

Summary of Stakeholder Engagement ACP-2023-083

April 2024

CONFIDENTIAL

1. INTRODUCTION

Flylogix are an unmanned aircraft service provider, focused on the offshore energy sector. Flylogix have been contracted to complete methane emission surveys of oil and gas platforms over the Northern North Sea in 2024. These surveys will be achieved by using an unmanned aircraft with a methane sensor fitted to it. The operations will be conducted in a Temporary Danger Area (TDA).

Flylogix have submitted an airspace change request (ACP-2023-083) to establish this TDA. This document is a summary of the stakeholder engagement carried out by Flylogix in relation to this ACP.

2. OBJECTIVES OF ENGAGEMENT AND THIS DOCUMENT

Flylogix engaged with aviation stakeholders (airspace users, air navigation service providers and aerodromes) on the safety and operational viability of the proposed TDA with the aim of informing stakeholders and addressing any issues or impact that may arise from the TDA being established.

This document provides a summary of the process, results and any subsequent changes to the proposed TDA.

The supporting document sent to all stakeholders and a record of communications can be found in the appendices.

3. LIST OF STAKEHOLDERS

The table below is a list of the stakeholders contacted and reason for their engagement.

Organization	December including in angeograph
Organisation	Reason for including in engagement

NATS	ANSP
AVINOR	Norwegian ANSP
Babcock	Helicopter Operator
JRCC	Coastguard body that task SAR helicopters
Bristow SAR	Operate SAR helicopters
NHV	Oil and gas helicopter operator in North Sea
CHC	Oil and gas helicopter operator in North Sea
Bristow	Oil and gas helicopter operator in North Sea
Airtask	Commercial operator flying over the North Sea
Babcock Mission Critical Onshore	Helicopter operator
2Excel aviation	Commercial operator flying over the North Sea
GAMA Aviation	Commercial operator flying over the North Sea
GAA	An independent group and partnership of organisations representing UK General Aviation
AOPA	Non-profit political organization that advocates for general aviation



Airport Operators Association (AOA)	NATMAC member
Airfield Operators Group (AOG)	NATMAC member
Aircraft Owners and Pilots Association (AOPA)	NATMAC member
ARPAS-UK	NATMAC member
Aviation Environment Federation (AEF)	NATMAC member
BAe Systems	NATMAC member
British Balloon and Airship Club	NATMAC member
British Business and General Aviation Association (BBGA)	NATMAC member
British Gliding Association (BGA)	NATMAC member
British Helicopter Association (BHA)	NATMAC member
British Microlight Aircraft Association (BMAA)	NATMAC member
British Skydiving	NATMAC member
Drone Major	NATMAC member
Guild of Air Traffic Control Officers (GATCO)	NATMAC member
Honourable Company of Air Pilots (HCAP)	NATMAC member
Helicopter Club of Great Britain (HCGB)	NATMAC member
Light Aircraft Association (LAA)	NATMAC member
Defence Airspace and Air Traffic Management	NATMAC member
UK Airprox Board (UKAB)	NATMAC member
UK Flight Safety Committee (UKFSC)	NATMAC member
United States Air Force Europe (3rd Air Force-Directorate of Flying (USAFE (3rd AF-DOF))	NATMAC member
Sumburgh Airport	Airfield in the vicinity of the proposed TDA
Tingwall Airport	Airfield in the vicinity of the proposed TDA
Viper (Offshore Helicopters)	Identified through discussion with Sumburgh airport
Osprey (PDG Aviation)	Identified through discussion with Sumburgh airport
Direct Flights	Identified through discussion with Sumburgh airport

4. SUMMARY OF ENGAGEMENT METHODOLOGY AND TIMELINE

Engagement Methodology

Flylogix has completed BVLOS UA flights over the North Sea since 2019, including operations in the Northern North Sea, and engaged with other air users when planning and completing these operations. This prior engagement provided a provisional audience list. This was used as a starting point for the engagement and additional stakeholders were identified through inspecting aviation charts to look for local airfields, engagement with local ANSPs and consideration of the NATMAC list of organisations/stakeholders.



Once a list of stakeholders was compiled, the approach was to engage directly with individuals at the organisations by email.

The methane measurement work being carried out is a vital part of reducing the greenhouse gas emissions of the North Sea oil and gas industry. This is supported by both the UK government, through BEIS, and the oil and gas operators.

The target AIC publication date is the 2 May 24, to fit in with client oil and gas platform production and operation schedules. To achieve this target publication date, this ACP must have passed the CAA's decision gateway by 21 Mar 24.

Considering the above and the need to provide the CAA with sufficient time to assess the temporary airspace change application, stakeholders were given between 16 Jan 24 and 23 Feb 24. Key stakeholders were contacted on the 16 Jan 24 (see Appendix 1) by email and were given details of the proposed TDA design. Stakeholders were asked for their feedback and it was made clear that the Assessment Meeting with the CAA had not yet taken place but comments were being welcomed and key stakeholders would be updated post the Assessment meeting taking place. It was noted that key stakeholders only were contacted prior to the Assessment meeting as it is understood that engagement prior to the Assessment Meeting is taken on risk. Further correspondence was sent on 25 Jan 24 (see Appendix 2) together with a detailed stakeholder document attached (see Appendix 3) and given until the 23 Feb 24 to respond. Further reminder emails were sent on 2 Feb 24 and 21 Feb (see Appendix 4) to those who had not yet responded in order to encourage further comments and additional stakeholder feedback was received by some who had not yet responded. These included DAATM, CHC, NATS and RPAS UK. Flylogix held bespoke telephone conversations with Sumburgh and Tingwall and also select stakeholder's where requested. Flylogix's rationale to support effective engagement within this engagement period is as follows:

- The groups being engaged are mainly operators and organisations based in the region so input
 is only required from one or a small group of people. This means it is possible for stakeholders to
 provide feedback in less time.
- Flylogix is proactive in engaging directly with stakeholders via email and by telephone calls.
- Due to Flylogix's experience in operating in this area and the limited number of air users around Shetland, we are able to engage directly with the relevant individuals

It was felt that the stakeholder engagement window was proportionate to the complexity, scale and duration of the TDA sought. The TDA is situated predominantly over the water, with a DACS to support access to the airspace when the RPAS system is not utilising the TDA segments and there a limited number of flights (max 15) which will limit the number of the activations required. Given the nature of the operations it is felt that the TDA design and operations are limited in that nature of the stakeholders affected and also the complexity of the ACP is minimal enabling a scaled engagement window.

4.1 Stakeholders who have not been informed of operations

In line with the Stakeholder Engagement plan Local Residents were not engaged for the following reasons

- 1. The airspace design does not impact the how the UA will operate Scatsa and needs to cross over land to get to the sea.
- 2. The route over land is over remote farmland and has been selected to avoid direct overflight of buildings.



3. The unmanned aircraft will be at 800ft when operating over land. Flylogix testing shows that with the aircraft operating at 400ft AGL and at a distance of 1km away, the noise produced is ≤45dB. This combined with the fact that the aircraft only transits over land and does not hold (other than at the airfield), the noise impact of the RPA will be minimal and for short periods of time.

The following list details organisations from the NATMAC list who were not engaged with together with justification as to why:

- Airlines UK were not contacted given the low level and temporary nature of the operations. Airlines
 UK will not be effected by the BVLOS TDA.
- ACOG were not contacted given the strategic nature of the organisation and the temporary and low level nature of the ACP proposal.
- BALPA were not contacted given the low level, remoteness and temporary nature of the operations.
- Isle of Man CAA were not contacted given the geographic displacement and temporary nature of the operations.
- Low Fare Airlines were not contacted given the low level and temporary nature of the operations.
- Military Aviation Authority were not contacted as DAATM were engaged with as the PoC for UK MoD.
- Navy Command HQ were not contacted as DAATM were engaged with as the PoC for UK MoD.
- PPL/IR (Europe) were not contacted given the geographic displacement, low level and temporary nature of the operations.

5. SUMMARY OF FEEDBACK

5.1 Stakeholders who replied with feedback or objections

There were 11 stakeholders who replied with feedback and comments – no objections were received. They were

- 1. NATS (NERL)
- 2. AVINOR (Norway ANSP)
- DAATM
- 4. Sumburgh
- 5. Tingwall
- 6. Avinor
- 7. BBGA
- 8. LAA
- 9. Bristow SAR
- 10. BHA



5.1.1 NATS (NERL)

NATS (NERL) provided feedback that, subject to the appropriate approvals with the CAA, NATS Aberdeen will support Flylogix with the DACS/SUACS for the missions defined within this ACP. The noted that there would be a requirement for engagement with Avinor given that TDA F crosses the Median line (this had already been undertaken) and proposed some wording for the inclusion in the AIC as follows:

NOTE: TDA F is no longer operationally required and after liaison with NATS Aberdeen and Flylogixs has been removed from the ACP Submission and AIC.

'As the TDA structure crosses several radar sectors, may we also suggest that a statement for the provision of SUACS within the AIC should follow: "Within EG DXXXXX, a Danger Area Crossing Service (DACS) will be available from Sumburgh Radar or Brent Radar on 131.300MHz as defined in UK AIP ENR 1.6 Paragraph 4.5.2.2.".

Actions taken/to be taken following feedback

- TDA F has been removed from the requirement.
- The proposed wording shall be included in the draft AIC
- Engagement had already started with Avinor but is no longer required as the operation will remain with UK Airspace.

5.1.2 Sumburgh

Conversation was held with Sumburgh who confirmed that the operation, as was the case with previous operations in the area, would not directly affect their operation or infringe in the area where they would be providing a service. Again, as the approach service is provided by Sumburgh Radar, and communication has already been established to provide the crossing service, then they have no objection to the operation.

Further guidance with regards to local stakeholders was provided as information by Sumburgh and all those operators identified have been engaged with and are captured within this document within the evidence attached. Offshore Helicopters (Viper) and Direct Flights were contacted via Sumburgh but not response was received. PDG Aviation Services (PDG Helicopters) were contacted via email on 22 February following contact details via Sumburgh but no response was received.

5.1.3 Tingwall

Conversation was held with Tingwall airport who confirmed that the proposed TDA does not present any concerns and that there were no issues arising from previous operations.

Further guidance with regards to local stakeholders was provided as information by Submburgh and all those operators identified have been engaged with and are captured within this document. Tingwall contacted Airtask directly and included the Sponsor within the email chain. No response was received from Airtask.

5.1.4 Avinor

Avinor were contacted through introductions from Aberdeen Radar. Avinor have had previous experience of Flylogix operations from ACP 2022 044 and have a good relationship with Aberdeen Radar.

Part of the proposed TDA F crosses into airspace under jurisdiction of Avinor and so information pertaining to the proposed airspace design was provided. Initial responses suggested that there needed to be further liaison



given proximity to Tampen HTZ, however later correspondence confirms that this would not be an issue. There may be activity in May/Jun (also drone activity) which would require tactical deconfliction. In order to achieve this Avinor request a phone call from the RP to call prior to entering TDA F and then a call to say vacating. All phone calls should be made to Supervisor Polaris ACC who will then co-ordinate as required. Avinor do not require notice of activation of the other TDAs. Avinor have requested a phone call should the UA leave the confines of the TDAs as has been the operating procedures in previous ACPs.

Note: TDA F no longer required. Please see para. 5.1.1 above.

Actions taken/to be taken following feedback

- TDA F no longer required.
- Flylogix to ensure that the appropriate contact details are in place between Flylogix and Aberdeen Radar and Avinor prior to operations commencing.
- Operating procedures shall be detailed to ensure that the RP makes contact with Avinor, via the Supervisor Polaris ACC prior to entering TDA F and upon completion. No longer Required. See Para 5.1.1 above.

5.1.5 BBGA

Direction was given to liaise with Tim Fauchon as representative of British Helicopter Association.

Actions taken/to be taken following feedback

- No change to proposed TDA design
- Stakeholder engagement had already been sent to the BHA but efforts made to ensure BHA had required information.

5.1.6 LAA

The LAA had no objections to the ACP but wished to raise that the area is occasionally frequented by touring GA traffic including their members.

Actions taken/to be taken following feedback

- No change to proposed TDA design
- Ensure that LAA are advised of the outcome of the ACP if successful and ask to promulgate to their members.

5.1.7 Bristow SAR, Sumburgh Operations

A telephone discussion was whereby the proposed operations were set out and Bristow SAR had the opportunity to raise issues and make comments. The stakeholder was content that with a DACS being provided they would have sufficient opportunity to access the TDA should they require it for emergency operations. Flylogix would ensure that they afforded SAR operations every priority and should an emergency response arise then they would vacate the necessary TDA segment immediately to enable access. Flylogix will also engage with Bristow SAR prior to operations to ensure that they are aware of the same, including proposed timings. Of note there were no issues resulting from the previous campaign within the same location and similar TDA design.

Actions taken/to be taken following feedback



• If the ACP is successful then Flylogix will ensure that Bristow SAR is made aware of the planned dates and timings for the campaign.

5.1.8 BHA

Email confirmation was received to confirm that the proposed TDA would not cause an issue to their operator considering the time of the year and the levels involved. They have asked to be kept informed.

Actions taken/to be taken following feedback

 If the ACP is successful then Flylogix will ensure that BHA are made aware of the planned dates and timings for the campaign.

5.2 Stakeholders who replied but had no feedback or objections

The following stakeholders replied saying they either supported or had no feedback on the TDA design or ACP. The full correspondence is included in **Error! Reference source not found.**

- 4. 2Excel
- BBGA
- 6. CHC
- 7. DAATM
- 8. LAA
- 9. Babcock
- 10. RPAS UK
- 11. British Gliding Association
- 12. PDG Helicopters. Engaged with via SUMBURGH but no response received. Email contact established but no feedback yet received.
- 13. GAMA Aviation. Engaged with via SUMBURGH but no response received. Email contact established but no feedback yet received.

5.3 Stakeholders where no reply received

The remaining stakeholders did not provide any feedback. In addition to the initial email requesting feedback and sending the Engagement Material, reminders were sent to those who had not yet replied on close of engagement with an opportunity for them to comment outside the engagement window should they so wish.

This communication is included in Error! Reference source not found. and Error! Reference source not found.

6. CONCLUSION AND CHANGES

6.1 Notification and procedures

Flylogix will complete the actions below



- Flylogix will liaise with Bristow SAR at the start of the campaign with their intended flying window and will advise them of any changes.
- Flylogix will liaise with Aberdeen ATSU (Sumburgh Radar) for confirmation of contact details prior to
 operations and ensure that all stakeholders identified above who require the same are furnished with the
 information.
- Flylogix will contact Aberdeen ATSU (Sumburgh Radar) by telephone or email to confirm they can provide a Danger Area Crossing Service before issuing a NOTAM to activate the TDA.
- Flylogix will liaise with Avinor and ensure that they are furnished with their intended flying window at the start of the campaign and should TDA F be required, ensure that they have agreement.

6.2 Impact on flight paths below 7000ft and over inhabited areas

There will be little to no impact on the flight path or volume of air traffic flying below 7000ft over inhabited areas. This is due to the following reasons:

- The TDA onshore is established from surface to 1,300ft. Therefore the majority of aircraft below 7,000ft
 can fly over the TDA. The volume of traffic in the operating area is mostly comprised of Oil and Gas
 helicopters flying offshore, with some GA.
- Oil and Gas helicopter operators are known to operate between 1500-3000ft and therefore will likely be unaffected by the TDA. Additionally, this traffic is predominantly offshore and is highly unlikely to be within the onshore segments of the TDA
- The inshore segment of the TDA only extends over a small section of land, the majority of which is sparsely populated and therefore minimises impact on inhabited areas.
- The unmanned aircraft will be at 800ft when operating over land. Flylogix testing shows that with the aircraft operating at 400ft AGL and at a distance of 1km away, the noise produced is ≤45dB. This combined with the fact that the aircraft only transits over land and does not hold (other than at the airfield), the noise impact of the RPA will be minimal and for short periods of time.

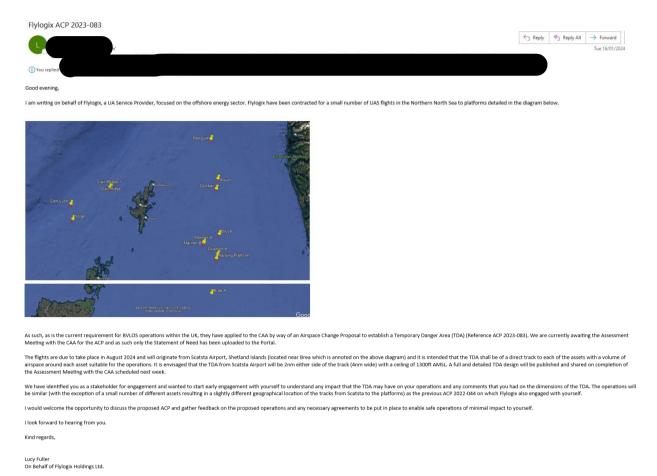
6.3 Collection and monitoring of feedback and complaints while the TDA is active

It shall be the responsibility of Flylogix to gather all feedback received when the TDA is in place. All stakeholders in this document have the contact details for Flylogix and there will be contact details for Flylogix in the AIC notifying the TDA and on the NOTAM.

Once the operation is complete and the TDA ended, any feedback collected during this period shall be compiled into a summary report and forwarded to the CAA for review.





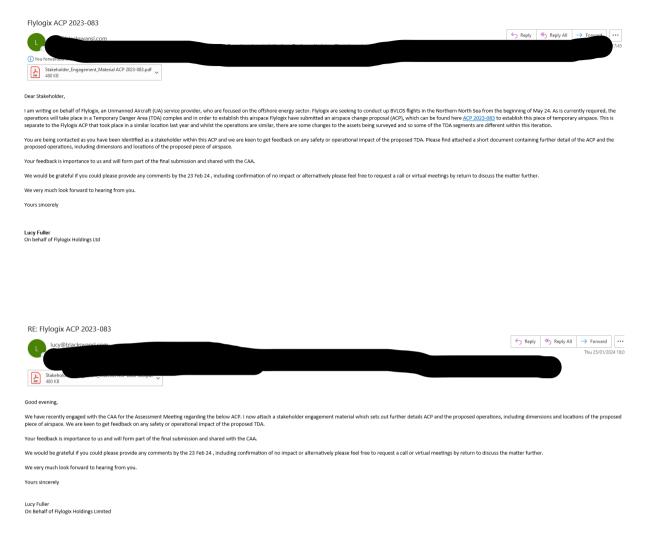


Expanded email to show stakeholder addresses





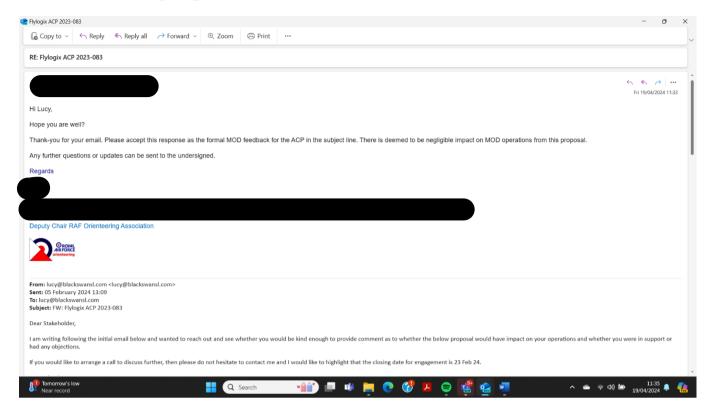
APPENDIX 2



Expanded email to show stakeholder addressees







From

Sent: Tuesday, April 16, 2024 7:37 AM



Subject: Re: [External] Re: ACP-2023-083 Engagement and Consultation Clarifications, Discrepancies and Recommendations

Good Morning

For E& C Regulator. I have now contacted Gama Aviation and PDG Helicopters again to ask for Feedback so we can all be assured that those operators are covered. I will forward that information as soon as I get it, A bit late I know but we are trying to resolve that particular question.

Regards









Fri 19/04/2024 10:54



For E&C the email trail below captures the removal of TDA F from the subject ACP. I shall capture that along with the other changes to the updated Stakeholder Engagement Submission which I will send you this afternoon.

Regards





Sent: Thursday, April 11, 2024 12:12 PM





Subject: RE: Flylogix ACP Feedback



TDA "F" can be removed from the ACP process as this is now not required. Hopefully this will help speed up the process.

The source of met data used by the flight crew are as follows:

MET Aviation briefing service

MET F214 & MET F215

Readiings from the asset's weather station

METAR & TAF's if available

Skydemon



Windy

With regards to the transponder question.

We carry out a position check once airborne in the home loiter to allow ATC to identify us. Once they have confirmed position we continue with the flight. If the transponder were to fail mid flight the crew have no way of determining this unless radar coverage is such that the crew are notified that we have stopped transponding. In this event the crew would RTL back to base.

The crew are required to inform ATC when entering and exiting TDA sectors and if radar coverage allows, a position check would be made.

I will ask to answer the LOA question.

Kind regards

Aviation Lead

Flylogix Holdings Limited



From

Sent: Thursday, April 11, 2024 11:40 AM



Subject: Re: Flylogix ACP Feedback



Thank you very much for that. Much appreciated. I will examine the below and adjust accordingly. I will get back to you early next week.

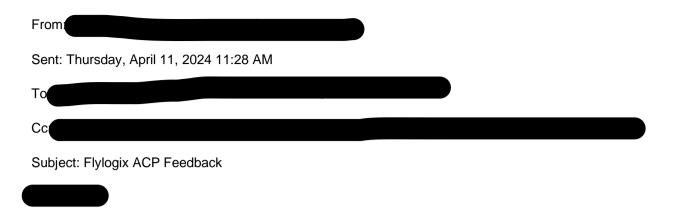


Could your guys look at the below and reply to the "Operations" related questions please?

Regards







I have been discussing the ATC procedures with Tina Robson as part of our approval process for the forthcoming Flylogix operation from Scatsta. I agreed to pass on the following output from the discussion:

TDA 'F': Because this TDA crosses the Median Line and into airspace which is outside of both the UK FIR and airspace delegated to the UK, the planned use of a dedicated transponder code would need to be agreed with Norway and time may not permit that. Tina's suggestion is for the eastern edge of this TDA is aligned with the Median Line. As part of my procedure development, I understood from Ash Carnell that this TDA serves the Magnus platform, however when plotting it on the radar display this TDA lies south of the Magnus. In discussion with Avinor, I also understand there are no offshore installations within the TDA segment that lies east of the Median Line. As this small section of TDA looks like it will significantly complicate the procedures and approvals necessary to commence operations, can Flylogix reconsider the requirement for this TDA to extend east of the Median Line and is correctly aligned to reach the Magnus if that is the planned destination platform?

Met. criteria: Paragraph 5 of the ACP submission contains the Met. criteria outside of which Flylogix will not operate. How will the crew determine their compliance with these criteria, i.e. which source of Met. data do they plan to use?

ACP/LOA alignment: Since the ACP was originally submitted, procedures have evolved, partly following the final procedure development for the Hollym-based operation. However this will mean some aspects of the submitted ACP documents will be out of alignment with the LOA that NATS and Flylogix will agree. Tina's requirement is for the ACP submission to reflect the LOA. An example of this is reference to 'Sumburgh Radar' providing the SUACS, when in fact this will need to be spread across the Sumburgh, Brent and Aberdeen (REBROS) Radar sectors due to the extent of the TDAs.

Transponder failure modes: Paragraph 5 of the ACP submission also states that "The UA will be fitted with ADS-B in and out and a Mode-S transponder. If the transponder is nonfunctioning, the mission will be cancelled/aborted". Tina believed this was an ATC requirement, but that isn't the case as we aren't providing a service (notwithstanding the requirement to correlate the reported position which the transponder will facilitate). I believed this may be part of the Flylogix OSC as the availability of a functioning transponder will provide pilots of TCAS-equipped aircraft with additional situational awareness. Either way, Tina made a request for the ACP submission to contain more detail on transponder failure modes, i.e. if only Mode C data was missing, could the aircraft still operate?

I appreciate time is extremely tight for the resubmission of ACP documents and amending the TDA design, but it could be that CAA will require these areas to be addressed before final ACP approval can be granted.

Best regards,





Watch Manager - Operations Support



Aberdeen Airport,

From

Sent: Tuesday, April 16, 2024 4:45 PM

To:
Cc:

Subject: RE: [External] Re: ACP-2023-083 TDA Coordinates

OFFICIAL - Named Parties Only. This email and any files transmitted with it are intended for the use of the entity, department, team or individual to whom they are addressed. It can be shared further by the receiving party on a need-to-know basis.

Good afternoon

Our E+C Regulator has asked if you can add details of the change in the TDA (ie its restriction to remain outside of the Norwegian FIR) and the engagement evidence with NATS Aberdeen which led to this change, to the Engagement Summary Report, please.

Many thanks and kind regards,



Airspace Change Account Manager

Airspace Regulation

UK Civil Aviation Authority--



www.caa.co.uk



APPENDIX 3

Stakeholder engagement for TDA for UAS operations around Northern North Sea ACP 2023-083

1. INTRODUCTION

Flylogix are an Unmanned Aircraft (UA) service provider, focused on the offshore energy sector. Flylogix have been contracted for UAS flights to the East and West of Shetland from May 2024 and Jul 2024.

The UA will operate from Scatsta Airport and the operations will be conducted in a Temporary Danger Area (TDA). Flylogix have begun an airspace change request ACP 2023-083 to establish this TDA.

2. OBJECTIVES OF ENGAGEMENT AND THIS DOCUMENT

In line with the CAP1616, Flylogix are engaging with aviation stakeholders to get feedback on the safety and operational impact of the proposed TDA. This engagement will occur over 4 week period between the 25 Jan 2024 and 23 Feb 2024. All feedback will be shared with the CAA as part of the final TDA submission.

This document has been sent to the following stakeholders for feedback. More stakeholders may be contacted as Flylogix becomes aware of them:

- Oil and Gas helicopter operators CHC, NHV, Bristow
- Commercial operators working in North Sea Airtask, 2Excel Aviation
- General Aviation Airspace4All, General Aviation Alliance, AOPA, BMAA, LAA
- SAR JRCC, Bristow SAR
- MOD DAATM
- Other Operators Babcock Mission Critical Services Onshore
- ANSP NATS (Aberdeen Radar)
- All other organisations present on the CAA's NATMAC list considered as a stakeholder for the purpose
 of this ACP.



3. TYPE OF OPERATION

The operations are unmanned BVLOS flights conducted within a TDA. The purpose of the flights is to conduct methane surveys of critical offshore energy infrastructure in the North Sea East and West of Shetland.

The UA will transit up to an altitude of 1,300 AMSL.

4. UNMANNED AIRCRAFT CHARACTERISTICS



6.3.1 Figure 1 - The FX2 type UAS

Flylogix is in the process of securing the appropriate authorisations from the CAA for these operations. It should also be noted that the UA will be fitted with ADS-B in and a Mode-S & ADS-B transponder.

5. TDA

5.1 Design Principals

To limit the impact of the TDA on other air users, Flylogix applies the following design principals:

- Minimise the volume of airspace, including both footprint and altitude
- Segment the TDA so that only the sections required for a specific flight are activated and to simplify the Danger Area Crossing Service



5.2 Proposed Design



Figure 2 - Map of TDA Proposal (segments bounded by separate colours)

The proposed TDA is broken into 11 segments. Segment A covers Scatsta Airport and onshore. Segments A, and B have minimal land coverage, C - M are all offshore.



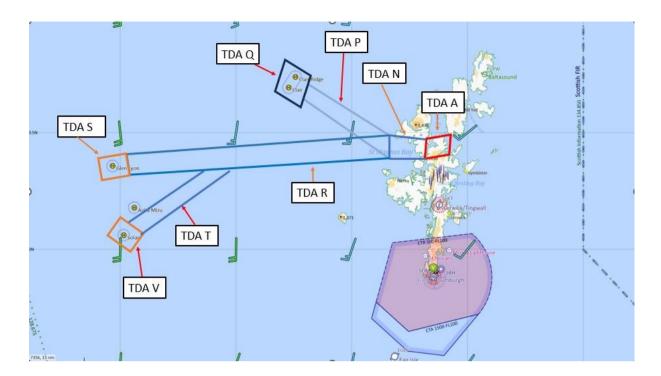


Figure 3 - Map of overland TDA Segments A, N-V

- All TDA segments are established between SFC 1300ft AMSL.
- The TDA will be in place from beginning May 24 until end July 24 (notification will be given if this changes in the final submission) and will be cancelled before this date if all operations are completed.
- Flylogix will engage with Aberdeen Radar (NATS) to provide a Danger Area Crossing Service during the periods the TDA is active. The frequency for the service will be published on the NOTAM and in the AIC – along with Flylogix contact details.
- Flylogix will be available for direct contact by telephone before and during operations if additional information is required

5.3 TDA Design Rationale

It is Flylogix's intent to minimise the impact the TDA has on other air users. The following is a summary of the considerations made when designing the proposed TDA and rationale for its features.

5.3.1 Airfield

Scatsta was selected due to the following characteristics:

 Scatsta is clear of nearby existing Danger Areas and other notified airspace such as noise sensitive areas and bird sanctuaries



- Scatsta is situated next to bodies of water, therefore the travel of the UA over land is minimal reducing risk to those on the ground
- Scatsta is a disused airfield with no crewed aviation on site
- Scatsta is free of significant ground-based obstacles such as power lines
- Scatsta is 15Nm from the closest airfield (Lerwick/ Tingwall) and therefore should pose little impact to existing operations

5.3.2 Segments A, B & N

Segments A, B & N have been designed to ensure they do not cover any other airfields and make it as easy as possible for other aircraft, for example when coast following, to fly over the TDA. The rationale for their features is as follows:

 Established from SFC – 1300ft AMSL. The UA will operate at up to 800ft in this segment and a 1300ft ceiling allows for 500ft separation.

5.3.3 Segments C – M, P-V

Segments C - G and I are airspace corridors for transit to offshore assets East and West of Shetland. The rationale for their features is as follows:

- Established from SFC 1300ft AMSL. The UA will operate at up to 800ft in this segment and a 1300ft ceiling allows for 500ft separation.
- Due to the wider dispersal of assets West of Shetland, these TDA segments were designed as direct corridors to simplify the TDA complex and the subsequent provision of DACS
- The shape of these segments is such that when active, any activity at 3rd party offshore structures/assets, their HTZs or helicopter operations in the Shetland area of the North Sea are minimally impacted.

6. PLANNING AND NOTIFICATION

Flights will be between 3 hours and 4.5 hours long. The TDA will be activated 30 minutes before take-off and end up to 3 hours after the last scheduled landing time. This contingency will be determined by weather forecast and, in the case of flights to oil and gas facilities, by the uncertainty in helicopter flights and other operations at these facilities. If the UA lands before the end of the TDA activation, Flylogix will inform ATC and request of the CAA that the NOTAM is cancelled.

Flylogix may conduct multiple flights in a single day. During the 90 day period in which the TDA will be published, Flylogix plans to carry three periods of flights which indicatively are currently planned for 2 May to 19 May 24, 30 May to 16 Jun 24 and 28 Jun to 14 Jul 24 (subject to weather and serviceability).

To activate the TDA, a NOTAM will be published at least 24 hours in advance of planned flights detailing activations times. If UA activity is cancelled for whatever reason, we will request the NOTAM is cancelled.



If direct notification is required in addition to the NOTAM publication, please make note of this in your feedback.

7. ENGAGEMENT PERIOD

The methane measurement work being carried out is a vital part of reducing the greenhouse gas emissions of the North Sea oil and gas industry. This is supported by both the UK government, through BEIS, and the oil and gas operators.

The target AIC publication date is the 2 May 2024 to fit in with client oil and gas platform production and operation schedules. To achieve this target publication date, this ACP must have passed the CAA's decision gateway by the 22 Mar 2024.

Considering the above, public holidays and the need to provide the CAA with sufficient time to assess the temporary airspace change application, stakeholders are being given 4 weeks to provide feedback. Flylogix's rationale to support effective engagement within a 4-week engagement period is as follows:

- Flylogix is proactive in engaging directly with stakeholders via email followed up by telephone calls
- Flylogix has previously engaged with all listed stakeholders for other TDAs from Shetland for methane survey flights. Therefore, the stakeholders are familiar with the type of operation.
- Due to Flylogix's experience in operating in this area and the limited number of air users around Shetland, we are able to engage directly with the relevant individuals.

Stakeholders will be contacted on 25 Jan 2024 and will be given until the 23 Feb 2024 to respond.

8. YOUR FEEDBACK

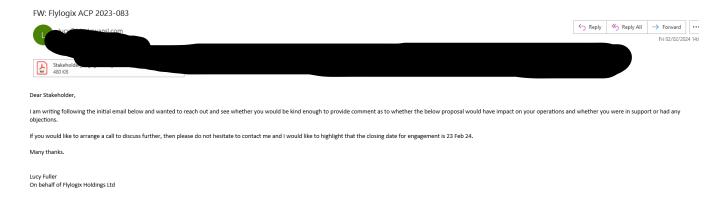
The CAA require evidence of engagement with other air users as part of the airspace change request process. We would therefore value your feedback by Friday the 23 Feb 2024 so that we can include this in our submission to the CAA. This feedback can be submitted in the following ways:

- 1. An email to lucy@blackswansl.com detailing any recommended changes to the TDA to improve safety or reduce impact on you.
- 2. An email to lucy@blackswansl.com saying that you understand and agree with the proposed approach.
- Setting up a call with us to give your feedback. We will take minutes of the call and get your approval of these minutes before submitting them to the CAA. Email lucy@blackswansl.com.

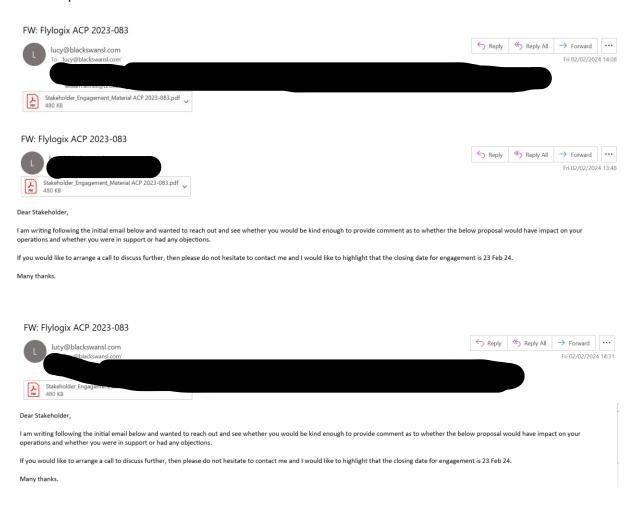
Where possible, if feedback could be sent in advance of the end of the engagement period this would be greatly appreciated. This affords Flylogix more time to work with you on any recommended changes to the TDA and collate your responses into a summary report for the CAA. Flylogix will send periodic reminders during engagement if no response has been received.



APPENDIX 4



Email expanded to include stakeholder addressees



Reminder sent 21 February



Flylogix ACP 2022-083



← Reply ≪ Reply All → Forward Wed 21/02/2024 11:41

Dear Stakeholder

I am writing on behalf of Flylogix and following my email correspondence with you at the beginning of Feb. You have been identified as a stakeholder within the Flylogix ACP and were sent a stakeholder engagement pack (attached again for ease).

We would invite any final comments on the proposed TDA and would remind you that the stakeholder engagement window for this ACP is due to close on 23 Feb 24 (this coming Fri). If you would like to arrange a call or discuss matters further then please do not hesitate to contact me and I will arrange the same.

Kind regards

Email expanded to show stakeholder addressees



Wed 21/02/2024 11:4

Dear Stakeholder

I am writing on behalf of Flylogix and following my email correspondence with you at the beginning of Feb. You have been identified as a stakeholder within the Flylogix ACP and were sent a stakeholder engagement pack (attached again for ease).

We would invite any final comments on the proposed TDA and would remind you that the stakeholder engagement window for this ACP is due to close on 23 Feb 24 (this coming Fri). If you would like to arrange a call or discuss matters further then please do not hesitate to contact me and I will arrange the same.

Kind regards



APPENDIX 5

RAW STAKEHOLDER FEEDBACK

NATS



Hi Lucy.

Thank you for providing NATS (NERL) the opportunity to review and provide feedback on ACP-2023-083

Subject to the appropriate approvals with the CAA, NATS Aberdeen will support FlyLogix with DACS/SUACS for the missions defined in ACP-2023-083.

Of note, is the section of the TDA that crosses the Median Line into Norwegian managed airspace. For this, may we suggest that Flylogix coordinate the proposed TDA with Avinor as NATS Aberdeen will be unable to provide support for that section. From what I understand, Aberdeen ATC has already discussed this matter with you.

As the TDA structure crosses several radar sectors, may we also suggest that a statement for the provision of DACS (SUACS) within the AIC should follow: "Within EG DXXXXX, a Danger Area Crossing Service (DACS) will be available from Sumburgh Radar or Brent Radar on the appropriate frequency as defined in UK AIP ENR 1.6 Paragraph 4.5.2.2.".







← Reply ≪ Reply All → Forward ...

Thu 22/02/2024 12:56

Good afternoon Chris,

Many thanks for your response and note that there is support for the below ACP

We have engaged with Avinor with regards to TDA F and they are in agreement with the TDA as proposed with direct liaison with Flylogix when entering that segment.

We also thank you for your input with regards to wording for the draft AIC. $\label{eq:control}$

Kind regards,

Lucy Fuller On Behalf of Flylogix Holdings Ltd

SUMBURGH



← Reply ≪ Reply All → Forward
 Wed 21/02/2024 13:56

Hi Lucy

Thanks for getting in touch. Paul Lawrence has asked me to reply to you regarding your proposed design. Similar to the previous operations of this nature, your flights do not directly affect our operation or infringe in the area where we will be providing a service. As our approach service is provided by Sumburgh Radia reased in Aberdeen, and you are alteredy in comms with them to provide you with a DACS, we have no objection to the operation.

It is likely to affect the operators(mainly helicopter) who route in and out of us, so I am presuming that you are already in contact with them: Bristow Oil and Gas, Bristow SAR, Off shore helicopters (Viper), CHC, NHV, Osprey. Also Direct flight who operate out of Tingwall. Please could you let us know if you are not in contact with these operators, so that we can pass on your details.

If you require anything else from us, please don't hesitate to get in touch.





Many thanks for your swift response and appreciate the position of Sumburgh with regards to the ACP and that you have no objections.

I have been in touch with the majority of the stakeholders you mention below but I have not reached out to the following:

If you had contact details for them or could pass on my email then I would be grateful and I will contact them as a matter of urgency.

Kind regards,

Lucy Fuller On Behalf of Flylogix Holdings Ltd





Hi Lucy,

nd Direct Flight as I don't want to pass out their emails without permission. I don't have personal contact details for Osprey but their contact details from the internet are:

Kind regards,







Lucy Fuller On Behalf of Flylogix Holdings Ltd

TINGWALL

Subject: RE: Flylogix Proposed TDA for BVLOS operations



From: <u>lucy@blackswansl.com</u> <<u>lucy@blackswansl.com</u>>

We have contacted Airtask with the stakeholder material but have not had any response from them at all. If you had a good contact number/email address for them then I'd very much appreciate it if you could let me have the same? Alternatively I am content for you to forward my details to them and ask them to get in contact with me directly?

Very many thanks for your time.

Lucy Fuller On Behalf of Flylogix Holdings Ltd



Subject: RE: Flylogix Proposed TDA for BVLOS operations I'll forward your email from yesterday onto Airtask, and cc you in. Hopefully you will get a response that way.



AVINOR

 $\textbf{Fra:} \underline{simonsmith@blackswansl.com} < \underline{simonsmith@blackswansl.com} >$

Det er ikke ofte du mottar e-pos Good Afternoon,

I represent a UK Based Company[Flylogix] who operate BVLOS Drones from the Shetland Islands to Monitor Methane emissions from North Sea Oil. and GAS Rigs. In the chart below we show the Temporary Danger Areas(TDA) we are required to operate in within UK Airspace to segregate the activity from Manned Aircraft. For 90% of the routes below the Drone will be operated in Conjunction with Aberdeen Radar. You will see in the North East Corner of TDA F, that we wish to operate in Airspace which is under the Lurisdiction of Ayinor. We are requesting permission. I have attached a DRAFT UK Airspace Change Proposal which will hopefully answer some of your questions.





Yes, I can probably assist. I'll have a look at the coordinates and get back to you, but just from looking at the map it looks like we have to involve Tampen HFIS as well. At times there is a lot of helicopter-activity in Tampen HTZ, including an S-92 SAR helicopter. I'll get back to you within a few days.



Thank you very much for looking at this for us.

I think the main thing from our point of view is:

If ABERDEEN Radar or Flylogix(the Drone Operator) give AVINOR phone updates on the Drone position, ie, entering Norwegian Airspace, on Task, vacating the airspace would that work? The premise would be that any SAR etc would have priority so if there was any conflicting aircraft the simple answer would be that the Drone would remain within UK Airspace.

Happy to discuss and if you need any more information then please contact me.



Sent from Outlook for iOS



Sent: Monday, February 19, 2024 2:54 PM

To: Smudger <simonsmith@blackswansl.com>
Subject: SV: UK ACP-2023-083 BVLOS Drone METHANE Monitoring Northern North Sea

Good atternoon, I had a close relook at the coordinates, and they are a little further north than I initially thought. This is a good thing because it means you will stay clear of the platforms within Tampen HTZ (see photo). However, there is an upcoming change to Tampen HTZ and in May/June it will increase in size and touch slightly into TDA F. Tampen will also at times have drone-activity so a coordination will be required.

We would like a phone call prior to the Fylogix drone entering Norwegian Airspace and another phone call when the drone is back in UK airspace. As for the rest of the TDA's they seem to be within UK airspace, but some are close to the Median line. As with previous Fylogix operations we do not need a phone call when those TDA's become active but should the drone for some reason stray outside the TDA we require a phone call as soon as possible.



Fw: UK ACP-2023-083 BVLOS Drone METHANE Monitoring Northern North Sea



ery much for that information and your very pragmatic approach. Much appreciated.

in thinking that the Liaison calls to "Polaris ACC", suggested by Oyvind would be made by the Remote Pilot?



BBGA



Out of interest we have an alliance which is GA4Biz GA4Biz GA4Biz - GA4Biz. As such we work closely together, hence I have also copied in the CEO of ARPAS for information so we can see what is happening.

Good luck with your activities.

Kind Regards





We have sent the below information to BHA and welcome a conversation to understand any feedback that the organisation may have. With regards to ARPAS we have already forwarded the email to Rupert Dent but again we would welcome any correspondence with Graham on behalf of ARPAS.

Would you like us to keep you informed of the engagement material following our Assessment Meeting with the CAA or are you content that we liaise with BHA and ARPAS who will represent your interests also?

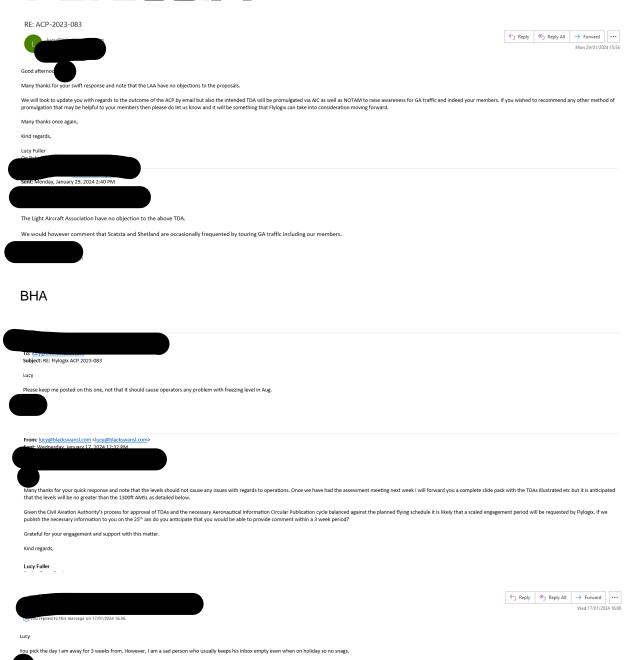
Many thanks for your assistance with this and very kind regards,

Lucy Fuller
On Behalf of Flylogix Holdings Ltd. lucy@blackswansl.com +44(0)7773652029

LAA

← Reply ≪ Reply All → Forward ···



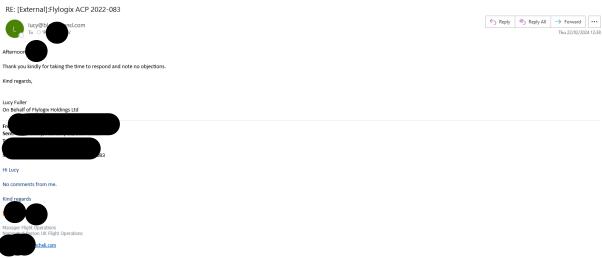


STAKEHOLDER RESPONSE EVIDENCE IN SUPPORT OF PARA 5.2

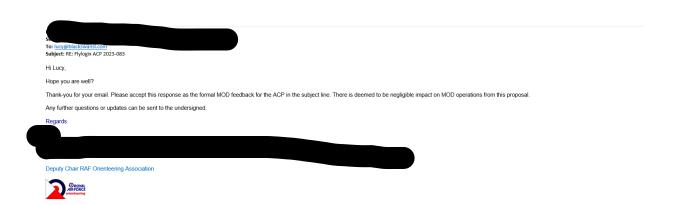
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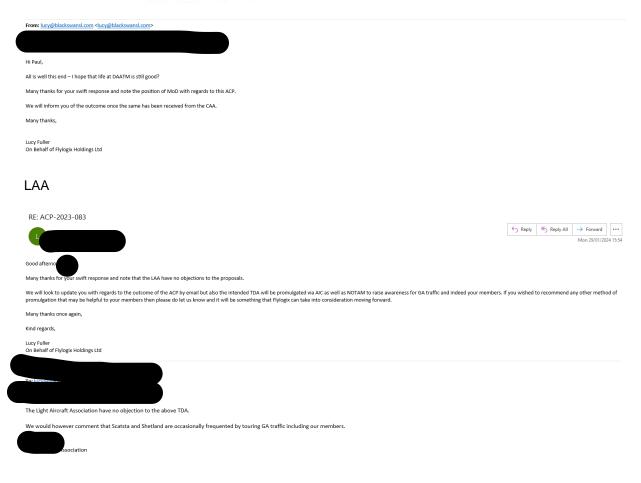




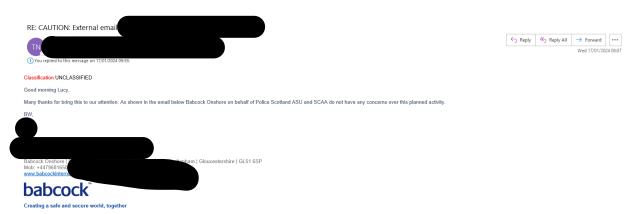
DAATM





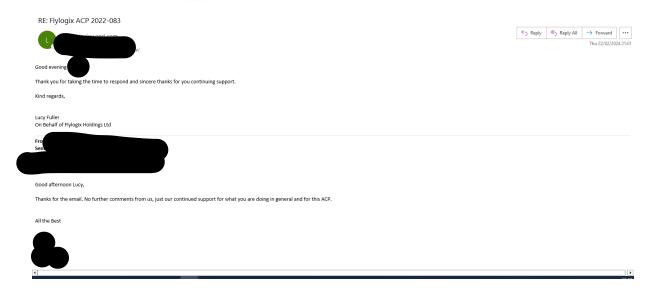


BABCOCK



RPAS UK





BGA



PDG Aviation







I've been given your contact details from Sumburgh airport who have identified you as a potential stakeholder for a proposed TDA that Flylogix has submitted to the CAA under ACP 2023-083. Flylogix have been contracted for UAS flights to the East and West of Shetland from May 2024 and Jul 2024 to conduct methane monitoring to platforms in the Northern North Sea. The UAs will operate from Scatsta Airport and the operations will be conducted in a Temporary Danger Area [TDA). This operation will mirror the operation that took place Autumn last year from Scatsta Airport with a slight variation in the location of some of the platforms, and therefore slighty different in some of the TDA locations – see below.

It is anticipated that the same operating procedures will be used and the same platform (FX2) will be used. Flylogix is in the process of securing the appropriate authorisations from the CAA for these operations. It should also be noted that the UA will be fitted with ADS-B in and a Mode-S & ADS-B transponder. To limit the impact of the TDA on other air users, Flylogix applies the following design principals:

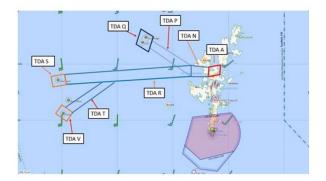
- Minimise the volume of airspace, including both footprint and altitude
 Segment the TDA so that only the sections required for a specific flight are activated and to simplify the Danger Area Crossing Service

Proposed Design





The proposed TDA is broken into 11 segments. Segment A covers Scatsta Airport and onshore. Segments A, and B have minimal land coverage, C - M are all offshore.



- All TDA segments are established between SFC 1300ft AMSL.
- The TDA will be in place from beginning May 24 until end July 24 (notification will be given if this changes in the final submission) and will be cancelled before this date if all operations are completed.
- Flylogix has engaged with Aberdeen Radar to provide a Danger Area Crossing Service during the periods the TDA is active. The frequency for the service will be published on the NOTAM and in the AIC along with Flylogix contact details.
- Flylogix will be available for direct contact by telephone before and during operations if additional information is required

Segments A. B & N

Segments A, B & N have been designed to ensure they do not cover any other airfields and make it as easy as possible for other aircraft, for example when coast following, to fly over the TDA. The rationale for their features is as follows:

Established from SFC – 1300ft AMSL. The UA will operate at up to 800ft in this segment and a 1300ft ceiling allows for 500ft separation.

Segments C - M, P-V

Segments C - G and I are airspace corridors for transit to offshore assets East and West of Shetland. The rationale for their features is as follows:

- Established from SFC 1300ft AMSL. The UA will operate at up to 800ft in this segment and a 1300ft ceiling allows for 500ft separation.
- Due to the wider dispersal of assets West of Shetland, these TDA segments were designed as direct corridors to simplify the TDA complex and the subsequent provision of DACS
- The shape of these segments is such that when active, any activity at 3rd party offshore structures/assets, their HTZs or helicopter operations in the Shetland area of the North Sea are minimally impacted.

Planning and Notification

Flights will be between 3 hours and 4.5 hours long. The TDA will be activated 30 minutes before take-off and end up to 3 hours after the last scheduled landing time. This contingency will be determined by weather forecast and, in the case of flights to oil and gas facilities, by the uncertainty in helicopter flights and other operations at these facilities. If the UA lands before the end of the TDA activation, Flylogix will inform ATC and request of the CAA that the NOTAM is cancelled.

Flylogix may sometimes conduct multiple flights in a single day. During the 90 day period in which the TDA will be published, Flylogix plans to carry three periods of flights which indicatively are currently planned for 2 May to 19 May 24, 30 May to 16 Jun 24 and 28 Jun to 14 Jul 24 (subject to weather and serviceability).

To activate the TDA, a NOTAM will be published at least 24 hours in advance of planned flights detailing activations times. If UA activity is cancelled for whatever reason, we will request the NOTAM is cancelled.

I look forward to chatting through the above with you.

Kind regards