

UAS operational test capabilities to support benefits to the UK economy

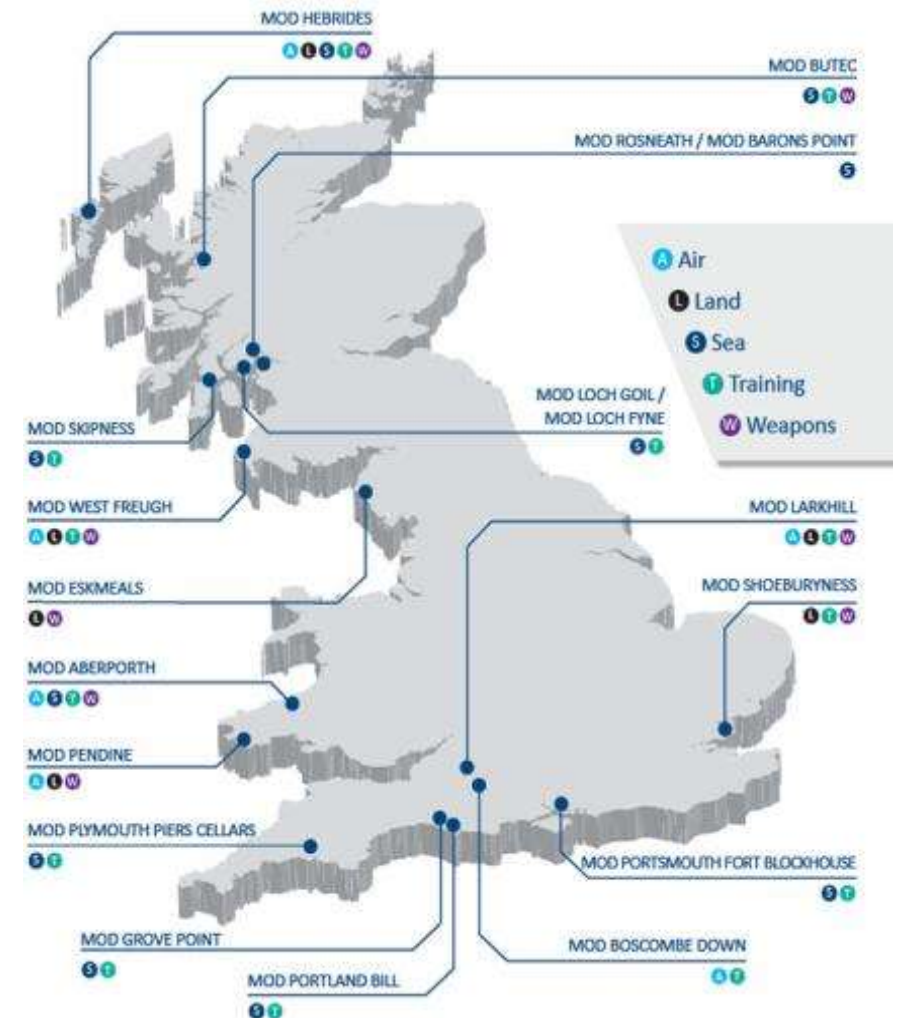
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QinetiQ

What we do

- We test and evaluate the effectiveness and safety of a whole range of land, sea and air equipment for government defence departments and equipment manufacturers
 - Architecture Analysis/ SoS Testing
 - Environmental Test & Integration Services
 - Evaluation & Analysis
 - Certification & Qualification Services
 - Operational Services
 - Modelling & Simulation
 - Range Solutions

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Wales UAS Environment

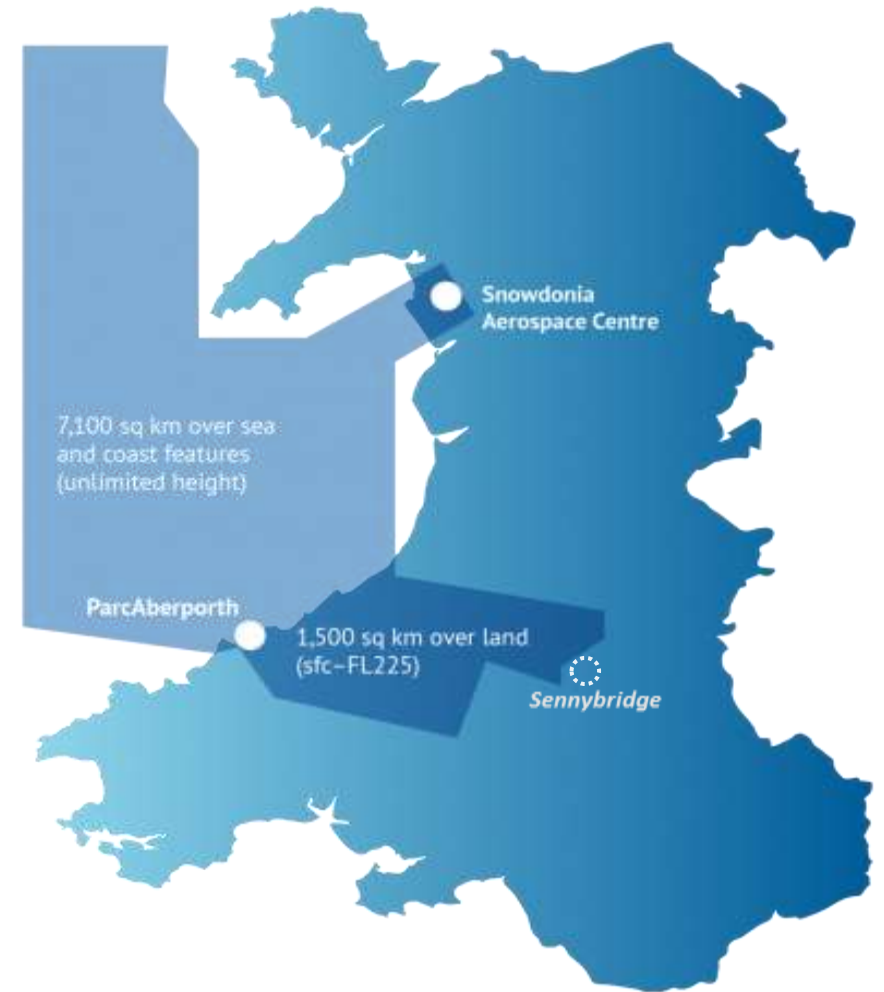
Why Wales?

- Current regulations require BVLOS flying to be conducted in segregated airspace
- Cardigan Bay danger area has a long history of operating target drones and WUASE is greatly enabled by MOD range facilities

Wales UAS Environment

- A unique environment within UK for BVLOS operation of all civil and military UAS
 - 7100km² of dedicated airspace over sea, plus further 1500km² over land
 - rich geographical operating environment for testing and training
 - Full ATC and range instrumentation

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Possible system and operational test scenarios

- BVLOS system testing in segregated airspace
 - Extended range testing of comms, navigation and surveillance (CNS) integrity, UTM concepts
 - Full ATC coverage and range instrumentation
 - Proposal for Spectrum Innovation Centre (SPICE) at Aberystwyth University in partnership with QinetiQ and Ceredigion Council/Welsh Government
- BVLOS operational testing in remote, rural, non-segregated airspace
 - Environment
 - Tidal estuaries
 - Coastal flood plain
 - Upland farming
 - Snowdonia National Park
 - Fisheries protection
 - Flora, fauna and habitat
 - Archaeology, historic and ancient monuments
- BVLOS operational testing in remote, rural, non-segregated airspace (continued)
 - Search & Rescue
 - Coastguard station → Caernarfon
 - 6 RNLI stations
 - Snowdonia mountain rescue
 - Emergency services
 - Border security
 - Infrastructure
 - Road network
 - Rail network → Cambrian line with latest ERTMS
 - High voltage electrical power distribution network
 - Nuclear power stations → Trawsfynydd and Wylfa Newydd
 - Water reservoirs
 - Mining, quarries
 - Offshore renewables

Contribution to IAG

- Help coordinate BVLOS test requirements
- Support to DFT, BEIS, InnovateUK, IMechE Grand Challenges
- A safe “playground” for allowing UK supply base to interact with potential customers in operationally relevant scenarios