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Published in 2019 by the Royal United Services Institute for Defence and Security Studies.

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RUSI Occasional Paper, June 2019. ISSN 2397-0286 (Online); ISSN 2397-0278 (Print).

Printed in the UK by Kall Kwik.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>A2/AD</td>
<td>anti-access area denial</td>
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<tr>
<td>AMB</td>
<td>ambulance</td>
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<td>AMOS</td>
<td>advanced mortar system – Patria double-barrelled 120-mm mortar turret</td>
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<td>AMV</td>
<td>armoured modular vehicle</td>
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<td>APC</td>
<td>armoured personnel carrier</td>
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<td>APFSDS</td>
<td>armour-piercing fin stabilised discarding sabot</td>
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<tr>
<td>APS</td>
<td>active protection system</td>
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<tr>
<td>ATGM</td>
<td>anti-tank guided missile</td>
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<td>AUDS</td>
<td>anti-UAV defence system</td>
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<tr>
<td>C2</td>
<td>command and control</td>
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<tr>
<td>CE</td>
<td>combat effectiveness</td>
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<tr>
<td>COA</td>
<td>course of action</td>
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<td>CS</td>
<td>combat support</td>
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<tr>
<td>CSS</td>
<td>combat service support</td>
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<tr>
<td>CTC</td>
<td>cased telescoped cannon</td>
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<tr>
<td>C-UAS</td>
<td>counter-unmanned aerial system</td>
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<tr>
<td>EW</td>
<td>electronic warfare</td>
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<tr>
<td>DMR</td>
<td>designated marksman’s rifle</td>
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<td>GBAD</td>
<td>ground-based air defence</td>
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<td>GRU</td>
<td>Russian military intelligence</td>
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<td>HET</td>
<td>heavy equipment transporter</td>
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<td>HIMARS</td>
<td>high-mobility artillery rocket system</td>
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<td>HMG</td>
<td>heavy machine gun</td>
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<td>HPM</td>
<td>high-powered microwave</td>
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<tr>
<td>IFV</td>
<td>infantry fighting vehicle</td>
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<td>ISO</td>
<td>International Organization for Standardization</td>
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<td>ISR</td>
<td>intelligence, surveillance and reconnaissance</td>
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<td>JAV</td>
<td>Javelin team</td>
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<td>JTAC</td>
<td>joint terminal attack controller</td>
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<tr>
<td>LMG</td>
<td>light machine gun</td>
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<td>MANPADS</td>
<td>man-portable air defence system</td>
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<td>MBT</td>
<td>main battle tank</td>
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<tr>
<td>MFC</td>
<td>mortar fire controller</td>
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<tr>
<td>MIV</td>
<td>mechanised infantry vehicle</td>
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<td>MLET</td>
<td>modified light equipment transporter</td>
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<td>MLRS</td>
<td>multiple-launch rocket system</td>
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<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
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<td>NEMO</td>
<td>new mortar – Patria single-barrelled 120-mm mortar turret</td>
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<td>RAMC</td>
<td>Royal Army Medical Corps</td>
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<tr>
<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>REC</td>
<td>recovery vehicle</td>
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<td>REME</td>
<td>Royal Electrical and Mechanical Engineers</td>
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<td>RHA</td>
<td>rolled homogenous armour</td>
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<td>RLC</td>
<td>Royal Logistics Corp</td>
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<tr>
<td>RWS</td>
<td>remote weapon station</td>
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<td>SAM</td>
<td>surface-to-air missile</td>
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<td>SCATMIN</td>
<td>scattered mines</td>
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<tr>
<td>SDSR</td>
<td>strategic defence and security review</td>
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<td>SEG</td>
<td>Strike Experimentation Group</td>
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<tr>
<td>SHORAD</td>
<td>short-range air defence</td>
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<td>STANAG</td>
<td>NATO standardization agreement</td>
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<tr>
<td>SV</td>
<td>support vehicle</td>
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<tr>
<td>UAS</td>
<td>unmanned aerial system</td>
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<tr>
<td>UAV</td>
<td>unmanned aerial vehicle</td>
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<tr>
<td>VDV</td>
<td>Russian airborne troops</td>
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Executive Summary

Military concepts are largely aspirational; they describe how a military wants to fight in the future and should, therefore, set the goals to be realised through procurement and training. The translation from concept to extant force rarely follows a smooth linear progression. This is certainly the case with the British Army’s Strike concept. The idea for a rapidly deployable, mobile force was inspired by France’s 2013 intervention in Mali. However, Russia’s 2014 annexation of Crimea, and the subsequent NATO summit, led the UK government to commit to a major procurement programme for Ajax armoured vehicles before its role in the force had been clearly determined. The subsequent 2015 Strategic Defence and Security Review then announced the creation of Strike Brigades as a core part of Army 2020 Refine, before the details of the Strike concept had been fully worked out.

Rather than make subsequent announcements, the British Army has been undertaking a detailed process of experimentation to inform how these brigades will be structured, and how they will fight. The lack of public detail about the brigades following their announcement has led to much confusion in the public discourse surrounding Strike. The army will soon need to commit to procurement decisions, however, to transition Strike from concept to force. In a fiscally constrained environment those decisions involve difficult trade-offs.

This paper is an attempt to conduct an independent assessment of the missions that a Strike Brigade may plausibly be expected to undertake, the capability and training requirements for the force to fulfil its missions, and the systems and platforms available that meet these requirements. The paper hopes to provide an independent evidence base to inform policymakers examining the army’s procurement plans to deliver the Strike Brigade. This paper is not a study of the merits of the Strike concept as a purely theoretical force. It does not, for instance, re-tread the well-worn debates over Ajax’s suitability for the concept. With two regiments in 1 Armoured Infantry Brigade already receiving the vehicle, the useful question is how Ajax can be integrated into the force. Nor is this study a comparison of Strike with other potential formations. It is a narrow study of the non-discretionary requirements to make the Strike Brigade a viable force in fulfilling a set of identified missions.

The key conclusions are:

- All Strike missions depend upon the brigade being able to undertake an extended road march of up to 2,000 km. This operational reach is critical to the force’s utility. This means that the core of the force must be built around platforms that can self-deploy. The mechanised infantry vehicle (MIV) therefore represents the core of the brigade.

Ajax vehicles will need to be moved on heavy equipment transporters or modified light equipment transporters. Many combat support (CS) and combat service support (CSS) functions should be mounted on military trucks to reduce the number of platforms, and therefore the burden on the Royal Electrical and Mechanical Engineers in maintaining vehicles in the field.

- The brigade cannot depend on support from aviation or air assets in any Eastern European scenario due to Russian air defence systems. Furthermore, being dependent on fires from Allied formations severely limits the brigade’s utility, as it becomes a burden on Allied forces with a wide set of targets of their own. Given the weight restrictions imposed by the brigade’s mobility requirements, the force will have limited protection, and must compensate by being sufficiently lethal.

- The most dangerous threats to the brigade are massed enemy armour, massed fires, and enemy air attack. In the face of massed enemy artillery, the brigade will need to be able to fight dispersed. Against massed armour, the brigade will need to be able to call down effective indirect fires. Most 155-mm artillery solutions are not compatible with the brigade’s mobility requirements and given the risk of operational penetration of dispersed sub-units, would be difficult to protect. Brigade-level wheeled multiple launch rocket systems (MLRS) therefore appear to be a much more credible capability. Against smaller concentrations of armour, brigade sub-units will need readily available anti-tank guided missiles (ATGM), calculated at 108 launchers across the mechanised infantry battlegroups. In a contested airspace organic brigade-level air defence is critical, such as that afforded by the national advanced surface-to-air missile systems with evolved SeaSparrow missiles.

- MLRS will need to be reserved for concentrated targets. Each sub-unit will therefore need to have sufficient lethality to attrit company-sized enemy groups, supported by armour and aviation. This leads to each mechanised infantry company containing three combat teams comprised of eight vehicles:
  - A command MIV with a heavy machine gun (HMG) remote weapon station (RWS)
  - A MIV with a 25-mm Gau-22 or BK-27 RWS
  - Two MIVs with HMG RWS
  - Two MIVs with turret 40-mm cased telescoped cannons and twin ATGMs
  - A MIV with 120-mm mortar
  - An engineering MIV with dozer blade and HMG
  - Four Javelin teams among the combat team’s dismounts.

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2. Although combat team usually refers to a squadron/company-sized formation with attached elements, in this paper it refers to troop/platoon groups, because of the command-and-control implications of dispersed movement.
It was concluded that Ajax should not be mixed into mechanised infantry combat teams for three reasons:

- This would not make the best use of Ajax’s sensor suite.
- Ajax is not capable of peer-to-peer recovery and cannot be recovered by MIV. Therefore, its inclusion into mechanised infantry combat teams could lead to the team being fixed and would create too great a CSS burden on the brigade.
- As Ajax needs to be deployed by alternative means, it cannot be guaranteed to arrive with the MIVs.

Ajax may be better employed in three ways. One Ajax regiment should conduct formation recce, establishing listening posts in advance of the brigade to ascertain the adversary’s axes of advance and to direct strikes on high-value targets with the EXACTOR missile system and/or MLRS. The second regiment should form a medium-armour reserve to bring concentrated lethality to reinforce success, or to evade enemy axes of advance and thereby strike advancing enemy CS and CSS elements.

The need to operate and manoeuvre in a dispersed manner leads to a demand for robust command-and-control infrastructure, both in terms of equipment and procedures, to maintain coordination in the face of sophisticated and sustained interference in the electromagnetic spectrum. It was concluded that the need to communicate to fight when dispersed means that it will be very difficult for the brigade to eliminate its electronic signature, and that the brigade should work to employ robust deception by emitting false positives to avoid being targeted by signature.

The brigade cannot avoid coming under fire, and therefore must have adequate protection. MIV will need STANAG Level 4 protection at a minimum. Given the volume of 30-mm cannon fire available to Russian forces, this would ideally be raised to STANAG 6, especially on MIV’s exposed drive module. However, this should not be done if it compromises the mobility which is central to the Strike concept. Active protection systems, however, appear to be a non-discretionary requirement given the proliferation of highly effective ATGMs.

Crucially, Strike Brigades will depend upon the ability of their personnel to fight dispersed, use initiative to exploit opportunities created by dislocating the enemy, and sustain operations. Troops will need to be competent to maintain their vehicles in the field. They will also need to be mentally prepared for a battlefield in which they lack air supremacy and will struggle to rapidly evacuate casualties. To succeed, Strike troops will need an appropriate ethos and mindset.

The above should not be considered a rigid blueprint for the brigade. However, it should be considered representative of the levels of organic lethality necessary to make a Strike Brigade a credible force. Force structures that neglect, or outsource, critical capabilities highlighted above should be looked upon with scepticism.
Introduction

OVER THE PAST two decades, the Russian Federation – building on Soviet platforms – has developed a multi-layered and integrated suite of anti-ship and anti-air systems that provide mobile, dense and long-ranged area denial. Air and sea denial is not just a Russian venture. China, with its HJ-12 anti-ship cruise missile and DF-21D anti-ship ballistic missile, has gone further still, while its HQ-9 anti-aircraft missiles pose comparable levels of threat to the modern variants of Russia’s S-300 series. These capabilities are likely to proliferate. Russia is pushing for sales of both S-300 and S-400, and has signed 19 defence cooperation agreements across Africa, while China has begun to export high-end capabilities to the Gulf and North Africa. There is also a widespread proliferation of less capable anti-air systems, most notably anti-tank guided missiles (ATGMs) and man-portable air-defence systems (MANPADS). Anti-access area denial (A2/AD) is evolving from a serious but isolated tactical problem to a persistent and pervasive threat to operations worldwide.

The implications of A2/AD have been widely debated in the Royal Air Force and Royal Navy for decades. The threat from Exocet anti-ship missiles during the Falklands War posed comparable challenges for the Royal Navy. The US Army is developing an operational response via its Multi-Domain Operations concept. UK land forces, however, have yet to fully grapple with the

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operational challenges imposed by A2/AD. The UK’s two most deployable formations – 16 Air Assault Brigade and 3 Commando Brigade – rely on air, aviation and naval support for insertion and resupply. In the face of A2/AD capabilities, deploying these formations will come with a high risk that they will be cut off. Were 16 Air Assault Brigade to deploy to the Baltics, it could not be safely redeployed by aviation,\(^\text{10}\) or be resupplied by air were Russia to activate its A2/AD systems,\(^\text{11}\) while the Royal Navy considers the Baltic Sea to be denied sea-space in the event of war.\(^\text{12}\)

This is not to say that 3 Commando Brigade or 16 Air Assault Brigade lack utility, but once deployed, they would become fixed.

And yet speed of deployment is critical in modern conflict. Extensive analysis by the UK’s Defence Science and Technology Laboratory has concluded that the force ratio required to be reliably successful in the attack without suffering significant losses has climbed from 3:1 to 6:1 in urban operations.\(^\text{13}\) It is worth noting – when considering deterrence – that Russian doctrine has shifted from expecting to need a 4:1 advantage in attacking urban areas to a 6:1 force ratio requirement.\(^\text{14}\) Seizing complex terrain is gruelling, costly and slow. The force that can first occupy key terrain with infantry therefore has a significant advantage. Britain’s armoured infantry brigades are expected to take more than 60 days to deploy to the Baltics.\(^\text{15}\) In all probability, an adversary could achieve its objectives within this time.\(^\text{16}\)

Even if the UK were to retain its existing force structure and balance of capabilities, its platforms need to be upgraded and, in some cases, replaced. Many platforms are reaching the end of their service lives, while the lack of active protection systems (APS) on the UK’s armoured platforms

\(^{10}\) Advances in radar technology leave even low-flying aviation highly vulnerable to anti-air systems, while the number of anti-aircraft artillery (AAA) in Russian formations makes dependence upon aviation non-viable. For discussion of Russia’s integrated air defence systems, see Cabot, ‘Fortress Russia’.

\(^{11}\) For example, see Tass, ‘Regimental Set of S-400 Air Defense Systems Enters Duty in Russia’s West’, 15 March 2019.

\(^{12}\) Although not policy, the lack of sea room for entering the Baltic Sea, combined with the anti-ship missile threat from Kaliningrad and submarine threat makes risking surface combatants highly dangerous. As a Royal Navy flag officer noted in interview in London in January 2019, the risk would be sufficient to consider the Baltic Sea denied for large surface combatants in the early stages of a conflict.


\(^{16}\) Timothy Bonds, ‘Limiting Regret: Building the Army We Need – an Update – Addendum’, testimony before the House Committee on Armed Services Subcommittee on Tactical Air and Land Forces, 1 March 2017.
leaves them vulnerable to ATGMs. Bridging equipment and other logistics platforms are wearing out. The result is that there is a need to modernise the force, both to maintain existing capabilities, and to adapt to a changing threat landscape. Despite the need to modernise, the army has been in a process of managed decline since 2011. Over this period, it has shrunk from 101,000 regular soldiers to 82,000 on paper, and to approximately 75,000 in reality. Between 2011 and 2019, the army has faced £31 billion in cuts. In such a fiscally restricted environment, the scope for new thinking, and the capacity to implement new ideas, is constrained. Further complicating this process is the fact that military procurement had, for some time, focused on counterinsurgency operations. As then Chief of the General Staff General Sir Nick Carter observed in 2015, ‘We bent ourselves significantly out of shape from 2007 onwards to be able to deal with the challenge that we were confronted with in Helmand’.

It was in this context that the Strike concept emerged. Inspired by the speed and effectiveness of French operations in Mali in 2013–14, the concept aimed to take the UK’s Mechanised Infantry Brigades, currently mounted in worn-out Mastiff trucks, and turn them into an agile, mobile and lethal force. The Mastiff in many ways epitomised the manner in which the army’s capabilities had been reshaped by the wars in Iraq and Afghanistan. The mine-resistant ambush protected (MRAP) vehicle was an effective battlefield taxi to protect troops from insurgents and improvised explosive devices (IEDs). It is not, however, optimised for warfighting. The Strike concept, by contrast, envisaged a force that could self-project 2,000 km, and use manoeuvrability to find gaps between enemy formations, achieve operational penetration, and destroy adversary combat support (CS) and combat service support (CSS). The object was to offer ‘infantry brigades the ability to march and manoeuvre under armour at far greater distances than is currently possible’.

The evolution from concept to force is ideally iterative, with the purpose of the proposed formation informing its needs, which can then be translated into platforms, and thence

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21. Ibid., p. 3.
22. Combat support comprises specialist forces that provide direct support to combat elements in fighting, including artillery and engineers.
23. Combat service support encompasses sustainment functions including recovery, repair, resupply, and medical units.
purchased and fielded. The 2015 *Strategic Defence and Security Review* (SDSR), however, forced the army’s hand. In a bid to protect the force from cuts, SDSR 2015 announced the creation of two new Strike Brigades that will provide a rapidly deployable protected force that can sit between the highly mobile but light forces in 16 Air Assault Brigade, and the heavy forces of the armoured infantry. The Strike Brigades will be equipped with the new Ajax vehicle family and a new Mechanised Infantry Vehicle.

The result was a blizzard of questions as to the compatibility of these platforms, the modules to be purchased, the enablers required, and the effectiveness of the formation, which the army did not yet have the evidence base to answer. Rather than further committing itself, the army has embarked upon several years of experimentation to translate Strike from concept to force. As General Carter observed in January 2018, Strike ‘brings with it good questions about logistic sustainability and communications, as well as combat and combat service support. However, we are testing it at the moment through a programme of experimentation and we are learning very good lessons’.

While thorough testing is eminently sensible, the lack of public information following the announcement of the concept has, as Nicholas Drummond observed, generated ‘much conjecture about what Strike will be or needs to be. This has resulted in misunderstanding, misinformation and confusion’. Gabriele Molinelli posed a prime example of this – in an assessment of Strike’s components – by asking ‘is the concept instead a solution in search of a problem?’.

As should be apparent from the preceding paragraphs, the problem is all too clear. The aim for Strike is to deliver ‘an agile, integrated, sustainable, operationally-mobile land capability relevant to the changing character of conflict … [enabling] innovative ways of operating to mitigate A2/AD and precision-strike systems’. But even sober academic analysis has tended to conclude with more questions than answers as to how such a force is to be delivered.

Today, the Strike concept is at a critical juncture. Following SDSR 2015, the army established Strike Experimentation Group (SEG) to test the concept, and has been preparing 1 Armoured
Infantry Brigade to transition to 1 Strike Brigade. With the army now gearing up to commit to procuring a mechanised infantry vehicle (MIV), and with two regiments from 1 Brigade receiving their first Ajax vehicles, Strike is in the process of moving from concept to force. Over the next year there are critical decisions to be made about the MIV modules to be procured, where critical capabilities will be mounted, and how the force will be organised. In short, the army must now answer the questions that have been dominating the discussion surrounding Strike over the past five years. This Occasional Paper is based on observations of experimentation, interviews with 1 Armoured Infantry Brigade staff, SEG, officers from the British Army’s Directorate of Capability, higher command, industry specialists, allied officers operating comparable formations, and analysis of adversary capabilities. It is an attempt to provide an independent assessment of non-discretionary capabilities to enable Strike to achieve its mission, and how this will shape the way in which Strike Brigades must fight. This paper is not simply a comparison of equipment. It explores which vulnerabilities can be mitigated, advantages exploited by the development of training and tactics, and the likely limitations of the concept.

This paper arose from several years of engagement between RUSI and Army Concepts Branch. In late 2018 RUSI was invited by SEG to undertake an independent review of the capabilities required to realise the concept. RUSI researchers observed Exercise Urban Strike 1 and Exercise Urban Strike 2 in early 2019. The methodology adopted in making the assessment was for RUSI staff to conduct a geopolitical analysis of specific and plausible scenarios that would require the UK government to deploy the army. These scenarios produced political objectives, which could be translated into military missions, and therefore a set of requirements for a theoretical force. The next step was to assess what balance of platforms would meet those requirements by making a technical assessment of vehicles and modules. The study did not assume a blank slate. The army has already committed to buying Ajax, and two regiments within 1 Armoured Infantry Brigade are in the process of adopting the vehicle. Since this study is aimed at informing future procurement decisions, rather than critiquing those already made, it focuses on how to integrate Ajax into the Strike Brigade, rather than whether the vehicle is ideally suited to the concept. While accepting systems that are already purchased, the conclusions reached in this paper differ from those favoured by the army with regard to a number of potential platforms for Strike, and how they are to be used. The most notable differences include the Army’s prioritisation of a 155-mm artillery system for the brigade.

This paper concludes that 120-mm mortars and organic multiple-launch rocket systems (MLRS) are more critical, and that a MIV-mounted 155-mm artillery system is undesirable on both mobility and performance grounds. The army is currently seeking to integrate Ajax and MIV into troop-sized combat teams. While this paper supports the attachment of Ajax troops to


34. Alan Tovey, ‘British Army Agrees £4.4bn German Armoured Vehicles Deal “Without Competition Between Suppliers”’, The Telegraph, 24 April 2018.
mechanised sub-units, it concludes that the mixing of Ajax into mechanised platoons is not viable. The army currently envisages a Strike brigade operating along 12 independent axes. This paper concluded that six is more realistic. There are also other differences.

Finally, an assessment was made of how the force outlined in this paper would fight several critical missions. The methodology was not to write drills and procedures for all mission sets; Strike brigades would carry out many operations in a conventional manner, and any such analysis would be useful in inverse proportion to its length. Instead the authors selected three critical missions that would pose the greatest challenge for the brigade, and then considered how the force could credibly fight them. These treatments included comparisons of capabilities, historical analysis, terrain analysis, examination of firing procedures, and enemy doctrine. In researching this paper, the authors have discussed the concept with more than 123 officers and soldiers from 13 countries, and further experts from industry and academia. As these personnel were not approved to comment publicly, their names have not been included.

It is important to acknowledge what this paper does not do. It does not compare Strike with other approaches to modernising and inserting UK forces. Its focus is on what is needed to make Strike a viable solution to the problems identified. Nor does this paper seek to hypothesise on the wider response to, or outcome of, an escalation with Russia. If Russia were ever to test NATO Article 5, decisions would have to be made as to the viability of lateral retaliation, rather than escalation. There would also be questions as to thresholds for nuclear deterrence. These matters are too complex to be detailed here without distracting from the issue at hand. Suffice to say that it should not be assumed that a limited incursion onto NATO territory would bring about nuclear escalation, and that conventional responses also need to be examined. Finally, this paper does not detail what other UK units would be doing in these scenarios except insofar as they directly impinge upon a Strike brigade’s operations.

The paper is divided into three parts, closely following the methodology. The first defines the missions that Strike brigades will be expected to be able to take on, and thereby produces an assessment of the attributes that a Strike brigade should have to be optimised for achieving its mission. The second section explores the platforms and systems that are non-discretionary in meeting Strike’s mission requirements, and those that are highly desirable. The third considers the training, organisational and tactical implications of the force, and how it will need to fight in three distinct types of operations. The aim is not to define a perfect Strike brigade – uninhibited by cost – but rather to clarify the minimum necessary to be able to achieve the desired results.

I. The Mission

To assess which capabilities are essential for the Strike Brigade, it is necessary first to analyse the circumstances under which it would operate. This paper considers three potential scenarios: an incursion by non-declared Russian forces onto NATO territory; a conventional escalation between NATO and Russia in Europe; and a complex intervention in the Gulf, Maghreb or sub-Saharan Africa.

Testing Article 5

In 1997, the former adviser to Mikhail Gorbachev (and now a Russian Senator), Alexei Pushkov, warned of the consequences of NATO expansion, writing: ‘If NATO military structures were to approach Russian borders ... Russia would be forced to adjust to these challenges to its security. New tensions caused by enlargement would ... destroy mutual trust, revive old fears, and throw the relationship between Russia and the West back into the past’.36 In spite of such warnings, as the veteran Russian political scientist Sergei Rogov lamented in 2009:

Moscow was presented with a fait accompli when [in 2002] NATO implemented a new round of expansion. This time it was a ‘big bang’ – NATO admitted seven new members, including three former Soviet republics: Estonia, Latvia and Lithuania. NATO fully absorbed what used to be the ‘security belt’ of the USSR.37

NATO officials have struggled to grasp the hostility with which the organisation is viewed in Russia. In 2011, Robert Pszczel, NATO’s representative in Moscow, argued that in selling the virtues of the Alliance, ‘I am convinced that in the end the best guarantees of success in this endeavour are the Russian people themselves. For they display a unique ability to judge others both with their heart and with their brain’.38

The suggestion that the hostility of Russia’s leadership will one day be rendered irrelevant by the people feeds directly into fears in Moscow that NATO is practising information warfare against their country – of the kind that Russian officials believe brought about the Colour Revolutions in Eastern Europe39 – to weaken adversaries and remove any capacity to oppose US policy. Indeed, General Valery Gerasimov, Chief of the General Staff of the Armed Forces of Russia, emphasised

38. Robert Pszczel, ‘How NATO is Perceived in Russia (Or Lessons in Optimism)’, NATO Review, 2011.
his concern over Washington’s ‘Trojan Horse’ strategy in a speech in March 2019.\textsuperscript{40}  Russian President Vladimir Putin has persistently argued that the US through NATO seeks to force states on Russia’s periphery to advance US interests. Of Ukraine’s army, he noted in 2015 that it ‘is a foreign legion, in this case a foreign NATO legion, which, of course, doesn’t pursue the objective of the national interests of Ukraine’.\textsuperscript{41}  As a RAND study stated in 2017, ‘Russian elites appear to have increasingly concluded that the United States and NATO represent long-term political and potentially military threats to the current regime in Moscow’.\textsuperscript{42}  

Perceiving NATO as a threat, a long-term Russian objective has been to break the Alliance. As Putin observed at the St Petersburg Economic Forum in 2017, ‘they should completely be falling apart, that will help ... But we don’t see [NATO] falling apart just yet’.\textsuperscript{43}  At the same time Russian officials recognise, as concluded by RAND, that ‘with NATO’s clear overall edge in conventional capabilities ... direct aggression against a NATO member would likely result in a very damaging, and potentially disastrous, military conflict’.\textsuperscript{44}  Russia has therefore sought to disrupt the unity of the Alliance by political subversion, funding extreme political parties across Europe,\textsuperscript{45}  and intervening in elections in the US\textsuperscript{46}  and France.\textsuperscript{47}  At present there is no sign that this has created a belief in Moscow that the Alliance would not react to an incursion; however, accepting that Russia aims to undermine the Alliance – which would enable Russia to deal bilaterally with its neighbours and increase Russia’s influence – then ultimately the Alliance would break if an Article 5 scenario was presented and NATO failed to act. Far from acting along a meticulous step-by-step plan,\textsuperscript{48}  Putin has demonstrated that he is opportunistic and flexible,\textsuperscript{49}  and prepared to escalate if he believes

\begin{thebibliography}{99}
\bibitem{41} Elena Holodny, ‘Putin: Ukraine’s Army is a NATO Legion Aimed at “Containing Russia”’, \textit{Business Insider}, 26 January 2015.
\bibitem{43} Jacob Pramuk, ‘Putin: It Would be Nice for Russia if NATO Were “Falling Apart”’, \textit{CNBC}, 2 June 2017.
\bibitem{44} Frederick et al., \textit{Assessing Russian Reactions to US and NATO Posture Enhancements}, p. 73.
\bibitem{49} Consider the co-option of cyber criminals and the reinforcement of their successes, see John P Carlin and Garrett M Graff, \textit{Dawn of the Code War: America’s Battle Against Russia, China, and the Rising Global Cyber Threat} (New York, NY: Perseus Books, 2018), pp. 279–306. Also note that Ukraine was a contingency, not a step in a grand strategy.
\end{thebibliography}
he can gain an advantage by doing so.\textsuperscript{50} If the conditions were right, it is plausible that Russia would test the Alliance’s resolve while leaving routes for de-escalation.

While it is vital not to mistake Russia’s bespoke contingency in Ukraine as its modus operandi, the tactics employed are instructive. If NATO were to face acute political crisis, Russia could instigate instability in a peripheral Alliance member. The Baltic states have made clear that they will shoot ‘little green men’ if they resist arrest,\textsuperscript{51} but this could provide the pretext for Russia to intervene to protect ethnic Russians from reprisals. The movement of Russian ‘peacekeepers’ onto NATO territory would present an existential threat to the Alliance, but not immediately to any of its members. The land occupied could be a mere sliver of territory. If NATO were too slow to mobilise, it could be presented as a fait accompli, the local population ‘choosing’ to be annexed, with the threat of massive escalation if heavy Alliance forces began to move towards the enclave. A slow NATO response may also shift public support against any action given the risks of escalation compared with the short-term cost of the loss of a sliver of foreign territory. In short, speed of response is critical to ensure that Russia cannot progress from subversion to annexation, via incursion. The pre-positioning of heavy forces close to NATO’s borders would be a deterrent against this threat. Forward basing, however, would probably prompt Russia to also pre-position heavy forces on its border, and would likely create a precondition to attempts to resolve disputes diplomatically. It would also mean that NATO’s first response would involve the commitment of its heavy forces, leaving little room for managed escalation, and a limited reserve. Finally, if the UK were to forward deploy heavy forces, the British Army would become fixed to a single adversary, with limited resources for other contingencies.

In the event of an incursion by undeclared Russian forces, the speed with which a significant NATO force could assemble to ensure that any Russian regular incursion would fight the Alliance – and not just a member state – would be crucial to deter escalation. It might be asked why the UK must provide a significant contribution to that force. The answer is that the attitude engendered by assuming that someone else must do it is corrosive of the principles of the Alliance, and precisely the frame of mind that increases the risk of Article 5 being tested. The capacity to respond to such a scenario is therefore integral to making sure that no such ploy is attempted. Strike is one option for a force able to respond to this scenario. In order to do so, however, a Strike Brigade would need to be able to:

- Rapidly self-deploy to NATO’s borders.
- Arrive with sufficient combat effectiveness (CE) to defeat light forces.
- Have sufficient resilience to maintain CE in contact with irregular forces.
- Have enough organic ISR (intelligence, surveillance and reconnaissance) to monitor a wide front.

\textsuperscript{50} Consider the seizure of Ukrainian naval vessels, see Stephen Lewis, ‘Russia’s Continued Aggression Against Ukraine: Illegal Actions in the Kerch Strait and Sea of Azov’, \textit{RUSI Journal} (Vol. 164, No. 1, 2019), pp. 18–26.

• Have organic short-ranged air defence to degrade hostile unmanned aerial system (UAS)/aviation.
• Have enough organic lethality to deter heavier forces.\textsuperscript{52}

**European Escalation**

A major direct conflict with Russia is unlikely. This is in no small part because the Russian government does not believe it can win such an exchange. Maintaining capabilities for such an eventuality is, therefore, vital to ensuring that it never comes about. Since the British Army faces significant budgetary constraints, it is not realistic to maintain Strike Brigades for a unique grey-zone escalation contingency. The Strike Brigade must be able to contribute to the UK’s warfighting capability.

There are multiple potential routes to such a conflict. The most dangerous for Strike would be that a non-declared Russian incursion, and NATO’s reaction, led to a further escalation in which Russia committed heavy forces. In such a scenario the Strike Brigade would likely be already deployed, without immediate support from the UK’s heavy forces, and may not be at full CE. The priority therefore would be to avoid becoming decisively engaged while slowing the enemy until heavier NATO forces arrived. A Strike brigade would clearly be too light and too small to defeat heavy forces, but if it were able to attrit, delay and disrupt early Russian operations, it could play a significant role in the shaping battle before NATO counterattacked.

There is also the potential, however, for Russia’s initial fait accompli to include a major seizure of territory. As Dimitri Trenin noted at the Norwegian Royal Air Force Academy in February 2019, Russia was taken by surprise in Ukraine in 2014, and was forced to rapidly reshape its foreign policy. Russia also miscalculated the Western political response to the seizure of Crimea, which has isolated the country in a way that was not the case following its seizure of Georgian territory.\textsuperscript{53} Russia’s assessment of the West’s military response was more accurate. As General Sir Mark Carleton-Smith noted at RUSI’s Land Warfare Conference in 2018, ‘Russia took the view that it could not cope with losing influence in the Crimea, whilst the West probably could. And Russia therefore took a rational risk, judging correctly, that the Crimea was “doable”’.\textsuperscript{54} At present there is no reason to believe that Russia considers a similar move against NATO territory to be necessary, or doable. But just as Russia’s policy posture and risk calculus was recalibrated in 2014, there remains the risk that it could. As a senior NATO officer noted in an interview, ‘if the Russian government felt threatened, or destabilised, they could reach some very dangerous

\textsuperscript{52} Authors’ assessment.
conclusions’. American military analysts similarly noted that in the event of Russia being destabilised, ‘the risk of undertaking any incursion against NATO makes a full-scale assault just as plausible as little green men’.

It is plausible – if NATO forces could not respond in time – that such a fait accompli would be successful. Current wargaming consistently shows that NATO loses the Baltics. Given 33% readiness in Russia’s Western Military District, RAND concluded in 2017 that Moscow could generate nine brigade equivalents in seven days. With a defensive force ratio requirement of 1:3, this necessitates four NATO brigades to be able to fight such a force. Given the ability of each Baltic state to generate one brigade for national defence, this requires the rapid deployment of at least two NATO brigades within seven days, with further forces deploying within 21 days. Current Russian planning appears to assume that objectives must be completed within 30 days. If it can be made doubtful that Russia can achieve this within the timeframe, then NATO can be judged to have a credible conventional deterrent. The value of the UK being able to contribute to a pre-positioned battlegroup in each Baltic state, 16 Air Assault Brigade, to bolster urban defence – dependent upon host country logistics for resupply – and a Strike brigade, with the remainder of 3 Division following on, should not be underestimated. The remainder of the necessary force ratio could comprise US Cavalry, French and German forces.

In the event of a general escalation with Russia, US planners have noted that the foremost contribution by its allies must be the speed of deployment of allied mass, to prevent a fait accompli prior to the build-up of US forces. Given that speed of deployment remains an important attribute of Strike in this context, it seems probable that the Strike Brigade would be engaged prior to the arrival of heavy UK forces. Strike may be required to support Allied heavy forces, however, creating a requirement for interoperability, and insofar as possible, commonality of CSS.

In a divisional battle, the Strike Brigade would perform several standard tasks. These would include the full range of advance force actions. However, with Strike’s speed of movement, it is also reasonable to expect the brigade to perform some tasks differently, and to exploit opportunities created by its mobility. The main qualities necessary for the Strike Brigade to shape the divisional fight include the ability to:

- Disrupt, dislocate and delay Russian forces.
- Provide the division with a clear picture of the operating environment.
- Fight dispersed and avoid being decisively engaged.
- Maintain operational coordination in a comms-contested environment.

58. Briefing on Russian General Staff War Planning attended by one of the authors, Vilnius, 12 December 2017.
• Invest and defend complex terrain.
• Provide brigade-level medium-range air defence to deter hostile aviation.
• Maintain compatibility with Allied logistics infrastructure, with ammunition commonality.

Out-of-Area Contingencies

While Russia remains the most dangerous threat, history suggests that it is far from the most likely fight for UK land forces. Whether as a result of an escalation with Iran, the need for humanitarian intervention in sub-Saharan Africa, or assistance to an Allied government following loss of territory to a non-state actor, there are a plethora of plausible scenarios that could demand a UK response. Such operations may be politically unpalatable, but history testifies to their regularity. As RAND concluded in 2000, global trends suggested a need for the military to be made ready to respond with virtuosity to rapid-reaction missions within an increasingly complex geopolitical climate; this is especially the case for situations that mandate immediate reaction and in which hostile mechanized forces are present. It is quite evident that the total number of different threats that may have to be addressed has increased substantially. Essentially, it can be argued that the threat has ‘globalised’.

In a sub-peer context, the UK has more options regarding deployable forces. However, there are scenarios where a highly mobile force could be ideally suited to the mission. The first point is that Iran’s extensive anti-ship missile capabilities, and the export of missile systems to Algeria and other states, may increase the distance from the conflict that ground forces can be safely inserted by air or sea. Second, the need to disperse and secure a large area is difficult for light forces that lack organic mobility. The present solution to this is aviation, but in the Sahel helicopters can be grounded during sandstorms, leading to a strain on logistics.

61. As in Mali in 2012, or Iraq and Nigeria in 2014.
62. Experiences from Iraq and Afghanistan have undermined public confidence in the effectiveness of such interventions, which in turn undermines belief in the morality of intervention, see Graeme Davies and Robert Johns, ‘R2P from Below: Does the British Public View Humanitarian Interventions as Ethical and Effective?’, International Politics (Vol. 53, No. 1, 2016), pp. 118–37.
66. As one of the authors experienced in Timbuktu in June 2015, when aviation was grounded and patrolling was diverted to secure convoys resupplying the UN Multidimensional Integrated Stabilization Mission in Mali’s (MINUSMA) bases.
Rapidly proliferating modern MANPADS represent a serious threat to aviation assets typically operating below 15,000 feet, and therefore within the effective ceiling for these weapons. It is worth considering the requirements for Strike to undertake such missions, since if they can be accommodated without compromising the brigade’s warfighting capabilities then there are plenty of advantages to be gained.

The number of possible missions renders conjecture about specific hypothetical scenarios unhelpful. There are a number of key trends that will be common to these missions, however. Desertification and urbanisation are causing the expansion of unpopulated and unforgiving terrain with scarce infrastructure. At the same time, the significance of cities in a number of recent insurgencies means that fighting is likely to take place in peri-urban and urban areas. The characteristics of recent conflicts suggest that the bulk of the population will not be aligned with any faction, and changes in public opinion are liable to shape which neighbourhoods will be permissible, and which impermissible. While adversaries are likely to be relatively poorly equipped, it is also probable that they will gain access to limited numbers of highly effective munitions. Recent conflicts have seen an influx of sophisticated weaponry, from Chinese MANPADS to Kornet or TOW-Missiles and complex IEDs. The transition from assault to garrisoning that urban missions entail also means that exposure to these threats will be protracted. There are a number of key attributes that a Strike brigade would require, principally the ability to:

- Support partnered forces.
- Fight over a wide area to secure dispersed objectives.
- Maintain force protection from unconventional threats.
- Take and secure urban objectives held by sub-peer and irregular forces.
- Sustain prolonged deployments of indeterminate length.

70. Reed, ‘Chinese Surface-to-Air Missiles are Being Used by Syrian Rebels’.
71. Kornets have been widely available on the black market after being removed from Muammar Qadhafi’s stockpiles following the fall of the Libyan government in 2011. Kornets have been used in Libya, the Sinai, Iraq, Syria, Ukraine, and further afield. For example, see Michael Smallwood, ‘Kornet Anti-Tank Guided Weapon Captured by Syrian Islamist Rebels’, Armament Research.com, 26 September 2014; Ivan Kochin with Michael Smallwood, ‘Further Evidence of 9k135 Kornet ATGWs Found in Ukraine’, Armament Research.com, 29 October 2014.
II. The Force

Having identified the demands of the likely missions for a Strike brigade, it becomes possible to assess its non-discretionary and highly desirable capabilities. There is no such thing as a perfect force. All structures represent a series of trade-offs. The Strike concept contains a number of desirable attributes that appear to be in opposition. How can a force retain speed and mobility while being adequately protected? How can Strike fight dispersed while delivering sufficient lethality? This chapter seeks to examine the most important trade-offs before laying out a structure that balances these competing priorities. The chapter discusses different platforms and their suitability for the concept’s requirements, and presents a proposed brigade structure.

Mobility

All Strike missions are premised on speed of deployment and sustained mobility around the battlefield. While UK strategic lift might be able to provide some options to allow certain critical elements to ‘bound forward’ at least some of the way in lower threat scenarios, relying on limited numbers of C-17 and A-400M aircraft to deploy a brigade consisting of over 300 armoured vehicles is not viable. There are too many vehicles, and they are too heavy. It would also prevent airlift of more suitable formations, such as 16 Air Assault Brigade. Strike brigades must therefore be able to self-deploy, to project land forces into areas where maritime and air access are contested by A2/AD systems. The force must be mobile, in its fighting elements, and in its CSS.

Building the brigade around a wheeled MIV would be ideally suited to fulfil this requirement, given their characteristically long-range, large carrying capacity and reliability. The leading platforms are the Stryker Interim Armoured Vehicle, the Patria Armoured Modular Vehicle (AMV), and ARTEC Boxer. Of these, the Stryker is an older platform with limited protection, an operational range of around 550 km, and a top speed of 95 kph. It lacks modularity, limiting fleet upgrade options, but would provide commonality of platforms with US Cavalry brigades. The Patria AMV has a road range of 600 km and can reach 100 kph. It also has an amphibious capability — mitigating dependence on bridging equipment, although entering and exiting rivers can be difficult — and is modular, supporting 120-mm cannons and 120-mm mortars. Finland, Sweden and Poland all use the Patria AMV, ensuring some availability of spare parts.

and engineers. Boxer is the option favoured by the British Army.\textsuperscript{76} Able to reach speeds of 100 kph and with a range of over 1,000 km, Boxer can travel significant distances by road, and can move across country.\textsuperscript{77} It has a high degree of modularity and is more heavily armoured than its competitors, increasing its utility in supporting infantry. With a need to self-deploy 2,000 km, Boxer provides a credibly mobile platform. A further advantage to Boxer is that it is currently in service with Lithuania, Germany and the Netherlands, ensuring commonality of spare parts for the drive module – although not necessary for the mission modules – and the availability of trained mechanics able to support UK vehicles in the states through which Strike would travel to its most critical missions.

Not all variants of MIV share the base vehicle’s mobility. One variant under consideration for the British Army mounts a 155-mm howitzer. This vehicle presents challenges to mobility. At more than 4 m tall, the platform is restricted in the means by which it can cross the channel and the roads by which it can travel, and it weighs substantially more than the standard MIV. It also lacks the MIV’s mobility across country because of its additional weight, while the long barrel would make movement in Eastern Europe’s forests difficult. The turning circle of a standard Boxer is 21 m. The turning circle on the artillery piece will be greater. The rate of mechanical failure, wear on brake pads and other components caused by the significant increase in weight expands the CSS burden of the brigade. This would be exacerbated after firing, with the force of recoil inflicting heavy wear on the MIV’s suspension system. It is difficult to envisage the 155-mm howitzer variant of MIV retaining the mobility or agility to easily function in the brigade. Organic indirect fire is essential in providing lethality – as explored in the following section – but the MIV-mounted 155-mm howitzer appears a sub-optimal, and potentially non-viable solution.

From a mobility point of view, the current 105-mm light gun is also wholly inappropriate. This is not because of its impact on Strike’s march, but because as a towed gun with 17-km range, the piece could not fire and manoeuvre quickly enough to avoid being hit by counter-battery fire. This would bring most of the logistical burdens of a heavier gun without delivering significant effects. From the point of view of mobility, the best options are MLRS and 155-mm artillery mounted on military trucks, such as high-mobility artillery rocket systems (HIMARS), and the ARCHER 155-mm howitzer.\textsuperscript{78}

CSS for the formation will be primarily based on military trucks. The precise model of truck is not important, although commonality across the brigade is vital to ensure that the brigade’s crews and Royal Electrical and Mechanical Engineers (REME) battalion can maintain its platforms. For the purposes of calculations of range and reliability, this paper has assumed that Strike will use the family of MAN military truck, of which the British Army has a large fleet. With a road speed of 100 kph, MANs can keep pace with MIVs. Its operational range of 480 km is lower than...
that of MIVs, but this should not significantly restrict its ability to keep pace with the brigade. MAN-mounted systems are able to support recovery and other functions, including bridging. While there are assault bridges developed for Stryker, equivalent Boxer variants would be prohibitively heavy, overly large, and likely unable to deploy bridges capable of supporting Ajax or heavier vehicles in Allied units. Although bridges based on military trucks are less protected, they offer logistical simplicity, are more cost effective, and would enable Strike to lay bridges for Allied – and later UK – heavy forces.

The inclusion of Ajax in Strike has caused conjecture as to the viability of Strike’s speed of deployment. With a top speed of 70 kph and a range of 500 km, Ajax is far slower than MIV. At 42 tonnes, there is less infrastructure suitable to sustain its weight. Moreover, as a tracked vehicle, the rate of mechanical failure over a 2,000-km march would be unacceptable. Its size also limits options for getting Ajax vehicles across the English Channel. Once the Rail Baltica project is completed in 2026, there will be a single train route capable of transporting Ajax from France to NATO’s eastern flank. This, however, would represent a single point of failure that is highly vulnerable to conventional or cyber sabotage. The only reliable way of deploying Ajax over a 2,000-km march is by modified light equipment transporters (MLETs) or heavy equipment transporters (HETs). At present, the army favours the cheaper MLETs. The cost savings bring with them a significant opportunity cost, however. The UK currently has 92 HETs under contract until 2022 (of which 71 are available). This is already too few to carry the UK’s heavy forces. Procuring further HETs would therefore provide a wider range of options. Once

81. Tracked formations tend to be slower and are more prone to maintenance issues on long marches. It is worth noting, however, that the mixing of tracks and wheels, while conceptually problematic, has often occurred historically; see John Matsumuru et al., Assessing Tracked and Wheeled Vehicles for Australian Mounted Combat Operations (Santa Monica, CA: RAND Corporation, 2017), pp. xvi–xx.
they had delivered Ajax, they could also prove invaluable in resupplying the brigade, being able to carry two International Organization for Standardization (ISO) containers each. With the existing private finance initiative contract set to expire in 2022, the Army could purchase many of their existing contracted fleet at a significantly reduced cost. In procuring HETs, it is essential that the requirements are not over-specified, since simplifying the transporter can reduce costs. An agreement to be able to lease HETs when needed presents major problems, as in a test to Article 5 there would be competition between NATO members to secure these vehicles, with priority going to heavy formations, and to US brigades.

The respective mobility and logistical capabilities of MIV and Ajax have implications for how they can be teamed within the brigade. The British Army has examined whether Ajax and MIV can operate in mixed platoon/troop-sized combat teams.\(^{86}\) This is problematic. Ajax has CSS requirements that MIV does not. While a standard MIV can recover a standard MIV, it cannot recover Ajax. Furthermore, Ajax is not capable of peer-to-peer recovery in the event of breakdown or mobility kill and must rely on a specialised recovery vehicle.\(^{87}\) It is not possible to attach Atlas and Apollo recovery vehicles to every troop as it would require too many recovery vehicles and increase the size of the combat teams beyond what is manageable by a troop commander. However, given Strike’s dispersed deployment, without these attached recovery vehicles, mixed platoons/troops could be fixed simply by one of their attached Ajax suffering a mobility kill.\(^{88}\) The result is a formation that is inflexible, and the need to have REME fitters in each combat team capable of operating across both vehicles creates training and tooling requirements.\(^{89}\) Currently REME fitters would be trained to support the platform within the formation to which they are attached.

A second set of problems with teaming these platforms at the platoon/troop level is that as they will not be deploying in the same manner, and given the CSS enablers necessary to support Ajax, it cannot be guaranteed that Ajax will be available in the early operational stages. This challenge is even more significant outside Europe where the practicality of moving by HETs on poor roads, across weak bridges, and the greater strain of sustaining a prolonged deployment, risks troops having to fight without Ajax. If integrated into combat teams in the initial force design, this would critically reduce the lethality of combat teams were Ajax to be unavailable. It therefore makes sense to attach Ajax troops to mechanised infantry companies to fulfil a recce role. In


\(^{87}\) Assessment by Royal Mechanical and Electrical Engineers officers found that an Ajax cannot recover another Ajax without damaging the rear of its hull. Fourteen officers discussed this in separate interviews with the authors, at various locations between January and May 2019. Two employees of General Dynamics – responsible for the manufacture of Ajax – declined to confirm this in two separate interviews, but did not contradict the assessment.

\(^{88}\) This was repeatedly demonstrated in simulated testing by the army observed by one of the authors in Scotland in March 2019.

\(^{89}\) The capacity for troops to maintain their own vehicles is critical to the effectiveness of formations, see Micah Clark, ‘What Do Future Main Battle Tanks Need to Succeed? Ask the Operators’, RUSI Defence Systems, 25 March 2019.
addition, Ajax operating separately could provide highly effective medium armour for formation recce and support. Ajax was originally designed for the recce role, and if the platform is not integral to the core combat team, this creates greater flexibility in maximising its contribution to ISR collection.

RAND studies have consistently forecast that it would take seven days for Russia to mobilise forces in its Western Military District for a major confrontation. Russia’s seizure of Crimea in 2014 similarly took seven days – despite having pre-positioned troops in Sevastopol – from irregulars seizing civic buildings on 27 February, and the insertion of unbadged Russian forces on 28 February, to the withdrawal of Ukrainian units, and the securing of the local government under Russian control by 5 March. It should be noted, however, that in either scenario there would be indicators of rising political tensions, and the build-up of stores before this point. It is reasonable to require Strike to reach its position within 10 days. At R1 status and with vehicles kept with Strike units, rather than in whole fleet management, it can be assumed that the force could be moving within 48 hours. It would take approximately 24 hours for MIVs to cross the English Channel via the Channel Tunnel, civilian and chartered ferries. Given the need to load Ajax on to HETs, it should be assumed that crossing the channel would take an additional 24 hours by military roll-on, roll-off ferry. Assuming that agreements were in place to ensure free passage, the brigade would take approximately 72 hours to traverse 2,000 km, factoring in the need to refuel, rest the drivers, and the likelihood of delays. It is worth noting that French forces assembled in 12 hours and managed a 1,300-km march in 72 hours from Abidjan to Bamako, in 2012, across poorer roads, in less mobile vehicles, and having already been deployed for some time. This would see MIV squadrons arrive at their assembly area in six days and Ajax elements in seven. The formation could then spend 24 hours taking on ammunition and supplies before proceeding on operations, to be within the area of operations in nine days.

Another common mobility requirement across the Strike Brigade’s mission set is the ability to fight dispersed. In a contingency against Russia, dispersion would be necessary to avoid being destroyed by artillery. In a sub-peer contingency, dispersal would be necessary to control enough ground. The need to fight dispersed shapes the capabilities and platforms that make

93. Such agreements were strongly advocated by Lieutenant General Ben Hodges when he was commanding general of United States Army Europe, but are not yet in place. The UK government should support this effort ahead of 2023, see David M Herszenhorn, ‘Call for Military Schengen to Get Troops Moving’, Politico Europe, 4 August 2017.
up the Strike Brigade. As will be explored in more detail when examining the force’s endurance and survivability, Strike will need to be able to fight in eight-vehicle combat teams, moving in four-vehicle pairs. This means that there must be sufficient organic lethality across eight vehicles to counter a range of plausible threats, and to mutually reinforce friendly troops without physically concentrating. This has implications for mobility.

The first consequence of dispersal is that operations will be spread across a wide area, while high-lethality systems will need to be integrated into combat teams, rather than commanded at the brigade level. This means that resupply for those high-lethality systems will need to be brought further forward, into the range of enemy indirect fire. Vehicles will need to avoid concentrating to resupply, demanding a number of transfer points through which vehicles can move, picking up ammunition and rations, before moving on. There is also a need to improve the precision of data on consumption rates to maximise the resupply of relevant materiel, and thereby reduce the overall CSS burden.

The second consequence of fighting dispersed is that a force can be overwhelmed if it is delayed in manoeuvre. Combat teams must maintain sufficient situational awareness to understand which routes are safe and which are compromised. To this end, engineers capable of safeguarding avenues for manoeuvre must support each mechanised infantry company. In Eastern Europe, the ability to fell and clear trees is an essential capability for these troops. A second is to defend the force from being pinned by scattered mines (SCATMIN). Since the scenarios in which Strike is to be employed are unlikely to see the force assaulting through complex minefields, vehicles such as Terrier are unnecessary, and logistically prohibitive. Engineering MIVs and Ajax with dozer blades, on the other hand that are able to clear SCATMIN from intersections and roads behind operational units, are vital.

The lack of peer-to-peer recovery capability for Ajax necessitates attached Atlas and Apollo vehicles. It also appears sensible that MIV recovery variants are available, which on road at least are likely to be able to support Ajax. These assets will be limited, however, and so there is demand for recovery variants of military truck, which are more readily available and can support a wider range of platforms, albeit on fewer types of terrain.

In conclusion, Strike’s mobility requirements lead to a force that is primarily based on the MIV platform, operating in dispersed platoons/troops of vehicles. Each mechanised infantry company needs to include an attached Ajax troop to provide a recce screen. Separately, the second Ajax regiment must work in hunter troops, to conduct formation recce and provide medium armour support to mechanised infantry company. In order to minimise the complexity of maintaining

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the force in the field, CSS would be based on military trucks. There is an essential requirement for mechanised infantry companies to have attached engineering troops.

Lethality

The most pressing challenge for a force intended to self-deploy, self-sustain and fight dispersed until the arrival of heavier forces is its limited lethality compared to the firepower offered by heavier tracked platforms. The baseline threat assumed in an Eastern European context involves a mix of irregular and regular forces of the Russian Federation, supported by significant tube and rocket artillery, potent air-defence systems, the use of extensive electronic warfare (EW) interference, and small unmanned aerial vehicles (UAVs) for artillery spotting and situational awareness. Since the Strike concept is geared towards developing a force that is light enough to self-deploy, and lethal/resilient enough to fight once it arrives, the force must be sufficiently lethal to enable viable tactical options against Russian irregular and vanguard regular army units.

At a minimum, each combat team must have vehicles with direct fire weapons capable of reliably taking on medium-weight Russian armoured vehicles, such as the BTR-80/82 and BMP-3 series of armoured personnel carriers (APCs) and infantry fighting vehicles (IFVs), since these platforms are common throughout all Russian formations. Relying solely on ATGMs from dedicated fire support vehicles and dismounted infantry would greatly increase the quantity of ATGMs required and reduce the capacity of Javelin firing posts to concentrate on more heavily armoured threats such as main battle tanks (MBTs), against which the Strike Brigade is unlikely to be able to field direct fire answers. While a 120-mm smoothbore cannon turret could be developed for MIV, such a vehicle would have a high silhouette and weight, and, lacking heavy armour, would still be uncompetitive against modern Russian MBTs.

The latest BTR-82A APC, equipping Russian motor-rifle, naval infantry, reconnaissance and special forces units is relatively lightly armoured, with only an additional spall liner added to the basic BTR-80 Level 2 STANAG 4569 equivalent protection (all-round protection against 7.62-mm steel core armour-piercing bullets at 30 m). The more heavily protected BMP-3 IFV boasts the equivalent of Level 4 STANAG 4569 (all-round protection against 14.5-mm steel armour-piercing bullets at distances up to 200 m), while the Kurganets-25 IFV/APC family are reportedly protected up to the equivalent of Level 5 STANAG 4569 (all-round protection against 25-mm tungsten alloy armour-piercing fin-stabilised discarding sabot [APSFDS] rounds at distances up to 500 m).

97. For more information on Russian ground forces capabilities, see Igor Sutyagin with Justin Bronk, Russia’s New Ground Forces: Capabilities, Limitations and Implications for International Security, RUSI Whitehall Paper 89 (London: Taylor and Francis, 2017).
98. Examples of such systems include the Italian Centauro II, and the Japanese Type 61 manoeuvre combat vehicle.
This means that to counter currently fielded IFVs as well as APCs in Russian service, Strike’s mechanised infantry platoons must have vehicle-mounted gun systems with greater performance than the 14.5-mm steel-core AP round (approximately 30-mm rolled homogenous armour [RHA] angled at 90 degrees at 200 m). To future-proof the Strike Brigade against the planned large-scale introduction of the Kurganets-25 – replacing both the BMP-3 and BTR-82A in some units – a cannon with superior performance to 25-mm APFSDS rounds is needed (approximately 45-mm RHA angled at 60 degrees at 1,000 metres).\(^{101}\) A long-cased 30-mm cannon such as the British Army’s 30 x 170-mm RARDEN would almost certainly suffice if equipped with APFSDS rounds, and such systems are fielded on Boxer by both Australia and Lithuania. However, for a greater level of overmatch and to retain commonality with Ajax and the Warrior Capability Sustainment Programme, the 40-mm cased telescoped cannon (CTC) may be a better choice. The 40-mm CTC can penetrate 140 mm of RHA out to 1,500 m,\(^{102}\) ensuring overmatch against the Kurganets-25 series out to significant combat ranges.\(^{103}\) Lockheed Martin have already demonstrated a module for Boxer with their 40-mm CTC turret, which also incorporates two Javelin tubes.\(^{104}\) Two such vehicles per platoon would solve many of the anti-vehicle/hard structure lethality deficiencies created by maintaining Ajax as a separate recce troop. It may be preferable to ensure the turret is remotely controlled, to maintain sufficient space in the hull. It should be noted that the configuration chosen for the Dutch Boxer variants – with the armament mounted towards the rear of the vehicle – should be avoided, as the vehicle must often expose itself out of cover for the weapon station to freely engage targets.\(^{105}\)

Finally, it must be noted that to engage, attrit or deter Russian MBTs, the force must have sufficient ATGM teams dispersed across the force. Ideally, this would constitute 108 ATGM firing posts across the two mechanised infantry battlegroups, equating to six per combat team. This would enable each vehicle pair to have an anti-armour capability. While experimentation has largely been based around mounted-TOW and dismounted NLAW ATGMs,\(^{106}\) Javelin would appear to be a more effective common weapon system with greater range and lethality. Crucially, these need to be both dismounted and mounted: mounted to ensure quick time to fire, and dismounted

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105. Author interview with senior Dutch officer, London, March 2019; also noted by a senior British officer, Warminster, January 2019.
because there is a risk that a vehicle targeting an MBT would be identified and destroyed before the ATGM could reach the target, while a dismount can fire without being exposed.

Since remaining evasive on the battlefield is a key part of the envisaged Strike course of action (COA), a robust counter-unmanned aerial system (C-UAS) capability is essential, as is a measure of short-range air defence to enable operations without friendly air superiority. Dispersing into groups of eight vehicles and fighting several kilometres from supporting elements requires short-range air defence (SHORAD)/C-UAS to be vehicle-mounted and able to accompany and protect each group organically. The traditional answer to this problem for the former Soviet Union, US Army and Russian Federation today has been to mount compact, short-range search and track radars with one or more fast-firing small/medium-calibre cannons. More recent Western studies have often focused on the potential for using laser or high-powered microwave (HPM) directed energy weapons for this task.\(^\text{107}\) Both approaches are possible options, and both have advantages and disadvantages for the Strike concept.

Laser weapons in the 5-10 kW class are already fieldable with systems such as the compact laser weapon system advertised for vehicle and static use against unmanned aerial systems (UAS).\(^\text{108}\) Rheinmetall tested a 5 kW laser on Boxer in 2013, which showed utility for limited tasks such as remote unexploded ordinance or mine clearance, although for countering incoming projectiles, C-UAS and direct fire applications against hostile vehicle components, a significantly more powerful 30–50 kW system is much more suitable.\(^\text{109}\) Systems based on microwave and radio frequency jamming or even destruction through HPM techniques are also being explored and field-tested by many forces worldwide.\(^\text{110}\) Directed energy solutions are primarily an answer to the C-UAS problem since the power levels currently attainable on remote-weapons stations (in the 5–15 kW range) are sufficient to damage small UAS, but are not suitable for operations against pop-up or fast-moving aviation threats, and are of highly questionable legality for use against dismounted personnel and vehicle crew, especially in a non-lethal role given Protocol IV of the 1980 Convention on Certain Conventional Weapons prohibiting blinding laser weapons.\(^\text{111}\)

Nonetheless, they offer huge benefits in terms of CSS requirements since no ammunition is consumed when firing, and so they could be better able to provide persistent coverage over time without resupply compared with gun solutions. However, fuel consumption will increase to

\(^{107}\) For example, see Deidre Ortiz, ‘704th Test Group Successfully Leads Directed Energy Experimentation Campaign’, United States Air Force Academy, 22 January 2019.


provide electrical power. Lasers also offer scaleable effects depending on power level, allowing the force to disable cameras, radar antennae and other sensors without firing kinetic rounds. Since laser systems do not need to be reloaded, they are potentially better at dealing with multiple simultaneous UAVs or incoming artillery rounds.\(^\text{112}\) The modularity of the Boxer or Patria platforms allows for high-energy laser modules to be purchased and integrated once the British Army deems the technology to be sufficiently mature and capable compared with more conventional cannon solutions to the SHORAD/C-UAS problem.

Cannon-based solutions currently offer a more flexible addition to the mechanised infantry platoon since they not only provide effective battlefield C-UAS coverage but, for solutions of 25 mm or above, are also a serious threat to any helicopter gunships and even fast jets at lower altitudes. Furthermore, a cannon solution would significantly add to the firepower of each combat team against ground targets, especially in urban areas or dense cover. In the Second World War, Vietnam, Grozny and elsewhere, the high angles and rapid rate of fire, as well as a combination of high-explosive and armour-piercing ammunition, have made self-propelled, anti-aircraft guns highly valued in the ground support role. The downside of such solutions is the vehicle volume and CSS capacity required for ammunition resupply, as well as potential limitations on sustained fire due to barrel overheating during a swarming UAS attack. The current suite of Western aircraft and self-propelled anti-aircraft cannons ranges from 20-mm to 35-mm calibre with the US favouring the rotary Gatling type and European nations favouring single-barrel type weapons.\(^\text{113}\) The mechanised infantry platoon requires lethality against UAS, armoured helicopter gunships and tactical aviation, with the desirable secondary capability to enhance anti-personnel and light-vehicle lethality. A cannon solution must also be able to be mounted on the MIV chassis for commonality without raising weight, centre of gravity and total vehicle height enough to compromise cross-country mobility and bridge clearance. This latter criterion probably rules out GAU-8 30-mm or 35-mm Oerlikon single-barrel solutions, the recoil, size and consequent turret-mounting configuration of which would greatly increase height, weight and centre of gravity.\(^\text{114}\) The US Air Force and US Army M61 Vulcan 20-mm Gatling cannon lacks sufficient lethality against armoured Russian and Soviet-era gunships, such as the Mi-24/35 Hind and Mi-28 Havok series, as well as high-explosive power when used in an anti-personnel role. A solution based on either the 25-mm GAU-22 Gatling cannon or a ground version of the 27-mm BK-27 single-barrel revolver cannon, as used in F-35 and Typhoon fighter aircraft respectively, would seem to offer an optimal compromise. Both are sufficiently compact to be mounted on a MIV without an oversized turret, and their recoil is not dramatically greater than that of the M61 Vulcan. The ammunition for both GAU-22 and BK-27 is not vastly bulkier than 20-mm rounds, and both benefit from the economies of scale and consequent lower cost and ammunition variety inherent in being used by air forces throughout NATO. Both rounds

\(^\text{112}\) Rheinmetall Defence, ‘HEL on Wheels’.


offer armour-piercing, explosive ammunition with high muzzle velocities for lethality against UAS, tactical aviation at short ranges, and both dismounted Infantry and light vehicles.¹¹⁵

The force must be able to rapidly bring firepower to bear on concentrations of hostile forces beyond immediate line of sight or in heavy cover. This is to enable ambush tactics by one dispersed element to be reinforced by responsive and heavy indirect fire from those in neighbouring operations boxes. It also allows the Brigade recce force to identify enemy high-value targets, and then call in fires from supporting units, without giving away the position of recce vehicles. The ability to outshoot Russian artillery in a conventional counter-battery role is unlikely to be possible given size and budget constraints. The current 105-mm towed light gun does not have sufficient range to perform counter-battery work against Russian 152-mm or 203-mm tube artillery or MLRS, such as the Smerch and Tornado series, and is also slow to deploy and re-attach, rendering critical shoot-and-scoot tactics difficult. However, a MIV-mounted 155-mm artillery solution renders the vehicle too heavy and with too high a centre of gravity to keep up with manoeuvre elements.¹¹⁶ Such a system is also unlikely to be available in sufficient numbers to compete with Russian 152-mm howitzers. Given Strike’s dispersed concept of operations, a 155-mm howitzer would be difficult to protect. Instead, a superior option might be a 120-mm mortar solution on a turreted MIV – such as the new mortar (NEMO) or advanced mortar system (AMOS) turrets offered by Patria¹¹⁷ – to support fighting elements, and MLRS to perform counter-battery fire missions and to strike high-value targets. While the AMOS can deliver a higher weight of fire, the ammunition consumption would present a CSS challenge to Strike, making the NEMO a more attractive system. While unable to perform the counter-battery role, it offers 155-mm howitzer-class explosive payloads with both a powerful direct fire capability and an adequate range of 10 km to provide rapid support between dispersed mechanised infantry platoons. 120-mm mortar ammunition is also cheaper and more compact than 155-mm howitzer shells, enabling an increase in rounds carried or a reduction of CSS burden.

The presence of brigade-level, long-ranged rocket artillery to provide counter-battery capabilities across the battlespace, as well as supporting fire to dispersed elements, would greatly increase the overall fighting capabilities of the Strike Brigade. Not only would it increase lethality, but the threat of effective counter-battery fire would ensure that hostile forces would have to be cautious in revealing the location of their own artillery – reducing the incoming threat to combat teams. MLRS could also fire on high-value targets identified by recce elements while remaining at sufficient range to avoid precise detection and retain sufficient time to manoeuvre. The threat of concentrated fire would also encourage the enemy to disperse heavy forces, reducing the likelihood of Strike being completely overmatched in the close battle. The most obvious solution to this requirement would be a HIMARS-style wheeled adaptation of the current MLRS system to allow it to self-deploy to theatre by road with the main force elements. The CSS

¹¹⁶. For example, see Think Defence, ‘Boxer Armoured Vehicle’.
burden of MLRS systems is also less than that of the 155-mm howitzer, as canisters can be carried on military trucks to the MLRS battery without coming close to the combat area.

Since two of the core mission sets for Strike involve operations in Eastern Europe against Russian forces with formidable theatre-range airspace denial capabilities, dependence on air support for heavy firepower is not a viable approach for the Strike Brigade. The RAF and other NATO air forces would be facing a demanding defensive counter-air and suppression of enemy air defences (SEAD) task set in any Russian scenario and would not have the assets to spare or the uncontested airspace access required to provide close air support along the lines of previous conflicts in the Middle East. If anything, the air component would initially be looking to ground forces to provide additional long-range fires from the ground to assist in the SEAD campaign, rather than the other way around. Within the coverage of the mobile medium-range surface-to-air missile (SAM) systems fielded as part of any Russian battalion tactical group, as well as advanced MANPADS such as the Igla-S and Verba in the hands of Russia’s forward-infiltrating special forces (Spetsnaz) teams, rotary assets would be at high risk. With active radar seeker-head-equipped long-range SAMs and long-range radar networks, SAMs would also be a serious threat to rotary aviation in most of the Baltics, as would Russian fast jets. Therefore, reliance on army aviation for fire support or in-theatre mobility would introduce significant vulnerabilities in the Eastern European context and should be avoided. While qualified joint terminal attack controllers (JTACs) would be useful as an asset to Strike in more permissive environments, air support will not be reliably available during the most demanding contingencies in Eastern Europe and as such, JTACs cannot be relied on to ensure brigade lethality.

Finally, it is necessary to consider the lethality required for the squadrons of a Strike brigade’s Ajax-mounted cavalry regiment. With each troop comprising four Ajax-mounting 40-mm CTC, Strike’s medium armour can deliver a high volume of effective firepower against anything less protected than an MBT. Its sensor suite also makes ambush by infantry unlikely. However, with MBTs a standard component of Russian manoeuvre formations – including VDV units (Russian airborne troops) – the ability to engage MBTs is essential. For Ajax troops operating as part of Strike’s recce screen, the size and signature of Ajax would require vehicle pairs to find suitable observation posts and then turn off their engines, running systems from their auxiliary power supply. In this sense the aim should be to avoid contact, passing information back via directional transmission to avoid detection. However, Ajax recce troops ought to be issued with Javelin, or have it integrated into their turrets. A particular challenge for Ajax, however, is how to engage high-value targets of opportunity without exposing themselves, since their primary role is to inform the brigade as to the enemy’s movements and axes of advance. A critical capability in this context would be EXACTOR, already available in the British Army. Maintaining EXACTOR trailers, moved by joint light tactical vehicles (JLTVs) to sit behind the MIV formation, would allow the Ajax recce screen to call in precise fires up to 20 km in front of the brigade’s main line, without revealing their positions to the enemy. This capability – used in a similar manner to Swingfire mounted on CVR(T) – would be consistent with existing UK armoured recce training and doctrine.
Endurance and Survivability

The capacity for the Strike brigade to fight sustainably depends upon three factors: its mobility; the robustness of its logistics; and its survivability. SEG believe that with trailers for MIV the brigade can last 10 days without resupply, although this requires some extraordinary measures such as vacuum-packing rations. It is not inconceivable; French forces managed to carry 10 days of supplies during their march to Bamako in 2012. It appears plausible that Strike can reach its assembly area without resupply. The capacity to sustain operations without resupply for 10 days would also be exceptionally valuable in a low-intensity, out-of-area contingency. It is far less likely that Strike can undertake sustained combat operations without resupply because of ammunition consumption. If we assume a carrying capacity of around 50 bombs in each indirect fire system, this would allow each tube to carry out 10 salvos before requiring resupply. In any form of high-intensity conflict this, and replenishment of 25-mm or 27-mm cannon ammunition and Javelins, represents the most critical limitation on Strike’s endurance. Moreover, if ammunition resupply is necessary, then it is likely – given comparative space and weight – that the Brigade would prefer to carry a higher volume of ammunition, at the expense of surplus days of food and water. Some of the water burden can be reduced by locally sourcing water with filtered jerry cans. It should also be possible to arrange for coordinated resupply rather than maintaining continuous ground lines of communication. However, such measures – while increasing the brigade’s flexibility – should not lead planners to underestimate the necessary logistics fleet to keep Strike fighting.

The greatest threats identified by the British Army to Strike’s survivability are concentrated MBTs and massed indirect fire, especially MLRS, since if the brigade were fighting un-badged Russian forces, these systems could engage the brigade from across the Russian border with little warning. The impact of these systems, as demonstrated in Ukraine, is catastrophic. The solution to the indirect fire threat currently being examined is to fight dispersed. This has far-reaching implications. Russian fires will usually engage by grid square, prosecuting a pre-determined fire plan. The second manner in which they are employed is to engage grid squares containing targets of opportunity identified by ISR systems.

The survivability of Strike therefore depends upon presenting as few opportunities as possible. This necessitates manoeuvring and being able to fight as dispersed sub-units. In a fight in the Baltics against Russian forces, the maximum necessary level of dispersion for manoeuvre would constitute an eight-vehicle unit occupying a 16-km² fighting box. A 1-km² fighting box would

118. Author interviews with Strike experimentation group (SEG), Warminster, January 2019.
120. Such as the ICON Lifesaver Jerrycan, which passed US military trials.
121. Author interviews with SEG, London, November 2018.
allow Russian artillery to reliably achieve hits once they contacted the brigade. In a 4-km² to 9-km² box, it is too easy to calculate the location of forces because of the number of wood blocks and positions of advantage likely to be found in a typical Baltic area. A 16-km² fighting area provides too much ground for Russian artillery to systematically target. It also provides enough wood blocks and lines of communication to avoid being targeted analytically. Although this level of dispersion is relevant only to a very specific scenario, it is probably the most challenging mission set, and therefore shapes the requirements for the brigade’s command and control (C2) and CSS. It is also important to note that if the brigade becomes any more dispersed it loses the ability for its organic weapons systems to mutually support one another.

The threat to brigade CSS is exacerbated by the fact that dispersal means that Strike cannot avoid having its front line penetrated. A brigade CSS base is vulnerable both to long-range Russian MLRS and also to attack by Russian reconnaissance units. Target UAS also pose a major threat to CSS depots. Strike CSS therefore should be based around ISO containers and dispersed. Resources are likely to need pre-packaging into distributable pallets before being moved to the brigade, since the fewer personnel and hours needed to apportion incoming resources, the smaller the target. These measures complicate both finding and fixing the brigade’s CSS, but also make prioritising fire missions difficult, since large numbers of identical ISO containers reveal very little as to which contain critical supplies. Decoys could also be scattered behind the operating area to further complicate targeting.

While a dispersed formation may be difficult to hit with indirect fire, it significantly complicates C2. The Strike Brigade will need to coordinate its dispersed units both to ensure that platoons/troops are mutually reinforcing, and to manage complex manoeuvre. If Strike must avoid being decisively engaged, then it will need to conduct multiple rearward passage of lines, or traverse neighbouring elements, during fighting, with platoons/troops passing through neighbouring friendly forces, risking fratricide. If it is to operate dispersed, it will invariably suffer operational penetration. Lines of withdrawal will therefore need to be adaptable. Maintaining shared situational awareness across the dispersed formation will be critical, as will the ability to rapidly share new movement plans between platoons/troops, to prevent fratricide and accidental concentration. Resilient C2 is a non-discretionary capability requirement for Strike to function.

124. This is premised on an assessment by the authors of sampled squares on plausible lines of advance in the Baltics, using satellite imagery to count the number of wood blocks, roads, intersections and other terrain features of tactical significance.


The C2 stresses of operating in dispersed platoons/troops not only complicates communication and blue force tracking for battlegroup headquarters, but also increases the workload for tactical commanders. A Strike combat team of eight vehicles would be required to manage direct and indirect fire, dismounted and mounted manoeuvre, engineering and SHORAD capabilities, while coordinating with CSS elements. Many of these responsibilities would normally be centralised at the company/squadron headquarters. They are also a lot to manage for junior troop/platoon commanders who are supposed to be overseeing the tactical fight. It is likely necessary therefore for each eight-vehicle combat team to have a troop/platoon commander and an officer or senior non-commissioned officer to oversee the integration of attached elements. This may risk complicating the clarity of command. In order to alleviate this, the general rule would be that the troop/platoon commander would command, and dismount with the infantry to manage the fight. The combat team leader would coordinate capabilities to support the lieutenant’s intent and remain mounted. Command responsibility would therefore rest with the officer closest to the personnel, and most at risk.

Russia has invested heavily in EW, and its operations in Georgia, Syria and Ukraine have been characterised by the employment of layered wide-area jamming. This includes jamming GPS and radio frequencies, denial of the civilian cell network, and artillery-deployed jammers. Strike Brigade will, therefore, have to be capable of operating in a heavily comms-degraded environment. Due to the classification of communications capabilities it is not possible to offer recommendations as to which system might provide sufficient connectivity in this paper. However, it is essential that Strike’s C2 architecture is tested rigorously in an environment that realistically reflects the level of disruption that Russia can achieve.

The prospect of a Strike Brigade maintaining persistent communications across a large area creates an additional vulnerability. If Strike Brigade troops/platoons are in constant communication, their positions will be identified by Russian EW assets. If this can be done, then there is no value in fighting dispersed, and Russian fires will be able to target combat teams by their electronic signatures. Given that dispersal demands communication, it seems that Strike will need to rely on providing Russian EW units with multiple false positives, through procedural and technological deception, rather than seeking to eliminate their signature. Multiple electronic spoofing systems that are sufficiently mobile to be dispersed by the brigade across the operational area are therefore an essential capability if Strike is to remain survivable. These systems have a need for electrical supplies, and if they are powered by a generator, will need fuel, adding a further requirement for Strike CSS.

129. Such as the Borisoglebsk-2, see Cranny-Evans, Cazalet and Foss, ‘The Czar of Battle’, p. 3.
It is necessary to consider the protection requirements against conventional kinetic threats. Strike brigades must be able to avoid being ambushed by VDV or other light forces. Beyond the sensor systems on Ajax, commercial off-the-shelf small UAVs are able to provide situational awareness out to 2 km, making them ideal for preventing light forces from surprising Strike platoons/troops operating in a 16-km² fighting box. A further capability that would greatly increase the ability of the brigade to avoid being ambushed by lighter forces would be a system equivalent to the Chess Dynamics anti-UAV defence system (AUDS) radar, as mounted on a Jackal during Exercise *Autonomous Warrior*. Beyond being able to detect enemy UAS, this system was reliably able to identify movement of infantry out to 4 km. When this could be activated would depend upon the threat from enemy ordnance. Such a system, mounted on one MIV in a platoon, would allow dispersed units to maintain situational awareness.

Unavoidably, however, Strike will come under fire. The standard variant of Boxer offers protection to Level 4 STANAG 4569. The British Army is considering raising this to Level 6. This makes sense given the volume of 30-mm cannon fire that can be generated by Russian forces. However, if increasing the armour on MIV significantly increases its weight and reduces its mobility, then this is not compatible with the Strike concept. Further discussion with Rheinmetall will be needed to find a suitable balance. One option could be to up-armour the drive module, which is most likely to be hit, but not the mission module. It is also important to note that increasing protection on the mission module reduces its stowage capacity. An APS system for MIV, however, appears to be non-discretionary. Strike vehicles will be engaged by both RPG-29s and Kornet-EM ATGMs. It is not realistic for armour to prevent these weapons from achieving kills on MIV. An APS would drastically improve MIV’s survivability.

Another non-discretionary force element would be a medium-range air defence capability held at the brigade level to deter Russian tactical aviation and larger ISR platforms from finding and fixing the dispersed platoons/troops. Given the systems being developed by Russia, China and proliferating around the world, air cover during the initial deployment and engagement phases of an operation cannot be counted on. Therefore, the brigade needs some way to make high- and medium-altitude ISR and strike sorties dangerous and impractical to maintain except for brief windows. National advanced surface-to-air missile system is one option for this, and even a single battery employing the new evolved SeaSparrow missile-derived variant could provide significant levels of capability if deployed in the rear echelon. As with the MLRS and other core brigade elements, the air defence capability must be wheeled to allow self-deployment.

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132. Report from exercises in Oman, received by author March 2019 from British officers, indicating vulnerability to anti-tank guided missiles (ATGM) even among the UK’s heavy forces.
133. For more information on national advanced surface-to-air missile system, see Jen Judson, ‘Raytheon’s Extended Range AMRAAM Missile Destroys Target in First Flight Test’, *Defense News*, 4 October 2016.
to the Baltics and other contested areas alongside the rest of the force, as well as to allow rapid redeployment to avoid being fixed and destroyed by enemy long-range fires or infiltration teams. Mounting the system on military trucks would ensure the smallest logistical burden.

**Structure**

Given the capability requirements outlined above, the following seems to be a representative force structure. Note that the distribution of dismounts must depend upon the space available in the MIV variant procured. The following should be understood as representing the necessary distribution of capabilities, rather than as a rigid blueprint for how the brigade must be organised.

In order to create a brigade with competitive mass to adversary formations, a third mechanised infantry battalion would greatly increase Strike’s effectiveness.
Figure 1: Strike Brigade Order of Battle

Figure 2: Mechanised Infantry Combat Team

Source: Author generated.
Figure 3: Mechanised Infantry Company Group

Source: Author generated.

Figure 4: Armoured Cavalry Squadron Group

Source: Author generated.
III. The Fight

The range of missions for Strike demands several distinct ways of fighting. The most challenging mission set is to conduct covering force operations to delay, disrupt and dislocate Russian regular forces. This will require novel courses of action if the force is to fight dispersed to avoid massed fires. Given the capabilities outlined previously, this chapter unpacks how Strike will need to approach fighting three particularly challenging missions, and thereby outline essential training requirements for the brigade.

Fighting Light Forces

The adversary force in a test to Article 5 would likely comprise locally raised militia supported by infiltrated GRU (Russian military intelligence) and Spetsnaz troops, backed by VDV. This presents a complicated landscape of both conventional and unconventional threats. The worst scenario would be if Strike were to occupy an urban area, be fixed by protests, degraded by IEDs and ambushed in the urban fringe by VDV armed with RPG-29s and Kornet-EMs, leaving the brigade to rapidly become combat ineffective and therefore no longer a deterrent against escalation, even if it eventually defeated these un-badged adversaries. Further complicating the brigade’s approach is that Russian long-range fires could suddenly and unexpectedly engage the brigade were it to concentrate, maintaining the need to fight dispersed.

One advantage for the Strike brigade in this scenario is that it would be supporting NATO forces with significantly better local knowledge. It does not seem to be the best use of the brigade to engage in assaults on urban areas. Local forces are better suited to these tasks. The reason that many Ukrainian troops were unwilling to engage inferior forces in early 2014 was because of the risk of escalation, facing significant overmatch from Russian forces across the border, a factor which still constrains Ukraine’s responses to Russian actions. Strike’s presence would therefore best be used to: quickly dislocate enemy groups by seizing lines of communication; screen local forces; engage enemy elements detached from the local population; and conduct

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134. The number of Russian special reconnaissance units has been increased following their proven utility in Ukraine, suggesting that these tactics will continue, see Sutyagin and Bronk, Russia’s New Ground Forces, p. 54.
135. In Ukraine, VDV and reconnaissance units made up a large part of the troops moved to support local proxies, see Shaun Walker, Oksana Grytsenko and Leonid Ragozin, ‘Russian Soldier: “You’re Better Clueless Because the Truth is Horrible”’, The Guardian, 3 September 2014.
raids and fire missions. The brigade’s most important contribution, however, would be to empower local forces to deal decisively with their adversaries by deterring escalation.

In undertaking these operations, the Brigade should remain mobile, both with its CSS and sub-units, to avoid being engaged by Spetsnaz elements conducting ‘reconnaissance-combat actions’. The use of aggressive, roving patrols would make the brigade difficult to fix. In approaching suspect areas, the aim should be to use the brigade’s ISR capabilities to find and fix hostile groups, and then finish them at range, limiting opportunities for ambush. Ideally the brigade – using ISR to be forewarned of enemy positions and avoiding urban centres to prevent clashes with civilian agitators – could use manoeuvre to encourage enemy positions to shoot first, justifying a decisive response.

The use of force against adversaries in a sub-Article 5 context presents challenges in shaping the narrative. If operations are framed as a police action, the overt application of military force may create a pretext for escalation. In this, Strike will need to be sensitive to the constraints on their actions created by the host country. Such operations would occur in a hotly contested information space, which would in turn shape public perceptions around subsequent escalation or de-escalation. The brigade would therefore need to be prepared to be public facing, and to produce regular and rapidly packaged content for media release. This would need to be fed back to 77 Brigade for production and dissemination, creating a requirement for data transfer. Crucially, that information must be published within hours to keep pace with a developing narrative. The brigade must therefore be able to triage and transmit relevant data.

Ultimately, however, the purpose of the brigade in this scenario is to remain as a credible fighting force to deter escalation by Russia. In this context, the brigade’s endurance is of primary importance. The mission demands that vehicle crews are able to maintain their vehicles and carry out basic repairs to prevent attrition by breakdowns. Removing Strike vehicles from whole-fleet management, and thereby improving the technical proficiency of crews in maintaining them, should assist in reducing the burden on REME fitters. Where fitters are necessary, they must work forwards, keeping units operational, rather than recalling vehicles wherever possible. Furthermore, the brigade could use the opportunity to prepare ground, and begin to stockpile ammunition, in case of a major escalation. While the brigade may be able to sustain operations without resupply, it should seek to maintain a high level of supply, in case sudden escalation requires multiple days of operations.

138. For more information on reconnaissance-combat action tactics, see Sutyagin and Bronk, Russia’s New Ground Forces, pp. 54–58.
140. The criticality of this must inform both training and design, see Clark, ‘What Do Future Main Battle Tanks Need to Succeed?’.
Fighting Heavy Forces

If a major escalation were to take place, the force confronting the Strike Brigade would likely be a Russian motor-rifle brigade comprising approximately 40 T90 MBTs, upgraded with reactive armour and active protective systems, four manoeuvre elements of BMP-3 and BTR-82s mixed in a 1:2 or 2:1 ratio, 152-mm self-propelled howitzers, Grad 122-mm MLRS systems, 300-mm MLRS and five air defence batteries. This formation would also contain Spetsnaz, likely mounted in BTR-82s to keep pace with the force, or lighter recce vehicles.141

Russian motor-rifle brigade tactics would normally include a reconnaissance detachment, operating as mounted companies up to 50 km ahead of the main body, and reconnaissance patrols moving approximately 10 km ahead of the brigade forward detachment.142 These reconnaissance elements would usually be mounted in BTR-82s. The brigade forward detachment is usually a reinforced manoeuvre element, tasked with pushing through and chasing down forces identified by the reconnaissance patrols, in order to clear lines of advance for the following manoeuvre elements.

Building on Soviet doctrine for urban warfare, which called for storm groups,143 Russian forces have increasingly operated in mixed vehicle formations, epitomised by the Battalion Tactical Group, with a high number of supporting and enabling capabilities integrated into manoeuvre elements. It is therefore highly likely that Strike, in coming into contact with the forward detachment, would face company-sized groups of BMP-3s supported by anti-aircraft platforms, MBTs and artillery. The ability to threaten small numbers of MBTs from within mechanised infantry platoons is therefore a non-discretionary requirement for Strike’s credibility. Artillery for the Russian formation would work to a pre-planned list of targets, with some guns held for fire missions on targets identified by UAVs and reconnaissance patrols. Due to heavy use of electronic interference, orders tend to be set for a day’s operations, listing tasks and timings, to which commanders are urged to adhere. Coordination of fire and manoeuvre tends to be sequential, running to the order sheet. Although Russia has reformed considerably since the Georgian War, many of these constraints persist.144

Confronting such a formation represents the most dangerous scenario for the Strike Brigade. In the first instance, it is essential that the Strike Brigade has sufficient operational depth to attrit the force over 60 km. The first objective for the Strike Brigade would be to blind its adversary by finding and destroying its reconnaissance elements. This would best be achieved by the formation recce screen, comprising Ajax recce troops. Given the large silhouette of Ajax –

larger than most MBTs – the screen would best function with the attached recce troops divided into pairs, concealed in positions to maximise the effectiveness of their sensor suite. The recce vehicles would need to keep their engines off to minimise their acoustic and electronic signature, running their systems from their auxiliary power supply. Having identified enemy elements, this screen could then call in strikes on MBTs, artillery or other high-value targets from EXACTOR, and coordinate hunter troops from the armoured cavalry formation to interdict and engage enemy recce elements. Since Strike Brigade’s forward screen would consist of roving armoured recce patrols of Ajax, while their Russian equivalents are usually mounted in BTR-82s, Strike Brigade has significant overmatch in ISR, lethality and protection against these units. It is reasonable to expect Strike to inflict significant casualties in meeting engagements between recce forces, as long as Ajax troops avoid being engaged long enough for the forward detachment to reach them. The hunter troops could then conceal themselves and allow their positions to be bypassed to await the arrival of Russian CS and CSS elements, and then either raid them or call in MLRS strikes. Alternatively, they could fall back to fight alongside the mechanised infantry, significantly increasing their lethality. In blinding Russian forces, these raids would likely slow down the advance of the forward detachment, which would need to advance without a clear picture of the enemy ahead. Realistically large numbers of Ajax – given their size – would not be able to move undetected ahead of the formation. It would therefore make sense for the medium-armour regiment to have one squadron divided into pairs to hunt enemy recce, and two squadrons held in reserve to either exploit gaps in the enemy axes of advance, or to act as a medium-armour reserve for the MIV squadrons.

The Baltic states are heavily forested, with significant water obstacles and a large network of small roads, wide enough for just one or two vehicles. This creates highly defensible terrain. Once the enemy forward detachment began to push into the mechanised infantry operational boxes, it would necessarily advance in columns through the woodland. With openings at around 600-m intervals, there are multiple opportunities for ambush from flanks, and from concealed positions between wood blocks. Destroying the leading vehicles by CTC fire or ATGMs would likely necessitate a halt to clear wreckage. Each platoon could bring six Javelin posts to bear, though with a 4.5-km range it would also be possible for adjacent platoons to contribute further firing posts in support. Since the NEMO is capable of engaging targets at 10-km range, if three platoons were operating in adjacent 16-km² fighting boxes, two forward and one back, then each troop could provide indirect – and in some cases direct – fire support to one another. Thus, three 120-mm mortar tubes could unload salvos on the area behind ambushed vehicles, inflicting artillery strikes almost as deadly as 155-mm howitzers, enabling the ambushing vehicles to withdraw and reposition while Russian forces clear the road and tend to their casualties.

This approach would present multiple dilemmas to the Russian commander. They could dismount to have infantry clear ambush sites ahead of the column. This would slow down the force, allowing the mechanised infantry to employ their AUDS radar to detect the dismounts and inflict heavy casualties with mortar fire. The force could disperse to try and out-maneuver and cut off Strike forces. However, this would enable Strike to execute a cascading series of ambushes on company-sized groups, which would still be constrained by the terrain. This would also create challenges for Russian artillery, since the manoeuvre elements would be forced to divert from
their planned axis of advance. The most likely, and potentially dangerous course of action by the Russian commander would be to mass heavy units and try and push through, accepting initial losses to overwhelm the brigade’s positions. As John Matsumura and others highlighted in *Lightning Over Water* — their 2000 study of light forces in contact with mechanised opponents — the capacity for massed armour to simply overwhelm lighter opponents by concentrating can be devastating.\(^{145}\) With only a platoon in a 16-km\(^2\) area, with two 40-mm CTC, two mounted Javelin, and four dismounted Javelin firing posts, the force would risk being overrun if approached by concentrated armour. Javelin — while effective in an ambush — is at a disadvantage due to its lengthier time of flight compared with direct fire systems, making concentrated MBTs a serious threat to Strike.

If the Russian commander massed their armour, then the platoons could call upon brigade MLRS to operationally significant effect. If the Strike platoon chose to laterally evade the thrust, rather than hold in defence, then the enemy would pass through to the second prepared troop square. This could similarly ambush and manoeuvre, allowing mechanised infantry companies to maintain a fresh platoon in position to ambush the leading enemy element, inflicting persistent attrition on the advancing force. Alternatively, having moved laterally, the mechanised infantry company could allow operational penetration, leaving the Russian commander with a high lethality threat on both flanks, liable to attack their CS and CSS elements. It is also worth noting that in complicating the battlespace, this would significantly increase the likelihood of casualties from friendly fire among Russian forces, as occurred in Ukraine, when Russian operational sequencing was disrupted.\(^{146}\) A further important point is that inflicting multiple high-casualty ambushes, and threatening the flanks and rear of formations, would have a significant psychological effect on the morale of Russian forces who, both in Ukraine and Syria, have been known to break under heavy fire.

It is highly unlikely that such tactics would halt a Russian motor-rifle brigade. However, if conducted over sufficient depth, these tactics could seriously attrit and degrade the ammunition, morale and enablers of the formation, inflicting heavy casualties, so that the Russian brigade would struggle to achieve its objective — likely the capture of a defended town. Moreover, by avoiding decisive engagement, such tactics would leave significant pockets of NATO forces in the rear of advancing columns, cutting off resupply and thereby undermining the ability of Russian forces to sustain operations. A significant challenge for Strike in sustaining raids on Russian forces once operationally penetrated is resupply and vehicle maintenance. For this reason, the commander will likely need to decide early whether the brigade is to withdraw and attrit the enemy or allow operational penetration. The former would allow the brigade to fold in with Allied forces holding defensive positions, having worn down the enemy. The latter could allow Strike to destroy the enemy’s CS and CSS, but the brigade could only sustain that deep fight for

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146. Significant casualties among a Russian VDV company group were reportedly caused by friendly artillery fire after communications failures around assault timing alterations due to enemy action during the battle of Debaltseve. Author interviews with Russian military experts, London, November 2016.
a limited period.\textsuperscript{147} If the brigade opted to withdraw to a line of defence alongside Allied forces, its tactics would likely transition to traditional urban defensive techniques.

A third potential course of action for the brigade – having identified an adversary’s axes of advance – would be to evade the enemy force entirely, using its manoeuvrability and reach to strike deep into their rear, hunting ammunition dumps and artillery, and potentially destroying infrastructure critical to their resupply. While such a move might be crippling to the enemy’s ability to achieve its operational objectives, it would also likely see the destruction of the Strike Brigade and would not halt or slow the advance of the enemy force in achieving its tactical objectives. A clear distinction must also be drawn between allowing operational penetration and tactical penetration. The latter opens up enemy vulnerabilities. If, on the other hand, Strike sub-units allow enemy forces to pass through their positions while in contact, then the sub-unit is liable to find itself caught between echelons and engaged from multiple directions.

Another critical implication of these tactics is the threat to casualties seeking to withdraw. If Strike is to operate dispersed, allow operational penetration and attrit heavier forces, then it will invariably take casualties without being able to ensure their evacuation. Nor is it likely that damaged vehicles in front of an advancing Russian manoeuvre element could be recovered before being overwhelmed, without exposing scarce recovery assets to undue risk. The brigade would therefore need a fundamentally different mindset and set of priorities in terms of how it handles and prioritises casualties.

\subsection*{Out-of-Area Contingency}

The conduct of out-of-area contingency operations is not particularly novel for Strike. Strike Brigade would likely be a comparatively heavy force relative to its adversaries. The one area of war development to be carefully considered is offensive operations into urban areas, which the brigade would likely need to undertake, irrespective of whether it is best suited for the role. A distinction must be made between urban assaults aimed at securing control of key population centres against a sparse defence, and the retaking of urban centres from prepared enemy forces.

To consider the former scenario, when fighting poorly trained or insurgent forces, rapid and aggressive action can often dislocate and disorientate adversaries. The concept of the coup de main – highly dangerous against motivated and experienced adversaries\textsuperscript{148} – is an effective

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\item\textsuperscript{147} Operation \textit{Market Garden} presents an excellent case study in both the effectiveness of forces operating behind the enemy, and the limited capacity for a force to sustain that fight given the constraints of ammunition, and the tendency for adversaries to close in once penetrated. See Antony Beevor, \textit{Arnhem: The Battle for the Bridges}, 1944 (London: Viking, 2019). If the Chindits campaign in Burma provides a counterpoint to the sustainability of operations in the enemy’s rear, it should be noted that the Chindits sustained heavy casualties, and were resupplied by air, which Strike is unlikely to be able to do.

\item\textsuperscript{148} As demonstrated by Russian casualties in Grozny, see Olga Oliker, \textit{Russia’s Chechen Wars 1994–2000: Lessons from Urban Combat} (Santa Monica, CA: RAND, 2001), pp. 5–32.
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method of rapidly seizing key civic infrastructure, and thereby taking control of an urban environment. The COA would be to enter the urban area rapidly and reach key points in the city before dismounting and setting up perimeters, using vehicles to provide heavy firepower along key arcs. Those key points could then be connected, either by patrol or by partnered forces, overseen by specialised infantry, depending on the operating environment.

These tactics would not work against a well-armed or well-motivated adversary, or against forces prepared in defences. Against such an adversary the key is to carefully coordinate the movement of vehicles and dismounted troops. As soon as vehicles get ahead of their infantry, they are liable to be ambushed and destroyed. On the other hand, if infantry moves without the firepower afforded by their vehicles, they are liable to be forced to clear buildings, and suffer steady attrition. Ideally vehicles would cover the advance of infantry into an urban block. From there the infantry could launch UAS and maintain surveillance – calling in indirect fires – to enable the vehicles to move up, engage new positions and thereby allow the infantry to advance. 40-mm cannon fire, 120-mm mortar bombs in direct or indirect fire, and 25- or 27-mm explosive shells are more than capable of destroying enemy firing posts. There would also likely be a more permissive air environment in these operations and the brigade could make use of JTACs to call in air strikes. However, at close range, there are a significant number of weapons that could damage or destroy MIV, and it would be the role of the infantry to identify enemy positions to deprive them of the opportunity. This requires robust equipment for mounted and dismounted collaboration, and the ability to maintain shared situational awareness between crews and infantry.

The greatest threat to this COA is the systematic emplacement of IEDs, not for the purpose of isolated ambushes, but for the denial of ground, as practised by Daesh (also known as the Islamic State of Iraq and Syria, ISIS) in several cities in Iraq, or by the Taliban in complex terrain in Afghanistan. While Boxer is mine resistant, and may be able to prevent its passengers being killed by an IED, the blast would quite likely mobility-kill the vehicle. In any case, the booby-trapping of compounds and buildings would slow down the advance of infantry units, reducing the tempo of operations and allowing defenders to mount ambushes. Of course, ground mined to this extent is mutually denied, and in the majority of political contexts, cities are seized to be controlled. There are therefore plenty of instances where Strike would not face this level of IED threat during urban operations. If such a threat exists, it is important for the brigade to recognise that retaking the territory is not a brigade task. It took 90,000 troops to retake Mosul. However, Strike, being agile and mounting significant firepower, could effectively isolate and control routes of entry into the urban environment, sealing it off. Intelligence of the state of the defence must inform how Strike approaches the problem.

Conclusion

THE STRIKE CONCEPT is not a silver bullet. In terms of providing a deterrence to Russia, there is no substitute for pre-positioning heavy forces in Eastern Europe. However, such a policy would fix the British Army to a single contingency. Strike has the virtue of delivering a deterrent effect, while maintaining policy options for the UK government. A Strike brigade could move quickly enough to ensure a rapid NATO response to an un-badged Russian incursion or contribute to ensuring a sufficient force ratio to slow a conventional Russian thrust. In achieving the latter, Strike would be dependent on Allied forces, but the capability would in itself demonstrate the UK’s determination to uphold the principles of the Alliance, and thereby push Allies to show comparable resolve.

Strike cannot achieve this effect simply by virtue of existing. The concept requires sufficient enablers:

- The brigade must have sufficient lethality within its sub-units, requiring investment in a number of MIV variants.
- There must be sufficient HETs – or at the very least MLETs – to transport Ajax, and enough logistical vehicles to support the Brigade at range.
- It must have resilient C2 systems.
- It needs to be able to punish an adversary for concentrating, which would require MLRS and an ability to deter enemy aircraft.

Many of these are not just requirements for the brigade, but for the army generally. If the UK government demands a force that is able to meet the identified threat, it must maintain the necessary investment to sustain that force in the field. Without investment in logistical capabilities, and new vehicles, the army will find itself running worn-out platforms with increasing maintenance costs, without the necessary enablers to deploy the force on operations.

However, making the Strike concept work is not just a matter of purchasing equipment. If a Strike brigade is to deter heavier forces, it must be able to fight dispersed to avoid being found, fixed and destroyed. Dispersal in a comms-contested environment demands training for coordination procedures and complex movement. Strike personnel must operate with considerable independence, seeing operational penetration as an opportunity to strike vulnerable enemy CS and CSS assets, rather than a trigger for prompt withdrawal. Strike personnel also need to be able to maintain their vehicles with a greater level of independence, and will need casualty procedures that reflect the difficulties of extracting under heavy contact. After two decades of counterinsurgency, the army is currently too easily fixed by low numbers of casualties and is not prepared for fighting at scale.
The need to operate dispersed, and the tendency to accept operational penetration, has consequences beyond the brigade. Strike is unlikely to be able to hold heavy enemy forces. This must be factored in to divisional and corps-level plans, which are likely not to be British in the early stages of a conflict. How Strike operates must therefore be clearly communicated with Allies. At present, it is unlikely that US Divisional or Corps planners would assign a Strike Brigade the battlespace needed to fight in the manner outlined in this paper. The brigade would therefore be vulnerable to becoming concentrated, or else to friendly fire casualties from deep fires. It is critical that Strike’s doctrinal development is conducted in liaison with US, French, Italian, Lithuanian, Polish, and other Allies who will likely be operating alongside it, in order to ensure its compatibility.

There has been some debate within the army as to whether there will be one Strike brigade or two. The implications of the need to maintain extremely high readiness, and the hope to be able to deploy the force on out-of-area contingencies, lends itself to maintaining two brigades. A single brigade would invariably have vehicles that are steadily worn out during exercises, and morale would suffer from maintaining extremely high readiness for sustained periods. It would also mean that were Strike deployed for an overseas contingency, the UK would significantly weaken its deterrence posture. With two brigades, by contrast, it becomes possible to have one engaging in training and refitting, and ready for out-of-area contingencies, with the other at extremely high readiness and ready to deploy to Eastern Europe. These brigades could be rotated. This would also ensure that members of Strike brigades gained combat and operational experience, rather than preparing for a single hypothetical scenario. Since Strike personnel are expected to act with initiative, ensuring that they spend time deployed would help to encourage creativity in adapting techniques to different contexts.

The Strike concept faces significant hurdles. It is all too easy to highlight its vulnerabilities and lament its limitations. All force structures are a culmination of hard choices. The risk is that in an attempt to be painstakingly thorough assessing those trade-offs, the British Army finds itself with a small number of new platforms and insufficient enablers, while remaining reliant on old vehicles, paying excessively to extend their service only to be left with declining capabilities. If the Strike concept is to be implemented, it should be pursued with the necessary resources to ensure that it can address the problem for which it is designed. This paper has sought to lay out that challenge, the capabilities available and their implications for how the Army fights. Strike is one of several possible solutions. The decision for the army now is whether it is the solution they wish to carry forward from concept to concrete reality.
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