority: progress with reducing risk at Sellafield (HC 1126)

Examination of witnesses

Witnesses: Alex Chisholm, David Peattie, Mark Russell and Paul Foster.

Q1 Chair: Good afternoon and welcome to the Public Accounts Committee on Monday 16 July 2018. We are here today to look at the work of the Nuclear Decommissioning Authority, particularly at Sellafield. As a Committee, we have been looking at progress at Sellafield for a few years, and we really want to look in depth at what progress has been made and what challenges and assessments are being made by both the Nuclear Decommissioning Authority and Sellafield Ltd and, of course, the sponsoring Department, about the progress of the work, what could be done to make it move faster and how you are watching the costs, because obviously this is a hugely expensive programme of work for the taxpayer, with billions of pounds being set aside to do the absolutely essential decommissioning work there.

I will say whom we have as witnesses. Paul Foster is chief executive of Sellafield Ltd. Paul, I think you have been there for just over a year. Is it 18 months?

Paul Foster: No, I have been in charge of Sellafield for three and a half years.

Chair: Sorry, I'm getting mixed up. We went to visit, and one of your colleagues, I think, had been there only a year. Forgive me.

David Peattie is chief executive of the Nuclear Decommissioning Authority. Remind us how long you have been there.

David Peattie: Since March last year.

Chair: So it was you I was thinking of. Sorry, Mr Foster. I knew one of you had been in post for about a year and a half. Then we have Alex Chisholm, who is the permanent secretary at the Department for Business, Energy and Industrial Strategy—the sponsoring Department for Sellafield Ltd and the Nuclear Decommissioning Authority. Mark Russell is the chief executive of UK Government Investments, where he keeps an eye on the work done there and the companies' involvement. He is watching the Government investment in that respect. We are going to kick off with Sir Geoffrey Clifton-Brown. Over to you, Sir Geoffrey.

Q2 Sir Geoffrey Clifton-Brown: Good afternoon, gentlemen. I note that your foreign reprocessing waste brings in £1.5 billion. It is made up of



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50% Japanese, 25% German and 25% other—Italian, Spanish and Dutch. Is it really cost-effective, Mr Peattie?

David Peattie: Well, it has been. Reprocessing of foreign companies' spent fuel has been very lucrative for the UK over the years. It has brought in well over £10 billion of foreign revenue. As you know, the history of THORP goes back 40 years. By the end of this year, we will be closing THORP. Once we have completed all the contracts, many of which have been in place for decades, we will move to close the other reprocessing plant in 2020. It has been good value for the taxpayer. It was a unique skill that the UK had, particularly at Sellafield. It has been a good earner for the country, but now the world has changed and there is a different market situation. We can now focus Sellafield on storage, broad-front decommissioning and some of the other really important things it has to do, other than reprocessing fuel.

Q3 **Sir Geoffrey Clifton-Brown:** Has it left us with any legacy issues—I am not an expert in this subject—or, once it is reprocessed, is that the end of it?

David Peattie: It does leave material behind. Perhaps Mr Foster can comment on the detail, if you would like to hear more.

Sir Geoffrey Clifton-Brown: Please do, Mr Foster.

David Peattie: I just want to emphasise that the vast bulk of the material at Sellafield relates to UK activity in the civil and military programmes, stretching back 60 years.

Q4 **Sir Geoffrey Clifton-Brown:** Do you want to comment on that, Mr Foster?

Paul Foster: The THORP reprocessing is effectively a closed cycle, whereby, in almost real time, the waste created by the reprocessing of the fuel is turned into various waste forms. That waste form is, by contract, returned to the customer. We ship that residue back to the customer, and the NDA receives a revenue for doing that. When the reprocessing is concluded, it will be turned into an appropriate waste form and returned to the customer.

Q5 **Sir Geoffrey Clifton-Brown:** While you are on your feet, metaphorically, can I ask you two more technical questions? What is going to happen to the military waste? Is it going to come to Sellafield for reprocessing? When is that likely to happen? We heard in our previous hearings on nuclear enterprise that there are all these submarines tied up at Devonport. What is the Government doing about that, and when is it going to come to Sellafield?

Paul Foster: I will just make a point of clarity, and then I will pass over to people who are better informed. We do not have the capability to reprocess nuclear submarine fuel. Our receipt of any fuel is for storage purposes. We do not have reprocessing capability for submarine fuel.

Q6 **Sir Geoffrey Clifton-Brown:** Sorry, could you clarify that? Where are



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the fuel cells from the submarines going to be reprocessed?

Paul Foster: We store the fuel cells at the moment, but the decommissioning is a matter for elsewhere. We do not have the ability to do anything other than store the material until a future purpose is determined for it.

Q7 **Chair:** And that includes the hulls of the submarines as well?

Paul Foster: Sellafield is not going to be used for the decommissioning of the submarine entities. We receive the fuel at the moment.

Q8 **Chair:** The thing is, only a handful have been defueled, and one has begun the decommissioning.

Paul Foster: We have been a site for receiving spent fuel from submarines for some decades. It is not reproducible by our processes, so we store it until it is determined what to do with that.

Q9 **Sir Geoffrey Clifton-Brown:** What worries me about all of this is that it delays the problems until tomorrow, and in some cases very much until tomorrow. You will not reprocess the Magnox cores until 2071, on the basis that, by that time, the half-life will have reduced the radioactivity and the costs of decommissioning them will supposedly be less. Can you comment on that? Why are we delaying all these problems until tomorrow, rather than getting on with them?

David Peattie: The first thing we are doing is focusing on the highest-hazard risks at Sellafield, which go back 70 years in some cases, and particularly those that the regulator regards as intolerable. There are five of those—four of the legacy ponds and silos and one of the old plutonium stores. I think we all acknowledge that job No. 1 is to deal with high-hazard inventory. We are making very good progress, as the NAO Report noted. Since 2016, we have removed 70% of the contents of one of the oldest ponds, and we installed a groundbreaking piece of technology last year, which involved putting some steel doors on the silo. That is our first priority.

We then need to grade the other challenges that we face from the existing inventory. We want to bring other material from around the UK into Sellafield, where the expertise is, and then to triage that, so that we prioritise the most important things. We then need a plan for the measured defueling and dealing with the spent fuel from the Magnox reactors, and beyond that the submarines and the new nuclear fleet, which will ultimately need to be decommissioned. It is really about prioritising and dealing with this difficult legacy that we have taken on and that we need to clean up.

Alex Chisholm: Could I just make one point about the timing of the Magnox decommissioning? As you say, it is a way off—the 2070s—and we are looking at whether there are alternatives to bring that forward.

Q10 **Caroline Flint:** Going back to a couple of the answers you gave my colleague, Mr Peattie, you said that you thought that the monies we



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received as part of the reprocessing contracts were a good deal. Could you explain how you determined that, since there is no real active market for these services?

David Peattie: Well, there isn't a market now, but THORP was originally commissioned and approved by Parliament in 1978, and then came on stream around 10 years later—roughly 25 years ago. THORP was built based on customer orders, much like a gas pipeline is built with known throughput. The plant has been active for the bulk of that time, and it has certainly covered its costs and made a good return.

Q11 **Caroline Flint:** I appreciate that it has been active. I am trying to understand how we ascertain whether what we charged Japan, Germany, Italy, Spain and Holland for doing this reprocessing work is a good deal? They are paying us, and I understand that 29% of the £1.5 billion of fuel receipts in these areas have come from this reprocessing work. I am trying to work out how that is a good deal. It might be a good deal, but I am trying to work out how you determined that it is.

David Peattie: Well, it is difficult to benchmark, because not many people in the world do this.

Q12 **Caroline Flint:** Exactly; that is what I said. There is no active market, so how do you know? Should we charge them more?

David Peattie: The first measure to judge by is our costs. We want to set the revenues against what we regard as a fair margin above the cost of doing the work, such that the customers still want us to do the work and do not take it somewhere else. You are absolutely right: it is impossible to say whether we optimised that. However, I think the figures speak for themselves. We have made a good return over that period. Could it have been a little bit higher? Maybe, but at the risk of losing customers, which we really didn't want to do.

Q13 **Caroline Flint:** Mr Foster, my colleague asked about what happens to the waste once it is reprocessed. The acoustics in this room aren't great, but I think I heard that some of the materials are returned to customers. Could you give me a percentage that is returned to customers? I understand that waste products are often effectively mixed together, including with other waste from the NDA's own activities. Could you give me a sense of what percentage of the commercial work is actually returned to customers and what goes into the mix of what we have, which we then have a further responsibility to look after for many decades or more?

Paul Foster: That is an interesting question, and I will answer it in the best way I can. Under the terms of the contracts, we reprocess the fuel and return the activity to the customer. When you are reprocessing, you create uranium and plutonium. You create highly active liquids, intermediate-level waste and low-level waste, and the volumes increase as you move down the activity. Technically, you should take all that individual waste and ship it over, but that is not really practical, so the NDA negotiated a contract whereby the same amount of activity as was



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created in the waste is returned to the customer in the optimum form—in this case as a residue, which is like a glass block. That is the minimum-volume, maximum-activity vehicle for returning it to the customer. We are well through that return programme, and we can offer details of the programme to the Committee. We are well through it, and that is how we do it. The waste is mixed, but to optimise volumes and security and safety it is shipped back in an optimum form.

Q14 Chair: So the high-level stuff is shipped back, but the low-level waste is more or less kept on-site.

Paul Foster: Yes, it is swapped over. We swap their low-level and intermediate-level waste for our high-level waste, and they receive it back. The activity balances up, but with the volume, we keep the lower-level and intermediate-level waste and they get the highly active waste back.

Caroline Flint: Thank you for that explanation.

Q15 Sir Geoffrey Clifton-Brown: Mr Peattie, for the record, have we stopped taking in any foreign nuclear waste for decommissioning?

David Peattie: I would have to defer to Mr Foster to give you a very precise answer, but the intent, certainly at the NDA, and the run-off this year, is to close THORP and then in 2020 to close all other reprocessing. I believe there is still some—

Paul Foster: Technically, we never received anybody's waste. We received their spent fuel and returned the activity to them. We have not received any spent fuel from abroad for some time.

Q16 Sir Geoffrey Clifton-Brown: Has everything we took under those contracts been reprocessed and whatever residue returned? It seems quite technical as to what was returned.

Paul Foster: Again, in the interests of being as open and simple about this as I possibly can—forgive me if I get a bit technical, and please pull me up—we are in the last remnants of the THORP operations and, as David rightly says, we conclude in November of this year, come hell or high water. We have done everything we need to do to be strategically correct going forward. However, the more material we can process in that window, the more opportunity it has to create space for storage or for other options for the Government. There is an element of revenue opportunity in that too, which can be recovered. Over the next few months, we have the opportunity to optimise the reprocessing schedule to the maximum benefit of the NDA. Some of that material is of foreign origin, but to optimise economics we have done swaps of title with some of our material, to ensure that the economics and the returns balance off. This is perhaps not quite the forum in which to describe some of the details of that, but we can offer full disclosure of those details from here on in. To answer your question specifically, the point is that at the end of this we are still reprocessing some material that has been of foreign origin, but the title swaps are a matter of a little more complexity in that space.



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- Q17 Sir Geoffrey Clifton-Brown:** Perhaps the Committee could have a note on this please, Mr Peattie. That would be really helpful. It is quite complicated.

David Peattie: I am happy to provide that.

Sir Geoffrey Clifton-Brown: I am interested in your reply on risks. Clearly you are trying to prioritise the most risky materials. Perhaps I could take you to page 35 of the NAO Report and ask you to comment on all the high risks in the three tables on pages 35, 36 and 37. Let us take them in turn. At the beginning of miscellaneous waste retrievals there were milestones set, and they are still regarded as very high-risk. Could you tell us whether that programme is on time?

David Peattie: Yes, it is. This primarily relates to the ponds that have been in place for many decades. Members of the Committee who have visited and seen these ponds will have seen the great progress in the last two years in clearing out those ponds, using new technologies—some of it from the oil and gas sector, where I spent my career—remote-operated vehicles, underwater technology and some new technology. There has been good progress there. There is still a lot to do. It will take several more years before one of the first ponds is clear. Then we will have to slowly lower the water level and ultimately decommission that concrete surround. This is, as we are all learning, something that will take many years and, in some cases, as you have noted, many decades. But that first one is making good progress in clearing out the ponds.

- Q18 Sir Geoffrey Clifton-Brown:** I am a complete amateur to this project, but I have a suspicious mind. You make great play of 70% of ponds being emptied. Is that 70% the easiest bit, or is it real progress?

David Peattie: I think it is both, probably. It is starting off in a very cautious way. We are building skills, and the team is getting comfortable in understanding the inventory. It is not that many years ago that the material in the silos and the ponds was still quite unknown. We now have the best understanding that we have ever had of what is in these containers. You will see that the nuclear provision has tailed off over the last few years. I think that is perhaps an indication that we can now start to get our arms around this problem. We are starting now to put in place a deliverable programme of work, rather than just looking at something that was for a while—maybe for a couple of decades—deemed an insurmountable problem. Necessarily, it starts with the easiest. Everything is super-cautious in the nuclear industry, and rightly so. But it is also genuine progress. For some of the ponds, in the next couple of years, we will see the rest of it really cleared out in a much reduced-hazard way.

- Q19 Sir Geoffrey Clifton-Brown:** As with all of these things, the cost overrun has been huge. It has gone from a few hundred million pounds to £1.5 billion or thereabouts, I believe.

David Peattie: I am not sure which specific—

Sir Geoffrey Clifton-Brown: On the silos and the clearance.



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David Peattie: It certainly increased by a significant amount. Whether it is as high as the figure you quote, I would need to check. I am not here to suggest that it has been done to the original cost and budget. It certainly has not. It has cost a lot more than we originally forecast.

- Q20 **Sir Geoffrey Clifton-Brown:** With all these things, it always seems that the forecasts are a lot more than what was originally budgeted. Since 2015, you have made great improvements. Do you think you have a better handle on these costs, and can we rely more on the forecasts that you are giving us now than we could in the past?

David Peattie: Yes, I think you can. There was a change in the very helpful NAO Report—I thank the NAO, because we found this Report hugely helpful. It has given us some great insights to make the NDA even more effective at what we do. You are absolutely right, the cost forecasting is improving. In the trend since 2015 that the NAO has looked at, you can see that the cost estimates are less high than they were for the projects that we have. But it is far from perfect. We still have a long way to go, and some of the projects, because of the difficulty and the unknowns that we are dealing with, will necessarily increase in their forecast. I would make a distinction between an overspend and a change in the forecast. Certainly, some of the big estimates we are making now are for moneys that have not yet been spent and we are simply—or perhaps complicatedly—increasing the estimate of the future spend.

Alex Chisholm: Could I add a little bit, to try to give a perspective on this? For many years—decades, even—there were no retrievals from the ponds at all, so the estimates that were made were necessarily quite conjectural. There was not really an agreed methodology for how to access nuclear material—radioactive material—from the two silos. There has been incredible progress since 2015-16, in that one of the ponds is mostly clear now and in the other one retrievals are under way, so we now understand what is in the rest of the pond. For both of the silos, they have actually managed to install the equipment to begin mechanically removing it, with the steel doors on either side.

- Q21 **Chair:** We went and visited a year and a half ago. How does your Department assure itself that the estimates or forecasts of the NDA and Sellafield Ltd on this are in the right space? I ask that because for a long while it was seen as just this big, difficult thing to deal with, and there was a lack of detail. I think lots has changed, and we recognise that progress. You have a very small team, Mr Chisholm, in your Department as the sponsor body. How are you assuring yourself that the NDA is on it, because that is your job?

Alex Chisholm: Yes, indeed. First of all, like the Committee itself, we take great comfort in the fact that, for the first time now, the estimates of those costs have begun to stabilise. As the Report rightly notes, most of the projects are now coming in largely on budget and to time, and the amount of the overshoot that was previously forecast, which was about 60%, is now down to 29%. If we keep up that rate of progress, we will end up with something that is really running on budget.

I also think there is a very different type of cost estimating here compared with some other projects we are responsible for, because nearly everything that has happened here is the first of a kind—it is absolutely at the cutting edge of technology and engineering capabilities, and it is a uniquely difficult situation where you cannot afford to take any risks at all.

So at the early stage of a project, what I have seen is that, at the design stage, it is quite conjectural; there is a very broad range of costs. It is only when you get into it that those costs begin to narrow down to a range, and most of the projects are now pretty mature, which is why we are now able to have a much higher level of confidence in what they're doing.

Obviously we go through every major project with them closely, both ourselves and through the UKGI, but that is where we are drawing the assurance from.

- Q22 **Sir Geoffrey Clifton-Brown:** Just to follow the Chair's question, you have a very small team of relatively junior people managing this vast Government expenditure and vastly complex operation. Do you think your team in the Department is sufficiently senior to be able to deal with that?

Alex Chisholm: I think it is, and actually I would not underestimate either its level or the quantum of resource we bring to bear on this. You are right that within the Department we have our own team to do this, but we are also able to draw on the resources of UKGI, which has a dedicated team that is very experienced—they have been at this for a number of years. We can also draw on the Infrastructure and Projects Authority, which has done eight reviews of this body even in the last two years for us, particularly in the post-Magnox inquiry cases, which is a situation with an enhanced level of scrutiny.

- Q23 **Chair:** Can your sponsorship team escalate things up to the IPA? Are the IPA doing that at the behest of your team, or are the IPA doing it because it is a big project? Where's the relationship?

Alex Chisholm: Yes, we identify projects that we think are suitable for the IPA's additional scrutiny. It tends to be the largest and most risky ones.

- Q24 **Chair:** So basically, your sponsorship team hasn't got the capabilities, but it knows where to draw them in from.

Alex Chisholm: We have some of the capabilities; UKGI has as well. In addition, we can bring in the IPA, the commercial team and the Cabinet Office, and the Treasury also gets involved. So there is no issue of there being a lack of assurance and governance available across Government to make sure this is happening.

We are very conscious in doing that that we do not want to be too much the dead hand of bureaucracy; we have to make sure that the people on the ground actually doing the work feel they can deliver the mission and are not spending all their time completing assessment forms for the rest of



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Government to be comfortable with what is happening. A balance has to be struck there, and we are quite happy with that balance.

Nevertheless, especially after Magnox and after one or two of the other overspends we have seen, we are very keen to try to use both this Report, the Report that the Committee gave us after the Magnox inquiry and the upcoming Holliday inquiry to see if we can adjust the balance of governance again, to make it even more effective and even clearer and better understood than before.

Chair: We will come on to that a bit more later.

- Q25 **Sir Geoffrey Clifton-Brown:** A lot of these projects have very long tails, so it's very difficult to get a handle on the costs, but do you, as the accounting officer in the Department, feel that you have got a better handle on the costs now than was previously the case? As the accounting officer talking to the Treasury, are you relatively confident of the requirements you're going to need from Treasury?

Alex Chisholm: Yes. The situation really is transformed from what it was three years ago. Having said that, new developments do come in, some of which the Report mentions in relation to plutonium—that's a relatively less understood issue. The full costs of that have not been fully estimated and there are some other projects that, again, are at a relatively early stage. But most of the projects are now understood and most of the legacy has been very well mapped out, and they are actually engaging with the business of making them safe. So, I would say that our confidence level has gone up considerably in the last three years.

- Q26 **Sir Geoffrey Clifton-Brown:** Okay. Mr Peattie, could we go on to the second of those high risks, beginning with "full inventory retrievals", and get your view? I am back on page 35 of the Report. I get worried when I see these high-risk things, but the more one understands it, maybe one isn't quite so worried. Can you just tell us whether that's on time? The latest forecast date is 2022.

David Peattie: Yes, it is. Good, steady progress is being made there, day in, day out, on the skills, the quality of the workforce, getting familiar with the repeatable tasks that need to be done, and bringing in the new technology and equipment that can actually deliver it. One hopes that, as the learning curve improves, the skills and the familiarity with the task mean it will become repeatable. As Mr Chisholm said, we are still in the very early stages. This is the first time that this has ever been done.

- Q27 **Chair:** Can I just be clear, because they all had different names when we visited? Is this the one where you have the bit of kit punching a hole in the wall and the sliding doors, to put it in layperson's terms?

Paul Foster: You are almost right. The 2022 risk reduction—

- Q28 **Chair:** Is this the one quoted in figure 13?

Paul Foster: That is the Magnox swarf storage silo.

Alex Chisholm: There are four of them—A, B, C and D. Which one do you mean?

David Peattie: I think you are referring to what we know as the PFCS—the pile fuel cladding silo.

Chair: That is the one—on page 37. I’m just getting my bearings on what I can remember.

Paul Foster: The original purpose of the first Sellafield concept, during the Ministry of Supply days, was to support the cold war. We had two original piles, and a pond between the two. That is the one from which 70% of the inventory has been removed. To answer your question slightly more fully—no, it is not the easiest 70%; it is the order in which we did it. From what was there, all the fuel was taken out.

What was unusual, because it was under the Ministry of Supply, is that we didn’t have a full inventory of what was actually in there. We were dealing with some very interesting isotopes and fuel types and experiments. All the fuel has been removed. We are currently drawing what is, in effect, debris—it’s called sludge, which is unfortunate—that gathered over time because, as you will remember, it is an outdoor pond. That has been pumped out. What will be left in there is a little bit of sludge and what we call furniture, which is the material on which the fuel used to sit. That is being stripped out now. That is being done on time and in full.

In terms of the other areas, what is highly unusual, as Mr Peattie pointed out about the other pond, is that we are making great headway, in that we are removing fuel faster than we thought, through innovating through existing projects. We will come on later to cancelling bits of projects that we no longer need. We are here to be safer sooner, and anything extraneous stops. As David says, when we conceived of these things in the past, we were not quite sure until we started. When we start, we can innovate and we can cancel projects because we can use existing facilities.

In terms of the uncertainty to go, when we retrieved from one pond, the material was easier than we thought, so we went quicker. In the other pond, the material was more difficult, so we needed a higher-rate pump. We had to get in to start that learning. Of the two silos, the pile fuel cladding silo was the original from the Windscale piles, which was a Ministry of Supply area. It was a dry silo with material dropped into it, and it had a poor inventory. We have the doors in the side of there now. We are constructing the capability testing equipment, and next year we will make our first retrieval out of there, which will be early.

Against the last declared date, that is earlier than anticipated. Compared with the original conception back in 2007, it is later than we thought, but in 2007 we were only two years into getting our heads around how to do this. We didn’t know what was in there or quite how to do it, but we were obliged to give an estimate.

Q29 **Chair:** And of course you could go faster or slower, depending on what



the first grab brings.

Paul Foster: Exactly. That is why, as the Report acknowledges, we are making great progress on the critical path to doing the value-adding activity of getting it on there. I am glad you visited so that you could see it. The consequences are well mitigated or managed. We cannot afford to be wrong, so what we need is a lot of statistical significance. The first time you make a grab, you learn and you go, "Oh, it actually behaves like this." You can then finesse what you do and really make progress. Every time we have allowed the workforce actually to start making the progress—rather than it being a design or scientific concept—is when the second kick of innovation has come.

Chair: Various members of the Committee have visited. I think Ms Flint and I have visited twice each. In my case, they were six years apart, so I saw the difference. We probably don't need the level of description that someone—

Q30 **Sir Geoffrey Clifton-Brown:** Yes. If we could briefly go through these high-risk projects, on page 36 the risk level for "Beginning of bulk sludge removal" is, again, "Very high". The latest forecast date is March 2015—has that been completed?

David Peattie: Yes.

Paul Foster: Yes.

Q31 **Sir Geoffrey Clifton-Brown:** That is a part of a pond.

Paul Foster: Yes. That is the very large pond that we have. Clearly, the "bulk" is there because when you are reprocessing material, you have the storage area where most of the sludge is, but you have the other areas which did the processing. Those areas will have a long tail, as you said—you can do the bulk, but the tail will take longer.

Q32 **Sir Geoffrey Clifton-Brown:** Okay. The second of those is "Beginning of bulk fuel removals...Achieved: April 2016", so that has been done.

Paul Foster: Yes.

Q33 **Sir Geoffrey Clifton-Brown:** Right. Finally, "Beginning of bulk retrievals...2019 to 2020"—is that on time?

Paul Foster: That is on time. That is why I just mentioned—

Q34 **Sir Geoffrey Clifton-Brown:** Right. May I then take you to the plutonium canisters? Perhaps, Mr Foster or Mr Peattie, I can ask you what you are doing about these. They seem to be an ongoing problem.

Paul Foster: Yes. It should be said that we are probably the world's experts in plutonium. It is part of our ethos, it is what we were created for, and we have spent decades doing this. Because plutonium generates heat, when you have this for quite a long period of time, there is a need to repackage the containers and one of our projects is bulk repackaging of our materials. What we have seen is that with a proportion, the design life



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of the repackaging we did several years ago may not be what we wanted it to be. So, in advance of the bulk repacking facility being available, we have certain areas that we can convert to allow us to be able to repackage this material in advance of the bulk being available. Yes, it is surprising that these things—the container, not the material—are showing signs of deterioration quicker than we would have hoped, but that is why we have the contingencies, so we will enact them, keep a watching brief and, if we need more contingency, bring that to bear. We enjoy the full support of the NDA, the regulator—

Q35 Chair: You say it is surprising. What, in simple terms, went wrong?

Paul Foster: It is not so much about going wrong. Plutonium was originally considered as a product to be used for a variety of purposes. Therefore, it was stored inside a container. To allow it to be moved out, it was stored inside some plastic, to be sealed, so that there was no contamination on the outside, and put inside another container. These things generate heat and over time the package, like any metal package, will show signs of degradation. So we track this and take the ones that are most affected. Bearing in mind that, because of the nature of our varied reactor types and reprocessing types, our plutonium is of a different nature—

Q36 Chair: Given that the inventory problem is obviously huge across the site, was there a projection for these plutonium canisters? Are you aware of what the packaging was, and were there any projections at the time of the range at which this might deteriorate? There must have been someone doing the maths, working out the temperature and the likely degradation. Were you completely surprised, or was this something within the range of possibilities?

Paul Foster: No, we were not completely surprised. This is why we have contingencies and everything in place. When we did the repackaging of this population in 2011, we thought we might get only about 10 years out of the design, but we would hope to get more like 20, if truth be told. Often, we are very prudent in our estimates, but if it is more in the region of about 10 years, that is not a huge surprise because it is in that distribution of expectation—at the earliest end.

Q37 Chair: So 10 and 20 years are roughly your parameters.

Paul Foster: Yes.

Q38 Sir Geoffrey Clifton-Brown: Mr Foster, this seems to come into my category of putting off things until tomorrow. Instead of keeping repackaging them—and it sounds as though they will need to be repackaged again in 20 years' time—why are we not trying to use this plutonium? Surely there are commercial uses for it. It can, for example, generate electricity in certain power stations, can't it?

Paul Foster: I think that is possibly a better question for someone else. We are the licensing authority, but the strategic authority is to my left.



Alex Chisholm: Yes, that is a policy question. Thank you, Paul. As the Report rightly describes, there are two options for this plutonium inventory, and one is to try to use it as fuel in power generation. But we are not currently doing that in the UK and we do not see a market for it externally. There are various ideas and proposals for doing that, so we do not want to rule out that option, but it is not a viable one at the moment. The alternative is to immobilise material and place it in a geological disposal facility, once that has been constructed. That is a separate one of our biggest projects—again, a long-term project that will take about 20 years to construct. What that means is that whichever option you follow, whether you are trying to use it for power-generating fuel or you are going to store it in a GDF, you want to make sure that it is absolutely the right option—the best option—and that you will not feel regret over it. Obviously, once you put it in a GDF you cannot take it out again, or if you have burned it in power generation you cannot use it for any other purpose. In any case, it will be necessary for the NDA to have a safe storage place for its plutonium, so that is what it is investing in at the moment.

Q39 **Sir Geoffrey Clifton-Brown:** As I understand it, a few years ago a proposal was put to your Department that a Canadian company would build a nuclear power plant that would use plutonium first and then switch over to uranium. Why was the proposal to build a power plant to use up this very dangerous plutonium rejected?

Alex Chisholm: That didn't prove viable, and it was not the only proposal made at the time. I have looked back over the record from that time, and there are a number of different, quite conceptual, proposals. I don't think they reached the level of full business plans. That is an indication of some of the potential uses, which is why we are not immediately moving to the GDF route, but we haven't found one at the moment that we feel totally comfortable with.

Q40 **Sir Geoffrey Clifton-Brown:** Mr Peattie, I gather that some of these canisters—if that is what they are called—urgently need to be repackaged because of the level of leakage or radioactivity, or however it is you measure this. I gather that there is not an SRP and that there is a contingency of £2.15 billion to £2.16 billion to deal with this. Is that correct?

Sir Amyas Morse: I think those numbers are sections of the Report.

Sir Geoffrey Clifton-Brown: Sorry. Thank you for that correction, Sir Amyas. What is happening about getting an SRP?

David Peattie: We are getting on and building it. It is at the early stage of design, as you will see in the Report, and in just the last few weeks we have re-estimated the total cost of that. It was originally about half a billion pounds. Our current thinking, and again this is because it is at the early stages of design and we are not sure exactly of the scale of it or the complexities, is that we are now projecting a range of £1 billion to £1.5 billion in order to give us the facility to manage this hazardous material in a very cautious and prudent manner.



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Q41 **Sir Geoffrey Clifton-Brown:** Okay, but this is obviously urgent, if they are leaking badly. Are they leaking badly and is it urgent?

David Peattie: No, they are not leaking badly. The ones we are concerned about are a very small number—Mr Foster can explain this in more detail, if you want him to—and we have the capability on-site to manage this material. As Mr Foster says, we have the best-experienced team in the world managing this material.

Q42 **Chair:** Is it seen so far as an early warning?

Paul Foster: If I can be very clear, there is no leakage. All we are saying is that these containers are showing signs of things like discolouration, which says, "Something is happening—do something about it". No leakage—sorry, but I just wanted to be very clear on that.

Q43 **Chair:** Absolutely. We don't want to over-alarm people.

David Peattie: This is a very active store. We don't just leave it—

Chair: You are catching it before it leaks.

Paul Foster: Exactly.

Q44 **Sir Geoffrey Clifton-Brown:** Moving on from that contentious subject, since 2012 you have cancelled three projects after spending £586 million on them. Why did you cancel them, Mr Peattie?

David Peattie: Primarily because we found a much better way to proceed to the outcome. I hope this isn't a trite example, but it is rather like riding a horse on a very long journey and 5% or 10% into the journey someone invents a motorbike. Then, at that point, we want to shift to the much quicker and more efficient way of getting there.

This overspend, particularly on one project, took a lot of work with universities, with permission from the regulator, essentially to move from what was a chemical process, and thereby much more complicated and much more expensive, to a process that is more physical.

Obviously, it is regrettable that we have to stop a project that has incurred so much cost, but we also have to look at the forward costs and the earlier project that had already been estimated at moving up to over £2 billion, when our new opportunity—if you like, the motorbike—would save, in the long run, at least £1 billion of taxpayers' money.

These are tough calls to make. Because they run for decades, we have to make the choice, but only when we're 100% confident, and that is the other difficulty with this—

Q45 **Chair:** Have you had any benefit from that £586 million? Are there technologies or approaches that you have learned from, so that you can capitalise on this as IP or—



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David Peattie: There have certainly been some. There are physical locations—in some cases, buildings—that can be used for repurposing the skills that the teams have built—

Q46 **Chair:** Have you quantified those? Have you got a figure or will you be doing that analysis?

Paul Foster: If I may help, of the three projects to which we referred, one of which is an asset, which is still valuable to us. The box transfer facility was cancelled only in the sense that the order in which we were going to do things meant it wasn't required on that timescale. It will still be required, and that is still an asset and will be valuable. That is of value to us.

One of the other projects was about highly active liquor storage tanks. Again, to pick up on something that Mr Peattie said, this is something that we cannot afford to get wrong. When you are dealing with issues about time at risk, it is not about when it starts; it is about many years beyond that. You have to keep pursuing the path that you know will give you the answer until you are 100% sure that you can move to another position and then, as David said, you have to do that as quickly as possible.

On the highly active storage tanks, innovative work that we did with our supply chain and with our own scientists meant that we could extend the life of our current highly active storage tanks, so that the learning from there was applied, but the design work for the asset wasn't required within that.

Then there were other things. David mentioned that we had a 23-stage waste processing capability. In doing that work and understanding that work and in sharing it with universities and, again, with our staff and supply chain, it means we can go to a single-step process, avoiding all that complex handling. That process is cheaper, quicker and allows us to start the entry into the silo earlier—

Q47 **Chair:** Going back to my question, on the last one in particular you potentially have some financial gain in project management and perhaps in some other understanding of how these processes and projects work in the future. Have you been, or will you be, quantifying the cost in pound terms of those benefits over a period of time, or the potential to capitalise on those costs or those learnings?

David Peattie: We attempted to quantify them. Of course, we could go back and—

Q48 **Chair:** It would be quite helpful. As Sir Geoffrey has highlighted, this is 586 million of taxpayers' money, which would build quite a lot of schools, for example. We know the scale of the costs at Sellafield and we understand what you're saying—that there may be cheaper ways of doing it in the long term. Nevertheless, surely for that £586 million there must be some financial benefit to the taxpayer? If you could look at that, it would be very helpful.

David Peattie: Can we come back to you on that?

Chair: Thank you.

Q49 **Sir Geoffrey Clifton-Brown:** Why is the baseline for the whole of Sellafield not being reviewed before 2020?

Alex Chisholm: The plan they have been working to was originally done in 2014. It is updated constantly to take account of changes: the progress they have made, new opportunities or new requirements that are imposed. It is an up-to-date plan that they are working to. What they have not done is a wholesale review. When is the best time to do that? They think the best time to do that is when they have finished the THORP reprocessing that we discussed earlier, and indeed all reprocessing activity. That will be in 2020. I think the work to do that will commence in the middle of next year, to be ready for 2020.

Q50 **Sir Geoffrey Clifton-Brown:** So it will actually be done by 2020?

Alex Chisholm: Yes.

Q51 **Sir Geoffrey Clifton-Brown:** In what form will it appear? Will there be a Government White Paper? How will Parliament be told what the review is?

Alex Chisholm: There will certainly be a published report. I don't know whether there will be a White Paper.

David Peattie: It will be an NDA business plan-type report.

Q52 **Sir Geoffrey Clifton-Brown:** To try to get a handle on some of these financial issues, I will quote from the middle paragraph on page 10 of the Report summary: "We also found no clear or shared understanding of what constitutes value for money in nuclear decommissioning and, in particular, how the balance is struck between near-term affordability constraints and long-term value-for-money considerations." That is quite a damning comment, isn't it?

Alex Chisholm: Yes. The context is that there has been a lot of progress and there is a better grip on the timeliness of projects and on the money expended for them. We are all working to a single understanding of what VFM is: it is the optimal use of resources to achieve intended outcomes. In all cases, one wants to spend sparingly and wisely, but in the Sellafield case there is also a particular task of trying to sustain and improve safety and security, and that is a special context to be working in.

As both David and Paul have brought out, there are trade-offs sometimes between your immediate, short-term activity and your long-term goals. You find new opportunities to reshuffle the priorities to deal with new developments, as we were just hearing about with the plutonium canisters, for example, or when you get into projects and see, "Actually, this is turning out to be a bit easier than we thought; we can make faster progress there." We share in and support the prioritisation that David described of focusing on the highest risks first of all, and relish the fact that since 2015 they have got to grips with those key projects that were described earlier. If that has meant some viring between short and long-



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term costs, there is some flexibility in the overall budget to do that. It is important that there is no financial constraint on these intolerable risks.

- Q53 **Sir Geoffrey Clifton-Brown:** Further down in the next paragraph, paragraph 15, it says, "the NDA Board does not regularly scrutinise progress on major projects".

Alex Chisholm: The NDA board did, partly on my prompting, set up a new programme and projects committee, which has now started doing its regular review. David, perhaps you would like to talk about the work of that Committee?

David Peattie: Mr Chisholm is right. In the last few months, the board of the NDA has set up a committee that now looks at programmes and projects, reviews them in some detail and then reports to the NDA board when it meets in plenary. We have put in place an improved review process. There is more we can do; as the NAO Report said, we have tended to focus on IPA-style project reviews and we would benefit from more peer reviews and standardisation. That is one reason why, next year, when the Magnox sites also become a subsidiary of the NDA, we will be able to share learnings across more sites.

- Q54 **Chair:** Had that been in place sooner, do you think you might have pulled out of some of these long-term projects at an earlier stage? They were going on for quite a long time—

David Peattie: It is always possible. Paul mentioned the prudent approach; the regulator requires all our sites to proceed with a knowable, deliverable solution and is very cautious before we can jump from one vehicle to another.

- Q55 **Chair:** When the red flags were rising, did you consider pausing? Was that technically feasible?

David Peattie: It may be technically feasible, but particularly on the intolerable risks, we are required to continue to pursue a known solution. Where we should try to improve is in the speed with which we identify a better alternative and have the courage and support of the regulator to make that shift in a more optimal way.

- Q56 **Chair:** In the grand scheme of things, a year's delay while you assess issues is not very long in terms of the length of these projects, but it could save millions of pounds of taxpayers' money.

David Peattie: Indeed.

Chair: But you are saying, under the regulatory rules, you could not do that.

Alex Chisholm: Yes, although sometimes it can be the other way round. I think I am right in saying that the silos direct encapsulation plant, which was one of the ones that was cancelled, was partly prompted by a flag raised by the ONR. They are not always putting a restraint on shifting. Sometimes they are saying, "That project is not looking that good. We

have concerns about it. Is there a better way?", which contributes to new solutions.

Paul Foster: I could not agree more. Although the regulator has been holding us to account, it has been incredibly supportive in trying to find an innovative way to do it quicker and cheaper, which is in everybody's interests. It is incumbent on us to do everything we can to keep progress moving.

The cancellation of the project was the culmination of at least two years' worth of new research done through universities and the like. It was cutting edge at the beginning and not thought feasible. We pulled stumps on it at the earliest opportunity when we felt we had that. We tailed it off once we knew—we cut it back to just keep the critical path moving and cut back the extraneous. Once we were confident, we cut back, but we had to keep pursuing the critical path until we had a line set on the other thing.

It should be said that the biggest investment in capability that we have made at Sellafield, other than base engineering, is in the field of project and programme management. We have learned from the IPA national group and we have our own academies.

Q57 **Sir Geoffrey Clifton-Brown:** Mr Chisholm, that raises the question of what the board were doing before in terms of supervision. Be that as it may, do you now believe that the NDA board has the correct skills to do this important supervisory work?

Alex Chisholm: Some really important enhancements have been made to the board. I particularly welcome the UKGI-appointed director, who has made a real impact in the last few months. I also think it is important that nuclear expertise is available to the board, which was a recommendation from the outgoing chief executive, as you may remember. Given some of the legal issues, particularly in the Magnox case, it is important that the board has access to a general counsel.

The material that is available to the board for scrutiny, and the extent to which the non-executives on the board feel able to make inquiry of any of the executive team, not only the chief executive, seems to have improved. For a final judgment, I am waiting for the Holliday inquiry report, which will go into that a lot, so some further refinements may be necessary. To date, I think the necessary changes have been made, and I particularly welcome the fact that the board has taken those actions to add to its own capacity without waiting for the final inquiry report, in response to the interim one and the case judgment.

Q58 **Sir Geoffrey Clifton-Brown:** Last question: when do you expect the Holliday report to be available?

Alex Chisholm: It is an independent report, so it does not work to my direction, because in effect, the Department is one of the people being looked at. I am told that it is in its final stages, but my experiences of these big inquiries—

Chair: Final stages can be quite long.

Alex Chisholm: Final stages can take a while because of those well-known processes such as Maxwellisation and Salmonisation, but it is in that phase. Substantially, the work is done.

Chair: They have done the work. They just want clearances.

Alex Chisholm: They have conducted most of the interviews and so on, yes.

Q59 **Sir Geoffrey Clifton-Brown:** You run a big, complex Department. How high in your portfolio is the whole Nuclear Decommissioning Authority in terms of risk?

Alex Chisholm: It is the single biggest set of risks, because there are national risks of almost incalculable consequence if errors are made. It is very high impact, very low probability because of the good work that is done on-site, but it is very substantial. It has 16,000 people working away night and day to try to reduce that risk and to keep us safe, which is excellent, but the underlying level of risk is very large. That is why we have to make progress in reducing it. NDA put a lot of resources into it—£3 billion a year of expenditure.¹ We have held that up; even at the last spending round, it was maintained. We give this a lot of attention, from the point of view of both my time and that of my team. For the Secretary of State and the ministerial team, it is probably our single biggest thing, which I think is right.

Q60 **Sir Geoffrey Clifton-Brown:** Given that, as I expected, you say that this is the highest risk in your Department, do you feel—you obviously know a great deal about it—that the risk is travelling in the right direction fast enough and that you have control of all the projected costs of dealing with it?

Alex Chisholm: We have the best handle on it that we have had so far. That is what I would say. It has made real progress since 2015-16, when you last looked at it. It is really substantial progress, so we are in a much better place. Do we expect to get better still? Yes, and I am really encouraged by the ambition of the management team. Paul Foster and his team have put together a transformation plan, saying, “We can save another billion pounds here, and we can accelerate the progress on some of these projects and bring them in from finishing in the 2030s.”

Q61 **Chair:** You sound quite buoyant in that answer.

Alex Chisholm: Yes.

Chair: Perhaps I can put this to you and Mr Peattie. Have things improved since this went directly back to Sellafield—

¹ Note from witness: “£3.3bn is the total spent by NDA. This is offset by £1.2bn revenue so the department spends a net total of £2.1bn each year”.

Alex Chisholm: Just as a qualification point, that is in the context of a hundred years of projects and huge risks.

- Q62 **Chair:** Yes, the context of this hearing is major risk. It is all right: I'm not suggesting for a minute you are going dancing down the street thinking it's all sorted. Don't worry, Mr Chisholm; your knighthood is assured from your careful wording there.

To Mr Peattie and Mr Chisholm, do you feel more confident now that Sellafield Ltd is directly managing this than was the case with the previous arrangements?

David Peattie: Yes, I do. Under the previous ownership model—the so-called parent body organisation—there were, typically, discussions around the fee that the private companies were—

Chair: We don't need to go into all the history; we know all that. Are you confident that some of the improvements are because of that, or—

David Peattie: I am confident they are because of that, because the economic alignment and the strategic alignment between the people running the site, the NDA and the Department are 100% aligned. We all want the same thing.

Alex Chisholm: I agree, and just one other comment is that moments of risk come in when you make a change to the models. We had the big model change of switching this from a parent body organisation to bringing it in house. As the Report rightly recognises, that transition has been very well managed. There hasn't been interruption and it has worked, which is great. I suppose the next thing is the so-called PPP—programme and project partners.

Chair: Which we're going to come on to.

Alex Chisholm: We have done a lot of work between ourselves, the IPA, UKGI and the Treasury to try to make sure that we feel really comfortable with what the NDA and Sellafield are planning there.

Chair: We will come on to that, but I'm going to ask Caroline Flint to come in.

- Q63 **Caroline Flint:** I want to explore in more detail some of the risks and how they can be reduced faster, but also some of the factors that are limiting the pace of de-risking activity. If you turn to page 55 of the NAO Report, you will see that paragraph 2.48 says that the NDA and Sellafield Ltd have identified three areas: task complexity, physical constraints and low productivity of the workforce. Perhaps we can take a bit of time to explore each of those factors.

Let's start with the task complexity. In some respects, we have touched on that in the previous rounds of questions. The Report says that "bespoke technological solutions...take time to develop. There are...interdependencies across the portfolio, so that delays in one work stream can delay progress on others and there is a limit to management's



decision-making capability in a complex environment". How are you going to make further progress in dealing with those shortfalls?

David Peattie: Just a little contextual comment from me. A big chemical site or a big oil refinery will tend to be focused on just a couple of things: keeping people safe and keeping the hazardous material well contained and then getting on with the economic activity. I think the unique thing about Sellafield is that it's trying to do five or six very different things, all on a very constrained, congested site. It has reprocessing activity—

- Q64 **Caroline Flint:** I'm going to come to the issue of the congested site—the physical constraints. Could you just deal now with the first point task complexity in relation to finding bespoke technological solutions? For example, in the last round of questioning, we talked about the decisions to cancel projects. It occurs to me, from reading the material, that there is a lack of transparency about factoring in the sunk costs that have been lost and learning from what went before that led to the decision to close—just generally, a sense of engaging on why people who are very qualified, very professional and very expert obviously green-lighted a certain project and a few years down the line are saying it is no longer fit for purpose. I understand the complexity, but I am trying to understand how we learn from this. In 50 years' time, I won't be here, you won't be here—

Chair: The PAC will be here.

Caroline Flint: The PAC will always be here. For all I know, someone on the PAC will be saying, "There is another round of projects that have been put to one side to find a new innovation." I am trying to understand how dynamic it is for you to take on board some of these things—perhaps they are mistakes or challenges—and be honest and transparent about that.

David Peattie: Absolutely. I think the model change is allowing us to be much more self-challenging and more inquisitive. It is helping us to move quicker to come up with more creative solutions.

- Q65 **Caroline Flint:** And how are you effecting that? What are you doing to make that happen now that you weren't doing before?

Paul Foster: I will try to help. Under the old model, Sellafield was considered to be a baseline, a project—deliver the baseline, deliver the project. It didn't really support innovation and change. What the model change has allowed us to do is to organise the business around its purpose. Its purpose is to be safer sooner, to retrieve hazard quicker, to build projects to support that, to take down the other buildings we have—we have over 1,200 buildings on our site—to complete the spent fuel reprocessing and to manage the plutonium and uranium.

What we can do is say, "Actually, you are not doing a project as part of a journey. You are there to achieve an outcome." The point is, can you achieve this outcome in a better way than what you are currently planning to do? Doing something and failing gets you closer to that outcome. We are trying to engage the staff. We are saying, "You are not here to be on a



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journey or to follow a process. You are here to achieve an outcome.” We are two years into that, and we are seeing the benefits of it now. We are underpinning the 25% acceleration that we are trying to achieve in high-hazard retrievals. We are ahead of schedule on doing the work we were scheduled to do less expensively than we had budgeted. We are trying to remind them that they are not here to exist as a small cog in a gigantic machine; they are here to deliver a purpose and an outcome.

Q66 Caroline Flint: And how would I or Mr Chisholm’s Department know whether that is working or not?

Paul Foster: Apart from having a daily line-of-sight view and reporting up, we have NDA personnel working with us all the time. We do a weekly report and a monthly report. The NDA hold us to account at a quarterly performance review, whereby the critical outcomes of progress—value for money, safety and security and environmental impact—are all scrutinised, as well as strategies to keep getting better.

Q67 Caroline Flint: I suppose what I’m trying to understand—excuse me, I’m just a lay person—is this. A load of data can be put in front of anybody, but how does someone who is not an engineer on-site, such as someone from UKGI or the team working in BEIS, say, “Hang on. Decisions being made here changed a decision from before, and the outcome is this,” or, “We have tested some of our thoughts and the constraints we feel are there. We have looked at different scenarios, gone back and challenged it again”? I am interested in how that is presented to those who, at the end of the day, are signing this off. It is not a money constraint, because HMT is going to pay, that’s for sure. How can we challenge within that?

David Peattie: Seeing the same task done a year later for less resource—a genuine efficiency improvement year on year—is one metric that we use. It is benchmarking to history. When activity can be benchmarked internationally or across industries—a simple one is how quickly you can put up scaffolding—we can see improvements there. Alternatives to scaffolding are also a measure we can use.

Q68 Chair: But scaffolding, important though it is, is probably not the biggest cost. Not even as a trite example.

David Peattie: Indeed it is not.

Q69 Caroline Flint: Let me give you another example. In answer to one of the earlier questions, Mr Foster, you said that an intervention from academia and universities helped you understand that, for some of the projects, it wasn’t worth carrying on down that route. How alive are you to other research and innovations that are going on in academia? How does that work challenge what might have been current technological thinking five years ago but is going in a different direction today? How alive is the organisation to that, to test and challenge?

Paul Foster: Seriously, that is right at the heart of part of the model change. Under the old model arrangements, innovation wasn’t considered. We are only two years into being a stand-alone business.

Q70 Caroline Flint: It's very sad to hear that, considering how much money has gone into this area.

Paul Foster: It is unfortunate. The idea under the old model was that we should know what we had to do and how much it would cost from then until the end of time. In giving it the innovation that we have to achieve and accounting for the uncertainties, I have gone on the record as saying that I hope we destroy our plans every five years because we have found a better way of doing it.

It is about viewing ourselves as a business and an enterprise and viewing ourselves in the entire round of everything we are here to do, and about engaging our people to be challenging, innovative and benchmarking. We are getting better at that, but it is still a journey. It will take us years to get even better at being even more challenging and not being satisfied with the status quo.

Q71 Caroline Flint: Is there anything that BEIS, or UKGI, for that matter, needs in their capacity to be able to better challenge you and to ensure that those benchmarks are stretching or pushing you in a direction?

Paul Foster: That is dangerous territory for me—it may be career-limiting—but I will have a go anyway. Sellafield is viewed as a risk. It is a gigantic liability and cost burden, but it is also a centre of expertise that is renowned worldwide. There is an opportunity not just to do what we do better, quicker, cheaper and to provide more value, but for people to learn from that and to take it abroad.

It has to be viewed as pulling innovation towards it, and we have to be challenged on whether we have thought about things and what happens elsewhere. We should absolutely welcome that. At the moment, a lot of the systems are designed to make sure that nothing goes wrong. Innovation is often difficult to push through when people are concerned about not doing anything wrong, rather than about what they could do better. I think there are opportunities there if we are able to set more ambition for what we could achieve.

David Peattie: May I add that the NDA has a dedicated strategy and technology team? Part of its role is to engage with academia and with leading experts internationally to find new solutions. I visited Culham, where there is a lot of learning across the nuclear space. We are still searching for new solutions all the time.

Q72 Caroline Flint: Okay, but maybe not quickly enough in the past.

Let's move on to physical constraints. It is a congested site—I have been there myself—and not only the site itself, but the routes into the site present their own challenges, too. How much attention is being given to looking at how the site might be reconfigured and what spaces on the site might present themselves as providing some solutions, even if that means taking away certain things, such as car parks, from the site? There may be other solutions to that, such as paid-for transport into the site. How much time has been spent looking at the use of the site itself?



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Paul Foster: Again, there is remarkable prescience there, because that is exactly what we have done. We have moved several thousand vehicles off-site and put in a better transport mechanism for our staff to get in and out, freeing up valuable land.

Q73 **Chair:** When did you do that?

Paul Foster: We started that in the last 12 months, and we keep on doing more and more. We are currently doing parking and riding, we are changing access arrangements and we have taken away some car parks that would be better elsewhere. That has actually decongested the local area and supported green travel plans. Those are some things we are doing.

I hate to say this—it will sound terrible—but under the parent body model, the idea was that there was a baseline, and that we execute the baseline. Under the new ownership subsidiary model, the idea is that we are a business that could be here for 100 years, so we think about how we should configure it for the future. You are absolutely correct: the amount of land in the Sellafield site is at a premium.

Q74 **Chair:** Could you give a precise example of a car park you have moved and what the impact has been on delivery, and where people are being transported from?

Paul Foster: Yes. We improved the security status of the business with the security programme, and we have now just completed one of the high-security areas. That has taken away a car parking area. An area that we are putting aside for the plutonium repackaging plant also cuts across an extant car park. We have changed access arrangements for multi-car usage and put on better bus services that run in a more convenient manner, and we have basically prohibited certain types of access to the site, other than for those who absolutely need it. We have relocated more staff off-site who do not need to be on the site. Currently we have more than 2,000 people off-site who historically were on it. That has improved, and has impacted positively on the local community.

The point you made earlier was that we should have started this much earlier, but the incentives did not allow for that. The new model allows us to do that, and what we are just about to do, at the NDA's request, is submit the masterplan for Sellafield, which will be the first iteration that describes what we can do where. It is the first iteration, and we will improve upon that with time.

Q75 **Caroline Flint:** When will that be presented to the NDA?

Paul Foster: I have the draft of it now, so it should be a matter of weeks.

Caroline Flint: Weeks?

Paul Foster: Yes.

Q76 **Caroline Flint:** Does the NDA then have to sign that off for you to be able to realise that plan, and how long will that take?

Paul Foster: It presents choices to the NDA. The NDA are the strategic authority, and it will present choices to them on how they might wish to progress. Some parts of this are things like travel and accommodation, because they come with trade-offs, balances and pros and cons.

Q77 **Caroline Flint:** Mr Peattie, this is coming to you in the next few weeks. In terms of your thought processes, and those of the board, in looking at this, how are you going to measure up potential costs attached to this against realising more efficiencies, and how it will work for how the site operates? Do you feel that at a future meeting you will be able to explain to us your decision based on that?

David Peattie: I hope we can. I have a team in the NDA that works very closely with Paul and his team at Sellafield, so this is not a huge surprise being thrown over the wall at us. We have been involved in its creation. Our board will discuss it with our colleagues from UKGI and the Department. I hope that we will make the right decision so that we can press ahead and make Sellafield deliver the mission even faster and even more safely.

Alex Chisholm: If I could just add something that might help, the site, as you say, is very congested. I think 73% of the space is already taken, and of the remainder, you have a quarter to work with, but it is all in little pockets in different places. If you want to build a substantial new facility, you really need to innovate quite substantially. You can demolish buildings, but obviously that is a difficult place to be doing demolition work. If you change the perimeter, that affects the whole security cordon around it. Indeed, in the cases of some buildings, if you change the profile that too can affect security.

Chair: We know. We've been to visit; we know the difficulties of the site.

Alex Chisholm: These have to be weighed up: security, safety and cost.

Q78 **Chair:** What we are trying to get from Mr Foster is, if you have taken a car park out, have you done an analysis of the cost savings, the time savings, or the ease with which someone can work on the neighbouring physically constrained site? Have you done that financial calculation, or will the NDA be doing that analysis of your plan? Just to be clear, the NAO, on page 55—Ms Flint has been going through the points in 2.48—concludes, "We have not seen any evidence that Sellafield Limited and the NDA have sufficiently tested the limitations they say constrain faster progress". What the NAO says it has found in its fieldwork and what you are telling us now seem to be quite different stories.

Sir Amyas Morse: And apparently directly contradicts what we have just heard.

Chair: Yes, that's exactly my point. Do you want to give us an example? Why didn't the NAO see the plan that you are drawing up?

Paul Foster: The NAO was largely focused on high-hazard projects and programmes. Masterplanning was a matter of corporate strategy, so the



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NAO did not spend too much time looking at things like reprocessing, which is what we do, or the security programme. Sellafield has a whole heap of other activities, one of which is taking forward the masterplanning. To specifically answer your question, we have quantified the benefits in terms of traffic flows, cars on the road and things like that, but at Sellafield, because of the historical nature of it, we have never put a value on land. What we have never done is actually project forward and—

Chair: We're not talking about the value of land. The value in time savings, the speed at which—

Caroline Flint: For example, if you are getting rid of a car park that staff are using, and then you are putting on a bus service, or having to build a park-and-ride, we are just trying to work out how you are going to justify the cost of those things. Also, it could have an impact on recruitment, because people are going to say, "We can't drive there anymore." We are just trying to get a sense of how you were testing these assumptions out—exchanging one cost for another set of costs. The way that people behave is also important in this too. If you are saying this will help you get things done faster and it will help reduce risk reduction faster, how can we be clear that that will happen? I am afraid the NAO was not convinced by that.

Sir Amyas Morse: We didn't see any evidence, that's why.

Q79 **Chair:** Did you share this with the NAO?

Paul Foster: Sellafield's annual expenditure is £2 billion a year, and we have hundreds of projects and programmes that run and all sorts of things going on, so the NAO cannot look at everything in its entirety. I am happy to go back and review this element of it.

To come back to your point, if you take, for example, the repackaging plant we are talking about, there was a car park there. You have two choices. You either build another car park somewhere on-site or you change the parking arrangements and put on bus travel. We thought that would be easier, cheaper and greener. You have been there, so you know about the congestion on the roads.

Q80 **Chair:** But what is the benefit of moving the car park compared with the rest of the activity on the site? Have you thought about that?

Paul Foster: Without that space, you would have had to build another car park on the site somewhere else. In the 27% of space that we had left, you would have had to build another car park, and that is not a good use of taxpayers' money.

Chair: Perhaps we are not being clear. If you take car parking out, you are not doing it just for the fun of it. Presumably it is because you would get a faster or safer route to some of the work going on.

Q81 **Caroline Flint:** If you have to put a crane on-site, and at the moment there is a bloody great big car park there and that makes it a bit difficult, does removing that car park give you a better access route through what is obviously a complicated site? What about those sorts of things? You



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could get a crane up in one week rather than in one month.

Paul Foster: Quite right, and that's what I'm saying. The direct choice is you build a temporary car park or you take the cars off-site, and we have chosen to take the cars off-site.

Q82 **Chair:** Have you done a cost-benefit analysis?

Paul Foster: No. We haven't costed it because it is not a discrete part of the project baseline to create a separate project for a car park.

Q83 **Caroline Flint:** Maybe this Report will be in the office in two weeks—I don't know how public this Report can be—but I am just trying to get a sense of this. Nobody wants little bits of things done here and there, and the sum of all of it adds up to not a lot down the road. I am trying to understand this. You yourselves, both NDA and Sellafield, have said, "the following factors limit the pace of de-risking activity: Task complexity...Physical constraints...Low productivity of the workforce." Those are things you have said. We are just trying to probe, in a holistic way, how you are pulling these things together. It is not about closing a car park and opening another one. It is about how that adds to the overall activities on the site to allow you, on that particular part of the site, to get to one of the legacy ponds, or wherever it is that you need to do the work, given that there will be lots of small plots on the site that will prevent activity. We want to know whether it is joined up.

Paul Foster: I'll have another go at trying to get round this. I apologise. This is for the NAO. We have had a little bit of discussion. *[Interruption.]*

Chair: You have to speak through the Chair.

Paul Foster: Sellafield is a business that executes projects within it. A decision around car parking and whatever is a matter for the business, not for the project, so I don't think it would be represented in the project space. That comes back to the position on worker productivity, which is an unfortunate, accurate title—it implies that it is an issue with the capability of the workforce. It is about our ability to get the workers to that workplace, our ability to have an asset that is available to work and the packages of work available for them to do it. So we have got to improve our management system, our access arrangements, our shift patterns and our assets capability. But that is an issue from a site perspective as opposed to project by project. We are trying to take it away from doing project by project.

Q84 **Chair:** Mr Chisholm and Mr Peattie, this is an agreed Report. Who signed off?

David Peattie: I did. I acknowledge this. I think this is a fair challenge. The NDA must and can do a much better job.

Q85 **Chair:** Just to be clear, when you signed it off you agreed with the statement that the NAO had not "seen any evidence that Sellafield Limited and the NDA have sufficiently tested the limitations" and so on. It is the final point on page 55: paragraph 2.48. Do you agree with that?

Paul Foster: I'm okay with that.



Q86 **Chair:** Perhaps I can bring in Zaina Steityeh from the NAO.

Zaina Steityeh: I want to correct the assertion that it was not within the scope of looking at performance on a budget by budget basis. I specifically spoke to your head of strategy at Sellafield and to the head of strategy at the NDA, to put these questions directly to you about the level of analysis and evidence used to back up these assertions. It was definitely within the scope, and we were not able to find any evidence to support it.

Q87 **Chair:** So the NAO asked the questions and it did not get back what you just described, Mr Foster. There were very direct questions on this point about the wider management of the site.

Paul Foster: I am okay with the way that is stated, but on these particular issues we have taken away the car parks to try to improve the constraints. Have we characterised which constraints lead to which problems? Absolutely not. Of all the factors that were outlined, absolutely not, and I would not try to pretend otherwise. However, we have not been able to quantify the benefits of the things that we are doing, but we take an enterprise view project by project of what is the best choice in terms of where it should be sited, what the utilities provision should be and where the car parks should be. We have not broken down and calculated the contribution to the constraints. We have not done that.

Q88 **Chair:** Not even for an individual project, such as in the crane example?

Paul Foster: We have done that with cranes; when you park a crane it takes a car park out.

Q89 **Chair:** So you quantify that it is better to move a facility.

Paul Foster: We do it on a choice by choice basis, not as part of the project submission. It is on a site-wide basis of whether it is better to do this or that.

Q90 **Chair:** You say you make an assumption about whether it is better, but on what basis? Are you looking at money, time or the ability of the workforce? On one of the sites we visited, it was a long walk to the canteen. You would think that if there was a possibility of putting the canteen closer, that might be a good productivity save.

Paul Foster: And that is part of the masterplanning concept that we are putting forward—ease of access of employees to the workplace.

Q91 **Caroline Flint:** I think we have opened up something here. Mr Peattie, do you accept that unless there is an ability to really interrogate some of the areas that you have identified as problems in de-risking activity and have challenge within that, there is not a strategic look at where you are putting your effort, how you are managing the site and how staff have been able to do their jobs at the site, in a way that we can really test whether it is just hit and miss that you are doing better or whether it is planned, thought through and challenged for some better outcomes?



David Peattie: I absolutely agree. That is one of the reasons why this part of the NAO Report is very insightful and will help the NDA challenge further and with more scrutiny what we regard as the constraints to faster progress. I am 100% with you. We can do more in this area.

- Q92 **Caroline Flint:** Okay. You and other people are paid quite a lot of money; I would have thought it is common sense that you would look at challenging the constraints as a priority of what your job is all about. Wouldn't you agree?

David Peattie: Yes. There has been some challenging of constraints. Our focus over the last few years has been on understanding the risk. But this is the next stage of optimising the site and of the NDA and Sellafield. The model change is only two years old—it is quite immature. But we will get on to it.

Paul Foster: We have a transformation programme that says how do we get better at the purpose of this business? How do we get safer sooner? To be clear, we have not kept categorised constraints. To come back to your point, worker productivity, better utilisation of staff and better outcomes are part of the transformation programme identified. We haven't wired that in terms of the constraints problem, I agree with that entirely, but we are targeting improvements.

- Q93 **Caroline Flint:** Mr Chisholm, it has been left to us to challenge the evidence behind these constraints. What is your team doing?

Alex Chisholm: We do challenge them as well. I agree with my colleague Mr Peattie that you have drawn attention to some very good ones. We have discussed the other ones, but we haven't pick up on transport yet. Obviously we have talked about immediate inflow to the site, with the park-and-ride and so on, but we wanted to use your findings to take up the issue with both Cumbria County Council, which has the responsibility for the section of the A595 south of the Calder bridge, and Highways England, which has wider responsibility for roads in that area, to see whether they can help improve access to the site. I think that Cumbria County Council and Highways England have done a joint study on road connectivity west of the M6, and identified a number of potential improvements. The question is then: are they going to be funded? So that is something that perhaps on the back of your Report—

- Q94 **Chair:** The danger is that people just drive their nice big BMWs faster down the A595, which, as we know, is not a great road, rather than use other access routes. It is noble that you are doing that, but I am not sure that improving the roads on its own is the answer. Perhaps you could take Ms Flint's question more broadly, as being about how you are looking at access to the site?

Alex Chisholm: There is a whole range of constraints. The ones that can be adjusted, we are trying to adjust. We prompt the NDA to look at these constraints and ask whether there are any we can help with. I am at risk of repeating what colleagues have said already, but the big leaps forward tend to come from technological improvements. We fund the NDA to



spend, I think, £75 million a year on different forms of innovation, working with the scientific community.² That is probably the single biggest thing we can say. If there are other things, they come to us and say, "This is what we'd like to do." To consider whether that is acceptable from a security perspective is one of the responsibilities we hold. Obviously we look at that. I agree that we should try to encourage as rapid as possible a reduction in safety problems, so long as that doesn't threaten security. We can use this Report and other suggestions to try to do that.

- Q95 **Caroline Flint:** Finally, can I ask a question about the Cumbrian dividend for the wider community? It is clear that those working at the site are the highest paid earners in the area. That has also had an impact on house prices and other things. To Mr Peattie and Mr Chisholm, because part of it is about rebalancing our economy as well: what more could be done? Sellafield clearly has an intergenerational relationship with the families who have worked there for many years, but I know, having been to Whitehaven and other parts of the surrounding areas, that there is a lot of disadvantage and poverty. Some of the schools aren't doing as well as they might be with the children that they are teaching. What more could be done to ensure that the site is seen as an integrated part of the economy, rather than something—with due respect to everybody who works there and to what they are contributing to the country, to which it is a huge asset—that could be seen as a bit of an island, with those who benefit being most closely attached to it?

David Peattie: Two quick things from me. We can build on the success of the West Lakes Academy at Egremont, which is one of the best schools in the area. The NDA helped that with some seedcorn investment several years ago. It is a terrific school. I visited it; the pupils are fantastic.

- Q96 **Caroline Flint:** Have you got people on the governing body?

David Peattie: We do, yes. Two of my team sit on that, and we are in regular touch with them. That is the first thing; education is so important—

- Q97 **Chair:** Is it only recently that you got into that?

David Peattie: No, it was several years ago, when the original investment was made, and it's gone from strength to strength. In the last year, it's had terrific results.

- Q98 **Caroline Flint:** That's one school, isn't it?

David Peattie: That's one school, and we are looking at how we can extend that further north, closer to Whitehaven, near where I live. My second point is around small and medium-sized enterprises, and our support, investment and encouragement of SMEs. For instance, instead of having a 200-page form to fill in to work on Sellafield, we have reduced it to roughly a 10th of the size, so that small companies that do not have a big admin department can also access such work. There are some terrific

² Note from witness: The NDA's research and development budget is £85million per year.



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examples, including LaserSnake built up at Workington. There is much more we can do, though, to encourage SMEs, so that there is life beyond people working on the site. I see it every day.

Alex Chisholm: First of all, to echo what David said, trying to encourage the local supply chain is tremendously important. I would also like to emphasise the opportunities available through apprenticeships, which have been a very big feature, particularly in the last two years. I remember also a long discussion we had one evening when we were up in Cumbria together about what to do when reprocessing ends. About 3,000 of the workforce are involved in that. Paul's vision, which he is successfully implementing, is as much as possible to retrain those people for a whole new set of skills, which is very important. The other thing to mention is that the NDA does have responsibility under the Energy Act to try to promote socioeconomic development and to work with local communities. Last year it spent £10 million on that purpose.

Q99 **Chair:** How do you assure yourself and your team that it is doing a good job? Presumably someone in the Department is monitoring this.

Alex Chisholm: There is monitoring, but we rely heavily on feedback from individual stakeholders. Last week David and I were down in Berkeley in Gloucestershire for the stakeholder summit, and we met special interest groups and local communities from up and down the country who are in the sites. Berkeley, of course, had been a nuclear power plant, and the particular facility we were in is now a training college. I think it had previously been a nuclear laboratory. We talked a lot to the people there and got their feedback directly. There is also a—

Q100 **Chair:** If we had more time we could go into that more, but the Committee has previously reported on and been quite concerned about some of the damping effect—at Sellafield and other nuclear stations—of uncertainty on a local area. We do not have time to go into that.

I want to move on to the outfall of the Magnox contract. Thank you for your letter, Mr Peattie. We also received a copy of the confidential report made to you to look at what happened there, so thank you for that. Obviously it is confidential so we will be careful what we say. Mr Chisholm and Mr Russell, how sure are you now that, after the Magnox failure, the NDA's assurances processes are robust enough to deal with any future issues, particularly in the light of the coming PPP contract?

Alex Chisholm: We are in a process of heightened scrutiny. As soon as we got the original Magnox case, which I think came through in August 2016—it might have been the end of July—we put in place these enhanced measures, which included making sure that the IPA should be responsible for an extra level of review for all major and contentious projects.

We have established the oversight panel, chaired by the chief executive of the IPA. I think they have had four reviews so far of the PPP. At the beginning, they did have some concerns, particularly about the capacity of Sellafield to be an intelligent client—we have pressed them on that. They have added to that capacity quite considerably. They have worked up their



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plans and, I think, made some changes to the formulation of the four different elements of the programme. As a result, the IPA's confidence level has been going up, and we now feel much more comfortable than we did two years ago that they will be able to complete this successfully.

They have some time to go before the final assessment—I think it is up until March 2019. We have not had the full business plan review, but certainly our level of confidence in Sellafield and the PPP is pretty high. On other aspects of assurance by the NDA of the estate, as mentioned before, we welcome the steps they have taken to act on your Report, their own findings, a number of independent reviews and the first part of the Holliday inquiry. But we do wait for the final and complete Holliday inquiry to see whether there is more needed to do on that—

Q101 Chair: Why have you gone ahead with the PPP approach before the final bit of the Holliday inquiry? Why didn't you wait? Mr Peattie should answer as well.

Alex Chisholm: Just to begin to answer that, a decision to go down that route was taken something like 18 months ago—it must be two years ago now. We did pause it: we delayed and we went over it very carefully again with a fine-toothed comb. Obviously both the Secretary of State and I are very keen not to give an assurance to go to that next stage unless we are very happy. When we had that assurance, we felt confident enough to be able to go ahead on that basis.

Q102 Chair: Mr Peattie, what is the point of the rest of the Holliday report if you are already going ahead with the PPP?

Alex Chisholm: The Holliday report is addressing much wider issues. That is about the Magnox estate; it is not about the Sellafield thing. Also, some of the particular issues about Magnox procurement do not apply here.

Q103 Chair: So the bits of Holliday you have already got are enough to deal—

Alex Chisholm: And that is a required step: all the findings of the original Magnox judgment and the Holliday inquiry have to be applied in the PPP case. That is a necessary—

Chair: Mr Peattie.

David Peattie: That is right. On the learnings from the interim report, I have appointed a new general counsel, a commercial director, a head of operations and internal audit, and we are recruiting a new director of risk and assurance. All of that will give the NDA a much greater oversight of what is happening at Sellafield. The initial learnings that have been applied to PPP are in there now: ensuring you have legal advice, not having one single contract across the whole thing but broken down into four lots, and the intelligent client. Those are all things that have increased confidence.

Q104 Chair: Those are things that this Committee looks at across the piece. What due diligence, Mr Foster and Mr Peattie, have you carried out of the bidders for PPP contracts, to ensure that we do not hit some of the same problems that happened before?



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Paul Foster: We have done the usual things that you would expect in terms of financial credit worthiness. The other thing that we are doing is targeting everybody else to see the extent to which they are committed. There is a financial assessment, but there is also a time-based contextual assessment that we will conduct as soon as we know the outcomes of the down selection. Clearly, everybody, throughout every stage of the process, has been able to progress only when passing the requisite and third-party assurance twice.

Q105 **Chair:** Have you had many bidders?

Paul Foster: Yes, we had a lot of bidders. They were down selected to a smaller number to take forward to negotiation.

Q106 **Chair:** How many did you have and how many are you dealing with now? If you want to write to us—

Paul Foster: I am only hesitating to understand whether that is commercially sensitive.

Q107 **Chair:** If it is a very small sample that you are dealing with now, I understand that that may be commercially sensitive, but if you are able to write to us on that, I would be grateful.

Paul Foster: Absolutely.

Q108 **Chair:** The point of my question, if it helps, is: did you have only a handful of people to choose from, so that you were then hidebound by the lack of bidders, or did you have good competition and lots of people interested?

Paul Foster: Yes. Thanks for that. We had very good competition in terms of interest. We were able to down select a very good population to take forward. We felt healthy with that. There was a degree of stepping down in one or two cases, where some parties had bid for more than one lot. You cannot win more than one lot, but they had bid for more than one, so they stepped away. We still have multiple candidates for multiple lots, each of which is still financially viable. We are taking that forward. Part of the process of this latest iteration is that Sellafield is the fifth partner in this, as well as being a client. As well as being fifth partner, it is not just Sellafield's capability that we are bringing to bear, but we have other frameworks from other suppliers that already exist, such that if one of the partners has a problem, we can fill the gap from within the resilience of the entirety.

Q109 **Chair:** So you have contingency plans built in from day one.

Paul Foster: We have lots of resilience built in. You are right that over a 15-year period, if it were to run this far, one of the bidders may run into a problem over that period of time, so we have built that resilience in.

Q110 **Chair:** Can I ask whether Carillion was one of the bidders for the contract in the original number? As it is now a defunct company, I think you can answer that question without worrying.



Paul Foster: They were one of the original interested parties.

Q111 **Chair:** Did you pick up any worries about Carillion when they were bidding?

Paul Foster: We track all our suppliers at all levels. At the time of the issue, we had no exposure of any consequence to that company—very minor levels.

Q112 **Chair:** To some extent that is water under the bridge that may raise some wider issues. Mr Chisholm, you mentioned that the NDA board—I think I quote accurately—needs nuclear experience. What about your sponsorship body, which, as was referred to earlier, is quite light on team members? There is one director, half a director general, a grade 7, a grade 6 and an executive officer in your sponsorship body. Is that right, roughly? You may not know the exact personnel.

Alex Chisholm: That sounds broadly right, but that doesn't describe all of our involvements. That is a specific team that is doing the sponsorship function, but in addition to that we have another team that is responsible for the whole security aspect with the oversight of the Civil Nuclear Constabulary and so on.

Q113 **Caroline Flint:** Why can't it be the same? Why do you need two?

Alex Chisholm: It is actually a useful separation. In the working oversight and site security—both cyber-security and perimeter physical security—you are working very closely with the police force, with the Civil Nuclear Constabulary and sometimes with the intelligence agencies. It is a very different type of work from the sponsorship of the engineering and other projects.

Q114 **Chair:** Okay, so which of the people in that team—the director general, the director, the grade 6, the grade 7 and the executive officer—has nuclear knowledge and understanding?

Alex Chisholm: There's a lot of experience of working with the NDA on this type of work, but they are not qualified nuclear personnel, nor would I expect them to be. One of the reasons we set up the NDA was to be able to have nuclear expert personnel within it.

Q115 **Chair:** The point of my question is obviously the NDA needs those people to challenge Sellafield Ltd, as it is now, and the previous incumbent in that role. But you are saying a generalist—I don't know if your director general and director are policy focused individuals, are they? Have either of them had experience of running major programming? Have they run a major programme anywhere in Government?

Caroline Flint: Are they engineers?

Alex Chisholm: Our top engineer, our chief scientific adviser, is a very experienced engineer.

Q116 **Chair:** Okay, but where does your chief scientific adviser fit into the BEIS sponsorship team?



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Alex Chisholm: He doesn't work as part of the BEIS sponsorship team, but if we have a particular issue that requires a scientific or engineering assessment, we go to him.

Q117 **Chair:** Can I ask again: does your director general who heads this, or the director, have any direct project management experience in the civil service or anywhere else?

Alex Chisholm: A huge amount of project management experience but they are not nuclear experts.

Q118 **Chair:** Okay, so they have run major large projects. What sort of scale? Can you just give us an idea? You may not know off the top of your head.

Alex Chisholm: Not off the top of my head, but certainly very substantial projects.

Chair: Could you please write to us? You could run a major project that could be a policy-led major project; or there is actually running a project. That brings me on to the role of UKGI.

Q119 **Sir Geoffrey Clifton-Brown:** Just before I go on to UKGI, Mr Chisholm, one of the alarming aspects of the NDA's supervision of the Magnox decommissioning was that NDA didn't have a really good handle on the state and condition of those 12 sites. Are you absolutely confident that that same sort of deficit, if you like, doesn't exist with the NDA at Sellafield?

Alex Chisholm: Two things to say about that. First of all, I think they do have a much better handle on the sites, on the actual baseline situation; secondly that the great significance of not having a good handle on the baseline in the Magnox cases was because they were working on this new type of contract—I cannot think of the right phrase. *[Interruption.]* Thank you—the target costs model. It is vital that you do understand well what the baseline is in that, for that model to work successfully. In the case of Sellafield, obviously it is a wholly owned subsidiary of the NDA. It doesn't work to a target cost model at this point in time, so it is an important but not a decisive factor in the same way as it was in the previous contract.

Q120 **Sir Geoffrey Clifton-Brown:** Now, Mr Russell, up to now you have not had to say anything. What is UKGI's role in all of this?

Mark Russell: It is to support the sponsorship team. Going back to numbers again, this is probably our second biggest team within UKGI, so there are about nine people—not full time, but nine people involved in our work on the NDA. What are the roles we are doing? It is typical of the shareholder role that we do for a number of organisations. This is a particularly complex one so we will advise the Department on board appointments, remuneration, budget setting. To the extent that business cases need to be signed off by the Department, by Treasury, we will navigate those through the system and we will advise on them. Then we are very much part of the monitoring fabric of the Department. So we receive the monthly reports, the quarterly reports. We attend the monthly meetings, the quarterly meetings, and we report back to the Department



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on the performance of the organisation. So it is a combination of those things.

Q121 Sir Geoffrey Clifton-Brown: So if I can take you to page 21, at paragraph 1.8, it says "UKGI told us it does not, however oversee the progress of individual major projects"; "it does not carry out assurance of NDA business cases"; it "helps the NDA 'navigate the system' of central government's approval of business cases"—which you have already said. I am really not quite sure what UKGI does that the Department—I mean wouldn't it be better from a governance point of view if all of those nine officials that you are talking about were transferred to Mr Chisholm's Department and he had one department within his Government Department dealing with the whole of this issue? There must be a certain amount of duplication between what you are going and what Mr Chisholm's Department is doing.

Mark Russell: We work pretty hard to ensure that there isn't duplication. Yes is the answer—the tasks that UKGI does could be done by the Department. What is for sure is that the tasks need to be done. Why do BEIS and other Departments turn to us for some of this? Because of our particular skill mix. We are not project managers, we are not assurers, but we are financially literate, we have experience in corporate governance—remember that the model here is not one where the Department runs the decommissioning; it is one where the Department oversees the body that does the decommissioning. We could not possibly be over the hundreds of projects; the Department could not possibly be over the hundreds of projects. As with many activities of government, the model we have is the arm's length body, and a crucial part of that is, do we and the Department have the confidence in the body to perform that task? That is part of what we are trying to do and part of our specialisation. But you are right, our tasks could be done by the Department, but we have been set up as a resource within Whitehall to specialise in this.

Q122 Sir Geoffrey Clifton-Brown: Right. If I can take you to paragraph 1.10, at the bottom of that page, the NAO has come to the conclusion that the system is "overly complex. The distinct role played, and value added, by each layer in the accountability and governance framework is not always clear." There is an "overlap between the respective roles of the NDA and UKGI in managing central government stakeholders. While UKGI felt it was clear on its roles and responsibilities, these were not always clear to us"—this is from the NAO, Parliament's auditing body that audits thousands of these projects in a year. That is a fairly damning criticism, is it not, of how the current structure works? Not necessarily the work you do, but what the governance structure in place is at the moment.

Mark Russell: Well, I am sure Mr Chisholm will comment, and it is an agreed Report, so we have obviously accepted this point. But I would say, it is clear to us and it is clear to the Department—we are in the same building, we have joint teams—and, I would suggest, it is clear to the NDA as well.

Q123 Caroline Flint: Can you give me one example of where you have made a

difference?

Mark Russell: I would say board appointments, financial monitoring—

Q124 **Caroline Flint:** What difference have you made on board appointments?

Mark Russell: When the Secretary of State comes to make board appointments, we give views on that. We give views on the process through which the appointments are made. On the performance—

Q125 **Caroline Flint:** As a former Minister, having received some of those submissions, I am really not quite sure why the team that comes under Mr Chisholm could not get on with doing that.

Mark Russell: As I've said, I am sure that colleagues in BEIS absolutely could do that. We tend to do more of it.

Alex Chisholm: I would be slow to unwind the UKGI's involvement in this. It is partly because they are the Government's experts in corporate governance generally, so they are learning from other situations and can apply that here. Also, I have found from my own dealings with the UKGI that they have a lot of expertise. Mark himself has been involved with the NDA for most of its history, and that gives a perspective that is not always available to anybody else in the Department, so I would be grateful for the work that they have been doing.

As Mark says, it is right that it is quite complex. Even to map just the key parties within there—the NDA with its statutory role of setting strategy, targets and budgets for decommissioning; the site licence companies, which are actually doing the work; the role of the Office for Nuclear Regulation setting the regulatory standards for safety and security, not to mention the Environment Agency, another important regulator here; obviously BEIS providing policy, oversight and direction, and holding the NAO to account, alongside yourselves and the Parliament in Scotland; and the UKGI—

Chair: That's a list of things—

Alex Chisholm: And the NAO too. There are a number of parties, but—

Q126 **Sir Geoffrey Clifton-Brown:** Mr Peattie, I am going dizzy at the number of organisations involved in trying to regulate you. You having to deal with them all must be a nightmare, mustn't it?

Chair: Now's your chance, Mr Peattie.

Sir Geoffrey Clifton-Brown: Candidly, please.

David Peattie: I spend a fair amount of my own time managing the machinery of government, and working with colleagues. I would say that the relationships are very good. There is a great sense with all colleagues that—

Chair: But there are a lot of people and a lot of organisations—that is Sir Geoffrey's point.

David Peattie: The NAO Report recommends a tailored review, again—an agreed report. I would like to see a tailored review of the governance that sits above us.

Q127 **Sir Geoffrey Clifton-Brown:** To follow up on my question, it is not whether you have good relations with them, it is the sheer amount of time that it must take your organisation to deal with them all. Do they ever give you conflicting advice?

David Peattie: They tend not to give conflicting advice, but we sometimes have to report the same amount of information more than once. Again, a tailored review should be able to streamline that.

Q128 **Chair:** Mr Chisholm, it is not beyond the wit of your Department and you to streamline that.

Alex Chisholm: There has been a great deal of reviewing of the NDA going on, with your good selves as part of that, obviously. As well as the Holliday inquiry and all the judicial scrutiny that they have had, they have also had three independent assessments done as part of trying to learn the lessons from Magnox. When we have finished with the Holliday one, the NDA will probably feel they have had quite enough reviews for a while.

We want to bring it all together in this tailored review; I think it is an excellent suggestion from the NAO that we have endorsed and accepted—to try to take stock and say, “Can we make it more effective and tidy it up, to ensure that it is streamlined as well as strong?” and, crucially, “Does everybody understand how it works?”. One of the valuable findings in the Report was that when they went round talking to every different stakeholder and a number of different members of the NDA staff, people who work at Sellafield, not everybody precisely understood the role of each player. We could certainly streamline that.

Q129 **Sir Geoffrey Clifton-Brown:** Mr Chisholm, I take you to paragraph 1.7 on page 17. On UKGI, it says, “The Department inherited this governance structure from the former Department of Energy & Climate Change following machinery of government changes in 2016.” Is there not a clear case for trying to simplify the number of organisations involved at that level of Government and, for cost effectiveness for the people being regulated, for taking Mr Russell’s nine staff into your Department to beef up your Department’s regulation and simplify the whole thing?

Alex Chisholm: I certainly agree with the spirit of simplification, but I will wait for the tailored review to see what the best way to do that is. There is also a strong case for having specialists in particular institutions and not trying to combine everybody else in a single Department.

Q130 **Sir Geoffrey Clifton-Brown:** A final question on money. I think you said earlier, quite reasonably, that your Department is currently spending £3.3 billion on Sellafield, which includes £1.2 billion of revenue.³ As we

³ Note from witness: “£3.3bn is total NDA expenditure. This is offset by £1.2bn revenue, so the department spends a net total of £2.1bn each year across the entire NDA estate including Sellafield.”



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discussed earlier, the revenue is likely to drop. Does that mean that the amount of money you will need to spend on the NDA and Sellafield is likely to have to increase?

Alex Chisholm: That is a very interesting and appropriate question to which I do not yet have the answer. We will be going into the spending round 2019—it has been announced that there will be one next year—and we will have to map out the correct level of public subvention to support Sellafield and the wider NDA in their work. Judging by the previous spending round, the Government have been very responsible and determined to ensure that we deal carefully and make continued progress with our nuclear legacy, but that remains to be determined as part of that spending round negotiation.

Q131 **Sir Geoffrey Clifton-Brown:** Given the questions we had earlier about risk, would it not make sense to perhaps put more resources into Sellafield so that you could reduce the significant risks quicker?

Alex Chisholm: Certainly, as agreed, the intolerable risks have not been constrained by resources. For the other risks, sometimes it makes sense to put them out over a longer timeframe, as we have discussed, and for low-level waste, to be able to look at cheaper methods of storing that long term. Those are some of the opportunities for saving money; that is what we are balancing. Where we do not compromise at all is on the intolerable risks, where we must make as rapid progress as possible in addressing them.

Q132 **Chair:** I have a last couple of quick questions. Mr Russell, would it be beyond the wit of the UKGI to train up people in the sponsorship body and other sponsorship bodies in Government Departments to do some of what you do? They could use you as an outside body for certain expert bits, but could you not pass on your knowledge of board and governance issues and accountability issues to specialist teams?

Mark Russell: Yes, and to an extent, we do that. We look after the Government's larger arms-length bodies, so about 20 of them. There are hundreds, and BEIS has very many of them. One of our key tasks is to ensure, for the smaller ones, that they have the governance models that we have developed. We only focus on the very large ones.

Q133 **Chair:** There is a whole bit of work to be done around some of the work you do. Finally, I suppose to Mr Chisholm but maybe Mr Peattie wants to chip in too: what are the other risks around Brexit that are worrying you for Sellafield and for nuclear decommissioning more generally? Mr Chisholm, where does it figure in your Department's list of worries?

Alex Chisholm: It is absolutely a huge issue, as we have discussed in other contexts. So far as it relates here, the biggest single thing was obviously the decision to leave Euratom. We had to move from the known embrace of the Euratom organisation and set up something completely different. The key steps we have done are, first, within Parliament, the Nuclear Safeguards Act, which had Royal Assent just last month. That was the first piece of EU-exit-related legislation to be passed by Parliament—



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Q134 **Chair:** Are you confident that that is on track now? You are one of the few Departments that has a bit of legislation that has actually been passed.

Alex Chisholm: Yes, and we are also consulting on the regulations for that. We have also been able to update our status in the International Atomic Energy Authority, to sign a new bilateral agreement with the US and to have—

Q135 **Chair:** So you are saying it will be seamless, as we leave.

Alex Chisholm: That is absolutely the intention and all the signs are that we are absolutely on track to ensure that there is no interruption to that. We have also trained up, through the ONR, a whole new set of nuclear inspectors—

Q136 **Chair:** So that worry—

Alex Chisholm: That was the single biggest worry and now, because of all the work we have done, which has required a huge amount of effort, with 30 people involved over 15 months, it is now very small.

Q137 **Chair:** So what else? Is there anything else?

Alex Chisholm: The other aspects of Brexit that I would say would be likely to arise in people's minds would be, first, the movement of personnel. That is obviously a very relevant issue. It is not as important at Sellafield as it is in a new nuclear build, but certainly it is a point that we have made in our evidence to the Migration Advisory Committee, who are reporting on this in September—

Q138 **Chair:** Everyone is waiting with bated breath for that report because every Permanent Secretary has worries in that direction. **David Peattie:** I would just add that we are continuing to be able to work with colleagues in Europe at the political level and at the—

Q139 **Chair:** What about sharing research, is that a problem?

David Peattie: No, it shouldn't be, going forward. Again, we can have bilateral agreements with the few countries that are involved, typically France, Japan, the United States—

Q140 **Chair:** Are they in place now? Where are they at? You say you can have bilateral agreements.

David Peattie: We already have some in place, and I would hope they could continue. The bigger concern is skills, and the recruitment and retention of key people and the ability to—

Q141 **Caroline Flint:** How much more effort do you think the UK should focus on building our own workforce?

David Peattie: Yes, we should do that as well, and we do, but it takes time.

Q142 **Chair:** We won't go into it now but I think we would acknowledge from previous reports and work we have seen and done that it is a bit behind.



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Mr Foster, you are there on site every day in Sellafield. How many of your staff are EU nationals?

Paul Foster: The vast, vast, vast majority. Very small numbers would be non-EU nationals.

Chair: Sorry—

Alex Chisholm: The vast majority are UK nationals.

Paul Foster: The vast majority are UK nationals.

Q143 **Chair:** I was getting confused there. So it is a small problem immediately. Is there anything else worrying you about Brexit?

Paul Foster: No, it has been covered—

Q144 **Chair:** Foreign exchange rates, is that something that affects you?

Paul Foster: No, we are not too exposed to that either. The only issue that does arise is the matter of indemnification of foreign goods for use in UK nuclear issues. Certain components are highly regionalised.

Chair: Okay. We haven't got time to go into all that, but it is perhaps a subject for—I am sure everyone will be crawling all over this. Thank you very much indeed for your time. The transcript will be up on the website in the next couple of days, uncorrected, and we will be producing our report in the autumn.