

# AERONAUTICAL INFORMATION CIRCULAR Y 095/2022

UNITED KINGDOM



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## Date Of Publication

22 Sep 2022

## Subject

Operational



## TEMPORARY DANGER AREAS: VIRGIN ORBIT UK ROCKET LAUNCH 06 OCTOBER 2022 - 06 JANUARY 2023

### 1 Introduction

- 1.1 Virgin Orbit (VO) is intending to launch a rocket to deliver UK & US government and commercial satellites to Low Earth Orbit. The rocket (Launcher One) is a two-stage liquid propellant vehicle with an overall length of approximately 21 meters which will be released from a carrier aircraft (Modified B747 - Cosmic Girl).
- 1.2 The activity will take place between **06 October 2022 and 06 January 2023** (the specified period). The period of activity will be approximately 2 hours in duration (**within 2200 and 2359 UTC**) according to operational need, directly affecting Shannon FIR/UIR, Shanwick FIR/UIR, SOTA, Madrid FIR/UIR, Santa Maria FIR/UIR, Lisboa FIR/UIR and Canariass FIR/UIR. Five Temporary Danger Areas (TDA).
- 1.3 The associated Buffer Zones/Oceanic separation standards will be established according to the standard procedures in place at each affected FIR/UIR. The coordinates for any buffers/separation standards will be made available via the NOP Portal in advance of any activation NOTAM.
- 1.4 The final activation and deactivation hours of the airspace reservation associated with the TDA's will be published in due time by Virgin Orbit or the National Authorities with NOTAM responsibility for each of the affected FIRs/UIRs. The UK is the lead AMC for management of the associated EU Flight Plan Restrictions as described below.

### 2 Details

#### 2.1 Temporary Danger Area 1 (EUVIRGIN 01)

- AMC: Manageable.
- Upper Limit: FL400.
- Lower Limit: SFC.
- Activity: Orbital Rocket Launch.
- Service: No DAAIS or DACS is provided for this TDA.
- Access: Requests for access to the TDAs by airborne emergency services, aircraft with an emergency or aircraft operating in support of National Security will be given priority and any launch activity will be suspended. Requests for access can be made direct to Air Traffic Control or Virgin Orbit by phone on +001-562-706-3647 or +001-661-754-4371.
- The airspace complex is sponsored by Virgin Orbit in accordance with ACP-2021-031.
- Activation: Activated by "G" series NOTAM for UK Shannon Oceanic Transition Area (SOTA). Area 1 airspace in other affected FIR/UIR will be activated by Virgin Orbit or National Authorities with NOTAM responsibility for that airspace.

#### 2.2 Temporary Danger Area 2 (EUVIRGIN 02)

- AMC: Manageable.
- Upper Limit: UNL.
- Lower Limit: SFC.
- Activity: Orbital Rocket Launch.
- Service: No DAAIS or DACS is provided for this TDA.
- Access: Requests for access to the TDAs by airborne emergency services, aircraft with an emergency or aircraft operating in support of National Security will be given priority and any launch activity will be suspended. Requests for access can be made direct to Air Traffic Control or Virgin Orbit by phone on +001-562-706-3647 or +001-661-754-4371.
- The TDA complex is sponsored by Virgin Orbit in accordance with ACP-2021-031.
- Activation: Activated by "G" series NOTAM for UK Shannon Oceanic Transition Area (SOTA). Area 2 airspace in other affected FIR/UIR will be activated by Virgin Orbit or National Authorities with NOTAM responsibility for that airspace.

## 2.3 Temporary Danger Area 3 (EUVIRGIN 03)

- Upper Limit: UNL.
- Lower Limit: SFC.
- Activity: Orbital Rocket Launch.
- Service: No DAAIS or DACS is provided for this TDA.
- Access: Requests for access to the TDAs by airborne emergency services, aircraft with an emergency or aircraft operating in support of National Security will be given priority and any launch activity will be suspended. Requests for access can be made direct to Air Traffic Control or Virgin Orbit by phone on +001-562-706-3647 or +001-661-754-4371.
- The TDA complex is sponsored by Virgin Orbit in accordance with ACP-2021-031.
- Activation:
  - Within UK Shannon Oceanic Transition Area (SOTA) through “G” series NOTAM, AMC manageable;
  - Within Madrid FIR activated by the National Authority with NOTAM responsibility for that airspace, AMC manageable;
  - Within Lisbon FIR and Santa Maria FIR through “A” series NOTAM.

## 2.4 Temporary Danger Area 4 (EUVIRGIN 04)

- Upper Limit: UNL.
- Lower Limit: SFC.
- Activity: Orbital Rocket Launch.
- Service: No DAAIS or DACS is provided for this TDA.
- Access: Requests for access to the TDAs by airborne emergency services, aircraft with an emergency or aircraft operating in support of National Security will be given priority and any launch activity will be suspended. Requests for access can be made direct to Air Traffic Control or Virgin Orbit by phone on +001-562-706-3647 or +001-661-754-4371.
- The TDA complex is sponsored by Virgin Orbit in accordance with ACP-2021-031.
- Activation:
  - Within Lisbon FIR and Santa Maria FIR through “A” series NOTAM.

## 2.5 Temporary Danger Area 5 (EUVIRGIN 05)

- Upper Limit: UNL.
- Lower Limit: SFC.
- Activity: Orbital Rocket Launch.
- Service: No DAAIS or DACS is provided for this TDA.
- Access: Requests for access to the TDAs by airborne emergency services, aircraft with an emergency or aircraft operating in support of National Security will be given priority and any launch activity will be suspended. Requests for access can be made direct to Air Traffic Control or Virgin Orbit by phone on +001-562-706-3647 or +001-661-754-4371.
- The TDA complex is sponsored by Virgin Orbit in accordance with ACP-2021-031.
- Activation:
  - Within Lisbon FIR and Santa Maria FIR through “A” series NOTAM.
  - Within Canarias FIR activated by the National Authority with NOTAM responsibility for that airspace, AMC manageable.

## 3 Activations

3.1 Each FUA restriction will be activated by NOTAM which will be published no less than **15 days** prior to the planned activity. The UK is the lead AMC for the activity. Relevant EU restrictions will be applied via the European AUP on D-1.

## 4 Coordinates

4.1 The final TDA coordinates activated in each FIR/UIR must be confirmed in the NOTAM request submitted by Virgin Orbit to each state AIS provider. The TDA coordinates will be broken down by FIR/UIR boundary within the NOTAM.

4.2 The coordinates for Temporary Danger Areas (EUVIRGIN 1-5) within this AIC are ADQ compliant.

## 5 Lateral Dimensions - TDA 1 (EUVIRGIN 1)

5.1 Temporary Danger Area 1 (EUVIRGIN 1) will be established within the area bounded by:

### Point Coordinates

a	514132.99N 0113752.58W	then straight line to
b	513604.93N 0104652.46W	then straight line to
c	512633.74N 0102355.76W	then straight line to
d	502009.88N 0104324.56W	then straight line to
e	503058.39N 0120549.16W	then straight line to
f	514132.99N 0113752.58W	-

## 6 Lateral Dimensions - TDA 2 (EUVIRGIN 2)

6.1 Temporary Danger Area 2 (EUVIRGIN 2) will be established within the area bounded by:

### Point Coordinates

a	512833.69N 0110625.08W	then straight line to
b	512419.80N 0103343.52W	then straight line to

c	504446.68N 0104742.04W	then straight line to
d	501640.36N 0104303.03W	then straight line to
e	490424.29N 0110859.26W	then straight line to
f	491209.65N 0120256.82W	then straight line to
g	502413.78N 0114154.24W	then straight line to
h	504915.24N 0111943.20W	then straight line to
i	512833.69N 0110625.08W	-

## 7 Lateral Dimensions - TDA 3 (EUVIRGIN 3)

7.1 Temporary Danger Area 3 (EUVIRGIN 3) will be established within the area bounded by:

### Point Coordinates

a	491209.65N 0120256.82W	then straight line to
b	490434.29N 0110859.26W	then straight line to
c	422121.89N 0123503.92W	then straight line to
d	404445.00N 0131114.86W	then straight line to
e	410655.27N 0152220.79W	then straight line to
f	424532.34N 0150015.26W	then straight line to
g	491209.65N 0120256.82W	-

## 8 Lateral Dimensions - TDA 4 (EUVIRGIN 4)

8.1 Temporary Danger Area 4 (EUVIRGIN 4) will be established within the area bounded by:

### Point Coordinates

a	410655.27N 0152220.79W	then straight line to
b	404445.00N 0131114.86W	then straight line to
c	384435.31N 0133714.61W	then straight line to
d	364503.65N 0141126.56W	then straight line to
e	370858.18N 0163047.65W	then straight line to
f	390917.45N 0160503.49W	then straight line to
g	410655.27N 0152220.79W	-

## 9 Lateral Dimensions - TDA 5 (EUVIRGIN 5)

9.1 Temporary Danger Area 5 (EUVIRGIN 5) will be established within the area bounded by:

### Point Coordinates

a	370858.18N 0163047.65W	then straight line to
b	364503.65N 0141126.56W	then straight line to
c	272309.44N 0170023.71W	then straight line to
d	274035.39N 0182500.43W	then straight line to
e	370858.18N 0163047.65W	-

## 10 Procedures

### 10.1 North Atlantic Track information

As per NAT Doc 008, within North Atlantic airspace, operators must ensure:

A minimum separation of 30 NM from the nearest limit of the reserved airspace provided the aircraft meets the required navigation specification (MNPS) and a portion of the route is above, within or below NAT HLA or; 60 NM from the nearest limit of the reserved airspace of the stationary airspace reservation, when the aircraft does NOT meet the required navigation specification.

To assist operators with their Flight Planning Prestwick Area Control Centre will issue an Aeronautical Information Message (AIM) prior to the start of the launch. The AIM will include suggested routings for flight planning around the active area during the launch.

## 11 Contact Details

11.1 Booking, management or activation enquiries should be made to the UK Airspace Management Cell via the Military Airspace Management Cell, SWK-MAMC-ManagedAirspace@mod.gov.uk.