

Defence Committee

Oral evidence: Progress in delivering the British Army's armoured vehicle capability, HC 659

Tuesday 3 November 2020

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Members present: Mr Tobias Ellwood (Chair); Stuart Anderson; John Spellar; Derek Twigg.

Questions 157 - 189

Witness

I: Brigadier (retired) Ben Barry, Senior Fellow for Land Warfare, International Institute for Strategic Studies.



Examination of witness

Witness: Brigadier Ben Barry.

Chair: Welcome, ladies and gentlemen, to this Defence Select Committee hearing at the House of Commons on Tuesday 3 November, US elections day. We are going to continue our study into the British Army's armoured fighting vehicles. I am very pleased to welcome Brigadier Ben Barry, formerly of the Rifles and land warfare senior fellow at the International Institute for Strategic Studies. Brigadier, thank you very much indeed for your time today. It is much appreciated.

You have had a wealth of experience in uniform, not only commanding battalions and brigades but also in various forms of conflict. You have gone on to write books about post-conflict stabilisation, in Iraq and elsewhere, and lessons learned connected to the changing character of warfare. That is all pertinent in our study today, as we consider the land component for the British Army in relation to the integrated review, which we assume will be materialising in the next couple of months. Thank you very much indeed for your time.

I should declare a declaration of interest. I served under your command, in Bosnia, in 1995. I owe you an apology for stealing a Land Rover, I think, on the final week of the tour to take my boys for a drink to say thank you to them. Very kindly, when I had to march in front of you and salute, you simply asked for an apology and told me to be on my way. I am forever grateful that you were so kind and did not dishonourably discharge me, as it was my last day in the British Army as a regular.

Welcome here today. We are going to come straight into the questions, beginning with the integrated review as a whole, and then we will go deeper into the vehicles themselves.

Q157 **John Spellar:** As the Chair has said, it is basically a scene-setting question in two parts. How would you assess the current state of the British Army's armoured capabilities? What do you think will be the consequences if there is a delay to the integrated review and associated funding decisions?

Ben Barry: The British Army's armoured warfare capabilities have some strengths, but they also have weaknesses. They are in desperate need of modernisation, not just Challenger and Warrior and the fielding of Ajax and Boxer, but also the replacement of the obsolescent Bulldog armoured utility vehicle. If the integrated review is delayed, defence's current plight, where there is a mismatch between ends, ways, means and resources, will continue to get worse.

The core defence budget clearly is in need of increase if the aspirations in the equipment plan are to be delivered. If the budget is going to be reduced, plans to modernise equipment will have to be curtailed by reducing the numbers, programme delays or cancellations. There is a danger of the choices of which programmes to delay or defer being



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guided by where the money has been contractually committed and lobby groups, rather than military necessity.

If the MoD does not get the three-year financial settlement it needs, it will be in deep financial trouble. The incoherence between its ambitions and resources available will increase and that will diminish the UK's military credibility. For the Army's armoured warfare capability, it could be disastrous. For example, it is difficult to see, if there is not a financial settlement, how Challenger and Warrior upgrade programmes could be approved and funded at the end of the year, as seems to be planned. Where would the programme stability come for the other modernisation?

There is also a people dimension. I have a sense there are a lot of bright, young, experienced and committed people in all three services, for example the people who are adjutants and operations officers in Army battalions or RAF squadrons. They are keen to see the integrated review deliver modernisation and restore this balance. If it fails to do so, or is postponed beyond the radar horizon, I think they will receive this badly and more of them will walk away from the services.

Q158 John Spellar: What impact, as far as you can see, is this all having, for example on their ability to train, to prepare and, indeed, where they are engaged in operations in the Baltics?

Ben Barry: Positively, there is no sense that preparation and the training for operations, be it NATO's eastern front, Middle East or Afghanistan, is degraded and falling below the necessary level. Quite clearly, there are all sorts of economies being made in British military capability. We see this in the Army in a number of ways. It would appear to be the reason why the level of ambition from that required by SDSR 2015 for a division has been reduced so significantly. It may well be the reason why Boxer is planned to be delivered at a very slow rate.

On training, there is an interesting comparison with the US army. The US army armoured brigade combat teams go through the national training centre on average about once a year. The last time a British brigade went through BATUS was 2002. When the major combat operations in Iraq ended, the US restored its combat training for armoured brigade combat teams at the national training centre. British brigades have not been going back to BATUS or Poland as they did before 9/11.

Q159 Chair: Can I go back and confirm the consequence of any delay in the integrated review and the manner in which the spending will be attributed? Are you saying that, to your best understanding, decisions could not be made certainly on the Warrior and the Challenger, but also on the Ajax and the Boxer? Is it possible that, in one year, some decisions could be made on four vehicles that are desperate for an outcome?

Ben Barry: The evidence from the MoD team last month was pretty clear that Ajax and Boxer were contractually committed. I would imagine that



contract includes cancellation penalties. The evidence was also pretty clear that firm decisions to proceed with the Challenger 2 upgrade and the Warrior modernisation have not yet been made. If there is not a proper stable financial settlement for defence of the sort that both the Defence Secretary and CDS have argued for in front of your Committee, it is difficult to see how the MoD could commit to the Warrior and Challenger upgrade programmes in the way the Army would like.

Q160 Chair: If there is a delay, if we do a single-year spending round then we have to wait another year for a multiyear spending round, when decisions could be made, we are then left with the status quo. Looking at the current situation, the operational capability of Warrior and Challenger, would we struggle to mobilise a division without the necessary upgrades taking place?

Ben Barry: I think so. If you ask the Army that, it would say it would move the difficulty yet another year to the right. There would be even more delay in fielding the planned division.

Q161 Stuart Anderson: Hello, Brigadier. It is quite interesting to hear that the brigades have not been in BATUS or Poland. That was our staple diet many years ago. I spent my 21st birthday on that prairie. I remember it fondly. If we expand on this, I would be keen to know what the implications of the Army's inability to field a war-fighting division, including two armoured infantry brigades, would be by 2025. How is that going to impact us?

Ben Barry: I call it the SDSR 2015 division, the division with two armoured infantry brigades and a new strike brigade. I am calling the division the Army suggested could be fielded in 2025 the reduced division. That reduced division would, broadly speaking, have only half the combat power. It would not be capable of the same missions as a full division, or, if it was assigned them, it would take much longer, or the chances of success would reduce. Also, British casualties would increase.

I benchmarked an engagement between a Russian tank division and 3 Division. 3 Division, as envisaged by the SDSR, two armoured infantry and a strike brigade, could probably stop a Russian tank division in its tracks. It has smaller numbers of almost everything. It only has two thirds of the number of tanks. It has a slight superiority in armoured infantry fighting vehicles. It has 40% fewer anti-tank guided weapons, one third less artillery and one third fewer multi-barrel rocket launchers, but it could stop a Russian tank division.

The reduced UK division basically has half the anti-armour capability, only 30% of the tanks of a Russian tank division, two-thirds of the armoured infantry fighting vehicles, 20% of the anti-tank guided weapons and 15% of the self-propelled artillery. It would be very difficult for that reduced division to stop a Russian tank division. A Russian tank division would seriously overmatch the reduced Third Division. "Overmatched" is a very polite, clinical way of saying "could be defeated".



Q162 **Stuart Anderson:** That is very concerning. I will come back to the Russian division in a minute. If we could look at both the half and the full capability compared to our US equivalents, where is that as a benchmark?

Ben Barry: The US army has half a dozen heavy divisions, four armoured and two mechanised. It has been in the process, triggered by the invasion of Ukraine, of increasing its armoured brigade combat teams, which are what they say on the tin, from nine to 11. In fact, one of them recently went through the national training centre for the first time. An armoured brigade combat team is broadly similar to an armoured infantry brigade, but in some respects it is more capable. It has 50% more Abrams tanks than an armoured infantry brigade has Challenger tanks.

Abrams tanks and the Bradley fighting vehicle are both being modernised, reflecting some of the hard lessons from Iraq and Afghanistan, but also modernised in their own right anyway. The Abrams tanks are being fitted with the Israeli Trophy active protection system. Bradley, the US equivalent of Warrior, not only has a turret with a 25 millimetre cannon on it, but it has an under-armor pod of TOW missiles. An armoured brigade combat team has many more anti-tank guided weapons than a British armoured infantry brigade.

The other thing that is relevant to British plans is that the large numbers of M113 APCs that are the basis of utility vehicles like command posts, ambulances and mortar vehicles are all being modernised. In fact, they are being replaced as we speak by something called the armoured multi-purpose vehicle, the AMPV, manufactured by BAE, which is basically a Bradley hull with the turret taken off. Whereas a British armoured infantry brigade by 2025 will still have lots of FV432 Bulldogs in utility roles, as time goes on the equivalent of that will be these relatively new AMPVs, which are better protected and have commonality with Bradley. The other factor is that armoured brigade combat teams, on the whole, go through the national training centre about once a year.

Q163 **Stuart Anderson:** It is very interesting to hear that. The MoD's response in the past is to say, "We do not want to match peer opponents. We want to overmatch them". I know that you spoke on Russia. I would like you to expand on a full division. Would we be able to overmatch them? Also, I would like to see a benchmark similar to the US with both France and Germany.

Ben Barry: Right now, in the planned Third Division, the only area of weapons system to weapons system overmatch is probably the very high degree of protection that is designed into the Challenger 2 tank. Challenger 2 has a good gun, a 120 millimetre. It probably overmatches most Russian 125 millimetre guns, but of course it has fewer of them. The division has quite a few Javelin anti-tank guided weapons, which is a very effective anti-tank guided weapon, but an equivalent Russian formation has about four times the number of vehicles that can fire anti-



tank guided weapons, and from underneath armour. That includes the T-72 tank and the other tanks, all of which can fire a missile from their main gun.

The other weakness of the British division compared with an equivalent Russian division, which I am afraid the Army chose not to acknowledge, is artillery. Broadly speaking, Russian brigades and divisions have three times as much gun and rocket artillery as their NATO equivalents. Whereas a British armoured infantry brigade would be supported by a single AS-90 regiment, a Russian motor rifle brigade would have two battalions of gun artillery and a battalion of multiple rocket launchers.

There is another area in which the British Army is overmatched, and that is ground-based air defence. Broadly speaking, the Army has two regiments of ground-based air defence, one of Rapier and one of Javelin. We can assume that Rapier would be behind the division, but Javelin would be with the division. Most Russian brigades have an air defence battalion and divisions have air defence brigades. They have an impressive array of layered air defence. Many of their missile and radar systems are very capable.

That is important, because it would complicate efforts to use fixed-wing air power to help offset Russian numerical superiority. It is also important because it would limit the options for manoeuvring Apache helicopters around the battlefield to attempt to apply their tank-killing power to the battlefield. Let me say that this is not just a British Army problem. It is a NATO land forces problem.

Q164 **Stuart Anderson:** Would you also expand on Germany and France?

Ben Barry: France has two heavy armoured brigades with the Leclerc tank, which itself is being modernised. It recently introduced a VBCI wheeled armoured infantry fighting vehicle, which seems to have done very well in Mali. It has gone down a different road of self-propelled artillery, which is a wheeled, lightly armoured approach. There is nothing wrong with that at all.

Germany has the Leopard 2. It is replacing its Marders with the Puma armoured infantry fighting vehicle. Puma not only has a cannon but also a pod of spike missiles. German army serviceability and readiness is very low and there has been a lot of reporting on this in the public domain, not least by the Bundeswehr's own inspector-general.

Q165 **Chair:** Can I go back to the American BAE Systems vehicle on a procurement question? We will probably move into more detail about this later. It is interesting to hear that a British company is developing the armoured multipurpose vehicle for the United States, yet we are not exploring and utilising the same procurement models and, indeed, sharing a platform. Is there any obvious reason why we have not considered working together with the US to create an armoured personnel carrier that we could share?



Ben Barry: I think the answer is that the British Army has few, if any, M113 chassis in service. The interesting thing is the approach. If we go back to what was in a US brigade combat team before the invasion of Iraq, Abrams tanks and the Bradley fighting vehicles were the main weapons systems, but they had lots of M113s in supporting roles, in the same sorts of roles that the 432 Bulldog is currently used for. After the invasion of Iraq, the US found that the armour levels on the M113 were very low and it very quickly removed the M113 from service in Iraq, replacing it with armoured Humvees and then with MRAPs.

For the British Army, my judgment is that Bulldog urgently needs replacing. It is a 1960s vehicle. Yes, it has had a new engine and powertrain put in it, which has improved its automotive performance, but it is still a 1960s hull with not very great protection. What should replace Bulldog? One option, which none of your official witnesses seemed to identify the other week, was that, of the Warriors the Army holds—and it actually holds almost 800 Warriors—those that are not going to be modernised into new Warrior infantry fighting vehicles with the new turrets could easily have the turret taken off and be turned into battlefield support vehicles, just like the US army is doing with its surplus Bradleys. For armoured infantry battalions, that would have the advantage of commonality of chassis, just like the AMPV has that advantage for US mechanised battalions.

Q166 **Chair:** We are just about to purchase 500 Ajax, which is a slightly bigger version of the Warrior for the untrained eye. I appreciate it has a lot of ISTAR equipment in it, but, essentially, it is not too dissimilar in its construct. It is going to have the same turret. It is just bigger. It is less of a subtle vehicle than the Scimitar that you and I were familiar with when it was used in Bosnia. Sorry to labour this a little. If we are looking for a multipurpose vehicle, instead of purchasing the Ajax, could we have gone down the road of using the AMPV and utilising that as a multipurpose, which includes the suite of recce capabilities that we have chosen Ajax to provide?

Ben Barry: Bradley always had two variants. The M2 Bradley was the equivalent of Warrior, the armoured infantry fighting vehicle. The M3 Bradley was a scout vehicle and continues in that role today. If the Army was here, it would say that it wants to have a fleet of four principal armoured vehicles: Challenger tank, which is also the chassis for the two different Engineer tanks, Warrior, Ajax and Boxer. It would not welcome introducing a fifth type of hull into the armoured vehicles that are in an armoured infantry brigade. It would argue: "We are where we are".

If you look at the data that is on the MoD website on the number of armoured vehicles that are in service with the British Army, it has almost 900 Bulldogs. They are mortar carriers, command vehicles, signals vehicles, armoured ambulances; they are what engineer field sections travel round the battlefield in.



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What is to replace them? Some of them could be replaced by a battlefield support vehicle based on Warrior. Some of them could be replaced by variants of Ajax. Ajax already has six variants and fulfils many of the supporting roles in the future armoured cavalry regiments. They could also be replaced by Boxer, which has the advantage of being modern, simple and comparatively large. In many of the supporting vehicles, capacity is what you need. If I was in General Tickell's shoes, I would be looking at what the most cost-effective mix of vehicles based on those hulls would be to replace those 900-odd Bulldogs in those supporting roles.

Q167 **Chair:** I do not disagree with what you are saying. My suggestion was that, with a bit of forethought and planning, we could have looked over our shoulder to have a discussion with the Americans, before we went down the road of looking at Ajax, to see that there is a chassis made by a British company, a capability that we could then utilise with a very close NATO ally. That could have done exactly the same job as Ajax is attempting to do.

Not only that, but you say we want to slim down the number of platforms we have. When we add them all together, today we have spoken about, or not really spoken about, Challenger, Warrior, Ajax, Boxer, Bulldog, Stormer, Jackal, Coyote, Foxhound, Husky, Mastiff, Panther, Wolfhound, Ridgeback, RWMIK Land Rover and then the battlefield Land Rover. This is an awful lot of different variants, different types of vehicles, all with their own procurement streams and the support back-up that comes with it on the battlefield. I am suggesting that this needs to be drastically slimmed down and modularised, so that, when we are in a theatre of operations, we do not have to have supply chains that do not complement each other, all going back to the UK, to keep these vehicles on the road.

Ben Barry: I am sure you are right. You will recall the logistic challenges of administering a company group that had three different types of armoured vehicle chassis in it and the vexation it often caused to our hard-pressed REME fitters. To be fair to the British Army and US army, in the late 1990s there was a great momentum behind collaboration on a future scout reconnaissance vehicle to replace both CVR(T) and the M3 Bradley. It was called TRACER. The project manager in the late 1990s was the then Colonel Peter Wall. When the Army's eyes switched to FRES and the apparent match between its FRES requirements and the US army future combat system, TRACER was abandoned by both countries.

There are options still for US-UK collaboration. There is no doubt that, if the Challenger upgrade fits the 120 millimetre Rheinmetall gun, British, American and German tanks will be able to fire each other's ammunition and ammunition that is used by a lot of European armies that have Leopard 2, so there can be collaboration on future development of the ammunition.



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The other thing is that the US has an ambition to replace the M1 tank. It is upgrading the ones it has, but has a future main ground combat system programme. It is a bit surprising that there is no evidence in the public domain that the UK is involved in that programme.

Chair: We will come back to Challenger. That is a really interesting point that we will explore later.

Q168 **Derek Twigg:** Could the Army abandon its heavy armour capability and remain a credible ally to NATO?

Ben Barry: It could. It could choose to, just as Canada chose to abandon its tanks, although it had to rapidly reacquire them in the middle of the last decade. Such a course of action would reduce the UK's contribution to NATO's deterrence and military credibility. It would probably be welcomed by the Kremlin. We need to turn our minds back to the NATO summits of 2016 and 2018, which saw commitments made by the alliance and the UK to improve NATO's ability to deter and reinforce. This included a greatly increased emphasis on armoured forces in both roles. The US and Germany both committed to growing their armoured forces, as indeed, in a modest way, have the Dutch.

Abandoning heavy armour would reduce the combat power of the Army. Its abilities to counter enemy armour would reduce, reducing its chances of success against an armoured opponent. The Army would also become less effective in urban warfare, with urban operations taking longer and incurring more casualties. It would be quite difficult to explain to the NATO military structure and key UK allies, including the US, France, Germany and our eastern European allies like Poland and Estonia. It would also be difficult to explain to smaller allies that retain tanks: Australia, Canada, the Netherlands and Norway.

There is another aspect, which spins into the integrated review. In my opinion, the integrated review is absolutely right to emphasise engagement. If we want the British Army to engage important armies in key regions of the world, we have to be credible to them. There are an awful lot of armoured vehicles, for example, in the Middle East and north Africa, which includes 10,000 tanks. We have not long seen the UAE make really quite impressive use of armour in its initial intervention in Yemen, before things got sticky. A British Army that has walked away from heavy armour would lose credibility and influence not just in NATO, in my judgment; it would also lose it in key regions of the world.

Q169 **Derek Twigg:** What other capability gaps does the Army need to address to ensure it retains the ability to conduct high-intensity war-fighting operations?

Ben Barry: The Army is on the case about the key ones, the need to modernise and upgrade Challenger and Warrior, the need to replace the obsolete and very vulnerable CVR(T) with Ajax and the need to have wheeled, mechanised infantry in Bosnia. I think it knows, in its heart of



hearts, it needs to replace Bulldog, but I will not repeat what we have just discussed.

Along with many other NATO armies, it needs to acknowledge the massive overhang of Russian artillery capability that sees the British Army, like many NATO armies, outgunned, outnumbered and outranged. When you look at it in comparison with the US and Russian armies, it lacks a capability to fire anti-tank guided weapons from under armour, which is going to reduce their effectiveness and increase the vulnerability of the troops firing those missiles, particularly in a manoeuvre battle. It has a relative shortage of ground-based air defence.

It does not appear to have a forward-deployable battlefield counter-drone capability. That is unlike the RAF. In the recent series of announcements designed to warm everybody up for the integrated review, the Chief of the Air Staff clearly stated that the RAF had developed a counter-drone capability to protect its airfields. Armies that do not have a counter-drone capability are going to run into the same sorts of difficulties that the Armenian army has run up against or, indeed, the Syrian army ran up against with Turkey.

The final thing it needs to acknowledge is the clear and present danger and inconvenient truth of the difficulty that the fielding of active protection systems to potential enemy armour will pose to it. There is also the training differential compared with the US that we have discussed earlier.

Q170 **Chair:** Expand a little on the counter-drone capability. The images we have seen coming from that conflict in eastern Europe have been quite thought provoking on perhaps the vulnerabilities of tanks. We have been told many times during this inquiry that the only way to defeat a tank is with another tank. Is the might of the drone now challenging that ethos? At the moment, what is our umbrella of defence that we have against drones?

Ben Barry: If anyone testifying in front of this Committee has given you the impression that the only way to counter a tank is with another tank, they have been misguided. Armoured warfare has to be a holistic, combined arms capability. To conduct it, an army needs a full spectrum of anti-armour capability. It does not just need tank guns to take care of tanks. It needs cannon on its other vehicles to take care of medium and light armour. It also needs anti-tank guided weapons, whether they are fired by infantry, armoured vehicles or, indeed, helicopters or aircraft. Anti-armour defence is also enhanced by the ability to create anti-armour obstacles and the use of accurate, concentrated artillery fire, which I have seen for myself, both on trials in the UK and looking at Bosnian Serb positions in western Bosnia. Concentrated artillery fire can damage, suppress and even destroy armour that is on the receiving end of this.

Since 1940 and the German offensive against France, we have known that, if a ground force lacks air superiority and the enemy can bring its



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air power to bear on it, it is going to find it very difficult to move and attack. We should not be surprised, particularly given the use that the UK and the US made of drones in Iraq and Afghanistan, that a number of armies have found ways of integrating drones with precision weapons and suicide drones, loitering munitions, but also using drones to call in concentrated artillery and missile fire. If armoured formations are to move against an enemy that has that drone capability and you can use it, they are going to need to create an umbrella that keeps the drones off their back. It is another example of why armoured formations need integral ground-based air defence.

A whole load of options for countering drones have been put forward by industry. We saw quite a few of them rushed into service in Iraq, not just with US forces but with the Iraqi forces. There are plenty of things that are on the shelves, like radars, jammers and kinetic systems. I am not aware, from any information in the public domain, that the British Army has any field-deployable counter-drone capability that could be up there with the Fifth Rifles battlegroup as it was manoeuvring as part of 20 Armoured Brigade. I noticed that, when the Chief of the Air Staff gave a keynote speech in the context of promoting the integrated review, he stated that the RAF had a counter-drone capability that was deployable to defend airfields. I thought that was an interesting asymmetry.

Q171 **Chair:** It is interesting and very helpful that you talk this way. The person who told me that you need a tank to take out another tank was in the cavalry. It is therefore not surprising that they would have this perspective. It worries me that we have just procured two aircraft carriers with no drone capability whatsoever. You are saying, from your perspective, that right now we do not have a British Army drone capability to give that umbrella of security for our battlefield land forces. We have some deployed now in eastern Europe. Is it right to say that they could be vulnerable to any form of drone attack?

Ben Barry: We have to be fair to the Army and the Armed Forces. One thing I have noticed since 2014, which you see, for example, in what the Army has said in public about the counter-hybrid-warfare capabilities in the Sixth Division, is that there has been an increased awareness of operational security. In some respects, the Armed Forces are less candid about some of their capabilities than they might have been 10 years ago. I work on what is in the public domain and I do not see anything in the public domain, I am afraid, that says the Army has a battlefield counter-drone capability that can be right up there with battlegroups, squadrons and companies.

Chair: The concern is that this is leading away from state capability to non-state capability. I visited the massive oil refinery in eastern Saudi Arabia at Abqaiq. A huge amount of damage was done simply by driving large drones, UAVs, without any explosives on board, but just using their kinetic power to punch holes in the oil infrastructure, causing the complete stoppage of the utility for a couple of weeks. That gives an



indication as to how vulnerable our forces can now be on the battlefield. If it is tucked away in the integrated review, of course that comes with a price tag. That price tag, as we talked about at the beginning, perhaps is being challenged because the spending review has now been cut into thirds.

We have talked about some of the old kit. Can we focus now on sunset capabilities?

Q172 Stuart Anderson: You mentioned earlier that there are some very good soldiers, sailors, airmen, service personnel, coming up through all the tri-services. You mentioned excellent adjutants and ops officers. I am sure you agree there would be some excellent riflemen in there as well. As the new generations come through, we have heard so many times about the change of the battlespace. Far more people have said it can be done on a click of a button, behind a screen. Based on that, would you see the tank as a sunset capability?

Ben Barry: No. Armoured warfare is still a capability of great relevance. What is really important is that tank heavy armour, or, for that matter, medium and light armour, is part of a 21st-century combined arms battle. That 21st-century combined arms battle clearly includes drones and counter-drones. It includes both old fashioned dumb artillery and precision artillery. To make manoeuvre warfare on land work, it needs to be inherently joint and air-land. There is no better exposition of that than the US advance from Kuwait towards Baghdad.

It is also the case that armour has played a very important role in the wars that are ongoing. For example, ISIS made the maximum use of captured armoured vehicles, both as fighting vehicles and as basically suicide armoured engineer vehicles. To counter this, the Iraqi army deployed a layered anti-armour defence, including Kornet missiles and 84 rocket launchers.

In Syria, for example, we saw the Syrian Government forces make great use of tanks and all sorts of other armour in their very indiscriminate fighting, which seemed to emphasise civilian casualties and collateral damage. When the opposition acquired US TOW missiles, Syrian armour was greatly constrained. The Syrians appeared to lack the training and ability to do combined arms warfare, which would have enabled them to counteract the rebel missiles.

Armour was decisive in the 2006 war in Georgia. It also played a decisive role in Ukraine. Do not forget, with the south Caucasus, both sides' Governments are releasing the videos they want you to see, but it is quite clear that they see tanks and armoured vehicles as particularly important. If we look at the climax of the campaign against ISIS in Iraq, the battle of Mosul, key to that battle was a combined arms team. You saw Iraqi army tanks, Iraqi infantry—be they army, special police or special forces, in APCs or in armoured Humvees—and armoured engineer vehicles, principally armoured bulldozers being combined. All that was



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intimately supported by drones and precision firepower. I see no hard evidence that armoured warfare is obsolete. I hope that helps.

Stuart Anderson: It does. That was a very clear answer, and backed up, so thank you.

Q173 **Chair:** Can we turn to the Challenger 2? You seemed to express concern or surprise that perhaps we were not slightly closer aligned, with our advancement and upgrade of Challenger 2 to 3, with what the Americans are doing. Can you expand on that a bit please?

Ben Barry: Do not forget that the US army has the most capable armed forces in the world. The US defence budget dwarfs everybody else's. It still has large defence companies and spends a lot of money on R&D. There is plenty of open-source information on this. It is upgrading the M1 Abrams in a number of ways. Many of these upgrades are fitting various incremental upgrades that were fielded for Iraq into the whole fleet. There is also fitting of the Israeli Trophy anti-missile system, which should significantly improve its survivability.

The US army tends to work not only on midlife updates for equipment it has in service, but on putting R&D money into the next generation of replacement capability. It did that with its range of small arms in the 1990s, for example, which is why it was able to rapidly field improvements in Iraq and Afghanistan after 9/11. By contrast, the UK basically spent no money in the 1990s on upgrading SA80.

As well as the upgrades to the M1 Abrams—I could send you an IISS graphic on that from *The Military Balance 2020* that summarises the upgrade programme, which I think you will find interesting—the Americans have a programme called the main ground combat system. That is for a replacement for the M1 Abrams. It is in fairly early days. I know the team has been over here and had discussions with the British team. They are looking at all sorts of options, including the radical consideration of the balance between manned and unmanned systems. Although there seems to be information exchange and consultation between this US programme and the British Army and British experts, the UK is not part of this programme in a way it is part of the F-35 programme.

The French and Germans have a similar ambitious collaborative programme. At the moment, that is strictly French and German. Although many other European countries would like to be part of it, Berlin and Paris are resisting their overtures. Again based on public information, it seems to me a bit of a pity that the UK does not appear to be engaged as a partner in either programme.

Q174 **Chair:** We will explore that a bit further. That is very helpful indeed. What are the French doing? Is it the Leclerc that they are working with? That had incremental capability too, didn't it, where it could be upgraded during the lifespan, rather than having to procure a whole new vehicle?



Ben Barry: Correct. There is a modernisation programme for Leclerc, which is part of the overarching French army modernisation programme called Scorpion. There might be a lesson there of the importance of branding a coherent modernisation programme with a single name. Leclerc has also been used on operations by the UAE in Yemen. I am not aware that the UAE had any complaints about it at all.

Q175 **Chair:** On the Challenger, we are trying to establish what the delay in the turret upgrade was. I understand a lot of people were arguing over whether it should be smooth bore or rifled. Can you put your finger on what caused the year's delay for them to decide which way to go on this?

Ben Barry: I do not know. I have not come across credible information on that in the public domain. It is the case that, during the Cold War and the 1990s, the British Army and its then state-owned research and development establishment felt that the 120 rifled gun was superior in performance to the 120 smooth bore. They also felt that the way the ammunition was arranged, with the bag charges and the high-pressure water protective envelope, improved the survivability of Challenger 1 and 2, compared with Leopard 2 and Abrams.

The fact is that there are several thousand Leopard 2 and Abrams tanks in service with the UK's allies and partners. The 120 millimetre smooth-bore gun has also been developed since the Cold War. My assessment is that the benefits of commonality, stretch potential, the ability to collaborate with the US and Germany about future ammunition and the ability to easily fire a missile from the gun all mean that the advantages of changing to smooth bore are probably greater than the disadvantages.

Q176 **Chair:** There is the self-loading system, the automatic loader for the main armament. We are doing this upgrade now and we have chosen to still use another human to do that task, whereas some countries are looking now to automate this. Are we really behind the curve in upgrading but still using a fourth person?

Ben Barry: When Russia fielded the 125 millimetre gun, it also fielded an autoloader. Autoloaders themselves can have reliability problems. In some respects, until the loader becomes exhausted, a human loader can be more reliable than an autoloader, but opinions on this vary. If the next generation of tank guns for future new tanks, like the US and the Franco-German systems, or, indeed, a future Russian gun on a midlife improved Armata, rises to something like 140 millimetre or 150 millimetre calibre, an autoloader will be absolutely essential for a tank with that large a calibre gun.

Q177 **Chair:** It seems puzzling that we have not considered or looked into this, given it has been 20 years since the last upgrade and I do not know when the next one will be. It was not even considered. As you say, there are challenges that come with that. If you want to be at the cutting edge of these things and you want to market something and procure it to other nations, we should be procuring the best in the world. At the moment, it



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is still going to be a man who does this. It is only 31 shells that you have in any tank, which seems a very limited amount of armament. Is that correct?

Ben Barry: Yes. Of course, an autoloader itself can use up volume inside the armour. I would not forget that, in future, the loaders could be ladies.

Q178 **Chair:** You are absolutely right to say that and I would very much welcome that if that happens. That would be welcome news. I make it very clear that I think every position in the Armed Forces is now open to both men and women, which is a positive step.

Ben Barry: The key thing is that, if there is to be another increase in gun calibre, an autoloader will be essential and needs to be designed in from the outset.

Q179 **Chair:** Could I turn to how the discussion we have just had fits into General Nick Carter's integrated operating concept? If you have seen or heard any of the speeches he has given and the direction of travel that he wants to take, with an overarching, integrated system that has a very transparent spine of communications, command and control, do you think this vision is worth pursuing? There are some that believe that it is going to take us to investing far too much money on ISTAR capabilities and the interoperability for command and control, rather than allowing the types of stabilisation operations that you or I were involved in, let us say, in Bosnia, which were on a different scale.

Ben Barry: The integrated operational concept, or the 15-page version of it that has been published, because my understanding is that the full concept is classified, is a bold statement of intent for current and future UK forces and operations. There is much in there that seems to me, and my colleagues in IISS, to have considerable merit. In some respects, it establishes a degree of doctrinal leadership for the UK Armed Forces. Much of it is coherent with our view of current and future conflict, for example, the clear need to better contest hybrid, threshold and grey zone conflicts.

This is an area where the Army has already innovated, with the formation of the Sixth Division, including 77 Brigade and the Specialised Infantry Group. Indeed, from outside defence, it seems that the Army is well ahead of the Royal Navy and Royal Air Force in this area. Where, for example, is the 77th flotilla, or the 77th squadron of the Royal Air Force? Where are the maritime and air equivalents of the specialised infantry group, as a dedicated capacity building force?

It is absolutely right to come up with the PECF framework: protect, engage, confront and fight. When we look at the implications for the land forces, we should not forget that an awful lot of the armed forces that the UK would like to engage have an awful lot of armoured fighting vehicles and heavy metal in their inventory.



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In the brochure, on page 15, there are some headlines for capability. Many of them make sense, but some of the soundbites seem better thought out than others. For example, it calls for trading reduced physical protection for increased mobility. The US army tried to do that in the first five years of the 21st century and it foundered on the protection requirements of fighting an unpopular war. It is right to emphasise non-line of sight fires, but, given the considerable overhang that Russian artillery has compared with British and NATO artillery, there is an awful lot of catching up to be done.

Do not get me wrong: there is a lot of rich thinking in the integrated operating concept. I would observe that some of it appears to come from a slightly different universe from some of the weaknesses that I and my IISS colleagues identify in current British military capability, for example the absence of missile defence, the great shortage of air defence and bridging, the apparent insufficiency of stockpiles sufficient to meet the SDSR requirement for 3 Div and the obsolescence of Warrior, Challenger and Bulldog.

The other problem that is placed at a flank from the integrated operating concept is the very small size of the UK Armed Forces. They really are now very small: a single division, a single maritime task group, a single full-spectrum expeditionary air wing. That is against an ever increasing problem of manning, recruiting and retention. Please do not get me wrong: there is a lot to be commended in the integrated operating concept. As General Carter said, the key judgment is going to be how you chart that path through the night, between sunset and sunrise capabilities, within a constrained budget.

Q180 Chair: That is very helpful. My concern, and you touched on it towards the end, is the fact that we are creating and procuring a very high-tech and bespoke full-spectrum armed force capability, which is tiny. It will look impressive and, if there is a small adversary, we will do exceedingly well. We could probably dovetail in and complement the United States in a wider battlefield engagement, but 99% of the time we will not be engaging in these high-risk, low-probability events. They act as a deterrent in their own way, and I fully understand that, but if you take the aircraft carrier with F-35s on it even the numbers themselves have been brought into question. We have invested huge sums of money potentially for fewer than 100 F-35s, depending on the outcome of the integrated review.

This ship will kick around, with the necessary battlegroup or the fleet that goes with it, and yet it will not be able to do all the other spectrum of taskings that we would like to get involved in, not least upstream engagement, stabilisation operations, littoral, expeditionary and all these other things. It has been so finely tuned to be at the high spectrum of engagement that it is a very costly way to do all these other things. I am not saying do not do it. I am suggesting that we are losing the bandwidth to express mass.



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China is going to advance itself into places where there is a vacuum. You do not need a Type 26 or a Type 45. It could actually be a far smaller corvette that simply has the British flag there. As long as they have a radio on board to call in assets, they can protect the expansion of Chinese maritime influence. Likewise, with Russia and placing assets in the Baltics, for example, absolutely they need to have back-up there, but we have become so small.

Playing on this as well is the fact that, right across Africa, we are being slowly nudged out of favoured nation status with many Commonwealth countries because we are not doing the upstream engagement with basic kit, simple assets, wheeled, tracked or whatever. We cannot gift or sell these things to these countries because they are too high-spec themselves and we do not have enough of them. I get where General Carter wants to go. My concern is that there is a gap in the market for mass, reach, forward engagement and advancing a general defence posture that will cover the types of activity we are likely to bump into over the next 10 or 15 years, which does not include state-on-state full engagement.

Ben Barry: You put it very persuasively. Although I would not pretend to be an expert on maritime or air, I am sure the maritime and air experts who are my colleagues would feel equally that you have put a very strong case. Part of the problem is the very small size of the British Armed Forces. The Army is about half the size of the Army I joined. The reduction of the Navy and the Air Force is even greater.

What does this mean for the Army and armoured fighting vehicles? It means that the way the Army set up Sixth Div and the Specialised Infantry Group is potentially a very powerful tool in this. I would return to my point that many of the armies the British would want to engage are not just light infantry. They are combined arms armies and some of them have quite a lot of heavy metal. It is a bit surprising that the Specialised Infantry Group is not actually a specialist all-arms brigade so it can help develop all arms capabilities.

If you look at the hard lessons of developing the capability of the Iraq and Afghan armies over the last 20 years, it has been much easier to build capable light infantry battalions, but much less easy to build the combined arms parts of it, particularly things like artillery and armour. In my view, the Army's dedicated capability building formation needs to be all arms, including armour, as well as infantry.

This also tells you that British forces still have a potential role to play in stabilisation operations. They did that operation in South Sudan. They have been in Somalia. They are making a very modest contribution to Mali. British conventional forces made a very modest contribution to the war against Daesh. It has been quite interesting to see that, when it came to firing artillery against Daesh, the US army and the US marine corps were doing this. The French were doing it with their CAESAR gun, but British artillery was nowhere to be seen. I wonder why that is.



What it tells you about your armoured vehicle fleet is that you require a range of armoured vehicles that have some flexibility built in. A lot of the international forces that are deployed in Africa use light and medium-armoured vehicles, mostly, but not entirely, wheeled. I have spoken to several African armies who think their 1960s Russian and Chinese Cold War-era wheeled and tracked APCs and tanks, T-55s and T-62s, are ideally suited for stabilisation operations under an African Union banner in Africa.

What does this mean for the British Army? It means that it needs a range of light, medium and heavy-armoured vehicles, wheeled and tracked, that also have simple, robust design and are capable of having things added on to them and hung on them, be that additional armour, additional radios, loudspeakers, whatever. With the mix of Ajax, Boxer and Warrior, as well as the US JLTV, the wheeled armoured vehicle, and retaining some of those UOR vehicles procured for Afghanistan, like Foxhound, that gives the British Army a fairly well-balanced mix of armoured vehicles. Your main point, Mr Chair, is extremely well made. It is a point you need to be putting to the Defence Secretary and General Carter.

Chair: He will be in front of us very shortly, so we will be doing just that.

Q181 **Derek Twigg:** This leads us nicely on to the next part of it, to draw you out a bit more in terms of what the Army and the MOD could do to make sure new vehicles are relevant to a range of scenarios beyond war fighting. I do not know if we could draw you out a bit more about what you think they could do.

Ben Barry: I have covered quite a bit of it and I would not want to bore you. Quite clearly, they need to be able to be operated in a full range of climates, European, hot and high. They need to be tested and evaluated in those climates so the sort of problems that needed fixing in Iraq and Afghanistan, like air conditioning, do not come as unpleasant surprises. Overall, this tells us that armoured vehicles need extensive and powerful power supplies, so you can power up all these add-ons, and the value of them being simple and easy to maintain.

Warrior is a really good example of this. It was designed for a Cold War role that required it to take part in quite a spectrum of high-end force on force. It proved to be simple, reliable, pretty user friendly, pretty easy to train with and pretty easy to maintain. It had the stretch potential to have 10 tonnes of extra armour and about three tonnes' worth of extra gadgets added to it. Building in stretch potential, open architecture and the ability to upgrade is essential.

It is important that, within the Army and within DE&S, there remain intelligent customers and people who are looking very thoroughly at what is going on in this sector in the outside world. What are the lessons from the use of armour in current and recent conflicts? What are the new technological and industrial ideas? Should we be looking at other people's



lessons to challenge ourselves? If we had been doing a bit more of that, we might not have had some of the difficulties we have had with the Challenger and Warrior upgrade programmes and, indeed, the introduction to service of Ajax.

Q182 Chair: We did an interesting visit down to Corsham, where we saw all four vehicles: Challenger 3, the Warrior upgrade, Boxer and Ajax. We had the various procurement companies there as well and I put a question to all four of them: was there one thing, one asset, one type of firepower that you can lift from one, very simply, and then place on another? The answer to that was no. There was no ability to have a plug and play system, even future-proofing it to have a location on the back deck of all four vehicles. That could see, let us say, a remote general purpose machinegun, which could be utilised from inside, a Brimstone launcher, a UAV launcher, or even a large refrigerator, stuck on there, clamped down, to hold vaccines. Let us say you are doing a mission to provide vaccinations as part of a humanitarian effort. There was nothing there to allow anything in the future that we may utilise to be clamped on simply, plug and play, and move forward.

When I asked, "Why do you not have that versatility and modularity?", they said that they had it between their own vehicles, but not between the different companies of vehicles at all. Maybe this is the directive that should be clearer from the MOD, to require this. Do you not think this is where we should now be going with all our equipment? Let us take the drone threat that we spoke about earlier. The Phalanx system, which you get on board the frigates and destroyers, fires I do not know how many rounds of ammunition per second. It could very well be that a smaller Phalanx could take out any drone that is coming near. One has not been invented yet that you could stick on the back of a tank, but you could easily see that being quite helpful in the future. We are not even allowing the space for future developments and procurements to be included in the current designs as we sign off these four new projects.

Ben Barry: You put it very clearly. I visited the Army combat power demonstration a year ago at Copehill Down. I noticed some commonality, albeit not to the level of ambition you articulate, but 7.62 machine guns, smoke grenades, Bowman radios, the digital C2 system and battlegroup thermal imaging. They can also all use the same fuel. The Army I joined was split between diesel and petrol-fuelled vehicles, a source of vast confusion.

We have to distinguish between tanks, recce vehicles and the rest. Tanks are orientated entirely around delivering the big gun and using the big gun. Recce vehicles like CVR(T) and Scout are orientated around the recce equipment, be that the eyeball, the optics, the electro-optics, the radars, whatever. APCs, armoured infantry vehicles and the variants that are used for all those utility roles we have discussed have quite a bit of capacity. It is those vehicles that are often the platforms for other things. If I was designing an armoured vehicle family for an army from scratch, I would want to build in that ability to have other gadgets and gizmos,



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large ones that soak up lots of power, not on tanks and recce vehicles but elsewhere.

There are examples of boxes, for example electronic counter-measures, being added on to all sorts of armoured vehicles, and not just the British doing it. There are obviously design trade-offs. The conventional wisdom in the Army and the industry, which I support, is that this means you have to have an adequate power supply. It also means you have to physically have room and you have to have an open architecture so you can integrate software.

You mentioned the ability to shoot down drones. Ideally, the system you use to shoot down drones would be the system you also use to shoot down other things. Where there is a capability revolution of the order that Phalanx was for defeating anti-ship missiles, it is with the fielding of active protection systems to armoured vehicles. It has been credibly demonstrated by Israel on a number of battlefields that it can stop incoming RPGs and Kornet missiles.

Q183 Derek Twigg: Following on from that, in your experience and your view of things, given the work you are doing, what has gone wrong and what can the MoD and the Army put right to get, where it makes sense and is practical to do so, commonality and modular systems? Where can we make that improvement and ensure we get it right?

Ben Barry: The big picture is the very coherent arguments that the industry witnesses and, to their credit, General Tickell and the team all put forward for a proper land industrial strategy and a coherent armoured vehicle element of that. The absence of that has caused many problems. In the delivery, by the combination of the Army and DE&S, of the upgrade programmes over the last 10 years, it seems to me that they have been repeating errors from previous programmes.

The Astute submarine programme is widely considered to have been an example of poor procurement. I have on my screen a report that was commissioned by DE&S in 2011 into the procurement of the Astute. I would like to read to you a single paragraph: "A big contributor to the problems faced by the Astute programme was the substantial time gap between the design and build of the Vanguard class and the start of the Astute programme. This led to a situation in which submarine design and build skills atrophied in the United Kingdom, resulting in a costlier and lengthier Astute procurement effort. The issue is not that the gap should have been avoided, but that the MoD neither anticipated the impact of the gap nor factored into the cost and schedule estimates the need to rebuild industrial base capability".

Bearing in mind that the delays and additional cost on Warrior, Challenger 2 and Ajax are really small beer compared with the similar opportunity cost of the delays of Astute, you might want to ask DE&S how it is that it was apparently surprised that it had this problem with armoured vehicles. Had it not learned from the Astute programme?



There is also a question of accountability. Quite clearly, part of the delay with Warrior and Ajax was that the Government-furnished equipment, the cannon, was not furnished on time or exactly as envisaged and there were all sorts of interface problems. That is another issue that comes up with the problems with Astute. It is not clear to me who was responsible and accountable for allowing that problem to manifest itself. I also wonder about the delay imposed on the Warrior programme, from the sale of the Defence Support Group to Babcock. Again, who was responsible and accountable for this? Did they consult the Army about it? It seems to me that there is a serious performance issue here about those problems that caused that delay to Ajax and Warrior.

Q184 Chair: Brigadier, could I finally wrap up with a last question? Going back to the integrated review, the starting point of any review is supposed to clarify what Britain's interests in the world are, what we need to defend and where we want to project our ambitions. From there, you then craft the defence posture that supports that. Even though we have pressed for answers here, I have not seen a lot of clarity from the Foreign Office as to where our strategic outlook will go over the next 10 years. What is the threat that is coming over the horizon?

There has been no discussion about the geopolitical tilt towards China and what that offers there. We seem to still be in denial about the scale of what China is up to and how we might advance that. We have tactical responses to what is going on in Hong Kong, but no strategic overview as to where we should go. Are you aware of any hints that the integrated review will actually provide some answers here into what is a very troubled, difficult and dangerous decade that we are about to embark on?

Ben Barry: You have put it extremely clearly. I could not put it better myself. I am quite sure that the Foreign, Commonwealth and Development Office probably feels the same way as you do. The integrated review has to be hard-nosed about priorities. The British Armed Forces are so small that they cannot do everything. They could probably, by doing things differently, deploy slightly more capability worldwide. We have seen some move in that direction, for example with the Royal Navy keeping ships in place and rotating crews, but that is only going to be a marginal improvement.

What does "global Britain" mean? This is the key question. Does it mean everything to all men? Does it mean an equal importance for Europe, Europe's near abroad, sub-Saharan Africa, the Middle East, the Indian Ocean and south Asia, and the Asia-Pacific? I do not sense any closure with that very difficult question. The asking of difficult questions and the setting out of strategic priorities is exactly what we have Prime Ministers, the National Security Council, Foreign Secretaries and Defence Secretaries for.

This will have hard effects on the Armed Forces. If they are asked to continue to do everything but do more of it and do a bit more further afield, how they are going to sustain that is very difficult to envisage. Of



course, the choices will have impact on capability. For example, if there is to be an up arrow in the Middle East, it might call into question training in Canada as opposed to armoured warfare training in, say, Oman. The debate about these hard choices ought to be going on with Government, and Government may well be keeping it to themselves. They have not really shared any of it with us.

Q185 Chair: That has not happened, because, if they had first announced what our vision is and our ambitions are, the MoD could spend some time giving some options, with costs associated, for how to meet those ambitions, rather than trying to do the whole thing in one. It would have been very interesting to have that debate with the British people, as to how much we want to invest in our global ambitions and advance global Britain. If global Britain is an instruction rather than a strapline, the integrated review is the roadmap to articulate that and to get us there. It is interesting that you, from IISS, have not picked up anything on that front either.

My final point is whether you would agree that, in looking at the threats that Britain faces today, on the full spectrum from climate change to non-state actors, potentially one of the larger ones is to do with our economic security being challenged by China nudging us out of favoured nation status with many of our friendships across the world, through its economic prowess, through its military engagement with a particular country or, indeed, by superseding us from the technological perspective.

To put that into context, Kenya is now developing a very strong relationship with China. This is a country, as you know—I am sure you have been there while you were in uniform—where we would think we are very strong on all three of those areas. Yet I can say in all three of those areas we are losing ground to China. That will impact us, our ability to trade and the Exchequer. That is being repeated right across the world, not just with us, but with other Western countries. In a nutshell, is that not the wider, more subtle threat that we face over the next 10 years?

Ben Barry: Strategic competition with China is a real challenge for the UK, particularly given its economic impact and the way it is very successfully integrating its various arms of strategic effect. That is not to say it is not heavy handed and does not arouse quite a bit of local opposition and suspicion. China's credibility may well also be increased if it is seen to be an early winner in suppressing Covid and then develops medical diplomacy in helping many second and third-world countries counter Covid itself. It is a really difficult challenge.

We spend quite a bit of time looking at various aspects of China in IISS. We have a full-time expert on Chinese military modernisation. I would also observe that the Chinese defence industry is now a major world actor. It has a lot of armoured vehicles and artillery that it is busy exporting, including to Africa, along with what appear to be very cost-effective drones, for example.



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The UK has to be very humble. I would caution against a phrase that General Carter used when he was CGS. He said that we want to be a reference army. I have travelled the world quite a bit on IISS business and there are not many countries I have been to that see the British Armed Forces as a reference armed forces. Take India and Pakistan. I go regularly. Neither country sees the UK as being a significant player in armoured warfare. They see Russia and China as being significant players in armoured warfare. They see the US and Israel, but they do not see the British Army as being a significant force in armoured warfare now.

There is also a link to prosperity. Gone are the days when the UK had a wide range of military equipment, some of which it exported very successfully, for example the Centurion tank, the light gun and the 81 millimetre mortar. A lot of its equipment now, as you say, is quite narrow and highly specialised. It does not have that broad spectrum of defence industry it once did. If there was ever a case for the fusion doctrine to be applied, it is in trying to better sell British defence equipment as a whole-of-Government activity.

Mind you, from the point of view of defence, fusion doctrine and whole-of-Government activity is ever more important than it was. I note, for example, that the UK and US were defeated in Iraq by Iran. One of the reasons they were defeated by Iran is because of the leadership of General Soleimani and Quds Force. Why is Quds Force important? It supports terrorism. It also has special forces. It does information operations. It has its own air force of drones. It can bring in conventional Iranian military forces under its command. It also has the diplomatic lead for Iraq, Syria, Lebanon and Afghanistan. The Iranian ambassadors in those countries are Quds Force officials.

With Quds Force, you had a standing joint interagency taskforce that was able to do the comprehensive approach and do it extremely successfully in a way that left the UK and US standing in the dust. I suspect properly implementing the fusion document to create the conditions for success in military operations is more important than ever, notwithstanding the need to give the Armed Forces the tools for the job.

I have a couple of other thoughts on the integrated review. A lot of what the integrated review says about using autonomous systems, using drones, the importance of cyber, information operations and electronic warfare is all absolutely right and proper, but many of these capabilities are force multipliers. The multiplier depends on there being a force to multiply. If the force reduces, the overall multiplied force is going to be less than it was before. The second thing I would observe is that it is all very dependent, as you said, Mr Chair, on ISR and the network. It is going to be very vulnerable to old fashioned electronic warfare.

Q186 **Chair:** That is very helpful indeed. This is my final question. You mentioned Covid-19. I am sure you would join us in thanking the Armed Forces for what they are doing in support of the Government's response



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to the pandemic. We have just seen 2,000 Armed Forces personnel mobilised under the MACA arrangements to help with the roll-out of the testing programme in Liverpool. We certainly think this will be a game changer. It is good to see the Armed Forces utilised in this way. I believe personally—I think others on the Committee agree—that the Armed Forces have been an under-utilised asset during this pandemic.

If 2,000 were to help a population of—we were trying to work it out—400,000 in Liverpool, to multiply that by 100 to get the rest of the country, you are talking about every regular armed force personnel participating. Do you see that being required? Do you see us recognising that we are going to need far more armed force engagement with this particular testing programme, not least then with a vaccine when it eventually comes to fruition?

Ben Barry: This is a subject I have taken a great interest in. I have the background, as Mr Spellar knows, of having looked at the US approach to civil emergency management. I ran the land element of the SDRS new chapter, which seems a long time ago and very far away. Personally, I am surprised that more use has not been made of the Armed Forces. I am surprised the Defence Secretary does not seem to be a member of the so-called quad, the core Covid Cabinet sub-committee or whatever it is.

I wonder if I might give you a couple of examples. There are many modern countries that had the same sorts of terrible problems at care homes that we did in the first wave. Canada put the military into care homes that were going under. This was at the request of two provincial premiers, but they specifically asked the military go in and rescue care homes that were close to collapse because of Covid. Unsurprisingly, a proportion of the Canadian armed forces people who went in became Covid casualties themselves. There was also some media coverage of the terrible state that those care homes were in as a result of the pressure they were under and staff illness.

When the history of Britain's war against Covid is written, I think people will wonder why the Armed Forces did not go in and help rescue struggling care homes. I would very much hope there is a contingency plan that has been properly developed and been rehearsed for them to do that. If we go back to March, the panic buying led to great shortages on supermarket shelves, which was not good for anyone's morale and probably was the beginning of challenging some people's mental health and causing stress. Based on the media accounts, the choke point was the supermarket warehouses having difficulty shipping it from the incoming deliveries on to the shelves and then into their own distribution system. I would have thought allocating Tesco, Sainsbury's, Asda and Morrisons each a logistic battalion for a while would have helped that.

If you look at test and trace, when Singapore began its test and trace operation, it set up an interagency taskforce to do it. Who were the people who were in it? They were police special branch, police



intelligence, civilian intelligence and military intelligence, because test and trace is an intelligence operation that you and I would recognise from our previous experience.

Another similar example is that, early on in the lockdown, some county councils that had attractive bathing beaches were finding it difficult to monitor who was on the beaches, how much they were used, whether they were getting too full, something the Armed Forces could easily have helped with. I am not advocating the Army going on the streets, but it seems to me that much wider use could have been made of the Armed Forces. I am pleased to hear that the Armed Forces helped run a strategic war game earlier in the autumn, which the Government found useful.

There is a wider lesson from Government. Did the Government actually have a plan to mobilise themselves for a major national crisis? Had they done an exercise programme of exercising Ministers in their roles of making hard decisions under pressure? I do not see any evidence they did. There are other countries that are better organised in emergency management that I suspect will have been seen to have done better with Covid. My overall proposition is that opportunities to use the Armed Forces more widely have been missed.

Q187 **John Spellar:** Could I throw in a question there? As far as you are aware, to what extent has COBRA been meeting on a regular or systematic basis during the course of the crisis?

Ben Barry: Quite clearly, there were five meetings that were not attended by the Prime Minister early on. There are media reports that it occasionally meets and that Sadiq Khan and the heads of the regional governments have been involved. I do not honestly know the answer to your question, I am afraid.

Q188 **John Spellar:** Is that not where the key quality that the military brings, to make and execute decisions in real time, comes into play? It is developing that sort of momentum within the system that is constantly moving decisions on and chasing progress with Departments. Certainly in my experience, that is where COBRA plays its strongest role.

Ben Barry: From British history, we know that having an effective war Cabinet is a really good way of improving your chances of making the right strategic decisions. Having a National Security Council is an advantage as well, provided it is used. You have to distinguish that there are several players in the room here. One is the politicians. You would know much better than me about the pressures that politicians are under. Another one is the officials and, if you like, the permanent skeleton, so the Cabinet Secretary and the mechanisms you have for COBRA and the National Security Council. Then you have Government Departments themselves.



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It is very clear—there is no secret about this—that early in the crisis, in March, April and May, the Armed Forces had substantial planning teams in five other Government Departments to help them manage the crisis. I wonder, in retrospect, if those five Government Departments were as well organised about flicking on to an emergency footing. A good example where this seems to have worked very well is the Treasury. The Treasury learned how to do this in 2008 and would appear to have kept the muscle memory.

If you were to take an example of a Department that has struggled, it is the Ministry of Justice. My understanding is that, when not the lockdown but the Prime Minister's direction to the country to implement social distancing was made, that took a while to be implemented by the Ministry of Justice. In some of my remarks, I have spoken as an informed member of the public, one who happens to be a veteran and to maintain expertise on defence matters, but also a taxpayer. I do not think the public have any sympathy for Government Ministers who cannot perform in a crisis. If a Government leader selects Ministers who cannot perform in a crisis, you have to make judgments about that head of Government's competence.

The impression I have formed is that, at times, Government Ministers have been under pressure and some have risen to it more than others. It is the job of their officials and the machinery of Government to make it as easy as possible for them to make the right decisions and when. No politician should have any illusion that, if they accept Government office, they are not liable to be placed into an emergency situation very quickly. That is why Governments need high-level exercise programmes so they can learn how to do this in more congenial circumstances.

With the exception of the well-known counter-terrorist exercise programme, it is not clear to me that the British Government had a high-level exercise programme. Whether they had a national plan to rapidly mobilise Government for a national emergency of this level of severity is not clear to me either. There are European countries, many of them further east than we are, that seem to have a much better approach to this.

Q189 Derek Twigg: That was very interesting. If you have nothing better to do, can I suggest you read one of my recent speeches? It talks about having a Covid-war fighting committee or cabinet and how the leadership of this crisis has been managed. Going back to the earlier comments you made in answer to John Spellar, from your knowledge and contacts do you know whether the Armed Forces have been offering to up the amount of support they can give and whether that is just not being taken up by Government? For instance, we are all extremely grateful for their impact on the PPE scandal, when they got a grip of that. I wonder whether you have any intelligence that the military has offered more help but it has not been taken up.



HOUSE OF COMMONS

Ben Barry: I know that, in an article in the *Spectator*, James Forsyth stated that the Defence Secretary had offered Army assistance to go in and help care homes that had got into difficulties, but this was turned down. I do not know if that is true. Bearing in mind the Canadian experience, it would seem to me to have been a very prudent offer to have made.

The Armed Forces run a programme of useful briefings to UK defence academics and think tanks. They have been saying, and in public as well, that they have been at great pains to try to sustain their standing capabilities, like the battalion in Afghanistan, the battlegroup in Estonia and NATO air policing. They are trying to sustain their reaction force capabilities as well, both domestic for flooding and for counter-terrorism, and their joint reaction capabilities. If you want evidence of this, there was a rather good video published on the website by the regimental medical officer of 3 Para, showing an airborne exercise and an urban warfare exercise, in which 3 Para was applying social distancing in combat.

Quite clearly, keeping the personnel and keeping the recruiting and training machine going is quite challenging. Many armed forces have also faced those challenges. As someone who has studied the way the US has used its armed forces in a wide variety of scenarios, led the land element of the SDSR new chapter and learned quite a bit about the total national defence approach of Scandinavia and the Baltic states, it seems to me likely that, in retrospect, much more use could have been made of the Armed Forces. If you want an example of this, it would be to compare the British and Canadian experience with care homes.

Chair: I concur with everything you have said. It has been very sad to see the military kept out of the room on so many occasions, given that the MoD is the one Department that actually prepares for emergencies and trains for strategic thinking. It is there to step in when other Government Departments are not able to cope. It shows either a naivety on behalf of those at the core of Government, or a stigma attached to wanting to use the military, for fear of looking as if you cannot cope, as to why the Armed Forces are not greater utilised.

I put this question to the Leader of the House yesterday. Six months into this Covid-19 pandemic, we are now in a second lockdown. Is it not time to shake up our decision making at the top, to split policy design versus operational delivery and to bring in people who are qualified to make these decisions? I am afraid I was brushed aside. To learn that there is no military representation in the quad, with the strategic thinking and the co-ordination that are required on what is the biggest enduring emergency since the Second World War, is, frankly, shocking. I am really sorry that we are halfway through, given a vaccine may occur in spring, and yet there is still no appetite, or a reluctant appetite, to include the professionalism and capability of what arguably could be the best armed forces in the world.



HOUSE OF COMMONS

We were here to start off to talk about land warfare. We have wandered away a bit, but, ultimately, I think we are expressing some frustration. I hope that, if Government listen to the workings of this humble Committee, they will recognise that there is no humility in calling for those who wear the uniform to support us in a time of need, and this is a time of need. Brigadier, I really appreciate your involvement this afternoon. It was good to catch up with you as well. Thank you for your contribution and your thoughts on land warfare, the vehicles and so forth. All the best to those at IISS and to my Committee members too. That brings this particular inquiry to a conclusion.