

Defence Committee

Oral evidence: The Navy: purpose and procurement, HC 168

Tuesday 2 November 2021

Ordered by the House of Commons to be published on 2 November 2021.

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Members present: Mr Tobias Ellwood (Chair); Sarah Atherton; Mr Mark Francois; Mr Kevan Jones; Gavin Robinson; John Spellar.

Questions 153-319

Witnesses

I: Jeremy Quin MP, Minister for Defence Procurement, Admiral Sir Tony Radakin, First Sea Lord, Ministry of Defence, and Vice Admiral Chris Gardner, Director General, Ships Domain, Defence Equipment and Support, Ministry of Defence.

Written evidence from witnesses:

[- Ministry of Defence: NAV0030](#)



Examination of witnesses

Witnesses: Jeremy Quin MP, Admiral Sir Tony Radakin and Vice Admiral Chris Gardner.

Q153 **Chair:** Welcome to the Defence Committee. I am delighted to welcome the Procurement Minister, Jeremy Quin MP, Vice Admiral Chris Gardner and the First Sea Lord, Admiral Sir Tony Radakin.

Admiral, may I, on behalf of the Committee, congratulate you on your promotion? We are glad that you could squeeze in one last visit to the Committee as First Sea Lord before your elevation, although no doubt you will return before us in your wider guise.

We are grateful for your presence today for the final session of our naval inquiry looking at the size and make-up of our surface and sub-surface fleet, the shipbuilding strategy, weapons systems, F-35 numbers, threats and deployments, and alliances.

Before we get into the meat and substance, there are some outstanding matters, of which we warned you. Perhaps you will give us a couple of lines on them. Ajax has been a concern; we know that you have focused on it, too. Will you give us a quick update on Ajax?

Jeremy Quin: It is not just a concern for you, Chair. As you know, we are very focused on Ajax. The health and safety report is out for Maxwellisation at the moment. I am keen to see it out as soon as possible, and it will be published in full, as I promised the Committee.

We have ongoing work with the trials to ascertain where the vibration is coming from and to test possible mitigations, and the root cause. That is all work in progress. I have tried to maintain a regular drumbeat of updates to the House through WMSs and to notify the Committee, and I will continue to do so.

Q154 **Chair:** I am very grateful; you have been extremely helpful in keeping the House informed. It would be good to receive an oral update next time, if possible, so that we get an opportunity to react.

The second question is on accommodation and buildings. I understand that over 750 defence accommodation buildings still have combustible cladding. Will you update the Committee on what we are doing, post Grenfell?

Jeremy Quin: I take a close interest in this because of my responsibility for Defence Estates, although another Minister leads on it day to day. If I misspeak on any of the issues, I shall write to the Committee.

As you know, we have a vast number of buildings—98,000, I think, of which 38 are high rise and 27 are high rise with external wall systems and in residential use. There is a programme to ensure that we know what can be done to remove the combustible materials. It is not always cladding. In one case, Peninsula, which is being investigated as we speak, I believe,



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wood is part of the composites—it is not traditional cladding. Only a small minority are fully clad; the vast majority—22 of 27—are at Faslane, where there is cladding to the internal core and top floor. Each requires separate mitigations and we are going through each in turn.

The one thing on which I would like to reassure the Committee is that, as you will appreciate, all these buildings are occupied. They are all SLA, not SFA. These are residential units for active, trained personnel. They are regularly drilled. I believe that all—certainly, the vast majority—have active fire alarm systems in place. As you will appreciate, there is a regular put-through of barrack inspections and regular checks through Defence Fire and Rescue services to check that all mitigations are in place that should be in place, and that they are fit to operate under defined FRAs. There are fire regulations to do with each of the buildings that are adhered to while we go through the process of working out what we do.

The cladding might not need to be removed. Partial cladding may not need to be removed, but there may be other mitigations—cavity insulation or compartmentalisation—that need to be put in place. It is not a simple issue.

Q155 Chair: Thank you for that comprehensive reply. Of the 755, when will the programme of renovation be completed? Perhaps you could write to me with more details, including what you have just mentioned.

Jeremy Quin: I will. In some cases, it will be work in progress. It will tell you when we will get the reports on which we can base our solution. The focus, for understandable reasons, has been on the initial high rises of six floors and above. MHCLG changed its guidance in January 2020 to include all residential. We have reflected that, but I shall give you an update on the whole thing.

Q156 John Spellar: Minister, you will be aware that the Committee has written to the Secretary of State expressing our concern that GE might be selling EDF the facility at Rugby that makes turbines, including, of course, for our submarine fleet. What engagement has the Ministry had with GE on this? Do you have any concerns about part of the UK's submarine manufacturing infrastructure being sold, in the current climate, to a French company, after the issues that have been very publicly aired about the UK-US-Australia submarine agreement?

Jeremy Quin: I should reassure the Committee on one point. You, Chair, and the Committee have been very concerned about the propulsion business. I am pleased to confirm that there is a guarantee in place that the propulsion business is there until 2024, and hopefully going on from there. A guarantee has been put in place for the propulsion unit.

The steam unit is separate. It is different. At the moment, the Department and I don't know exactly what GE plans, exactly what the scale of any sale might be or indeed whether the sale will go through. We have received absolute assurances from GE that it will brief us fully on what it has in mind and the security implications.



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I don't know yet whether I have concerns. Is it a matter of concern? Yes, it is. We will want to make certain that we are reassured about what is planned, what is being sold and what the implications may be.

We will certainly go through that. As the Committee knows, we have powers under the Enterprise Act—the Department for Business has those powers— if required, to intervene. We in Defence will take a close interest. It is impossible to add more until I know the details of the transaction.

Q157 **John Spellar:** Have they indicated that they will give you early sight of the proposals, rather than notify you of a done deal?

Jeremy Quin: We have had an assurance that they will give us full information. The implication of what we have been told is that that will be in advance of anything being concreted, signed or delivered.

Q158 **John Spellar:** Can we also be clear that the Department will take a closer interest in this than it did in the propulsion system? Quite simply, until the Committee became engaged there was no interest from the Department at all.

Jeremy Quin: I can't answer for the Department on that; I don't know what interest was taken. I can assure you that a legally binding deed poll has been signed by GE in relation to the propulsion system.

Q159 **John Spellar:** That is fine, but there was no interest from the Department when this was mooted. Indeed, it was only when the company was going to give evidence to this Committee that it changed its mind. It required the Department to take an interest, which it didn't before the Committee took an interest.

Jeremy Quin: As so often, I am better informed as a result of Mr Spellar's contributions.

I am aware that we have had contact. I am aware that we will look at this very closely. I reassure the Committee on that. The Committee should also be reassured that when the new National Security and Investment Act comes into force in January, there will be far wider requirements on industry to report transactions, rather than us having to conduct our own due diligence and voluntary reporting. The regime is, I am pleased to say, being strengthened as a result of the recent Act.

Q160 **Chair:** My final request is to do with some outstanding requests for information on the naval inquiry. We are still missing responses to a number of requests. We shall get in touch with your office to make clear what those are.

Jeremy Quin: I am very sorry if that is the case. I was not aware that things had not been furnished to you that you require. We will see what is outstanding.

Q161 **Chair:** They cover plans for transitioning to new vessels, maintaining Type 23 availability and submarine availability.



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Jeremy Quin: With things like submarine availability, the Department has always been fairly cautious about what is put in the public domain. I will chase that up and we will come back to you.

Chair: Scrutiny and oversight are important, no matter how deep the submarines will go.

Mr Francois: Or not go.

Chair: Let us now focus on the substance of the Committee hearing: the Navy, its purpose and procurement.

Q162 **John Spellar:** Over the next decade we will replace or upgrade most of the main surface and sub-surface vessels in the Royal Navy. What are you doing to address the risks that are possibly inherent in so many major concurrent transitions?

Jeremy Quin: I am aware that the First Sea Lord is here; I am sure you will want to hear from him as well.

The Committee will have been warmly supportive of what the MoD and the Royal Navy have done with the increased drumbeat of orders for surface shipping. There is always inherent risk, particularly in first of class, but the industry is working with us on Type 26 and Type 31. We are doing our utmost to get those in on time and on scope.

There is positive news on the Type 31s, which have gone through all their milestones to date. We have done the steel cut for *Venturer*, the first of class. Progress is being made at BAE on Type 26.

We have a demanding schedule because we are bringing a lot more surface vessels into the service of the Royal Navy. The objective is to ensure that there is no capability gap—that HMS *Glasgow*, the first of class of the Type 26 ASWs, comes in to match the coming out of service of HMS *Westminster*, the first of the Type 23 ASWs to come out, and that we have the Type 31s coming in regularly to replace the retiring general purpose Type 23s. The Type 23s have been upgraded and are, post upgrade, good to remain in service for some considerable time.

I don't know whether the First Sea Lord wants to say something about the transition.

Admiral Tony Radakin: The only thing I would add is that, unsurprisingly, we welcome the capital investment—and it is substantial stepping through this decade and into the next decade.

We have the backdrop of some things having matured. The carrier programme is coming to life, with both carriers operational. The five batch 2 OPVs are all being deployed. The Type 45s, a mature capability, are being invested in to address some of the propulsion concerns. The Type 23s, as the Minister said, are also being invested in to give them a much longer life.



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That allows us to start the frigate transition. Type 26s come in to allow us to fulfil our ASW capability as the Type 23s start to be paid off, and the Type 31s come in to replace the general purpose Type 23s, and again that is a steady drumbeat.

One of the big things for us is ensuring we have the crews to take on those ships. There is an element of a slight double bubble running on the existing ships and starting to crew the new ships. We have had very positive recruitment over the past three years, so that feels good.

The capability transitions also feel comfortable in how we step through the decade. If anything, probably the more challenging one is in the submarine area—how we continue to introduce the Astutes.

Q163 Chair: May we stick to the surface fleet? We will come to the sub-surface fleet.

Jeremy Quin: The surface fleet does not end with Type 26 and Type 31, as we saw in the IR. We then have concept work ongoing that is just beginning on Type 32. We should then increase the size of the surface fleet as we go into the 2030s.

Q164 John Spellar: Have you had assurances from industry about skills and the professional engineering workforce and about the resilience of its supply chain that suggest it will be able to maintain that drumbeat?

Jeremy Quin: One of the things that I most worry about is skills and making certain that the skills gap is filled. We have had the benefit of a lot of work with industry on how we can meet any skills gap that emerges.

I was with BAE in Govan last week and was delighted to hear of its plans for a skills academy based there. It has sign-off from the board to have an academy that will not only support its own needs but those of the wider shipbuilding industry. There is also the work that we are doing with the MEZ, which was initially based in Gosport but has now become a UK-wide endeavour, and with the maritime enterprise in Scotland. There is a lot of focus on skills and Mr Spellar is absolutely right to refer to it as a key issue to ensure our delivery. It will happen; industry is determined to make it happen.

It also requires investment, such as the work at Babcock to put up the new conditions for working within a shipbuilding hall and the similar plans in BAE to increase the digitalisation of the workforce. I do not know whether everyone has had a chance to see the scale of what is happening with HMS Glasgow, but it is worth a visit. The way people are using digitalisation to ensure that they are incredibly efficient is deeply impressive. Skills are absolutely an area that we need to focus on. That is absolutely right.

Q165 Chair: You have mapped out what is happening. It is an exciting time for the Navy. There is no doubt about it in wider terms, but there is a concern that you are retiring Type 23s early—the Montrose, Monmouth, Argyll and so forth—and your new ships are not coming in in time. There



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is a capability gap. Then you have maintenance and training that are separate from operational matters. The concern is that two Type 23s were retired early. You mentioned HMS Glasgow, but that does not come in until 2028.

Jeremy Quin: We hope it will be 2027, but with covid there are always issues. Before that, we should have the Type 31s coming in, but the point is about availability. We are fighting over who should answer this question, but I will give the First Sea Lord the opportunity to have a crack at explaining how Monmouth and Montrose do not affect our availability.

Admiral Tony Radakin: Thank you, Minister. I understand that it starts to sound like alchemy when we are paying off two ships and then actually saying that we will have more availability. That is because when you look at those two ships' programmes, the money we were spending on them and what we would get out of that, versus extending three other Type 23s—HMS Argyll, HMS Iron Duke and HMS Lancaster—you see that we get more ships available for operations. There is not the gap that you referred to, Mr Chairman. We carry on with the same number of ships that we have got today over the next couple of years, and then in 2024 we start to increase the number of ships in the frigate-destroyer fleet that are available. That continues to grow throughout the decade.

Q166 **Chair:** Okay, but you currently have only eight Type 23s. Is that correct?

Admiral Tony Radakin: We have 12 Type 23s, of which we have eight available for operations.

Q167 **Chair:** Okay, and six Type 45s?

Admiral Tony Radakin: We have six Type 45s, of which we have three available for operations. That will grow to four out of six on a consistent basis from 2024.

Q168 **Chair:** Because that is the resilience issue we are talking about. Out of any three ships that you have, the chances are that only one—or possibly two—will be operational and ready to go at any one time. Let us say one and a half, although you obviously cannot have half a ship. My point is that training, maintenance, deep fits and so forth take out a third to two thirds of your fleet at any one time.

Admiral Tony Radakin: Traditionally, it always did. We are looking to grow the availability much more strongly than that. The traditional view was that a ship would be available for 60% of the time. That aligned with the way that we crew our ships in order to give people both their leave and some home-based port time. If you recall, we are adjusting some of the ways that we operate our ships. For HMS Montrose in the Gulf, we rolled the crews through so that the ship was available for far more of the time. The batch 2 OPVs have a one-in-three watch system that allows us to have those ships a lot more available. We are looking to do that with far more of the fleet. With a modern fleet, we are looking to get 80% availability out of those ships.

Chair: We will stay on frigates and destroyers. I am afraid OPVs are a



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different class. You would not put them in harm's way in the same way that you can with frigates and destroyers.

Q169 **Mr Jones:** There is going to be a gap, isn't there? You are talking about the number of hulls, but the Type 31s will not have the capability to take over responsibility for what some of the Type 23s can do. They will not be able to do that, will they?

Admiral Tony Radakin: The Type 23s have two main roles. They have a general-purpose ability as a frigate. The Type 31s absolutely fulfil that role. The other Type 23s have an ASW role and we are looking to the Type 26s to replace those Type 23s that are specialised in ASW. How do we manage the fleet so that we can invest in the Type 26s that are at a high end of ASW capability? How can we maintain a frigate-destroyer fleet of 19 ships and how do we look to grow that further when we introduce the Type 32s?

Q170 **Mr Jones:** That is the problem with all this. I agree totally but if you are retiring Type 23s with ASW capability, you can't replace that with Type 31s, can you?

Jeremy Quin: We will replace that with Type 26s as they come through.

Q171 **Mr Jones:** But that is several years later. You can't have it both ways.

Jeremy Quin: No. The idea is that the first of our Type 26s—HMS Glasgow—will come in to replace HMS Westminster, the first of the ASW Type 23s to go out. Then we will match it ship by ship. We retain the ASW capability on the Type 23s until they are retired as the Type 26s come in. I am right on that, Chris?

Vice Admiral Chris Gardner: Yes, Minister.

Jeremy Quin: I absolutely understand the concern. That is what we are doing to try to prevent that concern from taking place—matching the retirement of capability with capability.

Q172 **Mr Jones:** Is that a guarantee? That is not what you told me in parliamentary questions.

Jeremy Quin: I am horrified if there is any difference between what I am saying now and what I said in parliamentary questions.

Q173 **Mr Jones:** Can I just explain the problem I have with this? I understand why politically we have to be seen to have 19 frigates and destroyers. Yes, we could have 19 Minis, but that does not mean that they would necessarily do the same as 19 Ferraris. That is the problem, isn't it? What you're saying is that it will be seamless from the ASW going out with the Type 23s to the Type 26s taking over. Can you give that guarantee?

Jeremy Quin: That is what we intend. Whenever you produce a first-of-class vessel, you get nervous about giving guarantees. The Chairman referred to a 2028 entry date for HMS Glasgow; 2027 is meant to be the entry date for Glasgow, but now we have had covid and all kinds of things. I don't know whether you, Chris, would want to be able to give more



reassurance and whether you feel you can give a cast-iron guarantee on behalf of the Royal Navy. That is what Mr Jones is after.

Vice Admiral Chris Gardner: I don't think I can give a cast-iron guarantee. What I can say is that the frigate transition plan we currently have in place matches the out-of-service dates of the ASW Type 23s with the planned in-service dates of the Type 26s as they come into service. Equally, on the Type 31s replacing the general-purpose frigates, one of the reasons that we are driving Babcock so hard is that the deal that we have with them is for five ships off contract by 2028 to ensure that we have as seamless a transition when the general-purpose frigates leave service and for which the Type 31s are a really good match.

Admiral Tony Radakin: Can I add a little more on the capability side? As well as going from 19 frigates and destroyers, with the Type 32 we potentially get up to 24 frigates and destroyers. I accept there are various capabilities of those individual ships, but when you look at this through an ASW lens, you have to acknowledge that we have introduced P-8. That makes a big difference in terms of how we are shaping the ASW battle in the north Atlantic. We have newer submarines in the Astute class, and that makes another difference. At a more sensitive level, we are investing in some of the underwater sensors and we continue to have Merlin Mk 2s and the way they contribute. There are other research programmes that we are doing with the Americans where again we are focusing on underwater capabilities.

Q174 **Mr Jones:** I agree with all that, but you would not really put the general purpose Type 31 in harm's way, would you?

Admiral Tony Radakin: Yes, we would. It's got the Sea Ceptor system, a gun and other self-protection measures. Part of the debate that we are having is that it will be fitted with Mark 41 launchers, but not at the moment.¹ That is part of our lethality debate particularly around a surface-to-surface weapon. Do we extend that programme to the Type 31?

Chair: We will come to weapons systems shortly. Kevan, is that all right with you?

Q175 **Mr Jones:** Can I say one last thing about skills? Skills and our shipbuilding capability worry me. A few weeks ago, I sat next to a Canadian admiral and I was interested in what the Canadians have done about their Type 26 programme. What the Minister has said is reassuring, but will you say what the Government are doing on this? From speaking to the Canadian admiral, it was clear that the Canadian Government took a very clear, hard-nosed look at the skills gaps, where they were and they put money in as well. Are we doing the same?

Jeremy Quin: We are doing that through the maritime enterprise zone and the MES. We will get on to this, but the National Shipbuilding Refresh will be published later this year. I am sure that it will refer to the skills that we need to have in order to have a flourishing shipbuilding enterprise.

¹ These vessels will be fitted for but not with Mark 41 launchers.



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It is also about making certain that people are aware in their local communities what shipbuilding involves. I have had the real pleasure—I mean this—to meet the trade union conveners at Govan and they made the point that, as people drive past, they are delighted to see HMS Glasgow being built. They are proud that it is happening and are delighted that it is being built at Govan. Would they necessarily want to be out there in all weathers doing work on the ship? Only a minority would say yes. So we need to put the investments in terms of the halls and the physical infrastructure to support the build.

Mr Jones: If you hadn't pulled the frigate factory 10 years ago, you might have got that.

Chair: We need to press on. We are only on the first question and we are gobbling up time. Mark Francois wanted to come in quickly on this.

Q176 **Mr Francois:** Very quickly. It is said that when the Secretary of State took over, he gave each of the Service Chiefs one key priority. He told the head of the Army to sort out recruitment, he told the head of the Royal Air Force to sort out the military flying training system and he told the head of the Royal Navy to sort out availability. So far, it is not sorted. Vice Admiral Gardner talked about a perfect handover on paper, but some of those Type 23s will be 30 years old by the time they come out of service. How confident are you that they are not going to break when HMS Diamond was dropped from CSG21? This all works provided nothing goes wrong but the history of availability in the Royal Navy shows that lots goes wrong very often.

Vice Admiral Chris Gardner: With regard to the Type 23s, what we have done is invest a lot of money in their life extensions, including upgrading their power and propulsion systems. We put Sea Ceptor into them and 997 radar. We have planned to invest in those platforms to see them through to the end of life and to make sure that we can marry that up with the ships and the capital investment that we are putting into the new ships coming into service. Of course, they will be significantly more sustainable and supportable from day one because they will not be suffering from the same sort of levels of material fragility and obsolescence.

Q177 **Mr Francois:** I don't mean to take up time, but we have reams of parliamentary questions that show that the ships break more frequently than you estimate. Why suddenly is there going to be this miracle that nothing breaks for years?

Vice Admiral Chris Gardner: I am not saying that. Ships will always suffer from defects.

Q178 **Mr Francois:** But your plan doesn't allow for that.

Vice Admiral Chris Gardner: I am not sure I entirely agree with you. On CSG21 for example, we are hitting an availability target in excess of 90% at the moment. That includes the unfortunate and unplanned defect in HMS Diamond.

Mr Francois: We will come to that in a moment.



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Chair: Half the ships are not British, so that's a separate matter. We can come back to this subject on a later question.

Mr Francois: Very quickly. This is not alchemy; this is fool's gold. Let's deal with the world as it is and not the world as we would like it to be on an MoD PowerPoint presentation. Perhaps we can do the rest of this hearing on that basis. Is that all right?

Chair: I just want to touch on RFA. John, do you quickly wish to ask about that?

Q179 **John Spellar:** Could you just update us on how the Navy plans to plug any capability gaps from the retirement of RFA Argus and to mitigate the risks that the fleet's solid support ships will not be available in time to replace current vessels? Indeed, could you give us an update on where we are on ensuring that the fleet solid support vessels will be built in British yards?

Jeremy Quin: I have a sense of déjà vu, Mr Chairman. I will happily answer that.

On Argus and FSS, we have made great progress. It is worth reminding the Committee where we were a few years ago. Reserved for British build were warships—aircraft carriers, frigates and destroyers. Under the Secretary of State and the Prime Minister, we have a different policy and a more nuanced policy in terms of what the requirements are. We have certainly taken the view that we need substantial UK involvement in the FSS. That came out of the lessons from CSG and the importance of FSS to the fleet as a whole.

We have a procurement process with two phases. We look forward to getting the manufacturing phase kicked off in May 2023, which is two years after the initial procurement of the design phase. Four consortiums are involved and all are either exclusively UK or a blend of international and UK partners. I am confident that the build will be substantially in the UK with all the integration work undertaken in the UK. I think that gets us the best of both worlds. We have an opportunity to see what is out there in terms of international design to ensure that we have the very best of kit to put the Royal Navy's way. It will help to ensure that we get an FSS into service as soon as possible. We are focused on the 2028 date, which is when RFA Fort Victoria is due to retire, and it will help to upskill and deliver work, talent and opportunity to our UK yards. Type 31 is a good example of how this has worked in the past.

Chair: Let us stay on the RFA. Are there any other questions on that?

Q180 **John Spellar:** Can we be clear? Will there be a capability gap and will the vessels be built in British yards?

Jeremy Quin: The integration will take place in UK yards and there will be a substantial amount of build in UK yards. I cannot say more than that at the moment because it is an ongoing process. As I say, the integration will be in UK yards.



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Q181 **John Spellar:** Surely, Minister, integration means that you build the sections elsewhere—possibly abroad—and then you bring them and bolt them together.

Jeremy Quin: Integration involves bringing together elements of the ship and I am certain that there will be a substantial UK build as part of that process. We are still mid-procurement, so I cannot say more than that. I am focused on the 2028 date, which is RFA Fort Victoria's out-of-service date. Having tested the market, we believe that it is entirely possible to have the first-of-class FSS into the hands of the Royal Navy before RFA Fort Victoria retires. On Mr Francois's points about PowerPoint presentations and reality, I can't swear to that because we still haven't got anyone on contract.

Q182 **Chair:** Okay, so it is fair to say that a new Fort Victoria class has not been built yet and you want to terminate Fort Victoria by 2028. You have not started building this one yet and the aircraft carrier does not have the support that we have at the moment, so we are in danger of not having any fleet solid support at all after 2028 if we don't get our skates on.

Jeremy Quin: The current out-of-service date is 2028 for RFA Fort Victoria.

Q183 **Chair:** Current. You are nodding. That suggests you may have to extend and keep it alive.

Jeremy Quin: We have a current out-of-service date of 2028, but there is flexibility in that. We also have the hope and expectation on the market engagement that we get the first-of-class of the new FSS in before that date. We have discovered that there are other CSG means that we can use. If we didn't have any capability, CSG would be able to carry a lot of the stores required within the hulls of the—

Chair: Make it clear. We do not have enough capability right now: to have one Fort class is simply not enough. If that Fort class is not working, who is supporting the aircraft carrier? I presume NATO allies will be giving that support.

Q184 **Sarah Atherton:** What plans do you have to replace the Argus hospital ship when it retires in 2024?

Admiral Tony Radakin: At the moment there is a potential gap from 2024 onwards. We are looking at a range of mitigations, one of which is to extend Argus. That would be a relatively modest extension to 2026.

Another is to start to look at how we provide a role 3 capability, and do we do it slightly differently? Less of a bespoke ship and more similar to what we have seen with our hospitals on land, where you look at, from a ship-going point of view, containers, and can that provide some of the capability rather than having it designed into the ship?

That starts to link with both the FSS programme and the programme that follows, the multi-role support ships (MRSS). That is at the back end of the decade. Does that allow us to reintroduce the role 3 capability?



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In the meantime, we have to acknowledge that we are limited purely to role 2 and having to link with what might be provided from shore. There is a potential gap and we are looking at various options to try to ease it.

Chair: There is a concern. The theme building here is that yet another ship may need to be extended because of the pressures you are under.

Q185 **Mr Francois:** What about the fire on Fort Victoria before she deployed on CSG21?

Admiral Tony Radakin: She did have a fire. That was quickly put out. That involved her having to have some maintenance before she sailed. Then she caught up with the rest of the task group.

Q186 **Mr Francois:** The Dorset press report that some personnel were taken to hospital with smoke inhalation and other injuries. Is that true? That sounds to me like more than a fire in an ashtray.

Admiral Tony Radakin: I am trying to recall the precise details.

Q187 **Mr Francois:** I can happily provide your office with the press cuttings.

Admiral Tony Radakin: It wasn't a major fire, if you're saying that this was a major fire that then hampered Fort Victoria and was a big delay on the task group.

Q188 **Mr Francois:** I am saying it was a fire on what is already an extremely old ship. Some people were taken to hospital as a result.

Admiral Tony Radakin: Yes.

Mr Francois: I am making the point that she is already on her last legs.

Q189 **Chair:** We will come back to fleet solid support with Kevan in a second.

I want to ask a basic question. Minister—I have asked this before, but I hope that the answer will be consistent—do you think that, on the current trajectory, the world will become more stable in the next five years, or is there a worry that it will become less stable?

Jeremy Quin: The worry is that it will become less stable.

Q190 **Chair:** First Sea Lord, given what the Minister has said, do you concur that part of that instability will in the maritime space?

Admiral Tony Radakin: Yes, definitely, and we are also seeing a shift to a preponderance of state threats and the severity that those state threats—that is the other piece I would add to that stability issue.

Q191 **Chair:** The Committee is of the view that the next five to 10 years will get pretty bumpy indeed, so why are the Government reducing the defence budget, as announced on page 40 of the Red Book last Wednesday?

Jeremy Quin: I don't think that is right, Chairman. We have a £24 billion increase in the cash being invested in defence. That was announced as



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part of our spending review last year and it will come into play over the next four years.

Q192 **Chair:** I put it to the Treasury Minister after I spoke in the debate on Wednesday and he confirmed that what I said in my speech was correct: there is a 0.4% reduction in TDEL, as illustrated on page 40 of the Red Book.

Jeremy Quin: I shall have to reacquaint myself with page 40 of the Red Book, but the way I look at it is that there is a 1.5% increase annually in real terms in defence spend over the period of the spending review. Our numbers clash—

Q193 **Chair:** They don't clash because the number you are referring to is in the column next to the one I am reading from, which goes back a year. When you include last year—the £16.5 billion that was added—then, yes, you get a smoke-and-mirrors impression that defence spending slightly increases. I am talking about today. For the next four years defence spending is reduced by 0.4%.

My concern is that, if we are saying the world is going to get more rather than less unstable, that it is going to get more dangerous, the maritime surface fleet is absolutely critical to that, as we have talked about. You have got a new aircraft carrier coming on board. We want to see more frigates and destroyers. You are going to have to make some cuts somewhere.

Jeremy Quin: Chairman, I think we need to go away and study the numbers. As for smoke and mirrors, it depends where you take the cut-off. What we are looking at in defence is over the period of our spending review—a four-year period in which we have got a £16.5 billion increase over what we had set out, a £24 billion increase. In real terms, that is a significant increase in defence spending over that period. In addition—

Q194 **Chair:** I hear that. Let's make it clear. I am sure that those of us who sit where you are would want to make sure that you do your best to see the budget increased, but I am spelling it out to you. I hope you will now quietly go back and speak to the Treasury and ask questions.

Because when you do want to increase frigates and destroyers, when you add a Type 45 destroyer or Type 23 frigate you are adding about £11 million to £13 million respectively each year. You are not going to be able to do that if there is any form of cuts in the budget. You simply will not have the facility. The money will not be made available.

This is resources we are talking about—from a capital perspective, yes, £16.5 billion. I think a lot of that went into the nuclear submarines, the CASD. It was a requirement for that because there were some problems there; that is understood. But from a resource perspective, the MoD is going to be up against it over the next four years.

Jeremy Quin: We have had extra RDEL provided to the MoD, happily—about £700 million.

Mr Jones: Can I come in?



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Q195 **Chair:** Just a minute. Let the Minister finish, Kevan, and then you can come in.

Jeremy Quin: I am pleased that the Treasury has recognised inflationary pressures by increasing the RDEL that is going to be available in the outer years. I think there is an extra £700 million a year for the last two years of that period, which is a recognition of the inflationary pressures that we are seeing, and I welcome that recognition.

The equipment plan, which will be published in due course, will have a matching amount of the equipment we intend to acquire, what the costs of that are, and the total sum of the resources available to the Department.

Q196 **Chair:** This is my final point before I hand over to Kevan. This is important and goes to the crux of the concerns that we have. We absolutely want to see naval capabilities. You have illustrated that, going with the tilt to the South China sea. You went to the Black sea as well. You have got the Mediterranean, east Africa, the Caribbean, the Arctic, offshore Britain.

There is an awful lot of pressure on our 19 frigates and destroyers, plus other ships, to make sure that Britain is safe. But you are not going to be able to do that, with increased instability, when you cut the resource budget, which is our day-to-day operations, separate to the capital budget, which is what you want to spend on future equipment. Would you agree with that?

Jeremy Quin: What I would say is that we have got a huge investment in capital and equipment, and the resource budget is adequate to ensure that we maintain the crewing and effectiveness of those additional resources. Like every other part of the economy, we are looking at how we can be most effective. We may get on to that later.

In terms of the crewing requirement for our vessels, look at the number of people we have on our aircraft carriers compared with six times that number in the US equivalents. There is a resource that needs to be managed effectively. Do we feel we have a sufficient envelope for doing that? Yes, we do. We have got to be certain that we wisely spend the additional CDEL that we have.

Chair: If you want the Committee's support in going to the Treasury to try to get those figures addressed, I am sure we will be there with you. Kevan.

Q197 **Mr Jones:** I've got the figures here: RDEL budget, 2021-22 to 2024-25, minus 1.4%. CDEL budget over the same period, 1.8%. The total is a 0.4% decrease, which is before you take into account inflationary pressures on the actual budget.

The concern for me about the RDEL budget reductions is that is the Admiral's ability to get sailors on to ships and support them—it is people. I am not sure he'll admit it, but he knows that the Navy has been screwed, frankly, over the past few years in terms of its numbers. Its numbers are very tight now. If you are then going to reduce the budget



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down even further for that, how on earth is he going to provide more of those people? You can have as much kit as you want, but if you have not got the people to support and use it, it is pretty useless.

Jeremy Quin: I think the First Sea Lord would like to chip in.

Admiral Tony Radakin: The RDEL budget for us involves three main elements.

Q198 **Chair:** When you say “us”, you are talking about the Navy?

Admiral Tony Radakin: The Royal Navy, but I think it is true for the whole of defence. The three elements are people, support—Chris’s world of maintenance, stores and spares—and activity. It is true to say that there is more pressure in the RDEL budget than the CDEL budget, and that probably is a constant.

On the plans for the growing size of the Royal Navy and it becoming a carrier-strike Navy that introduces some of the new capabilities, if the question is can we do that, the answer is yes absolutely. Do we have to rearrange the way that we have operated in the past better to match the RDEL budget? Yes. Can we reduce the number of people in our headquarters, can we reduce the number of shore billets and put more people into the frontline, can we run our ships differently and can we have a transformation programme in the support world and how we wring out better value for money there?

Q199 **Mr Jones:** You talk to the same people that I talk to in the Navy and you know that it is very tight at the frontline.

Admiral Tony Radakin: It is very tight. We have had gapping. All of what we call operational pinch points that extend to the end of this decade—2028-29—are all coming left. Some of that is shifting people from the shore footprint to the sea-going footprint, better tackling some of the skills shortages and increasing our recruiting. When you start to put all those into place, that is the way to tackle the gapping on the frontline. We assess that we will then come to what we describe as into balance in 2023. That is accepting the budget position. I have a budget at the moment that is just under £7 billion and that grows to just under £8 billion at the end of the spending review period. There is a matching of ambition and resources.

Q200 **Mr Jones:** You are also going to come under pressure over the next few years because of inflation. We all know that defence inflation is higher than normal inflation so the budget will be eroded very quickly if inflation is at 5%-plus.

Admiral Tony Radakin: We will have to wait and see whether what we are putting into place beats the inflation pressures. What we are seeing at the moment is that we can absolutely match the capital investment with the crewing, support and increased activity. We had the same conversations several years ago when HMS Prince of Wales was being built much more quickly than HMS Queen Elizabeth and we were told that we would not be able to crew the second carrier. I delighted in having that



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problem as the Second Sea Lord as we were then able to do that. Would we be able to run on the batch 1 OPVs? Yes, we have. We have a track record of doing better than some of the concerns.

Chair: We have made the point that the British people agree that the world is getting more dangerous. Because of that, they would like to see that Britain is able to defend itself. If I can politely say, the better the case you can make to the British people that we need to invest to protect ourselves, they will be with you to make sure that the numbers are in the positive and not in the negative.

We have milked this subject enough, so let us move on to procurement.

Q201 **Mr Jones:** The national shipbuilding strategy refresh and the Dunne report on defence's contribution to prosperity had as their main focus ensuring that there was a steady pipeline of work through the UK shipbuilding industry. You trumpeted the great fact that you have designated the FSS as warships, but some of us were arguing that you should have done that like everyone else right at the beginning. It is interesting how quickly you have designated the national flagship—it is not a royal yacht—as a military vessel, so I would love to know how you got around that.

On the FSS, why have you invented this spurious competition? You said earlier that integration would take place. There is no commitment to build these things. If you look at some of the consortiums you clearly see, frankly, what is going to happen: the main work share will be abroad, not in the UK. It might be assembled here, but that is all that is going to happen.

Why are you not following through on what was in the national shipbuilding strategy—the slow drumbeat of work? The Americans and Canadians get this. Why don't we get it, even when it has been spelt out in a strategy?

Jeremy Quin: The strategy preceded our taking the decision on the FSS. It was after the national shipbuilding strategy of 2017 that a competition—an international competition—was launched for FSS. Under the current Secretary of State it was looked at again and we realised, quite appropriately, that we needed a greater degree of certainty, for good security reasons, of UK content. That is the approach we have taken on FSS.

It is not a spurious competition—

Q202 **Mr Jones:** Come on! Some of those companies have never built this type of vessel. Some are very good on design. It is quite clear what you are going to get—a foreign design that might be assembled abroad or might be done here or integrated. For long-term sustainability and supporting UK shipbuilding, this ain't going to be the way to do it, is it?

Jeremy Quin: I am absolutely convinced that this will deliver real value to UK shipbuilding as well as delivering good value to the Royal Navy.



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Q203 **Mr Jones:** But no other country in the world would do it this way.

Jeremy Quin: I am not certain that is true. Very few countries have the equivalent of FSS. Type 31 was an international design. The one which we have made our own and is entering service is the Type 31; we already have one export order, and I think there will be more to come.

I am absolutely convinced that the methodology is the best way of ensuring that we get the best design for the Royal Navy, that we get it into service as quickly as possible and that we see real work and skills in UK shipyards.

It is being pointed out by the First Sea Lord that I am eating Chris Gardner's lunch on this. I don't know whether the admiral wants to add anything on FSS.

Vice Admiral Chris Gardner: I agree with you, Minister. We have the basis of a really credible competition. I am conscious of the fact that we are in the middle of a competitive process. All four bidders are answering the challenge that we have put in front of them. Social value is a significant part of the overall evaluation criteria for these vessels.

Under the banner of the national shipbuilding strategy and the pipeline we are doing, it is all about how we are going to invest in plant, people and skills.

Q204 **Mr Jones:** What percentage of the contracts will be done in the UK?

Jeremy Quin: That cannot be stated at this moment in time because we are in the middle of that process. I would say a substantial amount.

Q205 **Mr Jones:** No, no, no. You are the Minister who signed off the national shipbuilding strategy to support UK shipbuilding. You have signed up to the prosperity agenda in terms of Philip Dunne's report. If I was sat in your shoes, I would want to ensure that as much as possible is done in the UK.

Chair: Wasn't that why they were so designated?

Jeremy Quin: That is a reasonable point to make, but in the middle of a procurement process you are not going to draw me any further, Mr Jones, on exactly what that proportion will be. There is a competitive element to this.

Mr Jones: I beg to differ.

Q206 **Gavin Robinson:** Minister, I think you are right to say that there will be value for the Royal Navy and value for the country, but that is the wrong premise from which to start. Value seems to be the totality of the thought process. When there was a failure to designate FSS at the start of this process, it was all about pounds, shillings and pence. Do you accept that if we get good value it does not necessarily mean that we get the throughput, establishment and continuity of skills in our shipbuilding strategy? When we in the United Kingdom hear "integration", we fear



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that we will miss out on all the great investment in people and skills that Sir John Parker's national shipbuilding strategy envisaged at the very start.

Jeremy Quin: That is why social value is a very important element, as the admiral said. We need to ensure that this does inject greater reassurance and skills and design expertise into our industry.

Q207 **Gavin Robinson:** If it is solely around integration and subsequent maintenance, we have missed a huge trick.

Jeremy Quin: I did not say it was solely around integration or maintenance. I did say that all three vessels would be integrated in the UK, but that is not the limit of my ambition.

Q208 **Mr Jones:** Can I ask about—I cannot remember what it is called now. It is not the royal yacht.

Jeremy Quin: The national flagship.

Q209 **Mr Jones:** Yes, the national flagship. Where does that fit in? We have had the Prime Minister now designating it a warship. It would be interesting to know why it is being designated a warship; so that it is built in Britain. Where does it fit in terms of two things? One is the pipeline of work and the second is whose budget it is coming out of. I am interested to know from the Admiral how it is going to be crewed.

Jeremy Quin: Shall I kick off on that? It is the national flagship. It will be flagged with the white ensign and will have Royal Navy crew and officers on board. Under WTO there is a security exemption. The security of the vessel is incredibly key to how we think about it. Given the nature of what it will be doing, it is important that there are security ramifications around that, which is something we take very seriously. There are legitimate reasons, under WTO, why we can direct this to be a UK build, which it will be.

In terms of payment, yes, it is coming out of the MoD budget. I do not need to remind the Committee that prosperity is a defence task. It is absolutely right, if we are going to have a national flagship, that the MoD will be front, centre and core to the delivery of that national flagship and its projection of global Britain. Yes, it will come out of the MoD budget. It is around 0.1% of the MoD budget for the next four years. That is still money but—

Chair: A budget that's just been cut by 0.4%.

Q210 **Mr Jones:** What's going to give? The other thing, I'm sorry to say, is that I see no need for it at all. That is what the Royal Navy do very well with our existing ships, with port visits and promoting Britain. What's going to give? What are the running costs going to be? There are running costs in this, in terms of crew as well.

Jeremy Quin: The First Sea Lord may want to come in on the expected number of crew and associated costs. We should not forget that, as a



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country, we spend a lot of money every year on trade pavilions, trade support, on boosting our trade presence.

Q211 **Chair:** Minister, I don't want to be rude, but we need a quick answer and to move on from this. Please answer Kevan's question about how much it will cost. We get the bigger picture with all those other things. How much will this cost to run?

Jeremy Quin: First Sea Lord.

Admiral Tony Radakin: It is in the realms of £20 million to £30 million but we will have to wait and see.

Q212 **Chair:** That is more than a Type 45 and more than—

Admiral Tony Radakin: In terms of the overall costs and the crewing and all of the maintenance and support, we are waiting to see. We anticipate the ship's company in the realm of 50 to 60. Some of the tasks get assisted by the Royal Air Force and the British Army.² In a Navy of more than 30,000, is that something that we think we can absorb? Yes, we can. If we are going to have a national flagship, with a white ensign, the anticipation is that it will be crewed by the Royal Navy, and that is something that we will look to do.

Jeremy Quin: In terms of payment of it, when it is in service it is a cross-Government asset. It will fulfil vital roles, not only for the MoD but for FCDO, DIT and other Departments.

Q213 **Mr Jones:** What are the capital costs of it?

Jeremy Quin: The capital cost is paid for by the MoD.

Q214 **Mr Jones:** No, how much?

Jeremy Quin: The Secretary of State has said between £200 million and £250 million, which is roughly 0.1% of the defence budget for four years.

Q215 **Mr Jones:** What has given in the budget to make way for it?

Jeremy Quin: We have not needed to find a give. There is enough for a 0.1% per annum commitment. There is enough we can do to make certain this can be additive.

Q216 **Mr Jones:** If it going to cost £30 million to £40 million a year to run, what has given in your budget, Admiral?

Jeremy Quin: Whatever the running costs are, that is not necessarily a MoD bill to pay. This is a cross-Government asset.

Q217 **Mr Jones:** Good luck with that, if you are trying to get it out of other Departments.

Jeremy Quin: Well, other Departments do spend a lot of money in supporting our trade and our ambitions around the world.

² [These tasks may merit assistance by the Royal Air Force and the British Army.](#)



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Q218 **Mr Francois:** Will it be in the equipment plan?

Jeremy Quin: A good question to which I do not know the answer off hand. I should remember but I can't.

Q219 **Mr Francois:** Is there anyone in charge of procurement we can talk to? Is it in the equipment plan or not?

Jeremy Quin: I am ultimately in charge of procurement.

Q220 **Mr Francois:** It is £250 million. It has got to bump a quarter of a billion pounds-worth out of the equipment plan for something else. If it is not in the equipment plan, it makes a farce of the process, doesn't it?

Jeremy Quin: It will be fully funded and I will make certain when I come back to you on exactly that.

Q221 **Mr Francois:** Minister, with respect, that is not the question I asked you. I did not ask if it would be fully funded; I asked if it will be in the equipment plan, if and when it is ever published. Will it be in the equipment plan—yes or no?

Jeremy Quin: I regret that in preparing for this Committee I did not read through the latest draft of the equipment plan that is sitting on my desk. If I had, I would have been able to answer that question—I cannot off the top of my mind. I suspect it is in the equipment plan, but forgive me that I do not know it off the top of my head. I will write to the Committee and confirm it.

Chair: Well, you have some staff behind you—perhaps they can do some homework and feed in some information by the end of the session. We have another hour to go. We have other questions to go.

Mr Francois: Just text Abbey Wood now and get the answer before we finish.

Chair: I made that request, Mark. Could I ask one final question on this: you are designating it as a warship—

Mr Francois: He doesn't even know what's in his own plan.

Q222 **Chair:** Okay. Can you tell me whether there will Royal Marines onboard? How will the ship defend itself?

Jeremy Quin: I did not say it was designated as a warship; I said that there are a number of exemptions under WTO that can require building in a home jurisdiction.

Chair: That, I thought, was the clarification that allowed it to be built here, because it then was a warship.

Jeremy Quin: I haven't said either yes or no to that question.

Chair: Maybe you can also pass that back behind you.



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Jeremy Quin: There is a series of rationales why, under WTO, you can designate a build.

Q223 **Chair:** How does it defend itself? Does it require another naval ship to escort?

Jeremy Quin: In all circumstances, you would depend on a threat assessment at the time. I am not going to get into any defensive suites that may or may not be incorporated, but any threat assessment would be taken on the—

Q224 **Chair:** Where was the last trade deal that you signed?

Jeremy Quin: Personally?

Chair: Yes.

Jeremy Quin: I have signed various MOUs with—

Q225 **Chair:** Was it not in Ukraine in the Black sea? You could have taken this flagship to the Black sea to sign this. Would you argue that that should go through the Black sea without another escort? Or will it be self-contained and look after itself?

Jeremy Quin: In every circumstance there will be a threat assessment made.

Q226 **Chair:** The point I am trying to make is, I would love to have a flagship. I think it would be fantastic. But needs must; there is pressure on budget, yet here we are, with all the maritime requirements that we currently have, creating a new one for the flagship to have an escort—which I think is where this is going to go—in certain circumstances. That takes one of the 19 frigates and destroyers that we have away from their other duties.

Jeremy Quin: If the flagship went to New York, would it require an escort?

Chair: No, I am saying in some cases.

Jeremy Quin: I think we totally agree that in some cases you would require an escort.

Chair: Okay.

Mr Jones: You don't believe in it.

Jeremy Quin: I do. I think it will be fantastic. I look forward to having it and I think it would be fantastic.

Chair: Let's move on from one ship that is yet to be built to another one—the Type 32.

Q227 **Sarah Atherton:** Minister, you mentioned the concept work on the Type 32. I will be honest: I am on a fact-finding mission to find out what this T32 is. Perhaps you could tell the Committee your understanding of the



concept design. How is it unique from the T31 or any other surface fleet vessel?

Jeremy Quin: The First Sea Lord will come in, unless he wants to send it to the Admiral. On all the things about Type 32, everything is changing very rapidly. We are very conscious with Type 31 and Type 26—we will get on to this with the lethality—that the kit that we will use in future will be very different from what we are used to at the moment. If you look on FCAS, in terms of future combat air systems, with swarms of loyal wingmen, it will be a different world. I am conscious that anything we say now may change during the course of the concept phase. First Sea Lord, do you want to address that?

Admiral Tony Radakin: We are just kicking off the concept phase now. In terms of whether it will be an ASW platform, an AAW platform or more a general-purpose frigate, it is in the general-purpose frigate class. Does it have a wide spectrum of what it might be? At the moment, absolutely. The debate we had was whether this is really a Type 31 and just call it a batch 2. That could be one answer. Or, in the world that we are in, where the technology is moving so quickly, should we challenge ourselves about whether this could be a very different ship? It could have a lot more automation, a lot fewer ships company and a lot more in terms of some of the new technologies, whether drones or directed energy or some of the weapons that are coming through. That is why we have now started the concept phase to better understand what those choices are.

Q228 **Sarah Atherton:** What are your timelines?

Admiral Tony Radakin: The timelines for this are towards the end of this decade and stepping into the 2030s. From my point of view, this is about frigate and destroyer numbers that we have heard before are anchored around a 19 figure and potentially start to grow to 24 in the early 2030s. That makes a substantial difference to the Navy. The earlier debate that we had about having 60% availability and potentially 80% availability in the future gives me twice as many frigate and destroyer days than I currently have. This is a substantial change.

Q229 **Sarah Atherton:** When you are feeding into the ideas of the concept that you want in a decade's time, are you looking at capability gaps, or are you looking at new capabilities, or both?

Admiral Tony Radakin: This is more about additional volume in the fleet. In terms of the capability gaps, it is about embracing the technology that is out there. My wariness around some of the programmes we have had in the past—which get initiated, take forever to deliver and are fixed—is that you cannot ever introduce technology that is moving along at a faster pace than you are designing or building the ships.

If you look at how long it took to initiate Type 26, build it, and bring it into service compared to Type 31, the speeds are hugely different. It is the same with Type 32. Can we start to accept that the correct way to build our ships is to have a lot more flexibility and introduce the technology almost as you are designing and building the ships, rather than something



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that was cemented in aspic 10 or 15 years ago? You then get the wrong capability too late, and it is not good enough in terms of what we need.

Q230 Sarah Atherton: So you are learning lessons from the T31 frigate factory concept. Are you looking at a modular programme or a persistent operations deployment system? Or is it too soon to say?

Vice Admiral Chris Gardner: It is both, fundamentally. We want this platform to be agile and flexible, and where it can be roled to meet the specific mission requirement. That is fundamentally part of the thinking that is going into the concept phase at the moment.

Q231 Sarah Atherton: The Russian-Israeli corvette is a punchy bit of kit by all accounts: well-armed, speedy, adaptable. Are you looking at that?

Admiral Tony Radakin: That would be part of the option set. If I take Type 26, one of the best things about Type 26 is this enormous mission bay that can take 16 containers. One of the other best things is that we have not decided precisely what will be in those containers and what will go into the mission bay. It is the same with Type 31 and Type 32. We are trying to avoid over-engineering and deciding too early, when I think, selfishly, that we want to maintain the amount of choice that we can have for as long as possible, and a level of ambition that allows you to embrace more lethality and is at the cutting-edge of technology in a better way that we have done in the past.

That does mean that we do not have the easy answers as to what this frigate will look like in 10 years' time. It is deliberate. This will be a platform which will be able to host, ideally, a different set of capabilities that we can swap in and out, but will be much more modern and lethal in terms of what it can deliver.

Jeremy Quin: The two themes that the Committee has regularly come back to us on are in terms of modularity and ease of spiral development. That is exactly what we want to embrace in future naval procurement.

Q232 Sarah Atherton: And this is the same approach for the Type 83, just a replacement?

Jeremy Quin: Well, that is going to be more exquisite. It is very hard. We are talking then about something in the late 2030s.

Vice Admiral Chris Gardner: Type 83 or the future air defence system. Again, we are in the foothills of trying to start to examine what is the option space to meet the future capability needs of the Royal Navy. I generally cannot say, hand on heart, today that I have a clear view of what that will be. Apart from the fact that we need to take the capacity we have today and work out how we evolve it and develop it to make it fit for purpose for the future. It becomes more about the system and less about the platform.

Mr Francois: The first thing to do is to make sure it has some engines that work. You got that one? Good.



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Q233 **Chair:** Thank you, Sarah. I will say that the Type 32 is a very exciting project. You and I, First Sea Lord, had a conversation when you were Second Sea Lord, and I was a Minister. I got my phone out and said, "If that was your ship, it is the apps on the phone that become the interesting things that make the ship so modern." I am really pleased that we are heading in this direction.

What I would say, and I have used this comparison before, is that if the maritime fleet were a chess board, we have the expensive pieces at the back—we do not have enough pawns. For the very reasons that we have been speaking about before—upstream engagement, force projection, the familiarity and frequency with which you are going to move across the south China sea, and the freedom of the seas—you need a lot more pawns than expensive pieces. Pawns with a radio, obviously, and the capability to defend themselves, can call in support if need be. With the upstream engagement around Africa with our Commonwealth friends, Type 32s seem to be absolutely the thing. I would love to see the Royal Navy double in size with Type 32s.

Jeremy Quin: I know you know but having the batch 2 OPVs, such as Forth down in the Falklands, Medway in the Caribbean, Trent coming out of Gibraltar, and Tamar and Spey in the Pacific, does provide that projection that you are looking for.

Chair: You would never send the Tamar through the Taiwan Straits, would you?

Mr Francois: Not if you wanted it to come back.

Q234 **Chair:** It would be a one-way trip. We do not want to digress on that. I have one question on the Type 32. Who first came up with the number 32?

Admiral Tony Radakin: I am trying to think whether it was me or the Second Sea Lord.

Q235 **Chair:** Could it have been somebody not in the MoD?

Admiral Tony Radakin: I don't think it was. If I am honest, the Secretary of State asked individual service chiefs to pitch at the Tower of London. We had a debate about Type 31s; we said that we were building a batch 1, and what we should be doing is building a batch 2. More from a marketing point of view, we felt that did not describe the conversation that we have just had. We thought that we should be demanding that the new batch—or new class—was substantially different from the previous one because of the pace of technology. We deliberately avoided saying, "Let's put a bid in for a batch 2 of Type 31. Let's try and describe it as a new class of ship."

Chair: Forgive me; I thought perhaps it might have been a typo, but clearly you have given justification.

Q236 **Mr Francois:** We will come on to Astute in a second, but we will talk about the surface fleet first. Some people have described the surface



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fleet as being like porcupines; they are spiky and quite good at defending themselves, but they have a very limited ability to inflict punishment offensively on anybody else—certainly compared to their Russian and Chinese counterparts. How do you respond to that criticism?

Admiral Tony Radakin: Much of that is very fair. We want to have a more lethal fleet in the future. Look at some of the things that we are introducing, whether it is the upgrade for Type 45, the introduction of Sea Ceptor on Type 23s, the F-35, becoming a carrier strike navy, or the introduction of the Astute class. All these things are improvements.

Q237 **Mr Francois:** With respect, sir, none of those answer my question—none of them. Sea Ceptor is a defensive system, Astute is a submarine and the F-35 is an aircraft; what are you doing to improve the offensive capability of the surface escort force?

Admiral Tony Radakin: F-35 and Astute have increased offensive capabilities. On your precise point, I think the problem that we have is focused around Harpoon, which goes out of date in 2023. We are having a debate about whether we take the sticking-plaster approach of an interim surface-to-surface weapon, which might have what I would call a relatively modest range and might stretch to being land attack, or do we accept that we might have to have more of a gap and go for a more substantial offensive weapon. We do that in partnership with other nations.

Chair: We are going to come on to weapons specifically, shortly. Would you like to move to sub-surface?

Q238 **Mr Francois:** I would like to know when we get to that, if you can tell us whether whichever option you have got is in the equipment plan? If not, the plan is kind of meaningless.

On sub-surface, Astute is arguably the most capable attack submarine in the world. It would give a Virginia class a run for her money any day of the week. It is horribly late, and because of that we have had to run on the T boats—very expensively. We have got two left in service; that is not classified. Our availability is very poor. It is a classified number, which we cannot discuss, but it is not a big number. Yet again on availability we are falling, aren't we?

Admiral Tony Radakin: I would disagree with you on the surface ships availability. If we go back to that—

Mr Francois: We have moved on to Astutes. We will come back to surface ship availability in a minute, I promise. Let's discuss the submarines that do not go to sea.

Admiral Tony Radakin: We have four new Astutes and we are waiting for a further three new Astutes to come in. We are managing that lateness with the run-on of the T-boats. We would agree that our overall submarine availability is weak. We have made international comparisons, looking at both the Australians and their diesel fleet and the Americans and what they achieve, and we are on par with them. We are trying to improve availability with the capital investment of the new Astutes coming in and



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the shift from Vanguard to Dreadnought, rather like the surface fleet. That is a big effort from the Royal Navy, the Submarine Delivery Agency and industry.

I will give some simple examples. When I was 2SL, we would start maintenance periods, and the biggest complaint by our warrant officer engineers was that we did not have enough spares ready at the start of a maintenance period. We were struggling, with a figure of about 50% of the high-priority spares at the start of a maintenance period. We now have over 90% of those spares.

Q239 Mr Francois: It was worse than that. You were robbing Peter to pay Paul. You were robbing spares from one boat so that another could go to sea. The taxpayer says, "Why have we spent £1 billion on a new submarine but have not got any spares for it? We have to rob parts from another billion-pound submarine so that this one can go to sea." Two blokes having a drink in the pub would go, "That's bonkers."

Admiral Tony Radakin: I think that was more accurate several years ago. We have invested a lot more money, to the tune of about £50 million a year, from the Navy command budget to increase the number of spares for our submarines. That has made the difference. To me it was deeply depressing that we had these engineers who wanted to fix the submarines and had the skills to, but they were spending most of their day chasing up spares. We have adjusted that, so we now have over 90% of the spares ready on day one of the maintenance period. That has the knock-on effect, unsurprisingly, of a smoother maintenance period. That is part of the programme to get more availability.

Q240 Mr Francois: To be clear, a lot of the issues were down to Rolls-Royce, because it screwed up the production of the reactors. It moved the reactor production across Derby. It was an unmitigated disaster. You cannot build a nuclear submarine without a nuclear reactor to put inside. It was not all BAE Systems' fault. We have been to Barrow and, to be fair, it is trying to catch up. I think it is important to put that on the record.

However, we still have unsolved issues, and I will choose my words carefully here. Sometimes when people have come to visit us, we have not been able to receive them properly and in the way that we should have done. How long will it be before that is rectified?

Admiral Tony Radakin: If this is a more of a tactical question, one of my primary responsibilities is to provide a nuclear deterrent for the Prime Minister and to ensure that it is invulnerable. I am absolutely confident that we have maintained that patrol in the same way that we have done for the past 52 years. It continues to be invulnerable. I would actually go further and say that some of the investment we have made has made it less vulnerable than it was even a year ago.

Q241 Mr Francois: Agreed, and we are reassured. You have talked repeatedly, and rightly, in the Committee's view, about the increased contestability in the north Atlantic because of increased Russian submarine activity. How



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can we play a part in that contestability if we haven't got enough serviceable submarines? It is a simple question.

Admiral Tony Radakin: I definitely agree—as does the Secretary of State, I think—that, looking at transparency in the world going forward and the way it will influence how we fight, the underwater domain, as the remaining stealth domain, will become even more important.

You are also right to say that that is becoming a more contested space. The ASW side of this is not purely with submarines: it is with our P-8s, our Merlin Mk 2s and our towed array capabilities. We have benefited from some of the increased ASW activity, which has helped us to grow back some of the skills that we probably had 10-15 years ago. We are approaching it tactically by linking with our international partners, as well as those investments. So the (NATO) Striker group of nations—

Q242 **Mr Francois:** First Sea Lord, I do not want to eat into other people's time, so I will just ask you one more question and then we will move on. When are we going to materially improve the availability of our nuclear attack submarine fleet? I am not talking about P-8s or Merlin; I understand about the integrated battle. We have all got that. When are we going to materially improve the availability of our nuclear attack submarine fleet, please, sir? Just answer that one question.

Admiral Tony Radakin: That will happen in the next few years as the new Astutes come in.

Q243 **Mr Francois:** In the next few years?

Admiral Tony Radakin: Yes. It will. At the moment, it is on a comparator with the other principal submarine navies in the world.

Q244 **Mr Francois:** So your argument is that it doesn't matter if we are poor at it, because they are pretty poor at it?

Admiral Tony Radakin: No, I am just trying to give you some assurance, if you are looking at how we are doing and how we compare with other navies in the world. Do we have an ambition to do better? Absolutely. Are we meeting our tactical objectives? Yes. Is the north Atlantic more secure and do we have more freedom of manoeuvre than we had in the last few years? Absolutely. Do we think that, in the future, the investment we are making means we will continue to have that advantage in the north Atlantic, and does it grow? Again, the answer is absolutely.

Mr Francois: I think the Committee has got the point, sir. Thank you.

Chair: Let's move to emerging technologies. Gavin?

Q245 **Gavin Robinson:** Minister, do you accept that there is a barrier in the Navy to procuring and bringing forward new technologies?

Jeremy Quin: I would certainly hope not. Those in the Navy can speak for themselves, but I think they would be very proud of the fifth-generation aircraft carriers and fifth-generation F-35s they have. As for the seed core of potential new ideas in NavyX, I have also seen some extremely exciting



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projects, such as the autonomous mine clearance, which is a £1 billion project over the next 10 years—that will be absolutely state of the art.

There is a desire to recognise and bring on. We have, over Defence as a whole, £6.6 billion being spent on R&D, which is proper Frascati principles. Lots of things are going to fail. The idea is to try things to see if they work or if they don't—things like the investment in Northern Ireland, the directed energy weapons. That is a classic case, where we think the time is right and we can now get a usable DEW system that could be deployed in due course. This is all cutting-edge R&D stuff. Chris will be able to talk through RAPSO³ and what the Navy does in terms of turning ideas through into the proper kit.

Q246 Gavin Robinson: Forgive me, Minister, but you mentioned mine clearing. With the exception of minehunting capabilities, this Committee has been informed that there is a huge barrier in DE&S, where new technology is brought there and rarely—or frustratingly slowly—comes out. Do you recognise that at all? Are there steps being taken to address that?

Vice Admiral Chris Gardner: I will be honest: I think we have historically been slow at bringing new technologies to the table. That is something that we are actively trying to address. We are doing it jointly with Navy Command through NavyX. On day one, when I took over as DG Ships, I set up an innovation and future capabilities team, because of that very problem. That team is actively working on that problem. More broadly, DE&S has just set up a future capabilities group. We absolutely recognise that we need to change the way we think about how we bring capability to the table, because we need to be much more agile and swifter than in the past.

Jeremy Quin: It is a real problem, and it is something I really wrestle with, that in the past—40 years ago—if we were going to buy a new bit of kit, there were probably about five companies that could do it; you would get them in a room and talk about it. We all know that now, given the way procurement is going, there may be two people in a flat somewhere in Belfast, Edinburgh or the east end of London who have the cutting-edge idea that is going to get us that solution. How do we make certain we open up and are open to hearing those ideas? It is a really difficult process.

Through DSIS, we want to be very open about the capabilities we are looking to acquire. We cannot just have anybody with a bright idea turning up in Bristol, knocking on the door, being given tea and biscuits and spending three hours going through their idea. We have to be focused on what we are actually trying to procure. How do we ensure that we communicate that to everybody? I am putting work into that in terms of the refresh of the SME action plan. How do we ensure that everybody can have clarity on the areas that are of interest to us? Constituency MPs come up to me and say, "It's so frustrating. This brilliant SME in my

³ Rapid, Agile Procurement and Scaling for Operations (RAPSO)



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constituency has a fantastic idea. Why the hell can't they get in to share the ideas?" In some cases, there are good reasons for that, but I have heard of circumstances where people swear blind that they have been able to get access to the Pentagon and, indeed, get a product through to production and into service in the US but have not been able to get into the MoD. There is something going wrong if that is happening.

Q247 Gavin Robinson: I am smiling at how the answer to the question evolved. When I asked at the start whether there were any barriers, the answer indicated no. We had brought forward the Queen Elizabeth class, F-35s, and mine clearance capabilities, so I am glad that there is now a recognition that there have been barriers.

Jeremy Quin: I didn't recognise the depth of the question, but I do now.

Q248 Gavin Robinson: Having just considered submarines, there is no depth that we cannot descend to.

On the unproved mine clearance capability, will it be used from a mothership or will it be a land-based capability when it comes into use?

Vice Admiral Chris Gardner: It will be deployable from both. Again, as part of the overall future shipbuilding pipeline, we are looking at what sort of mothership capability will come potentially through the multi-role support ship proposals. We are also looking at the rapid procurement of existing vessels to provide some early capability and the ability to carry out some experimentation and trialling.

Q249 Gavin Robinson: Will there be any impact on the presence in the Gulf?

Vice Admiral Chris Gardner: We have active plans to deploy the systems to the Gulf from 2023 onwards.

Q250 Gavin Robinson: I guess we have new capacity and technology groups within DE&S and the Royal Navy. What percentage of the budget is dedicated to emerging technologies?

Vice Admiral Chris Gardner: I don't know the answer to that question without checking.

Jeremy Quin: I appreciate it is not the question that you are asking, but overall in the MoD we have £6.6 billion devoted to R&D. A proportion of that is being pushed down to the TLBs and NavyX will get its share. It will be doing innovative work on emerging technologies. I can't give you the figure on a TLB basis but the overall figure is £6.6 billion.

Q251 Gavin Robinson: Would you be able to write to us given the focus of this inquiry on the Navy?

Jeremy Quin: Yes. What you'd like is a steer on the amount of money in the Royal Navy being devoted to R&D and emerging technologies.

Gavin Robinson: Yes.

Q252 Chair: Thank you very much. We have spent a lot of time talking about



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the big equipment and the platforms themselves, but I would like now to turn to munitions. Arguably they are just as important if not more important because they are what do the damage. Will you clarify to the Committee what the F-35B carries under its belly compared with what is used by the US?

Jeremy Quin: I would have talked about the SPEAR Cap 3, which is coming in 2028, I think, and about the integration of Meteor. There are different capabilities between the two platforms and there is a comparison with US allies.

Admiral Tony Radakin: We have got AMRAAM, Paveway—

Q253 **Chair:** Paveway IV?

Admiral Tony Radakin: Paveway IV. We are looking to go down the SPEAR Cap 3 route and at introducing Meteor. Some of those are in tandem with, and match, the US capabilities, but some of the US capabilities are further ahead than our programme.

Q254 **Chair:** In our arsenal, we have Storm Shadow, Brimstone and Hellfire, which have been the mainstay of our capability particularly on land attack. Was there a reason why F-35 chose not to go down that particular route?

Admiral Tony Radakin: Where we are at the moment is that we have invested in F-35 for its stealth capabilities and for what it brings to the overall battle space. The armaments are catching up with that so that it has more offensive capability. In the meantime, we are like a lot of F-35 nations. If you see F-35 as the way to defeat the enemy's air defences, the mass of the weapons that will be delivered will continue to be delivered by fourth-generation aeroplanes, but they will be flying in less contested airspace. Therefore, we are still reliant on the fourth generation for the delivery of the ordinance. That is where the mass still lies.

Mr Francois: But they don't fly from aircraft carriers.

Q255 **Chair:** May I finish my bit, Mark, before handing over to you?

Is Typhoon able to operate the Storm Shadow?

Admiral Tony Radakin: Yes.

Q256 **Chair:** Are you sure?

Admiral Tony Radakin: Yes.

Q257 **Chair:** The mark 3?

Admiral Tony Radakin: Yes.

Q258 **Chair:** It was a retrofit in order to be able to do that?

Admiral Tony Radakin: Typhoon developed a whole series of capabilities over its life.



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On Mr Francois's point, the notion that we would be at a war-fighting scale, operating unilaterally and not linking with our Air Force, our land forces and space and cyber forces, is one element. The other element is the international dimension. We will blend our capabilities with those of our international partners, particularly when it is at a war-fighting scale.

Q259 **Chair:** I want to move on to the Type 26 and Type 45. With Type 26 you have Sea Ceptor, the surface-to-air missile with a range of 25 km, and you have a future anti-ship weapon yet to be decided.

Admiral Tony Radakin: Yes, we have a Mark 41 launcher. Harpoon is going out of service in 2023. We have a capability conversation: do we bring in a relatively modest surface-to-surface weapon—it does not have a very long range and it is not hypersonic—and, if so, how much does it cost? It might be as much as £250 million, just to allow us to have five sets for three ships. When would that be able to come in? It looks like the earliest would be 2026 or 2027.

We have paused what we call the interim surface-to-surface guided weapon programme to force us to say: we accept that there will be a gap as Harpoon comes to the end of its life, but we should reach out to hypersonic weapons and weapons that have plus-1,000 km range. Do we do that with our international partners? That is when you start to look at the future—

Q260 **Chair:** We will look at alliances in a minute. It is interesting to get your reflections on the carrier strike group, because you were doing a lot of things with a lot of nations that have different weapons systems.

Simply put, there are four categories of weapons systems that you can use in the maritime environment: surface to air, surface to surface—anti-ship—sub-surface, or some form of torpedo, and a land strike capability. Do you concur?

Admiral Tony Radakin: The only one I would add is air to surface, whether you have a helicopter—relatively light weapons—or a heavier weapon in an aircraft. But in terms of surface platforms you are right.

Q261 **Chair:** My concern, in a spirit of modularity, is that even with the ships that are coming online we are still unable to hit things deep inland other than using your Mark gun on the front.

Minister, you have grasped some procurement issues in the past. Please look at this. If we are going to invest in the Type 32, we need to have missile silos that are ubiquitous—that are able to take a suite of missile systems that you slot in depending on the task and the threat. To be able to do all four of those missions will be a welcome direction.

Admiral Tony Radakin: We share your observation, Mr Chairman. The earliest it would be is 2027. Realistically, it is probably towards the end of this decade. We then start to get into land attack and long-range, surface-to-surface missiles from our suite of ships. That is Type 26 with the Mark 41 launcher. There is a debate about Type 31 that is fitted for but not with



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the Type 41 launcher. And then it is to complement the submarine fleet, the Astute with Tomahawk.

The direction we are looking to go down is exactly as you outline.

Q262 **Chair:** Going back to the strikes that took place in Syria—I think a one-off strike that we participated in with the United States and France—we had a choice of either using the Tomahawk or the Storm Shadow. We have only one type of vessel that can fire a Tomahawk, and that is a submarine at the moment. In the United States, the Arleigh Burke, the Type 45 destroyer, is standard fit. We have these that work in our arsenal. How come we are not utilising the ability to fire Tomahawks from all our ships, or something equivalent to that, with a range of over 600 miles?

Jeremy Quin: You are absolutely right. Chris, do you want to come in?

Vice Admiral Chris Gardner: That is why we have invested in the Mark 41 launchers on Type 26.

Jeremy Quin: For new vessels coming forward that is very much front of mind.

Q263 **Chair:** You do not know what that family of missiles will be. You are simply building the silo right now. Is that right?

Jeremy Quin: We want to ensure that we have the capability to launch missiles of that nature. What they will be as we go into the 2030s is another matter entirely.

Q264 **Chair:** And the same missile silo will be in the Type 32 and the Type 83?

Jeremy Quin: Well, we don't know that yet, but it would be logical that that or similar characteristics would be very much considered as part of the concept.

Admiral Tony Radakin: The path that we as a Navy want to go down is absolutely that—longer-range missiles from ships with land attack. To Mr Francois's point earlier about whether that is in the programme, it is in the programme with money that has been allocated for the future cruise anti-ship weapon, but we are only on the cusp of an assessment phase with the French. We have not delineated that it is going to be weapon X, but we have the budget line that supports that approach.

Q265 **Mr Francois:** Very quickly, if it is the hypersonic variant, it might be beyond the 10-year equipment plan. If it is the "simpler" Harpoon replacement, if you are talking '26, '27, by definition it must be in the plan. To make sure we have understood you, if it is the shorter-range one of the two, there is a line item in the plan. If it is the longer-range one, it might be without the 10-year envelope or not?

Admiral Tony Radakin: No. The exciting thing for the Navy is that the more substantial money is in the longer-term line, with the ambition around the future cruise anti-ship weapon and the French partnership. That has got the money in the line, but I agree with you that if we are



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operating at the hypersonic level, there is a debate as to whether that is at the back end of this decade or the early 2030s.

Q266 **Mr Francois:** To follow the Chairman's question, if the TLAM goes in Mark 41—you are not sure your new missile will go in the Mark 41, so that is an issue—why not just buy a bunch of TLAM now and drop it in?

Admiral Tony Radakin: We have got an option with France, and one of the other options is what might be available if we were to go down an American route. All of those we are looking at.

Jeremy Quin: To be clear, we have a very strong partnership with our French friends and MBDA, and we work together very closely. There is a very exciting prospect in terms of the FC/ASW, which is the future cruise anti-ship weapon. That is all within the equipment plan and priced in. We would look to have that within this decade, but it isn't yet because we are in the assessment phase, so obviously you have other options.

Q267 **Mr Francois:** What if our opponents have the temerity to want to fight within the next two or three years? What do we do then? What if they are rude enough to do something and not give us advance warning? History has a number of examples. Pearl Harbour was one.

Jeremy Quin: I think the First Sea Lord said it right at the start. We have a large range of capabilities under the surface, on the surface and with F-35 above it. We would be working alongside allies and partners, and we would ensure that we have the right capabilities to meet the threat.

Mr Francois: I hope to God you're right.

Chair: On that jolly note, can we move on to the OPVs? Sarah, over to you.

Q268 **Sarah Atherton:** This Committee, along with others, has raised concerns about the capability of the Royal Navy to meet current and future demands. We are going to speak about the offshore patrol vessels. We have 100% availability, which is really good. They are turning out to be the packhorses of the Royal Navy, with duties including counter-terrorism, drug smuggling, the Arctic, the Caribbean, humanitarian disasters and fisheries, and now you plan to deploy them in the Indo-Pacific. There are some concerns about how lightly armed these vessels are. They have a flight deck without a hangar; they have limited capabilities. Do you need more of them? Do you need to purchase more of them? Do you need to extend the life of the Hunt and Sandown classes to meet the future requirements that the OPVs are now doing?

Admiral Tony Radakin: I agree with lots of your points. What we are getting out of the batch 2 OPVs in particular, but also the batch 1 OPVs, is this enormous utility: batch 1 OPVs are assisting with the relatively basic homeland defence task close-in, and then batch 2 OPVs have given us a little bit more reach without having to always use expensive frigates and destroyers. That is why, as the Minister said, we have Medway in the Caribbean, Forth in the Falklands and Trent operating out of Gibraltar. That extends all the way through to working with NATO in the



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Mediterranean and in the Black sea, and now going south to the Gulf of Guinea, supporting UK investment in that part of the world and working with those navies in the Gulf of Guinea.

Then we have Tamar and Spey, which are doing what we would call constabulary operations in the Indo-Pacific, and this needs to be seen as complementary to what else we have in the Indo-Pacific. One of the criticisms has been that we were not going to the Indo-Pacific enough, and then when we did go, it was, "Wave a big flag, and then we won't be seen for a long time." We are trying to say that we will go with carrier strike, we will go with high-end capabilities, and we will do that on an episodic basis. We will link that in with our capabilities in Brunei, our facilities in Singapore and our base on Diego Garcia, and at the western end of the Indian ocean, we will link it with a littoral response group.

Further east, particularly to work more closely with some of the smaller nations, we have two OPVs, and they offer what we would call constabulary operations. Some of that could be signalling; some of it is a permanent presence; some of it is being able to respond to humanitarian disasters. It is about policing exclusive economic zones and maritime protected areas, and working with other navies in terms of what we would call relatively basic skills, such as boarding capabilities and doing those low-end tasks. It is not to pretend that these are high-end warfighting ships—they do not have the armament for that—but they do signal our commitment to the region and our shared values and interests, whether that is around territorial claims or supporting nations that are concerned with maintaining the levels of protein that they can provide for their nations, because that is the issue in some of the Indo-Pacific with the illegal fishing that is going on.

Q269 **Sarah Atherton:** To go back to my first point, are they being stretched too thinly? Do you need more of them?

Admiral Tony Radakin: I will always say that it would be wonderful to have a bigger Navy.

Chair: This is your opportunity to say it. I can feel it—you want to say it!

Admiral Tony Radakin: Do I want a bigger Navy? Absolutely, but I think the real question is whether we are being asked to do too much by our Ministers—more than we can achieve—and the answer is, "No". If you go into Chris's world, with the Tamar and the Spey, the traditional approach was that you would send the ship and then you would have to bring it back for its maintenance, or for the crew to get their downtime in the UK. We contract with blue chip companies, and there are some fantastic facilities all around the world, so we want to deploy the ships and keep them there for at least the next five years. That means that we then have to have a different crewing model, and it also means that we can get far more out of those ships, so that is what we are doing.

With our higher-end ships, you cannot have those crewing models and you cannot have those maintenance support models, so you have a slightly



different approach, but we have a more balanced approach to both crewing and support and how we deploy our ships, rather than one size fits all. That is allowing us to do a lot more. We are doing that because we have five more batch 2 OPVs, and that is not interfering with our core responsibilities in terms of NATO and the Euro-Atlantic. I don't buy that we are under too much pressure and doing too much, and so we're having to dilute in the Euro-Atlantic. We are able to do more because we have more ships and a different way of operating.

Q270 **Sarah Atherton:** Would your sailors agree with you?

Admiral Tony Radakin: Absolutely. If you want to know what are some of the happiest ships to be on, it is the ones where sailors are having the deployments of a lifetime. They're going off, in Tamar and Spey, to the Caribbean, through the Panama canal and across the Pacific, and operating in the Indo-Pacific, and they're doing it on a routine that is probably closer to four months at a time. HMS Montrose is the most popular frigate that we have in the Navy, because we have a different crewing approach, which is four months on and then four months to take your leave and additional training.

That gets to some of the fundamentals that I think we were getting wrong, which was about the amount of churn and instability. Our sailors are content to be away, but they have been fed up with being messed around, so being able to say whether they will be back for their daughter's birthday becomes really important. When they have said, "I think I'm going to be back," and then, for whatever reason, they miss that birthday, that is when we start to irritate people and their families, and we lose too many people that way. This is trying to respond to some issues that I don't think we have responded strongly enough on, and to crew the fleet in a much better way.

Q271 **Chair:** Those are really interesting observations. I don't want to put words in your mouth, but I am going to try. In your reply to Sarah saying, "Would you like a bigger Navy?", you said yes. I think, Minister, you would concur with that as well. But when asked, "Can you do all the taskings that are required of you, that the Minister sets?", yes, you can. And then Ministers realise the limits of what the Navy can achieve. But I think that, in saying that you would like a bigger Navy, there is a recognition—going back to our global stability issue—that you would probably like to see Britain do more on the international stage were there an appetite to do so.

Jeremy Quin: The First Sea Lord is soon to, chrysalis-like, arrive as CDS, and he will be balancing all the demands of the services and what their requirements are. What I would say is this. We should look at what we have: two aircraft carriers; a heavy investment programme, rising to £1.7 billion a year in capital for the Royal Navy; exciting developments in terms of mine countermeasures; and the investment that we are putting into our submarine programme. I think this is a very good time to be cheerful in the Royal Navy. If you ever ask any First Sea Lord whether they would like more lethality and more ships, more vessels, the answer will always be



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yes. But do we think we have made progress? We certainly have. Can we do a lot more than we used to in the recent past? We certainly can. And is there ongoing investment? Yes.

Chair: With respect, that is one side of the equation. On the other side, there are an awful lot of problems coming over the horizon. Are we ready and capable to meet that? That is another, bigger philosophical question and it is probably not for the MoD but for the Government itself to grapple with.

Let's move on to the issue of working with our allies. Gavin, do you want to take us forward?

Q272 **Gavin Robinson:** Thank you, Chair. I don't know whether this builds on the cheery note or not, Minister. Do you envisage us ever engaging in naval conflict by ourselves—without allies?

Jeremy Quin: If anybody ever said no, that would be a very strange answer to make. You can never know what threats are going to be present, and you need to study all the potential operational requirements. There have been times in our lifetime when the Royal Navy has absolutely had to take on that heavy burden alone. But in terms of the scale of the threat we may have to calibrate against, there are some potential adversaries where it is far, far more likely that we would be doing that as part of one of our very strong alliances. There are other circumstances where we would be acting alone. Would that be fair, First Sea Lord?

Admiral Tony Radakin: Yes, absolutely.

Q273 **Gavin Robinson:** Thank you. In terms of those alliances and agreements that we may have reached with allies, do you have a clear understanding of what each individual ally would look to us to provide and, in turn, what that ally could provide for us? Does the Department, the Navy or the Ministry of Defence have a clear understanding, whether in relation to the US, another NATO partner or whatever it may be, of what we can provide and what they can provide?

Jeremy Quin: The absolute core of our defensive alliance network is NATO, and there is the NATO plan, in which we have tasks that are allocated to each nation. The Royal Navy has its taskings, which it is meeting, and we will continue to meet our requirements as part of our NATO obligations.

Q274 **Gavin Robinson:** I want to come back to the term "core" in just a moment, but what work is ongoing with NATO interoperability? Do we have allies that we know we could not operate alongside because their systems don't naturally align with ours? We went through a lot of this with the F-35 and making sure that there was engagement between assets in the air, assets in the sea and assets elsewhere. Is there ongoing work on interoperability?

Jeremy Quin: It is a huge issue, not just nationally but across NATO. NATO does a lot of work on ensuring interoperability but, as we are finding with the carriers, on interchangeability as well.



Admiral Tony Radakin: Our levels of interoperability with the larger navies within NATO are strong and, I would argue, very sophisticated. They have been enduring. Are we an international Navy that is used to working with other partners beyond NATO? The same point exists. If you want to take the carrier strike deployment as a simple example, it goes out into the world and exercises with over 40 countries.

I would say that the exciting part is that throughout my career we have been striving for stronger interoperability, but we are now trying to set the bar even higher to what we call interchangeability. Take the notion that you have a US Marine Corps squadron of jets on board a British aircraft carrier alongside a UK squadron. They are comfortable operating together and comfortable with the command and control, the rules of engagement and how they project that force. Are you better for having that blended force? That feels very good. If you look at what is happening in the North Atlantic, how do we maintain the freedom of manoeuvre for NATO and, in particular, for the UK and the US? Is that a UK submarine or is that a US submarine, and how can we operate together? That is interchangeability, and it is a level above what we have always described as interoperability.

Then we have a whole host of programmes with different nations. Some of them are strong, such as that with America, and they are getting stronger as you have seen with the likes of the AUKUS deal. We also have arrangements with India, Japan and Australia. It is a sophisticated way of doing business and a highly effective one. There will be times it sends a message to some of our potential foes who don't have that ability to marry with such strong allies. We will be using this even more strongly in the future.

Q275 **Gavin Robinson:** Thank you, First Sea Lord. I said I would come back to "core" and I don't know whether you or the Minister wants to field this question. Some of the evidence that the Committee has received from the MoD suggests that the carrier strike group would always be deployed with a sovereign core. What is the definition of a sovereign core?

Admiral Tony Radakin: The core capabilities that we contribute from a maritime point of view are nuclear—everything from the nuclear deterrent, and the fact that we provide that to NATO, to our hunter-killer submarines—and the supporting capabilities that go with that, whether they be our intelligence, ASW capabilities, the Merlins, the P-8s and the way that we marry with the strike group of nations to fight the ASW battle in the North Atlantic—

Q276 **Gavin Robinson:** I am considering our carrier strike group. A carrier is deployed alongside—

Admiral Tony Radakin: But what we have said to Ministers about the carrier is that we would have a sovereign capability, so that we can always defend the aircraft carrier with UK ships and submarines. We will prove that capability, so that Ministers always have the assurance that we can protect the carrier ourselves. Whether or not we then deploy with a solely sovereign capability or we blend it with allies is a tactical choice at the



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time, but we have always got the backstop that we can defend it ourselves.

Gavin Robinson: With respect, I am not entirely sure what that means in practice. You lead me to believe that Ministers will always have the assurance of a sovereign protection capability. You mention attack subs, nuclear capability, intelligence, anti-ship and all of that, but then envisage a scenario where those supplementary elements may be provided by allies, which doesn't suggest to me that it is sovereign core. I am trying to get an understanding of theory and practice. What is sovereign core?

Admiral Tony Radakin: In theory and practice: do we have two destroyers, do we have two ASW frigates, do we have a submarine, do we have the support shipping, so that we can say to Ministers, "If you want to deploy this carrier with a purely sovereign capability, you can do so"?

Mr Francois: One of them broke.

Admiral Tony Radakin: Sorry?

Mr Francois: Diamond broke.

Admiral Tony Radakin: So do we have that capability? Yes, we have. How do we then want to deploy? Do we want to go around in this sovereign core capability when everything tells us that if we ever come to a war-fighting situation, we will be doing it with our international partners and we will be a lot more effective? It is a tactical choice at the time.

Mr Francois: If I may—

Q277 **Chair:** No, we are likely to open up a massive subject. The concern is that you don't know who your allies will be on the day. You have been doing exercises right across to the South China sea with allies who may or may not turn up if there is a real operation.

Jeremy Quin: You are absolutely right. We task the Royal Navy with being able to develop a carrier with proper defensive suites provided by the Royal Navy on a sovereign basis, so that we have the support under the sea in terms of—

Chair: The concern is you don't have 100% reliability in being able to provide that support, which is why you had to lean on allies.

Jeremy Quin: We have the capability to provide that. You are talking about circumstances under which you may get maintenance issues at any one given moment on any one give ship, but do we have the scale to provide that? Yes, we do. Even now, before the PIP improvements and the increase in capability, we have three Type 45s and ASW capabilities available.

Q278 **Mr Jones:** It is brilliant what we have done with the deployment of the carriers. I don't know why the Government don't just say, because I have no problem with it personally, "Deploy two carriers. If we are going to deploy them, it will be with allies." We are not going to deploy two



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carriers with just UK F-35s. I have no problem with that, frankly. If they are deployed with the US Marine Corps, it adds to our lethality to our opponents. We just need to be honest. It is a great asset for our allies. It is great for the UK, but we all know it is going to be deployed on a joint basis. That is the problem that I have when some people try to argue about the glory days of the UK steaming around the world on its own. It's not going to do that anymore, is it?

Admiral Tony Radakin: I think we have been honest in saying that we will always have the backstop of showing to Ministers that if they want to deploy a purely UK sovereign capability, we can.

Q279 **Mr Jones:** Two carriers?

Admiral Tony Radakin: Not with both carriers; only with one carrier and one air wing.

In terms of the actuality of when we deploy it, do we think we will deploy it as part of an international group? My expectation is that that will be the norm.

Mr Jones: It's not a military issue; it's a political issue. We need to get it into the public psyche that this is a benefit in deploying.

Chair: I echo that. We have said this again and again. We tell the country we need to invest money in our NHS to keep people well. We invest money in our schooling to increase skillsets. We need to invest in our military if we want to stay safe, and part of that is to have a sovereign carrier strike group. We are not there yet. Make that case to the British public and you'll win the argument and get support for an increased defence budget.

Can we move to Type 45 repair?

Q280 **Mr Francois:** Minister, an underarm ball: do you accept that a fundamental role of our armed forces is, in the first instance, to deter war?

Jeremy Quin: Absolutely.

Q281 **Mr Francois:** Good. Should deterrence fail, it is to fight and to win?

Jeremy Quin: Absolutely.

Q282 **Mr Francois:** Some of us are keen WPQ tablers, as you know.

Jeremy Quin: I have noticed, Mr Francois, yes.

Q283 **Mr Francois:** On 14 July, I tabled a WPQ, the essence of which was: what is the seagoing status of each of the Royal Navy's six Type 45 destroyers? The answer was: "HMS DEFENDER is currently deployed as part of the Carrier Strike Group...while HMS DIAMOND has experienced some technical issues and has detached from CSG21 for maintenance, inspection and defect rectification. HMS DARING and HMS DUNCAN are currently undergoing planned deep maintenance", and Dauntless is



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undergoing a power improvement project. So at that point, of these six Type 45 destroyers, at £1 billion a pop—arguably the best ship of its class in the world, when it works—one was available. Who are we going to deter with that?

Jeremy Quin: At the time, Diamond was just catching up with CSG, having had a short period of maintenance, so at the moment we have three of them.

Q284 **Mr Francois:** No, this is your answer. You said you did not want to contradict your own answers, but you just did. "HMS DIAMOND...has detached from CSG21 for maintenance, inspection and defect rectification." At this point, she had left the group; she had not been fixed at that point, so you have one out of six. Who in Beijing or Moscow is going to quake at that?

Jeremy Quin: I might just check with the others, because I do not want to contradict my own answer. Right now, Dragon is in the north Atlantic, Diamond and Defender are with CSG, Duncan is in deep maintenance, Dauntless has just finished PIP and is working up to do sea trials, and Daring will—

Q285 **Mr Francois:** Sorry, I apologise: "HMS DRAGON is undergoing a period of planned maintenance in advance of further operational commitments." On 14 July, she is undergoing planned maintenance, so you still only have one out of six.

Jeremy Quin: We are now at three out of six.

Q286 **Mr Francois:** No, but you were one.

Jeremy Quin: That may well have been the case.

Q287 **Mr Francois:** So if I am a naval analyst in the Red Banner Northern Fleet, or the equivalent in China, and I say, "They've got these fantastic ships, but they spend a lot of their time guarding the quayside", I am not going to be deterred, am I?

Jeremy Quin: If you are drawing to our attention the fact that we need to have better availability on Type 45s, you are absolutely preaching to the converted. We are absolutely committed to doing that.

Q288 **Mr Francois:** You were directed by the Secretary of State to improve naval availability through the power improvement programme to sort out the propulsion problems, which are not exactly a state secret. How long will it take to fix all six Type 45 destroyers?

Vice Admiral Chris Gardner: By 2028.

Q289 **Mr Francois:** So it is going to take seven years from today to fix some of the most vital ships in the Royal Navy.

Vice Admiral Chris Gardner: It is going to take that period of time because of the sequence we will put them into the power improvement programme, combined with their upkeep programme, to deliver the change in their main propulsion—



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Q290 **Mr Francois:** If they are such vital ships—if ideally you would have two to escort the carrier—why is it taking seven years to fix a defect that everybody has known about for donkey’s years? Why can’t you do it faster?

Jeremy Quin: It is to match the operational requirements.

Vice Admiral Chris Gardner: It is exactly that. Going back to the availability point, what I have been told is to get four Type 45s available to the Royal Navy from 2024 onwards. That means at that point in time I can have a maximum of two in some form of either deep maintenance or going through the power improvement programme.

Q291 **Mr Francois:** Will all four of them have been fixed by 2024?

Vice Admiral Chris Gardner: No.

Q292 **Mr Francois:** So they might break again. All right, what is the cost of the power improvement programme?

Vice Admiral Chris Gardner: The total cost is £189 million.

Q293 **Mr Francois:** Well done Minister, that was your answer on 18 August. Who is paying for that?

Vice Admiral Chris Gardner: That comes out of the Royal Navy budget.

Q294 **Mr Francois:** BAE Systems built these ships, and they do not work properly. Why are they not paying for it, rather than the taxpayer? This is a BAE Systems/Rolls-Royce cock-up. Why are they not rectifying it? Why are my constituents paying taxes to solve a BAE Systems/Rolls-Royce problem?

Jeremy Quin: Unfortunately, we are reaching deep into history here. I think there was a report in 2011 as to where the problems lay at that stage, and the view was taken in that report that decisions had been made by the MoD and Ministers at the time that contributed to the problems that were then being encountered by the Type 45s. I am not going to make a party political point—it could have happened to any of us—but that is the case.

Q295 **Mr Francois:** No, it is not a party political argument; it is a taxpayers’ money argument. Why don’t the contractors say, “Do you know what, let’s put our hand up. We’ll fix it”? I mean, BAE Systems made a lot of money last year. Why don’t they pay for it?

Vice Admiral Chris Gardner: To be fair to BAE, they were not the root cause of the technical problems that the Type 45s are facing. It was the decision and the technical bet we took on the propulsion system, and the direction we were given by Ministers.

Chair: So this had never been tested before. You had something that was being used in a commercial environment to go straight forward, and then you were using it in a manner in which it had never been used before. Is that correct?



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Q296 **Mr Francois:** The technical term for this, I think—I am not an engineer—is that it was a complete cock-up. These are the most powerful air defence destroyers in the world, but they are not a deterrent and they are not a war-fighting asset if they are tied up alongside the quayside. The Secretary of State directed you to fix this, and you just told us that you are going to fix it in seven years.

Admiral Tony Radakin: The Secretary of State's challenge to us, which I welcomed, was to have a more available fleet. I think you are right to highlight that, although the Type 45s work now, we are trying to build in additional resilience. Where I disagree with you is that they are not all broken. We want to have more resilience, and they work now. The two ships that are with the carrier have not gone through the PIP programme. If you look at my response to the Secretary of State, we now have two aircraft carriers both available and operational. We have eight out of 12 frigates. We have three out of six Type 45s.

Q297 **Mr Francois:** And how many submarines?

Admiral Tony Radakin: I am not going to go into the submarines. We have all of our OPVs—five out of five. We have 10 out of 11 MCMVs. We have eight out of 11 RFAs. All our survey ships are available.

Q298 **Mr Francois:** These ships are £1 billion a pop. I'm sorry, but the taxpayer deserves better than this from the Royal Navy. What happened to Diamond? What was the problem?

Vice Admiral Chris Gardner: Diamond suffered a failure of one of her gas turbines, basically, and we had to replace it.

Q299 **Mr Francois:** So it was an engine problem.

Vice Admiral Chris Gardner: It was an engine problem.

Q300 **Mr Francois:** Okay, because I spoke to a journalist today who said that the MoD flat-out denied that.

Vice Admiral Chris Gardner: Well, I don't know who in the MoD it was, but it wasn't me, and I am responsible for those ships.

Q301 **Mr Francois:** It was a propulsion problem.

Vice Admiral Chris Gardner: It was.

Q302 **Mr Francois:** Okay, well that's cleared that one up, but even if we put two to sea to defend the carrier and one breaks, in terms of deterrence they must laugh at us.

Jeremy Quin: I don't think they laugh at the capabilities of a Type 45.

Q303 **Mr Francois:** When she's at sea. That's the point, isn't it?

Admiral Tony Radakin: So you are saying—

Q304 **Mr Francois:** I am saying that warships have a deterrent effect if they are reliable and can go and fight, First Sea Lord. They do not have a deterrent effect if they are permanently tied up along a quayside in



Portsmouth.

Admiral Tony Radakin: They don't, but if we want to have an argument about the capability of that CSG21 group, what it has got, and what impact that is having in terms of China and Russia, what have we seen when we operated in the eastern Mediterranean? What have we seen when we have been operating in the Philippine sea, and so on? We have to look at it in a slightly bigger context than purely two destroyers as part of that group. We have to look at the air wing, the carriers, the fact that these are fifth generation, the support shipping, the success of the deployment, our international allies, the submarines—all of those things.

Q305 **Mr Francois:** We have given the support ship a good go, I think, and I am not sure that you won that one on points, to be honest. I am talking about one class of warship, and I think we find it unbelievable that it is going to take you seven years to fix these problems when you have known about them for a decade. Can't you do better than that?

Chair: Right—a final reply on this because we need to move on to Kevan's point.

Jeremy Quin: I think there is absolute agreement that we want to get more availability out of our Type 45s and more reliability. That is what PIP is designed to do, with the deep maintenance that goes alongside it. I have no doubt that I will be asked questions by you, Mr Jones and others about the success of Dauntless in due course, and that is what we are focusing on now—making certain that that work will actually work, and achieve the objectives that we have set for it.

Mr Francois: You are slowly going back to a 10-year rule.

Chair: Okay, Mark. You have made the point.

Mr Francois: They'll explain to you later what that is—*[Interruption.]*

Chair: Thank you, Minister. I am going to draw a line there. The point has been forcefully made, so let's move on to Kevan, who is going to widen the debate on maintenance.

Mr Jones: You made the position very clear that you want to get availability up. I think no one disagrees on that, but you very helpfully sent me a letter today on planned maintenance, availability and slippage, which is not good, is it? In your letter to me, you say that on Royal Navy vessels it is 33.8%—

Jeremy Quin: Extra time.

Mr Jones: Extra time, and on RFA it is 33%.

Jeremy Quin: On average.

Q306 **Mr Jones:** On average. I accept that some of it will be down to covid. I am not suggesting that it is all down to covid. Covid will have affected the figures, but what is the real issue here? In your second letter—I will not



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read them all out; I am sure that we can put it in the report—you named the various contractors in terms of the delays that they have. What can be done to improve that? It is an issue of availability for the Admiral, isn't it? If we put things into planned maintenance but then have delays like this, they are not available to be deployed. What can be done to actually—

Jeremy Quin: I can tell you lots of exciting things for the future, in terms of the new classes. Chris, I am sure, will come in on what is going on at the moment.

In the future, there will be increased digitalisation. If you look at what they do with Type 26, with that level of digitalisation, everything is down to millimetres. In the past, with a four-inch gap, you would say, "Oh, someone will sort that out with a hammer." Now there is such a fine degree of specification and the inventory is digitalised. That will help, and we will then start running that forward to work out what is wearing out where and what needs to be replaced. In the future, that will help.

Mr Jones: That is fine for the Type 26, but we have a long—

Jeremy Quin: I said in my preamble that I can talk about the future and how wonderful that will be when we have new ships. New ships make life a lot easier. At the moment, we are maintaining some older assets and revamping them. Some of this is about covid, but a lot of it is down to them taking something out and finding out what is behind it, and it does not look good.

Vice Admiral Chris Gardner: It is absolutely fair to say that the level of productivity we currently get out of industry is not good enough. That is fundamentally what is behind the change that we are trying to bring about and the transformation that we have enacted through the future maritime support programme that we have just let with Babcock and BAE.

Q307 **Mr Jones:** What is the issue there in terms of productivity?

Vice Admiral Chris Gardner: There is just general productivity within the yard, and the need to invest in tools, techniques and facilities to deliver an increase in the overall productivity. But there is also a truism in the fact that, for the ships that we are maintaining, the overruns—on the Type 23, for example—are down to the overall material state of those ships, the level of obsolescence, and the degree of investment that we are having to make in their life extensions, alongside the capability upgrades.

Q308 **Mr Jones:** So you are basically saying that until you actually start taking them apart, you do not know what you will find?

Vice Admiral Chris Gardner: That is true. When you start ripping a Type 23 apart, and you start ripping down bulkheads and things, you will discover problems and emergent work that has to be fixed.

Q309 **Mr Francois:** Because they are so old.

Vice Admiral Chris Gardner: Correct.



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Q310 **Mr Jones:** I remember the Type 23s being built by Swan Hunter. Does the fact that they were built in different yards mean that, although they are done to the same specs, they have different build finishes?

Vice Admiral Chris Gardner: It is a truism, anecdotally, that you can tell the difference in the Type 23s depending on which yard they came out of, but I would not say that that is material in the sense that a ship built by Yarrow will take months longer to fix than one that was built somewhere else.

Q311 **Mr Jones:** What are you actually doing to get industry to focus on productivity and uptimes? You are the customer; what are you doing to hold their feet to the fire and say that they have to improve?

Vice Admiral Chris Gardner: The key transformation commitment that we have just landed, through the future maritime support programme, is fundamentally moving the goalposts and the mindset—I do not underestimate the cultural journey we have to go on with industry as well—to think about how we contract and deliver and hold industry to account on an output basis, which is something we have not done in the past.

The next real opportunity comes as we recapitalise the Navy. We will bring new ships into service; we can invest in digitisation; we can invest in the data analytics; we can invest in adopting a fundamentally different way by adopting commercial best practice in terms of how we scale, source and support.

Q312 **Mr Jones:** So your first answer, in English, is about saying to the contractors, “If you do not hit these targets, you are not going to get paid or you will get penalties”.

Vice Admiral Chris Gardner: Yes. For example, in the surface ship world, we have moved from a cost-plus model to one where we adopt a target cost-incentive fee, so they are incentivised to deliver on time because that is how they maximise their profit.

Q313 **Mr Jones:** Is that being brought in now?

Vice Admiral Chris Gardner: Yes.

Q314 **Mr Jones:** So future work will be on that basis rather than a cost-plus basis?

Vice Admiral Chris Gardner: Correct.

Q315 **Chair:** I have a final question on F-35s. I know, Minister, that you have heard our concern that there was an initial bid for 138—we are up to 48 at the moment. There is no money available—we have just talked about the pressures on budgets. You have 21 in situ now—21 have been delivered. Is that correct?

Jeremy Quin: Correct.

Q316 **Chair:** The First Sea Lord said that you have two aircraft carriers? For



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effective readiness, how many F-35s do you actually require to be able to allow two aircraft carriers to operate concurrently?

Admiral Tony Radakin: The MoD plan has been to have two aircraft carriers and one air wing that you can then marry up with the very high-readiness aircraft carrier. I am trying to think—

Jeremy Quin: So, it is 48—24 and 24.

Admiral Tony Radakin: I am trying to think whether the figure I want to give is confidential or not, in terms of supporting four squadrons.

Jeremy Quin: Ah, I don't know whether that is confidential.

Chair: We won't tell anybody. It just among us.

Jeremy Quin: As you know, we are going to acquire 48. We have made it absolutely clear that we will be acquiring more. We have committed to have 48 in service by 2025, and we will be acquiring more. We have set that out in the IR. We will set out the exact numbers in 2025. The 138 number is still there. That is a defined number and we are looking at keeping these aircraft carriers in operation for a very long period of time. I am not dismissing that number either. We know that we have 48 to which we are committed, and we know that we will buy more beyond that.

Chair: This goes back to the reality check and your honesty, if you like, and openness with the general public. If taxpayers were aware of the pressure you are under to ensure that you have the number of F-35s required to run two aircraft carriers, I am sure that they would be the first to say, "Make sure that this money is available." But the money is not available. Minister, I know that you are saying, "We hope to get it," but that is an aspiration. The Treasury has not confirmed that there is any chance of this money coming forward over the next five years. It would be in addition—it is not in the equipment plan.

Q317 **Mr Jones:** I think this is an academic argument, because we are going to deploy them with our US allies. Frankly, I have no problem with there being a mixed fleet on these carriers, because that projects force for NATO and us. When we were in the United States a couple of weeks ago, there was mention of the US Marine Corps review in terms of drawing down its air assets. Will that have an effect on the deployability of the US Marine Corps to supplement what we have on our carriers? Have you had discussions about that?

Chair: It is air assets that you are talking about.

Admiral Tony Radakin: No, I don't think it does, because some of the things they are drawing down are not in the F-35 space and they keep those numbers up.

Are we matching what the Department has always said, which is that the carrier full operating capability matures at the end of 2024 and needs to be able to deploy 24 jets on an aircraft carrier? We are absolutely on track



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to be able to do that, and I think that has always been a very clear aspiration and it has been laid out.

Within the Navy—so not yet a departmental plan—how might we be able to look to provide a second carrier air wing? In the modern world, does that mean purely more jets, or is it what I think most of us would see as being a hybrid force of both jets and drones?

Chair: Littoral.

Admiral Tony Radakin: No, drones from the aircraft carrier. If you look at what is going on with the Air Force and their Mosquito and LANCA programme, and if you saw what happened in September with HMS Prince of Wales flying the first jet drone, that is the area that we want to pursue. Then we can start to give Ministers choices around whether or not it might be feasible, but not at the expense of buying lots of expensive aircraft even more quickly. Are there opportunities with the cost of drones? Does it become a better offensive capability to blend drones with crewed jets? And does that then start to allow you the opportunity for two carrier air wings to marry up with both carriers?

Q318 **Mr Jones:** The point is, Admiral, that being able to deploy two carriers with a mixture of our jets and the Americans' is a force multiplier. That is what we should be talking about. The argument that there always has to be two carriers full of UK jets is not important. What is more important is what capability we are bringing to the alliance—whether it is a mixed fleet, which we are working on in the deployment in the south-east—

Chair: That's fine, but then be clear about what our intentions are.

Mr Jones: That's why we need to be clear about it, rather than get stuck on this nonsense that we are going to buy 138 F-35s, when we aren't. It is not affordable.

Q319 **Sarah Atherton:** First Sea Lord, you publicly acknowledged the findings of the Defence Committee's inquiry into women in the armed forces. I thank you for that. Apart from legislative changes, which we will be involved with here, when you are CDS in a month's time how do you plan to change the terms and conditions and the culture inherent in the military?

Admiral Tony Radakin: Can I not give a full answer to that question? I think it would be discourteous to the current CDS, General Sir Nick Carter, and I have been really clear with the Secretary of State that I should wait to speak as CDS until I become CDS. To your point of how do we all, as chiefs, respond in a clearer way to a report that we all acknowledge exposed some very severe failings, we have to address that and do a lot more and be a lot clearer. I can assure you that we will look to do that. I see that as part of my role as CDS—to lead the chiefs in responding to what the Committee evidences in your report. But I do not want to start speaking as the next CDS when I am not the CDS.



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Sarah Atherton: I was not expecting you to, I was just looking for a commitment.

Admiral Tony Radakin: Yes.

Chair: We are very grateful. Minister, Admirals, you have excelled in your time here. Thank you so much, this has been really informative and constructive. I hope you understand why we raised these issues. We encourage you to be bolder in making your case, certainly to increase the Defence budget, simply because we all agree that the bigger picture is that we are living in increasingly dangerous times. We want Britain to play an increasingly involved role on the international stage, not least in the maritime environment.