

MOD to develop cutting-edge laser and radio frequency weapons

The state-of-the-art weapons systems, known as Directed Energy Weapons (DEW), are powered solely by electricity and operate without ammunition.

The systems could be fuelled by a vehicle's engine or a generator, significantly reducing their operating costs and providing unprecedented flexibility on the frontline.

In a Prior Information Notice (PIN) published this week, the MOD announced it is seeking to develop three new DEW demonstrators to explore the potential of the technology and accelerate its introduction onto the battlefield.

The laser weapons systems deploy high energy light beams to target and destroy enemy drones and missiles. Radio Frequency weapons are designed to disrupt and disable enemy computers and electronics.

Defence Secretary Penny Mordaunt said:

Laser and Radio Frequency technologies have the potential to revolutionise the battlefield by offering powerful and cost-effective weapons systems to our Armed Forces.

This significant investment demonstrates our commitment to ensuring our Armed Forces operate at the forefront of military technology.

Computer Generated Image illustrating the use of DEW on a Wildcat helicopter. Crown copyright.

The new systems are expected to be trialled in 2023 on Royal Navy ships and Army vehicles but, once developed, both technologies could be operated by all three services. The Armed Forces will use these exercises to get a better understanding of DEW, test the systems to their limits and assess how they could be integrated with existing platforms.

The MOD aims to invest up to £130m in this package of Directed Energy Weapons, including the construction of the demonstrators, the creation of a new Joint Programme Office and the recruitment of personnel to manage the programme.

These demonstrators are part of the MOD's "Novel Weapons Programme" which is responsible for the trial and implementation of innovative weapons systems to ensure the UK remains a world leader in military technology. They are expected to reach the frontline within 10 years.

The MOD already has plans for initial trials of laser weapons systems, with the Dragonfire demonstrator commissioned by the Defence Science and Technology Laboratory to be tested later this year.

The Dragonfire represents a world-first in laser weapons technology, combining multiple laser beams to produce a weapons system that is more powerful than its predecessors and resistant to the most challenging environmental conditions.

The MOD also has over 30 years' experience in Radio Frequency DEW, during which time the UK has become a world leader in developing new power generation technologies and a global hub for the performance testing and evaluation of these systems.