

Modernising Defence Programme

Submission by Prospect to the Ministry of Defence

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Introduction

1. Prospect is the union for 11,000 professionals in the defence industry and Ministry of Defence. We welcome the opportunity to participate in this public consultation at a crucial time for the country. The UK is facing a series of threats and increasingly hostile action from both state and non-state actors. Terror attacks in London and Manchester last year and the chemical attack in Salisbury followed similar atrocities elsewhere around the world. Rising tension between states and conflicts in Syria and Yemen have made the world feel less safe and more unpredictable.
2. Although security concerns are rising the defence budget is under intense pressure. A report on the MOD's Equipment Plan by the National Audit Office published in January found that there was a funding gap of up to £21 billion. This has led to speculation that instead of strengthening military capabilities there would be cuts in personnel or equipment following the defence review.
3. Pressure on spending has been acutely felt by Prospect members in the civilian defence sector, with over a thousand redundancies announced at Devonport, Portsmouth and Rosyth in the last six months and the threat of more job losses in Ministry of Defence as SDSR 2015 is implemented.
4. The four Workstreams in the review address the pressure on the budget and assess what military capabilities are required. Prospect has used the expertise and experience of our members to inform our response to the review.

Summary of Prospect's submission

Workstream 1 – MOD Operating Model

5. Prospect acknowledges the need to address weaknesses in the current MOD Operating Model, in particular the need to centralise decision making in some situations and increase training for civilian personnel to deliver the 'Whole Force' concept in a meaningful way.
6. The MOD operating model has been harmed by not addressing skills shortages in the department. This has damaged the MOD in three ways; the department is less able to act as an intelligent customer in the procurement of equipment, the skills in frontline

commands have been weakened and those left delivering the equipment and support are under more pressure.

7. There is mounting independent evidence that shortages of skilled civilian personnel are having an impact on the MOD's ability to meet its operational commitments. The report of skills gaps in existing core activities mask other problems in emerging specialisms such as cyber, AI and robotics.
8. Any relaxation of pay restraint for the armed forces will further undermine morale if the 1% pay cap is retained for the MOD civilian personnel.
9. The MOD needs a Peoples Strategy to attract and retain skilled personnel and address the low morale of civilian staff.

Workstream 2 - Efficiency and business modernisation

10. The emergence of a funding gap in the defence budget has arisen principally because of decisions made in SDSR 2015, which the government intends to fund through efficiency savings.
11. The efficiency programme looks ambitious. To achieve the efficiency savings required there will need to be significant outsourcing from the MOD.
12. Prospect's view is guided by a public interest test of the financial wellbeing of contractors and their ability to continue to provide a public service.
13. The pressure on contractors to cut costs has reduced margins. The collapse of Carillion has made the market much more risk averse to long-term contracting, even where companies have a well-established record of delivery in the sector.
14. The MOD should carry out a much more sophisticated due diligence test into the financial stability and security of any potential outsourcing partners to better understand the risks that taxpayers are being exposed.
15. Where outsourcing is considered to be appropriate Prospect supports the development of a Defence Sector Deal between trade unions, the MOD and defence contractors on outsourcing that would make specific recommendations for a fair deal for workers transferred to the private sector.

Workstream 3 - Commercial and industrial approach

16. The government needs to learn the lessons from previous defence procurement reforms. Continuing to develop the core skills and competencies within DE&S to

support the development of professional engineers should continue to be a key objective.

17. The department needs to ensure that cost control measures do not deter companies from continuing to deliver single source contracts.

Workstream 4 - Defence policy, outputs and military capability

18. The government's commitment to meet the NATO target of least 2% of GDP is not sufficient to fund all current cost pressures. Prospect supports additional funding for the defence sector to deliver the ambitions of SDSR 2015 and any additional commitments made as a result of the MDP.
19. Defence industrial policy should be an integral part of the UK's industrial strategy. In terms of force projection and supporting exports for the future- the policy of buying "off the shelf" is not sustainable over the longer term in terms of either force projection or supporting a thriving defence sector.
20. Partnership with industry is crucial; providing industry with a level of certainty and clarity to sustain investment and future looking research and development.
21. Prospect welcomed the Shipbuilding Strategy when published in 2017, in particular the competition opened for the Type 31e general purpose frigate. It is vital that there are no delays in this process and that a decision can be made as early as possible to allow the industry to plan ahead with certainty.
22. A risk with the current approach to defence procurement is that the UK loses sovereign capability in some domains. The MOD must ensure, as part of the development of an industrial strategy, that sovereign capability is retained across the defence domains.
23. By its nature equipment support work requires a workforce that is able to respond to a range of challenges. This requires the patient development of a skilled workforce with a balanced workload to support the fleet's future requirements.
24. Prospect members are involved in maintaining and sustaining the UK's nuclear deterrent. We would be concerned if there are any delays that would make the UK more reliant on an ageing deterrent fleet, with all the risks that this implies.

Workstream 1 – MOD Operating Model

25. The challenge facing the MOD in the delivery of defence equipment and support to the forces is complex and unpredictable. The need to be able to provide a range of responses to any given situation requires an agile and professional organisation that is able to use the available resources most effectively. In his lecture to London's Strand Group the Permanent Secretary at the Ministry of Defence, Stephen Lovegrove,¹ highlighted the areas where the MOD operating model needs to change; the ability to centralise decision making in some situations and increased training for civilian personnel to deliver the 'Whole Force' concept in a meaningful way. There are risks involved in changing the way forces are organised but there is merit in looking at the balance of resources in the MOD to see if there are different ways of delivering defence outputs. This is not simply a decision about reducing the autonomy of TLBs; there needs to be an assessment of the balance between defence outputs and the resources available.
26. The recent attack in Salisbury has underlined the importance of civilian personnel in the broader defence effort. The expertise at DSTL is a unique resource and something that the country is rightly proud. The commitment to invest £48 million in a chemical weapons defence centre at Porton Down is recognition that civilian research is vital for the defence effort. To address pressures within the armed forces and across the TLBs the MOD introduced the 'Whole Force' concept. While Prospect welcomes the recognition given to civilian personnel in the delivery of defence, the concept will only succeed if the full force establishment in line with Force 2020 objectives are achieved.
27. The timely NAO report, 'Ensuring sufficient skilled military personnel',² has highlighted the deficiencies of the MOD's current approach to recruitment to the armed forces. A 5.7% shortfall in the number of military personnel is evidence that the current People's Strategy is failing to deliver. There must also be concern that despite an array of measures taken to address this shortfall the problem seems to be getting worse not better. The gaps of skilled personnel in the armed forces cannot be filled by reservists or civilian personnel.
28. There is a recognition that future military recruits may enter from different routes, either into more senior positions or direct recruitment into some skilled jobs such as cyber,

¹ Stephen Lovegrove, Permanent Secretary for the Ministry of Defence, address to the 27th meeting of King's College London's Strand Group on Tuesday 20th March 2018 <https://www.youtube.com/watch?v=4SaXeJifjuM>

² NAO, 2018 <https://www.nao.org.uk/report/ensuring-sufficient-skilled-military-personnel/>

artificial intelligence and other advanced science and engineering roles. Much of this work could be done by civilian personnel. However as the NAO report highlights, there is a national skills shortages in some STEM skills that will bring the armed forces into direct competition with companies across the private sector as well as the MOD and contractors in the defence industry. The Whole Force concept has to be extended to take into account pressures on the whole organisation so that measures taken to address shortages in the armed forces do not inadvertently create additional pressures elsewhere.

29. The support provided by MOD civilian personnel and contractors to frontline operations has been recognised by government, the department and military chiefs. The role of defence contractors in adapting UORs into service for operations in Afghanistan and Iraq showed the vital role of contractors in frontline operations. The advisory role of science experts in developing defensive systems against IEDs saved the lives of military personnel. The maintenance and delivery of vital equipment is essential in ensuring that our armed forces are always ready for conflict. The civilian workforce must be recognised as a key part of the defence team delivering effective and safe support to the frontline.
30. In Prospect's view the current operating model may not be working in the way it was intended. Our members see different approaches taken, where work is duplicated and best practice not easily shared across different TLBs. The MOD operating model has been harmed by not sufficiently recognising the importance of civilian personnel. The reduction in civilian staff following SDSR 2010 was driven by cost saving. There was no thorough audit of skills across the MOD before staff were made redundant. This has harmed the MOD in three ways; the department is less able to act as an intelligent customer in the procurement of equipment, the skills base in frontline commands has been weakened and those left delivering equipment and support are under more pressure. This has now been followed by SDSR 2015 which commits the MOD to a further 30% reduction in civilian staff by 2020.
31. Reductions in civilian staff have had a direct impact on morale which is reflected in the results for the Civil Service Peoples Survey. The scores for the MOD and its agencies are consistently below average.³ The lowest scores are for pay and benefits. The cumulative

³ Civil Service People Survey 2017: A summary of main department scores 2009 to 2017 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/659569/Civil_Service_People_Survey_2017_Summary_of_main_department_scores_2009_to_2017.pdf

effect of pay restraint and changes to terms and conditions has further eroded staff morale. Any change to the MOD operating model has to address this problem

32. The pressure to remove the pay restraint is felt across all parts of the department. A relaxation of pay restraint for the armed forces will further undermine the morale of the civilian workforce if the 1% pay cap is retained.
33. The restrictions on government funding have made it harder to deliver public sector science and engineering. The annual defence budget has been cut in real terms by 14% since 2010. Total UK investment in defence research and development across the public and private sectors has been cut by around half in the past 10 years. DSTL is only part of this picture. There are many other agencies with predominantly civilian staff dealing with similar challenges. These include the Defence Equipment and Support, the Defence Infrastructure Organisation and the UK Hydrographic Office.
34. At DSTL, turnover has declined by 12% since 2014 and its specialist workforce has been reduced. Figures provided to Prospect by the Office for National Statistics show the number of science and engineering professionals working at DSTL has fallen by 2% in the last year. That trend is reflected more starkly in the MOD as a whole, where the decline is 8%.
35. Prospect recognises the effort made by the department to address known skills gaps, which range from advertising campaigns and use of contractors, to attempts to enhance the attractiveness of positions with supplements and allowances. However it is clear to us that these approaches are insufficient to address existing gaps. This is primarily because of the restrictions of current public sector pay policy, and general resource limitations which limit organisations' ability to ameliorate these restrictions, and also impact on the general attractiveness of the jobs and careers they are able to offer. These constraints are having a severe impact on recruitment and retention, particularly in skilled and specialist areas where pay rates are usually found to be 15% or more below market rates. Whole Force needs to become a Whole Package.
36. Prospect does not believe that the MOD has a credible plan to meet future workforce requirements, for the simple reason that recruiting and retaining the skills and staff necessary to deliver current policies and priorities within the confines of current public sector pay policy, and budgets planned for the current forecast period, is going to get harder and harder. A review of people numbers must be done on a Whole Force basis

that looks at the real cost to the MOD of doing the work and who is best placed to do the work. Whilst a 30% cut in civilian personnel may sound politically acceptable, replacing those with more expensive alternatives such as external contractors or military personnel would be a false economy.

37. There is mounting independent evidence that shortages of skilled civilian personnel are having an impact on the MOD's ability to meet its operational commitments:

- a. A 2015 review of the MOD's science and technology capabilities stressed that "the effectiveness and efficiency of our defence and armed forces depends on our ability to harness the most advanced science and technology" but found that cost pressures were "leading to reductions in staff working in areas that are already at the minimum to support MOD as an expert customer" and that in-house capability in chemical and biological defence was "fragile".⁴
- b. Expert witnesses have warned the House of Commons Select Committee on Defence that cuts made to MOD staffing would undermine the value of new equipment and capabilities developed under the Strategic Defence and Security Review:

"...we will be in the position of buying an enormous number of amazing capabilities with no one with the expertise to run them" (Peter Roberts, Royal United Services Institute);

"...the cuts of ... 30% in MOD civilians – will inevitably hit some of those strategic thinkers, planners and defence intelligence ... the last thing that we need to do is undermine our capacity to think about the problems and where we send our armed forces" (Professor John Gearson, Kings College London).

- c. In 2016 Sir John Parker's report to inform the National Shipbuilding Strategy cited the fact that "the MOD has lost expertise in both design and project management" as a factor in "significant growth in specification, scale and end cost of ships, with an

⁴ A Review of MOD's Science & Technology Capability, 2015, Sir Mark Walport
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/458623/20150414-MOD_Science_Capability_Review_Executive_Summary.pdf

associated risk that equipment/systems are technically obsolete before the contract is finalised".⁵

- d. In 2016 the Defence Nuclear Safety Authority warned that "the ability of the Department to sustain a sufficient number of nuclear suitably qualified and experienced personnel (NSQEP), both civilian and Royal Navy, remains the principal threat to the delivery of nuclear safety".⁶
 - e. The 2017 report of the Defence Safety Authority stressed that "provision of sufficient SQEP remains a key risk, with a majority of Regulators reporting this as one of their top concerns... Shortages, pinch-points, recruitment and retention difficulties are also widely reported by TLBs".⁷
 - f. In December 2017 the Permanent Secretary confirmed in correspondence to the Public Accounts Committee that the Defence Infrastructure Organisation "continues to have skills shortages in its specialist areas, including Programme & Project management, Surveying, Engineering and Environment & Sustainability".⁸
38. These observations fit with our own intelligence from Prospect branches and members in the MOD and its agencies. This includes near-universal reports of shortages of engineering skills and expertise across the core MOD as well as Defence Equipment and Support, DSTL, the Defence Infrastructure Organisation and the UK Hydrographic Office. Specific reports of skills gaps in areas such as information assurance, project management, specialist instruction, dental hygiene, noise and vibration specialists, IT security, programme and project management, health and safety, quantity surveying, analysis, software engineering, IT architecture, cost engineering, geospatial analysis, accountancy and finance, lecturing and instruction, navigation, and chemistry at the

⁵ An Independent Report to inform the UK National Shipbuilding Strategy, 2017, Sir John Parker

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/572532/UK_National_Shipbuilding_Strategy_report-FINAL-20161103.pdf

⁶ DNSR Annual Report 2014/2015,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/526138/20160520-DNSR_Annual_Report_2014-15-RT.pdf

⁷ DSA Annual Assurance Report 2016/17,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/654737/DSA_AAR_16-17_-_RT.pdf

⁸ Letter from the MOD Permanent Secretary to the Chair of the Public Accounts Committee, 2017, <https://www.parliament.uk/documents/commons-committees/public-accounts/Correspondence/2017-19/Correspondence-MOD-defence-Estate-301117.pdf>

Ministry of Defence. In addition skills gaps in areas such as safety management, naval architecture, programme and project management, salvage and mooring, and logistics at Defence Equipment and Support.

39. The report of skills gaps in existing core activities mask other problems in emerging specialisms such as cyber, analysis, electronics, software development, and gaps in core activities at the Defence Infrastructure Organisation in quantity and land surveying, training safety, and project management.
40. A strong theme in the reports we receive from our members is the demographic challenge faced by the department and its agencies, now heavily reliant on the skills and experience of employees due to retire within the next ten years. Most organisations are struggling to recruit mid-career experts or retain recent graduates or apprentices who have finished their programmes and can earn much better rates in the private sector.
41. Despite this mounting evidence of significant problems attracting and retaining skills, it is clear to us that the MOD does not have a full understanding of its capability gaps and the consequences of these shortfalls. The Department's management information systems and understanding of their skills base is notoriously poor. Departmental information that has been shared with us show headcounts for broad professional groups and generic job titles, but no evidence on qualifications or experience, or any assessment of staff numbers and skill levels needed in particular areas. Indeed the department will often ask us for information we have about particular pinch points or problems, indicating they are well aware they do not have a full picture. Prospect has been pressing for proper workforce planning to take place for many years – this is especially important as skills requirements change and adapt.
42. Equally we believe it is struggling to retain apprentice and graduate entry employees once they have finished their scheme. These people are highly qualified and very attractive to external employers so if MOD is to retain them they need to understand how they can develop their career, gather expertise, have interesting and challenging work and get properly recognised and rewarded in the longer term. The armed forces have recruited apprentices to help address some of the pressures on military personnel. A similar effort is needed to expand the number of civilian personnel joining the MOD. In 2015-16 there were 14,200 apprentices in the MOD, but only 350 of these were civilian

apprentices. There needs to be more focus on the recruitment of apprentices to civilian roles.

43. The MOD needs a Peoples Strategy that addresses these problems of morale, attracting and retaining the skilled personnel needed and deficiencies in the pay and reward package.
44. The MOD has discussed under the umbrella of the Whole Force concept, now being referred to as across the Defence Enterprise, making it easier for personnel to move between the military and industry and between the civil service and industry. There are similar aspirations to make it easier for industry personnel to work in MOD roles. While these are noble aims, the constraints on both military and civilian organisations within the MOD will make it difficult to offer attractive career choices for those who have already established a career in the private sector. Prospect has proposed engagement on revising the enabling policies which would underpin this concept. Current TUPE policies, for example, effectively transfer staff into the private sector and forget them. As Louth and Taylor observe,⁹ the best firms have an understanding of the health of their suppliers and supply chains. There are mature conversations between defence contractors and the MOD. But there is no oversight that ensures skills and expertise required to deliver the defence requirement are being retained and no gateway back in for staff the MOD will need as their future intelligent customers. Redeployment, reinstatement and secondment policies similarly do not yet reflect the Whole Force concept. For this to work action is needed now to provide the policy framework to enable it.

Workstream 2 – Efficiency and business modernisation

45. The emergence of a funding gap in the defence budget has arisen principally because of decisions made in SDSR 2015, which the government intends to fund through efficiency savings. This has created a presentational problem for the department, as Malcolm Chalmers from RUSI rightly observes, you could get the impression that spending on defence is falling even though the UK is a leading defence power in Europe and active in a number of theatres.

⁹ Beyond the Whole Force, Louth and Taylor, 2015, RUSI
https://rusi.org/sites/default/files/201510_op_beyond_the_whole_force.pdf

46. The National Audit Office (NAO) report on the equipment plan found that there was a risk that the equipment plan would be unaffordable with a shortfall of up to £21 billion.¹⁰ Prospect is concerned that the narrative of ‘unaffordability’, means that rather than focusing on the military capabilities required, there is a downwards pressure on spending which could mean that some defence capabilities are scrapped. The annual defence budget has been cut in real terms by 14% since 2010. Planned increases will restore less than half of this reduction in spending so it is no surprise that the pressure on spending is so severe.
47. The difficulty of delivering complex capital projects on time and within budget is well understood. As a project moves from the concept and development phase to production there is an upwards pressure on cost. There has been a significant improvement in MOD’s performance in recent years. Before 2009 the cost of projects increased by 21%, costs are currently rising by about 10%. However even taking this into account the NAO expects spending on current projects to overshoot the planned budget. MOD has always been criticised for over-optimism in its spending plans. The new commitments in SDSR 2015 were not matched by sufficient government funding.
48. In addition to a shortfall in funding the equipment plan the current budget does not provide sufficient funding for equipment support costs. As the NAO have noted servicing and support costs have a high degree of uncertainty on new platforms. The cost of equipment support is likely to rise as new equipment comes into service. Vigorous contract negotiations have achieved substantial reductions in maintenance costs supporting the older fleet of ships and submarines. For example investment by Babcock in new technology, such as e-frigate and the Equipment Management Operating Centre, has helped to improve efficiency performance. However the company had to reassure the market in February that the company is able to deliver share dividends against slower revenue growth and tighter contract margins.¹¹ What this suggests is that the market has become much more risk averse to long-term contracting, even where a company has a well-established record of delivery in the sector.
49. Other efficiency programmes look even more ambitious. Savings planned from Information and Communication technology are expected to deliver a £1.6 billion reduction in spending and savings from organisational changes in the MOD aim to deliver

¹⁰ The Equipment Plan 2017-2027, January 2018, NAO <https://www.nao.org.uk/wp-content/uploads/2018/01/The-Equipment-Plan-2017-to-2027.pdf>

¹¹ <https://www.babcockinternational.com/Investors/Results-and-Presentations>, 6 February 2018, Babcock International Group plc.

a further £5.8 billion. More worryingly, MOD is still in the early stages of identifying the remaining £8.1 billion of efficiency savings. These savings can only be achieved through significant outsourcing of existing MOD activities.

50. Prospect has always taken a pragmatic view towards outsourcing. This is guided by a public interest test of the financial wellbeing of contractors and an ability to continue to provide a public service. The costs of failure are not always easy to quantify but can be significant affecting those working directly for the affected contractor and those in the supply-chain.
51. Prospect wants the department to ensure that lessons are learnt from past privatisations by introducing a more rigorous value for money test, which should focus on what is best for defence. Previous outsourcing has been driven by a desire for headcount reductions which has meant that the quality of the outsourced service has not always delivered high quality, innovative and sustainable public services for the long term.
52. Prospect is concerned that the department's view is that the 'primary' role for MOD in the future will be the 'commissioning of services'. Rather than privatisation continuing to be the default position, MOD needs to adopt an evidence-based approach that understands fully what it is proposing to outsource, what efficiencies it expects to achieve, whether the same savings can be achieved in-house and what, if any, trade-offs it is prepared to accept in terms of time and quality of service to secure cost reductions.
53. One of the claimed attractions of outsourcing is that the risks are transferred to the private sector. However, this proposition has been shown to be an illusion. The collapse of the banks ten years ago showed that there really are some companies that are too big to fail. More recently, the collapse of Carillion showed that contracting does not completely remove liabilities from the public sector. The risk of failure needs to be considered as part of a rigorous test of due diligence. As has been observed above, tight margins, complex financial arrangements and opaque company structures make it difficult to assess the liquidity of a contracting company. Some leading investment managers have withdrawn from this market recognising the weakness inherent within the sector.¹² The number of companies with the competence to bid for MOD contracts is limited, which reduces any perceived benefit from submitting companies to competition. MOD should carry out a much more sophisticated due diligence test into the financial

¹² Carillion collapse shakes UK outsourcing industry model, 18 March 2018, FT <https://www.ft.com/content/9668f25e-2901-11e8-b27e-cc62a39d57a0>

stability and security of any potential outsourcing partners, including pension fund liabilities, the level of debt and recent contract performance, to better understand the risks that taxpayers are being exposed.

54. There is also a duty of care to employees transferred from MOD to the private sector that goes beyond the protections provided for by TUPE regulations. MOD has set itself ambitious targets to create high value jobs, with good pay and conditions. The socio-economic considerations which are being considered for future contracting arrangements should also apply to outsourcing. This should include the training offered to those in local communities and what efforts are made to attract a more diverse workforce. Contractors should also be able to demonstrate the highest possible ethical standards across its employment, reporting, environmental and tax practices.
55. Prospect would welcome an assurance that the in-house comparator would be fairly resourced and considered as a serious contender. To make this into a meaningful commitment some account would need to be taken of the potential to realise the contract, including any commitments needed to invest in future service provision. Prospect does have some concerns that services that have been starved of resources would not enter a competition on a level-playing field.
56. The sensitives of defence work means that outsourcing is not appropriate for all activities. There is mixed evidence of the ability of government to create a competitive market for activities previously carried out by the public sector. In defence there are a small number of companies that are capable of working in a secure environment. Following a long period of deliberation the department created DE&S as a bespoke trading entity. This provided the organisation with some financial freedoms but ensured that the organisation remained within the public sector.
57. The creation of a false market can lead to delivery failures in critical services. Problems experienced by the police force following the privatisation of the Forensic Science Service are an important warning of what can go wrong when a market is too weak to support services previously provided by the public sector. A reliance on the private sector to deliver a service can lead to a serious market failure with the liabilities returning to the public sector.¹³

¹³ Dubious forensic evidence? That's what happens when we sell off public services, 2017, The Guardian <https://www.theguardian.com/public-leaders-network/2017/nov/27/dubious-forensic-evidence-privatisation-public-services>

58. Prospect recognises that outsourcing may be appropriate in some circumstances. We have sought to develop a clearer understanding of how the wider defence community could work cooperatively. A development of a Defence Sector Deal is something Prospect would like to explore further with the department. This should take the form of a concordat between trade unions, MOD and defence contractors on outsourcing that would make specific recommendations for a fair deal for workers transferred to the private sector.

Workstream 3 - Commercial and industrial approach

59. The transformation programme within DE&S was scheduled to be “match fit” by April 2017. The programme has the potential to generate an improved focus on commercial capability and strategic supplier management. As the organisation moves towards a more settled state DE&S have recruited more full time permanent employees thus reducing reliance on more expensive external provision either through contractors or third parties, which is to be welcomed. There is still scope to replace external support with direct recruitment, however, there will be challenges in doing so – not least as a result of the continued public sector pay cap.

60. In our view more work needs to be done to ensure DE&S retains key staff, both experienced and apprentices and graduates on completion of their entry schemes. DE&S needs both appropriate financial reward and attractive training and development to support long term career paths in defence procurement. Investment in training and skills aligned with appropriate HR policies and line management practices to support those.

61. The government needs to learn the lessons from previous defence procurement reforms, including the debilitating effect of inter-service rivalry, and ensuring that there is in-house expertise and professionalism in contract specification and project management. Continuing to develop the core skills and competencies within DE&S to support the development of professional engineers continues to be a key objective.

62. The competitive tendering process does not always select contractors that have the capacity to deliver the work. The regulation of this market is governed by EU procurement law, which restricts the right of the government to take account of the ability of an organisation to deliver a contract. Although revisions to EU Directives allowed procuring authorities to specifically exclude prospective bidders from a competitive process on the basis of major problems with previous performance, the bar for this is set quite high. This means that an assessment of past performance

cannot be considered when assessing competing bids. This places more importance on the contracting process. The loss of in-house expertise has made it more difficult to construct a contract that ensures that the bidding process passes a value for money test and is able to deliver the service required. The MOD needs to guard against becoming too reliant on contractors, or third party consultants, to measure and monitor performance and specify future requirements when putting bids out to competitive tender.

63. Because of the nature of defence work non-competitive contracts are a significant proportion of the equipment and support plan. A reliance on this type of contract varies from company to company in the sector. Non-competitive contracts are subject to regulation by the Single Source Regulation Office (SSRO). The SSRO set the rate of profit for these contracts based on a formula to provide value for money protection for the taxpayer. The department aimed to achieve significant savings by tightening up the methodology for the calculation of allowable profits in single source contracts. Prospect have some concerns with the methodology used to calculate the operating profit as part of the single-source procurement regime. The old formula based on an average of commercial profits across the economy was transparent and easily understood by industry. The new methodology compares the defence industry with 'comparator' companies. But it is not clear that the comparator companies being used are similar to defence companies. Prospect is also concerned that the trend for operating profits has fallen from 10.7% in 2014/15 to 6.81% in 2018/19. This will undoubtedly squeeze contract costs in future years. The department needs to ensure that cost control measures do not deter companies from continuing to deliver single source contracts.

Workstream 4 – Defence policy, outputs and military capability

64. The government's commitment to meet the NATO target of least 2% of GDP is not sufficient to fund all current cost pressures. Prospect supports additional funding for the defence sector to deliver SDSR 2015 and any additional commitments made as a result of the MDP. Having the capability, capacity and agility to respond to a rapidly changing threat environment is crucial. The nature of the adversaries we face is changing as is their ability to rapidly deploy new and emerging technologies in ways we could not have imagined even a decade ago. This demands a response where government and industry work collaboratively together. Investing in research and

development and collaborative working across the sector has never been more important.

65. Having a Government which actively supports and is seen to support its indigenous defence industry is a key element in force projection and ensuring sovereign capability as well as providing proven economic benefits. The UK can learn much from Germany, France, Italy and others in their support for their defence sectors and their clear view as to the economic and security benefits it brings. More coherent cross government working is needed- for example MOD and BEIS working together to leverage commercial and export opportunities.
66. Defence industrial policy should be an integral part of the UK's industrial strategy. In terms of force projection and supporting exports for the future- the policy of buying "off the shelf" the lowest cost technologically acceptable solutions is not sustainable over the longer term in terms of either force projection or supporting a thriving defence sector. It is a truism in defence that the US will only sell us technology they know we could produce ourselves. It is also a truism that we will only compete in export markets successfully where it has been demonstrated that products and technologies are supported and adopted as part of our own sovereign capability.
67. Partnership with industry is crucial. Too often it can feel transactional at best and adversarial and suspicious at worst. Partnership is not just about the steady drum beat of orders (though that would be welcome) but about early and open engagement, providing industry with a level of certainty and clarity to sustain investment and future looking research and development.
68. A longer term and more sophisticated approach is needed with regard to decisions about what constitutes value for money. Long term and stable investment in research and development is critical and the competitive advantage of the UK lies in high end, value added technological solutions. This is best achieved through collaboration in the face of increasingly disruptive technologies. The Treasury also needs to be encouraged to take a more sophisticated approach and the value of the defence pound when invested in developing and sustaining our own sovereign capability and capacity.
69. One important lesson from the 2010 SDSR is not to abandon capabilities too quickly. The decision to cancel the Nimrod air surveillance aircraft weakened the UK's deterrence posture. This was clearly underlined when a suspected Russian submarine

was spotted near Faslane nuclear submarine base, which led to the scrambling of aircraft from NATO countries to fill the gap left by Nimrod.

70. This underlines a wider point about military capabilities. The Permanent Secretary has said there should be no sacred cows when considering what should be retained. It should be remembered that soon after the 2010 SDSR the Arab spring tested the UK's ability to provide support when needed. The diverse range of threats, from a resurgent Russian submarine force, instability in the Middle East and in a number of African states a rising naval challenge from China and existing defence commitments around the world, means that a full range of military capabilities is desirable.
71. In the development of future capability- some projects such as a next generation fighter aircraft will be transnational almost by definition. Our European neighbours are our most natural partners for such a project- but there are dangers that the politics and practicalities of Brexit will get in the way. Already we are seeing Brexit being used by others to seek to leverage commercial advantage as they vie for work we would hope to go to the UK. This is compounded by the removal of access to European funding for research and development on defence. All of this is deeply unhelpful and runs the risk of leaving the UK isolated and exposed.
72. The concept of defence needs to be widened – it's not just about visible equipment and military but also dealing with hidden threats from state and non-state actors. Prospect expects that new skill sets, with emphasis on cyber security, robotics and artificial intelligence will become more important in the future.
73. Cutting-edge information and data analytics. New and emerging technologies in data capture, capacity and connectivity have the potential to deliver operational and tactical advantages to the armed forces and to increase MOD efficiency and effectiveness.
74. Strengthened cyber defence is critical, especially as traditional perimeter defences become compromised by more sophisticated attacks and threats. Cyber defence systems must be able to distinguish among and assign appropriate priorities to different sources of cyber attack. Further, the most effective use of cyber defence systems is to improve systems resilience by intelligent use of the learning from such attacks.
75. The new defence scene requires different forms of deterrence from state-on-state conflict, seeking to avert threat action by potential opponents and to influence key

allies. Enhanced intelligence, surveillance and reconnaissance capability forms an essential part of such deterrence. A sufficiently rich picture of the UK's adversaries and their world could act as a deterrent in itself, by rendering events increasingly predictable. It would also deliver the evidence base for exposing threat behaviour and for decisions concerning international economic or military interventions.

76. Unmanned and remote systems advanced technology offers the potential for high-precision systems, for both surveillance and combat, and monitoring facilities such as networked sensors. The growing sophistication of such technologies requires a stable civilian workforce of skilled specialists, both to operate the new systems and, increasingly, to make use of their outputs.
77. The defence sector is more productive than most other sectors of the economy. Since 2010 productivity in the defence sector has risen seven times faster than the rest of the economy. Given investment in technology and skills it is likely that productivity will continue to grow. Trade union involvement in the change management process arising from the introduction of new technologies is recognised as a key element in the delivery of productivity improvements.
78. Since the end of the cold war defence research and development expenditure has declined by 61%.¹⁴ In part this reflects the general squeeze on defence spending. However the fall in R&D is sharper than the decline in overall defence expenditure, suggesting that the sector as a whole has become less "research-intensive". Given the importance of technology in providing an edge over comparable economies, especially after Brexit, reversing this trend should be an important objective of the defence review.
79. The defence community should be involved in the government's wider industrial strategy. The announcement of the AI sector deal by BEIS is clearly an area of development that defence will become a significant player.¹⁵ Other sector deals are also likely to touch on areas of defence interest. Involvement of the widest communities of interest within the defence sector will be important in ensuring that sector deals benefit UK defence interests. The Defence Growth Partnership provides a useful forum for sharing government and industry strategic thinking. Strategic

¹⁴ [Gross domestic expenditure on research and development, UK](#) March 2018, ONS.

¹⁵ Tech sector backs British AI industry with multi million pound investment, 2018, <https://www.gov.uk/government/news/tech-sector-backs-british-ai-industry-with-multi-million-pound-investment--2>

partnerships benefit from trade union involvement by ensuring that the workforce is engaged with discussions about the future shape of industry.

80. A risk with the current approach to defence procurement is that the UK has lost sovereign capability in some domains. The UK has secured an important role in the assembly of fast jets as part of the F-35 programme, however this is reliant on US expertise and IP secure systems.
81. The UK is no longer able to design and develop a Land vehicle. The closure of the BAE Systems factory in Newcastle significantly reduced the UK's ability to lead in this domain. The Land section of BAE Systems currently represents just 5% of sales. The decision to re-join the Boxer programme to construct the Mechanised Infantry Vehicle will secure a minimum UK workshare for up to 60% of jobs created,¹⁶ however this reinforces the trend away from sovereign capability in the Land domain.
82. The MOD must ensure as part of the development of an industrial strategy for defence that sovereign capability is retained across the defence domains.
83. Prospect welcomed the Shipbuilding Strategy when published in 2017. The strategy puts into practice the government's wider industrial strategy. There is a recognition by the government that shipbuilding is a key strategic asset for the country, providing 25,000 jobs and adding at least £1.5 billion to the UK economy each year. There are potential opportunities for UK industry and the wider UK supply chain.
84. Prospect welcomes the competition opened for the Type 31e general purpose frigate. Although Prospect would have preferred additional complex warships for the naval fleet, we recognise the government's commitment to this programme of work. A steady drumbeat of shipbuilding orders is essential to sustain our skills base, maintain sovereign capacity and keep people in work in yards across the country. It is vital that there are no delays in this process and that a decision can be made as early as possible to allow industry to plan ahead with certainty.
85. The strategy also launched the procurement process for Fleet Solid Support shipping. To ensure that UK shipbuilding is given the encouragement needed, the government should take steps to ensure that there is a UK bid for Fleet Solid Support ships. Unlike the Type 26 and the Type 31e, the procurement for this ship will be decided by a

¹⁶ £3 billion defence contract hope for Shropshire, April 2018
<https://www.shropshirestar.com/news/business/2018/04/03/3-billion-defence-contract-hope-for-shropshire/>

completely open competition. The government must ensure that there is a level playing field in this procurement process. Recent experience has shown that opening up procurement to international competition does not guarantee that a contract will be delivered on time and on budget. The MARS tankers built by Daewoo Shipbuilding and Marine Engineering were subject to delays in the build of the first ship and costs rose from £452 million to £550 million. The government's commitment to shipbuilding should include all classes of ship.

86. A welcome development in the Shipbuilding Strategy is to take into account socio economic factors when considering defence procurement decisions, so that;

"...in choosing between UK-based and overseas suppliers, all relevant, measurable national and local economic factors will be taken into consideration."

This builds on work by Oxford Economics and ADS to develop a model for calculating the value of investing in UK defence jobs. Using insights from this work and other sources Prospect will be developing a methodology that contributes to this discussion, which we will submit to the department for consideration.

87. The Shipbuilding Strategy touched on the issue of ship support. A key part of the strategy is a reduction in the service life of the new general purpose frigates. This is expected to reduce the need for upgrades and servicing costs in the future. Additional funds could be used to improve the efficiency and productivity of ship support for the new Type 26 and the QEC carriers as they join the fleet. The current contracts do not give clarity on how this work will be awarded in the future.
88. By its nature maritime support work requires a workforce that is able of responding to a range of challenges. Safeguarding a skill base that can support the fleet's requirements needs the patient development of the workforce across the UK's naval bases taking account of demographic pressures and the need for a balanced workload.
89. The defence industry relies on talent pipelines within which long term visibility of employment is absolutely crucial for the delivery of the government's strategy. Losing key professions through rapidly changing workloads arising from cancelled projects and poorly thought out [platform] design changes, including reductions in platform numbers in favour of short term cost savings do nothing to smooth this already constrained pipeline. The age profile of management and technical roles in the shipbuilding and repair industry is of particular concern. This places pressure on the

industry to develop the next generation of engineers. Commissioning engineers can typically take 10 to 20 years working in the industry to become fully proficient with the knowledge of naval shipbuilding rules and standards. Working with industry to deliver the workforce needed for the future is an important task for the defence review.

90. Prospect has always taken the view that it is for society and government to make a decision about the moral and philosophical case for nuclear deterrence. Maintaining and sustaining the UK's nuclear deterrent supports over 30,000 UK jobs. Approximately 2,200 people across the MOD and all three companies are currently working on the Dreadnought programme, of whom over 50% are highly specialised engineers and designers. Jobs are expected to peak at 6,000 during the entire build phase and involve an estimated 850 British companies in the supply chain.
91. The current cost for the design and manufacture of a class of four SSBNs is £31 billion, an increase of £6 billion on estimates set down in the programme's Initial Gate report in 2011. Spread over 35 years, this represents 0.2% of Government spending, which Prospect believes is affordable. Prospect would be concerned if there is a delay or change of plans that would make the UK more reliant on an ageing deterrent fleet, with all the risks that this implies.