

Defence Committee

Commission de la Défense Nationale et des Forces Armées

Oral evidence: Future Anti-ship Missile System - Joint Inquiry, HC 1071

Wednesday 11 Jul 2018

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Members present: Dr Julian Lewis (Chair); Jean-Pierre Cubertafof; Jean-Jacques Ferrara; Mr Mark Francois; Jean-Charles Larssonneur; Mrs Madeleine Moon; Natalia Pouzyreff; Gavin Robinson; Ruth Smeeth; John Spellar; Stéphane Trompille; and Charles de La Verpillière.

Questions 1-54

Witnesses

I: Guto Bebb, Minister for Defence Procurement; Sir Simon Bollom, Chief Executive Officer for Defence Equipment and Support, Ministry of Defence; and Lieutenant General Sir Mark Poffley, Deputy Chief of Defence Staff (Military Capability).

Examination of witnesses

Witnesses: Guto Bebb, Sir Simon Bollom and Lieutenant General Sir Mark Poffley.

Q1 Chair: Good afternoon and welcome to today's informal joint session between the House of Commons Defence Committee and the Assemblée nationale Standing Committee on National Defence and the Armed Forces. This is part of our joint inquiry into anti-ship missiles. I believe it is the first time that a House of Commons Select Committee has taken evidence jointly with a Committee from a non-UK Parliament. I welcome our colleagues from the Assemblée nationale and our witnesses from the Ministry of Defence.

Before we begin, I would like to go through some quick housekeeping. First, I remind everyone that this is an informal meeting and, as such, the live proceedings of today's meeting are not covered by parliamentary privilege. However, we will produce a transcript of today's meeting that, once approved formally by the Committee, will be privileged. Secondly, this is a bilingual session and simultaneous translation is being provided. Thirdly, we are going to alternate between UK and French questions, although of course members of either Committee can intervene with additional questions during the session.

We must have an eye to the clock, because there is a shipbuilding debate later this afternoon that our Minister needs to attend, and many of us will want to participate in it as well. That debate will probably come after a vote at 4 o'clock or a little after, so we need to keep an eye on how fast we are going, so as to not squeeze out those colleagues who have not had a chance to ask a question or make an intervention. I ask colleagues to try to be concise in their questioning.

I would like to ask each of the three members of the panel to briefly introduce themselves. Lieutenant General Poffley, as it is your first appearance since you received your knighthood in the Queen's birthday honours, we would like to congratulate you on that. Please start by introducing yourself.

Lt General Sir Mark Poffley: Thank you very much, Chair. My name is General Mark Poffley and I am the senior officer responsible for delivering advice on the balance of investment for our military capability, so I sit somewhere between the DGA and the French MoD.

Guto Bebb: I am Guto Bebb, Minister for Defence Procurement.

Sir Simon Bollom: Good afternoon, Chair and Committee. I am Simon Bollom. I am the chief executive of Defence Equipment and Support, which is responsible for UK procurement and acquisition of equipment and support.

Chair: For the benefit of anyone who does not speak French, channel 1 allows you to hear in English everything that is said, and channel 2 gives

you the other option. John Spellar will start us off.

Q2 John Spellar: Minister, may I start this really quite historic hearing by asking how important you would say the UK-France defence relationship is?

Guto Bebb: From our perspective, obviously, the relationship with the French MoD and the French military has been very important for decades. I think it is fair to say that France and the United Kingdom are the two powers in Europe capable of having a global reach.

The extent of our co-operation across the board has deepened significantly over recent years. We have seen joint operations, British warships protect the Charles de Gaulle, French warships protect Albion on missions, and of course there was the recent deployment in the Sahel. There is a strong long-term relationship, which certainly is important to us, and I think that will be the case moving forward as well.

Q3 John Spellar: That is the importance on the military side, which is often not so well understood. What benefits or consequences would you say that co-operation, and bilateral co-operation on equipment and capabilities, has produced for our industrial bases in the UK and France? Does it mean that our platforms are more interoperable?

Guto Bebb: We are doing such an amount of work on missile systems because of the success of MBDA, which is a joint UK-French enterprise but involves other partner nations, too. Its success is highlighted by platforms such as ASRAAM, SPEAR Cap 3, Storm Shadow and so forth, all technologically advanced systems that have been very successfully deployed and have also been successful in export markets.¹

In terms of industrial capability, MBDA employs about 10,000 people in total, and it could be argued that a significant element of its success on a worldwide basis has been built on the relationships that we have on an MoD-to-MoD basis.

Further, there has been a significant amount of co-operation on the nuclear programme, which can be highlighted by some of the research capabilities we are developing together, Teutates being one example. Again, that is an opportunity to see where we can work together to provide research capability more cost-effectively than if we did so on a nation-by-nation basis. That is a long-standing collaboration, which obviously builds on the military-to-military relationships we have but also provides a significant industrial benefit, competitiveness and technological solutions to some of the needs that we have in our two Armed Forces.

Lt General Sir Mark Poffley: I would endorse every word of that. I have noticed a considerable change in our relationship even in the course of the last five years. It has become increasingly close, in terms of both understanding threat profiles and then being able to translate that back into military capability. Certainly, I have seen with both the EMA and the

¹ SPEAR Cap 3 is in its Demonstration & Manufacture (D&M) at this time.



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DGA a very close relationship with us here in the UK MoD, which is encouraging. We have increasingly been sharing data. Indeed, that is an active line of our inquiry going forward—sharing even the most sensitive of information.

- Q4 **Chair:** Have any of you benefited in any way from this closer co-operation with France in terms of the fact that, although France spends a lower proportion of GDP on defence than we do, it seems to get rather more in equipment out of its defence budget than we get out of ours? Are there any helpful lessons we have been able to learn from our French colleagues about how to get the maximum output of equipment in return for the money we invest?

Guto Bebb: That is an interesting question. As part of our relationship, we have regular bilateral meetings where lessons learned are shared between MoD and French officials. Whether we have seen any clear signs of advantage being taken from those lessons learned is still to be considered in the fullness of time. But there is no doubt to my view that the extent of the information sharing is significant.

For example, one of the things that I have seen as a significant pointer to the depth of the relationship is the way in which the modernisation and transformation profile and programme at the DE&S has been taken seriously and looked at very closely by our French counterparts.

Sometimes there are lessons from France that we can certainly learn from. You highlighted a significant issue that we should take very seriously. In the same way, the transformation programmes that we have been undertaking within elements of our procurement processes are also being looked at by our French colleagues.

- Q5 **Chair:** Sir Simon, would people in your organisation be actively looking to the French to see whether we can gain from their very effective way of producing a great deal of equipment on a more limited defence budget?

Sir Simon Bollom: Yes, indeed. If you look back over recent history and programmes such as the ones we will discuss today on the missiles side—A400M and going as far back as the Jaguar aircraft—we have been traditional allies in terms of co-operation in procurement. One of the interesting things about going through these sorts of processes is to compare our processes. We work very closely with the DGA at every level. I think it is one of the closest co-operations that we have with our allies.

Chair: On that encouraging note, I turn to Natalia.

- Q6 **Natalia Pouzyreff (Translation):** Thank you. I want to turn to the co-operation at hand—the future of the anti-ship missile system. You say that the French and British forces share the position on threats and operational needs for 2030. Are French and British needs aligned? According to your evaluations of that threat, have you planned to budget for and finance the capacity you will need to respond to that threat?

Guto Bebb: I will have to respond in English, as regrettably I am not able to respond in French.



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On capabilities we are looking at, we have launched the concept phase for this programme. The concept phase offers real opportunities for us to learn and to benefit from each other, because we have a requirement in the United Kingdom to replace Harpoon and Storm Shadow, while, obviously, our French counterparts need to replace Exocet and SCALP. So we have similar requirements moving forward.

It has to be said that this is quite unique because I do not think we have seen the MoD in this country co-ordinate a process of research at such an early stage before. The fact that we are going in at concept stage and we are funding that concept stage for a three-year period means that the opportunity is there to ensure that we come up with responses to the needs we have in the United Kingdom and the needs of the French for their requirements.

We can co-ordinate that in a way that is coherent and that we genuinely hope will provide added value to both countries. But because it is a concept phase, we are not risking huge amounts of money at this point in time. If, at the end of the concept phase, we find ourselves in a situation where the analyses of the needs and solutions between the two countries are different, we will have the ability to separate at that point. Our own position is that the indications are that this programme is on time, on budget and is providing real value for both countries.

Lt General Sir Mark Poffley: To answer your threat question, from our point of view we share exactly the same ideas about the threat as far as we can. One needs to be careful because this particular series of programmes is looking at a threat profile from 2030 onwards, potentially as far as 2060. We are trying to make sure that in this concept phase we do not overprescribe and become guilty of delivering a platform that is out of date at the point at which you want to introduce it. The notion of things like open architecture becomes quite important. Your ability to add and subtract to that baseline is going to be an important dynamic.

To reassure both Committees, there is a very active engagement about the levels of threat and where we would see weapons of this type being used, and it is at the most sensitive levels. I don't think there is anything that is not shared between us.

Your second question referred to money. We have a programmed line over and above the concept phase, certainly here in the United Kingdom. Its attribution will obviously be dependent on where we get to at the back end of the concept phase in due course. We have made no judgments yet as to the scale and size of that attribution at this juncture.

Q7 **Mrs Moon:** Very soon we will be at the halfway stage of the concept phase. What progress has been made on that phase and is it still on track to conclude by 2020? Do you see that as feasible?

Lt General Sir Mark Poffley: First, very good progress has been made. We are due to conduct a further review at the back end of this year², and



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then we will have a more substantive key review in early '19, which will assess the judgments made to date. The phase to date has been essentially an evidence-gathering phase, and that is why I can give confidence to the previous question. It has looked at a number of technical investigations, but those have yet to conclude.

We will need to do more on that as we get to the latter part of the concept phase. It is in the process of gathering evidence from both the DE&S and the DGA about the industrial bases that would support such a procurement. The next phase is about how we now describe our arrangement in some form of memorandum of understanding, which might cover workshare and all of the technical procurement details in due course. So we are on schedule to deliver the results that we anticipated at the back end of next year.

Q8 Mrs Moon: So you are clearly monitoring. Are you monitoring in conjunction with your French counterparts?

Lt General Sir Mark Poffley: Absolutely. It is part of a completely collaborative programme.

Sir Simon Bollom: There is a joint piece of governance, so there are regular programme reviews and we share share their DGA/DE&S reviews with the capability sponsor. We are keeping a tight control over deliverables and the analysis process.

Q9 Mrs Moon: Minister, I feel you want to come in.

Guto Bebb: I was going to say that one of my first foreign visits was to do one of these regular catch-ups between the French officials and ourselves, so it is a regular event.

Q10 Mrs Moon: Thank you. At this stage, do you envisage that the requirements can be met by a single missile system with two variants of the same basic airframe, or are we going to have two distinct weapons? Is it one weapon/two variants or two distinct weapons? Where do you see us going? Have you any idea yet or is it too early to decide?

Guto Bebb: It would be fair to say that at this point in time we are into the first year of the concept phase, but it is too early to say whether a final decision is being made. The key thing is that both countries have a clear idea of what they need from this programme.

We are trying to ensure that we provide a response to the questions that we are asking, which will be coherent and providing the value for money that is increasingly important to both nations. Even as we see the defence budget in both France and the United Kingdom increasing, the demand for getting value for that investment is also increasingly important.

Q11 Mrs Moon: Which is going to be of more importance? Are we going to have a priority for the anti-ship capability or the DeepStrike missile? Which is the priority? Or are they of equal priority?

² This is the next 2-Star programme review in November 2018.



Sir Simon Bollom: At the moment, they are of equal priority. What we have got here is quite a broad capability set. In one, the target is a ship, and the other will be a long-range strike capability, probably against very protected targets. We might not have a single solution for that wide diversity of threats, to meet those different targets, but the other benefit of this programme is the modularity of the capability.

We might, for example, have two solutions here, and at the moment, we have—we've got SCALP/Storm Shadow versus Harpoon in the UK, and Exocet. But what we want to be able to do is to develop technology once and use it many times, so at this early-concept stage, it's a case of looking at which technologies we need to exploit and making them reusable.

- Q12 **Chair:** You have mentioned several different weapon systems. One weapon system that is quite widely deployed in the Royal Navy at the moment is the Tomahawk cruise missiles. Is it anticipated that the new joint system that you are trying to develop will take on some of the role that the Tomahawk takes on, and if so, what sort of gaps are we looking at between the loss of Harpoon and Tomahawk, for example, and the introduction of the new system, or will we be able to avoid gaps completely?

Lt General Sir Mark Poffley: Certainly we would anticipate the sorts of roles that Tomahawk is providing at the moment being catered for inside the requirement here.³ I think it's too early to say about gaps, because as we get further into the concept phase, particularly on the technical details, there will be some technologies that we think we may be able to introduce earlier.

Indeed, there may be options for us to take off existing weapon systems, to ameliorate any in-service or out-of-service dates. So at the moment, we are not in a position to say that we are going to treat any potential gaps—they are only potential gaps at the moment—with this programme. We are going to have a look at exactly what else is on the market and then attend to the problem as it arises.

- Q13 **Chair:** Are you looking at the developments that possible adversaries are making? We constantly hear about threats to the future carriers from Chinese anti-ship missiles, for example. Is that being fully taken into account in the design of what we are hoping to produce to cover what seems to be a very wide range of missile capabilities?

Lt General Sir Mark Poffley: Sure, but these weapons will not be configured, or at least we don't have an ambition for them, at this stage, to be in an anti-missile role. We quite clearly are looking at what is extant in terms of technology or missiles of this type today, including those of some of our potential adversaries, and those are being factored into the

³ The FC/ASW Concept Phase is not directly considering a UK sub-launched capability, although RN Tomahawk's current role is clearly similar to the surface launched land attack role being considered by FC/ASW.

assessments that we are making here about whether something is going to be an appropriate technology to take forward in the 2030 timeframe.

Chair: Anyone else? No? Okay, Charles.

- Q14 **Charles de La Verpillière (Translation):** Thank you, Chair. I have two questions, which are political and quite general questions. The first is about the budgets and the plans. The French Parliament has just adopted a military plan for 2019 to 2025, and I believe that the British Government and Parliament are also working on plans to the mid-term. Could you tell us what the first indications are, for now, in terms of mid-term budget planning? My second question is also general and political. Do you think that the current Brexit context may have an influence on a bilateral programme such as the one we are talking about today?

Guto Bebb: Thank you very much for those questions. May I say, from our perspective, that we welcome the fact that the French Government have announced a significant increase in defence funding? I am sure that will be welcomed at the NATO conference as well.

The context of the UK defence budget is that we currently have a budget of around £36.5 billion, which as Committee members from the United Kingdom are aware, is increasing by 0.5% above inflation every year. We have an equipment budget that is worth approximately £180 billion. Those are the top-line figures.

However, I think the key thing is that, in the period from 2015 until 2018, it has become very apparent that some of the challenges and threats that we face have changed, which is why the Secretary of State for Defence announced his Modernising Defence programme back in early February or late January.

The aim of the Modernising Defence programme is not to say that a specific percentage of GDP should be spent on Defence—there are obviously Members who have strong views as to how much we should spend on Defence—but to acknowledge the extent of the budget that we provide for defence and to say that the Government have a responsibility to ensure that we identify the threats that we face and the capabilities that we need to respond to those threats. I think the Secretary of State said on Monday that the top-line findings on the Modernising Defence programme should be available before recess.

The process and the discussion within Government on the Modernising Defence programme will continue, and I suspect that it will not be before the autumn until we see the final results of the programme in detail. It is important to stress that the MDP is happening within the context of what is both a protected and an expanding defence budget, in terms of the money made available. However, there is no doubt that the demands made on our defence budget are also significant, as a result of the changing threat environments.

In terms of Brexit, you make an incredibly important point about the importance of bilateral relationships moving forward. There is no doubt



that we want to be involved in some European projects and initiatives after Brexit. However, we also feel that some of the strong relationships we have with European partners are obviously based on our membership of NATO and on bilateral relationships that have often paid dividends. For example, we are very proud that the Eurofighter Typhoon is acknowledged as a very capable platform. That was developed in association, on a bilateral basis, with other partners in Europe. In the same way, the A400M, which Sir Simon touched on, is also an incredibly capable platform, and any RAF pilot will be very complimentary about its capabilities. Again, that was created on a bilateral basis with partners.

Our view is that there initiatives within Europe—the European Defence Fund is an example—that the United Kingdom would certainly prefer to be involved in moving forward. Some of the definitions made by the Commission of what would be described as a third-country participation agreement are currently not acceptable to the United Kingdom.

However, owing to the openness of the United Kingdom's defence markets and our contribution to both NATO and the defence of Europe, we feel that there are significant opportunities for us to carry on having a significant relationship with our European partners, both in co-operating on some of these EU projects moving forward and strongly developing our bilateral relationships, which we have and which we take very seriously and respect immensely.

Chair: Does anyone have anything to add?

Charles de La Verpillière (Translation): No. Just to say that we wish for the same—to follow up on these European and bilateral projects. We would like to carry on.

Q15 **Ruth Smeeth:** Good afternoon, gentlemen. Following on from Madeleine's questions earlier, will British and French operational requirements be sufficiently aligned to allow common development and procurement?

Guto Bebb: You are absolutely right to ask that question. That is one of the reasons why we are doing a concept phase. I think that we have similar requirements moving forward, but the whole point of doing this in a staged manner, where we have an initial three-year concept phase, is to make sure that we come up with a response to the similar challenges that we face.

The key thing we are trying to do is to make sure that, as we go through the concept phase, we look at issues that will be very important to any platform developed by the United Kingdom or France if we decide to go our separate ways. I do not think that is where we will go, but, for example, we will look at the ability to have a missile which can track sufficiently and can defend itself, and we will look at the accuracy of a missile and so forth, because those will be very similar and important to both a French and a UK solution.

The aim of the concept phase is to put as much research and effort as we can into what will be of common use to both France and the United



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Kingdom. We will preferably end up with a common solution, but I stress again—I apologise for sounding like a stuck record—that we are in the first year of a concept phase that will last for three years. I still think it is too early to say whether we will end up with a single platform or more than one.

- Q16 **Ruth Smeeth:** Picking up on what you just said, Minister, will the concept phase use MBDA's previous work on Perseus?

Guto Bebb: MBDA is certainly involved in the concept phase from the outset, yes.

Sir Simon Bollom: When kicking off on collaborative programmes such as this, ideally, at the end of it, both parties will have exactly the same view on the threat and the solution. The reality is that 100% overlap is unlikely. Of course, what you get through a collaboration is a sharing of the up-front costs. We have a very mature relationship with the French, developed over the years, and it is about compromise.

- Q17 **Ruth Smeeth:** So we may end up with a variant of a common programme.

Sir Simon Bollom: We might do, but both parties would want to be as common as possible, recognising the benefit in one-off cost of sharing as much as we can.

- Q18 **Ruth Smeeth:** What are the respective range requirements for DeepStrike and anti-ship?

Lt General Sir Mark Poffley: We have got indicative ideas as to ranges, and obviously they need to replicate the weapons systems in play currently with both us and the French. It would be an interesting commentary to suggest that I am going to pick a particular range, but at their longest ranges, we are talking about thousands of kilometres, and at their shortest, we are talking in tens of kilometres. It needs to sit somewhere in between there.

There will be some judgments to be taken about what the effect is, because this is about the type of flight and the weight characteristics of the weapon, which will play fundamentally into those range options. So we have not set a precise range; we have given them a band, and it falls into the broad category I have given you there.

- Q19 **Ruth Smeeth:** In terms of the requirements you have put forward, is one for an air-launched standoff anti-ship missile, or are we also looking at long-range surface-launched missiles receiving targeting information from airborne platforms like the F-35?

Lt General Sir Mark Poffley: From a UK point of view, we are looking at a precision strike weapon from our combat aircraft and a surface-to-surface, and indeed a surface to precision in depth on the land, weapon from the maritime component.

- Q20 **Ruth Smeeth:** Are we also looking at a submarine variant?



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Lt General Sir Mark Poffley: Not precisely in this programme. There will undoubtedly be potentially some read-across of some of the work done in this programme to other missile systems.

- Q21 **Chair:** It does seem to look, though, as if we are talking about a single concept which will have to cover everything from relatively short, to medium range, to very deep strike indeed. Doesn't that naturally point in the direction of having two separate systems? Otherwise, one will waste an awful lot of long-range capacity using something on a short-to-medium-range mission.

Lt General Sir Mark Poffley: I think it may well do. That is one of the things that, as we get to the end of the concept phase, certainly by 2020, we would need to make a judgment about. But it is quite clear that we need to service two requirements from both national perspectives. That is where the choice comes, and that is what the conclusions of the concept phase will draw out.

Sir Simon Bollom: I might add as well that if one of them is an air-launched requirement and the other is a ship-launched requirement, there will be specific things that that capability will have to have for both environments. So inevitably you will have two variants, even if we can get it down to a single missile.

- Q22 **Jean-Pierre Cubertafon (Translation):** Minister, I have an important question that encapsulates the generation of anti-ship missiles. Since the ratification of the Lancaster House treaties in 2010, the common development project for matériel has represented an important advance in Franco-British co-operation. It is the first time that our two nations have agreed to co-operate in weapons development and to undertake missions together in a single programme.

However, with Brexit being negotiated we need to consolidate a new legal framework to allow for future programmes and our relationship to continue. Is a new intergovernmental agreement possible? Can the Lancaster House treaties be the starting point for that? Are you afraid that some post-Brexit agreement may not allow the Franco-British military project to continue? Could the project, wanted by both, be torpedoed by that, for example?

Guto Bebb: From our perspective, the agreement in 2010 is considered to be an important agreement. We were very pleased with the outcome of the Sandhurst summit in January 2018, where there was a significant amount of agreement once again between France and the United Kingdom. For example, the willingness of the United Kingdom to deploy troops to the Sahel—helicopter support to the Sahel—was as a result of the Sandhurst summit.

Obviously, we were very pleased that France agreed to rejoin the UK-led NATO enhanced forward presence in Estonia. We had a number of other agreements and issues that were agreed at Sandhurst. That was in January 2018, so I would argue that Brexit is a challenge that we have to



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be aware of moving forward, but that the bilateral relationship that we have had with France from a military perspective is very long standing.

The key issue for us is to ensure that there is value delivered to both France and the United Kingdom from a continued bilateral relationship moving forward. I have already touched on the fact that there are EU initiatives in the sphere of defence, not least in terms of research, which we think the United Kingdom should be involved with.

I refer you to the Prime Minister's speech in Munich when she highlighted what she wanted to see in terms of our future defence and security co-operation with the European Union. That was a very constructive speech, highlighting the role that we perceived that the United Kingdom could still have in terms of the security and defence of Europe.

I go back to the fact that in January we did have a summit that was successful. We did have a summit that agreed a number of new proposals moving forward. From a personal point of view, I was also pleased to be in Malaysia during the Easter period, when a crew of Royal Navy personnel flew into the capital of Malaysia in a helicopter that had been deployed from a French warship, which highlights the fact that the co-operation that we have is ongoing and deep, and there is no reason that should not continue, despite the fact that the United Kingdom will be leaving the European Union next March.

Q23 Gavin Robinson: Good afternoon. I speak English, Minister. It may be a Northern Ireland dialect, but it is still English. I want to explore the exportability of whatever emerges from this conceptual case. Is it an important part? Is it something you are striving towards? Are you looking and assessing what market appetite or demand is? Ultimately, will that be an important factor in deciding what emerges from this process? Or is it a beneficial by-product, if you can achieve it?

Guto Bebb: I will respond and then Sir Simon and Mark can respond as well. I think the export issue is important. One of the successes of MBDA has been the capability in terms of export. Of course, we have other companies based in the United Kingdom that have also been very successful with the export of missiles to parts of the world. You would no doubt be aware of some of those companies.

In terms of export, obviously we are working within international treaty restrictions, but, from our perspective, as the work is being undertaken on this capability phase, we are also looking very clearly at how exports should be a part of that component, because the success of the development of our joint industrial base on this issue is dependent. It is not just ensuring that we have the right capability for both our militaries.

On the prosperity agenda, we had the Dunne review released on Monday, I believe. If you read the Dunne review, very clearly the contribution made to UK prosperity by MoD spend, not least by our ability to export some of our platforms, is crucial. From our perspective, we are certainly looking at

the export potential of any platform that is developed as a result of the work that we are doing on the joint conception phase.

Lt General Sir Mark Poffley: I would add a couple of comments to that, if I may. The first is that, from my perspective, we have to retain sovereign choice going forward. That, by extension, means that you need a vibrant industrial base from which to make those choices. That is the first point.

The second one is that, with weapons systems such as this, we would want to be interoperable with many nations that are close and dear to us. Therefore, that tends towards our wanting to ensure that there is certainly an export market, and that that can accommodate our ambitions for future alliances going forward, so there is a double incentive there for us to make sure we factor in very early the notion that this must contribute to the prosperity of both the United Kingdom and France.

- Q24 **Gavin Robinson:** Thank you. Minister, you referred to MBDA and other companies. Have you explored the issues associated with MBDA being involved in the conceptual phase and any implications that that will have for a tendering process? Do you envisage there being an open competition at the conclusion of the conceptual process?

Guto Bebb: That is a fair question. From our perspective, obviously we are working with MBDA on this issue, but we are also well aware of the capacity that we have, and the capacity that we have with companies that are also based in France, in terms of missile capability. The United Kingdom's default position is always to look at competition as the best option in ensuring value for money. As we move forward from the concept phase, we will certainly take into account the importance of ensuring that we retain the ability to procure in a manner that ensures value for money.

- Q25 **Gavin Robinson:** And do you foresee no issues at this stage with the early inclusion of MBDA?

Sir Simon Bollom: Absolutely. In fact, that is very much part of the strategy. MBDA will be the prime contractor in this case through the concept phase, but we want to get as many ideas in from SMEs and other suppliers as possible. MBDA does not have a monopoly on all the technologies we would want to embody, so part of the concept phase will be about examining what technologies are out there and which companies hold them, and working up a procurement strategy, if we were to go forward with a major acquisition.

- Q26 **Jean-Charles Larsonneur (Translation):** My question is about the capacity stoppage for the anti-ship system. Is it possible for the lifetime of the Harpoon missiles to go beyond 2020? Do you foresee a rupture in the anti-ship capacity? Can you envisage an alternative solution—for example, a step-by-step purchase?

Guto Bebb: That is one of our concerns moving forward. I will touch on it quickly, and I am sure I will be supported. Obviously, the Harpoon is currently in service until 2023, which leaves a capability gap. The key



thing from our perspective is that we are looking at the possibility of extending Harpoon, but that looks very challenging. We are also looking at the wider market and at other ways in which we can ensure that co-operation with other nations will deal with the issue in question.

Lt General Sir Mark Poffley: There are a number of weapons systems in play that are already in service, both here in Europe and in the United States. We are looking at those things at the moment. There is another group of weapons that are entering service. There is some more work to do to assess their applicability to fill the gap that we envisage, if we are to stick to the timetable for the Harpoon weapon in its current form. There is a bit more work to be done. We have not made a decision at this stage about how we are going to address that conundrum, but we obviously need to do so in a relatively short period.

Q27 Jean-Charles Larssonneur (Translation): In the concept phase, are you considering the issue of re-exportation?

Guto Bebb: That is part of the concept phase. This is not dissimilar to the answer I gave to Mr Robinson. We are certainly of the view that the export capability of any platform developed is an important consideration, in terms of the work we do at the concept phase. As we develop a solution, which will hopefully respond to the needs of the United Kingdom and France, from an industrial capability perspective and a sovereign capability perspective, we see the potential for exports as important.

As part of the concept phase, we are also looking at other options. The United Kingdom is looking at some off-the-shelf options as part of our concept phase, because we think it is important to look at the potential of off-the-shelf solutions in addition to any developments we manage that are bespoke to the needs of both militaries. We are trying to have a coherent overview of all the options open to us, and obviously the off-the-shelf analysis also contributes to our thinking on the replacement of Harpoon.

Q28 Mr Francois: Good afternoon, gentlemen. Minister, if I heard you right, you said that the current plan is to extend Harpoon out to 2023, but that to extend it further than that is pretty challenging. Can you give us a brief idea of why that is?

Guto Bebb: From a capability perspective I will defer to Sir Simon on that.

Sir Simon Bollom: The biggest challenges with this weapons system are the energetics, the propulsion system and the warhead. Here we come to difficult issues with finite lives and, clearly, its chemical compounds. Our assessment at this stage is that going beyond 2023 would be a challenge.

Lt General Sir Mark Poffley: Could I perhaps add one flavour to that? That is absolutely the case. There is a danger that you look at Harpoon and the issue of whether there is a gap or not, and imagine that it has to be filled by a Harpoon-type weapon, but none of these weapons sits in

isolation. They sit inside an ecosystem about which various compromises will undoubtedly be made.

When we look at the potential of a gap in the Harpoon and the surface-to-surface missile of the future, we are looking at it in the context of what other systems could come in and replicate the sorts of effect on targets that we might have hit with a Harpoon weapon. As I said earlier, that means that we have to look at other weapons systems that are currently available, or shortly about to enter service, as a matter of some urgency. Of course, we will then make that in compromise with other weapons systems that both ships and—dare I say it?—air platforms are likely to be able to bring to bear in the battle space that we are worrying about.

Q29 **Mr Francois:** Do you regard Sea Venom as one of those?

Lt General Sir Mark Poffley: I think Sea Venom is definitely one of those, as is Sea Skua⁴.

Q30 **Mr Francois:** As I understand it, Sea Venom is helicopter launched.

Lt General Sir Mark Poffley: Correct.

Q31 **Mr Francois:** So you are not going to have a surface-to-surface weapon as it were “directly based on the ship”?

Lt General Sir Mark Poffley: Correct.

Q32 **Mr Francois:** Unless you decide to go for an off-the-shelf procurement?

Lt General Sir Mark Poffley: Correct.

Q33 **Mr Francois:** Do you have an allocation in the equipment plan for an off-the-shelf procured surface-to-surface weapon?

Lt General Sir Mark Poffley: We have financial provision inside the equipment programme that is currently scored against that weapon system, and whatever we are going to do into the future. The size and shape of that is obviously under debate. We must, first, complete the assessment phase of the programmes we are talking about here, and also we must then look at what our requirements will be relative to the threat that we imagine in that 2023 period onwards.

Q34 **Mr Francois:** Okay, I have got that, Sir Mark, but to be clear, Sea Venom is obviously funded and is in the equipment programme. We know that, but, sorry, I want to press you a bit on that answer. You have some provision in the equipment right at the back end of the equipment plan for this new programme, but within the 10 hard years of the equipment plan, do you have a “replacement surface-to-surface missile” line item?

Lt General Sir Mark Poffley: We do not have a line item, but we are aware of that and it is in our minds when we look at the contingency inside the equipment programme.

⁴ Sea Skua was retired from service in Mar 17 coincident with the removal from service of the Lynx helicopter. Sea Skua is not compatible with the replacement Wildcat aircraft.



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Q35 **Mr Francois:** Okay, but at the moment that is not funded?

Lt General Sir Mark Poffley: Not at this stage. Not directly against a line that is configured—

Q36 **Mr Francois:** You understand why I was trying to get an answer—

Lt General Sir Mark Poffley: Indeed so.

Q37 **Mr Francois:** Which, thank you, you have given. Are you not therefore concerned that, other than Sea Venom, the Royal Navy will not have a surface-to-surface weapon, other than the 4.5 inch gun?

Lt General Sir Mark Poffley: I am indeed concerned, which is why we are looking at those alternatives, and why it is a high priority inside our programme considerations going forward.

Q38 **Mr Francois:** With respect—I am not giving away the Trident codes if I say this—the equipment programme is already heavily over-programmed at the moment. In the context of a heavily over-programmed equipment plan, are you saying that you realise there is a need, but there is no line item?

Lt General Sir Mark Poffley: At the moment we need to find provision for it, and we have yet to have established which part of the contingent pool that we have got inside the programme would be assigned to it, relative to other priorities that sit there, so there is a decision to be taken, yes.

Q39 **Mr Francois:** Do you think that decision might come as part of the Modernising Defence programme?

Lt General Sir Mark Poffley: It is part of our aspirations for the Modernising Defence programme.

Q40 **Mr Francois:** So it's an aspiration?

Lt General Sir Mark Poffley: We know we would like a surface-to-surface weapon. We have got some choices to make about where it might come from, and we know there is a lot of pressure on the rest of the budget. That is the debate that is under way at the moment with the Treasury.

Q41 **Mr Francois:** Last one. What are the off-the-shelf options that you are looking at, should you decide that you actually have to fund that within the programme?

Lt General Sir Mark Poffley: You have some choices at the moment. One is a Block II version of Harpoon, which quite clearly is there. There is the RBS15 system, which is produced by Saab. There is obviously an Exocet Block III version that you could use, or there is the Otomat, which I think is MBDA Italia. That is what is available now.

There are a series of systems currently entering service: the naval strike missile, which is essentially a Raytheon missile⁵ with some connections

⁵ NSM is a Kongsberg missile that is being integrated by Raytheon as the US Prime into



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into Kongsberg in Norway; the maritime strike Tomahawk, which we talked about earlier, with Raytheon; and the long-range anti-ship missile produced by Lockheed Martin.

- Q42 **Mr Francois:** In other words, if you decided that this was a sufficiently high priority to be funded, in the short term you have got plenty of choice.

Lt General Sir Mark Poffley: We have got routes. It is an issue of assigning money to those priorities.

- Q43 **Chair:** Before we leave the Harpoon completely, can you tell us a bit more about Block II? That is a newer version of Harpoon, by the sound of it. And am I right in thinking that there is a variant of Harpoon that will be on the maritime patrol aircraft? Is that correct?

Lt General Sir Mark Poffley: I'm not aware of the details behind Block II in terms of technical detail, so we would need to come back to you.⁶ I don't know whether Simon knows that.

Sir Simon Bollom: I'm afraid I don't.

Lt General Sir Mark Poffley: And I am not aware of whether there is the ability to load that on to a maritime patrol aircraft. I know the French have an ambition, inevitably, to do so with some of their weapons systems, and it is a natural thought that you would want a maritime patrol aircraft.

- Q44 **Chair:** Given that we appear to be in the business of trying to have the most versatile type of airframe and that we have brought back maritime patrol aircraft after a very unfortunate gap in that capability, it would seem that that would be an important part of the overall jigsaw picture.

Lt General Sir Mark Poffley: It is certainly something that will be considered very strongly.

- Q45 **Jean-Jacques Ferrara (Translation):** Two big concepts are currently envisaged for the anti-ship missile Sea Venom. The first is a furtive subsonic missile, and the second is a rapid supersonic missile. So it is a choice between stealth and velocity. Are we going to opt for one of these concepts, or do we envisage a new family of missiles with all the advantages of such a solution?

For example, we were going to be able to adjust the calendar for the different capacities and to benefit the several domains of expertise for the relevant countries. France, for example, is more expert at hypervelocity. I will not give you the full details about that. There is a mutual dependency between the two countries with the consequence that we would have the integration of the future missile among our platforms. I know that you are an aviation man, but is this missile to be integrated—the F-35 with the Typhoon—and what are the constraints at the moment with the F-35?

the USN Littoral Combat Ship.

⁶ P8 aircraft are being procured for the RAF, which will be equipped with Harpoon.



Sir Simon Bollom: Thank you. There are a lot of points to cover there. In terms of the concepts we are exploring, as my colleague, Sir Mark, has mentioned, there is a wide range of capabilities, long-range penetration, and the potential short-range engagement ship to ship. Supersonics is definitely something that we are looking at already.

We very much acknowledge that France has some excellent technologies in that area. That is one strength of the partnership. In terms of long-range strike, if we are talking about distances, which Sir Mark has mentioned, a very fast supersonic missile over those distances is possibly not a solution. There we would be looking at other alternative concepts. Low-observability and ability to penetrate enemy airspace without detection is another set of capability suites. Clearly the UK has a number of technologies that we could bring to bear there. For me, this underpins how good a collaboration this is, in terms of complimentary capabilities.

In terms of the F-35, we do plan to integrate the missile on to the F-35 in the future as SPEAR Cap 5. . That is a long way off. At the moment, I would call it a place-marker in the weapons integration plan. Certainly, the F-35 integration of this solution is something we desire to do.

- Q46 **Stéphane Trompille (Translation):** Regarding the main evolution that you are expecting at the moment on the future generations of missiles, what precisely are you expecting regarding the question that my colleague Jean-Jacques Ferrara asked? Have you already had a few points on which you would like to be asked, such as being furtive or hyper-speed? Also, for you, what would be the maximum range for the Royal Navy in the case of a rupture of capacity, to come back on what Jean-Charles Larssonneur has said? Also, do you think that, at the moment, regarding the range of missile that you currently have, this armament can answer your operational needs beyond 2030?

Lt General Sir Mark Poffley: I think Sir Simon has mentioned integration on to aircraft, so I won't dwell on that. We are actively having a conversation with our French colleagues about fifth and fourth-generation fighters. I hope that will give you some reassurance that that conversation is a rich one and progressing well. Regarding the ship variant, I mentioned earlier the sort of ranges we are talking about. It must meet pretty much where we are with Harpoon and Exocet Block II.

We would aspire for it to potentially go further. As I said earlier, we have not set a range for that at the moment. We have asked for the technical information to come back, to give us a feel for what is in the art of the possible, but we are talking about thousands of kilometres. From that point of view, it gives us choice downstream.

Again, there are a number of trade-offs to be made here. We have talked about hypersonics versus the ability to go a long way. Those are not necessarily compatible, given the technologies as they exist today. In the discussions we are having we will look to explore whether that will change.

- Q47 **Stéphane Trompille (Translation):** I also wanted to know what you need. In France, at the moment, we work a lot on artificial intelligence. I



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am not sure whether you have followed the latest work we have done, especially within the majority that we currently have. Is this a possible option? Could we start thinking about artificial intelligence for future missiles?

Lt General Sir Mark Poffley: It is absolutely the case that France is leading the UK in some sectors. The converse is also true: the UK is perhaps further ahead in others. The passage and the use of data from those weapon systems, both to the missile in flight and to be able to pre-programme them, will be a massively important part of the next generation of weapon systems.

It follows that our ability to handle data quickly, and artificial intelligence and automated data systems, will become quite important, not necessarily in the missiles themselves but in some of the feeder systems that will help to cue and target those weapons. As we have our broader capability dialogue with France, both those areas are strong elements of our discussions. A stream of work is going on inside those dialogues to see how we can collectively exploit not just the commercial market, but our technical experts in the military sector.

Guto Bebb: One of the strengths of the relationship that we have with France on this issue is that it is not confined. When we have regular meetings, we often take advantage of the opportunity to share experiences and to understand, for example, the types of issues that are being developed through the UK MoD's innovation fund.

I cannot stress enough how open a relationship we have when we are looking at those capabilities. Of course, France and the United Kingdom have their red lines, but in terms of trying to provide an enhanced capability as a result of the co-operation, it develops a degree of co-operation that I would argue is remarkable.

Chair: Everyone has been so remarkably self-disciplined that, almost uniquely, we have the opportunity for further bids. I will maximise our hospitality to our French friends in particular, because I would like to give them the best opportunity to interrogate our specialist panel. Natalia, would you like to ask a further question?

Q48 **Natalia Pouzyreff (Translation):** Thank you, Chair, and thank you, sirs. I wanted to mention the strategic autonomy question, which you mentioned already. When we consider strategic autonomy from one end to the other, we have intelligence, preparing for missions, and connectivity; we obviously have to master strike precision; and it also involves mastering key technologies and all the industrial skills and capacities that we need. Do you share the same vision as France on the fact that it is essential to master those capacities and skills from one end to the other to have full strategic autonomy?

Sir Simon Bollom: Madame, I absolutely accept the point on autonomy. Autonomous systems are proliferating everywhere. Fairly soon, we will have driverless cars on the road, I am sure. Autonomous air vehicles are very much in play as we speak, and we are looking at how much we can



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exploit those sorts of technologies—your colleagues have already mentioned artificial intelligence—in these systems.

We have to consider rules of engagement. Where we are launching lethal force, a high degree of assurance would clearly need to be placed on those autonomous capabilities. We are very much looking at what is out there in the industrial sector. The UK and France have some autonomous systems—ground, maritime and air—that we can exploit, but in taking those forward, we have to recognise where we might be in terms of the rules of engagement and the maturity of those technologies.

Lt General Sir Mark Poffley: Madame, I may have misunderstood your question, because I read it as being about the ability of a sovereign nation to operate independently with a range of capabilities. Therefore, I will follow that through with a comment about the Combined Joint Expeditionary Force. I think the CJEF is really testing our ability to engage alongside each other and still understand our own protocols and the levels of technology, particularly when we get into sharing very highly classified information.

We are learning some very good lessons from the CJEF initiative and I hope, as we get into the final stages of the exercise programme, to produce a full operating capability later next year, I think.

We will be in a position to be able to say precisely where we see those tensions. There are some difficulties at the moment between the UK and France because we classify information in a slightly different way. So we are having to work through those sorts of things, and that reads down into our ability to share technologies, because quite clearly we need to be able to pass data between our respective experts at an appropriate classification.

However, as I say, I think the CJEF initiative is the real litmus test of whether we are able to do that effectively, and I think the signs are encouraging. At least we now have an active conversation about the problems and our technical experts are now starting to get after those problems.

Guto Bebb: On the sovereign issue, one of the strengths of the programme is that both France and the United Kingdom were very open in terms of what our red lines were on sensitive information that we both have. But as the concept faces development, those red lines are kept in constant review, because as we develop the concept then the opportunity there to share information, if there is a clear potential advantage, is being kept under review, so that we can actually develop further.

So, yes, of course from a sovereign capability perspective, there are red lines that have been agreed at the outset, but they've been agreed on the basis of a willingness to talk and discuss whether those can be relaxed as we move forward, so that if we are looking at a capability emerging then we can slightly move the red lines, if necessary.

So it's a very flexible approach, which again shows the degree to which we are protecting sovereign capability while highlighting the degree to which we are willing to work together.

Chair: Are there any more bids from French colleagues for a further question?

Q49 **Charles de La Verpillière (Translation):** I think that Great Britain is a part of a dialogue on the future air combat system and I wanted to know the degree of work done by Great Britain in this dialogue. That is my first question. My second question is the following: what could be the integration of the missiles we are talking about in this future air combat system?

Guto Bebb: I will have to ask your forgiveness on this one, because we will be announcing our combat air strategy in the next few days and it would be wrong of me, as a junior Minister, to take the opportunity away from more senior Ministers to make the announcement in the appropriate circumstances.

I can assure you that we have been working on our combat air strategy for several months. We are confident that we will be putting together a programme that will be interesting, innovative and exciting, and as part of the work that we are doing we are undoubtedly looking at the way in which we can integrate a system rather than a platform. So, the idea from the combat air strategy is that we are looking at the development of a system rather than simply a platform.

I suspect that you will see more details of our views on this issue in the next few days, but I also suspect that my political life would be in danger if I shared too much at the moment.

Lt General Sir Mark Poffley: I would add only that when we were at Sandhurst, we recalibrated the future combat air system programme—the Anglo-French component of it—which I think is now reset, based on what I think industry, from both sides, was able to contribute to that.

That is, I think, going to show some really interesting ideas, particularly around a number of things: sensors, communication, navigation systems, software architecture, the vehicle systems themselves—what does that look like—and of course the propulsion systems that might contribute to it. So I think there is still a good stream of work, which will then be fed into the ideas going forward inside France, in collaboration with other European partners, but also into the context of the combat air strategy that we have been working through.

Sir Simon Bollom: Can I just follow up on your question on integration? For us and I am sure for the joint partnership, the issue of integration of weapons into an air platform in particular is very much one of the considerations in the concept phase. Integration of weapons on to platforms can be very expensive, and what we desire is to design a weapon that can be integrated easily through data changes from one

platform to another. So that will be very much a factor that we are looking at in this concept phase.

Dr Lewis: Did I see another bid from a French colleague?

- Q50 **Jean-Charles Larosneur (Translation):** Thank you, Chair. Within this concept phase how do you view the issue of access for A2/D2? We talk about the access denial link to some missiles—for the S-200, S-300 and S-400 for example. Is this an issue that you have integrated—and how?

Lt General Sir Mark Poffley: Certainly the concept phase will examine the contested environments that include anti-access area denial, as it is termed in the UK, capabilities; so it has to be able to operate in those sorts of environments going forward. They exist today. We do not anticipate that come the 2030s they will be any less capable than they are today. So, if you like, the minimum standard is where we are today. That is why the technology component of the concept phase is so important. It has got to be able to over-match those current systems.

- Q51 **Chair:** Any more responses? In that case I shall just ask one last question—I have saved an easy one for the end. Let us just suppose that this new weapons system comes into being. I am asking you to look a few decades into the future: so you have very powerful, very accurate weapons capable in particular of striking at naval units. Yet the tendency in modern navies has been to have fewer and fewer very powerful and very expensive platforms.

How do you see the battle space at sea developing if technology of this sort is proven to be successful? Will it mean that expensive ships like aircraft carriers, assault ships, destroyers—which are really cruisers in all but name—will have to be conserved well out of harm's way if up against an adversary armed with weapons of the very sort that we are trying to develop ourselves?

Are we therefore in danger of rerunning the argument about the development of Dreadnought battleships at the end of the 19th and beginning of the 20th century, which were likely to put the Royal Navy more than anyone else out of business, because we had more of the older ships that were going to become obsolescent?

Lt General Sir Mark Poffley: The Minister is looking at an Army officer and a retired Air Force officer for a commentary in this space. We are bound to be confronted with a more contested maritime environment than we find ourselves in today, that is our vision.

We recognise that we need to provide the appropriate levels of protection on those very high-end capital assets. That requires us to make sure that we continue to invest in platform protection—so the defence systems unique to the platforms themselves. They need to sit in a context in which you have a layered defence approach so that you have the ability to detect and treat an adversary at range. Clearly, as we do today, we will not put a high-end capital asset in harm's way without the appropriate levels of protection around them.



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Q52 **Chair:** Are we going to be trying to develop the antidote to the new missile system at the same time as we try to develop the missile system?

Lt General Sir Mark Poffley: Undoubtedly so, because the reality of warfare through time has been that the asymmetric is always presented to you, and then we have to go asymmetric on the asymmetric. It is a constant battle for us to retain the advantage in that space. We expect not much of this to stand still, which is why the notion that you must be adaptable and flexible into the future becomes an important component of most of our thinking.

Q53 **Chair:** Why am I reminded of a cartoon from the 1960s or 1970s, which showed a worried looking trooper reporting to his battery commander that, "Our anti-anti-missile missile has just shot itself down"?

Lt General Sir Mark Poffley: Indeed so.

Q54 **Mr Francois:** While we have got you for a few minutes, gentlemen, the future combat air strategy as I understand it does not include helicopters. Bluntly, Leonardo down at Yeovil—what used to be Westland, in old money—is running out of work. We have had successful Anglo-French helicopter programmes in the past, such as the Puma, which we recently spent a lot of money upgrading to keep it in service in the 21st century. Minister, perhaps I can direct this to you first. Guto, has the Ministry given any consideration to any kind of future strategy for helicopters? What can you say about that?

Guto Bebb: Clearly, we have a long-term relationship with Leonardo that is quite unique in terms of the industrial relationships we have moving forward. The issue is primarily one of ensuring that the order book is supported. In terms of the view that we should a rotary wings strategy, I think I go back to the fact that the industrial relationship that we have with Leonardo is fairly unique. It is a significant vote of confidence in the capabilities of Leonardo.

The key thing we can do from an MoD perspective is to continue to support them very strongly in their export campaigns. Clearly, Leonardo has already moved from a situation where 80% of its turnover was dependent on the MoD. I think the current figure is closer to 40%. The ability of Leonardo to win contracts on an international basis is acknowledged. From our perspective in the MoD, we are there to support them.

We have a long-term agreement with them, but the key thing is that they have a capability that can attract export orders. There is a significant number of potential export orders that we are working with Leonardo to try to achieve.

Chair: If there are no more questions, I will take this opportunity to thank our panel and in particular our French counterparts and guests. Quite apart from the subject matter of this inquiry, I hope the message they will take back loud and clear is that the desire for the closest possible bilateral co-operation on defence issues remains completely undimmed and is



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completely irrespective of any issues to do with Britain's continued membership or not of any aspect of the European Union. That has to be a unique selling point. Thank you all very much.