

Written evidence submitted by Paul Beaver

Armoured Fighting Vehicle Inquiry 2020

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1. Paul Beaver has a deep knowledge and understanding of defence, geo-politics, strategy, and procurement. This is based on his experience as a senior editorial and publishing member of Jane's Information Group; a TV war correspondent and as a Specialist Advisor to the House of Commons Defence Committee for nearly 15 years, during which time he supported more than 75 Inquiries, including several on armour vehicles. In 2013, he retired as the senior Reserves aviator from the appointment of Colonel (Reserves) Joint Helicopter Command. He has offered strategic advice and guidance to industry and government for more than 30 years.

Introduction

2. This is a timely and apposite inquiry which can influence one of the United Kingdom's key requirements, including dominating the ground as a conventional deterrent and in opposition to the Queen's enemies. The fact that the main battle tank and armoured fighting vehicles (AFVs) have been in existence for a century does not mean that they are 'sunset capabilities'. They will remain relevant as long as potential adversaries have and use them to 'hold ground'. The Ministry of Defence should therefore invest in armoured fighting vehicle (AFV) capability to keep them current and to have the capacity to be upgraded. Each part of the AFV family is a component part of a whole, a system. The investment in some onshore AFV technology will create a 'sunrise capability' which can be harnessed for national prosperity.

Executive Summary

3. There are four key areas which merit the response of non-MoD specialists and to these Beaver Westminster Ltd offers the following responses:
 - **Land Industrial Strategy** – the importance of having a Strategy to guide industry and customer in the provision of value for money to the taxpayer. This would do away with the large, expensive competitions which delay procurements.
 - **Sovereign Land Capabilities** – benefits of sovereign capabilities, onshore capability and protecting the domestic supply chain. This will aid the Prosperity agenda including surety of supply, freedom of use and exports.
 - **Challenger 2 main battle tank upgrade** – benefits now and the future by the creating on a sovereign capability in main battle tank upgrades and technological innovation for the next general ground combat systems.
 - **Key Gaps in AFV Capability** – there are many areas where the UK has dormant or extinct capabilities: Deep Fires; Artillery; Enablers and New Technologies. The UK has neglected such technologies as creating artillery/tank barrels, so some of these gaps will need to be filled through Allied Capability Collaboration.

Views on the following have also been added:

- Export Potential & Prosperity
- The British Army leaning into the national agenda
- Levelling Up through investment in the regions and nations.

Land Industrial Strategy

4. Governments seem to like Industrial Strategies and Defence Strategies but are loathed to combine the two into a Defence Industrial Strategy. This is an important missing link because it can then be broken down into sectors: aerospace (the National Sector deal from BEIS/DfT updated in February 2020), maritime (the Parker (naval) Shipbuilding Strategy of 2017 has been largely ignored); land (the current requirement); cyber (in existence) and space (under preparation).
5. A Land Industrial Strategy (LIS) would allow comprehensive investment planning by industry and allow the British Army to see the drumbeat of procurement across a realistic ten to 20 years period. By careful discussion and debate, this document will guide successful staffs in the planning of the Equipment Plan.
6. An important effect will be added value for money for the taxpayer as a strategy will enable both capabilities to be established onshore and costly, time-wasting competitions to be eliminated. It is impossible to find a single land sector competition which benefitted the taxpayer and which was wholly successful – FRES-UV is the classic example (HCDC report 11 May 2007); the British Army will be waiting 25 years for the vehicle which was originally developed onshore, the Boxer.

Sovereign Land Capabilities

7. There are a series of key, niche and sovereign capabilities which are required by the United Kingdom to sustain the land sector of existing and future vehicles and systems. Many of these are innovative, some are secret, but all require the confidence of investment which a Land Industrial Strategy can create. Examples of key sovereign capabilities are:
 - Directed energy weapons (laser and radio frequency, which will also benefit the maritime sector);
 - Novel defensive aids for vehicles;
 - Hybrid electric drive technologies;
 - New technology suspension systems;
 - New and innovative batteries;
 - Battlespace radar small and compact enough for vehicles;
 - Armour systems, both active and passive;
 - Open vehicle electronic architectures for 'plug and play' technologies;
 - Autonomy on the battlefield, including Robotics;
 - Systems engineering expertise;
 - Small and novel UAV (drone) systems;
 - Synthetic training environments;
 - Distributed communications systems.

Challenger 2 Main Battle Tank

8. The main battle tank has been written off from the order of battle many times. The latest iteration is that of a 'sunset capability' which it is not. The main battle tank represents two important attributes to the land commander – its sheer size and weight have an ability to dominate the battlespace in peace, near-war and conflict; its firepower is unmatched; its protection can be scaled as required to meet the known and perceived threats.
9. By investing around £750 million, the British Army can have a battlefield armoured system of repute and merit which adds significantly to the enhanced forward presence of NATO and the projection of power through forward basing with allies in the Middle East.
10. The investment in Challenger 2's lethality improvement programme will create a main battle tank with 20 years of service life through the adoption of a new turret, turret systems and a new gun. This gun will fire natures of ammunition inter-operable with our NATO allies and Five-Eyes friends – this is part of Allied Capability. The main weapon must be changed to remain effective especially as the ordnance for the weapon is now dangerously close to its sell-by date. To encapsulate the new gun in a purpose built turret adds both capability to the vehicle, provides the potential for export to a number of nations and creates the firm basis for a new land sector industrial base at Telford with the prosperity, levelling up and employment potential that are possible.

Key Gaps in AFV Capability

11. The armoured fighting vehicle sector has been ignored for 20 years. British developments under Alvis, GKN, and host of others, were subsumed into BAE Systems Land Systems which then concentrated on North American and Australian business as there was little investment by the UK. Small wars in Iraq and Afghanistan led to the procurement of special role vehicles, well-suited for these theatres but with little application in Europe and against a world class opposition. British genius for armoured fighting vehicles, developed over a century, were ejected in favour of buying off-the-shelf capabilities, some of which have failed to deliver. A new, domestic champion is needed and should be supported at a national level.
12. The result has been a deficit in the development of new systems. This is not so much the creation of new platforms but rather the systems which make them work. It can be argued that replacing one platform with another 25 years later is not the way to progress capability.
13. There are gaps in the British Army's order of battle which limit its exploitation by a government and risk its personnel in ineffective vehicles. Examples of capability gaps include systems and applications rather than platforms. Some examples are:
 - **Deep fires** – the battlefield term for long-range indirect artillery capabilities which have the ability to strike the enemy as much as 40 miles from the 'front line'; the British Army needs to be overmatched with range and accuracy what it cannot do in sheer numbers. The current Cold War systems are obsolescent and should be replaced in accordance with the Land Industrial Strategy. This is also where the development of a new generation Apache helicopter and novel technology guided weapons for air platforms can be used in concert with land systems; they are complimentary nor alternatives.

- **Command Post** – the British Army still operates the FV430 series of tracked armoured vehicles which have been in service longer than most of their occupants have been alive. The older vehicles cannot be economic to run on and should be gradually replaced at Brigade and Divisional level with a wheeled alternative.
- **Protected Bridging** – to make the British Army's armoured formation as manoeuvrable as possible, the existing bridging systems have to be replaced soon and this is a British sovereign capability which should be maintained through investment.

Export Potential & Prosperity

14. Exports in BREXIT Britain will be vital to aid the economic recovery and the land sector can aid in the Prosperity agenda with the skilful use of investment capital, both domestic and inward.
15. Britain is a good base for exports. There is a robust and trusted export clearance system and experience with the Royal Air Force has shown that working with allies, training with allies and being trusted by allies, allows for the development of commercial links. The development of a land sector champion for armoured vehicles, probably Rheinmetall BAE Systems Land (RBSL) with its German and British investment could be an important springboard for a prosperity agenda.

The British Army Leaning In

16. The time is now right for the British Army to ride the political tide, understand the national mood and to show leadership in the defence part of the Integrated Review. The British Army remains a vital part of the national story and it can contribute to levelling up and prosperity in the immediate future. As the armed forces are bound to shrink with the decline in available cash, the British Army is well-placed to adapt to the new reality by taking its own radical steps. It will not demean the soldiers if there is progressive thinking.
17. Over the last 20 years, the fighting strength of the British Army has decreased but its effectiveness has not lessened in the eyes of friends or potential adversaries. With fewer soldiers in the ranks, there is surplus equipment which can be used to the benefit of the nation. This is not a simple selling-off of surplus trucks and the older armoured vehicle fleet, but the wise use of the resource which has been handed down to the British Army and on which it should capitalise. Surplus kit of every description abounds in stores up and down the country. There is world-class expertise in every unit.
18. One way to capitalise on the surplus is a forward basing strategy. This would entail moving equipment to an Allied nation in, say, the Baltics or the Gulf, and plugging into training facilities. This would allow British troops to train with allies and the allies themselves to benefit from having direct links with the British Army. It would help keep 'fleets in bring.'
19. Funding will always be a major consideration but by maximising the host nation support, yet keeping ownership of the assets, this would be coherent with Government thinking on Allied Capability enhancement. It would mean that smaller allies have access to British thinking on, say, armoured warfare, and the UK government would have a conventional deterrent forward for use, if needed, in times of tension.

20. There is no 'one-size-fits-all' with forward basing. There could be a menu of options depending on the appetite of the hosts and availability of the equipment. In one country or region, there would be a need for a mixed armoured battlegroup to be based and train there; in another, it might be reconnaissance focussed, or artillery focussed battlegroup. The key is flexibility and the need to fit the defence requirement, national security requirement and foreign policy objectives together in a coherent way. That is defence engagement and diplomacy as a role for the British Army. NATO has already coined a term for it: eFP standing for 'enhanced Force Presence'. Forward basing shows political will and should suit the 'burden sharing' agenda in the White House too.

Levelling Up

21. Part of the post-General Election and post-COVID levelling up in the post BREXIT Britain of the next decade could be the capitalisation of the Land sector in its traditional heartlands of the Midlands, South Wales, the North of England, and Scotland. It should be borne in mind however that the land defence supply chain is nationwide and this needs to be properly mapped to exploit the onshore opportunities and safeguard that supply chain. The supply chain needs to be examined, as with Project DEFEND, to ensure that we have onshore or near-onshore capabilities in the event of a conflict which others, for political reasons, would not wish to support.

Recommendations

22. The Government should, as a matter of urgency, ensure a robust Land Industrial Strategy is published, which should cover the innovation and technology presently available, retained and that which could be created. It should be linked to a comprehensive list of UK sovereign capabilities which should be protected and nurtured.
23. The Government should identify key technologies, many of them secret, invest in their development or empower British firms to do so. This will require the serious buy-in of HM Treasury.
24. The Government should curtail the 'we must have a competition' mantra of HM Treasury, as it has been shown to be not cost-effective nor good value-for-money. The other damaging mantra is 'it is better to buy off the shelf'. In the case of the latter, Britain has as far back as the Falklands campaign that not having key technologies as sovereign capabilities onshore has hampered operations in wars.
25. The Government should examine the promises made by overseas vendors of armoured vehicles which have failed to deliver both capabilities and jobs as promised. There should be penalties imposed.

21 August 2020