

Consultation Paper Electromagnetic Weapons

November 2021



SIFA thanks the Department of Home Affairs for the opportunity to comment on the Consultation Paper on Electromagnetic Weapons*.

SIFA has adopted the policy that we will strive to make a constructive contribution to any stakeholder consultation process we are involved in.

<https://sifa.net.au/shooting-industry-stakeholder-consultation/>

This paper therefore accepts that it is the Governments right to regulate these devices should it choose to and focusses on flagging issues for consideration, and what form that regulation might take if it is to avoid unintended impacts upon the Australian firearms industry.

It must be stated however that industry is sceptical of the claimed public safety risks expressed and implied in the consultation paper.

Electromagnetic propulsion was first developed in the late 1800's and the first example patented in the early 1900's. The US Military has invested heavily in many unsuccessful attempts to develop and mature the technology in this particular form factor. It is questionable as to whether man portable electromagnetic propulsion devices have now reached a point where these devices are a viable alternative to firearms, and thus are appropriately regulated as firearms.

Noise is mentioned in the preamble to the consultation paper, the implication being that the absence of a report somehow elevates the public safety risk. SIFA does not agree with that proposition. The current policy stance on suppressors in Australia is unsupported by facts and data. Comparable jurisdictions (NZ, Canada, the UK) all adopt a different policy posture to suppressors without adverse effect. Noise levels should therefore not be a consideration in this matter as that would correspond to an extension of the current misrepresentations.

Claims of potential lethality, whilst at face value are technically plausible under ideal conditions, are neither probable nor practical in the real world. We feel that these claims are largely discredited by an objective consideration of available facts and data. We also feel that proposed regulatory response (which treats these items as the regulatory equivalents to fully automatic heavy machine guns) is disproportional to any risk represented, and when compared to a wide range of other unregulated devices producing far greater energy levels.

The consultation paper indicates that (under ideal conditions) the device in question *"produces a projectile muzzle velocity between 40 and 80 meters per second (similar to that of some low-powered air rifles).*

When using the recommended ammunition, a kinetic energy of 85 joules is achieved".

By way of comparison.

- A low-energy 40-grain standard velocity 22 long rifle rimfire target round produces 198 j.
- A standard 57.7g tennis ball served at a typical launch speed of 177kph carries 70.708 j of energy. <http://www.physics.usyd.edu.au/~cross/TRAJECTORIES/42.%20Ball%20Trajectories.pdf>
- Approximately 127j is required to penetrate the head of adult cattle under abattoir or veterinary conditions. <http://veterinaryrecord.bmj.com/content/116/2/36.abstract>

The physics behind the claim of 80 meters per second and 85 j suggests a ~400 grain projectile. Improvements in ballistic performance is therefore more likely to come from increased velocity rather than increased projectile mass.

Velocity from electromagnetic propulsion is a factor of barrel length (all else being equal), therefore we can expect that performance improvements will only be achieved with a reduction in both portability and concealability, largely negating the perceived public safety risk should further development take place.

Question 1: Do you support an import control on these electromagnetic weapons?

SIFA's role is to optimise the regulatory and commercial circumstances in which the Australian firearms industry operates. As a broad generalisation, that involves the pursuit of sensible deregulation and the elimination of unnecessary / ineffective red tape. Any proposal which adds yet more regulatory overhead without any regulatory offsets is therefore unwelcome.

SIFA's concern is not so much whether these items are regulated or not, but how they are regulated. Just as Gel Blasters and Paintball markers are not firearms, neither are these. All non-firearms should be regulated separately to firearms so that the intent and implementation of the NFA is not made even more complex and unworkable than it already is.

It could be argued for example that all these devices are already regulated under the Consumer Goods (Projectile Toys) Safety Standard 2020, which legislates a kinetic energy minimum but no maximum.

If it is determined that these devices must be regulated as a firearm, then that regulation must be consistent with all current (and future) firearms regulatory approaches to avoid inconsistency, duplication, and yet more regulatory dark matter.

Question 2: How should these weapons be described for the purposes of the import control, and what goods should be exempt from this ban?

As a matter of principle, SIFA is concerned at the introduction of a) damage to property; and b) bodily harm as additional regulatory considerations for firearms should these devices be deemed to be firearms. There are simply too many examples of regulators interpreting and applying regulatory provisions (e.g., aesthetics) in ways which were not envisaged nor intended when regulations were first introduced.

If (despite industry concerns) these electromagnetic devices are to be treated as firearms, then the existing firearms regulatory template needs to be overlaid and an inclusion for this new propulsion method added.

This can be achieved by amending the current definition of a firearm (as below) and regulating electromagnetic weapons* in the same way that conventional firearms with comparable energy levels are regulated (i.e., by actuation type (manual / semi auto), ammunition class and magazine capacity).

- (a) means a device designed or adapted to discharge shot, bullets or other projectiles by means of an explosive charge, compressed gas or electromagnetic means, whether that device is fitted with a magazine or other feeding device designed to be used with it or not; and

Just as there are many specific exclusions with the current definition of a firearm, SIFA is concerned that there will be a large number of electromagnetic devices which will require specific exclusion should this amendment proceed. In the shooting sphere, clay target throwers being just one example.

Question 3: For what limited purposes should import of these goods be permitted, and under what conditions?

Frustratingly, the consultation paper replicates issues which were flagged and worked through during consultation on the proposed reforms to the importation of firearms, firearm-related goods, and weapons Stakeholder consultation paper – September 2020.

It was acknowledged then that more work is required to enable the Australian shooting industry to fulfill its role in supporting Australia's sovereign defence capability, and to align the regulations with contemporary procurement practices.

The proposal to restrict these items to Government is flawed for all the same reasons that were discussed previously and which are yet to be addressed.

If we accept the policy logic that these devices have the potential for further development, and therefore should be limited to government use until they are better understood and legitimate civilian applications become clear, then it is axiomatic that industry too requires access to these device types.

It is a fact that Australia's intellectual capital in this sphere is not the exclusive domain of Defence and Law Enforcement employees. It will be critical that Defence suppliers (and their sub-contractors) are able to access, possess and develop this technology for Defence and Law Enforcement use, and to grow their ability to support future Government capability.

If the private sector is to be excluded (assuming there will be genuine consideration of civilian use cases post regulation) how are those civilian applications to be explored and developed, and which public sector agency will be tasked with undertaking that market development work for us?

It is important that Government not stifle innovation and the international competitiveness of Australian industries on the whims of single interest regulators looking for a quick fix which, frankly, fails to tick the boxes necessary for SIFA to support the proposed regulatory changes, as per our [policy on consultation](#).

A firearms license remains the primary regulatory tool for ensuring public safety in Australia with respect to firearms. Importation should therefore be permitted for those with an appropriate firearms license.

Since licensing for possession and use is a State and Territory responsibility, border restrictions alone are inappropriate. If States and Territories (via the FWPWG) feel that these devices demand regulation, then they cannot abdicate their own roles in achieving an effective regulatory outcome for the sake of expediency, since states and territories license the private sector enterprises which supply government.

SIFA has a clear expectation that the FWPWG will achieve its singular objective by delivering well considered, consistent, and uniform policy advice to all jurisdictions so that regulation is homogenous nationally. If jurisdictions are incapable or unwilling to work collaboratively towards that end, then the case for regulation of these devices at the border must be questioned.

Question 4: What parts of these weapons, if any, should be subject to import controls?

The decision to exclude ammunition and magazines from the scope of the proposed regulation is a welcome and practical decision. Industry thanks the Department for proactively identifying the many challenges this would have represented if they were to be included.

Barrels and triggers are already restricted (although the trigger in this case is nothing more than a common electrical switch). SIFA do not envision any changes being necessary for these items.

The other electronic componentry which constitutes the bulk of the item in question are in such common use across such a broad range of sectors and applications that it is difficult to imagine how they can be adequately controlled without causing major disruption. It would also seem impossible to guard against the diversion of those unregulated component parts after import, or local manufacture in the case of circuit boards, etc.

In SIFA's mind, the pragmatic approach is to rely on existing controls on restricted components which are common to both real and non-firearms, and capturing any fully assembled items by adding electromagnetic propulsion to existing regs alongside black powder, smokeless powder, and air powered firearms.

**The use of the term "weapon" when referring to firearms in the civilian context is considered by the firearm community to be derogatory and offensive and its use should be avoided as a matter of principle.*



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