

Public Accounts Committee

Oral evidence: [Submarine Defueling and Dismantling](#), HC 2041

Wednesday 1 May 2019

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Members present: Meg Hillier (Chair); Douglas Chapman; Sir Geoffrey Clifton-Brown; Chris Davies; Chris Evans; Caroline Flint; Anne Marie Morris; Anne-Marie Trevelyan.

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

Questions 1-108

Witnesses

I: Archie Bethel, Chief Executive, Babcock International Group, Ian Booth, Chief Executive, Submarine Delivery Agency, David Goldstone, Chief Operating Officer, Ministry of Defence and Rear-Admiral Tim Hodgson, Defence Nuclear Organisation Sub Cap Director, Ministry of Defence.

Report by the Comptroller and Auditor General
Investigation into submarine defueling and dismantling (HC
2102)

Examination of witnesses

Witnesses: Archie Bethel, Ian Booth, David Goldstone and Tim Hodgson.

Q1 Chair: Welcome to the Public Accounts Committee on Wednesday 1 May 2019. Today, we are considering the National Audit Office's report on submarine defueling and dismantling. It has been a burning sore for two particular constituencies in the UK, including that of the hon. Member for Rosyth, Douglas Chapman, who is a member of the Committee. It should be concerning to all of us, however, including the MOD, because it is a typical example of things being put off endlessly because they were not urgent at the time and now things are getting increasingly urgent as we are desperate for space for other submarine work and maintenance.

At the moment, the MOD has not disposed of any of the submarines we have in storage. The expectation is that a full roll-out of dismantling will not start until the mid-2020s—about 2026. We will be asking you questions about what has happened and what is going to happen.

I want to introduce our witnesses, but before I do that I am pleased to welcome members of the Ugandan Finance, Planning and Economic Development Committee. They are here today to see what we do and, I guess, to learn lessons from the Ministry of Defence. I hope they are going to be good ones, but I would not bank on it at this point of the hearing. We may be surprised by our witnesses.

The witnesses are Archie Bethel, who is the chief executive of Babcock International, which is the only licensed company able to deal with the defueling of submarines. One could say it is a sinecure, but we will get into that as we progress. We welcome back Ian Booth, who is the chief executive of the Submarine Delivery Agency. The last time you were in front of us, you said that you were staying for the long haul, as did Julian Kelly, the then director general of nuclear. He then left very quickly after that hearing. I do not know whether we did anything to him in particular. Are you planning to stick it out at the Submarine Delivery Agency?

Ian Booth: I am still on exactly the same plan. I signed up for five years, and I intend to stay that long.

Chair: Good to know that there is some staying power there. We also have David Goldstone, who is the chief operating officer at the Ministry of Defence. I hate to say he is stepping in, because he has his own job in his



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own right, but the permanent secretary is overseas today. The permanent secretary is in front of us next week; you should take back to the Ministry the message that we will be asking him questions on this issue if we feel we need to. I am sure we have told him that. Our final witness is Rear Admiral Tim Hodgson, who is the Defence Nuclear Organisation's submarine capability director at the Ministry of Defence. Welcome to you all. I am going to ask Anne-Marie Trevelyan to kick off.

- Q2 **Anne-Marie Trevelyan:** We are not going to dwell as such on the really disappointing Report, which sets out just how many times this boring but important part of the MOD's responsibilities has been ignored, but I will start by asking Mr Goldstone whether you believe that the MOD and the Government are acting as a responsible nuclear owner, and are doing what is reasonably practical to get on and deal with this problem.

David Goldstone: Yes, I do, and thank you for that question. Perhaps I can respond to the opening comments from the Chair and that question. We believe that we are acting responsibly. It probably goes without saying that what we are talking about here is a massively complex and challenging undertaking from an engineering and technical point of view. We are trying to do something that no other nation has completed. We are absolutely committed to the safe, secure and cost-effective defuelling and dismantling of all the decommissioned submarines as soon as we practically can.

In the meantime, we are absolutely acting responsibly as a nuclear operator. We are storing and maintaining all the decommissioned submarines to the highest standards of safety and security. We are working very closely with the NDA, as the civil authority, to ensure best practice and that we learn from any opportunities identified. I think we have now got the plans in place. I think we acknowledge and are not arguing with—

- Q3 **Chair:** You are saying you take what the NAO Report says.

David Goldstone: We take what the NAO says; we acknowledge there have been delays, but I think the important point is that we now have plans in place, and we are making good progress with them, so we will put ourselves in a much better place, looking forward. We are putting in place the facilities. We are developing the technical solutions, so that we can reach a steady-state process for disposal on the timeframe you described. The projects for defueling and dismantling have been running for a number of years, since 2007 and 2009 respectively. We have financial provision in our long-term plans for completing the work and discharging our long-term responsibilities, and funding for the long-term safe and secure storage, so I think we are in a much better place.

We have completed the removal of low-level waste on Swiftsure, the first submarine to go through that process. That was completed on time and on budget. That gives us a lot of confidence about the technical processes involved. We are now going through that with a second submarine, and we have the technical solution for the intermediate waste disposal, which I am



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sure we will come back to. While we acknowledge the delays, we do feel we are acting responsibly. We have got the plans and progress in place, so I think we can reassure the Committee. We are dealing responsibly with those liabilities.

- Q4 **Anne-Marie Trevelyan:** Thank you. That's helpful and encouraging. We hope to be able to hold you to your words, because clearly that previously has not been possible.

I have a technical question; I am not sure who the best person is to answer it. Why are we working to civil nuclear rules when the Americans do this quite differently? Their submarines have their own licensed nuclear status, so they are able to progress, and indeed are progressing, through their decommissioning and dismantling much more quickly, when we have not even begun to.

David Goldstone: I suggest we bring in Rear-Admiral Hodgson in a second. Very simply, there are policy reasons why the UK has adopted a different approach to that followed in other countries, but let me bring in Rear-Admiral Hodgson.

Tim Hodgson: Yes, I can give a technical answer to your question about the regulation. The regulation is not really what is driving the solution we are choosing. The Americans have chosen to cut out their reactor compartments as a whole, which contain all their radioactive materials, and then store those reactor compartments whole in a desert facility, in the Hanford desert. They have the space to be able to do that.

We have had public consultation going through the process—lots of consultation with local MPs, local government, the Scottish Government and so on. We considered that in the first place, and indeed that was the proposal from the original ISOLUS solution, going all the way back, that was comprehensively opposed by all the stakeholders we consulted, so we have come up with, I would say, a more appropriate solution for the UK, which is to minimise the packaged size of the waste that we are going to generate. That necessarily involves removing the reactor pressure vessel, which is primarily the intermediate-level waste element of the reactor compartment, and storing that separately. That will reduce significantly the size that's required and enable us to have a package that is able to be put, when it becomes available, into the nation's geological disposal facility.

David Goldstone: That is why we have a unique challenge, I think. It is a different approach to—

- Q5 **Anne-Marie Trevelyan:** So there was a conscious change from what might have been considered the international way of doing things after that consultation process.

Tim Hodgson: Absolutely.

- Q6 **Anne-Marie Trevelyan:** That's very helpful; thank you. Before I hand over to Douglas, who will talk more technically, Mr Goldstone, you have



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said that you have funding in place. We are asking everybody this question, and it's a mean one. What about the Chancellor's comments the other day about there not being a spending review this year after all? Would that compromise moving forward with this project?

David Goldstone: I think we have been open. I think the permanent secretary, Stephen Lovegrove, and Cat Little have been before the Committee and talked about the fact that the Department does face significant financial challenges. We have issues we would like to address through a spending review, as the well-established process—

Q7 **Chair:** Yes, we know that. What about the submarine defueling?

David Goldstone: The funding is in our current plans. At the moment, we are living on a sort of annual budgeting basis: we have to make ends meet and live within our means each year. We are doing that, and these programmes are still in the plans and being progressed with, but it is very difficult to speculate about what we might do if that position changed, whether through a spending review or through different annual funding decisions. But we have allocated the funding in our plans, and if those plans are supported out of whatever future funding arrangement we have, we will be able to continue delivering these programmes. If those plans change, obviously we would have to look at our priorities across the board. This is one of many priorities that we have to balance.

Q8 **Chair:** When you say that the funding is in place, do you mean just this year? From what you said, it seems that if there is no spending review, or if the spending review does not go your way, you cannot be sure that the funding will be in place for future years.

David Goldstone: It is very difficult to speculate in that situation about exactly what—

Q9 **Chair:** Where does it rank in the list of priorities for the Department?

David Goldstone: There is a clear answer to what the highest priority is: maintaining the continuous at-sea deterrent. Maintaining our nuclear deterrent is the Department's absolute highest priority.

Q10 **Chair:** And this is pertinent to that, potentially.

David Goldstone: It is pertinent, but it is not actually necessary in the immediate period. It may become a problem in the long term, but to maintain the continuous at-sea deterrent day in, day out at the moment, we do not have to have done this. It is obviously one of many priorities that we would want to address, but the overriding priority is maintaining the deterrent.

Q11 **Anne-Marie Trevelyan:** It has now—correct me if I am wrong—been taken out of the Royal Navy's budgetary framework and sits in the DNO, so in theory it should have a more committed budget stream than it ever had before. Is that correct?

David Goldstone: Establishing the DNO—and it is one of our top-level budgets, so absolutely—gives clarity of governance and budget

responsibility in a way that I think we did not have before. Establishing the SDA and bringing in the expertise of Ian is also part of clarifying those responsibilities and accountabilities in a better way than I think we had before. I do not think that it protects the funding from the prioritisation process that we will have to go through, which I think is the point that you were getting at.

Chair: After this hearing, with MPs such as Mr Chapman, Ms Trevelyan and the Plymouth MP Luke Pollard on your back, it would be a brave Government who dared not to prioritise this.

Q12 Douglas Chapman: For a long time—almost two decades—the ambition has been to dispose of our redundant submarines, particularly nuclear submarines. Just now, we have a commitment from you to dispose of submarines that is very much the same as the commitment that we received 20 years ago, under the same justification. How much confidence do you think we should have as a Committee that you can actually deliver on what you say, if you have not delivered what you said 20 years back?

David Goldstone: Let me start with why I think you can have that confidence, but I think I might want to bring in colleagues on some of the detail. What I think is different from the situation in the past that you referred to is that we now have approved projects going forward, both for the defueling and for the dismantling. As I said, we have the financial provision in our long-term plans, and I think a lot of confidence is taken from the fact that we have completed the removal of the low-level waste on the first submarine. We have proved some of the technology of what we are trying to do. We are doing something that, as we said earlier, has not been done anywhere else globally.

I think having the proven technology for the low-level waste, developing the solution available for the intermediate waste, the projects going and the funding puts us in a much more confident place. There is greater assurance that we will see this through than there was in the past, with what were really public consultations about proposals. Can my colleagues expand on that?

Tim Hodgson: I can give you a slightly technical answer that might give you confidence. When the ISOLUS programme was put together in the early 2000s, it was predicated on a national policy of delivering a national waste depository by 2010, but it rapidly became clear that that would not become available. We have now decoupled our process from the national policy for delivering the geological disposal facility, which on current estimates will be in the 2040s. For the interim storage, we went through a public consultation process and achieved consensus from all our stakeholders on the appropriate means of getting the intermediate-level waste out of the submarine, having a clear plan of what to do with it, and being relatively independent—I say “relatively”, because we have planned this interim storage to last for up to 100 years, even though it should be required for significantly less than that. We now have a policy, a strategy and a plan to deliver something that is genuinely deliverable, whereas if

you go back to our aspirations in 2001-03, we had nowhere to go without the national solution. I have a lot more confidence.

- Q13 **Douglas Chapman:** Do you feel that there are any other reasons why the dismantling project has experienced so many delays and so many cost increases over that period of time? To be honest, the NAO Report is damning in terms of these cost overruns and the constant changing of direction with the whole policy. What else is in there, apart from what you said, in terms of a national repository?

David Goldstone: To some extent the history starts in 1995 with the policy position, which anticipated a solution that then didn't become available for other reasons that we can go into. We then had to secure this interim solution. That was only done in 2016 at Capenhurst and means we now have an interim solution for intermediate level waste. In answer to your question, that is a key part of why we can now go forward with confidence in a way that we couldn't in the past. The original approach that was anticipated became undeliverable because the Nirex facility wasn't delivered and we then had to look at this interim solution.

Tim Hodgson: These programmes have risks. The programme has been devised to look at the various stages. There is obviously the removal of the material from the submarine and those risks will transpire. We de-risk that by doing a low level already,¹ but the real risk will start to either mature or not in the 2023-to-2026 timescale. The next risk is the transport of that material from the site where we remove it to the interim storage. That is the risk that has caused us the two-year delay, which is brought out in the NAO audit. We have had a problem with the commercials and the technical solution for that transport container. We have gone through that element, but that is the other primary area that has caused us to go from our original estimate of delivering a process by 2024 and move that to 2026. That doesn't mean all the risks are over.

- Q14 **Douglas Chapman:** Let me turn to Mr Booth. You have been in post for two years, I believe; I don't know if you are celebrating that this month or not. I was looking at the Submarine Delivery Agency corporate plan for this year, and the third point on your set of purposes is "Dispose safely of the UK's submarines that are no longer in-service." That point has been thoroughly endorsed by the Secretary of State, and the accountability for that programme and the framework rests with yourself. In terms of the SDA board, how are you assessing the performance of the submarine dismantling programme? In your report you mentioned KPIs. How many KPIs are actually related to the dismantling programme? Certainly, the dismantling programme gets a mention in the first page of your report, but in the remaining eight or nine pages it is never raised again as an issue. Do you and your board look upon that as a priority issue for the agency?

¹ The MoD later said that this should read: 'We de-risk that by removing low-level waste already...'



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Ian Booth: We have a monthly board meeting. The chairman of the SDA board is Rob Holden, who is also a board member of the NDA. My chairman takes the whole issue very seriously, so I am regularly and clearly reminded that dismantling and disposal are a priorities. The measures we have are effectively standard programme measures. Every project we have in the SDA is now under proper project management control, with allocated budgets, timescales, project managers, project controls and reporting. I get reports about them and I have visited the projects in Rosyth three times in the last year. I was there about six weeks ago. I don't just get the paper reports and hear from the project manager; I actually get to sit down with the teams. We review them quite regularly.

- Q15 **Douglas Chapman:** We are trying to give some assurance to the taxpayer and the general public. How many of your KPIs on dismantling are green and how many are amber or red?

Ian Booth: I will have to go back and give you a detailed answer, but my current ones for dismantling in Rosyth are good, because we achieved the Swiftsure programme on time and on budget and we have now started doing Resolution. The Rosyth ones have been very good performers.

David Goldstone: Is that something we should come back to the Committee with? We can provide further information on the specific KPIs.

- Q16 **Chair:** If you can write to us on that. You say Rosyth is good; do you have a headline for Plymouth?

Tim Hodgson: The issue in Plymouth is that we have to effectively complete, commission and set to work the defueling capability for the—

- Q17 **Chair:** We know what the issue is, but in terms of what Mr Chapman was asking about—your key performance indicators on where progress is on that—are you content with progress? Is it looking good? Where is it?

Tim Hodgson: At the moment we have not actually recommenced that process. We are literally in a negotiation between my team and Mr Bethel's team over the timescales, durations and costs of recommissioning that. Once we have that done and agreed between us, which we expect to be later in the year, we will be in a position to secure funding approval for it and to move forward with that programme.

- Q18 **Chair:** When you say later in the year, is that summer, autumn?

Tim Hodgson: No, our current headmark is that by the end of the year, we will have that done. We have work under way, so we are not not doing anything, but to recommence the programme—

Chair: It's just that the NAO Report got a lot of coverage in Rosyth and Plymouth, as you might imagine, so people out there are very interested, as Mr Chapman knows.

- Q19 **Douglas Chapman:** Given all that, and the plan that has been outlined, since the National Audit Office Report was published, is there any sense of renewed activity or focus on this area? We have a whole list of



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questions that were raised by the Report and, as I said before, it does not make for good reading, not just from the taxpayer's point of view but also for future planning. There seem to be huge gaps in the proposals. That is a concern for us as MPs, and it should be a concern for the industry and the Department.

Ian Booth: As Mr Goldstone said, the Department takes this seriously. It was in my job description when I started, and I have expected to do this programme ever since I was appointed. The Department has been taking it very seriously. It definitely wasn't not in our focus. However, the Report was good—we do not dispute the Report—and helps to focus the mind. Even preparing for a PAC hearing focuses the mind. I would not say I have detected an increase in pace, because we were already trying hard, but there is absolutely no doubt that the Report and this are reminding us of the importance of it.

Q20 **Douglas Chapman:** If we can just return to the first demonstration boat, Swiftsure, I think at a previous Committee meeting you agreed that that would be fully dismantled as the first submarine in 2023, but that is not really going to be the case. What is your new date for complete dismantling?

Ian Booth: Mr Kelly answered that question before. It was a longer answer than that, but in essence, we expect to be under way in 2023, but completion of it will probably be later than that.

David Goldstone: We did look back at this; I was looking at the transcript from that hearing. There was definitely a discussion about 2023, but I think, looking at the words, it was about what we would have learned and being ready to begin properly showing how we will dismantle. We are still aiming at 2023 for that point, but we will then be doing the—

Q21 **Chair:** We remember that, too. We were quite dismayed at how long it would take until then to have a proper plan in place and not actually have done anything. Picking up on Mr Chapman's question, when do you expect Swiftsure to have gone through that decommissioning? How long do you expect it to take from 2023?

David Goldstone: To have completed the decommissioning of Swiftsure,² 2026 is the aim point. By 2026, having started, we are aiming at 2023.

Q22 **Chair:** Is that what you think the average time will be, Mr Booth, for each boat?

Ian Booth: No, absolutely not. We think the time is around one and a half to two years. We still have to refine that. The 2026 timescale is our headmark for being fully ready to launch into what you might call series dismantling of the subsequent boats. We hope by then to have done the first boat, Swiftsure, and to have learned the lessons from that, refined the process and made any necessary adjustments to the facilities. We can then agree the way forward and be ready to go relentlessly through them.

² The MoD later said that this should read: 'To have completed the dismantling of Swiftsure...'



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I think 2026 is a pragmatic date to aim for, which both the company and the MOD are working to.

Q23 Chair: So you might have actually started another one?

Ian Booth: I would love to be able to start another one. I would love to be able to finish Swiftsure earlier. Frankly, we will try to do that, but being realistic, these are quite technically challenging and difficult jobs. They are of great engineering interest as well. Some of the skills that we are developing are excellent, and some of the technical choices we have are really stimulating for our young engineers. This is quite challenging. We are trying to do it in a methodical way, but with a real eye to keeping the cost to the taxpayer down. Frankly, the smaller the item we take out and put into storage, the better.

Chair: That is the prize.

Ian Booth: We are trying to set ourselves up so that all the subsequent boats are done effectively, rather than just starting one on time.

Chair: You are putting a good, positive gloss on something that has obviously been a very big problem. It is nice to know that you are so positive and you can see it as a prize.

Q24 Douglas Chapman: We are getting there. Are we getting any closer to 2026 being the date when you will have the full tried-and-tested process gone through and the boat will be dismantled in full?

Ian Booth: That is our current intention.

Q25 Douglas Chapman: I hope I am on the Committee in 2026. We will see what happens. You mentioned transportation earlier. As far as we could gather, you have not really finalised plans yet for how you will remove and transport the intermediate-level radioactive parts of the boats. I remember that at the time of the 2013 consultation, you gave a commitment that no intermediate-level waste would be removed from any submarine until the storage solution was in place. Given that you have risks associated with the transport solution and getting that right, why has the procurement process gone so wrong in the intervening period?

Ian Booth: We ran a competition for it, but we did not get a compliant bid. We had a number of bidders, but they were not compliant. We have restarted the competition having learned lessons from that. We had a really good engagement with the companies. I'm not sure what I am allowed to say. We have four interested parties who have responded so far. We are now working with those parties through a process with an intention of down-selecting the preferred bidder towards the end of the year.

David Goldstone: Out of those lessons, we have restructured the competition, because if we just repeated it, we would have non-compliant entries.



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Q26 **Chair:** What were the reasons that they weren't compliant? What was the general theme?

David Goldstone: We have separated the design parts and the manufacturing parts, and we have issued a concept design brief as part of the competition, so that the market is better able to respond, with clarity about what we want and recognising the different skills. Those are the lessons that we learned from it.

Q27 **Chair:** Yes, but what did they fall over? Was it the finances of the companies?

Tim Hodgson: It was primarily that they were not willing to accept the risk that we were trying to transfer by having the consolidated, whole package. By splitting it up, we are able to de-risk the element through the design process. We can then get on to a more meaningful construction process. It was a technical risk transfer issue.

David Goldstone: We have restructured the competition and had the engagement with the market, and are now getting a better response.

Q28 **Chair:** So arguably, if you had been engaging differently with the sector, they could have told you that before you put it out to tender.

Ian Booth: There is a difficulty with that. We tried to do what I think is considered good procurement practice, which is to ask them to provide a whole solution, but that did transfer the risk to them, and effectively we did not find a company that was capable of, or willing to, take that risk. So we have had to go for a slightly more targeted thing where we are being more prescriptive on the concept. We have fundamentally changed our procurement approach. We also have learned more about it since then; we know more about how we intend to remove the waste, and therefore what the container would look like, which has helped us this time.

Q29 **Douglas Chapman:** It was 2017 when you realised that there were no compliant bids. Time moves on. What sort of timeline would you be looking at now, in terms of making sure you have someone or a company organisation that can deliver what you expect, albeit a different design model? What are you working towards, in terms of that?

Ian Booth: We have already issued the ITNs, and we have had responses from a number of companies. The indication already is that they are competent and capable of doing the job. We are now going through a more detailed process with them, which will result in a bidder being selected by the end of the year.

Q30 **Douglas Chapman:** That is fine. This is my last question on this section. Going back to the destination in Cheshire, I believe from the Report that it is costing the taxpayer something like £1.5 million per year just to hold these sites in readiness for getting your transportation plan sorted and so on. What drove you to identify that site at this stage, when we are perhaps seven or eight years away from delivering anything to the sites?



Tim Hodgson: You will remember from having been involved in the public consultation that the big issue here was that there was no stakeholder appetite for any storage of the intermediate-level waste on site, which is the way it would traditionally be done on the civil side. We needed to find a third-party site that was available to do that. I have already talked about the strategic problems with ISOLUS and where we went in terms of that interim storage. This was seen as the biggest risk to us having a strategically acceptable programme. We need somewhere for that intermediate-level waste, because otherwise we are completely constrained to the GDF becoming available, and that would have pushed the timelines out so far.

In terms of having a solution, Capenhurst was a volunteer to take this storage capability. The local council was on side with the process. In terms of an approach, this seemed like the least risky way of delivering what to us was seen as the biggest strategic hurdle to having an appropriate policy. I actually think it is really good news. We felt that the public consultation went pretty well, because we had good buy-in from everybody.

David Goldstone: If we didn't have this, we would be talking about decades more delay. That was the consequence of waiting for the GDF.

- Q31 **Douglas Chapman:** But if you don't meet some of the other timelines in the programme, taxpayers will still be paying for a site that might not be used. Are you prepared to take that on the chin?

David Goldstone: Yes.³

- Q32 **Anne-Marie Trevelyan:** That is depressing to hear. It is always the same with commercial, isn't it? The commercial sector won't take the risk, so it comes back to the fact that the Department ends up rebalancing that, having tried really hard to push it off the Department's position first. It is a regular comment. You all know my view of the world is that your equipment plan should look 40 years long, not 10. I secretly hope that there is one somewhere on somebody's wall. Mr Booth, is there a 50-year plan for this submarine spending? I have tried to draw a picture, and it just doesn't work as it stands, so it worries me. The question is, why has the defueling part of the process been so difficult commercially to get going again?

Ian Booth: I don't think Devonport has so far been a commercial difficulty. There were decisions taken in recent years to slow down the project. Those saving measures were talked about in the NAO Report. The issue is restarting the programme. We have to complete the commissioning of the reactor access house over 14 Dock and complete the works on 14 Dock. This is an issue, in the first instance, of rescoping the work, recommencing it and negotiating a price and timescale between the MOD and Babcock. At the moment, it would be unfair to say that it is a commercial difficulty. We are going through a normal process of looking at

³ The MoD later said that David Goldstone's 'Yes' was in relation to the the first part of the question and not to the second part of the question.



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estimates. There are two opinions on the timescale and two opinions on the cost, and we have to go through that process.

Anne-Marie Trevelyan: That is normal practice. I hope you will reach a suitable cost. Babcock is a monopoly provider, which is always tricky from a value-for-money perspective. We sit and look at your equipment programme every year, and it continues to be unaffordable. Do you feel that you have got the backing of the Department to ensure that you will have that income stream and the shiny new stuff, of which you were an impressive provider and creator with the Aircraft Carrier Alliance? It was a very spectacular effort. You have really got to know that the Department can back you when the equipment plan for the shiny new stuff is already unaffordable.

Ian Booth: I do have confidence that all the plans for the submarine enterprise and the nuclear enterprise are laid out and understood. Having said that, a lot of that depends on me as well as the Department, because we have to get to affordable, good value-for-money prices on everything going forward. In principle, the funding lines are there. There is about £1 billion in the plan for Devonport over the next 10 years, but that is to provide a suite of infrastructures. We are doing good work ourselves, and with Babcock and the regulator, to ensure that the whole suite of infrastructures is affordable. To fit within that funding, we have to do the docks refurbishment and a jetty, and this defueling facility has to be fitted in with it. It is not simply a case of having the money for this. I think it was why I and my team were employed; we have to get an affordable arrangement with our supplier, Babcock. We are making good headway on that whole issue.

- Q33 **Sir Geoffrey Clifton-Brown:** Is there a danger that if the new nuclear submarines run over budget in a tightly constrained total budget, this denuclearisation programme would slip further, to save costs?

David Goldstone: That is another version, effectively, of the prioritisation conversation we were having a few moments ago. We have a whole range of important new equipment, support and removal requirements to satisfy, and we have a finite amount of funding, which is under a challenged position. As Ian said, if we lost control of the cost, it would make that problem harder and would make those decisions harder. We would be prioritising in a more straitened environment than we are already, and difficult decisions would have to be made. At the moment, with the absence of a spending review, we have not got certainty about the long-term funding profiles, and therefore there is uncertainty about what our funding will look like beyond the immediate period.

- Q34 **Chair:** Is there a point of no return for this decommissioning project if there is a delay at some point now?

David Goldstone: We recognise that carrying on with the plans that we have got in place for the defueling and dismantling is important, so that we do not hit the capacity constraints for Devonport for the first two. There would be a point where we had submarines and would be looking at future submarines, but we would not be able to house them. We are a

significant number of years off that at the moment, but that would be the risk if we did keep delaying.

Q35 **Chair:** It is a very small window between the two things, isn't it?

David Goldstone: We are confident that we have enough capacity for what is going to come through into the mid-2030s. Devonport has the capacity to take the next generation of submarines that will be coming through to be stored.⁴ Then there is a gap until the Vanguard submarines come through in the mid-2030s. For the foreseeable future, we should be okay, but we need to keep going with the programme we are describing.

Q36 **Anne-Marie Trevelyan:** On that, Trenchant, Talent and Triumph will appear shortly to go into 5 Basin.

Ian Booth: There is space for them.

Q37 **Anne-Marie Trevelyan:** But they will have to continue to be crewed. Those are the submariners and engineers who you want going on to the new ones, aren't they?

Ian Booth: There is a short period when they need to be crewed while they are prepared for lay-up—prepared for going into the parking area. They need to be crewed during that period. The one that is in at the moment is Torbay, which we are preparing in water. One of the constraints we have had before was that you had to put the boat into a dock, and docks are expensive and valuable commodities that cause conflict. We had to do that to prepare it. We are now developing the techniques for doing that in water. I reviewed that in Devonport two weeks ago, and that programme is running well, so we have an optimism at the moment that we can either minimise the docking requirement or totally eliminate it. The signs are encouraging on that, which means we can take each boat in, keep a crew with it while we prepare it in the water, and then put it into storage.

On the three that are due to come in and are still in service, we have space to park them and we expect very soon to have a method of doing that in water, which means we will not need to dock them, which is a huge help to the programme.

David Goldstone: Then it becomes about the future of the Vanguard class.

Q38 **Anne-Marie Trevelyan:** They are much bigger physically, clearly, but does 5 Basin potentially become another long-term parking space, particularly if the defueling programme gets slowed down again because of the cash flow? So you end up with two basins full of un-defueled, old vessels.

Ian Booth: That is not our intention.

⁴ The MoD later said that this should read: 'Devonport has the capacity to take the remaining Trafalgar Class next generation of submarines that will be coming through to be stored.'



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Q39 Anne-Marie Trevelyan: But that means you could do it. At a practical level, I don't want you to tell me you are going to; I would be very cross if you did. But if that were to happen and the Government said, "We are spending our money on something else", the potential blockage means you turn 5 Basin into what 4 Basin is, which is another long-term garage.

Tim Hodgson: There are some technical issues, but we can defuel the Vanguard class when they come out of service in the mid-2030s, because we already have a defueling capability for Vanguard. The defueling capability for the Swiftsure and Trafalgar class, the PWR1 submarines, is the one we are currently going through. There are two things going on here. We have defueling, then storage and dismantling. What we really need to do is get on with the dismantling in Rosyth, get that methodology sorted out, roll it out, and then, through Rosyth and into Devonport, we start clearing some space in 3 Basin, so that by the time we bring the Vanguard submarines out and put them through their defueling process, they can slot in. You talked about a long-term programme. That is the long-term programme that we have got on our wall. That is what it looks like. We need to address that, because anything else is sub-optimal.

Q40 Anne-Marie Trevelyan: The Vanguard will be the first, presumably, to come out. She's already done 30-odd years.

Tim Hodgson: That is the assumption, yes.

Q41 Anne-Marie Trevelyan: Once we get to that point, the defueling question will not be an issue. The dismantlement programme—

Tim Hodgson: The dismantling making space for them in 3 Basin will be the issue.

Q42 Anne-Marie Trevelyan: But the challenge is clearing the old girls out.

Tim Hodgson: That is not directly connected. Sorry, it is really quite complicated. That is not directly and immediately connected to the defueling, because we do have some defueled submarines that we could get on and dismantle. So it's all about doing that Chinese puzzle to work out which order.

Anne-Marie Trevelyan: Indeed. I have tried; I just couldn't do it, but I am glad if you can.

Tim Hodgson: There are lots of permutations.

Anne-Marie Trevelyan: There are.

Tim Hodgson: It's a Rubik's Cube.

Q43 Anne-Marie Trevelyan: Coming back to Devonport and getting the commercial position right, do you feel that—perhaps this is a question for Archie Bethel as well—you have done everything you can to gain the assurance that you will need over that supply chain to really move that first part of the process on?



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Ian Booth: We are reviewing that very carefully at the moment. In fact, the MOD and the company had a constructive partnering discussion this morning on the very subject. We have to make sure that we have the full suite of capabilities to deliver all the infrastructure upgrades at Devonport. I am pleased to report that we have embarked on what I think is a constructive dialogue facilitated by the Cabinet Office, which has helped us in quite a lot of relationship and behavioural issues, so we have a really constructive dialogue. We do not have any surprises between us, which is great.

We are looking at all the capabilities we need to do the defueling, which is the subject of this meeting, but also at the Astute dock and the other infrastructure. There are many other infrastructure challenges in Devonport. We are looking at how we bring in the best skills available to discharge those, and how we put it under a well-assured, well-governed programme. The status, I would say, is that there is a good discussion; the intent is good. We openly recognise that we need to bolster the skill base, without any question. What we have not yet done is finalise the plans for how we will do that, but we expect to do that during this year, because the first project that has to be up and running is this one.

Q44 **Anne-Marie Trevelyan:** The responsibility is sitting with the MoD or with Babcock to get that skillset brought back into the space, as well as the infrastructure.

Ian Booth: The responsibility is with me to require it—and in some ways to contribute, so we may well contribute in a partnership—and definitely with Mr Bethel, as the company, effectively to arrange the industrial response to the problem.

Q45 **Anne-Marie Trevelyan:** Mr Bethel, you can do that in the timescale that the Department are looking at?

Archie Bethel: That is very much part of the plan, of course—the resource, skill, availability and upgrading are an integral part of that. Again, as we are planning the re-start of the defueling project, to take that to completion a significant part involves the people, skills and resources side.

Q46 **Chair:** Do you have a living will? Not you personally, Mr Bethel—does Babcock have a living will with the Government, as a strategic supplier, or are you working on that?

Archie Bethel: I am not sure I understand what you mean by that.

Chair: If something were to happen to your company—given your track record over the years, that is not impossible; things can happen, as we know from Carillion—do you have a list of all the organisations that you work with and the projects you are on so that were anything to happen, especially given the sensitive nature of your work, a plan could be implemented quickly, to pick up the work if something catastrophic happened to your company?



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Archie Bethel: The nature of our contracts and the overall or overarching position that the Ministry of Defence owns a golden share in Devonport protect the Government from any catastrophic event. But we have been a supplier to the MoD for over a hundred years, and I do not really anticipate that that will change soon.

Q47 **Chair:** Well, we have seen it happen—companies that seemed to be too big to fail. Mr Goldstone, are you content that the golden share is enough to protect the interests of the taxpayer, the Department and the nuclear decommissioning programme?

David Goldstone: This is an unusual situation for Government contracting, partly because Babcock owns the dockyards where this work happens, so they are both a contractor in the way that we have just been discussing and also own the facilities. We have to have a particular sort of relationship. We have a golden share in the way that you describe—

Q48 **Chair:** What does that mean in practical terms? I do not want to distress Mr Bethel too much by talking about some of this, but if something went very badly wrong and there was not a Babcock, it went completely under and did a Carillion in a week or two, what would you be able to do? What would that golden share enable you to do to ensure continuity?

Archie Bethel: Fundamentally, the share would allow the Government to step in and to take over Devonport.

Q49 **Chair:** The Government would eventually take over all your assets and the supply chain.

Ian Booth: If I could just add something to that, the contracts that we have between us require Mr Bethel's company to keep a very closed register of the nature and the material state of all the strategic assets, so we have a strategic asset list—

Chair: So you have a proper inventory.

Ian Booth: It is properly defined—the material state, the maintenance state and the investment are all quantified. We are working together at the moment to strengthen that. Also, all our contracts going forward are qualifying defence contracts under the single source regulations, which give a great deal of transparency anyway. They are all completely open book, so in future contracts we will know all the details that we need to know as well.

David Goldstone: They give three important protections: the transparency; the basis for agreeing the cost base; and agreeing the profit margin as a fair return, fair to both the contractor and the Department. So being a qualifying defence contractor and being under those regulations help to protect both of us, and give us some real protection. Much better strategic supplier management arrangements are in place, and the relationship is basically collaborative and working well.

Chair: It sounds as if you are doing better than other Departments—



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David Goldstone: We need to keep the right sort of arm's length relationship and to hold Babcock to its contractual obligations, but because of the particular nature of the relationship, it has to be collaborative.

- Q50 **Anne-Marie Trevelyan:** Mr Booth, assuming the funding, are you confident that you have got the regulatory approval to start defueling again in 2023? Or will we hit another spanner in the works that we have not thought of yet?

Archie Bethel: We will not have the regulatory approvals until we have completed the commissioning and gone through a series of regulatory approvals. The facility was designed based on lessons from the one that we used for the PWR2s in the Vanguard. It is a facility designed to be intrinsically safer and easier to use.

The regulator was heavily involved at that point. Technically, it has agreed in principle with our approach, but there are still steps to go through to finally achieve that.

- Q51 **Anne-Marie Trevelyan:** Are you confident?

Ian Booth: Yes.

- Q52 **Chair:** And those timetables can line up with no problem, or is there a risk that they will not?

Ian Booth: The timescales are challenging; to be able to commence defueling in 2023 is a challenge, without any question. That is the nature of the debate between us. We may have to change our approach on a number of issues to get close to that.

David Goldstone: We have to take regulators through it step by step all the way through, on the whole journey.

- Q53 **Sir Geoffrey Clifton-Brown:** What is the constraining factor in what is admitted to be a 60-year decommissioning programme? Is it resources and money or is it skills and know-how?

David Goldstone: There is a combination of constraining factors—I do not think there is only one. Capacity and the availability of skills and infrastructure are all constraining factors. The team learnt through preparing for these sorts of discussions and have come up with a plan that balances the various constraints due to capacity in industry, capacity of the dockyards, and funding, so we have a deliverable plan. I do not think there is one constraining factor, but a number that we have to balance to come up with a deliverable programme that meets the policy, is technically deliverable, is resource deliverable in terms of capacity and skills, and is fundable.

Tim Hodgson: There is a value-for-money point as well. We are trying to achieve a steady-state programme that we can roll out. The 18-month to two-year point matches most of the other drumbeat issues across the submarine programme. Trying to right-size a process that matches the overall drumbeat of how we manage the submarine programme gives you



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that first-order effect of value for money through the process. What we do not want is a really peaky labour and resource demand because that is highly expensive. Trying to smooth that is part of the thinking. The longer term plan is the sort of thing we are trying to jiggle around to try to improve that steady state. That is a long-term aspiration.

Q54 Anne-Marie Trevelyan: Mr Booth, how much will it cost to get everything up and running for 2023?

Ian Booth: Are we talking about the defueling?

Anne-Marie Trevelyan: To get everything ship shape, approved and ready to go.

Ian Booth: At the moment, that is a matter of commercial negotiation.

Q55 Anne-Marie Trevelyan: Does the Government have a figure—£1 billion, £10 billion, £20 billion?

Ian Booth: I really would not want to declare that in front of my suppliers.

Q56 Anne-Marie Trevelyan: An order of magnitude?

Ian Booth: No. I really do need to do negotiations with Mr Bethel.

Anne-Marie Trevelyan: He is a good negotiator—we have seen him do it before.

Chair: We will look at that when it is announced and will come back to you.

Q57 Anne-Marie Trevelyan: This question comes partly from Luke Pollard, who is the Devonport MP: he, Mr Chapman and I have been working with BEIS to look at whether the Energy Act 2004 should have included military decommissioning stuff as well as civil. You are under the civil nuclear regulations but you do not have access to that stream. Are you having any conversations with the Treasury about that?

Tim Hodgson: I work very closely with the NDA on a regular basis, and I have a routine sit-down with the strategy director. We discuss exactly where we can help each other and work across that wider liabilities and dependencies piece. The most obvious one we have discussed today where that has an impact is the GDF. Clearly, we contribute our share towards the cost of that process. We have a joint aspiration with NDA and BEIS to, where appropriate, transfer our liabilities at the appropriate time to the NDA. That is something that we have negotiated with the Treasury.⁵

We will try to have open conversations about the appropriate best use of the UK approach. It does not apply specifically to the dismantling or defueling of submarines, because that is such a technical submarine-

⁵ The MoD later said that this should read: 'That is something that we are negotiating with the Treasury.'



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related business. This is more to do with other liabilities associated further back in the supply chain—more basic elements.

David Goldstone: We have a memorandum of understanding with the NDA that captures the shared objectives but also recognises that there are distinct defence requirements that are best delivered through the MoD owning this responsibility.

Tim Hodgson: When we review the overall liabilities programme, we invite the NDA to sit in alongside us, because we want to capture that experience, as much as anything else, and learning. That goes both ways, and my team work very closely at a working level with the NDA as well. I would say the relationship—

Q58 **Chair:** What specifically is a defence concern for one of the older boats? I do not suppose the technology is secret anymore because they have been sat there rotting in a dockyard. What are the particular defence issues that make it so different?

Tim Hodgson: The main defence issue is where it is situated. It is situated on—

Q59 **Chair:** In secure—

Tim Hodgson: Well, it is situated on a Babcock licensed site. You require submarine engineering to enable you to do the removal. You need to be able to understand the construction of a hull, how you cut that sort of material and so on—all those technical issues that are associated with regular submarine engineering. Those are totally different from how you would dismantle a civil power station, which is, over-simplistically, all about making big holes in concrete and—

Q60 **Chair:** We have been to see them doing that.

Tim Hodgson: It is a different problem. It is a different type of engineering. There are commonalities, and that is where we need to collaborate.

Q61 **Chair:** But a lot of it is because it is what you might call behind the wire—behind the security—

Tim Hodgson: Absolutely, and it is a submarine you are cutting apart, not a building.

Q62 **Chair:** Have you thought of moving the submarines anywhere? Is that an option?

Ian Booth: The public consultation was on dismantling the submarines where they lie, so our baseline plan is to do that.

Q63 **Anne-Marie Trevelyan:** Just to leave the thought with you, Mr Goldstone, doesn't it strike you as odd that, when the Energy Act 2004 came in, the MoD did not push to put the military nuclear decommissioning in with the civil so you could have access to what is going to be, for Mr Booth, a long-term trickle of a couple of billion pounds



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a year through to the 2060s and potentially forever?

Chair: She is tempting you, Mr Goldstone, with the promise of money.

Anne-Marie Trevelyan: It strikes me as extraordinarily odd that the MoD did not fight to be in that line of credit for nuclear decommissioning. You are under the civil rules but you do not get access to the cash.

David Goldstone: Well, yes. Obviously I do not know what the considerations were at the time. I do think it is important—

Q64 **Chair:** You could apply to have the Energy Act amended. We are not exactly busy with votes at the moment.

Anne-Marie Trevelyan: It is all right—Mr Pollard, Mr Chapman and I are going to try to do that for you.

David Goldstone: I think the fact that we have consistent regulatory standards is the important point. In terms of safety and regulation, we apply consistent standards. We do have the independent defence regulator, but the standards and the approach are consistent, and therefore I think we achieve the same objective that you are referring to in terms of the safety requirements.

Q65 **Anne-Marie Trevelyan:** There is a question of value for money at national endeavour level—all our submarine activity is done at national endeavour level, be it by Defence or otherwise—that the Department does not choose to challenge the status quo and say, “This is an important long-term civil liability risk.” The national endeavour should help you, not ask you to challenge your budgets consistently.

David Goldstone: Sure, but as you have heard, we do absolutely work together. We are getting that help from the NDA.

Q66 **Anne-Marie Trevelyan:** Yes—at a practical level I have no concerns; it is that I do not feel Mr Booth has the security to ensure, at a value-for-money level nationally, that we are going to be able to see you guarantee rolling this out, because there are risks to your limited departmental budget, which continues to be a challenge. Babcock will take whatever flow of cash is coming, be it short-term money just to keep them ticking over, or more money and more investment to push that forward. From both a liability and a value-for-money point of view, do you agree that it is much more risky, if you cannot secure that income stream, that you will meet that value-for-money requirement of actually getting on with doing this difficult job?

David Goldstone: We are making balanced judgments. We are having to make difficult choices between short-term funding availability and what we can afford, and the long-term consequences of delay, which, as you say, often increases cost. We understand that. We have to make trade-offs, because resources are always limited. As has happened in the past and is documented in the NAO Report, sometimes we have to make those trade-offs to keep within our available funding, and it has had delay consequences that end up costing more money.



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- Q67 **Douglas Chapman:** Can I go back a little bit to some of the questions about Devonport and the space that you have there, just to clarify in my own mind? HMS Torbay, which was retired in 2017, has been prepared for long-term storage and because you decided to do it not in dry dock but in water, there is a £1.5 million spend to bring the project on-stream. Is that correct?

Ian Booth: Yes.

- Q68 **Douglas Chapman:** Will that be the modus operandi from now on and will it all be done in water for any future boats coming out of service? Is that a cost saving and will your £1.5 million be returned to you?

Ian Booth: Yes, it is a cost saving, because if you can do the boats in water you do not need to tie up a dry dock, so it reduces our demand for dry docks, which are very expensive. In-water engineering—done carefully and properly—can give a technically good answer and can save money.

Tim Hodgson: I want just to point out as well that the docks that we would normally do that in are the very docks on which we are trying to complete the work on to enable us to do the defueling. Not requiring the dock to do the lay-up enables us to have more pace in delivering the defueling capabilities. To go back to that Rubik's cube of trying to get it all meshed together, it is a really important enabler to getting optimum use of the docks.

- Q69 **Douglas Chapman:** In the same way that you would want a drumbeat of orders to build ships, have you got a drumbeat plan to defuel and ensure that that happens?

Tim Hodgson: Absolutely.

David Goldstone: That is the value-for-money point that we were making earlier about setting that up so that it is a programme where we can roll them out over a consistent pattern.

- Q70 **Douglas Chapman:** Once again, to make sure that I understand, when will Trenchant, Triumph and Talent come out of service? Is it 2019-20 and 2020-21?

Ian Booth: We do not formally declare our out-of-service dates, but broadly, we would expect to have them out by the mid '20s.

- Q71 **Chair:** Just to lay it on the record, why don't you declare them?

David Goldstone: I think that the Department's policy is not to comment on any operational factors to do with the at-sea deterrent, so we do not comment on that.

- Q72 **Douglas Chapman:** I will ignore anything on Wikipedia in that case. On the annual storage costs, which involve Rosyth and Devonport—£9 million for Rosyth and £15 million for Devonport—and the maintenance costs involved in that, does keeping vessels in storage like that represent good value for money for the taxpayer?



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Ian Booth: It is a reality that that is where we are and until we have defueled and dismantled we have to pay that. Clearly, it would be preferable not to pay that in perpetuity. We can all see that the importance of getting the defueling and dismantling programme going is that the less time spent storing boats, the less it costs. We all recognise that and the National Audit Office Report shows that it is an important thing to do.

Archie Bethel: Those contracts cover a programme of work that has to happen every year to the stored submarines, and then every three years and every five years. So an inspection regime has been established between us, the customer and the ONR for some time now. Those costs fundamentally cover the cost of keeping the submarines safe.

Q73 **Douglas Chapman:** It has also been said that the longer the boats are in water, the less stable they become and the more you need to spend on maintenance. I do not know whether you agree with that, but that is certainly knowledge that is out there. There is a 15-year maintenance programme for each of the boats. Do you sense, because of some of the pressures that you are under, that any of the maintenance dates have slipped when you take a boat out of the water, repaint it, and make sure that the hull is secure and safe, and so on? Has there been any sense of change in that regime during the last few years?

Ian Booth: No. I think that we have stuck to the regime well, but we are constantly looking at opportunities to reduce that maintenance burden. For example, the underwater engineering that we are using on Torbay may be beneficial on the boats in dock.

David Goldstone: And I think this activity is subject to the regulator's inspection.

Ian Booth: It is, yes.

David Goldstone: So if we were trying to avoid the liabilities or the obligations, then we would be picked up, but we are not, in the way you have heard. However, it would be clear if we were, because the regulator would be able to identify it.

Tim Hodgson: Of course, by its very nature, a submarine hull—for its design purpose—is exceptionally strong. This is all about stability of ballast tanks and so on. We are moving towards much more in-water checking and inspection to be able to define the maintenance packages. I would say it has significantly improved over the years, because of the improvements in those techniques, and it has not gone the other way.

Chair: So more opportunities for naval divers.

Tim Hodgson: No, we can do it without divers now. As an ex-diver, that is unfortunate.

Q74 **Douglas Chapman:** We have touched on this before as well, but I just wonder how confident you are that the whole dismantling and defueling



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programme is actually affordable within the current budget. We all know that there are huge pressures across the MOD, and Ministers like nothing more than to cut the tape on a shiny new aircraft carrier or whatever. This whole area seems to be the poor relation, in terms of its focus and the way the MOD and various agencies have approached it. How can we change this to make sure that we become responsible nuclear operatives, and have a programme that we can see real progress in, and can get that steady drumbeat into?

Q75 Chair: I think you will sense, from the times that we are returning to this, that we are not yet convinced by your answers. I think it was the bold phrase used at the beginning, Mr Goldstone: "the funding is there", or something.

David Goldstone: What I said was that the funding is in our long-term plans, and that is the case. I do understand your scepticism and why you want to keep coming back to that point, and given the history, it is a fair challenge.

As we have explained, there have been good reasons why we are where we are, but I think we are actually in a different place now, in the sense that there has been a lot of progress made, without repeating what we have said. We have removed the low-level waste from Swiftsure; we have got the programmes going on now, which are making the progress we have described; and we have got the funding in our plans.

That does not make it immune to the prioritisation that we may have to make, for the reasons that we have touched on, and depending on future funding decisions, we may be in a difficult place. As I said earlier, ultimately, maintaining the at-sea deterrent is the overriding priority for the Department, and if we have to make choices, I cannot presume the outcome of that process, or guarantee today what the outcome would be.

However, if it ever was the case that it was a poor relation, I do not think that is the case today. I think the priority of this is recognised. As we have said, this sort of exercise helps to confirm people's focus and attention, but because we know there would be a real space issue if we did not get on with the programme, it keeps making sure that we recognise the importance and do not deprioritise it in a way that might create that problem.

Q76 Caroline Flint: I am looking at page 5 of the NAO Report. Point 3 says, "After examining our May 2018 landscape review...It"—that is, this Committee—"recommended that the Department end the delays to submarine disposals. The Department told the Committee that although it had deferred dismantling submarines on affordability grounds in the past, this was no longer acceptable on safety and reputational grounds. It committed to fully dismantling its first submarine".

Without going back to the earlier questions, I am interested in what sparked the change of approach—at what point and which organisation prompted that? Was it the NAO, the Defence Committee, this Committee or the media that, if you like, highlighted the issue of capacity—of what



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seemed to be a crowded space being created on these sites, with other developments down the road? What sparked attention on this? It seems to me from listening to this discussion that it is quite a doldrums-type of exercise. Where were the knives, if you like, in the process, to enable us to be alert to these concerns literally all the time, so that we could weigh affordability against the risks to safety and public reputational confidence in the programme, and in the wider nuclear submarine programme?

Chair: I think that falls to you, Mr Goldstone.

David Goldstone: I will bring in Rear-Admiral Hodgson in a second, but I think the key answer to your question is that we didn't have clarity on a solution that was deliverable within the policy until, effectively, 2016. A lot of the delay that was described was because we were in a situation where the policy that had been articulated wasn't deliverable. We didn't have an urgent problem, because we had capacity, but we had to come up with a new solution that had interim storage for the intermediate, was deliverable and would meet the requirements going forward. It was only once we identified Capenhurst and had a solution for the site, and had a new policy that went through consultation—effectively, there were two rounds of public consultation between 2010 and 2016—that we had a deliverable programme.

In answer to your question, that is what has given us the knives and the tools to go forward with a programme that we have got much greater confidence in. That is what has changed. As far as I understand it, I don't think it was the external pressure so much. That obviously helps and keeps us to it, but we didn't have the policy and the deliverable solution until that 2016 point, so it is only over the last two or three years that we have been in that position, and we are now progressing with the plans as described.

Q77 **Chair:** That begs as many questions as it answers. Rear-Admiral.

Tim Hodgson: I would absolutely echo all of that. What is really evident to me from having looked in over this period is the enthusiasm of the teams on the ground. They now have a policy they believe in that is backed up by the public consultation, which has the support of the relevant local authorities and stakeholders. That has enabled everyone to coalesce behind a programme that, at the working level, they can deliver. Ian's team up in Rosyth are highly enthusiastic. They lobby me on a regular basis as the strategy owner. They make sure that we are committed at our end. That all helps, but it is all down to—exactly as Mr Goldstone says—having a policy that is actually deliverable. That is the bit that has been difficult.

David Goldstone: That we didn't have.

Tim Hodgson: That we didn't have.

Q78 **Chair:** Any questions about why not before 2016?

Caroline Flint: Why didn't you have a policy before that? You made a policy decision. You said you didn't go the American route, and you didn't



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go the French route, so you must have gone through a whole process of policy, engineering and science in all of that to see what was there.

Tim Hodgson: Primarily through the public consultation and the consultation with stakeholders. We couldn't find anywhere that was available to accept the—

Q79 **Chair:** The point is that consultation didn't take place until more recently. What was going on before 2016? Was it not just shoved into the long grass?

Tim Hodgson: We were trying to achieve a national policy for what we were going to do with the long-term waste, nationally, so we were very dependent on that.

Q80 **Chair:** I think you are perhaps just gently saying, because you can't say it, that Ministers couldn't make the decision. Is that really what was happening? It was never a priority.

Tim Hodgson: No.

Q81 **Chair:** Was it not?

Tim Hodgson: No, I think it was about having that base. We needed to understand where the national policy was going, and then once we could do that, we could get into the debate with all the local authorities about their approach, what they would accept and what they would welcome.

Q82 **Caroline Flint:** It also goes back to the question my colleagues asked about the Energy Act and why, in terms of looking at the civil liabilities, there wasn't much more synergy on the overall problem. I take your point that there is a difference between nuclear power stations and this, but there is also some synergy and commonality in those areas, particularly in consultation, particularly in public confidence and particularly in finding space for disposal. Those are common issues. Also, fundamentally, the cost is a common issue as well.

Tim Hodgson: I accept the point. The difficulty with the civil approach is that the civil approach would require us to store the intermediate-level waste on the sites. That would require it being stored in Rosyth and in Devonport, and there was no appetite in either area to provide those storage facilities.

David Goldstone: I think you are asking about the long gap.

Q83 **Chair:** Exactly. Yes.

David Goldstone: The original policy anticipated using the Nirex repository, which was meant to be available from around 2010. That plan is not now being followed. Effectively, the geological disposal facility that we referred to is now being that long-term solution, and that only became clear latterly, and we then had to come up with a different approach for the defence requirements. That is why we needed a new approach to our policy, and had to go through all the consultation around that.



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Q84 **Chair:** That covers some of it. 2010 is still quite late in the day.

David Goldstone: I can see that, but we then had to go through all the consultation that followed.

Chair: We recognise that you were not there, and you probably will not be there when it is done—most of us will not be—but one of the things that we want to try to winkle out as a Committee is where the big public policy decision lessons are. We look at Sellafield, which is an object lesson in how not to make public policy, actually. Every politician and senior official should visit it to see what went wrong. We clearly digress on that, but I will bring in Anne-Marie Trevelyan to bring us back.

Q85 **Anne-Marie Trevelyan:** None of you were in post, but there is a question about that point in 2004 when the Energy Act brought it together, as you say, after a long time getting to a decision on how we were going to do things. You stopped defueling, so you had seven to put through the dismantling process that are done, but everything ground to a halt. I will come back to it, but as you sat outside the civil space in terms of liability, you were then still stopped from continuing the programme. There is a really challenging question, I think, about what has to be one of our big national policy areas.

You said something interesting, Mr Goldstone, however, which was that capacity is always the Department's priority. I fully support that, but capacity lives under the Royal Navy's TLB, and the DNO now exists as its own TLB, so I am slightly confused as to why that would risk this programme.

David Goldstone: I was making a point about the Department's overall priorities. The Royal Navy is one top-level budget holder; the DNO is another. In terms of our overall priorities, the capabilities to support the continuous deterrent operating day in, day out are shared. Some of what is required is provided by Ian's organisation. Everything necessary to support the deterrent is the overarching priority. That was the only point I was making; I was not making a point within individual budget holders. For the Department overall, that is the No. 1 priority. There are aspects of the Navy budget and the DNO budget that flow through to the SDA, all of which support that priority. The point I was making was that that is the top priority. It is obviously a top priority for the Government overall. Therefore, when we have these difficult funding and prioritisation decisions, that is a stake in the ground that we absolutely have to meet.

Q86 **Anne-Marie Trevelyan:** Indeed, and not only at a cash level, but at a skills and personnel level. The refueling of Vanguard meant that you nicked everybody to go and do that, so you now have a hole in your skills base. That could happen again, presumably. This is a challenge, unless Babcock have a magic solution for having a much larger pool of workforce.

Archie Bethel: You make an important point. Fuelling and defuelling do not happen continuously, which is a big issue. We maintain a single



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fuelling team, which is a big team and very skilled. It has to continually operate to get practice.

We did have to divert that in 2016 from the developments of the defueling to the Vanguard refueling. Part of the solution that Ian and I are trying to finalise at the moment will be to bring that team back. When we have completed the refueling of Vanguard, it will move back into the project for completing the defueling capabilities. The reality is that that one aspect of defueling, fueling and refuelling is a very important key skill, which does not exist in many places, and we do not do it continuously. It is something that is really always at the centre of the planning.

During the period—I know it is a long period—we had to do some really complicated engineering. From 2000 to 2004, we had to dismantle and decommission two older refuelling facilities—one at Rosyth and one at Devonport. We had to develop a whole new, modern approach to the defueling, which is the one that has taken us a long time, but that is now physically there. It is one that in a fairly short period of time we have been able to use, so it has not been wasted time. At Rosyth, we have developed the capability, more in terms of infrastructure, equipment and skill, to be able to do this ILW—first LLW, then ILW—removal. A lot has been achieved in the process.

- Q87 **Chair:** How are you making sure that when you are working out how to defuel or decommission one type, those skills are applicable to a future type? Obviously they all have slightly different reactors and different designs. It could be a cash cow for you, Mr Bethel, if we were being cynical about it, so how do you make sure you are learning that, and Mr Booth, how do you hold him to account for that?

Archie Bethel: We have full capability on PWR2, which is the modern type. That is what Astute will be. That is where the Vanguards are. PWR1, which is the legacy, is the piece of the puzzle that we are now completing in the defueling facility. At that point of time we basically have everything covered.

- Q88 **Chair:** So when you have got that done you will be ready, set for any other—

Archie Bethel: We should be.

David Goldstone: It is the peak and trough of the skills part that we are trying to address through having the long-term programme of continuous flow of activity.

Chair: It is heartening to hear that, Rear-Admiral. We wish you well in that, but many have come and said it and not been successful—she said cynically.

- Q89 **Anne-Marie Trevelyan:** That is yet another anxiety for me. Let us say the Dreadnought-class programme is delayed. What do you do with the other three V-boats? Will you have to refuel one of them? Will you have to stop and refuel to give that one another—



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Ian Booth: Our current plan is not to refuel the V-boats.

Tim Hodgson: There is no shortage of fuel in the V-boats.

Q90 **Anne-Marie Trevelyan:** Right. So it was only Vanguard because she was the first.

Tim Hodgson: It was purely precautionary based on the issue in Dounreay. We have decided not to do it for the—

Q91 **Anne-Marie Trevelyan:** So in terms of a team of a skilled experts, you do not consider the defueling in Devonport to be a risk.

Ian Booth: It is probably helpful, actually, because the team are as we speak in a defuel and refuel process on HMS Vanguard, so when that team has completed there, they should move over to the defueling of the old PWR1 boats. So if we are clever about it, we will effectively finish Vanguard and the team will move over and start work on PWR1 boats and work their way through those. Then when HMS Vanguard comes out of service, let us say in the mid-2030s, we do have a dock—the one she is sat in today—and a team that could move over to there. So it does not fit perfectly at the moment—it will need some smoothing—but there is a route that we can see to sustain the skills over a sustained period in Devonport, and almost a steady stream of boats coming in. But that does require us to get moving and to make progress on the old PWR1 boats.

Q92 **Chair:** You were involved in the carrier, and there was a real risk that that huge team of expertise in that conglomerate of private companies will have nothing to pass its skills on to. Presumably you are in a better place here because you can see the boats that you have got to deal with. Has that smoothed out that problem for you on submarines, compared with the carrier?

Ian Booth: The forward workload in Devonport at the moment is higher than we have people for, so in Devonport really if you look at the long-term plan of work on the V-boats, the A-boats and the defueling as well as the skills and demographics, Mr Bethel will soon have to work quite hard to top those skills up. Devonport has a reasonably stable forward look.

Rosyth is a different matter—which clearly is the carrier yard. But at the moment on the defueling project—actually, Mr Bethel was successful in winning missile tube contracts from our US partners for the Dreadnought programme, so he does not supply me; he supplies Electric Boat, who then supply me. I was pleased when I walked round there recently to find that quite a lot of my old team from the carrier were making missile tubes for Dreadnought. That was quite rewarding, actually.

Chair: So there was a little bit of flow-through. That is a debate we often have with the Ministry of Defence, but we will not get into that in too much detail now.

Q93 **Anne-Marie Trevelyan:** This is to each of you, starting with Rear-Admiral Hodgson: what keeps you awake at night? And what is the greatest risk to delivery?



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Tim Hodgson: Interesting. In this area, as I look after the whole submarine programme—

Chair: That is something else that keeps you awake at night.

Tim Hodgson: That is an interesting point, because it is probably not this area that is keeping me awake—apart from for Public Accounts Committee meetings.

Anne-Marie Trevelyan: We are nearly finished—you can go home soon.

Tim Hodgson: The main area, I think, is definitely about getting this progress on the defueling capability in Devonport. I think the team working on the submarine dismantling are very buoyant. They have a clear policy and a clear way ahead. There are some technical decisions, but that is in pretty good shape.

For the defueling, we need to get over this next few months, get forward with a contract and move into that same position of having that clearly defined way forward with a contract so that people can all align behind it. That is where we need to be. By Christmas, I hope to get a good night's sleep on that area as well.

Q94 **Anne-Marie Trevelyan:** Thank you. Mr Booth, what keeps you awake at night?

Ian Booth: Exactly the same.

Anne-Marie Trevelyan: Really?

Ian Booth: Yes.

Anne-Marie Trevelyan: The risk of the Babcock contract not coming together with the skills that you need to move forwards.

Ian Booth: All the submarine programmes that Tim contracts, I tend to deliver,⁶ so I have the same issue across the board. Looking specifically at this hearing, it is getting Devonport started in a timescale and a cost that makes sense for us, and having the skills there to discharge it. I would probably add that to Rear-Admiral Tim's comment, that the skill base to discharge it effectively: that feels like the tricky problem. I don't think it is insurmountable, and I would not want the Committee to think we do not have the answer, but it is going to take quite a lot of hard work through to the end of the year.

Q95 **Chair:** How long does it take, Mr Bethel, to train a nuclear decommissioning engineer to do this level of work? What is the pipeline? Where do you start—I mean, where will you be starting?

Archie Bethel: Most of our decommissioning engineers will have 10 or 12 years' experience. They will come in and they will be operating, probably,

⁶ The MoD later said that this should read: 'All the submarine programmes that Tim is the customer for, I tend to deliver...'



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on submarine programmes, and they will work their way up and learn the different aspects of it.

Q96 **Chair:** So you cannot just turn on a tap from nowhere.

Archie Bethel: No, you certainly can't.

Chair: You have to have 10 to 12 years' experience.

Archie Bethel: You have to do your own—and we spend a lot of time and a lot of money developing our own talent.

Chair: That is just helpful for us to know when we are looking at these issues.

Q97 **Anne-Marie Trevelyan:** How much of that workforce has come from the submarine service before it comes to you? How many do you poach when they have had enough of being underwater?

Archie Bethel: I could get that number. I don't—

Anne-Marie Trevelyan: It would be really interesting to know.

Chair: The transferrable skills, I think, is what Ms Trevelyan is asking about.

Archie Bethel: In some of the engineering and planning areas, it will be significant numbers. That is a healthy swap-over; we get some really experienced people who have spent their career on submarines, and they are great people to come in, to then work on our side of it. In fact, our new chief executive of that division started his life as a submariner before going and working in oil and gas. There is a healthy—and it is also an area where there isn't a lot of—I mean, submarines are a really specialist area, and nuclear submarines are even more specialist, so it is a relatively small pool.

Q98 **Anne-Marie Trevelyan:** What is going to keep you awake at night between now and Christmas?

Archie Bethel: The first thing I would say is keeping him satisfied—that keeps me awake some nights—and the skills. I have got to say that I do worry about the skills: can we continue to generate them in the quantities that we need?

Q99 **Chair:** Mr Goldstone?

David Goldstone: Look, I have not got the level of close expertise and involvement that all of my colleagues have.

Chair: So you can sleep resting, knowing that they are worrying about it.

David Goldstone: To some extent, absolutely. Despite this having come up already, when I first looked into this area and was understanding about the nuclear enterprise when I first came into MoD, it was the skills challenge long-term, and sustaining the expertise in the Department and the whole industry, that really strikes us as a long-term challenge and a



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national issue. There was a lot of work going on with the civil sector about graduate training, apprenticeships and all sorts of measures, as Ian said, to get on with it—to be on top of it and do everything we can—but that is clearly an issue that is broader than the narrow requirement we are talking about today. That is one of the things that is very striking when you look into the whole span of activity we have in the nuclear enterprise.

Q100 Douglas Chapman: One final question for Mr Bethel. I am not a Babcock shareholder, but if I was, would I be happier with Babcock still around and dismantling submarines, or would I be happier if the dockyard space was put to other positive economic activity?

Archie Bethel: If you were a shareholder, you would invest on what your view of Babcock's business was. Submarines is by far our biggest business. It is the part of our business that I am most proud of; it is the part where I think we play the biggest, most serious role. We take very seriously the responsibility we have as being the submarine enterprise's second-biggest supplier, so I think our shareholders will make a decision on whether they invest in Babcock or not based on whether they like submarines or not.

Douglas Chapman: That has not answered my question, but it was a good answer.

Q101 Sir Geoffrey Clifton-Brown: Two final questions to you, Mr Booth. First, the unplanned refueling of Vanguard caused a delay in the programme. Is there any likelihood that that could happen again?

Ian Booth: At the moment, we believe not. We did it as a precautionary measure. She was always going to have a refit, but the refueling was a precautionary measure.

Q102 Sir Geoffrey Clifton-Brown: Is there any way of measuring the strength of the reactive core?

Ian Booth: We absolutely do. We are getting into deep nuclear engineering here, but a very careful analysis and piece of work goes on. We have a team in Dounreay, so we monitor it very carefully. At the moment, on the balance of decision, we believe that we do not need to do it.

Q103 Sir Geoffrey Clifton-Brown: Finally, given that a lot of this session has been about skills and the limited availability of skills, is there any possibility that the presumably large amount of skills that are going to need to be used for fueling the Dreadnought programme is likely to have an effect on this programme?

Tim Hodgson: We are actually going to fuel Dreadnought in a completely different way to the way we currently fuel our submarines. That will be done by Rolls-Royce, so technically, no, there is no direct read-across.

Q104 Sir Geoffrey Clifton-Brown: So the skills will not be taken from this programme to do that.



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Tim Hodgson: There is always a movement of people around the industry, but there will be no need to move people from this programme. It is a completely different requirement technically.

Q105 **Chair:** My final question is to Mr Booth. You said that you had signed on for five years, when we asked whether you are going. That takes you to about 2023, interestingly. Is that you getting out before something happens, or do you actually see yourself being there when we start in 2023?

Ian Booth: I would hope to be there. Genuinely, as Rear-Admiral Tim said, for a lot of the team we are finding this really interesting. I think someone said early on that the dismantling of submarines was the slightly less exciting side of shiny submarines. The engineering challenges and the technology involved are good. We have even had young graduates volunteering to go to Rosyth to work on this programme, because it is stimulating, which I would not have predicted before I looked at it. I would personally hope to be there to see the first one dismantled.

Q106 **Caroline Flint:** Is there any learning for intellectual value from what you have discovered that could be used elsewhere to earn a bit of money back?

Ian Booth: The answer is yes—certainly for Babcock. For the Ministry of Defence, possibly not.

Q107 **Chair:** We see this at Sellafield. Those huge engineering skills are not tapped. Occasionally people float off a private company of their own, but there is a real capability there of top-level engineering.

Tim Hodgson: We are working very closely with BEIS, the NDA and the civil sector, as part of the nuclear sector new deal, in looking at those plans and synergies. There is a bit of greater prosperity for Britain, which we are feeding back into as part of that.

Chair: Isn't that one of the strands of the MoD's targets?

Caroline Flint: It would be nice if something could come back, through whatever route, into the public purse.

Q108 **Chair:** I wonder whether your average school child in Doncaster, Hackney, Berwick or Rosyth would be aware of this. In Rosyth, probably more so, but are they aware that there are opportunities here?

Tim Hodgson: Some of these benefits through the prosperity agenda do come back, but they come back very indirectly through taxation, et cetera, elsewhere. I do not know how you do the benefit tracking on that.

Chair: Well, there you go. There is a job for the NAO. We will have a chat with them about that. Thank you very much indeed for your time. The transcript will be up on the website in the next couple of days. It goes up uncorrected, so have a quick look at that. Our report will be out in due course. We are already in May, so it is not likely to be until June, but we will obviously keep you posted about that as well.



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Thank you very much indeed for your time. Remember, when you respond to our report, that if we do not like the responses, or they are a bit weak, we will call you back in, so there is an incentive to respond thoroughly and meaningfully. Thank you.