

# CAELUS2

GLA-GJH Flight  
Stakeholder Engagement  
Material



# CAELUS



PROJECTCAELUS.CO.UK



May 2023

# CAELUS2 TRIALS

GLA GJH Stakeholder  
Engagement Pack

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# Introduction

Dear Stakeholder,

You are receiving this briefing pack because your organisation was previously engaged with respect to BVLOS RPAS flights planned as part of CAELUS Future Flight Challenge project. The flight route this pack refers to is between Glasgow Airport and Golden Jubilee National Hospital. The original trial was meant to happen as part of the first phase of CAELUS in May 2022, but was rescheduled to take part in CAELUS2 in 2023 due to the UAV operator change.

We expect that the revised 2023 trials will have no impact on the required agreements compared to the 2022 proposal. However, as we appreciate that significant time has passed and your circumstances could have changed we would like to use that opportunity to provide a brief, but detailed summary of the proposal.

We would really appreciate if you could carefully review the following material with the appropriate members of your organisation and get back to us within 2 weeks (i.e. by 19 May 2023) with any questions/requests or a confirmation that you are happy with the proposal and have no objections to it.

Kindly note, that some stakeholders may require a signed Letter of Agreement. If you believe that LoA is required for your organisation and you don't hear from us within 1 week of receiving this pack please reach out to us and we will be happy to assist.

Kind regards,

Alex

On behalf of CAELUS2 FFC Project

# CAELUS2 Background

Part-funded by Innovate UK Future Flight Challenge

## Flight Trials

Long-range BVLOS RPAS flight trials will be conducted in order to test real value NHS use-cases as well as operational procedures developed by NATS as part of their ConOps work. These will mostly be long-range however this first flight is short-range.

Route between Glasgow Airport and Golden Jubilee National Hospital is the first out of 5 mapped out trials. This flight is unique because it is fully contained within Glasgow CTR.

Since RPAS cannot comply with the normal VFR rules, such operations need to occur in segregated airspace. Typically a Temporary Danger Area (TDA) is required, but as this flight will be wholly contained within Class D airspace, CAA have advised a Temporary Segregated Area (TSA) is more appropriate.

## 16 Consortium Partners

Led by AGS and supported by NHS-Scotland. The project contains a number of separate work packages all aimed at innovation or innovation research in the world of RPAS. Key organisations directly involved in the GLA-GJH live flight trial work are:

- NHS-Scotland
- Skyports (UAV operator)
- AGS (Glasgow airport operator)
- NATS (Air Navigation Service Provider)
- Plane Finder (surveillance technology)
- Trax International (airspace support)
- ANRA Technologies (UTM platform)



# UAV AIRCRAFT



## **SNOOP MK III – EVTOL RPAS**

**MTOW:** 17 KG

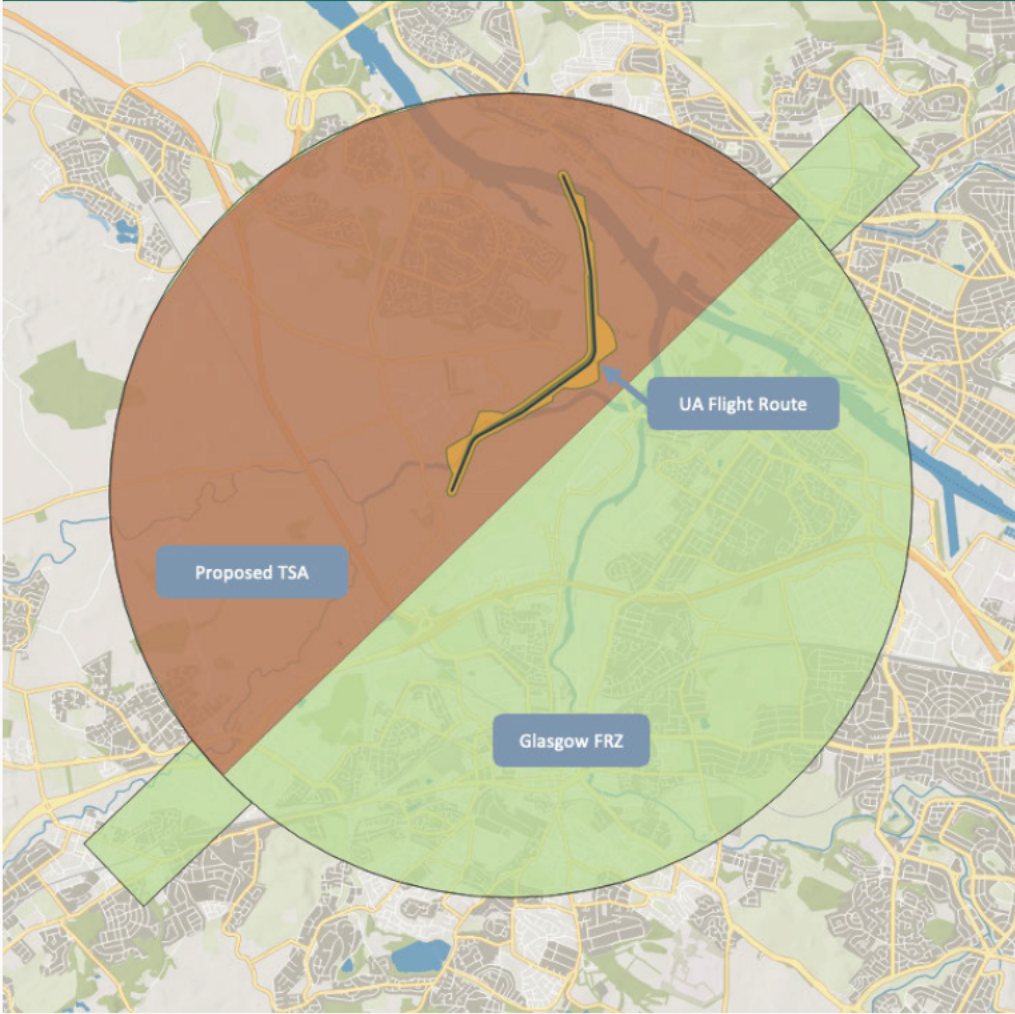
**PAYLOAD:** 3 KG

**CRUISE:** 55 KTS IAS

**RANGE:** 70 KM

**ROUTE:** GLA GJH

# GLA-GJH ROUTE FOR SWOOP MK III



DEP/ARR: GLASGOW AIRPORT	ARR/DEP: GOLDEN JUBILEE HOSPITAL
TYPICAL ALTITUDES	400 FT AGL
REQUIRED AIRSPACE AND DIMENSIONS	TSA - half of Glasgow ATZ, where TSA ceiling is ~1,000 ft AGL
FREQUENCY OF OPERATIONS	Expect only a very limited period of actual flying: 3-4 return flights across 3 flying days
DURATION OF A SINGLE FLIGHT	Depending on wind: 4-6 minutes from lift off to touchdown
REQUIRED WINDOW OF OPPORTUNITY TO CONSIDER	Due to the uncertainty of regulatory processing we suggest quite wide potential date range: 15 AUGUST - 15 OCTOBER 2023
TIME OF OPERATIONS	Aim is to conduct early morning flights before first CAT departures. However, operations during normal daytime is possible if sufficient gap in CAT is identified

# GLA-GJH TOLP



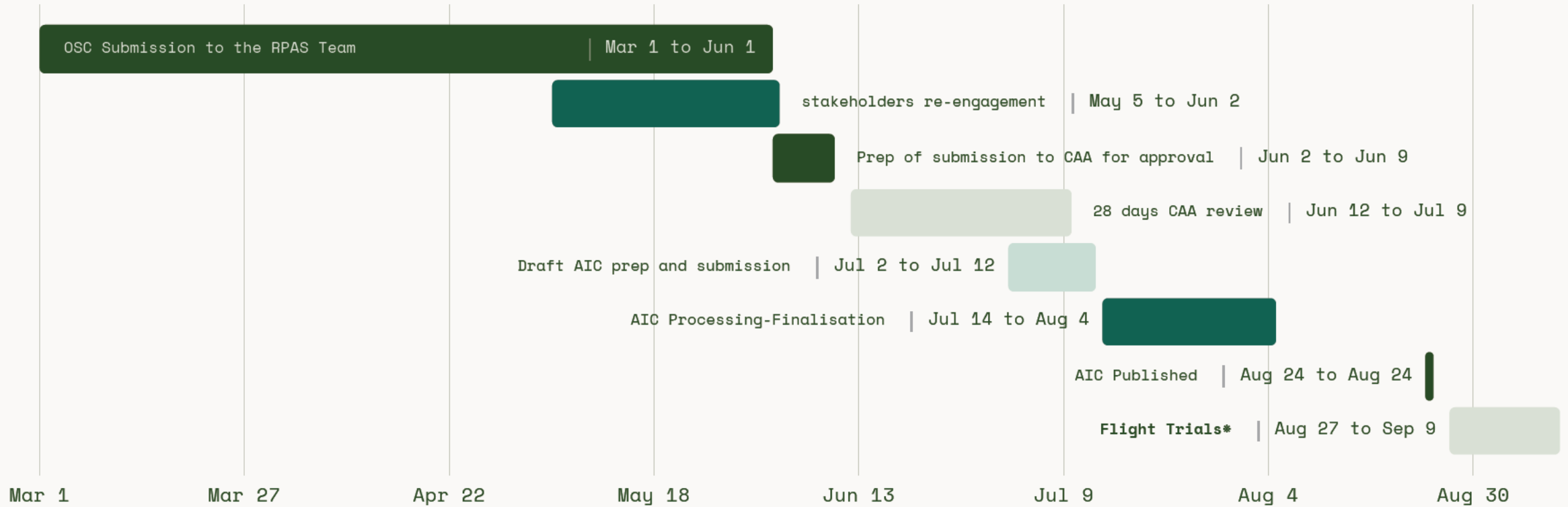
GLA Take Off and Landing Point

GJH Take Off and Landing Point

Western part on the tarmac of the disused GLA runway

Grass area near the helipad

# Timeline



\*Ideal timeline is August 27-September 9th as a window of opportunity to allow for any weather-related delays. At the same time, please consider any comments you may have should this trial take place between 15th of August 15th of October 2023 (still 3-4 return flights across 3 flying days at most) just in case we experience unexpected delays in the approval process.



# Frequently Asked Questions

## **How will the impact on Recreational GA be minimised?**

We will aim to conduct operations during early hours of the morning to minimise disruption to other airspace users.

## **How will the impact on CAT be minimised?**

We will aim to conduct operations during early hours of the morning well before first arrival/departure; operations during day will be avoided to minimise impact on GA and could be possible only if sufficient gap in CAT is confirmed.

## **What arrangements are in place for emergency services access?**

Most emergency services will provide sufficient notice for a flight to complete (if it already started), so no impact on HEMS or SAR expected. Police, however, might require unrestricted TSA access with as little as 2 minutes notice. The agreed procedure that will be confirmed with Babcock (UKP51) through an LoA.

# Frequently Asked Questions

## What changes to the usual procedures could various airspace users expect?

- Access to the TSA will not be possible while it is active and RPAS is airborne.  
VFR traffic (except Police Helicopter) might experience delay for transits of up to 6 minutes or be asked to route outside of the lateral dimensions of the ATZ.
- IFR traffic will not be cleared to descend below 3000ft until the TSA has been deactivated.  
FATO departures may be requested to follow the alternative procedures:  
**FATO SW** - HLE straight ahead until crossing M8 before turning right to route via Bishopton or Erskine Bridge.  
**FATO NE** HLE straight ahead until after passing Golden Jubilee Hospital before turning left.

It should be noted that strategic operational planning will aim to minimise the likelihood of any instances where conventional traffic might be affected by the RPAS operation in the TSA.

# Frequently Asked Questions

## **How will activation and deactivation of the TSA work?**

AIC will promulgate the details of the flights. The TSA will be activated via NOTAM. If the RPAS isn't airborne – then Glasgow ATC TOI will allow for traffic to be cleared into the TSA as they are the controlling authority.



# PRIMARY CONTACTS RE ACP MATTERS

@ CAELUS2AIRSPACE@TRAXINTERNATIONAL.CO.UK

# Abbreviations

AGL	Above Ground Level
ATZ	Aerodrome Traffic Zone
BVLOS	Beyond Visual Line of Sight
CAT	Commercial Air Traffic
CTR	Control Zone
EVTOL	Electric Vertical Take off and Landing
FFC	Future Flight Challenge
FRZ	Flight Restriction Zone
GA	General Aviation
GJH/GJNH	Golden Jubilee National Hospital
GLA	Glasgow Airport
NATS	National Air Traffic Services
MTOW	Maximum Take Off Weight
RPAS	Remotely Piloted Aircraft System
UA	Unscrewed Aircraft
UAV	Unscrewed Aerial Vehicle
UKRI	UK Research and Innovation
SAS	Scottish Ambulance Service
TDA	Temporary Danger Area
TOLP	Take off and Landing Point
TSA	Temporary Segregated Area