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**N E W S R E L E A S E**

# **Boost for UK space sector as new Westcott facility**

# **offers cheaper and greener engine testing**

A new gold standard national rocket test facility has been unveiled by Science Minister Amanda Solloway today (17th June 2021).

The centre will allow UK companies and academics to test state-of-the-art space propulsion engines at a more affordable rate than international rivals. It will also allow new types of more sustainable propellants to be tested, such as Hydrogen Peroxide and Liquid Oxygen which are more environmentally friendly in sourcing, storage and combustion.

Based at the Westcott Space Cluster in [Aylesbury Vale Enterprise Zone](https://www.aylesburyvaleez.co.uk/), the new National Space Propulsion Test Facility (NSPTF) received £4 million in funding from the UK Space Agency and has created around 60 jobs.

Until now, companies could test extremely small engines in the UK but had to go overseas to test bigger engines. The new facility will tackle this issue and help grow the UK’s status as a leading space player, giving our space industry the resources it needs to expand.

**Science Minister Amanda Solloway said:**

“As we build back better we are investing in our brightest space scientists, the facilities they work in and the technologies they are creating.

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# **Boost for UK space sector: 2**

“This pioneering facility will support our ambitious space businesses, enabling them to undertake complex spacecraft engine testing, while boosting the local economy by creating highly skilled jobs.”

The UK space sector is already a leader in satellite propulsion and, with a growing space manufacturing sector and plans for the first launches from UK spaceports in 2022, the satellite propulsion field is set to grow substantially in the coming years.

The UK Space Agency has worked with the European Space Agency, the Science and Technology Facilities Council’s RAL Space facility and NAMMO UK to develop this cutting-edge facility. The site will use game-changing technology to test the propulsion engines that position orbiting spacecraft in conditions similar to those experienced in space.

The new facility will allow innovation in propulsion technology, as well as the cost-effective development and testing of even more powerful engines for interplanetary travel, and to drive forward the significant commercial telecommunications satellite market.

**Richard Harrington, CEO of Buckinghamshire Local Enterprise Partnership, said:**

“The National Space Propulsion Test Facility at Westcott is a key step towards delivering a world-leading hub for the space sector in the heart of Buckinghamshire.

“We are delighted to support the opening of this new facility in our Enterprise Zone, which opens up the next stage in the evolution of the Westcott site to attract new business and investment to this world-class centre of excellence in space propulsion.”

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# **Boost for UK space sector: 3**

**Nigel MacKenzie, Westcott Development Manager said:**

“It was great to welcome Science Minister, Amanda Solloway to Westcott. This is yet another leap forward for the development of Westcott in Buckinghamshire as a centre of excellence in the space propulsion and associated high-tech industries.

“Future Investment will ensure Westcott’s place at the heart of the UK space industry. Over the next 10 years, Westcott will become the UK Centre for the next generation of propulsion systems and small satellite manufacture.”

**Rob Selby, Vice President of Nammo Space, the company that will operate the equipment, said:**

“Thanks to this key UK government investment, UK space can now compete favourably with the very best rocket test facilities in the world. The Nammo team have designed, created and produced this phenomenal, state-of-the-art hot-fire test facility that is already driving further growth in UK based spacecraft propulsion businesses. We look forward to testing engines for customers from all over the globe and to further key developments that the NSPTF will enable.”

The [Size and Health of the UK Space Industry](https://www.gov.uk/government/news/more-than-3000-jobs-created-as-space-sector-grows-across-the-uk) report published last month shows the UK space sector is booming. Income from the UK space sector in 2018/19 rose from £14.8 billion to £16.4 billion, representing growth of 5.7% in real terms, while employment increased by 3,200 from 41,900 to 45,100.

**How does the engine test work?**

* Engines will be fired up in a vacuum, with a mechanical pump system generating a vacuum down to 1.5 milliBar in a test cell containing the engine; an equivalent test altitude of approximately 140,000ft, which ensures technology can be deemed ready for the space environment.

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# **Boost for UK space sector: 4**

* When firing, the pressure of the engine’s exhaust plume is partially recovered by a 7-metre-long supersonic diffuser. The rocket plume intercooler developed by Reaction Engines will remove heat generated from rocket exhaust plume and allow the vacuum pumps to operate and maintain the simulated high-altitude conditions. This means the intercooler will cool exhaust temperatures of in excess of 2,000°C to less than 50°C in a fraction of a second, in less than a metre’s distance.
* The gasses then travel along a vacuum manifold to be recovered to ambient pressure by the pump system in the vacuum generation plant.
* Crucially, this range of engine testing will allow further innovation for the type of orbit-raising and station-keeping engines this facility will be able to test and it is the first step in a plan to test larger engine types.

Westcott is recognised as an integral part of the UK space sector growth strategy with a nucleus of well-established companies supporting rocket and satellite enabled research and development projects.

Last October saw the opening of the Westcott Innovation Centre, part funded by the Local Growth Fund and Aylesbury Vale Enterprise Zone, via Buckinghamshire LEP, and managed by the Satellite Applications Catapult.

This is the latest phase of the site development, which also now includes a 5G Step-Out Test Facility and Incubation Centre and is planned to include a Disruptive Innovative Space Centre for apprenticeships and further specialist testing sites.

Alongside office space and meeting rooms, the centre provides a fully flexible engineering facility, giving businesses working in space and related sectors the opportunity to use specialist equipment for light mechanical engineering and rapid prototyping activities.

 **Ends**

**Note to editors**

The [**Buckinghamshire Local Enterprise Partnership**](http://buckstvlep.co.uk/) (Bucks LEP) is a business-led ‘partnership of equals’ between local government and the private sector, building the conditions for sustainable economic growth in the County.

[**Buckinghamshire Business First**](http://www.bbf.uk.com/) (BBF) is the Growth Hub for the county and is backed by Buckinghamshire-based entrepreneurs, thousands of SMEs, the Buckinghamshire LEP and Buckinghamshire Council. BBF provides the link between public policy and the business community in Buckinghamshire and works with partners to create a dynamic business environment in the Entrepreneurial Heart of Britain.

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