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ACP-2020-100

Enabling Temporary Remotely Piloted Air System Operations in the UK – Summer 2021

Temporary Danger Area Submission - Issue 1

Roles

Action	Role	Date
Produce	Airspace Change Team UAS CDC	24 Mar 21
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Introduction

The Ministry of Defence (MOD) is supporting the deployment of the Protector prototype into the UK airspace in the Summer of 2021. Protector is the large Remotely Piloted Air System (RPAS) being procured by the MOD and due to come into service in 2023, for which the MOD has commenced an airspace change (ACP-2019-18). Protector's prototype MQ-9B, named SkyGuardian, is a civil-registered RPAS, which will be deployed to the UK this summer and operated by its manufacturer, General Atomics Aeronautical Systems Incorporated (GA-ASI). The purpose of the deployment is to conduct some test flights and demonstration activity as part of the ongoing airspace integration of RPAS. In addition participation in a military exercise is anticipated.

SkyGuardian has a 79ft wingspan, is powered by a Honeywell TPE331-10 Turboprop engine and has a gross maximum take-off weight of 12,500lb (5670kg). SkyGuardian is fitted with a Detect and Avoid (DAA) capability, which has been tested extensively in the USA and has been issued with an approval to operate by the Federal Aviation Administration (FAA) with some restrictions. An application for approval to operate by the Federal Aviation Administration (FAA) with some restrictions. An application for approval to fly with similar restrictions in the UK has been submitted to the CAA. If an approval is forthcoming for flight in the UK, it is hoped that SkyGuardian will be able to operate without restriction above FL100, but it is also possible that the approval might be forthcoming for flight without restriction as low as 3000ft above ground level (AGL). The work is ongoing and it is not known at this stage what will be the final outcome. For the areas within which restrictions are likely to be applied, the Change Sponsor proposes flight within segregated airspace in the form of Temporary Danger Areas (TDAs).

SkyGuardian will be operated within TDAs from the following locations under an exemption issued by the CAA directly to the operator, GA-ASI:

- RAF Waddington from early July to early September 2021 (see Figure 1);
- RAF Lossiemouth from early September to mid-October 2021 (see Figure 2).

Timings

A draft flying schedule is at Annex A and covers the period 6 July – 11 October 2021. SkyGuardian flights will comprise one aircraft at a time and it is intended that it will be flown:

- Whilst based at RAF Waddington, predominantly Monday – Friday between 1000 – 1800(L). Occasional longer days are foreseen. Weekend flying is only anticipated during the weekend 17/18 Jul 21, when a 24hr endurance flight may take place. No other night flying is planned.
- Whilst at RAF Lossiemouth, dependent on the military exercise flying schedule.

Times of TDA activation will be promulgated by Notice to Airmen (NOTAM) at least 24 hours before the activity.

TDA Dimensions

The dimensions of the TDA in the vicinity of RAF Waddington are in Table 1 below.

Identification and Lateral Limits	Vertical Limits	Remarks
<p>CAA to insert name (Waddington TDA Area A) A circle, radius 5 NM, centred on 530958N 0003126W</p>	<p>Upper Limit: 3300 ft AMSL Lower Limit: SURFACE</p>	<p>Activity: UAS Beyond Visual Line of Sight (BVLOS) Hours: When notified DACS: RAF Waddington Frequency: Waddington Zone on 119.500MHz and 232.700MHz Tel: Waddington ATC Switchboard on 01522 727452 Sponsor: MOD</p>
<p>CAA to insert name (Waddington TDA Area B) A circle, radius 5 NM, centred on 530958N 0003126W</p>	<p>Upper Limit: FL100 Lower Limit: 3300 ft AMSL</p>	<p>Activity: UAS Beyond Visual Line of Sight (BVLOS) Hours: When notified DACS: RAF Waddington Frequency: Waddington Zone on 119.500MHz and 232.700MHz Tel: Waddington ATC Switchboard on 01522 727452 Sponsor: MOD</p>

Table 1- Dimensions for TDA at RAF Waddington

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The dimensions of the TDA in the vicinity of RAF Lossiemouth are in Table 2 below.

Identification and Lateral Limits	Vertical Limits	Remarks
<p>CAA to insert name (Lossiemouth TDA Area A)</p> <p>Area bounded by: 574550N 0032703W - 575243N 0031450W thence clockwise by the arc of a circle, radius 5 NM, centred on 574917N 0030803W to 574550N 0030118W - 573858N 0031331W thence clockwise by the arc of a circle, radius 5 NM, centred on 574224N 0032016W to 574550N 0032703W.</p>	<p>Upper Limit: 3000 ft AMSL</p> <p>Lower Limit: SURFACE</p>	<p>Activity: UAS Beyond Visual Line of Sight (BVLOS)</p> <p>Hours: When notified</p> <p>DACS: RAF Lossiemouth</p> <p>Frequency: 119.575MHz</p> <p>Tel: 01343 817426</p> <p>Sponsor: MOD</p>
<p>CAA to insert name (Lossiemouth TDA Area B)</p> <p>Area bounded by: 574550N 0032703W - 575243N 0031450W thence clockwise by the arc of a circle, radius 5 NM, centred on 574917N 0030803W to 574550N 0030118W - 573858N 0031331W thence clockwise by the arc of a circle, radius 5 NM, centred on 574224N 0032016W to 574550N 0032703W.</p>	<p>Upper Limit: FL100</p> <p>Lower Limit: 3000 ft AMSL</p>	<p>Activity: UAS Beyond Visual Line of Sight (BVLOS)</p> <p>Hours: When notified</p> <p>DACS: RAF Lossiemouth</p> <p>Frequency: 119.575MHz</p> <p>Tel: 01343 817426</p> <p>Sponsor: MOD</p>

Table 2 - Dimensions for TDA at RAF Lossiemouth

Airspace Management

The Operating Authorities for the TDAs are as follows together with details for the provision of a Danger Area Crossing Service (DACS) and a Danger Area Activity Information Service (DAAIS):

- Waddington TDA:
 - Operating Authority - ATC RAF Waddington
 - A DACS will be available during TDA hours of activation

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- Arrangements for the provision of a DAAIS via London Information are being investigated.
- Lossiemouth TDA:
 - Operating Authority - ATC RAF Lossiemouth
 - A DACS will be available during TDA hours of activation
 - Arrangements for the provision of a DAAIS via Scottish Information are being investigated.

Activation and de-activation of the TDA will be requested by RAF Waddington and RAF Lossiemouth as appropriate.

Notification

The TDA will be activated via NOTAM, at least 24 hours in advance of operations.

Sponsor

Enquiries relating to the subject TDAs should be directed to AR Ops 01293 768202 in the first instance.



Figure 1 - TDA at RAF Waddington

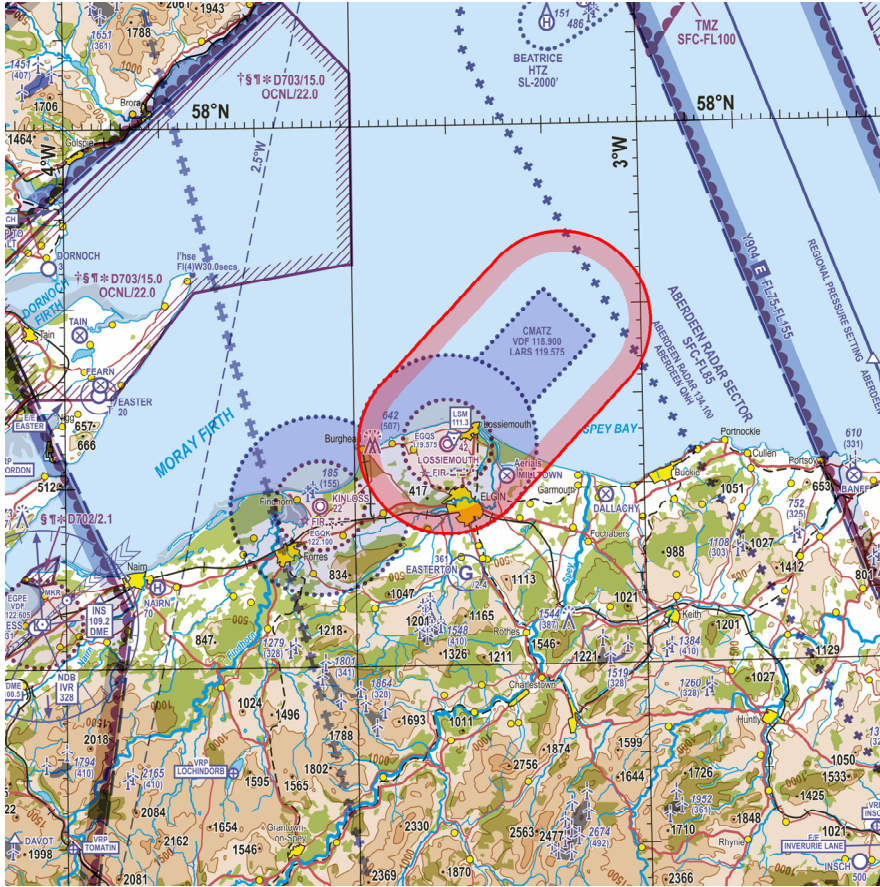


Figure 2 - TDA at RAF Lossiemouth

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ANNEX A – Draft Flying Schedule (as at 26 Mar 2021)

Dates (2021)	Activity	Remarks
6 – 9 Jul	Waddington & EG D323	
12 – 14 Jul	Waddington & EG D323	
16 – 18 Jul	Waddington & EG D323	17 & 18 Long Endurance Flight
20 – 23 Jul	Waddington & EG D323	
26 – 29 Jul	Waddington & DG D323 / EG D201 / Channel	
2 - 6 Aug	Waddington & EG D323 / EG D201	Maximum 3 flights
9 - 13 Aug	Waddington & EG D323	Maximum 3 flights
16 - 20 Aug	Waddington & EG D201 (TBD)	Maximum 3 flights
23 - 27 Aug	Waddington & EG D323 / EG D201	
31 Aug – 3 Sep	Waddington & Netherlands	
6 – 10 Sep	Waddington & Southwest DAs	10 Sep – fly to Lossiemouth
13 – 17 Sep	Lossiemouth & Ex Joint Warrior (TBD)	
20 – 24 Sep	Lossiemouth & Ex Joint Warrior (TBD)	
27 – 30 Sep	Lossiemouth & Ex Joint Warrior (TBD)	
4 – 8 Oct	TBD	
11 Oct		Commence pack-up for RTB