

# True but Irrelevant: Small Arms Performance in Afghanistan

by *William F. Owen*

*William Owen is a freelance writer and military/warfare theorist living in Israel. He disagrees with the suggestions that the current small arms round is under-performing in Afghanistan and that a different calibre is required.*

Recent articles in *Jane's Defence Weekly*<sup>1</sup> and followed up by the popular press, suggested that the UK and NATO-standard small arms round of 5.56mm is under-performing on current operations, to the extent that a case for replacement can be made.

This argument again highlights a vast field of woolly thinking and opinion that has traditionally informed infantry equipment decisions in the UK.

## The Argument Against 5.56mm

At the heart of this argument is a belief that small arms in general and calibre in particular are somehow important or even central to a dismounted operations capability. Yet hard data is lacking. Every conflict with US or UK participation since 1945 has produced a raft of small-arms performance observations, and opinions of a generally imprecise and largely irrelevant nature to the success or failure of operations.

Firstly, the evidence that 5.56mm NATO is lacking in performance seems to be almost entirely based on observation and opinion from a small number of troops. The men concerned are no doubt telling the truth, as they see it, but we know that memories and observations gained in combat are very far from reliable. The ballistic and terminal performance of all small-arms ammunition is extremely well understood due to range testing, and not combat experience. The weapons are far more accurate than the men shooting them, and memory-based estimates as to the number of rounds fired, hits gained, effect observed, and at what range, simply do not form a basis for empirical study, unless a near forensic level of analysis of a large number of incidents is possible. Moreover, to make the case for a particular round failing, research has to dismiss all the cases where the round performed adequately or even extremely well.

The other basis for the discussion is that small-arms engagements in Afghanistan are occurring at longer ranges than was previously considered likely or possible. The condition cited is 300-900m, with enemy troops primarily engaging with the PKM machine gun. This may well be true, but why is this a problem? L-85 and L-86 can both return effective fire out to 600m, and GPMG is proven effective out to the range if the fall of shot can be observed.<sup>2</sup>

Anyone with any experience of the AKM firing 7.62mm x 39 knows it cannot engage effectively at the ranges the L-85 or L-86

can. Essentially, if the enemy is equipped with AKM as individual weapons and PKM as a section/platoon weapon, then:

- British Army IWs and LSWs outrange the AKM in terms of ballistic performance, accuracy<sup>3</sup> and optics.
- The L7 GPMG matches or exceeds the effective range of PKM, by virtue of better training and employment if nothing else.

Based on this understanding, it is hard to see where the problem is. Range is not an issue and, even if it were, it would be ludicrous to base lack of performance on one relative criterion found in one theatre. To assume we will not be involved in a major jungle conflict is symptomatic of the same wisdom that assumed operations somewhere like Afghanistan were equally unlikely. To base the need on the equally dubious assertion that so-called 'asymmetric warfare' demands more capable infantry weapons is to quote opinion unsupported by logic or data.

The crux of the argument to replace 5.56mm rests on framing the imagined problem at the section level, thus promoting the idea that infantry capability is somehow tied to section weapons. This is a popular but unfounded and rather new idea. Autonomous section capability has been recognised as largely irrelevant in every serious shooting war, with platoon, company and battlegroup weapons always being more decisive.

For anyone who argues that the GPMG is no longer a platoon or section weapon, then it would seem that in theatre at least it is. It seems increasingly likely that the loss of the L7 GPMG from the platoon or section was a stupid mistake anyway.

Advocates of replacing 5.56mm then argue that the GPMG is restrictedly heavy. We know the GPMG can be made lighter for the same given performance. Given that we know the performance is adequate, why not pursue this?

That the British Infantry is strangely overloaded is beyond doubt, but trading weight for weapons effect is part of the judgement required.

## Alternative Calibres

Many suggest we need a new small-arms calibre. It is beyond doubt that there are rounds available that have ballistic performance superior to both 7.62mm and 5.56mm NATO. The two most common alternatives cited are 6.5mm Grendel and 6.8mm SPC. While capable on paper and on the range, there is simply no evidence that adopting marginally more capable rounds would make our dismounted forces more effective. Does giving a soldier an IW firing a bullet that retains

twice as much energy at 600m make him more effective than he already is? Under actual operational conditions, the overall performance increase is marginal. Why, for example, would the fact that 6.8mm drops below supersonic at 750m and 6.5mm at 1000m make them worthy of the vast expense associated with conversion, when 5.56mm (M262) falls below supersonic at 750m, and 7.62mm (M80) at 875m?

For 300 rounds all the proposed calibres are heavier than 5.56mm but lighter than 7.62mm. Advocates of a new calibre also assume there is some wisdom in equipping the platoon with just one calibre. This may be true, but all these marginal increases in performance come at vast cost, depending on which replacement round is adopted, because weapons and magazines all have to be replaced or modified. Accepting this vast cost would be predicated on the idea that infantry capability is inextricably connected to small-arms calibre performance. There is a very good body of empirical data to show that this is not true. The infantry platoon's ability to project HE is actually far more decisive in combat and this has been proven and well understood since 1919.

Essentially, if this discussion is progressed, UK infantry may well fall prey to arguments only valid in the US and UK popular 'gun press', where the figures, data and understanding of operational issues fall well below the standards required for decisions associated with operational light weapons. Additionally, there is also very active debate on the internet and between UK and US 'Gun Writers' as to whether 6.8mm is better than 6.5mm and

vice versa, with each camp massaging the data and selecting facts. For example, it is claimed that 6.5mm out-performs 7.62mm NATO at 1000m in terms of retained energy. This is true for 7.62mm M80, but untrue for 7.62mm M118.

**Case Dismissed**

In summary, there is simply no convincing body of evidence that a platoon equipped with a combination of 5.56mm and 7.62mm NATO weapons, is in any way disadvantaged compared to an enemy with AKMs and PKMs. The phenomenon has certainly not occurred in numerous conflicts anywhere else on the planet, and even if it were true, new small-arms rounds such as 6.8mm and 6.5mm would not make any significant difference. ■

**NOTES**

- <sup>1</sup> *Jane's Defence Weekly*, 11 November 2009, jdw.janes.com, page 20
- <sup>2</sup> 800m light role, 1800m sustain fire and 2400m + map predicted
- <sup>3</sup> A 7.62mm M43 fired from an AKM round drops 551cm at 600m compared to 254cm fired for 5.56mm SS109 from an L-85. The M43 round also suffers about 75% greater deflection from wind drift

**SMALL ARMS DESIGNATIONS**

- L-85.** The SA-80, the individual weapon (IW) of the British Army
- L-86.** The light support weapon of the British Army
- AKM.** Technically correct annotation for the family of Soviet/Russian-designed assault rifles commonly called the 'AK-47'
- PKM.** Soviet/Russian-designed general purpose machine gun, using 7.62x54R ammunition

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