



The outbreak of a major war in Europe has been a shock to many. The invasion of Ukraine by Russia in February 2022 has shaken the west out of its post Cold War torpor. The increasing belligerence of Putin's Russia led NATO members to increase their readiness, including the deployment of forces close to the eastern borders of the Alliance. It has also meant a recapitalisation of equipment in many NATO members including the UK.

In July 2023 I was able to visit an AS 90 self-propelled gun that the UK has gifted to the Ukrainian armed forces. We were in a location somewhere in southern Ukraine. The gun crew had been trained at the Royal School of Artillery in Larkhill. They were complementary about their training, but they were delighted with the way the AS 90 performed. They praised its accuracy and the ability to fire rapidly and move before the Russians had the time to retaliate – so called shoot and scoot. This is very necessary because of the prevalence of Russian drones spotting Ukrainian artillery.

The British Army is now seeking to replace the AS 90. The customer reviews from Ukraine might suggest this is not necessary, but thereby hangs a tale. Is the Army going about the process wisely? It is one thing to replace obsolescent equipment, which seems to work well in a real life war, but it is worth taking care to examine what the replacement will be, and whether it can provide the level of support that the existing AS 90 seems to be capable of.

The Mobile Fires Platform (MFP) is a procurement project which seeks to recapitalise the army's artillery capability. To replace the AS 90s gifted to Ukraine and to retain its artillery capability the MOD acquired 14 Archer a wheeled 155 mm self-propelled guns in short order. It is true to claim this is a great example of rapid capability enhancement, but it is worth noting that the Archers were only available due to a cancelled order by another NATO member. Under the present time frame the In Service Date (ISD) for the MFP is 2029.

The army has also got itself into a theological discussion about 'wheels versus tracks'. The AS 90 is tracked, Archer is wheeled. If the proposed system is forward deployed to be close to the Russian threat reminiscent of the old BAOR days the question of deployability is redundant, the front line is close at hand. If it is proposed to drive the equipment by road from the UK, it raises doubts as to the utility of having forces forward deployed in the first place.

The AS 90 I saw in Ukraine was concealed in a wood, but the crew were alert to the need to move quickly. Moving across country, to evade counter battery fire, or to keep up with battle group advances, would suggest that tracks have the edge. In a confined woodland, tracked vehicles can manoeuvre into or out of position by using a neutral turn, wheeled trucks or other vehicles need several goes to turn.

The army runs a risk in choosing a system that lacks manoeuvrability and exposes the crew to the risk posed by the lack of an armoured turret, such as the AS 90 possesses. Gunners speak of the ability to operate in the 'reversionary' mode when things break or fail. So the AS 90 can be hand operated if necessary. Moreover the ability to reload will be crucial, as the Ukraine conflict has proven, the rate of artillery fire required to disrupt enemy attacks is considerable. If the crew can do this under armour so much the better.

Much is made of the ability of NATO allies to support each other through inter-operability. This is especially so in the case of ammunition. Figures for the rate of ammunition consumed in Ukraine vary, but they are very high. If the British army is to operate as part of a coalition force, it cannot take risks with the supplies of its ammunition. Fundamental to the selection of any NATO 155 mm artillery system is that it complies with the Joint Ballistic Memorandum of Understanding (JBMOU), whereby NATO nations adopted standards for 155 mm artillery systems and ammunition to ensure that they are interchangeable between the signatory nations. Archer is not currently JBMOU compliant and therefore does not at present meet this key requirement. BAE Systems stated that: "As the ARCHER... comes into service with the British Army, the BAE Systems team will work with the Army to ensure extensive ammunition qualification is completed."

The British army is now smaller than it was in the cold war days of BAOR. At that time it had a variety of artillery systems to fight both the close battle (1-15 kms) and the depth battle (15 - 30 kms). The deep fires solution will be managed by the GMLRS - a development of the MLRS system that was used in the first Gulf War, this will enable the engagement of targets out

to 150 km, an improvement on the original 80 km range. The advertised range of Archer is 50 kms that of its tracked rival the Korean K9 is between 40 and 60 kms depending on the variant chosen.

One crucial matter that the MFP requirement has not addressed is the matter of supporting the equipment on operations. The gun itself is one part of the system of modern artillery, which includes the shell and the target acquisition and logistic support to bring the ammunition forward. The lesson from Ukraine points towards a much more dispersed battlefield than was imagined during the cold war. Rapid fire and resupply will be key to winning engagements with an enemy who is also doing the same.

155mm shells weigh in the region of 90 lbs, so old fashioned ammo bashing by the gun crew would seem to be out of the question. Archer carries 21 rounds, K9 has 48 rounds available.

Another important consideration that MOD will consider is the opportunity for the wider UK economy to benefit from what are in both cases foreign designed systems. Archer is a Swedish system designed by Bofors. The team bidding to supply Archer state that this will create 350 jobs in the UK. The team bidding to supply the Korean K9 system designed by Hanwha states that their bid could support 420 annual FTE jobs in 2030 when production activity would reach its maximum.

Napoleon is reputed to have said that "artillery is the queen of the battlefield" reflecting his training as an artillery officer. Military history repeatedly shows the effect that artillery can play in winning battles, lessons which are being relearned in Ukraine today. In choosing which system to adopt for a replacement to the AS 90 the MOD need to keep in mind the necessity for a system which is both mobile and survivable.

Nick Watts is Deputy Director of the U K Defence Forum. This article first appeared in Battlespace January 2024