The RUSI Journal, Volume 162, Issue 3, 2017, pp. 50-58
DOI:10.1080/03071847.2017.1353249

The British Army in Transition: From Army 2020 to the Strike Brigades and the Logistics of Future Operations

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Introduction

The financial crisis of 2008 and the economic recession that followed forced the UK Government to adopt measures to reduce public spending in order to deal with a growing budgetary deficit and the UK's spiralling sovereign debt. Like most other departments, the Ministry of Defence (MOD) had to play its part, as well as tackling a massive funding gap in its equipment plan. While 2010's Strategic Defence and Security Review (SDSR)[1] and the National Security Strategy (NSS)[2] have been criticised as lacking any real strategic intent[3], they did at least attempt to tackle the MOD's budgetary problems. It also set in motion an ongoing programme of structural change, for both the MOD and the UK Armed Forces, that has continued after the publication of SDSR 2015[4] and meant that the MOD has faced a difficult period – having to juggle the need to conduct major transformation, change the way it acquires defence capability, and restructure the armed forces while continuing to conduct operations in both Iraq and Afghanistan. This paper aims to examine the impact of both SDSRs on the British Army, and takes a broadly chronological approach in doing so. It analyses the new 'Strike Brigade' concept and what that might mean for defence acquisition and the logistic support to future operations, while highlighting the questions still surrounding the outcome of the latest review.

SDSR 2010

SDSR 2010 put forward a model towards which the UK Armed Forces were to gradually transform over the remainder of the decade, entitled 'Future Force 2020'. Underpinning this vision was a new set of Defence Planning Assumptions[5] that would mean that in future, forces would generally be in one of three readiness states at any one time:[6]

1. the Deployed Force – forces currently engaged in operations;
2. the High Readiness Force – forces kept at a high state of readiness so as to be able to respond to a crisis or threat; and
3. the Lower Readiness Force – all other forces, which would include forces that have recently returned from operations or have recently been stepped down from high readiness.

The implementation of this restructuring towards Future Force 2020 would begin during a period of major change, not only for the UK Armed Forces but also for the wider MOD, including Defence Equipment and Support (DE&S). The MOD's contribution to the reduction in public spending was originally to total £5.3 billion over ten years (2012-13 to 2021-22).[7] This was in addition to the need to tackle the funding gap between the defence budget and the actual cost of the defence equipment programme, a gap that had increased from £38 billion to £74 billion (over ten years) due to the reduction in the defence budget after the SDSR.[8] The SDSR had originally proposed a regular army reduced to about 95,000 but these reductions were subsequently found to be inadequate for generating the savings required. In 2011 therefore, the MOD developed eight scenarios that had differing assumptions in the reduction to staff, equipment and capability, all of which were able to

generate the savings required. Three of these scenarios were passed for further development work by a senior military judgement panel. Following further work by the MOD in 'fleshing out' these proposals, the panel considered that the three shortlisted options all created unacceptable risk to the UK Armed Forces' ability to deliver the defence outputs as required by the SDSR. They then developed a hybrid option, which offered a tolerable level of military risk and delivered the outputs required, but also met the level of savings required.[9]

Given that the defence budget has a relatively high proportion of fixed costs, in the short term the only room for manoeuvre the MOD had in reducing costs quickly was to reduce the number of personnel. The reductions in the SDSR were subsequently revised upwards in line with the 'hybrid' option, from 25,000 to 29,000 civilians (34 per cent of the total) and from 7,000 to 25,000 military personnel (14 per cent of the total).[10] In fact, the number of military personnel to be cut would turn out to be even higher, with both the Royal Navy[11] and Royal Air Force[12] losing 5,000 personnel apiece.

Army 2020

The big loser in terms of personnel, however, was the British Army. Originally, it was to downsize to around 95,000 personnel as part of the changes envisaged under SDSR 2010 – effectively losing five infantry battalions, 40 per cent of the Challenger II fleet and 35 per cent of its heavy artillery.[13] There were, however, plans for a corresponding increase in the Reserve Force, from 19,000 to 30,000. The Army was to be restructured into five 'Multi-Role Brigades', each of 6,500 personnel with 1 x reconnaissance regiment, 1 x armoured regiment, 1 x armoured infantry battalion, 1 x mechanised infantry battalion, 2 x light-role infantry battalions, along with combat support (CS) and combat service support (CSS) assets. Each brigade was intended to be self-sufficient to be able to handle a range of missions, from low-intensity warfare to conventional warfighting.[14] But under the new plans, the Regular Army would have to downsize to 82,000 personnel – half the size it was in 1978 during the Cold War and the smallest it would have been since the early years of the Napoleonic Wars.[15] A team headed by General Nick Carter (at the time, Deputy Director Land Forces), was tasked with somehow re-writing the Army 2020 plan to accommodate the massive reduction in manpower while still trying to meet the (unchanged) Defence Planning Assumptions that had been written for the original figure of 95,000 personnel. This appeared to signal the end of the Multi-Role Brigade concept – but did it?[16]

With the UK having been involved in two large-scale, prolonged counter-insurgency / stabilisation operations in Iraq and Afghanistan, the British Army, has in terms of equipment, training, doctrine, tactics and sustainment, become optimised for those sorts of campaigns. Under the plans for Army 2020 (part of Future Force 2020) the British Army would, in an effort to re-orientate itself back to being more flexible and mobile, have three 'forces': the Reaction Force (HQ – 3 UK Division); the Adaptable Force (HQ – 1 UK Division); and the Force Troops Command (HQ located at Upavon).[17]Another major change was the introduction of both the Whole Force Concept (WFC) and the Total Support Force (TSF), which are discussed below.

The WFC was one of a range of ideas and initiatives to emerge from SDSR 2010.[18] It was subsequently formalized in Key Recommendation Eleven of Lord Levene's report.[19] The WFC consists of three components: the UK Armed Forces (both regular and reservist); the civil servants who work alongside them; and the contractors who support them on operations. It is, as its name suggests, conceptual and, as was emphasized by the Independent

Commission to Review the UK's Reserve Forces[20], should not be thought of as representing a rigid structure. The Commission stressed the dynamic nature of the WFC: that at any given time the contributions the three components make to the Whole Force should aggregate up to represent what is most operationally relevant and cost effective.

The TSF, on the other hand, was proposed by SDSR Support Study 3.4. The MoD's vision for the TSF is of an end-to-end support force '...capable of deploying and operating with fully integrated support capabilities derived from a pre-planned mix of military and civilian individuals and organisations'.[21] The TSF requires that Reservists and contractors from industry be integrated into Regular force structures against readiness assumptions and agile force generation requirements.

During two decades of expeditionary operations in the Balkans, Iraq, and Afghanistan, NATO nations have made increasing use of contractors on deployed operations, their expediential growth reflecting the fact that these nations, configured for *Cold War* scenarios, either lacked the required support skills and resources or possessed them in insufficient volume.[22] So, the use of contractors in support to operations (CSO) is nothing new, but has been *ad hoc* in character. The TSF aims to replace this *ad hoc* approach to outsourcing support functions with planned contracting, with industry performing support functions commensurate with threat level.[23] A proper assessment of risk - financial, reputational, and personal - is essential[24] and this would seem to demand a change in the established way of managing threat assessments and other potentially critical information from 'need to know' to 'need to share'. The fundamental principle of both WFC and TSF as the planned integration of regulars, reservists, and contractors, seems likely to demand changes to MoD and Army culture. A joint MoD/industry forum recognised this shortly after the TSF concept was published, agreeing that a partnering, rather than a transactional, relationship would enable MoD and industry to work together effectively, and that trust was fundamental to success. It recognised that 'Industry faces enormous difficulty (and so risk) in pricing a deliverable when the "what?", "where?", and "when?" are all unknown'.[25]

This uncertainty applies across Defence, but may perhaps be most acute in Army operations. It might be argued that, with regard to determining support resource requirements, there is more planning certainty in Maritime and Air operations than in Land operations. The argument goes that for Maritime and Air, support resources can be linked reasonably proportionately to deployed platforms (aircraft and ships), which can be linked in turn to Final Outputs in the Departmental Plan, whereas the composition of a deployed Army formation will be determined by how Army planning staffs decide to task-organise it to best achieve the mission; in this sense, whilst a brigade is a formally established, designated, and equipped formation with an established headquarters and equipment table, its actual composition, on deployment, can vary considerably. The task organisation may be made late in the force generation process, once the staff has a clearer picture on the threat level, in-country resources, likely contributions of coalition partners and, indeed, the mission the deployed force is being asked to achieve. It would seem to be essential, therefore, that contractors become more closely involved in the operational estimate that creates this operational 'picture' if they are to accept the financial and other risks of providing deployed support, and make better-informed cost estimates for doing so.

The planning uncertainty which those industry organisations that commit to the TSF might face may be further exacerbated by a reality of Land operations versus those of Maritime and Air which was highlighted in the 2010 Defence Support Review: '...that its support costs

proportionately include more personnel than equipment, and it is characterized by a large number of individual, distributed assets and the intimate nature of their maintenance and support'.[26] The TSF envisages '...the greater planned use of contractors on operations, in functions that are commensurate with the category of threat level in order to accommodate force protection and duty of care responsibilities, normally with an increasingly higher proportion of contractors on successive roulements for enduring operations'.[27] Nonetheless, it seems fair to deduce that any lack of confidence on industry's part that they can price their commitment to supporting operations, and resource them with trained people at required readiness, is likely to have a greater negative impact on support to Land operations than to Maritime and Air. It would seem that for the Army, a commitment to integrating regulars, reservists, civil servants, and contractors will be fundamental to the success of both WFC and TSF. Vincent Connelly has described the challenge of integrating Army reserves into a regular Army some of whose personnel see reservists as less committed and therefore less professional as a consequence. He proposes that for integration to work 'the challenge is to make the Reserves relevant to the Regular Army and for the status of the Regular Army to be enhanced by the future success of the Reserves. This will not be easy and will require constant monitoring'.[28]

Many of the basic changes envisaged by SDSR 2010 were due to be completed by mid-2015, such as the changes to the structure of the Regular Army, the formation of the two divisional headquarters and reorganising units into the three 'forces'. Other changes, such as the expansion and restructuring of the Army Reserve, its integration with the Regular Army, the return of forces from Germany and unit moves and mergers would take longer.[29] However, by this time the MOD was already looking towards the next SDSR, due to be produced as soon as possible after the General Election of May 2015.

SDSR 2015 and Joint Force 2025

The new SDSR was published (as a combined document with the new NSS) in November 2015. Many commentators greeted the new SDSR with a measure of guarded optimism[30], with most of the positive news (i.e. the extra money) being focused on four areas – those of countering terrorism, restructuring the armed forces, and cyber warfare[31] on the one hand, and equipment purchases on the other. However, the reduction in numbers of the British Army to 82,000 will not be reversed, while the Army Reserve is now supposed to grow to 35,000 and the MOD as a whole is to lose thirty percent of its civil service workforce (down to 41,000).[32]

Joint Force 2025 builds on Future Force 2020 in that, by 2025, it is envisaged that the UK will be able to deploy a force of around 50,000 personnel, which will include a maritime task group centred on a Queen Elizabeth class aircraft carrier with F35 combat aircraft, an army division of three brigades, an air group and a special forces task group. Otherwise, the Armed Forces will be able to undertake multiple smaller operations, such as the operations against ISIL in Iraq, helping to tackle the Ebola outbreak in Sierra Leone, anti-piracy missions in the Persian Gulf and disaster relief operations around the UK.[33]

The British Army will be able to deploy a division of three brigades to undertake high-intensity operations. The forces that this division will be able to draw from will include:[34]

- 2 x armoured infantry brigades – the Challenger II tanks will have their service life extended.
- 2 x strike brigades.

- 16 Air Assault Brigade.
- 2 x specialist brigades – these are 77 Brigade (counter-hybrid warfare) and 1 ISR Brigade (Intelligence, Surveillance and Reconnaissance). 77 Brigade replaces what was known as the Security Assistance Group and is to focus on the use of 'soft' (non-lethal) methods (such as social media and psychological warfare) to alter a target audience's behaviour – the sort of tactics used by Russia in its conflict with Ukraine.[35]
- 4 x Apache helicopter squadrons, 4 x Lynx Wildcat helicopter squadrons, 3 x Watchkeeper UAV batteries, 2 x Puma helicopter squadrons, 3 x Chinook helicopter squadrons, 2 x Merlin Mk. 4 helicopter squadrons – the Apache and Chinook helicopters will be upgraded.

However, an analysis of the both SDSR 2015 and the Defence Fact Sheets that followed them[36] reveal that there is little detail underlying these broad statements of intent, and questions remain. While the SDSR contains little as regards investment in new capabilities for the British Army, it is really about government endorsement for a number of long-term visions that have gradually emerged under the current Chief of the General Staff. These have included the operationalisation of the 'Land Joint Strike' concept (which itself needs to be fully articulated), the incorporation of 'Integrated Action' into Army doctrine[37], the ambition to operate once again at the divisional level, an emphasis on 'agility', and rebuilding readiness. While the British Army now has a force structure around which it can develop, it seems appropriate to ask what the desired 'end state' is for this concept. These developments, the introduction of Ajax and the creation of two specialist brigades, need to be matched by the development of a suitable doctrine, both in terms of state and non-state adversaries, all of which will help to inform future acquisition planning. If the aspiration is to now have the ability to field a joint force of about 50,000 personnel, with the British Army expected to contribute as many as 40,000[38], it might be asked how it is going to rapidly deploy what would constitute over half of its current regular personnel, recent figures having shown that the regular army has now shrunk below 80,000?[39] This applies to the reserves as well, given the difficulty the MOD has had in expanding them in line with the Army 2020 target of 30,000[40] let alone the new target of 35,000.[41] While the provision of trained, disciplined and motivated personnel is vital (raising the question of what can be done to boost the retention of quality personnel[42]), being able to deploy forces on operations is not just a question of overall personnel numbers. The Army has a system of unit rotation, now known as A-FORM[43] (formerly known as the Formation Readiness Cycle) within which individual units will rotate over a thirty-six month period. So at any one time, some units will be undergoing training, some will be on operations or ready to be committed to operations, while the rest will be undertaking 'Other Tasks' (See Figure 1 below).[44] On top of that, the Army is supposed to earmark 10,000 personnel for emergency relief operations, but from which formations will they be drawn and what are the implications for readiness levels?

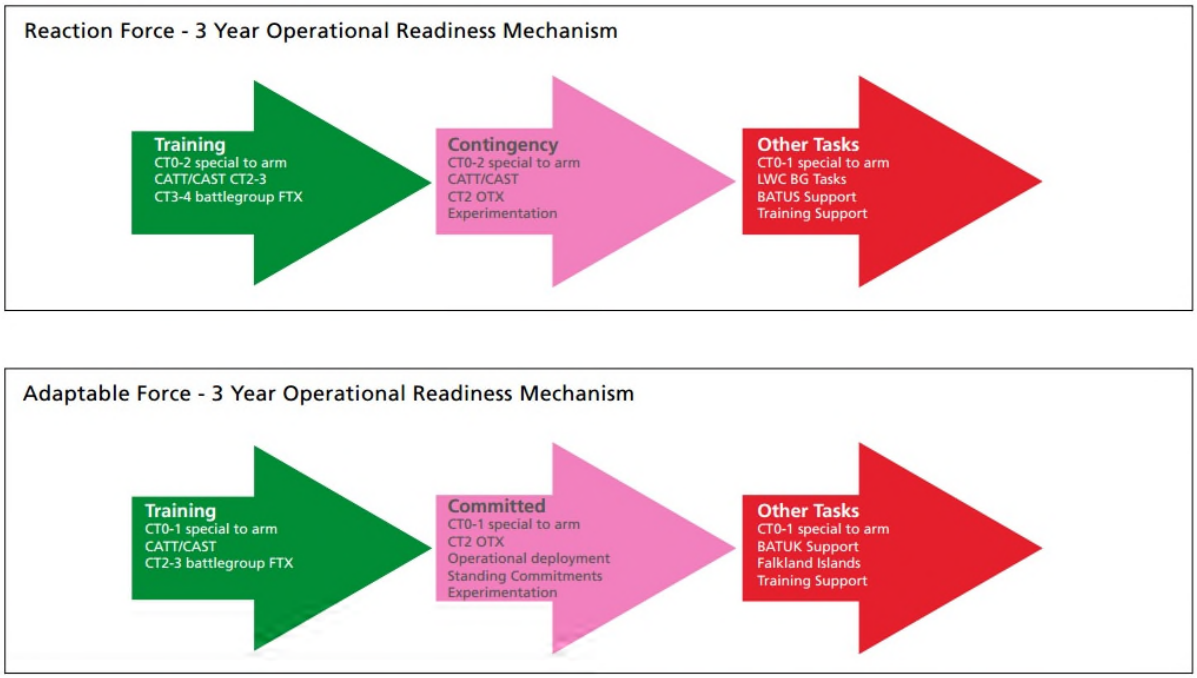

Figure 1. Force Readiness Mechanisms for both the Reaction and Adaptable Forces.[45]

In addition, and as a result of the additional savings required from the MOD and armed forces under SDSR 2015 (£11 billion), the British Army announced Project 'Marble Arch' in mid-2016. This is a deep, wide-ranging review of the Army's future plans, including force structure, equipment and services acquisition, manpower requirements and basing footprint. The review will have to try and reconcile two conflicting aims with a senior army source saying the 'financial pressures are immense and nothing is sacrosanct, yet we have been mandated by the defence review to generate specific effects'.[46] Joint Force 2025 and Project 'Marble Arch' therefore mean further reorganisation for the British Army, which includes the creation of two new strike brigades.

The Strike Brigades and the Logistics of Future Operations

The strike brigades (Multi-Role Brigades in another guise?) will sit alongside two armoured infantry brigades, six infantry brigades and 16 Air Assault Brigade.[47] This change from the structure of Future Force 2020 of three armoured infantry brigades, seven infantry brigades and 16 Air Assault Brigade[48] seems to indicate that with the total number of brigades available staying the same, the strike brigades will be formed by 'downgrading' one of the armoured infantry brigades and 'upgrading' one of the adaptable infantry brigades. But what exactly does that mean, notably for the armoured infantry brigade's Challenger II regiment, but also for future procurement in general and for logistic support requirements? There is not yet a proposed Table of Organisation and Equipment (TO&E) for a strike brigade, the only information being that it will be a ‘medium’ brigade[49], lying somewhere between an armoured infantry brigade and 16 Air Assault Brigade. It will be made up of 5,000 personnel in three battalions, equipped with the new Ajax armoured fighting vehicle (AFV) and an as yet unspecified mechanised infantry vehicle (MIV), probably in a wheeled, 8x8 configuration.[50] Will the brigade structure be set or will there be a degree of flexibility, so that it can be adapted to cover the requirements of different mission types (which would seem to underline the necessity for keeping the armoured regiment), or where requirements might change mid-operation? Also, if two existing brigades are re-roled, with regard to future

acquisition, are there assets that are immediately transferable, are there some that will need modifying / upgrading, or are there some that will need complete replacement?[51]

The introduction of the two strike brigades will have a major impact on acquisition decisions in the short-to-medium term. Taking just one example, if the idea is to have these brigades configured for rapid mobility and force projection, what CS and CSS assets will their TO&E include?[52] The concept of the strike brigade seems to rule out the Titan Armoured Bridgelayer, Trojan AVRE[53] and Challenger ARRV[54] vehicles (60, 62.5 and 62 tons respectively) as well as the AS90 Self-Propelled Gun (SPG) which weighs 45 tons[55] and has a significant logistic footprint (heavy and voluminous 155mm ammunition stocks, as well as the maintenance resources associated with a large, complex, tracked weapon system). For future acquisition, this means that the MOD will have to invest in procuring additional vehicles that are rapidly deployable (i.e. by aircraft), either ones that are already in service, such as the Terrier, or alternatively, a Military-Off-the-Shelf (MOTS) solution. The same goes for artillery support – will the MOD acquire additional L118 105mm light guns (and questions arise as to whether they are suitable for a formation such as a strike brigade) or look at a MOTS solution such as the US M777 or French Caesar 155mm lightweight artillery systems?[56]

Under the plans for Army 2020, 589 Ajax vehicles (which are predicted to be around 42 tons) were ordered, so as to equip three cavalry regiments (one for each armoured infantry brigade) and nine reconnaissance platoons (one for each of the three armoured regiments and six armoured infantry battalions in the three armoured infantry brigades). A key question is what the doctrinal framework within which the Ajax vehicle will be operated will look like. How will it operate in conjunction with the new MIV, Warrior and Challenger II? What will the introduction of Ajax mean for future operations, especially its impact on force readiness, deployment, sustainment and integration? [57] How will it be distributed? If there is no increase to the number of vehicles ordered, how will the fleet be managed so that the fourth brigade is covered? It should be possible to equip four cavalry regiments (one for each of the strike and armoured infantry brigades) as well as the reconnaissance platoons within the armoured regiments and armoured infantry battalions. However, this is likely to require careful whole fleet management (WFM). The original intent for WFM was that a fleet would be split: one increment remaining with the Field Army for training and operations use, the other going into storage, ideally in conditions of controlled humidity. The two increments would be rotated periodically to balance out wear and tear across the whole fleet. Unfortunately, the maintenance cost benefits of this approach have been undermined by the realities of urgent operational requirement (UOR) procurement for operations in Iraq and Afghanistan. Where the business case is approved, the Treasury will generally fund a UOR procurement under what it terms the Net Additional Cost of Military Operations (NACMO). Numerous enhancements to vehicles deployed in Iraq and Afghanistan, for example to add additional armour protection or weapon systems, have been funded this way as UORs. However, the Treasury is not inclined to fund such enhancements beyond those vehicles actually deployed in theatre or in limited numbers to enable critical pre-operational training. This effectively creates a mixed fleet, the 'in-storage' increment of which cannot be rotated out to operational and training use because it falls short of what the MoD terms the 'theatre entry standard'. The net result is a compromising of the logic of WFM, a reality which, if it applies to Ajax, could make fleet management very challenging.

There is no detail on the proposed MIV, only that it was originally intended to replace the Mastiff and Ridgeback Mine Resist Ambush Protected (MRAP) vehicles which equip the

three battalions of 'Heavy Protected Mobility Infantry' (HPMI) and is likely to be a wheeled 8x8 MRAP-style vehicle. Will it be along the lines of existing 8x8 wheeled Infantry Fighting Vehicles (IFVs) such as the German / Dutch Boxer, French VBCI and US Stryker? This class of vehicle varies widely in weight and capability, each one having different requirements with regard to both transport resources and logistic support. There is also very little information as to how the capability will be acquired and the numbers involved. Will it be by means of competitive tendering or a single source procurement? One possible contender is the German / Dutch Boxer vehicle. Formerly known as the Multi-Role Armoured Vehicle (MRAV), the multi-national programme originally involved Germany, France and the UK in developing a wheeled IFV. The UK pulled out in 2003 due to a 'requirements mismatch' – the vehicle had become too heavy to be transported by a C-130J Hercules, although at that time, the RAF had already started to acquire the C-17 Globemaster aircraft which could have transported two of such vehicles. Interestingly, the MOD's solution – the nationally developed Ajax – has become too heavy to be transported by a C-130J as well. It would be ironic if the UK decided to acquire a vehicle thirteen years after it pulled out of the development programme.[58]

In the event of an operational deployment, the force elements responsible for delivering equipment and logistics support to a strike brigade must be tailorable to the brigade's structure. If the strike brigades are indeed able to be task organised, this will complicate their logistic support as they could very well have different requirements from mission to mission. For example, a strike brigade that is organised around light infantry is going to have very different support requirements from one that has an armoured regiment, a mechanised infantry battalion and a HPMI battalion. Such force elements must also be responsive and be able to provide the support so as to enable the brigade to achieve its stated mission within readiness times. In addition to agility, this requires modularity, a degree of interchangeability, and a careful evaluation of where particular support capabilities should be concentrated for best effect.

During operations in Iraq and Afghanistan, Army maintainers had to maintain an increasingly diverse fleet of complex platforms, many of which were procured under urgent operational requirements (UOR) and delivered in an often bewildering array of configurations and marks. Given the drawdown in the numbers of regular Army personnel, both the Royal Electrical and Mechanical Engineers (REME) and the Royal Signals will have to wrestle with the extent to which they relinquish the maintenance, repair, and overhaul (MRO) of complex vehicles, weapon systems and ISTAR[59] equipment to the defence industry. The TSF concept arguably encourages this delegation of responsibility to industry personnel, but only where careful consideration has been given to the need to protect specific maintenance skills sets organic to military personnel, and to manage the support risk inherent in exposing non-military personnel to the hazards of a non-permissive theatre of operations.[60] A skill traditionally found in REME maintainers is that of improvised repair, and this is likely to be downgraded if they lose touch with the equipment the brigade deploys.

Such concerns may be offset by the design of the Ajax vehicle. General Dynamics makes much of its modular construction, its scalable, open architecture, and what it calls the 'Common Base Platform' which maximises commonality across the Ajax vehicle variants.[61] This should theoretically lead to a maintenance policy based on the more straightforward maintenance task of removing and replacing complete assemblies, compared with an interventionist maintenance policy which sees such assemblies being subject to a more granular, detailed and time consuming disassembly, repair and replacement. Other theoretical

benefits of modularity and commonality include: a reduction in the range of inventory (the part count); reduction in supply risk because spares can be procured and deployed for a generic family of vehicles, rather than a specific variant; and consequent economies of scale. As a result, inventory volumes should reduce, thereby easing the burden on the physical supply chain, and maintainers should benefit from the easier incorporation of spares into MRO activities in the strike brigade's light aid detachments and fitter sections. Commonality should enable a reduction in the variety of support and test equipment, tools, and technical publications, along with simplifying the skills sets required of the maintainers. Greater cross-servicing can be achieved, enabling distinct units to support each other, especially where battlefield attrition has placed a greater maintenance burden on particular units.

Simplified maintenance, a reduced range and scale of inventory, and the consequent reduction in the brigade's logistics 'footprint', should all contribute to greater agility and responsiveness. Two cautionary notes should be sounded, however: a maintenance policy which relies on getting assemblies back to the Original Equipment Manufacturer (OEM) or other maintenance facility in depth demands that the reverse supply chain is managed to ensure that the reverse flows of these small population items are expedited efficiently; and the theoretical benefits will be counteracted where the brigade is having to field legacy MRAP vehicles, such as the Mastiff family, whilst progressively fielding the Ajax and other new vehicle types. The UK MOD Permanent Joint Headquarters (PJHQ) must continue to prioritise the reverse flows of key materiel, as well as the forward flows, facilitated by the Defence Support Chain Operations and Movements (DSCOM) organisation which is responsible for allocating room on strategic movement assets.[62] The challenge of taking legacy MRAP vehicles, bought under UOR procedures, 'into core', i.e., converting them from UORs to contingent capability, presents a significant financial and management challenge to the Army which is likely to remain for many years to come.

The eventual retirement of the UOR vehicles, and their replacement with the MIV, if that is what happens, will almost certainly have to be a phased, incremental process. The aim will be to withdraw the old and replace with the new in sub-unit or unit increments. This is an established approach which aims to maintain the operating coherence of user units as well as can be achieved, but one which has support implications. The many variants of the Mastiff MRAP vehicle, for example, all share the majority of their parts and sub-assemblies but nonetheless also contain parts that are unique to each variant. This leads to an increase in the range of inventory a deployed force has to carry, this adding to inventory volume, supply management complexity, and the complexity of MRO operations. The added inventory volumes increase the storage liability to be accommodated in warehouses, as well as that on Army logistics unit vehicles, the latter adding further to the 'logistics drag' of a unit in the field – a reality which rather sits at odds with the UK's expeditionary posture, the Army's manoeuvrist doctrine and the concept of the Strike Brigade. The support benefits which the Army will accrue from fielding the Ajax and the MIV will become reality, but only after it has managed the challenges of supporting mixed fleets of existing contingent vehicle types, the UORs which are being taken 'into core', and of the new vehicles as they are fielded progressively.

Conclusion

This paper has highlighted that the British Army has been in a state of transition since SDSR 2010, on top of having to contend with continuing operations in Iraq (until 2011) and Afghanistan (until 2014). It is a state of affairs that does not seem to be ending anytime soon.

This was confirmed with, firstly, the publication of a new SDSR in late 2015, which announced more changes to the structure of the field army, including the formation of two new strike brigades. However, there has been little detail to accompany any of these announcements and it is vital for both British defence policy and the British Army that the uncertainty surrounding the implementation and eventual impact of SDSR 2015, the creation of the new formations, including questions as to their place in British Army doctrine, as well as their structure, role, equipment and logistics support requirements, be cleared up as soon as possible.

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[1] HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*, Cm7948 (London: The Stationery Office, October 2010), at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62482/strategic-defence-security-review.pdf, as of 15 March 2016.
[2] HM Government. *A Strong Britain in an Age of Uncertainty: The National Security Strategy*, Cm7953 (London: The Stationery Office, October 2010) at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/61936/national-security-strategy.pdf, as of 19 January 2017.
[3] House of Commons Defence Committee, *Towards the Next Defence and Security Review: Part One*, Volume I, HC 197 (London: The Stationery Office Ltd, 7 January 2014), at http://www.publications.parliament.uk/pa/cm201314/cmselect/cmdfence/197/197.pdf as of 15 March 2016.
[4] HM Government, *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*, Cm9161 (London: HMSO, November 2015), at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478933/52309_Cm_9161_NSS_SD_Review_web_only.pdf, as of 15 March 2016.
[5] *Op Cit*. Cm7948, p. 19.
[6] *Op Cit*. Cm7948, p. 19.
[7] National Audit Office, *Army 2020*, HC263 (London: NAO Communications, 11 June 2014), at https://www.nao.org.uk/wp-content/uploads/2014/06/Army-2020.pdf, as of 23 March 2016, p. 5.
[8] *Ibid*. p. 17.
[9] *Ibid*. pp. 17-19.
[10] National Audit Office, *Managing Change in the Defence Workforce*, HC1791 (London: The Stationery Office, 9 February 2012), at http://www.nao.org.uk/wp-content/uploads/2012/02/10121791.pdf, as of 16 March 2016, p. 5.
[11] HM Government, *Fact Sheet 6: Future Force 2020 – Royal Navy*, 19 October 2010, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62488/Factsheet6-Royal-Navy.pdf, as of 16 March 2016.
[12] HM Government, *Fact Sheet 8: Future Force 2020 – Royal Air Force*, 19 October 2010, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62490/Factsheet8-RoyalAirForce.pdf, as of 15 March 2016.
[13] BBC, 'Q&A: Army 2020 reorganisation', 3 July 2013, at http://www.bbc.co.uk/news/uk-18710936, as of 16 March 2016;HM Government, *Fact Sheet 7: Future Force 2020 – British Army*, 19 October 2010, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62489/Factsheet7-British-Army.pdf, as of 16 March 2016.
[14] Brown, Nick and Foss, Chris, 'SDSR Analysis: British Army Slims Down', *Jane's Defence Weekly* (20 October 2010) on janes.ihs.com as of 10 November 2016; Gabriele, 'Multi-Role Brigades and Army 2020', *UK Armed Forces Commentary* website, located at http://ukarmedforcescommentary.blogspot.co.uk/2012/12/multi-role-brigades-and-army-2020.html, as of 9 November 2016.
[15] Chandler David and Beckett Ian, *The Oxford History of the British Army* (Oxford: OUP, 2002), p. 132.
[16] *Op Cit*. Gabriele, 'Multi-Role Brigades and Army 2020'.
[17] British Army, *Transforming the British Army – An Update*, July 2013, at http://www.army.mod.uk/documents/general/Army2020_Report_v2.pdf, as of 21 March 2016.
[18] Mace Chris (D DSR), *A Strategic Vision for Defence Support*, DSR/VP/001, 15 November 2010.
[19] Lord Levene, *Defence Reform – An Independent Report into the Structure and Management of the Ministry of Defence*, June 2011, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/27408/defence_reform_report_struct_mgt_mod_27june2011.pdf as of 15 March 2016.

[20] Ministry of Defence, *Future Reserves 2020: The Independent Commission to Review the United Kingdom's Reserve Forces*, (London: The Stationery Office, July 2011) at http://www.mod.uk/NR/rdonlyres/263D5F71-30CE-45BC-9442-398B1DC12C93/0/futurereserves_2020.pdf as of 5 April 2016.
[21] ACDS (Log Ops), *Total Support Force - What it Means for Defence and Industry*, Presentation to RUSI, 21 March 2011.
[22] Steirn C, 'Total Support Force: Long-Term Strategic Partnering' in *Defence Procurement International*, Winter 2012, pp. 26-30.
[23] *Op Cit*. Mace, 2010.
[24] Cranfield University, *Defence Logistics Masterclass 2012*, Cranfield Defence and Security, October 2012.
[25] *Ibid*.
[26] Ministry of Defence / Deloitte, *Defence Support Review Phase-1 Report (Refresh)*, February 2010, p. 15.
[27] *Op Cit*. Mace, 2010.
[28] Connelly V, 'How to Create an Integrated Army' in *British Army 2014*, pp. 71-72, located at http://army.newsdeskmedia.com/Images/Upload/files/TheBritishArmy2014.pdf, as of 3 November 2016.
[29] *Ibid*. p. 14.
[30] See for example Hampshire Dr Edward, 'NSS/SDSR 2015: The 2015 SDSR in Context – A Very Unusual Defence Review?', 24 November 2015, at http://defenceindepth.co/2015/11/24/nsssdsr-2015-the-2015-sdsr-in-context-a-very-unusual-defence-review/, as of 5 April 2016; Foley Dr Robert, 'NSS/SDSR 2015: The Missing Link', 24 November 2015, at http://defenceindepth.co/2015/11/24/nsssdsr-2015-the-missing-link/, as of 5 April 2016.
[31] Ito Pete and Antill Peter, 'Assessing What Matters', *Defence Procurement International*, Winter 2015/16, pp. 12-17.
[32] *Op Cit*. Cm9161, pp. 27, 33.
[33] *Ibid*. pp. 28-33.
[34] *Ibid*.
[35] British Army. '77th Brigade' on the *British Army* website, located at http://www.army.mod.uk/structure/39492.aspx, as of 18 January 2017; Hume, D. 'Introducing 77 Brigade and a New Way of Business' on *Think Defence* website, posted 19 February 2015, located at http://www.thinkdefence.co.uk/2015/02/introducing-77-brigade-new-way-business/, as of 18 January 2017; Galer Andrew, 'SDSR 2015: UK Plans for Reservists to be in Forefront of Cyber and Humanitarian Crises' *Jane's Defence Weekly* (23 November 2015), at janes.ihs.com, as of 4 March 2016.
[36] Ministry of Defence, *SDSR 2015: Defence Fact Sheets*, DDC 01010, January 2016, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492800/20150118-SDSR_Factsheets_1_to_17_ver_13.pdf, as of 20 March 2016.
[37] *Op Cit*. Hume, 2015.
[38] Quentin Peter, 'Endorsement, Not Investments: The British Army in the 2015 SDSR', *RUSI Commentary*, 27 November 2015, at https://rusi.org/commentary/endorsements-not-investments-british-army-2015-sdsr, as of 4 December 2015; *Op Cit*. Ministry of Defence, January 2016, p. 4.
[39] Farmer Ben, 'Army Shrinks Below 80,000 as Recruitment Struggles' in *The Telegraph*, 2 September 2016, located at http://www.telegraph.co.uk/news/2016/09/02/army-shrinks-below-80000-as-recruitment-struggles/, as of 4 November 2016.
[40] BBC, 'Armed Forces Plans Criticised as Reservist Recruitment Stalls', *BBC News* website, 13 November 2014, at http://www.bbc.co.uk/news/uk-30033506, as of 8 March 2016.
[41] *Op Cit*. Cm9161, p. 33.
[42] *Ibid*.
[43] Army 2020 Formation Operational Readiness Mechanism.
[44] *Op Cit*. British Army, July 2013, p. 15.
[45] Acronyms used in the diagram: CATT = Combined Arms Tactical Trainer, CAST = Command and Staff Trainer, FTX – Field Training Exercise, OTX = Overseas Training Exercise, BATUS = British Army Training Unit Suffield (Canada), BATUK = British Army Training Unit Kenya, CT = Collective Training (e.g., CT0-2), LWC BG = Land Warfare Centre Battlegroup.
[46] Ripley Tim, 'British Army Looks Again at Future Plans', *Jane's Defence Weekly* (1 July 2016) on janes.ihs.com as of 10 November 2016.
[47] *Op Cit*. Ministry of Defence, *SDSR 2015: Defence Fact Sheets*, p. 9.
[48] *Op Cit*. British Army, July 2013, p. 5.
[49] Ministry of Defence (MOD), *Future Land Operating Concept 2008*, DCDC, October 2008, p. 2-10.
[50] *Op Cit*. Cm9161, pp. 6, 31; Gabriele, 'After the SDSR – Strike Brigades: A Big Deal?', *UK Armed Forces Commentary* website, last updated 2 December 2015, at

http://ukarmedforcescommentary.blogspot.it/2015/11/after-sdsr-strike-brigades-big-deal.html, as of 4 December 2015.
[51] de Larrinaga Nicholas and Goodlad Ben, 'SDSR 2015: British Army Reform Plans Left Vague', *Jane's Defence Weekly* (27 November 2015), at janes.ihs.com, as of 4 December 2015.
[52] *Op Cit*. Gabriele, 2015.
[53] Armoured Vehicle Royal Engineer.
[54] Armoured Repair and Recovery Vehicle.
[55] Genys Andrius, *Military-Today.com* website, located at http://www.military-today.com/index.htm as of 3 November 2016.
[56] *Op Cit*. de Larrinaga and Goodlad, 2015.
[57] *Op Cit*. Quentin, 2015; Clark Micah, 'Strike Unsure? Clarifying the Role of Armour in Joint Force 2025' in *RUSI Defence Systems* (Vol. 18, 22 April 2016), at www.rusi.org, as of 20 May 2016.
[58] Antill Peter, 'European Collaborative Procurement – The Multi-Role Armoured Vehicle Programme' in Moore David and Antill Peter, Case Studies in Defence procurement and Logistics, Cambridge: Cambridge Academic Press, August 2014, pp. 329-346; Haynes Deborah, 'Army set to buy £3bn fleet from German firms' in *The Times*, 15 October 2015, p. 8.
[59] Intelligence, Surveillance, Target Acquisition and Reconnaissance.
[60] *Op Cit*. ACDS (Log Ops), 21 March 2011.
[61] See General Dynamics UK. *AJAX: The Future of Armoured Fighting Vehicles for the British Army* webpage, at http://www.generaldynamics.uk.com/AJAX/, as of 25 March 2016.
[62] For DSCOM's role, see Ministry of Defence (MOD), *JSP 886, Vol. 1, Pt 1: Introduction to the Joint Supply Chain*, Version 2.4, 20 December 2012, p. 6.