



Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean

# Space Hub Sutherland Airspace Change Process

# Step 1B Design Principles Focus Group

9<sup>th</sup> October 2019

EUROPE & SCOTLAND  
European Regional Development Fund  
Investing in a Smart, Sustainable and Inclusive Future



Eòrpa agus Alba  
Maidh Leasachadh Fòrthaidh na h-Eòrpa  
A' taghadh ann an Am Fìsachd Ghluais, Seasmhach is Ìnghathail

Skills  
Development  
Scotland



Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean

# Welcome

- HIE Introductions
- Our Consultants – Osprey Consulting Services Limited



# Agenda

- Space Hub Sutherland Background
- CAP 1616 and Design Principles Explanation
- Open Forum for Discussion
- Next Steps

# Space Hub Sutherland Project Overview



# Project Overview

- Create a launch facility for Vertical Launch in the UK
- Team up with partners to launch from Sutherland
- Develop supply chain and support services
- Promote economic growth by creating local jobs.





## Why Sutherland?

- Natural advantages (good access to orbits)
- Developed engagement with Launch Companies
- Mainland Location
- Skilled supply chain (heritage from Dounreay)
- Supportive environment

# What is a Spaceport?

## Plans do not include:

- Horizontal launch capability
- Manned space travel

## Vertical launch site will include capability for:

- Transport and preparation of launch vehicles
- Cargo: payload for spacecraft
- Fuels and associated services
- Other generic infrastructure for use as a multi-use site





## Economic Aspirations

- By 2023, 40 local jobs with a further 400 jobs in the region
- Initial launches will use international staff
- Local staffing requirements will develop over time
- Orbex opened their factory in Moray in February 2019
- Timeline has an excellent fit with the decommissioning of Dounreay



## Summary of Project Overview

- Employment and talent attraction for North Sutherland
- Opportunity to sustain the reputation of the North Highlands as a centre for science and technology
- Excellent fit to provide new jobs when Dounreay is decommissioned
- Still risks to project completing
- Long term prize but limited window of opportunity
- Supports the diversification of local economies into other sectors – reducing the reliance of communities on nuclear site for employment

# CAP 1616 - Airspace Change Process



# Where the Airspace Change 'fits-in'

- The Airspace Change Process will create an area of segregated airspace to ensure all airspace users remain safely separated from all spaceflight activities
- The Airspace Change Process is one part of the wider programme that includes:
  - The Planning Application
  - The Land Court Application
  - Spaceport Licence
  - Range Control Licence
  - Launch Operator Licence
- For the issue of all licences, safety of the uninvolved general public is paramount
- All licences will need to be granted before a launch can take place

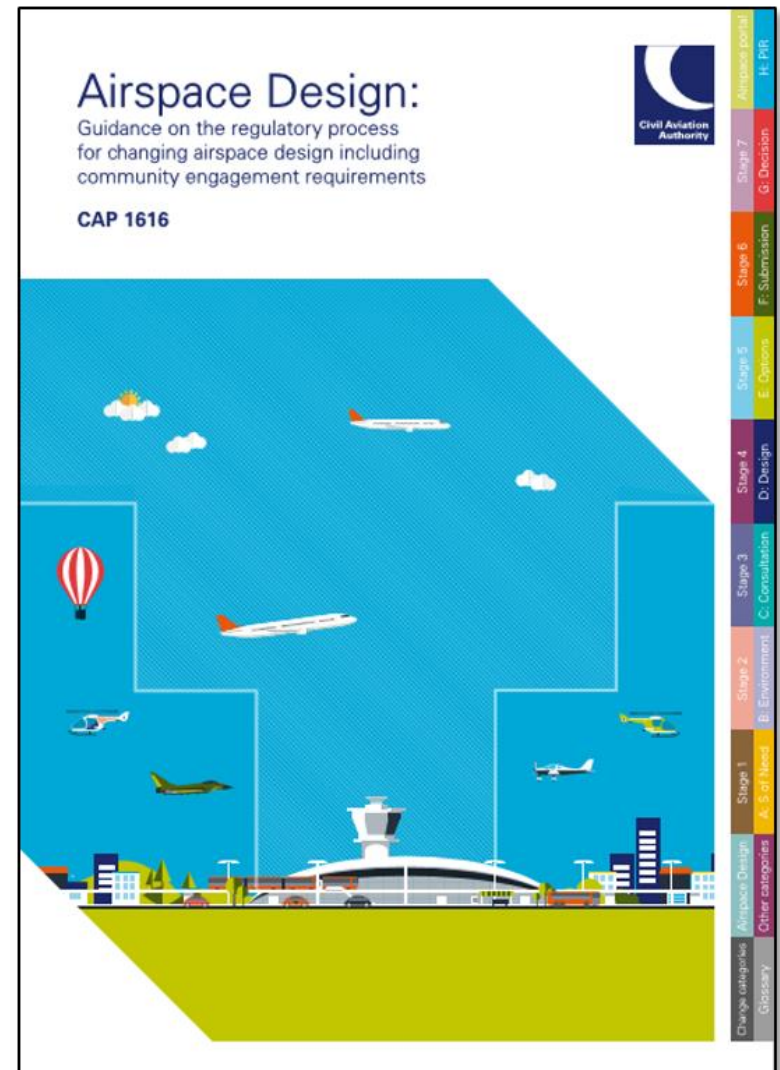
# Airspace Design Process

New process introduced in Jan 2018

- Developed by CAA and independent third party
- Endorsed by DfT:
  - Secretary of State
- Replaced CAP 725 (2002)
- Stated Aim of CAP 1616:
  - More transparency
  - Greater engagement with stakeholders

Available on CAA website:

<https://publicapps.caa.co.uk/docs/33/CAP1616E2interactive.pdf>



# Seven Stage Process



# Scalable Process

Assessment Meeting – end of Step 1A  
Minutes available on CAA portal  
CAA anticipated this was a Level 1 change

**Level 1: High impact\* changes to notified airspace design**

A change that does have the potential to alter traffic patterns below 7,000 feet over a populated area

**Level 2: Medium to low impact\* changes to notified airspace design**

A change that does not have the potential to alter traffic patterns below 7,000 feet over a populated area

The Government's Air Navigation Guidance states that below 7,000 feet is the maximum height at which noise is a priority for consideration

Level 1 will be confirmed as the end of Step 2B:

Develop and Assess Gateway

# Design Principles Development

HIE is committed to demonstrate that Design Principles and Options are developed via demonstrable two-way engagement with local communities.

Questionnaires have been sent to:

- Local Authorities
- Local Planning Authorities
- Local MPs and MSPs
- National Bodies
- Local Businesses
- Airport Operators
- General Aviation Community
- Airports
- Air Navigation Service Providers (ANSPs)
- National Air Traffic Management Committee (NATMAC)

Focus Groups



# Open Forum Discussion



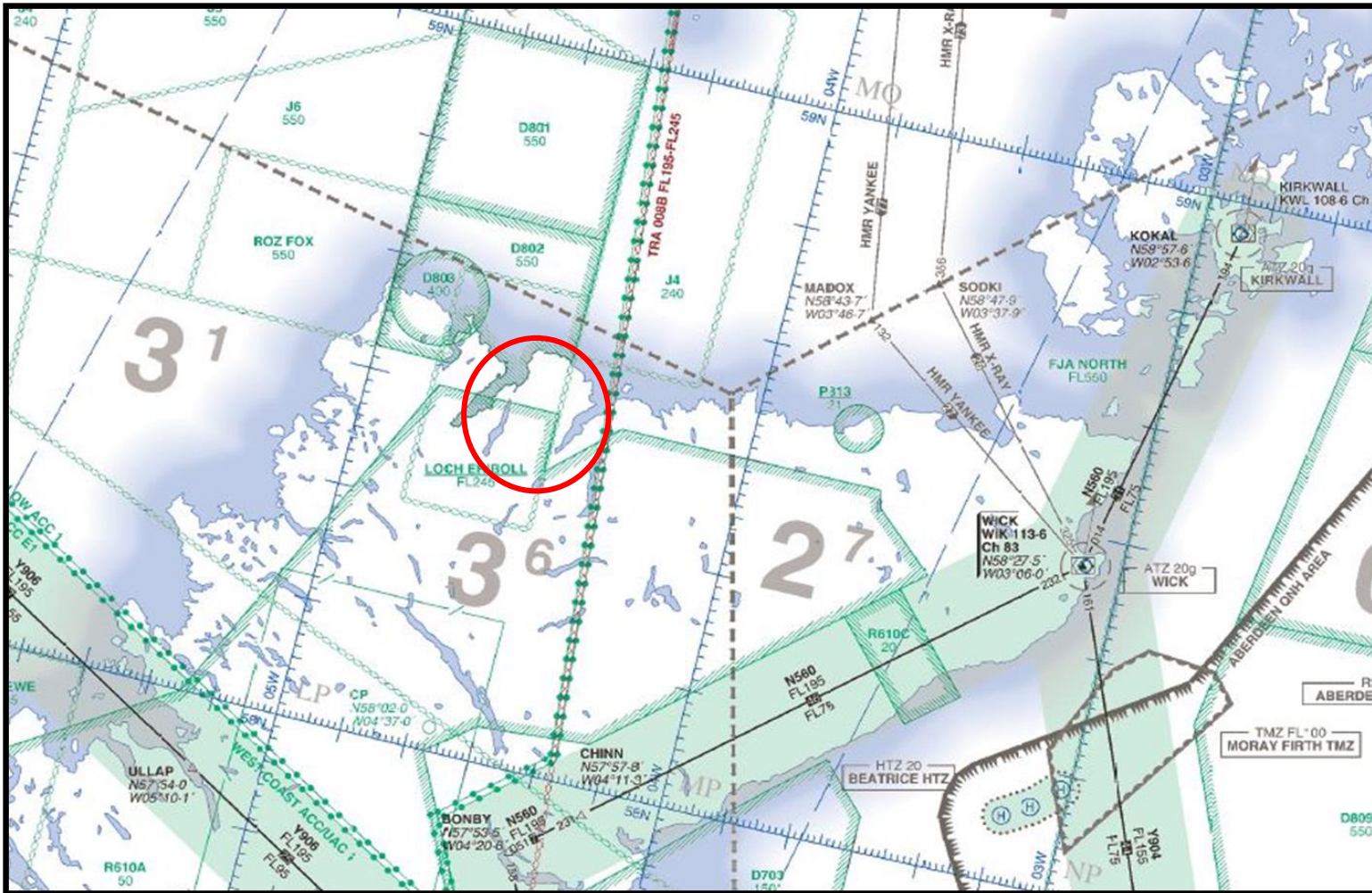
# Focus Group Facilitation

- Your help is required to identify your key areas of concern – specific to the airspace solution
- We recognise you may have strong opinions about the project
- Please allow others time to voice their opinions
- We are eager to hear all your concerns & record them
- Note-takers may ask for clarification or take names
- As a group you may have diverse opinions
- As a group you may have conflicting opinions
- We will record common areas of agreement or priorities

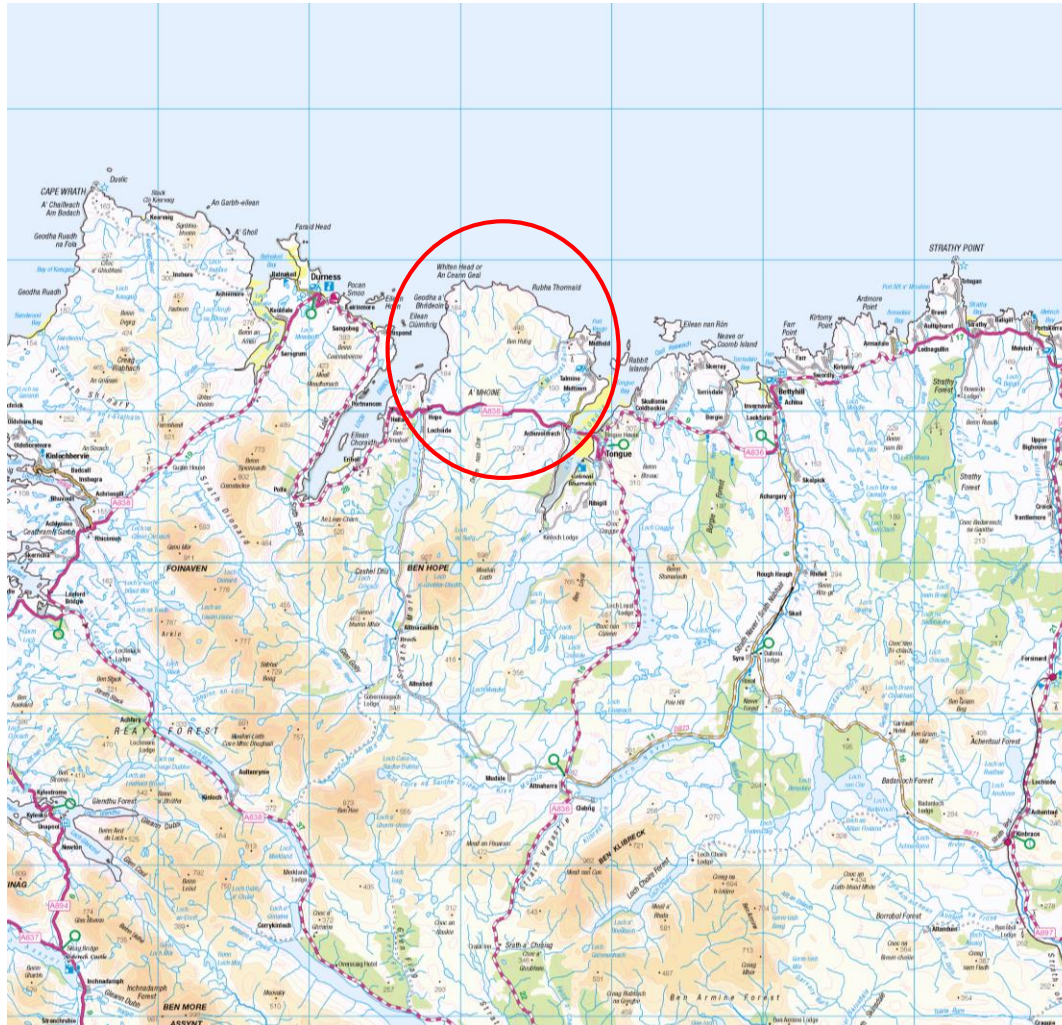
# Please Tell Us Your Views



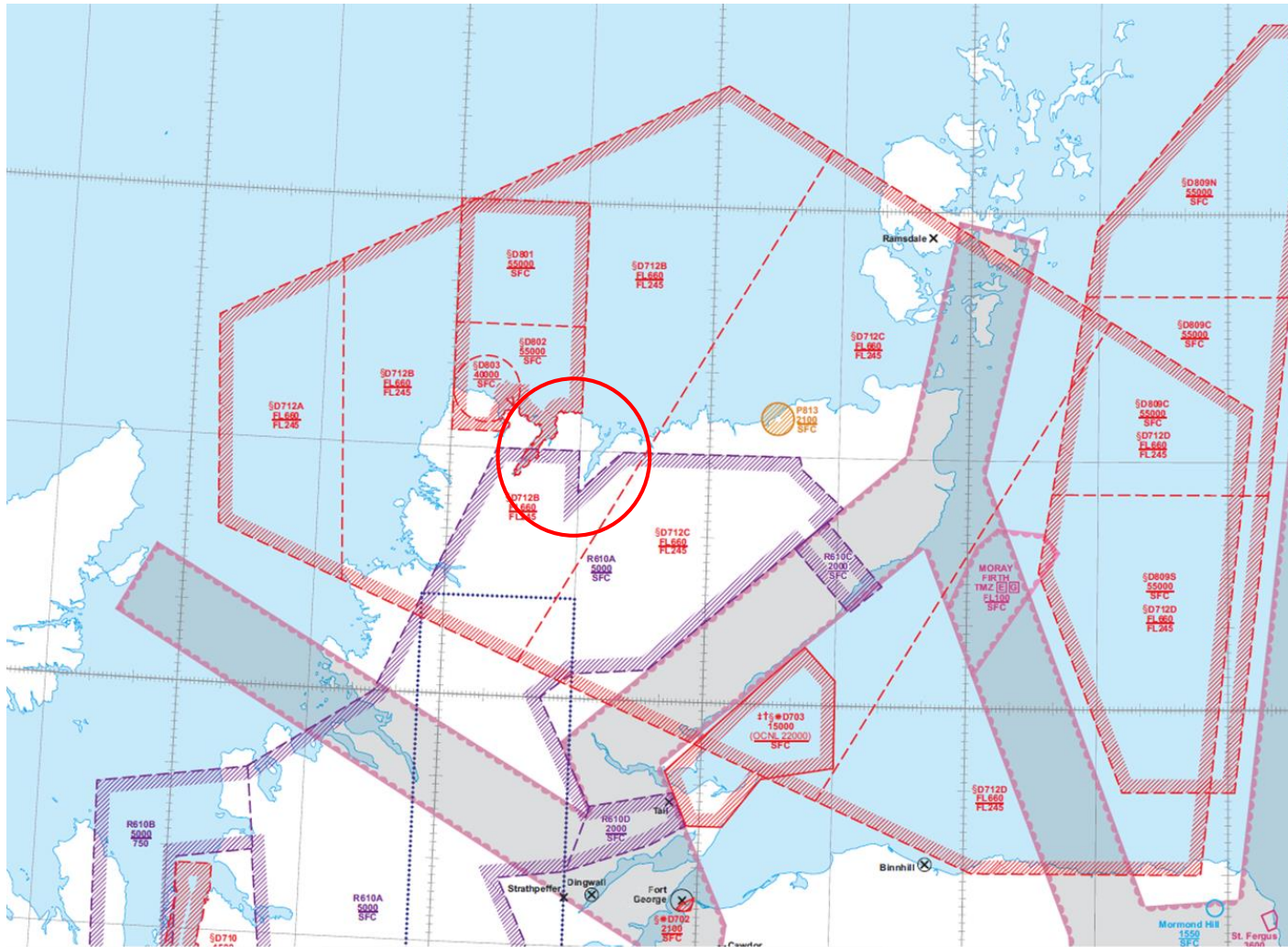
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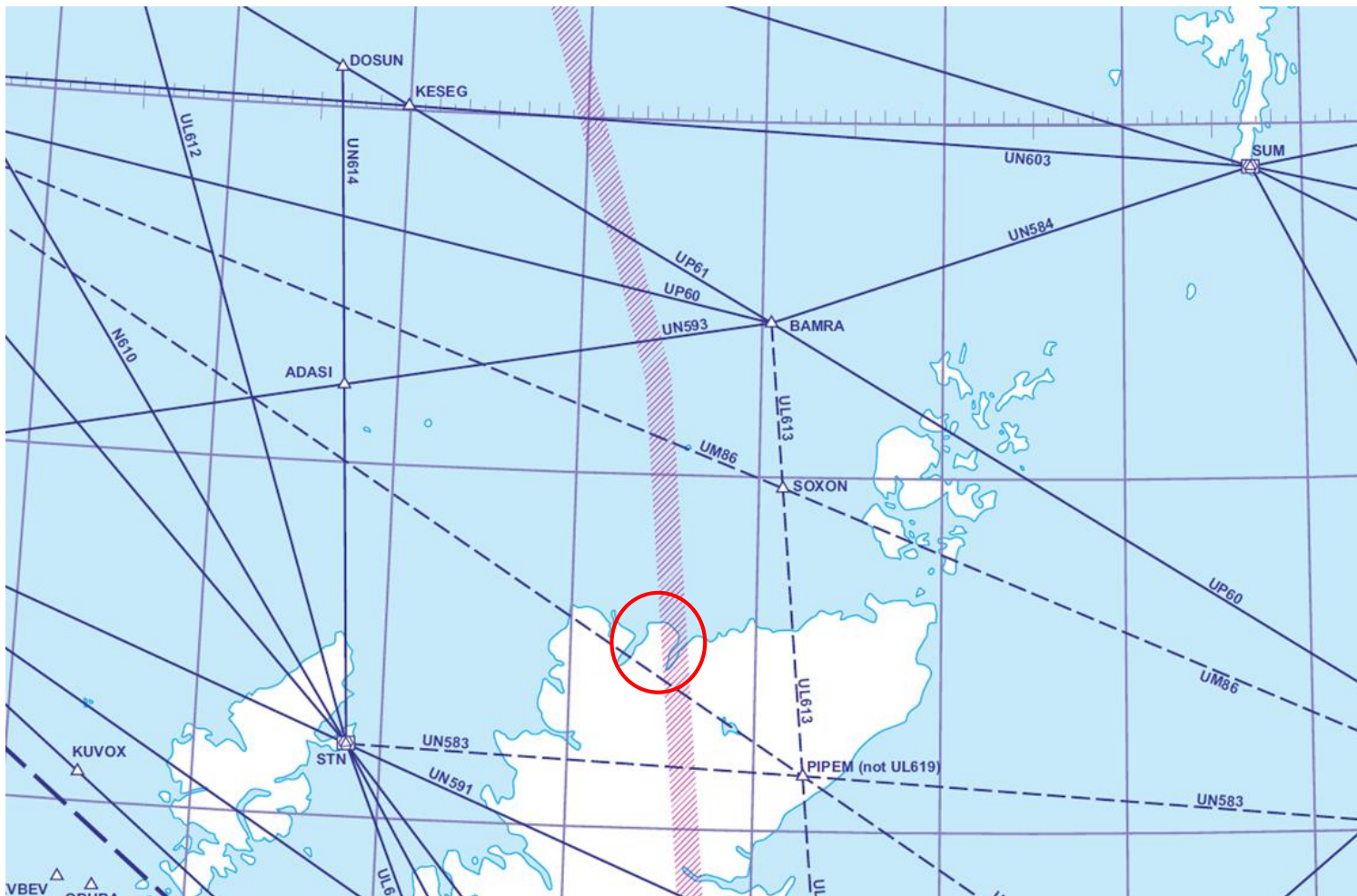
# Please Tell Us Your Views



# Please Tell Us Your Views



# Please Tell Us Your Views



# Please Tell Us Your Views

## UK ATS AIRSPACE CLASSIFICATIONS

Civil Aviation Authority		CONTROLLED AIRSPACE				OUTSIDE CONTROLLED AIRSPACE	
		A	C	D	E	F	G
I F R	ATC SEPARATION PROVIDED	IFR ↔ IFR	IFR ↔ VFR IFR ↔ SVFR <sup>‡</sup>	IFR ↔ IFR IFR ↔ SVFR <sup>‡</sup>	IFR ↔ IFR	<b>Class F was removed in 2014 and airspace returned to Class E or G.</b>	ATSOCAS Services Procedural, Deconfliction Traffic, Basic
	TRAFFIC INFORMATION PROVIDED			IFR ATC VFR <small>As traffic avoidance advice only</small>	IFR ATC IFR <small>(when practicable)</small>		
	SPEED LIMITATION	Not applicable (unless notified for ATC purposes)	Not applicable (unless notified for ATC purposes)	below FL100 <b>250 KIAS</b>	below FL100 <b>250 KIAS</b>	below FL100	below FL100 <b>250 KIAS</b>
	RADIO					Not required	Not required
ATC CLEARANCE REQUIRED?		YES	YES	YES	YES	NO	NO
V F R	ATC SEPARATION PROVIDED		VFR ↔ IFR VFR ↔ SVFR <sup>‡</sup>	SVFR ↔ IFR SVFR ↔ SVFR <sup>‡</sup>	<b>Not provided</b>	ATSOCAS Services PARTICIPATING TRAFFIC: Procedural, Deconfliction Traffic, Basic	ATSOCAS Services Procedural, Deconfliction Traffic, Basic
	TRAFFIC INFORMATION PROVIDED		VFR ATC VFR	VFR ATC IFR VFR VFR	IFR ATC IFR <small>(when practicable)</small>		
	VMC MINIMA	 <b>VFR FLIGHT NOT PERMITTED</b> SVFR AVAILABLE IN CTRs					
	SPEED LIMITATION		below FL100 <b>250 KIAS</b>	below FL100 <b>250 KIAS</b>	below FL100 <b>250 KIAS</b>	below FL100 <b>250 KIAS</b>	below FL100 <b>250 KIAS</b>
RADIO					Not required	Not required	Not required
ATC CLEARANCE REQUIRED?			YES	YES	NO	NO	NO

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**250 KIAS** Not applicable to military aircraft

<sup>†</sup> Helicopters may fly at or below 3000FT AMSL clear of cloud with the surface in sight and a flight visibility of at least 1500 metres.  
<sup>‡</sup> SVFR in CTR only.  
**NOTE: Air Navigation Order 2005 Schedule 8 UK PPL and NPPL license privileges apply.**

<sup>\*</sup> Aircraft (except helicopters) at 140KIAS or less: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres. Helicopters at a speed which, having regard to the visibility is reasonable: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres.





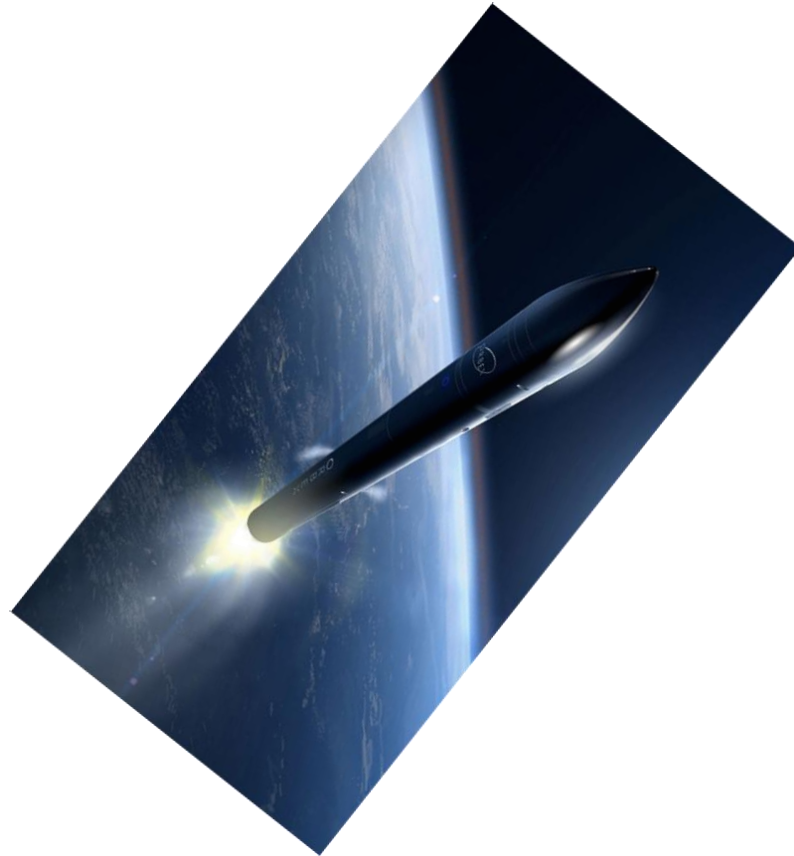
# Next Steps



# Design Principles (Step 1B) Next Steps

- Complete Focus Groups
- Collate all questionnaire responses
- Analyse all comments and questionnaire responses
- Identify long list of Design Principles
- Develop short list of Design Principles
- Include rationale for selection/ rejection of individual principles
- Test Design Principles with key stakeholders
- Submit to CAA for publication on CAA Portal
- CAA then conduct Define Gateway Assessment
- Proceed to Stage 2, Step 2A Options Development
- Consultation ~ April/May 2020

Any Questions?



Thank You for your Contribution

