

# LAUNCH UK

## A guide to UK spaceports





# Why launch from the UK?

**The UK is the most attractive destination in Europe to host commercial small satellite launch- offering the right geography, the right business and regulatory environment and the right industrial capability to support a range of spaceflight activities.**

Geographically advantageous, the UK's long coastline and island location make it unique in easily hosting different types of launch services. Scotland is the best place in the UK to reach in-demand satellite orbits with vertically launched rockets. Spaceplanes and other space transportation can be launched at several aerodromes around the UK, each with their own individual geography and local infrastructure.

Our space and aerospace sector are internationally renowned and home to many thriving companies and ground-breaking capabilities. Working with pioneering launch systems and space services, each of our spaceports will provide access to a range of valuable polar and sun-synchronous orbits.

We were the first country in Europe to put in place new spaceflight laws. Our outcome-focussed regulatory framework, including the Space Industry Act 2018, is the most modern space legislation in the world, with a focus on safety and the flexibility to support the pace of innovation. Our legislation allows for

the regulation of a wide range of spaceflight technologies, including traditional vertically launched vehicles, air-launched vehicles, sub-orbital spaceplanes, and balloons.

We have used our strong global partnerships to ensure we have access to markets, financing, and supply chains all around the world. The UK-US Technology Safeguards Agreement, (TSA), allows US companies to operate from UK spaceports and export space launch technology, enabling the UK to access revenues and customers previously unavailable, while abiding by both countries' commitments to non-proliferation. In addition, we have used our international partnerships to secure agreements with Ireland, Iceland, Portugal, the Faroe Islands and Norway to enable UK launch activities.

# UK Space Agency



**Air launch from a carrier aircraft**



**Ground launch directly from spaceport**

## Glasgow Prestwick

**Location:** Prestwick, South Ayrshire, Scotland  
**Launch mode:** Horizontal (orbital)  
**Orbital inclinations:** Sun-Synchronous (SSO) and Polar Orbit, Molniya and other high inclinations (North and South)  
**Planned departures:** Astraïus  
**Operational:** 2024  
**Website:** [www.prestwickaerospace.com](http://www.prestwickaerospace.com)

## Spaceport 1

**Location:** Scolpaig Farm, Isle of North Uist, Outer Hebrides, Scotland, HS6 5DH  
**Launch mode:** Vertical, sub-orbital  
**Orbital inclinations:** N/A  
**Planned departures:** In negotiation with launch providers  
**Operational:** 2024  
**Website:** In development

## Spaceport Machrihanish

**Location:** Campbeltown, Argyll, Scotland  
**Launch mode:** Horizontal, vertical and high-altitude platform  
**Orbital inclinations:** Sun-synchronous and polar orbits  
**Planned departures:** In negotiation with launch providers  
**Operational:** 2023 - Cryogenic systems and engine R&D  
**Website:** [www.discoverspaceuk.com](http://www.discoverspaceuk.com)

## Spaceport Snowdonia

**Location:** Llanbedr, Gwynedd, Wales  
**Launch mode:** Horizontal: Vertical & Rail  
**Orbital inclinations:** Sun-synchronous, polar and sub-orbital  
**Planned departures:** Multiple including research, development, test and evaluation  
**Operational:** 2024  
**Website:** [www.aerospacewalesforum.com/space](http://www.aerospacewalesforum.com/space)

## SaxaVord UK Spaceport

**Location:** Lamba Ness, Unst, Shetland Islands  
**Launch mode:** Vertical  
**Orbital inclinations:** Sun-synchronous, suborbital, orbital and polar orbits  
**Planned departures:** ABL Space Systems, Rocket Factory Augsburg, HyImpulse, and potentially others  
**Operational:** 2023  
**Website:** [www.saxavord.com](http://www.saxavord.com)



## Sutherland Spaceport

**Location:** A' Mhòine peninsula, Sutherland, Scotland  
**Launch mode:** Vertical  
**Orbital inclinations:** Polar and sun-synchronous  
**Planned departures:** Orbex Prime  
**Operational:** 2024  
**Website:** [www.orbex.space/launch-services](http://www.orbex.space/launch-services)













## Spaceport Cornwall

**Location:** Cornwall Airport Newquay, Cornwall  
**Launch mode:** Horizontal  
**Orbital inclinations:** Sun-synchronous and polar orbits  
**Planned departures:** Virgin Orbit LauncherOne Rocket (Cosmic Girl carrier aircraft)  
**Operational:** 2023  
**Website:** [www.spaceportcornwall.com](http://www.spaceportcornwall.com)



# Spaceport Cornwall

## Quick fact table

	<b>Location</b>	Cornwall Airport Newquay, Cornwall
	<b>Coordinates</b>	50°26'27.0"N 4°59'43.0"W
	<b>Launch mode</b>	Horizontal launch
	<b>Orbital inclinations</b>	Sun-synchronous and polar orbits
	<b>Payload capacity</b>	300kg to low Earth orbit
	<b>Operational</b>	2023
	<b>Planned departures</b>	Virgin Orbit LauncherOne Rocket (Cosmic Girl carrier aircraft), MoU with Sierra Space for Dream Chaser
	<b>Facilities</b>	Cornwall Airport Newquay   Space Systems Integration Facility   Space Systems Operations Facility   R&D Facility   Rocket and propulsion test facility   Hangarage   Fuel handling   Mission control
	<b>Website</b>	<a href="http://www.spaceportcornwall.com">www.spaceportcornwall.com</a>
	<b>Contact details</b>	Ross Hulbert   Business Development Manager ross.hulbert@spaceportcornwall.com



Spaceport Cornwall is a project between Cornwall Council, Cornwall and Isles of Scilly Local Enterprise Partnership, Goonhilly Earth Station and Virgin Orbit. The site is operational having received its Spaceport licence from the CAA in Nov 2022 and conducted its first launch campaign with Virgin Orbit in January 2023. The site offers:

- A 2,744m long runway
- Direct access over the sea
- Centre for Space Technologies development consisting of the Space Systems Integration Facility, Space Systems Operations Facility, and R&D Facility
- Rocket and propulsion testing hangars

Supported through funding by local and central government, Spaceport Cornwall is launching the region's new space ecosystem. The renowned Goonhilly Earth Station, the world's most capable satellite ground station, is also offering its services alongside the spaceport. Collaboratively, Cornwall's space cluster offers broader opportunities than just launch, including:

- Mission control and tracking services
- Space specific skills pathways offered by local colleges and universities from apprenticeships to degree level
- Countless downstream application companies

- Space is enabling other sectors including geo-resources, renewable energy, and defence
- Dedicated Cornwall Space Cluster development team











All this activity has led the Space sector in Cornwall to successfully grow 164 per cent since 2010. Spaceport Cornwall is determined to lead on more sustainable launch practices. Further details including a carbon impact report, 'Road to Net Zero' action plan and ethical framework will be available soon.

The Spaceport Cornwall team is working closely with schools, colleges, and higher education institutions across the region to build the skills base to meet the needs of the space industry. Leveraging our work with Virgin Orbit, an inspirational outreach programme is being rolled out across Cornwall.



# SaxaVord UK Spaceport

## Quick fact table

	<b>Location</b>	Lamba Ness, Unst, Shetland Islands
	<b>Coordinates</b>	60°49'05.0"N 0°47'32.8"W
	<b>Launch mode</b>	Vertical launch
	<b>Orbital inclinations</b>	Sun-synchronous and polar orbits
	<b>Payload capacity</b>	Up to 1000kg
	<b>Operational</b>	2023
	<b>Planned departures</b>	Various
	<b>Facilities</b>	Launch site   Integration hangars (launch vehicle and payload)   Fuel storage facilities   Pyrotechnic storage   Launch control centre   Range control centre   Off-site offices   Transmit and receive ground station 5M SX and KA bands   Data range   Space situational awareness
	<b>Website</b>	<a href="http://www.saxavord.com">www.saxavord.com</a>
	<b>Contact details</b>	Scott Hammond   Operations Director scott.hammond@shetlandspacecentre.com





SaxaVord UK Spaceport has an experienced aerospace team, with additional associated security knowledge. The company is agile and liaises regularly with domestic and international organisations regarding a number of complex spaceflight requirements, maintaining strong partnerships in the exciting new UK spaceflight sector.

Shetland itself is located at the highest latitude point in the UK, and one of the highest of Europe, allowing a greater payload to be launched for the same fuel load. The remote location and distance from heavily populated areas is a strength for both security and safety. The specialised supply chain of the Shetland oil and gas sector is also a great advantage, providing a strong lead in an established, technically skilled workforce.

The organisation collaborates with Shetland-based businesses which continue to demonstrate their ability to support the space sector. These include PURE Energy in Unst which specialises in the manufacture of hydrogen systems. Shetland Islands











Council is additionally committed to developing a Space Innovation Campus, providing incubation units specifically to support the space sector. The campus will house research institutions supporting launch, educational and supply needs of SaxaVord Spaceport.

SaxaVord Spaceport's Science, Technology, Engineering and Maths initiative already sees collaborative research and developments project underway with academic institutions including the University of Alaska, University of Strathclyde and Edinburgh University. An outreach programme to local Shetland schools and colleges is generating future technical skills in the area, ensuring a sustainable spaceflight ecosystem in Shetland and the wider UK.



# Space Hub Sutherland

## Quick fact table

	<b>Location</b>	A' Mhòine peninsula, Sutherland, Scotland
	<b>Coordinates</b>	58°30'15.5"N, 4°30'07.6"W
	<b>Launch mode</b>	Vertical launch
	<b>Orbital inclinations</b>	Polar and sun-synchronous
	<b>Payload capacity</b>	Less than 500kg
	<b>Operational</b>	2024
	<b>Planned departures</b>	Orbex Prime
	<b>Facilities</b>	Launch control centre   Launch integration and assembly facility   Antenna farm   Launch pad with commodity farm
	<b>Website</b>	<a href="http://www.orbex.space/launch-services">www.orbex.space/launch-services</a>
	<b>Contact details</b>	<a href="mailto:sutherlandspaceport@orbex.space">sutherlandspaceport@orbex.space</a>





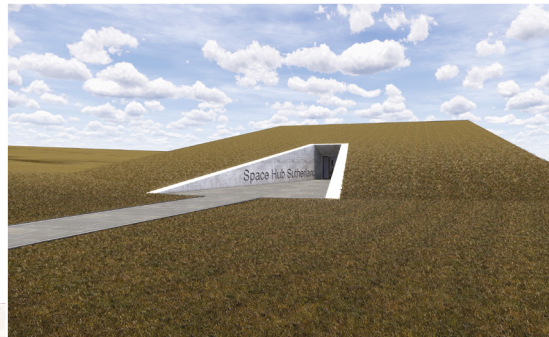
The Highlands and Islands of Scotland play a vital role in the growth of the UK space sector, and Sutherland Spaceport is ready to capture new and innovative markets.

Backed by development agency, Highlands and Islands Enterprise, and supported through grant funding from the UK Space Agency, Sutherland Spaceport will be the region's compact vertical launch site. It will enable spacecraft to access valuable polar and sun-synchronous orbits from a sparsely populated peninsula on the northern Scottish mainland. The site successfully achieved planning permission in August 2020 and will feature a launch pad, operations control centre and assembly building, all covering a total area of 4.2 hectares.

Orbex's innovative Prime launch vehicle, featuring lightweight 3-D printed engines and renewable bio-propane fuel that [cuts the emissions of a single launch by up to 96%](#) will launch from Sutherland. Orbex has already established a design and manufacturing plant in Forres, Scotland, where the Prime vehicle is built.



Sutherland Spaceport will launch payloads of small, nano and micro-satellites - which can be used for Earth observation and communications, including gathering data to address the global challenge of climate change. The spaceport and its facilities have also designed rigorous measures to ensure the environmental protection of land and wildlife around the site and in coastal waters.

With up to 12 launches a year, Sutherland Spaceport is expected to create around 40 high quality jobs on site, and underpin over 200 more in the wider region, including manufacturing and supply chain opportunities.



# Spaceport Snowdonia

## Quick fact table

	<b>Location</b>	Llanbedr, Gwynedd, Wales
	<b>Coordinates</b>	52°48'18"N, 004°07'38"W
	<b>Launch mode</b>	Horizontal launch , Vertical Launch & Rail Launch
	<b>Orbital inclinations</b>	Sun-synchronous, polar orbits and sub-orbital
	<b>Payload capacity</b>	Up to 200kg
	<b>Operational</b>	2024
	<b>Planned departures</b>	Multiple including research, development, test and evaluation
	<b>Facilities</b>	Snowdonia Aerospace Centre   3 runways   Offices   Workshops   Hangarage   Mission control
	<b>Website</b>	<a href="http://www.aerospacewalesforum.com/space">www.aerospacewalesforum.com/space</a>
	<b>Contact details</b>	Lee Paul   Chief Executive Officer, Spaceport Snowdonia   Lee.paul@snowdoniaaerospace.com



Spaceport Snowdonia has a long and distinguished track record in supporting experimental test flying in the UK. The site regularly provides air and ground services and facilities for the research, development, test and evaluation of novel aerospace systems and emerging future flight technology, such as:

- Drones
- Electric aircraft
- Urban and regional air mobility vehicles
- Balloons
- Airships and
- Near-space testing vehicles

Spaceport Snowdonia has a proven flight test heritage and unique and immediate access to the fully instrumented D201 Cardigan Bay range, with a complete array of range control capabilities from Aberporth (via a strategic relationship with QinetiQ). The spaceport is equipped in the preparation and launch of sounding rockets and the conduct of high-altitude and near-space testing of space systems, as well as a base

for orbital launch. The team is experienced in supported high altitude testing of payloads at 100,000ft+ with partner, B2Space and Newton Launch Systems. The on-site state-of-the-art technology park also offers a complementary range of ground-based facilities, including:

- Static sea-level propulsion testing
- Static altitude propulsion testing
- Space environment testing
- A multi-axis simulator
- Centrifuge and
- Hypobaric chamber

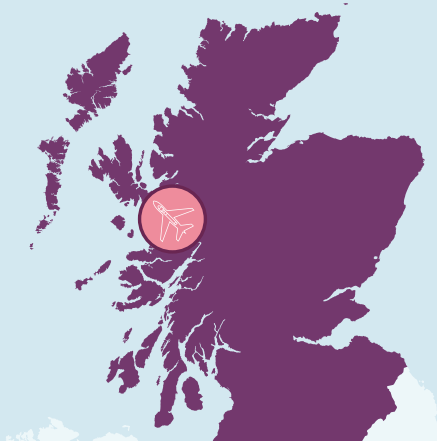
The Spaceport Snowdonia team is accomplished in supporting companies to innovate and accelerate their development from proof-of-concept through to full-scale prototype and large-scale market exploitation.



# Spaceport Machrihanish

## Quick fact table

	<b>Location</b>	Campbeltown, Argyll, Scotland
	<b>Coordinates</b>	55°26'13"N 5°41'01"W
	<b>Launch mode</b>	Horizontal, vertical and high-altitude platform
	<b>Orbital inclinations</b>	Sun-synchronous and polar orbits
	<b>Payload capacity</b>	Variable
	<b>Operational</b>	Small rocketry: 2021 Engine testing: 2022 Cryogenic systems and engine R&D: 2023
	<b>Planned departures</b>	In negotiation with launch providers
	<b>Facilities</b>	Campbeltown Airport   Verification and validation facilities   Offices   Workshops   Hangarage   1.4 km runway
	<b>Website</b>	<a href="http://www.discoverspaceuk.com">www.discoverspaceuk.com</a>
	<b>Contact details</b>	enquiries@maccdl.co.uk





Spaceport Machrihanish provides unique space access services outside of traditional orbital launch to complete the UK's national spaceflight infrastructure.

Our mission is to establish an economically and environmentally sustainable cluster of spaceflight related businesses, bringing economic and social prosperity to the local community and region.

Horizontal, vertical and high-altitude platform services have been selected with a primary aim to attract working age people to the area, create jobs, deliver research and academic excellence, as well as economic returns.

Industry, academia and the public can take advantage of our 1,000-acre site, providing:

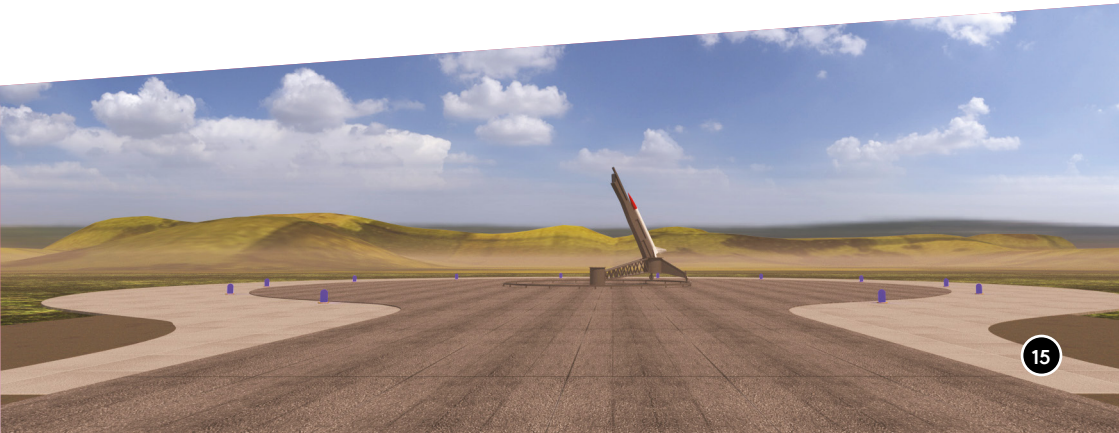
- A 1418m runway with options to extend to 3000m
- Hangarage
- Specialist fuelling facilities
- Extensive workshop and office space
- A training centre

- Conference facilities
- On-site accommodation
- Research and development centre including cryogenic fuel densification.
- Transportable launch support and range safety systems

Once completed, alongside orbital launch services Spaceport Machrihanish will provide a unique national facility for small rocket launch that will develop the UK and Europe's new launch generation.











Industry and academia can use small rockets provided by Machrihanish or bring their own prototypes to perform a full launch operation up to 10km altitude. This activity will include all of the services associated with a complete orbital launch campaign.

The facility can accommodate operators of high-altitude platform systems, including sufficient hangarage for inflation and test of stratospheric balloon systems.



# Glasgow Prestwick Spaceport

## Quick fact table

	<b>Location</b>	Prestwick, South Ayrshire, Scotland
	<b>Coordinates</b>	55°30'39"N 4°35'58"W
	<b>Launch mode</b>	Horizontal launch (orbital)
	<b>Orbital inclinations</b>	Sun-synchronous and polar orbit, Molniya and other high inclinations (North and South)
	<b>Payload capacity</b>	LEO: 800kg/SSO: 400kg
	<b>Operational</b>	Orbital: Q3 2024
	<b>Planned departures</b>	Astraios
	<b>Facilities</b>	Glasgow Prestwick Airport   2.99km main runway   National Air Traffic Services   Payload integration facilities   Atmospheric and exospheric flight testing
	<b>Website</b>	<a href="http://www.prestwickaerospace.com">www.prestwickaerospace.com</a>
	<b>Contact details</b>	Mick O'Connor   Prestwick Spaceport Programme Director   <a href="mailto:mick@haelo.io">mick@haelo.io</a>





Glasgow Prestwick Spaceport will provide small satellite operators affordable access to low earth orbit and sun synchronous orbit from 2024 via a novel and responsive air launch solution.

With significant financial investment awarded through the Ayrshire Growth Deal, a supportive local community and an active role in the developing Scottish space cluster's value chain, Prestwick is positioned as a gateway for space activity in the UK.

Although Prestwick focuses on launch as its flagship offering, it is the ancillary opportunities beyond launch that make Prestwick stand out. The area already boasts a strong aerospace presence with BAE Systems, Collins Aerospace, GE, National Air Traffic Services and Spirit AeroSystems.

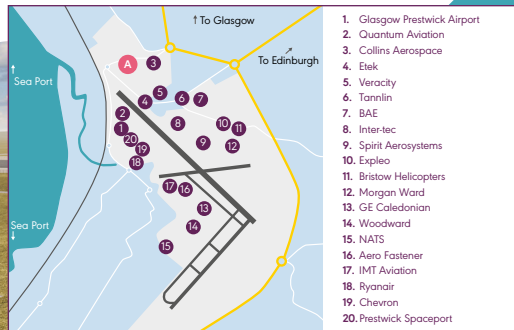
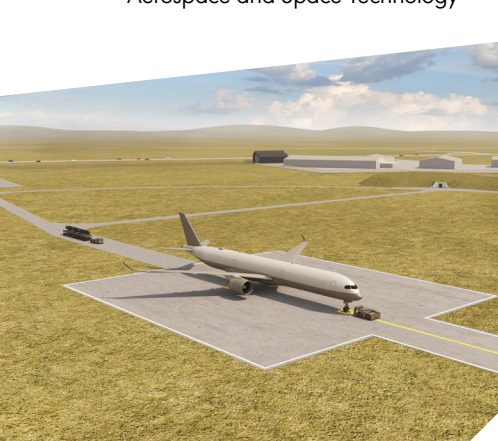
The area's established business environment, together with the development of adjacent facilities, provide a strong platform to generate high-skilled job opportunities and growth for the region. These facilities include:

- Aerospace and Space Technology

#### Application Centre (ASTAC)











- Aerospace Innovation Centre (AIC)
- Skypath Initiative
- Clean room capability
- Satellite technology development

Logistically, the site hosts an international airport with a main runway just short of 3km. Strong transportation connections via rail, road and sea allow access to major space industry and academic hubs in Glasgow, Edinburgh and other proposed UK launch sites. The location and access of the site is fundamental in providing collaborative opportunities across the UK's spaceflight ecosystem. Prestwick Spaceport has secured Astraius as a horizontal launch operator and attracted Mangata Networks via the Ayrshire Growth Deal.



# Spaceport 1

## Quick fact table

	<b>Location</b>	Scolpaig Farm, Isle of North Uist, North Uist, Outer Hebrides, Scotland, HS6 5EF
	<b>Coordinates</b>	57°39'00.0"N 7°29'00.0"W
	<b>Launch mode</b>	Vertical: sub-orbital
	<b>Orbital inclinations</b>	N/A
	<b>Payload capacity</b>	Suborbital: <100kg
	<b>Operational</b>	Summer 2024
	<b>Planned departures</b>	In negotiation with launch providers
	<b>Facilities</b>	Single Pad   Permanent Workshop/assembly building   Full Range Facilities/Services   Intra and Inter Site High-Capacity Secure Comms   Other Facilities (operational, clean room, admin, welfare, utilities) will be provided as temporary infra, bespoke to the launch provider's specific requirements.
	<b>Website</b>	In development
	<b>Contact details</b>	Alison MacCorquodale alisonmaccorquodale@cne-siar.gov.uk  Mark Roberts CBE MA MBA mark@reflectsolutions.com



Located on Scolpaig Farm, Isle of North Uist in the Outer Hebrides, Spaceport 1 is suitably remote for regular operations and the island is easily accessible by sea and air.

Spaceport 1's unique location and facilities will offer all the services required for sub-orbital launch from Summer 2024 (subject to Planning consent being obtained).

The site and services are designed to be adaptable and flexible with customers only charged for the services they use. Spaceport 1 will offer a full end-to-end launch service, with a multi-user, adaptable pad. The site will also offer access to:

- Sub-orbital launch vehicles
- Working accommodation
- Assembly facilities (including clean working areas)
- Licensed storage
- Range services - tracking, telemetry, FTS, air, land and sea space clearance
- Launch communications networks

Spaceport 1 takes a collaborative approach to ensuring a successful launch. From the outset, customers will be allocated a dedicated Operations Officer who will provide advice and assistance with regulatory matters, stakeholder engagement, project planning and logistics.





Department  
for Transport

