## Press release: Lockheed Martin and Orbex to launch UK into new space age

- Lockheed Martin to establish vertical launch operations in Sutherland, Scotland and develop innovative technologies in Reading, Berkshire with support from two UK Space Agency grants totalling £23.5 million
- A further £5.5 million will go to British company Orbex to build an innovative new rocket for launch from Sutherland, as part of Government's modern Industrial Strategy
- This builds on awards of £2.5m to Highlands and Islands Enterprise to develop a vertical launch spaceport in Sutherland and a £2m development fund for horizontal spaceports such as those planned in Cornwall, Glasgow Prestwick and Snowdonia
- Government support for launch is the first step towards a potential Space Sector Deal and the development of a national space programme

#### Lockheed Martin: UK spaceflight programme

Under the plans, global space leader Lockheed Martin and innovative spaceflight company Orbex will launch rockets into space from the north coast of Scotland.

The grants from the UK Space Agency consist of:

- Two separate grants worth a combined £23.5 million to Lockheed Martin to establish vertical launch operations at Sutherland using proven technology and to develop an innovative new system in Reading for deploying small satellites. Known as an orbital manoeuvring vehicle, this will be the upper stage of Lockheed Martin's rocket and will deploy up to six small satellites to separate orbits.
- £5.5 million to UK-based Orbex to build an innovative new rocket for launch from Sutherland, with the support of British manufacturing operations and supply chains. Their orbital launch vehicle, called Prime, will deliver small satellites into Earth's orbit, using a single renewable fuel, bio-propane, that cuts carbon emissions by 90% compared to hydrocarbon fuels.

The companies will work together with Highlands and Islands Enterprise, which has been awarded £2.5 million to develop a vertical launch site in Sutherland.

Business Secretary Greg Clark said:

"As a nation of innovators and entrepreneurs, we want Britain to be the first place in mainland Europe to launch satellites as part of our Industrial Strategy. The UK's thriving space industry, research community and aerospace supply chain put the UK in a leading position to develop both vertical and horizontal launch sites.

"This will build on our global reputation for manufacturing small satellites and help the whole country capitalise on the huge potential of the commercial space age."

Horizontal launch sites have significant potential in a future UK spaceflight market, which could attract companies from all over the world to invest in Britain. Sites such as Newquay, Glasgow Prestwick and Snowdonia will be boosted by a new £2m fund to grow their sub-orbital flight, satellite launch and spaceplane ambitions.

Chris Grayling, Secretary of State for Transport, said:

"The UK's space sector is thriving and satellite benefits our lives every day, from banking to transport, and agriculture to entertainment.

"Our Space Industry Act will allow the UK to tap into and develop new commercial space opportunities, with the potential for hundreds of new regional jobs and billions of revenue for British business across the country.

"Today's announcement is not only exciting for Sutherland, but with industry expertise up and down the country it will drive growth and further regional opportunities in England, Scotland and Wales."

Britain's Space Sector has set out ambitious plans to build on its global leadership in satellites and applications using space data to create a hub in the UK for new commercial space services, as set out in the Prosperity from Space report published in May.

The Government's modern Industrial Strategy identified spaceports as a key economic opportunity and a priority for the UK's space strategy. The UK is an attractive destination for space businesses and the north of Scotland is well-placed to reach in-demand satellite orbits.

Patrick Wood, Lockheed Martin's UK Country Executive for Space, said:

"The UK Space Agency's strategic vision for a world-class launch market will position the nation for a very bright future in space. Lockheed Martin will apply its 50 years of experience in small satellite engineering, launch services and ground operations, as well as a network of UK-based and international teammates, to deliver new technologies, new capabilities and new economic opportunities."

Chris Larmour, CEO of Orbex, said:

"We're delighted to have been selected after a highly competitive and detailed process. Orbex is one of the very few private spaceflight companies with credible practical experience in the development of launch vehicles and rocket engines. With the support of this grant from the UK Space Agency, we will soon be launching small satellites into orbit from British soil and

helping to transform the UK into an important hub for commercial space launch operations."

Following its call for grant proposals in Spring 2017, the UK Space Agency assessed 26 proposals to determine what would deliver the best value for money and strategic opportunity for the growth of the UK space sector.

A number of sites across the UK are developing their spaceport plans and engaging with regulators, demonstrating the scale of the industry's ambition and confidence in a future UK spaceflight market, which could attract companies from all over the world to invest in Britain. Launches will be regulated under the Space Industry Act 2018.

The UK and US will also soon begin formal negotiations towards a Technology Safeguards Agreement, which will establish the legal and technical safeguards that can support U.S. space launch vehicles to operate from UK launch sites. Attracting US operators to the UK will enhance our space capabilities and boost the whole market.

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## News story: UK Government funding for vertical launch spaceport in

### **Sutherland**

A proposed vertical launch spaceport in Sutherland has been awarded £2.5 million in funding by the UK Space Agency to develop a ground breaking launch site. The UK Space Agency is a UK Government body.

UK Government Business Secretary Greg Clark will today [16 July 2018] launch the start of a Great British Space Age that will see vertically-launched space rockets and satellites take off from a new spaceport at Sutherland on the north coast of Scotland.

Business Secretary Greg Clark said:

As a nation of innovators and entrepreneurs, we want Britain to be the first place in mainland Europe to launch satellites as part of our modern Industrial Strategy. The UK's thriving space industry, research community and aerospace supply chain put the UK in a leading position to develop both vertical and horizontal launch sites.

This will build on our global reputation for manufacturing small satellites and help the whole country capitalise on the huge potential of the commercial space age.

In addition, the UK Government is also making available a new £2 million fund to boost further horizontal launch spaceport sites across Britain — such as Glasgow Prestwick.

Welcoming the announcement Scottish Secretary David Mundell said:

The UK Government is driving the commercial space age and Scotland is leading the way. We are investing £2.5 million in a vertical launch site in Sutherland which will create hundreds of new jobs. And we will invest a further £2 million in horizontal launch sites — Prestwick is in the running for that and I wish them well.

Scotland is uniquely positioned to pilot the UK's commercial space sector and the UK Government recognises this potential. The opportunities are considerable, launching a new age for British industry.

The commercial space sector is estimated to be worth a potential £3.8 billion to the UK economy over the next decade and will support Britain's modern Industrial Strategy by creating high-skilled jobs and boosting local economies.

UK Space Agency selected the Sutherland site because Scotland is the best

place in the UK to reach highly sought-after satellite orbits with vertically launched rockets.

# Press release: One giant leap: Vertical launch spaceport to bring UK into new space age

- Industrial Strategy funding awarded to proposed vertical launch spaceport in Sutherland, Scotland
- Horizontal launch sites such as those planned in Cornwall, Glasgow Prestwick and Snowdonia to be boosted by new £2 million development fund
- Commercial vertical and horizontal launch demand is worth a potential £3.8 billion to the UK economy over the next decade and will support further growth of Britain's space sector
- Additional grants to be announced at next week's Farnborough International Airshow will see leading commercial spaceflight operators launching from Sutherland

#### **UK** spaceports

The UK Space Agency has selected the first vertical launch site in Sutherland on the north coast of Scotland and is making available a new £2 million fund to boost horizontal spaceport development across Britain, Business Secretary Greg Clark will announce today (Monday 16 July).

Scotland is the best place in the UK to reach in-demand satellite orbits with vertically launched rockets. Initial funding of £2.5 million will go to Highlands and Islands Enterprise to develop the vertical launch site in Sutherland which will use a combination of proven and innovative rocket technologies to pave the way for a world-leading spaceflight market.

This will grow the UK space economy through regular, reliable and responsible access to space.

Business Secretary Greg Clark said:

"As a nation of innovators and entrepreneurs, we want Britain to be the first place in mainland Europe to launch satellites as part of our Industrial Strategy. The UK's thriving space industry, research community and aerospace supply chain put the UK in a leading position to develop both vertical and horizontal launch sites.

"This will build on our global reputation for manufacturing small satellites and help the whole country capitalise on the huge potential of the commercial space age."

Horizontal launch sites have significant potential in a future UK spaceflight market, which could attract companies from all over the world to invest in Britain. Sites such as Newquay, Glasgow Prestwick and Snowdonia will be boosted by a new £2m fund to grow their sub-orbital flight, satellite launch and spaceplane ambitions.

Secretary of State for Transport Chris Grayling said:

"The space sector is an important player in the UK's economy and our recent Space Industry Act has unlocked the potential for hundreds of new jobs and billions of revenue for British business across the country.

"Today's announcement is exciting for places like Newquay in Cornwall too, paving the way for further potential space ports in the future."

The £50 million UK Spaceflight Programme is also considering leading proposals for horizontal spaceplane operations from across Britain, submitted as part of its call on low cost access to space.

Secretary of State for Scotland David Mundell said:

"The UK Government is driving the commercial space age and Scotland is leading the way. We are investing £2.5 million in a vertical launch site in Sutherland which will create hundreds of new jobs. And we will invest a further £2 million in horizontal launch sites — Prestwick is in the running for that and I wish them well.

"Scotland is uniquely positioned to pilot the UK's commercial space sector and the UK Government recognises this pot."

Secretary of State for Wales Alun Cairns said:

"The UK Government has an exciting ambition to take the UK into the commercial space age by enabling small satellite launch and spaceflight from UK spaceports. Wales now has an exciting window of opportunity to take a leading role in shaping that future.

"We have the right geography and a skilled engineering base in aerospace, electronics and the software industries, standing ready to diversify and to flourish in the fast-developing space market. The opportunities are vast — for Britain's strategic capabilities and for Wales in terms of job creation, cross border synergies through the Northern Powerhouse, linking to our strong academic institutions and the potential economic impact. We must now stand ready to grasp them."

The UK has a thriving space sector with significant capability in manufacturing satellites and using the information they collect to drive innovation in other sectors ranging from healthcare to finance.

Graham Turnock, Chief Executive of the UK Space Agency, said:

"This spaceport grant will help to kick-start an exciting new era for the UK space industry, and this is only the beginning of our LaunchUK campaign. We

are committed to supporting a commercial market for access to space in the UK, and we will continue to engage with any company who seeks to operate here."

A number of sites across the UK are developing their spaceport plans and engaging with regulators, demonstrating the scale of the industry's ambition and confidence in a future UK spaceflight market, which could attract companies from all over the world to invest in Britain.

Low cost access to space is important for the UK's thriving space sector which builds more small satellites than any other country, with Glasgow building more than any other city in Europe.

Will Whitehorn, Non-Executive Chairman of Clyde Space said:

"From designing and building the very first satellite in Scotland, Clyde Space has grown and become a front runner in small-satellite manufacturing. Having a spaceport located in Scotland will bring about a whole host of commercial advantages and not only to our operations in Glasgow, but to the entire space sector in the whole of the UK."

Peter Platzer, CEO of Spire Global, said:

"A spaceport in Scotland and the UK is fantastic news! Launch continues to be the most unpredictable part of the overall supply chain, with delays, often for months and sometimes years, being the norm. In Spire, Scotland already sports Europe's most advanced and prolific satellite manufacturing capability, and with a space port right next door, enabling clockwork like launches, we can finally get our space sector supply chain to be truly integrated!"

The UK's thriving space industry, research community and aerospace supply chain also put the UK in a strong position to further develop horizontal launch sites. The Government's decision to make available a £2 million strategic development fund, subject to business case, will help accelerate this early-stage market further.

Small-satellite launch and sub-orbital flight from the UK will support organisations across the country to remain at the forefront of commercial space services. It will drive new highly skilled jobs and boost local economies — not only in the communities around spaceport sites, but in the UK's space sector as a whole.

Charlotte Wright, Chief Executive of Highlands and Islands Enterprise (HIE), said:

"The decision to support the UK's first spaceport in Sutherland is tremendous news for our region and for Scotland as a whole. The international space sector is growing and we want to ensure the region is ready to reap the economic benefits that will be generated from this fantastic opportunity."

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