

Transforming future weapons technology for UK MOD

DRAGONFIRE is a consortium working to enable a Laser Directed Energy Weapon

Capability Demonstration Programme

Executive summary

QinetiQ is proud to be part of UK DRAGONFIRE, a consortium working to achieve a significant step change in the UK's high energy laser weapon systems capability. Through a new laser capability demonstrator programme Team DRAGONFIRE will provide the basis for technology-driven operational advantage for UK MOD. The programme will mature the key technologies for a high energy defensive laser weapon system, enabling the engagement of representative targets on land and at sea in 2019. This will provide the body of evidence for future procurement decisions alongside developing UK industrial capability and know-how, so that collectively the UK can respond more effectively to both threats and the emerging business opportunities in the UK and overseas.

“ UK DRAGONFIRE will put the UK at the forefront of high energy laser systems, capitalising on the experience of joint MOD/Industry working in the complex weapons environment. ”

Dave Armstrong, Executive Group Director Technical and UK Managing Director of MBDA



The brief

To enable transformation of future weapons technology and help develop the UK's first laser weapon. Dstl vision is for a new laser capability demonstrator programme, providing an end-to-end system demonstration – from target acquisition to destruction – with the system ready to deploy for testing on MOD Ranges by 2019.

Our solution

QinetiQ's role is to provide the high-power laser technology for the programme and, using our testing and evaluation expertise, we will conduct trials over land and water at various Trials sites that we operate for UK MOD under the Long Term Partnering Agreement (LTPA) to ensure a successful demonstration.

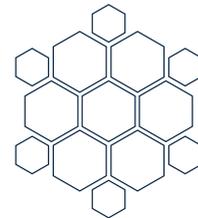
We are the only UK company to successfully and safely operate a high energy laser weapon in the UK. Our team has direct experience of high power fibre lasers and therefore a clear understanding of the requirements that will be placed upon the fundamental optical sources for the Laser Directed Energy Weapon.

Our coherent beam-combining technology offers a laser system that can deliver substantial benefit over other beam combining technologies. Using our design for a coherently combined fibre laser, and the associated phase control system, we will provide a precision laser source that can be directed onto a dynamic target and achieve an enhanced power density on a target in the presence of turbulence. This expertise has been developed over many years in partnership with the UK MOD.

Outcomes and benefits

Beam combining is a technology that is able to achieve enhanced power densities at target, reducing defeat times and increasing engagement range. The QinetiQ solution for the high-power laser has a scalable architecture that supports increasing the number of laser channels, offering a route map towards systems suitable for maritime, land and air use.

The DRAGONFIRE consortium is successfully enabling our MOD customer to achieve their goals for the programme.



UK DRAGONFIRE is a collaborative consortium, led by MBDA with QinetiQ and Leonardo-Finmeccanica, which has brought together the best of UK industry expertise to deliver the highly challenging and complex Laser CDP. GKN, Arke, BAE Systems and Marshall ADG are among the organisations providing specialist capability.

For more information

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QinetiQ is always on your side, protecting, improving and advancing your vital interests

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