

Defence Committee

Oral evidence: [UK National Shipbuilding Strategy](#),
HC 970

Tuesday 28 February 2017

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Members present: Dr Julian Lewis (Chair); James Gray; Jack Lopresti; Mrs Madeleine Moon; Gavin Robinson; Ruth Smeeth; Phil Wilson.

Questions 1-53

Witness

I: Sir John Parker GBE FREng, Independent Chairman, National Shipbuilding Strategy.

Examination of witness

Witness: Sir John Parker.

Q1 **Chair:** Good morning, Sir John, and thank you for coming to see the Defence Committee to talk about your independent report. Before we start our question and answer session, would you kindly say a few words about yourself and about the status of this report, which we understand is to inform the national shipbuilding strategy, which of course has yet to be published by the Government? They say it will be in the spring some time.

Sir John Parker: Thank you very much, Chairman. First, I would like to apologise to you and all members of the Committee for not making the earlier session. A rather unique event in my life took place: I lost my voice. I can only put it down to the labour of love with the MoD in producing this report.

I don't like talking about myself. I am a naval architect and engineer. I started my life in Harland and Wolff in Belfast building a lot of naval ships. At that time—in the '60s—we were the largest shipyard in the world, in fact. Then I moved to Sunderland to Austin and Pickersgill, which built the standard ship the SD14, the Liberty replacement ship. We delivered one of those every 27 working days. It was a very successful operation. Then the industry got nationalised and I got hijacked out of Sunderland to come to the British Shipbuilders headquarters. For the period I was there, I was in charge of both naval yards and merchant yards.



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Five years later, I was invited by Jim Prior—Mrs Thatcher, the Prime Minister, supported this—to go to Northern Ireland and attempt to rescue Harland and Wolff. It was in the middle of the troubles in Northern Ireland. Bombs were going off and bullets were flying, and the company was losing more than £40 million a year, so it was a very tough assignment. I finally decided to go. I promised I would stay for a maximum of three years, but I ended up staying 10. We got the yard turned round. We privatised it and took it out of public ownership and into private ownership with Fred Olsen of Norway. From there I went to Babcock and again back into naval refitting work, and bought the Rosyth dockyard from the Government at the time. I was already on the boards of a number of companies and once I stopped being a chief executive at Babcock I then went plural—as it were—and I think that I am now on my fifth FTSE 100 company: Anglo-American. I announced earlier this month that the board should find my successor after being there for eight years. I have been an industrial guy and have always joined companies with engineering somehow running in the bloodstream.

Q2 Chair: The status of the report that you were asked to produce by the Government?

Sir John Parker: It was clearly to inform the Government. I was not arrogant enough to believe that I was the Secretary of State and the Chancellor rolled into one that I could dictate matters. I was given an absolutely free hand, and I would pay tribute to the Secretary of State for Defence for that. I was not leaned on, and I think people probably realise that they should not lean on me. The Secretary of State was very supportive. I saw him several times during the course of the review to advise him where I had got to. A lot of effort had gone into the report, and I was heartened that it was published without any word redacted from it. It gave me considerable encouragement that it was taken seriously by the Government.

Q3 Chair: Thank you. You produced a helpful covering letter to your report. I will read out one sentence which you emphasised in this letter, before asking Madeleine Moon to start the formal questioning. I take it you regarded this as central to your findings. You wrote, “The current situation is that fewer (more expensive) ships than planned are ordered too late. Old ships are retained in service well beyond their sell-by date with all the attendant high cost of so doing. This ‘vicious cycle’ is depleting the RN fleet and unnecessarily costing the taxpayer.” That is at the heart of what you have been trying to address, is it not?

Sir John Parker: It was indeed. I think it was with the grain of this Committee’s concerns that have been expressed in your various reports. If I remember it correctly, your November report clearly set out the decline in the frigate fleet as the 23s are phased out between 2023 and 2035. By that time most of them will be 32 or 34 years of age. Frankly, this is way beyond the sell-by date. That was indeed one of the points. That is not a free option. *[Interruption]*

Chair: Technology glitch.



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Sir John Parker: I apologise as an engineer—that should not have happened. We are trying to address two fundamental things. One is the SDRS review that wanted to ensure that the frigate numbers and the total numbers—19 surface ships—should not decline, and I believe the objective was to expand that again. If we come back to the diagnosis that you just read out, the fact is that—taking Type 26—there were 12 that were originally planned, and in fact eight are now being budgeted for. If I cast my mind back to Type 45, that is also a reduced number. It is when these designs have matured and the final cost realised after a number of years at work. The ships have been more expensive than planned. Not only are the numbers reduced because of that, they are then ordered much too late, so you have a compounding effect.

I will touch on this later, but it is worth mentioning that part of that ordering too late is clearly associated with the fact that, unlike other infrastructure projects in the country, the ships do not have a capital budget that is, in my language, ring-fenced, or assured as we say in the report. That means that, because of the cash system inside MoD, there is an arbitrary pushing back of programmes to accommodate the cash needs. In my commercial world, if we embark on a large project—be it a ship, a mine or whatever it might be—the board will set aside the capital to see that project through, because we all realise that time is money, and projects moving to the right is a very expensive uplift cost on the project itself.

In this case, the situation is compounded because of the need to then keep old ships running much longer than they need to. The result is that you are having to pile a lot of money, capital, into those old ships to cover refit and maintenance costs. Frankly, it is a nightmare for the operators. It is a nightmare for the engineers to have to operate very old ships like that—big demands on the engineering teams. Those ships really should have been sold earlier to other nations as part of our export. Second-hand export is also good business.

You have this vicious cycle of cash consumption that is depleting the RN fleet and costing the taxpayer much more money than it would have done if we had a real grip on defining the specification of the ships in the first place and ordered them on time, to a given timescale and to a fixed capital spend. That is the only way you will break into this vicious cycle.

Q4 **Mrs Moon:** Sir John, we have to thank you for your report which is absolutely stunning, and what an amazing career you have had. Are there your equivalents coming up behind with your level of knowledge and expertise or, in a few years' time, will we be at risk of there not being anyone with your level of expertise to turn to for the sort of advice that we have here?

Sir John Parker: It is rather flattering that you think that I am somehow unique. No, there is a lot of talent out there. I was fortunate to be president of the Royal Academy of Engineering for three years up until about two years ago. The amount of top engineering talent in the UK is very significant. However, we have a big shortage of professional



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engineers. This is outside the remit of this Committee but since you have asked, there is a crucial need to increase the output of professional engineers in the country. We are very short. We did a study at the Academy a few years ago that showed that, between engineering and scientists, we will be well over 1 million short just past 2020.

The other very important point is that it is not just graduates. We need a great cadre of technicians, particularly in some of the directions I have pointed the industry in, like digital technology and digital engineering for example. You need a real cadre of technician-grade which we are not producing at the rate we should in the country. We shut down our polytechnics, which in my view was a mistake. They have become universities but they have not retained their original terms of reference to output technicians. Thankfully, technical colleges are now coming onstream again. That is a crucial need, in order to have a successful industrial base in the country. It obviously has a bearing on what we are talking about.

Q5 Mrs Moon: My colleague Ruth Smeeth is going to pick up on skills and employment issues later. You will find her grilling you quite heavily on that.

In your report, you have given a comprehensive list of recommendations, and the gap I am worried about is the expertise in the business world. To clarify, is it essential that the Government and industry implement your recommendations in full? What will be the implications if they start cherry-picking—"We like that bit; we can do that; that's easy"—and ignore some of the tougher stuff? What is your assessment? Should it be implemented in full or are there bits they can cherry-pick?

Sir John Parker: I would not believe that I have written a holy grail. There are some recommendations that will have a much bigger impact on the cost and arresting the decline in fleet numbers than others. There are also a number of the recommendations that are for industry to implement, not Government. I would hope, regardless of how my recommendations are picked up in all or in part, that industry will pick up on a number of the recommendations—particularly on the yards setting up a global competitiveness plan. At the end of the day, the greatest security for jobs in the country, for winning export work and for the various industrial enterprises is to be globally competitive—technically globally competitive as well as productively globally competitive.

I have the good fortune to see some of the best production operations in the world, through my membership of the board of Carnival Corporation, a cruise ship group. The German yard that is building our cruise ships in Meyer Werft are absolutely leaders in the technology, not just of design but of production. I have recommended that the yards really drive forward on digital engineering, which has a powerful force in design, but it is the translation of that design into the industrialisation of the enterprise that is so crucial. I see a lot of headroom—I give credit to BAE on the Clyde, for example. It has now invested in digital engineering in the front end. Particularly with the Type 26 series in the coming years, it has a great



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opportunity to get the benefits of industrialisation that come from that, in the same way as the car industry—which is a leader in the field, particularly Jaguar Land Rover—has really seized the benefits and high productivity that can flow from the sheer organisational ability that you have to organise the right material and piece parts in the right place at the right time.

Q6 Mrs Moon: A number of press reports have said that there is a significant gap between the aspirations that you set out in the report and the reality of delivery. What would your comment be on that?

Sir John Parker: You talk about the gap between—

Mrs Moon: Your aspiration—

Sir John Parker: And the delivery of the strategy? Or the delivery of the—

Mrs Moon: The reality of whether the MoD and industry are going to be able to deliver on what you are aspiring for them to produce as a result of your report.

Sir John Parker: First of all, there is a lot of talent—we underestimate sometimes how much talent there is in the country. What it often needs is the right strategy in place; it starts with that. Yes, there will have to be culture change if we are to be totally successful in implementing all I have said, but if you want to change the culture in any business, be it within or without Government, first, there has to be the right strategy in place and secondly, you have to have the right leadership at the top of the organisations—that could be the top of the Navy, the top of BAE or the top of Cammell Laird—and that leadership has to have a commitment to change.

The next thing that is very important is that you have the right structures in place and that takes us into the area of governance, which you will find quite a bit about in my report, particularly governance inside the MoD. The right governance models are critical. We can come back to that later. I believe that if you have the right structures, governance and leadership in place and you empower boards, with assured budgets and timescales, to get a ship contracted, it will happen. It will happen with the right leadership, but you also have to remove a lot of the processes around what is there today, you have to streamline them and empower that organisation to get on with it, have less focus on process and much more on project.

Q7 Mrs Moon: Are you confident that that can be done?

Sir John Parker: I believe, talking to the Secretary of State for Defence, that he is very committed to the changes that I have recommended. It will be his leadership and that of other Ministers that will be very important, along with that of the Permanent Secretary. If they show the commitment to change and the leadership and back their people and empower them, I am pretty confident that a lot of change can take place.



Q8 Jack Lopresti: You touched on cultural change in your report and in your remarks in particular, but how does that align with the change programme within DE&S itself?

Sir John Parker: Obviously, my remit did not cover how DE&S should change.

Jack Lopresti: You mentioned process.

Sir John Parker: What I came up with was a radical change in the governance of how you actually define a ship, how you finally contract for it and, indeed, how you manage it post-contract.

As an engineer, I tend to talk in diagrams: if you go to figure 1 and figure 2 in my report, you will see the critical change that I am recommending. Distinguish between the sponsor and the owner or the client—the sponsor being head office and the client being the customer, in this case the RN. You will notice that, in figure 2, I have recommended that once the sponsor has handed down a budget and timescale and empowers the project contracting board, chaired by the First Sea Lord, he has alongside him the chief executive of DE&S.

This is critical: if you empower that board as you would in commercial life to get the job done, it has to have the technical resource below it. I have recommended—it is shown in figure 1—that there should be an integrated programme office. You pull in people from DE&S, the RN, the shipyards and some of the long-lead contractors, like engine builders and so on, who will have a big influence on finalising design and specifications. They are ring-fenced. They forget where they come from and should be “departmentally agnostic”; I think that is the phrase we use in the report. They should all wear the same T-shirts. If it is Type 23, Type 65 or whatever it is going to be, they should all be in that one team of people.

That stops the boundaries—it should be a boundaryless organisation, which reports to this board that is empowered to make the decisions. That cuts out a lot of departmental to-ing and fro-ing and cross-border stuff that absorbs so much energy and so many approvals and so much process. Just cut through it!

Q9 Ruth Smeeth: Good morning. You highlight the need for contracts to be tautly drawn to properly incentivise industry to invest and deliver to time within the agreed cost envelope. I would suggest that that is simply common sense. Why do you believe that was not already the approach?

Sir John Parker: I have dealt with the MoD over the years in contracting, so forgive me if I have perhaps strayed into a certain area. But look, you just need a clean contract that is not commercially complex, shares risk in a sensible way and means that people know exactly where they are. That is just one dimension of a much wider conversation that you would encourage between the contractor and the MoD in any event.



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- Q10 Ruth Smeeth:** Culturally, what do you think has stopped that from happening previously? All of us outside the MoD would think that a normal way to operate. Why has it not been happening?

Sir John Parker: I am not sure that it has not been happening, but what I am saying is that in this case it should happen. That is what I am really driving at: you should have clear contractual arrangements with the right balance of risk and reward. I want to see that happen and make sure that it does not slip into some other different box.

- Q11 Ruth Smeeth:** You also argued for “set and assured” capital budgets for each new series of ships. How feasible do you think that is, given that the Treasury holds the purse-strings? Should the Treasury be involved and accountable for the delivery of Royal Navy programmes?

Sir John Parker: It is very important that the Treasury appreciates what I am trying to say; from the conversations we have had, I believe it does.

First, if you are messing about with a programme every 12 months in an arbitrary way and pushing it to the right—you just have to look at table 1 in my report, which shows the lead time from concept to actual contract for a series of ships. From concept start to contract—conceptual to contract—it took two years for Type 21; six years for Type 23; and 19 for Type 26. None of us can be proud of that.

The answer is that the issue has to be addressed. Every year you push contracts back, you have massively added to the cost. In this case, you have a double-whammy because you have kept on the old ships for much longer. Keeping ships to 34 years of age, in my view, is just not a sensible commercial budgetary use of cash. There are many reasons for that.

- Q12 Ruth Smeeth:** Do you think that one of the complications is that the process, as you have clearly outlined, crosses over different SDSRs?

Sir John Parker: That is an issue, but what we are recommending is that the sponsor should have a programme of renewal of the fleet within the right time windows to avoid the amount of money being spent on old ships.

In fact, at one point in the report we recommend that the RN look into the optimal time to retain a ship in service before you sell it and have to spend a great deal of money on its refit. What is the crossover point? I don't know, because I haven't done the exercise, but we should be able to work it out. We recommend that they do that, because there is an export market for second-hand ships. It is important that we keep that in mind in the country. There are certainly very expensive bills to be paid if you keep these ships running so much longer. This comes back to the fundamental question for the Treasury, which is economic contracting and economic retention of the number of ships in the fleet.

- Q13 Ruth Smeeth:** Given the inherent tension between the Treasury and the MoD on these issues, do you think that assured capital budgets for the Royal Navy may be a better way to have these contracts, so they have a clear cost envelope from day 1 to guarantee it?



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Sir John Parker: Yes; I have no doubt of that. A lot of the money in large capital projects is defined by the time it is contracted. If you leave it longer, greater technical obsolescence creeps in, redesign creeps in, ship size can change, the specification gets changed, and before you know where you are you end up with a ship that is more expensive than you first thought.

Part of that is the time shift. That and the specification in my view has to be gripped by a new governance approach that says, "Look, this is the budget, this is the timescale, and you've got to organise yourself," in the way that I just discussed with your colleague. It has to be set up in that way so you can contain cost, give the Navy what they need and produce a design that is export compatible.

We are not selling any naval ships for export at the moment, and we haven't done for quite a long time. Part of the reason is that we do not design with export in mind, but you can do it.

Q14 **Chair:** We will be coming on quite soon, but not just yet, to a detailed examination of the whole frigate programme—the Type 26 and the Type 31e, as you dubbed it.

I would just like to get one point clear about the idea of a fixed and allocated budget. What you are saying is that, if there is new ship design and the Government are going to introduce that new class of vessel, there should be a sum of money specifically and strictly allocated for that whole project right at the outset.

Would I be right in thinking that what you are saying should be done, for example, in the case of the frigate replacement programme—or, in this case, programmes—is something similar to what I understand has been done in relation to the Successor submarines? It has been stated right at the outset, regardless of the fact that it's going to take a long time to build them and that they are very complex and expensive, that there is going to be a budget of £13 billion allowed with an extra £10 billion contingency. Presumably, that is it—that's the pot of money. That gives certainty.

Are you basically saying that they've got it right for Successor, and that they ought to be using the same or a similar model for these other major naval shipbuilding projects? Is that the point you are making?

Sir John Parker: You expressed it much better than I could. This is a very crucial point, in my view. We would not have built the Olympics on time had we not allocated a ring-fenced, or assured, capital budget. To us, we have done it and brought it in under budget. You would not commit to Crossrail 2 without the same approach.

You are right: you have highlighted the nuclear submarines. I believe—and we are talking about a much smaller pot of money, in terms of Type 31e—that whatever the number of initial ships in that batch, you should ring-fence the capital for that batch. That has a lot of economic advantages. Provided it is ordered on time and that the governance model I have suggested is in place to control the specification, the naval standards and



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all the things that contribute to cost, so that they are controlled and within that timescale, you are then assured at the outset that you have matched the design and specification requirements to that cost base, plus contingency.

The contingency will be based on a risk assessment of where the design risks are likely to be. You will allocate some of that to the project director—we have suggested the MoD—and the other should be allocated to the contracting board that will oversee the contract with the principal contractor.

That is another important point. When you come to contracting, you freeze the design and specification and no further change is permitted unless the delivery board, which will have a contingency, is prepared to accept that there will be no change to contract time as a result of introducing a particular change. It is that rigid discipline throughout that breeds success in big projects.

- Q15 **James Gray:** I come from a shipping background. I started in P&O, where my first task was running the SD14s, which you built—Strathduns, Strathdee and Strathdoon, if you remember those.

Sir John Parker: Indeed I do.

- Q16 **James Gray:** In those days, I am sure the senior management at P&O, for whom I worked, had the sort of discipline you describe. The project, the capital cost and the other things you describe were there, 40 years ago. Why have we lost them?

Sir John Parker: I am not sure that we have lost them in capital life. On the Carnival board, for example, when we are ordering—I think we have about 20 ships on order at the moment. When we approve that at the board, Micky Arison always turns to the chief executives of the brands that may be going to get these new ships and says, “Not a cent more than what we’ve approved. You can do what you like; we are going to get a standard platform and if you are Aida in Germany you will design your own topsides and rooms and so on. If you are P&O, you will have a different accommodation arrangement. But you are getting no more money—that is it.”

There will be a contingency held centrally if, say, there is some new feature that would be an incredibly attractive thing to do and will earn money. Somebody could come forward and say, “By the way, this is a great new idea that has been put to us. Will you entertain it?”

I am very glad that you know the SD14.

James Gray: I sailed on them when I was in the Gulf, quite a lot.

Chair: There is a depth of knowledge in the Committee.

- Q17 **James Gray:** I did 15 years altogether on the Baltic Exchange, and I am now a younger brother at Trinity House; I am still slightly involved.

Nonetheless, the thrust of your report is that most of those disciplines



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have been lost. You have a vast list of things that are going wrong and making the delivery of royal naval programmes both late and over cost. There is a huge list: we have talked about some already.

There are shortfalls in industrial capacity; lack of design; lack of capital controls of the kind you describe; lack of expertise in design; the project management; and the anticipated cost-base—the whole list of things in your report that are going wrong, which means that our royal naval ships are both late and over cost.

Who is to blame for that? What is the difference between the first-class management at P&O when I joined in 1977 and the rather woolly management of the kind that you now blame for this failure? Is it the industry, the MoD, the Treasury? Who is to blame?

Sir John Parker: I have not set out to blame anyone; I have tried simply to diagnose what is wrong and what I think is the opportunity to put it right. I have concentrated, of course, on honestly trying to find out what is wrong, but more importantly focusing on what can be done to rectify the situation.

You can say that the glass is half full or half empty; I would say the glass is half full because there are tremendous opportunities if we seize them now to correct many of the issues that can be put right. A lot of parties have contributed to where we are—from not having a fixed budget to having various boundaries in the organisation that are always difficult to cross, and a lot of focus on process rather than the project itself. You can change that. There are the governance models I have suggested.

Go back to P&O. You and your chief executive would have had total responsibility for—

Q18 **James Gray:** I was a junior management trainee, so I took no responsibility for anything. But the chief executive did.

Sir John Parker: But the chief executive would have had total authority from the board. Once the board approved a project, he would have had a budget and the authority to go out and contract for those ships. He would then empower the superintendents to monitor the production and so on at the yard so that you got them on time and within budget. You did not pay another penny more.

To me, those inherent disciplines in my body are not different from what should be injected in, and there are people within MoD who can do this. Yes, they need some strengthening with more project management skills, as I have undoubtedly identified, and some further technical capability, but there are a lot of very good people inside the MoD—good professionals, highly intelligent, highly capable. They just need to be empowered in a different way.

Q19 **James Gray:** Slightly off-piste on that front, one of the problems with MoD contract management of the kind you describe is that they are not paid enough. The people in the industry with whom they work are all paid £500,000 a year, but the top civil servant is only paid £100,000 a year.



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Is that right? Does the MoD need to employ some really sharp commercial brains?

Sir John Parker: That trend is in place. They have hired in some people from the outside with excellent skill sets and a lot of international experience. There is a need in areas to upgrade the capability.

Q20 **Gavin Robinson:** Good morning, Sir John. I am an east Belfast representative. Harland and Wolff is very much still a part of the constituency. Not only your evidence this morning, but some of the initial media interviews that you gave made compelling listening for anyone who wants to see the heart given back to the shipbuilding industry.

The virtual shipbuilding industrial strategy relies on a significant commitment from industry itself. How confident are you that this can be achieved? What sort of intervention do you think will be necessary, whether it is from Government or from industry alone?

Sir John Parker: It is good to hear a Belfast voice. It is 20 years or so since I left Harland and Wolff. Obviously a lot has changed in the European shipbuilding industry since then.

If we are now coming on to the virtual shipbuilding model, what are the drivers for that? Why on earth did we go down this route? In building the carriers, BAE and Babcock have already subcontracted work out to a number of the yards that we have identified. In fact, visiting the yards, we also found that a number were already doing work for BAE at Barrow on the nuclear submarines. It is not new under the sun. What I think is new about the VSb is the fact that you could have a series. The carrier had only two, but they were big.

If you look at what we have proposed, if you had a series of five, six and, hopefully, many more for export, and perhaps in due course lifting the number of ships in the RN, you would be able to have a series run of building the same block in the same yard and get all the benefits of the learning curve, which could be substantial. You also would have the ability to tool up robotics, or otherwise, for each particular block, so you can really industrialise the whole process.

We talked to the Harland and Wolff management. They came to see us and we were very impressed by what they are doing, lean manufacturing in particular. They have a good open mind, as we found in every single yard that we visited around the country. There has been a real renaissance.

I hadn't visited shipyards for some time, but I was thrilled to see the entrepreneurial attitudes, where they have been working in the offshore oil, gas and wind markets, RFA refits, conversions of offshore vessels and merchant ships. There is quite a lot going on that was very encouraging, as well as them doing subcontract work for the nuclear submarines and, indeed, for the carrier.

Q21 **Chair:** At this point, I want to plunge into the specifics of the whole issue of the frigate replacement programme. That will take a bit of a while and



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then we will come back, if we may, to the issue of exportability, for example.

I appreciate that your particular task was to try to construct—correct me if I am wrong—what is effectively a new management model at the highest overview level, so that in future any major Royal Navy shipbuilding programme will try to conform to a more rational and controlled system, rather than one that, as you said, in the Type 45 destroyers, for example, started with a tentative plan for 12 ships, then eight and ended up with six, because of all the changes, delays and modifications along the way.

I am just going to try to take you through some of the elements of that, particularly in relation to the frigate programme, because that has to be our concern. You referred to our report that we brought out on 21 November last year. I hope you felt that we were getting to grips with it in a sensible way, and I would like to take that further.

I am looking to finish off with the virtual shipbuilding industrial strategy. I am looking at figure 4 in your report. There you have got this list of seven shipbuilders: Cammell Laird, Babcock's at Appledore, Harland and Wolff, A&P, Babcock's at Rosyth, BAE on the Clyde and Ferguson Marine on the Clyde.

I want to get clear what you are saying, for the benefit of anyone listening. You are saying that the virtual shipbuilding industrial strategy means that instead of just having a frigate factory at BAE Systems on the Clyde, this network of seven shipbuilders would be building different blocks of these ships in different locations and then they would all be bolted together, as happened to some extent with the Type 45s and a much greater extent with the carriers.

Could you just confirm that? In that case, incidentally, why do you use the word "virtual" in that context? It does not automatically resonate for that context.

Sir John Parker: No, I agree. It must be the computer age we live in, I think.

Q22 **Chair:** Maybe it is "virtuous".

Sir John Parker: First of all, it is trying to convey an industrial model. It is very important to note that it has to be led by a lead contractor or an alliance, as was the case with the carriers, and that that lead yard has to have the balance sheet strength and the project management capability and knowledge to subcontract with these yards.

Q23 **Chair:** On that point, and so we can knock these things on the head as we go along, are you saying that the lead, what might be called the "integrator" or the "assembler"—

Sir John Parker: Yes—"integrator" would be a good word.

Chair: That the "integrator" could be BAE Systems, but might be somebody else?



Sir John Parker: Correct.

Q24 **Chair:** Any preference?

Sir John Parker: It is not my job to say which yard should do it, but I have highlighted in the report that it could well be BAE, or it could be others. There are not many we have identified. Clearly Babcock and BAE are the two that are now heavily involved from the UK in the carriers and, of course, Thales of France is there.

We have said that either a consortium or a separate lead yard is the right way to do Type 31. There was one overriding point that came through in the various studies inside the MoD, which was that we are at a unique point right now, because the series of eight 26s is about to be contracted this year. Those eight 26s alone will not take care of the decline that you noted in your report between 2023 and 2035, so if you are going to maintain the number at 13 frigates, that requires a separate Type 31e stream coming along at the same time.

Q25 **Chair:** Forgive me if this is a little bit like a dialectic. I hope that is okay, notwithstanding the Marxist overtones, because we need to try to get these components—*[Interruption.]* A few chuckles from my Labour colleagues there—safely nailed down.

You referred to that part of our report. On page 19 of our November report, we have the out-of-service dates for the existing 13 frigates, which are, of course, all Type 23s. HMS Argyll is the first to go in 2023; HMS St Albans is the last to go in 2035.

If we are not going to fall below what we regard as our existing already inadequate total of 19 frigates and destroyers, including the 13 frigates—the Type 23s are leaving at the rate of one a year and we have the new complex warships that are supposed to be coming in—do you think it is realistic to build just the eight Type 26s from the outset and not start on the build of the Type 31e frigates until the eight Type 26s were constructed? We would be able to bring in a new Type 26 with a steady drumbeat to match the drumbeat of the Type 23s leaving service at the rate of one a year.

Sir John Parker: First, let us take the 26. As I understand it, the contracts, which are under final negotiations for the eight ships, will be to start work—to cut steel—this year, '17, and the last ship of that series will deliver sometime in the early to mid-2030s. That is eight ships.

Q26 **Chair:** I have seen 2034 for ship eight.

Sir John Parker: Somewhere around 2034. That is those eight ships. If you then take your report for the 34 or 35-year-old Type 23s, you will have a deficit of at least five ships. That is why the current situation, where we are today, requires a series of Type 31e frigates to start urgently—as a priority I have said in my report—so you can build at least five ships. My view is you could build five ships by 2030.

Q27 **Chair:** So what you are saying—and this is a critical point—is that unless



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we start building the Type 31e frigates in parallel with the Type 26s, there is little chance of not reducing below our existing figure of 13 frigates all told. That, I must say, fits in with the projections I have seen and it follows from that, therefore, that we have to consider the best way of building two classes of frigates in parallel, rather than in succession.

Sir John Parker: Correct.

- Q28 **Chair:** One of the ways you have in mind is that, presumably, BAE Systems would concentrate on the Type 26, and BAE Systems or Babcock might be the integrator for the Type 31e frigates, which would be built in blocks around the country. That raises the question that, if we were to start with a whole new concept for the Type 31, as far as I know, the design work has not even begun. The suggestion I have heard is that it might be much more practical and possible to take the existing design for the Batch 2 offshore patrol vessels and enhance and enlarge it to create a general purpose light frigate that could then be brought into production relatively soon.

Do you think there is much chance of being able to get the Type 31e programme up and running in the sort of timescale you are talking about—if we are not going to dip below the already low totals we have—if we had to have a brand new design? What do you think about the suggestion that we ought to take an existing design from the large offshore patrol vessels—the latest type—and adapt that for the general purpose frigate?

Sir John Parker: We are trying to attack two issues here, at least, my report was directed, effectively, to look at two issues: the decline in fleet numbers and how you arrest that, and secondly, how you have the opportunity to start exporting ships again.

I, personally, am not in the business of choosing which design to go for, but I am convinced that, with modern digital engineering and so on, you can get a new design on the street in time and build in this way. The reason for distributing in this way is that you can massively reduce the cycle time of building. So, instead of building sequentially in one facility, if you are receiving the blocks, you massively compress your construction time.

That is a very important component of satisfying the delivery of five or six of these ships by 2030 or by the early '30s. If I were the ship builder, I certainly would have no problem in getting it done. None. With a new design plus construction of these ships in this way, you could keep your frigate numbers up by getting on with it now, commissioning the design and producing a new design that is compatible with the export market.

- Q29 **Chair:** Can I check that, on this point, you are talking about a new design?

Sir John Parker: Yes.

- Q30 **Chair:** If we were to start a new design from scratch with a new concept, given the time it took us to design the admittedly much more complex



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Type 26 frigates, do you think we could still meet the timescale with a brand new design? How do you react to the suggestion that we perhaps ought to take a more mature design from the offshore patrol vessel model, and enhance and expand that, to accelerate the process of design?

Sir John Parker: There are two questions there. One is, can you produce a new design that will meet our end needs and have a long-term export potential around it? You take on the overseas competition in doing that. I will come to your second question in a moment. I have a list of 18 designs from around the world—some of them are from the UK, actually. If I exclude the UK, there are probably about 14 designs that range from 2,400 tonnes to 5,000 tonnes. If you remember, the Type 23 was 3,380 tonnes when it started—it is probably over 3,500 now. I imagine that a new design will lie somewhere in that 3,000 to 4,000 tonne range.

The very important thing is that, whatever design is chosen, it has got to have adaptable features for the export market. We have pointed to one British design by BMT the consultants—Venator. They went out, talked to a lot of overseas navies about their requirements and produced modular choices. They have a standard platform, more or less in line with what we conceived. We met them and discovered that they had already developed such a design. The design is close to 3,800 or 4,000 tonnes. They created a design with modular choices for weapons systems, communications systems, etc., which you can fit on day 1 and retrofit later. There is great flexibility, and they have introduced a lot of plug and play. It is a very modern concept. An important point, because the yards that get the blocks to build have to completely outfit them—it is not just a sticky box—is that the systems engineering has to be done within the blocks as far as possible, so you have minimum join-up of systems. You will quite clearly have some, but you try to minimise that.

If we are going to take on the competition, we need to have the very best modern design, which takes care of the export market. If we decide not to do that, you can widen the camera lens on to different designs, including looking at extending our existing OPV. That is, in my view, quite a long way from a modern tailor-made export with all the options in it that you would need.

Q31 **Chair:** I am rather keen that we avoid ambiguity of language, and we have used the word “modular” today in two senses. I just want to clear this up. Sometimes when we use the word “modular”, we are talking about the fact that the ship is built in separate blocks in different places, but that is not what we are talking about here. What we are talking about here is what you described as plug and play, and what we called in our report a template warship with what we might say are a lot of empty compartments that you can sell to people and they can then plug in different weapon systems, just as we have a rather large gymnasium on the Type 45 destroyers, which was designed so that when we can afford to have a surface-to-surface missile system—which a Type 45 does not have—we will not have to rip the ship apart to fit it. I just want to check that you are with us on this: what we are saying here is that whether we



take an existing design or a brand new design, the idea is that this new warship—the one that we want both for export and the one that we are hoping will start to increase our warship numbers, because it says at least five of these after the eight Type 26s—will be a template and will not necessarily be fully fitted with all its weapons systems from the word go, but will be capable of being versatile and adaptable. Different countries will then want to configure it in possibly very different ways. Do I have that right?

Sir John Parker: You do indeed, Sir. If we can just clarify the language as you have asked me to do, modular construction is as you have described it: the block-build. Modules of equipment is what we are talking about in terms of the menu of choice that an overseas customer would look for, along with the ease of either fitting it now, at time of contract, or fitting it later through life. Upgrades that are done easily would be a feature of modern export-orientated design. A fundamental issue is that we have made T31e deliberately. The “e”, as in export characteristics, is an inherent part of that design so that we do not neglect that in the development of the design.

- Q32 **Chair:** My last point before I hand back to Gavin to pursue the export points specifically is on cost. I have heard it suggested that if we were to take an existing design such as the Batch 2 OPV and base the new design on that, it might be possible to get up to four or five new ships for what it cost us to build one much more sophisticated and advanced Type 45 destroyer. Do you think that part of the problem that we have is this tendency—which must now go back several decades in the Royal Navy—to reclassify ships in a rather inflationary way? What I mean by that is that they started off by calling small aircraft carriers “through-deck cruisers”, then what we would regard as “cruisers” became “destroyers” like the Type 45, which has to be a “cruiser” by any standards. “Destroyers” became “frigates”. The idea that a Type 23 does not meet the criterion of a destroyer, let alone the Type 26, is crazy, but that is why frigates are sometimes now put in terms of “offshore” or “ocean-going patrol vessels”. I can see what the political arguments were for this downgrading, but we are talking here about a new generation of light general purpose frigates, and I would not want the classifications and the rebranding that we have had in the past to stand in the way of getting the right design. What I am really asking is: is there any basis at all for saying that a general purpose light frigate, with the template features that you are talking about, could not be based on an enhanced design coming from what is currently classed as an offshore patrol vessel?

Sir John Parker: I am not saying that. I have not looked into converting existing ships to what we need here, but I am saying that the nation needs to make up its mind. Is it going back into the export market aggressively or not? If it is, you should come up with the very best product because you are going to have competition from this list of designs around the world—France has just developed a new design which it is working on now of 4,200 tonnes—from Spain, Italy, Germany, Netherlands and Holland.



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Q33 Chair: It is a gamble, isn't it? If we make the ship too sophisticated and too large, and we don't sell many, we won't be able to afford to buy that many for our own fleet, and we are not going to get the numbers up, are we?

Sir John Parker: Correct. We have come full cycle into allocating a budget, the time and the right governance model to ensure that you don't have the explosion of either specification or timescale. We are back to that fundamental question of how to achieve that. I have no doubt that we can massively improve the discipline around this.

Q34 Gavin Robinson: Sir John, you have touched on some of the export opportunities quite comprehensively, but what about the dangers of pursuing an export-based strategy? How much reticence do you think there would be within RN as to whether its needs would be met first in competition with the commercial considerations?

Sir John Parker: I have read this stuff in some of the newspapers that you can't produce a design that will satisfy the Royal Navy and export. If I may say so, that is technical rubbish. The reality is that you can. You can design to satisfy the MoD. We should remember, coming to the Chairman's point about scale, that the Type 23 was, if I remember rightly, just under 3,400 tonnes, whereas Type 26 is closer to 7,000 tonnes, and Type 21 was 2,750 tonnes.

We are talking about a ship that, in terms of its platform scale, has the ability to have the features of a Type 23, if you need them for the RN. But you do not have to equip all the ships necessarily, even for the RN, to an all-bristling weapons standard. You could have optionality that some are highly defended and others are less so for the different duties that the RN has to execute. I see us having a ship that is down in that sort of scale of the Type 23 and a competitive price and a very flexible design that can satisfy the Royal Navy and export.

The other thing is that, having talked to the First Sea Lord and the Second Sea Lord, and others in the naval ranks, they are very supportive of this concept. They are supportive of being involved in the export effort. They are willing even to sell a ship from the fleet, which we have suggested, provided it is replaced. If you were building a series of these at a rate of at least a drumbeat of one a year, you could easily replace that quite quickly but give a country that wants to have that ship one out of the fleet quite fast, as long as it comes in quickly at the back end.

I really commend the attitude of the First Sea Lord and the Second Sea Lord on this question and their enthusiasm for a ship of general purpose light frigate. Because, when we talked about it, the press seemed to have pushed it into a corner and said that this is a small thing. This is a ship that is going to be similar in size to the Type 23.

Q35 Gavin Robinson: What of the market potential? You mentioned earlier in evidence selling surplus ships. We are not able to do that at the moment; we are not involved in that export market. What about the export potential for a brand-new, all-singing, all-dancing, it-can-be-what-you-



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like frigate?

Sir John Parker: We put in figure 5, which came from the UK Defence Solutions Centre and is an assessment of the global market. In service right now between OPVs, corvettes and frigates—so I guess we are talking from about 2,500 tonnes up to 4,500 tonnes—you have in the range of 1,500 ships. Right now 244 are building around the world and some 500 are being planned. That is a sizeable market. We have also indicated in the figure 5 the range of exporting activities that we could be involved in, from complete UK build, to building the first ship in the UK and then selling our design and manufacturing information and project management capability to the country concerned, or selling from the Royal Navy order book or from the fleet mid-life. There is a range of options. If you have the right design with the right optionality, a competitive cost and an ability to build it fast, which is what we have tried to do with this strategy, you are likely to be highly competitive.

Q36 **Gavin Robinson:** Last week as a Committee we had engagement with French parliamentarians involved in defence collaboration with the United Kingdom, the Lancaster House agreement and various projects. Do you think that collaboration outside the UK, between the UK and other countries, needs to form an important part of the Government's national shipbuilding strategy, or do you think that commercially much more could be achieved by companies irrespective of what Government decide?

Sir John Parker: You touch on an important point that concerns the export market, which is that we have a long and very capable supply chain of equipment in the country, which has got diverse geography—where it is located. What we heard in talking to those companies was that you should never underestimate the importance of your equipment being RN-selected, RN-badged. When you go to sell in Korea or wherever it might be, almost the first thing they will ask you is, "Has your own Royal Navy chosen your equipment?" That is a very important aspect of a new design—that you have tried to incorporate and maximise UK equipment—because it is an export model, not just for shipyards but for the equipment around the country. I do not think that we have always been careful enough about giving our UK companies the final shot at the prize. We have drawn attention to that. This issue should be a total UK effort. If we are really serious about it, Government need to get behind it to support the export effort in the way we have outlined. Equally, however, procurement policies need to be aligned not just to maximise the choice of competitive equipment, but to take into account the importance of exporting that equipment, which after all is jobs and employment.

What we are talking about—we have not touched on this, and perhaps I should have done so earlier when Ruth Smeeth questioned me on skills and so on—is that in our yards and the supply chain there is an ageing workforce. This is a great opportunity to bring in others. These are really highly skilled jobs for the most part, and there is a great opportunity to drive the right forms of apprenticeships, with union co-operation and so on, and the right recruitment of technicians to really drive forward on the efficiency and industrialisation.



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- Q37 **Chair:** One last point on selling ships to other countries—I can see the obvious advantages of selling new ships to other countries. Historically, when the Royal Navy was very large indeed, in the post-war world, it sold many, many warships to other countries. I think I am right in saying that this was not really a very significant source of revenue, any more than the price of a second-hand car which, the moment you put it on the road, significantly depreciates in retrading value. Have you any reason to believe that if we were to sell some of these ships after we had had a good deal of use out of them, the revenue that we would receive would in any way match what we had spent in order to acquire them in the first place? Given that we are finding numbers so difficult to sustain, how likely is it that we would want to dispose of these ships, if we had actually managed to build them and take them into the Royal Navy, where they still had years of service left in them?

Sir John Parker: I take your point. What you are suggesting by the sale of one from the line is that if we have an important overseas prospect of selling a number of ships but they need to get them in a hurry, then if the RN were to cough one up to actually help secure the business, why not?

- Q38 **Chair:** So we would just build a new one for ourselves?

Sir John Parker: Correct. Because we would also have the opportunity to build some others for them, or provide them with support to help them build their own. I think we have to be very flexible in the export market, but you need to have the right product and it needs to be competitive, otherwise don't enter it.

- Q39 **Jack Lopresti:** Sir John, has BAE's position as the sole producer of UK warships inhibited efficiency and innovation in our military shipbuilding?

Sir John Parker: First, may I say that I read in the press an inherent misinterpretation of my report with regard to BAE? I even got into *Private Eye*, apparently, for the first time in my life and I hope it is the last. It was alleged that I was biased against BAE because I had never worked for it. It cited Harland and Wolff, Babcock and British Shipbuilders et cetera: they actually listed some of the companies I had worked in, including BVT, which was my last chairmanship in shipbuilding, a joint venture between British Aerospace and Vosper. May I just clarify that I have the highest regard for BAE and its people, from the shop floor to the top of the company and its chairman, Sir Roger Carr? It is a national champion and I admire the company for its technical capability, but that does not mean that it cannot improve. It should improve.

What my report pointed out is that I had no hesitation in recommending that it build the Type 26, it has had to rebuild its labour up from a much lower base now and it has been quite a challenge, but I described it having an eight-ship run as "double first prize". The value of that order, if I were a shipbuilder I would die for it. But having got that order there is then a great opportunity, with that series build, as I touched on earlier, to develop a global competitiveness plan where digital engineering is at the heart of industrialising the operation and creating greater efficiency. I would like to see, at the end of that eight-year run, BAE on the Clyde



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emerge as the world's leading sophisticated warship builder. Other facilities can produce lower-tech ships, because the Type 26 or a replacement of the Type 45 is very high technology and, in some cases, high risk stuff.

Q40 Jack Lopresti: In your view, how is BAE driving innovation within its supply chain?

Sir John Parker: I think that they have got a lot of technical capability. Their technical director or former technical director of submarines, John Hudson, gave evidence to this Committee back in November. It is quite clear that they have the technical capability, but we should never stand still. What I believe is critical now is that we seize this opportunity to massively increase the drive for industrial efficiency in the company, and that requires a lot of innovative thinking. That is why we need to get the yards sharing industrial ideas and going out and seeing what world-class practice looks like.

I deliberately put in the report the timescale to build \$1-billion cruise ships. They are using exactly the same approach, by the way. They are building all the engine rooms in east Germany—a series of ships, one after another. They are building the bows and sterns in Poland. They are building blocks in Finland and bringing it all together in Germany. That is all through the power of digital engineering defining things down to the last nut and bolt.

Q41 Jack Lopresti: Does that increase capacity or competition?

Sir John Parker: The first thing it does for the individual yard is massively reduce the cycle time of build. You want to reduce the cycle time of build to occupy the lowest period of the higher overhead facility, which is the integrator. By distributing lower overhead facilities, you can create a more competitive outturn.

Q42 Phil Wilson: BAE Systems has invested large sums of money in modernising Scotstoun yard in Scotland and in design and virtual engineering skills. How would you ensure that such investment was replicated by other yards?

Sir John Parker: As I said earlier, BAE will need to utilise that investment to the full with the Type 26 order book. As I said in the report, it is a unique opportunity for a collective drive to create world-class competitiveness. The other yards will not need the same design overhead as BAE, because BAE among others can compete for the design for the Type 31. Whether they are a lead yard or a consortium, they will also have the opportunity to compete. Their technology and so on can assist the industry through that process.

Q43 Phil Wilson: Dr Peter Roberts from RUSI has written: "Ending BAE's monopoly might seem a lovely idea for industry but very few companies are willing to take on as difficult a customer as the Ministry of Defence, which changes its mind all the time as warfare changes." How can you see other shipyards adapting to that and taking it into consideration?



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Sir John Parker: You are not asking the individual yards to conduct the orchestra on design; you are asking the lead yard or the consortium, which could involve BAE, to have that interface with the MoD. Babcock or BAE, which are the two big beasts in the country, have a lot of experience in dealing with the MD every day of the week. I would expect that level of capability to be the interface with the MoD.

- Q44 **Phil Wilson:** Harriett Baldwin, the defence procurement Minister, recently said that it is for "industry to consider the optimum locations to base their shipbuilding work". As a major client, should the MoD have an input in such decisions?

Sir John Parker: If you have a lead yard or a consortium building in a virtual shipbuilding way, they will have to compete to the satisfaction of the MoD, because these will not be handouts; the yards will have to compete. I come back to what I said earlier: competitiveness is the real bulwark against securing employment over the long term.

The lead yards will have to compete these blocks with the individual list of yards. If I am sitting in Ferguson's on the Clyde, for example, or at Cammell Laird, I will get an inquiry from the lead yard to build five blocks of block A or block C, or whatever it might be, for Type 23, and I will have to submit my price and timescale for delivery. That will need to include certain things. The yard will need to consider what tooling and equipment it needs to drive productivity down through that series of blocks.

- Q45 **Phil Wilson:** What role do you think the MoD would play in that? Any role?

Sir John Parker: The MoD would have to be satisfied that a competitive process took place. It would not be an automatic handout. If I were Babcock or BAE and conducting this orchestra, I certainly would be keeping my customer fully informed. In any event, they would be fully informed through, as I have recommended, a joint project management team. We have not touched on that, Chairman.

Post-contracting, I have recommended there should be a delivery board with an independent chairman, as they now have on the carrier, for each major programme. The project management team should be joint between MoD key people and yard key people. The answer to your question is that there would be daily interface between the two within these project management teams.

- Q46 **Phil Wilson:** Finally, who should fund the necessary investment required for other shipyards to compete and build Royal Navy ships?

Sir John Parker: I would hope and expect that the local enterprise development in all the areas that we have mentioned, from Scotland to Merseyside to Cornwall, if good cases for efficiency improvement were put forward, would look at whether there was some tooling and equipment that could be supported. I don't think we are talking about massive sums of money.

- Q47 **Ruth Smeeth:** Now we will move on to skills. You stress the importance



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of the workforce to build capacity in the industry. What are the risks to the workforce of any further delay to the construction of the Type 26?

Sir John Parker: Workforces are secured only by workload. I mentioned earlier that BAE obviously have had to reduce the employment in Clyde yards. The five OPVs have taken up quite a bit of slack but not all of it, so they have got to build back up again to the level of resource needed for the Type 26. If it is contracted this year, clearly it will be another year before that probably builds up to a significant level.

- Q48 **Ruth Smeeth:** I have huge concerns, because we don't have a steady drumbeat of orders for shipbuilding, that we could see exactly the same happen as we saw at Barrow, in terms of retention of skills. What do you think the impact on the Clyde could be if they are dependent only on the Type 31 being built there, especially given that we have no money yet allocated for the Type 31? This is all wishful thinking at the moment.

Sir John Parker: I hope it is not all wishful thinking. We have been through the whole story here this morning that the Type 26 alone does not address the decline in the frigate fleet, and therefore you need to have a new general purpose frigate to take that slack up and get back up to 19 ships. The SDR also pointed out that it wasn't to stop there—we were looking for further expansion.

Night follows day here, and getting the Type 26—the most valuable contract going this decade—placed is the first important thing. That needs to be in place. The 31 will not take up the slack or, obviously, create work in the yards for some two to three years, because you have all the lead time of design first—probably two and a half years or thereabouts—before you can start contracting and cutting plates. But if I understand the process on the 26, the hope is that you will be cutting steel this year.

- Q49 **Ruth Smeeth:** One of my concerns is that we talk a great deal about the direct impact on the shipyards but a great number of the skills that generate our shipbuilding capacity are outside the shipyards, including in constituencies such as mine in Stoke-on-Trent. What do you think the Government should be doing to retain the skills and experience to ensure that we still have a domestic capability?

Sir John Parker: I come back to workload, really, especially in the supply chain. The Type 26 key contracts will now already have been defined for subcontracting, but the Type 31e is a blank page, so UK suppliers need to be lined up to compete for that design. They could have years of work based on that if we succeed in the export market as well as satisfying the fleet numbers in the UK.

- Q50 **Mrs Moon:** An increasing worry of mine is that the new apprenticeships are not rigorous enough in terms of the skills being passed on. The whole idea of indenture and working alongside a master craftsman—we are not getting driven into apprentices the depth of knowledge, skills and understanding that is needed. Is this a concern that you have in relation to our future shipbuilding capacity?



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Sir John Parker: I highlighted the great opportunity for really mature apprenticeship schemes in shipbuilding. We have an ageing workforce. If the 26 and 31 could get going together, we would have a very significant workload in our yards and also in different regions through the supply chain.

We often forget that shipbuilding is like a large traction engine pulling behind it a huge supply chain, which has a great summation of skills throughout it. In my view, you clearly have to grab that opportunity to ensure that the apprenticeship model is a mature one from which people will emerge with the right skill sets. It is an issue for the yards and their trade unions to ensure that we create the very flexible skills that are required now but also for the future.

As we move to a more industrialised approach to shipbuilding, we will be driven by modern digital engineering, like Jaguar Land Rover, Meyer Werft in Germany and so on have been. We will then clearly have a great opportunity to pull in graduate level, technician level and apprenticeships, and to have apprenticeships designed in such a way that you can go from the shop floor to the boardroom.

To me, that is the right form of apprenticeship—with massive flexibility—so kids that come in and show real promise, who maybe could not afford to go to university, still get the opportunity to go with a progressive employer. I am certain this industry can come up with those. There are already some very good models around. I am optimistic.

Q51 **Chair:** We are coming to a close. We have just a few questions about other ships. This is naturally concentrated on frigates: what other ships do you see coming up on the horizon that your new model would bring benefits towards? In the report you mentioned solid-state supply ships.

Sir John Parker: In the report we have encouraged that yards should undoubtedly aggressively tackle support ships for the carrier. With the pound where it is now, our overseas experience with the Royal Fleet Auxiliary and so on, can't be all that attractive. From what I have learned, I don't think overseas contracting through that process has necessarily been a massive success—let me just put it like that.

I believe that it is up to the home market, and us as an industry—sorry, I am using “us”; I am no longer in the industry, but if I were—to become as competitive in design and industrialised productivity as possible. The industry should be tackling every ship in either the Royal Fleet Auxiliary or the support fleet.

I would see the support ships as a possibility and other ships coming in the future. We also pointed out in the report that, on some occasions, we should look at the conversion of commercial ships for support shipping to reduce budgets overall. In a way, this is what the longer-term planning should be looking at as well. For example, is there a case for mine clearance? Can we use different platforms and entirely different



technology today from that available to us when we designed the previous generation?

- Q52 **Chair:** Let's go back to the question of the carriers. I had the experience of being in Parliament from 1997—the year before the carriers were first put forward in the then Labour Government's strategic defence review—right through to the many delays in placing the order, and the rising price from, if I remember correctly, £2.9 billion to nearly £4 billion over the time.

If your whole management model had been in place, how would that have affected the story of the carriers? The carriers were the largest vessels ever built for the Royal Navy: presumably, if your management model would have worked with that, it would work with anything. Let us just take a flight of fancy. If you would, will you take us through how the carrier story would have been different if your methodology had been applied? For a start, they would have had to put down a ring-fenced budget.

Sir John Parker: I was going to start with that point but thank you, Chairman, for getting ahead of me. I think an assured budget would certainly have ensured that some of the cost that accumulated would not have materialised.

Secondly, I suggest that rigour should apply in the contracting board model of a joint integrated team, with technical challenge from the outside. I have recommended independent technical challenge on, for example, the extent of naval shipbuilding standards and not reducing the capability of the ship. There are standards around it. They have been there for years, but do not necessarily add real value to its fighting capability. You could save quite a bit of money.

We have suggested, as part of the innovation centre, that you have a rigorous review of all naval shipbuilding standards, but, more importantly, that we cost the ones that we believe should be there as options so that those who are specifying understand the commitment they are making to the project in terms of adding money or adding cost. I believe that that would have saved probably quite a bit of money on the carriers.

On change, I am not privy to the build process. I did the review originally for the Navy on whether the carrier was ready for contracting or not. We made a series of recommendations about what should be done and needed to be done before you did actually contract.

I think the project overall has been quite a success, if you remove these additives to the cost that are outwith the normal industrial process, because I think sometimes industry carries the can for a lot of things that have happened up the line. Were I to examine it in a clinical way, I am sure I would find a lot of things that have happened that should not have happened with regard to change, which have all contributed to costs.

When I look at these projects today, I think back to those early days when people said, "There is no way Britain has got the capability to build



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anything of this scale today.” Well, the answer is that it has been done and we can take some pride in that. But if we were managing it in a more rigid way upfront, in the way we describe now, you could save quite a bit of money.

That is another point I would like to leave with you and the Committee. The governance that we are proposing here will save the MoD and the country a lot of money over time. If we can build the ships on time with grip on their specification and cost and we avoid retaining old ships for 30-odd years when we should have sold them at 20-odd maximum, we will undoubtedly accumulate significant savings over time.

Q53 Chair: Finally, are you satisfied that the permanent secretary at the MoD, the Secretary of State for Defence, the Minister for Defence Procurement, the Treasury, the First Sea Lord and his staff and the captains of industry have all fully gripped and understood what you propose?

Sir John Parker: Well, that is quite a task you are giving me, at the end of a gruelling session. First, I have a lot of confidence in the Secretary of State. I have had absolute support throughout this process. We have been in contact several times, to have updates. Never once did he steer me, and never once did he lean on me; I hope my reputation is such that people would not lean on me anyway.

We had Treasury involved in a steering board, as well as No. 10, the high-ranking naval officers and headquarter finance and so on. I have also had discussions with the new permanent secretary, Stephen Lovegrove. He is, I think, quite taken by the governance model we are suggesting here. He is very supportive.

Obviously, I cannot speak for all of the industry in any way, but I believe that the industrialists I have talked to see a lot of logic in what I have proposed. Of course, it may not suit everybody, but I believe that the vast majority who have talked to me are highly supportive and realise that we had to navigate a challenging task here: to ensure that Type 31 can become a reality only if there is an industrial strategy around it that allows it to be built with speed and if we get on with it.

Chair: Sir John, thank you. That was a tour de force. Thank you for the work you have been doing and for appearing before the Committee for five minutes short of two hours. I hope we have set a good example to industry by finishing slightly ahead of schedule.