



# ACP-2021-030 Radnor BVLOS TDA



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## **Abbreviations**

Abbreviation	Meaning
ACP	Airspace Change Proposal or Airspace Change Portal
AGL	Above Ground Level
AMSL	Above Mean Sea Level
ATPL(A)	Air Transport Pilot's Licence (Aeroplane)
ATPL(H)	Air Transport Pilot's Licence (Helicopter)
ATSU	Air Traffic Service Unit
ATZ	Aerodrome Traffic Zone
BOCAS	Base of Controlled Airspace
BVLOS	Beyond Visual Line of Sight
CAA	Civil Aviation Authority
CADS	Centralised Aviation Data System
CUAS	Counter Unmanned Aerial System
DAAIS	Danger Area Activity Information Service
DACS	Danger Area Crossing Service
EOP	Emergency Operating Procedure
EVLOS	Extended Visual Line of Sight
GA	General Aviation
LoA	Letter of Agreement
MESA	Minimum Enroute Safety Altitude
NATMAC	National Air Traffic Management Advisory Committee
NOTAM	Notice to Airmen
OEM	Original Equipment Manufacturer
SA	Situational Awareness
SoN	Statement of Need
TDA	Temporary Danger Area
UAS	Unmanned Aerial System



## Section One - Introduction

## The Sponsor

ACP-2021-030 is sponsored by Nexus Nine Ltd. The Sponsor has a history of safely operating UAS within the Radnor site and more widely in the UK. The Sponsor operates both fixed and multi-rotor platforms, exclusively in the sub-25 kg category. Nexus Nine was granted Enhanced Permissions by the CAA in October 2020 which includes reduced separation, increased height, EVLOS and BVLOS permissions. The cadre of personnel at Nexus Nine includes former CAA UAS Inspectors, active ATPL(A) and ATPL(H) holders, flying instructors, GA operators and certified test & evaluation personnel.

#### The Need

The sponsor is seeking segregated airspace via a TDA to conduct BVLOS UAS operations from its test site at Radnor. An initial application for a TDA was submitted on 5 April 2021.

The application SoN is as follows:

"The Sponsor intends to conduct both BVLOS training and evaluation activity in and around the area of Radnor Range. Due to the substantial terrain within the range complex and its surrounding area it is necessary to conduct a series of test flights to establish operating ranges and heights for a variety of UAS platforms. This is coupled with the identification of potential locations to site signal rebroadcast stations, thus ensuring signal continuity. Whilst initial testing can utilise EVLOS mitigations, the operating ranges, scale and type of terrain within the intended area make it impractical for all analysis. The results of this short testing period, scheduled to begin in October 2021 for up to 90 days, will inform a subsequent application for Trial Airspace and a potential permanent airspace change request within the same locality.

Whilst airspace use will be kept to a minimum, a suitable means of segregating these BVLOS UAS tests from other air users is required to mitigate against the risk of mid-air collision."

Due to a delay in case assignment it was noted that the proposed October 2021 timeline was unachievable; the Sponsor amended this to follow on from a concurrent ACP. An initial assessment meeting was conducted on 5<sup>th</sup> July 2021 where the CAA deemed that the SoN did meet the requirements of the CAP 1616 process and was suitable to proceed to the next stage. The requirements of the Targeted Engagement were outlined to the Sponsor by various section representatives from the CAA.

## The Location – Radnor Range, New Radnor, Radnorshire

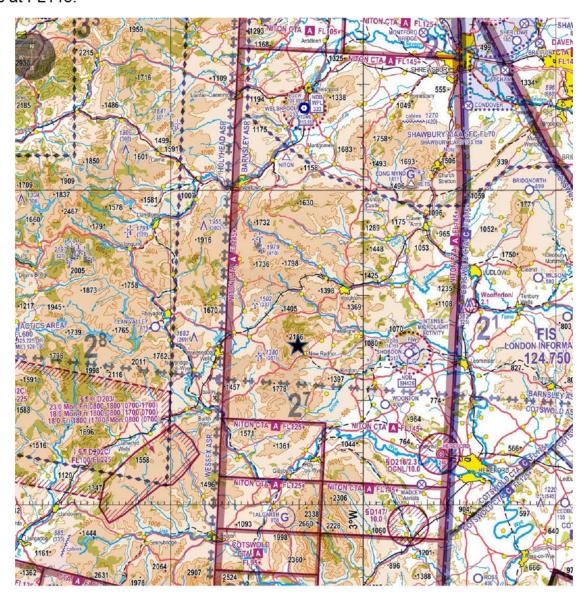
Radnor Range originally opened as a test facility in the 1920s where it has a long history of conducting munitions and rocket motor evaluations. The current owners, Radnor Range Limited, took over in 2006 continuing its vital work within the explosives test arena. The Sponsor has conducted UAS operations out of the Radnor site for approximately 18 months, having identified its potential for both UAS training and for test and evaluation of CUAS systems.

Radnor Range sits within a Y-shaped valley, surrounded by terrain of approximately 1100' above the valley floor, in rural East Wales. The A44 provides access to Radnor Range and lies 1nm immediately South of the Range. The nearest hamlet is that of



New Radnor 1.25nm to the South-East, with the nearest significant urban area being the town of Kington 6nm South-East.

Radnor Range is located in Class G airspace with the nearest airfields being Shobdon some 11nm to the East and Welshpool 22nm North; BOCAS above Radnor is at FL145.



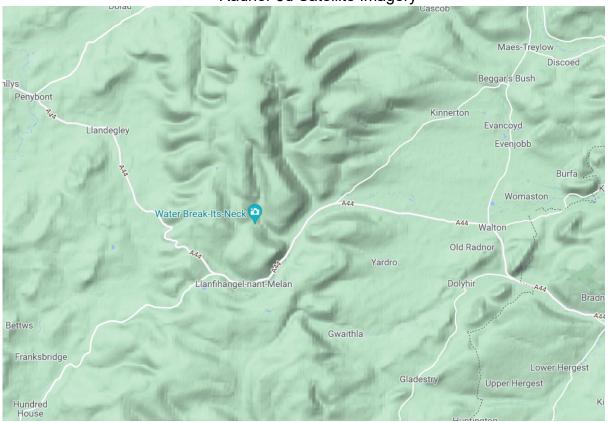
## **Initial Proposal**

The Sponsor initially proposed a 3nm TDA centred on Radnor Range (N52°14.89 W003°10.77), active from the surface to 3500' AMSL. Whilst the TDA would be valid in the AIP for 90 days, the Sponsor plans on using it for approximately 18 of those 90 days. The TDA would be activated by NOTAM. A map of the proposed TDA and its proximity to surrounding airspace is given below. The TDA sits under controlled airspace (base FL145). Nearest lateral airspace is that of Shobdon's ATZ 11nm East and Sennybridge Danger Area (D203) 13nm South-West.



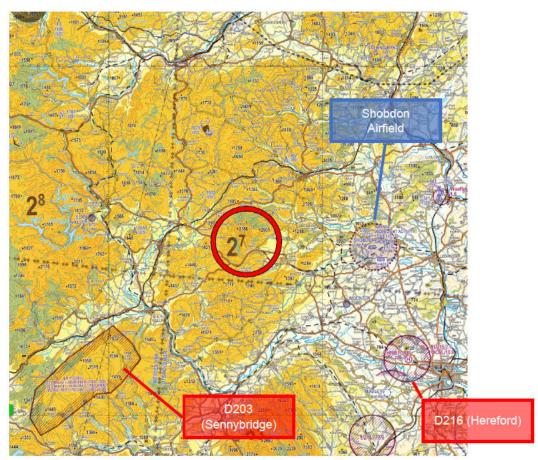


Radnor 3d Satellite Imagery



Radnor Local Area





Radnor Initial Proposed TDA & Surrounding Airspace



## Section Two – Targeted Engagement Strategy

## **Aviation Stakeholders**

Both national and local Stakeholders were approached as part of the Sponsor's Targeted Engagement strategy. The CAA's NATMAC list was used to identify a number of national organisations that would reflect the variety of aviation users within the area. This was coupled with a more local approach encompassing 2 civilian airfields and a military helicopter base located nearby.

The Sponsor submitted a proposed list of targeted Stakeholders to the CAA Engagement Team to seek guidance on their suitability. At their suggestion a number of additional Stakeholders were included to a total of 18 aviation representatives.

The initial list of contacted Stakeholders is as follows:

Stakeholder	Туре
658 Sqn, Army Air Corps	Local
Aircraft Owners & Pilots Association	National
Airspace4All	National
Babcock Mission Critical Services Onshore (HEMS)	National
British Helicopter Association	National
Cardiff Airport	Local
General Aviation Alliance	National
Heliair (Pipeline patrol)	National
Helicentre (Pipeline)	National
Maritime & Coastguard Agency	National
Ministry of Defence DAATM	National
National Grid (Powerline)	National
National Police Air Service	National
National Air Traffic Service	National
PDG Helicopters (Railtrack patrol)	National
Shobdon Airfield	Local
Specialist Air Services (HEMS and Children`s Air	National
Ambulance)	
Western Power (Powerline)	National

It should be noted that for those national Stakeholders, concurrent engagement was conducted in support of ACP-2021-029 (Moreton-In-Marsh BVLOS UAS TDA). This was to minimise the burden of providing feedback to 2 separate, yet similar, ACPs on 2 different occasions. This was well received by those busy national organisations.

The Sponsor also received a number of enquiries via the CAA Airspace Portal. Each enquiry was added to our record of Stakeholders and their thoughts regarding this ACP were discussed. All feedback received is included in our submission.

## **Local Community Stakeholders**

Local community engagement is not a requirement under the CAP 1616 Targeted Engagement. However, the Sponsor thought it important to include the local community surrounding Radnor to advise them of the potential for UAS activities and



address any concerns they might have as a result of the ACP. Radnor Range Ltd have a good working relationship with the local community, hence the Sponsor was keen to maintain this with good communication. Consequently, the Parish Council of New Radnor was contacted for their thoughts. Due to the scheduling of Council meetings, the Sponsor extended the feedback period to facilitate New Radnor's input; their feedback is included in our submission.

## **Engagement Period**

The Sponsor elected to complete an 8-week continuous Engagement Period from 16th August to 10th October 2021. The Sponsor believed this duration of engagement was proportionate to the nature of the ACP and was sufficient to allow all potential Stakeholders to have the opportunity to respond. This period also allowed the Sponsor to undertake meaningful, in-depth engagement, so Stakeholders' thoughts could shape the final submission for this ACP. All engagement materials were distributed via publicised email addresses on either the NATMAC Distribution List or respective organisation websites. An example of the engagement material can be found at Appendix A; for local community Stakeholders the proposal was explained in a more appropriate, less aviation-orientated manner. For those organisations that had not responded by 13th September 2021 (approximately halfway through the Engagement Period), a hastener was sent out encouraging engagement.

#### Airspace Change Portal

Initial documentation was uploaded to the Airspace Change Portal prior to commencing the Engagement Period. Due to a technical difficulty, the Sponsor did not upload a copy of the Stakeholder Engagement Letter until 31<sup>st</sup> July 2021, approximately 2 weeks into the Engagement Period. However, with 6 weeks still remaining of the Engagement Period, the Sponsor did not feel that Stakeholders were denied the opportunity to reply using the portal; indeed, many did use this method across both ACPs.

One Stakeholder requested that a copy of the presentation given at the Assessment Meeting was uploaded to the Portal. This was not originally uploaded by the Sponsor as they believed it would cause confusion to Stakeholders. Such confusion related to the presentation referencing up to 3 sequential ACPs for the Radnor location as part of a medium-term plan that the Sponsor outlined to the CAA.

Nonetheless, and although not mandated, in the interests of transparency the redacted presentation was uploaded on 26 September 2021 (2 days after the request) and with 15 days of the Engagement Period remaining. The Sponsor would wish to highlight that all relevant information regarding this ACP was contained within the original Stakeholder Engagement Letter and the CAA approved Assessment Meeting minutes.

A redacted version of this Final Airspace Submission will be uploaded to the Airspace Change Portal once it has been submitted to the CAA. Names and contact details of Stakeholders will be protected.

#### Feedback

A feedback form was included at the end of the Stakeholder Engagement Letter. Whilst some Stakeholders utilised this form, others chose to write their feedback in



email form. All engagement replies were collated for inclusion into this report. Feedback has been categorised by the typical groups who replied to the Sponsor. This aims to provide generalised thoughts and concerns from each representative group, thus ensuring a balanced view.

## **Sponsor Engagement**

The Sponsor very much saw the Targeted Engagement as a two-way process. Some Stakeholders contacted by the Sponsor had no concerns with the ACP; others had taken the time to detail a number of issues the ACP presented for their organisation and/or the wider aviation community.

The Sponsor endeavoured to fully understand these issues and suggest suitable mitigations to alleviate some of the drawbacks this ACP might bring alongside planning considerations already made by the Sponsor. Indeed, as can be seen from the final ACP design, the Sponsor has endeavoured to show flexibility and, to some degree has compromised their capability, in order to minimise disruption to other aviation users. It was however, clear that compromises could not be met with all Stakeholders. Notwithstanding this, the Sponsor wishes to thank all respondents to this ACP for their invaluable input into the process.



## Section 3 – Summary of Feedback

#### Introduction

This section seeks to categorise the different Stakeholders consulted and give generalised feedback of the concerns and issues that the Stakeholder raised with respect to ACP-2021-030. Whilst all feedback received from every Stakeholder is enclosed at Appendix B, the Sponsor has identified consistent themes or flight safety related issues that it feels should be raised within each Stakeholder group. The Sponsor will demonstrate solutions or proposed mitigations to the Stakeholder concerns as well as detail agreements that will be put into place, should this ACP be approved.

## Measuring Feedback

A measure of the impact of this ACP can come from the volume of responses. Notwithstanding this, the Sponsor has endeavoured to understand the consequence of this ACP on those airspace users. The Sponsor is in no doubt, <u>any</u> additional airspace will have a detrimental affect on the freedoms of <u>all</u> Stakeholders. In measuring the impact of this ACP on each Stakeholder group the Sponsor seeks to address 2 criteria:

Does this ACP create unreasonable disruption to the Stakeholder?

And perhaps more crucially,

2. Does this ACP present an unacceptable Flight Safety risk to the Stakeholder?

#### Stakeholders

#### **Emergency Services**

Stakeholder	Contact Means	Stakeholder Responded
, HEMS Babcock	Direct	Yes
, HEMS Specialist Air Services	Direct	Yes
, National Police Air Service	Direct	Yes
, Maritime & Coastguard Agency	Direct	Yes

#### Method of Engagement

Initially via email, with some telephone conversations with HEMS Babcock to facilitate understanding of the operating procedures of their aircraft and onboard mission capabilities. A record of telephone decisions was formalised in a subsequent email to ensure a full record is maintained.

Both Specialist Air Services and the Maritime & Coastguard Agency confirmed that there would be no impact on their operations; their confirmatory emails are at Appendix B.



## Key Issues

- 1. Access to the TDA in the event of a HEMS tasking
- 2. Access to the TDA in the event of an NPAS tasking

#### Sponsor Response

- 1. The Sponsor has agreed, with HEMS Babcock, a robust system for requesting access to the TDA, the cessation of UAS operations, clearance into the area and reestablishment of the TDA post HEMS operations. This process involves the HEMS Air Desk contacting the published operator's contact mobile/satellite phone to coordinate access. This process will be formalised into an LoA to ensure all parties understand their responsibilities.
- 2. NPAS aircraft are equipped with onboard communication systems that will enable them to call the designated operator mobile/satellite phone directly. UAS activity will cease until the NPAS tasking has been completed and the aircraft has departed the area. This process will be formalised into an LoA to ensure all parties understand their responsibilities.

## Disruption to the Stakeholders

Due to the remote location and low population density of the Radnor site, it is exceptionally unlikely that a tasking will occur in this locality. Given the distances emergency services aircraft must transit to get to the TDA, the Sponsor assesses there will be ample time for the co-ordinated cessation of UAS activity. The nearest aviation asset is the Air Ambulance located at Welshpool, with an approximate 10-minute transit time to Radnor. The Sponsor estimates that it would take 6 minutes to recover a UAS from the furthest extremity of a 3nm TDA. Consequently, little or no delay is anticipated for emergency service aircraft accessing the TDA. At a maximum of 3nm radius, the TDA may require emergency service aircraft to route around the TDA if transiting to a tasking. At 120kt cruise speeds it is calculated that routing around the TDA will add 90 seconds to transit times over a direct routing.

#### Mitigations:

- 1. LoAs with Babcock HEMS and NPAS to clarify procedures for accessing TDA.
- 2. Detail of procedure available to HEMS Air Desk and Remote Pilot.
- 3. Provision of a DAAIS to aid awareness for HEMS/NPAS task planning.

#### Flight Safety risk to the Stakeholders

The Sponsor has agreed a robust means of segregating UAS activity from emergency service aircraft. A clear LoA between the Sponsor and emergency service operators will ensure that all parties understand their responsibilities to allow swift, yet safe access to the TDA. Outside the TDA, there is 5nm of lateral separation between the eastern edge of the TDA and Shobdon Airfield, and 10nm separation between the south-western edge of the TDA and Sennybridge Danger Area (D203). The sponsor believes these lateral distances allow suitable separation, thus there is no significant increase in risk of mid-air collision with local traffic. HEMS and NPAS crews have onboard electronic flight bags with the ability to interrogate the NOTAM system whilst airborne, thus minimising the risk of



inadvertently infringing the TDA. Sponsor EOPs detail actions required in the event of an airspace infringement.

## National Air Traffic Services

Stakeholder	Contact Means	Stakeholder Responded
National Air Traffic Services	Direct	Yes

## Method of Engagement

All communication via email from NATMAC contact list. A hastener was sent to the Stakeholder on 13<sup>th</sup> September 2021, but no response was received.

Notwithstanding this, the Sponsor also contacted London Information by email with respect to the provision of a DAAIS for the proposed TDA; their response is at Appendix B.

#### Key Issues

Provision of a DAAIS.

## Sponsor Response

 London Information has agreed to provide a DAAIS for the proposed TDA. A NOTAM must also be submitted by the Sponsor.

#### Disruption to the Stakeholders

No impact envisaged.

#### Flight Safety risk to the Stakeholders

No impact envisaged.

#### Ministry of Defence

Stakeholder	Contact Means	Stakeholder Responded
Sqn Ldr , SO2 Airspace Strategy, DAATM	Direct	Yes
Sqn Ldr , SATCO, RAF Benson	Direct	Yes
Training Officer, 658 Sqn Army Air Corps	Direct	Yes

## Method of Engagement

Initial Stakeholder Engagement email to DAATM with additional discussion raised as part of ACP-2021-029 (Moreton-In-Marsh) by SATCO, RAF Brize Norton.

Consequently SATCO, RAF Benson requested clarification regarding co-ordination with National Standby crews.

The Training Officer at 658 Sqn was initially contacted by telephone (9 Sep 21), due to an ongoing relationship they already have with Radnor Range Ltd. The ACP was



discussed with no issues raised; the Training Officer requested a copy of the Engagement Letter which was emailed to him. No further correspondence was received from 658 Sqn.

#### Key Issues

1. Access to the TDA in the event of a National Standby or operational tasking

## Sponsor Response

1. As can be seen from the email trail, the MoD is content with a general principle to route around the proposed TDA in most instances. It is exceptionally unlikely that a National Standby or operational tasking will require access within the TDA. Notwithstanding this, if required, the MoD will contact the on-site pilot via the published mobile/satellite number to arrange the collapse of the TDA, much in the same way as the emergency services.

#### Disruption level to the Stakeholders

658 Sqn, AAC already have an active working relationship with Radnor Range Ltd with established lines of communication. Particularly, given the distance from National Standby aircraft bases, it is assessed that routing changes around the TDA will cause negligible disruption. Similarly, for access to the TDA, helicopters will have ample opportunity for the TDA to be collapsed prior to their arrival.

## Flight Safety risk to the Stakeholders

The Sponsor believes that with the low density of MoD traffic operating in this locality there is no significant additional flight safety risk regarding this ACP. MoD aircraft already deconflict from emergency services and other military users utilising the CADS online system enabling them to identify other low-level aviation users. The MoD do not typically operate in the same height band as GA, but nonetheless have ample lateral separation to deconflict if required.

### Commercial Operators

Stakeholder	Contact Means	Stakeholder Responded
, Heli Air Limited	Direct	Yes
, Heli Centre Pipeline Inspections	Direct	Yes
, National Grid	Direct	Yes
, PDG Helicopters (Railtrack Patrol)	Direct	No
, Western Power	Direct	No

#### Method of Engagement

All communication via email; there were few issues with the Stakeholders that replied, hence engagement was relatively brief. A hastener was sent to the 2 non-respondents on 13<sup>th</sup> September 2021, but no response was received.



#### Key Issues

None identified.

## Sponsor Response

None required.

## Disruption level to the Stakeholders

No pipeline or high voltage assets in this location.

## Flight Safety risk to the Stakeholders

Stakeholders are unlikely to even transit through this geographical area.

## Local Airfields

Stakeholder	Contact Means	Stakeholder Responded
, Operations Manager, Shobdon Airfield	Direct	Indirect
, Senior Air Traffic Control Officer, Cardiff Airport	Direct	Yes

## Method of Engagement

All communication via email. Whilst no formal feedback was received from Shobdon Airfield, the Sponsor believes some GA operators from the site contacted us as a result of the dissemination of information by the airfield. Such correspondence has been associated to their respective GA organisations later in this report. As can be seen from dialogue with Cardiff Airport, whilst initially contacted to evaluate the potential impact for their operations, the Sponsor additionally approached them to request they consider the feasibility of providing a DAAIS for the TDA.

#### Key Issues

Provision of DAAIS.

#### Sponsor Response

It was agreed that Cardiff would be unable to provide a suitable DAAIS. Due
to the distances involved, intermediate terrain and limitations of their
communications and radar systems the Sponsor agreed to find an alternative
DAAIS provider.

## Disruption level to the Stakeholders

No issues raised by Shobdon and sufficiently displaced from Cardiff as to not affect their operations.



#### Flight Safety risk to the Stakeholders

Shobdon-based traffic will likely be in contact with Shobdon Radio or may contact London Information as the DAAIS provider. Either ATSU will provide SA as to other traffic operating in the locality.

## National General Aviation Bodies

Stakeholder	Contact Means	Stakeholder Responded
, Aircraft Owners & Pilots Association	Direct	Yes
, British Helicopter Association	Direct	Yes
, Airspace4All	Direct	No
, General Aviation Alliance	Direct	Yes
, British Gliding Association	ACP Portal	Yes

#### Method of Engagement

Initially, 4 national aviation bodies were contacted by email. Replies were received from 2 of the organisations. A hastener was sent on 13<sup>th</sup> September 2021 to bodies who had, as yet, not responded. Unfortunately, the Sponsor was unable to fully reply to one Stakeholder due to the Engagement Period ending.

A video conference was held between AOPA, a local Stakeholder and the Sponsor to discuss issues with ACP-2021-029. The Sponsor took this opportunity to equally seek feedback from AOPA as to their stance regarding ACP-2021-030. No concerns were raised by AOPA regarding this ACP.

As a result of seeing the ACP on the CAA's ACP Portal, the British Gliding Association (BGA) contacted the Sponsor directly by email.

## Key Issues

- Alleged breach of CAP 1616 Delayed upload of Assessment Meeting Presentation. The GAA highlight that the Assessment Meeting supporting presentation was not uploaded by the Sponsor until 26 September 2021.
- 2. Alleged breach of CAP 1616 The contents of the Assessment Meeting presentation differ significantly from the ACP.

#### Sponsor Response

1. The Sponsor's adherence to CAP1616 will be determined by the Regulator.

#### Disruption level to the Stakeholders

Whilst the TDA may cause some disruption to Stakeholders, it is anticipated that the estimated 5% utility of this TDA, combined with the design changes outlined in Section 5, will significantly reduce this.



## Flight Safety risk to the Stakeholders

No Flight Safety risks were identified as a result of engagement with National GA Body representatives.

## Local General Aviation Users

Stakeholder	Contact Means	Stakeholder Responded
, Herefordshire Gliding Club	Indirect	Yes
, British Hang Gliding & Paragliding Association	ACP Portal	Yes
, British Microlight Aircraft Association	ACP Portal	Yes
	Unknown	Yes
, Glider Pilot	Unknown	Yes
, GA Pilot	ACP Portal	Yes

## Method of Engagement

All engagement with the above Stakeholders was conducted via email. As can be seen above, a number of users utilised the CAA ACP Portal as a means of contacting the Sponsor regrading this ACP.

All Stakeholder engagement received within the Engagement Period has been included at Appendix B. Unfortunately, due to some queries being received in the final couple of days, the Sponsor was unable to reply before the Engagement Period closed.

#### Key Issues

- Impact on recreational users. A number of Stakeholders raised concerns at how the TDA might impact their operating areas and was seen as an airspace 'grab'.
- 2. Concerns over electromagnetic effects for Stakeholders operating near the TDA.
- 3. Lack of engagement with some Stakeholder groups. Some Stakeholders felt that the Sponsor should have engaged more widely for this ACP.
- Alternative locations are available. Stakeholders identified that other areas are available for UAS test, such as Llanbedr, where they viewed this activity could be conducted.
- Typographical errors in Stakeholder Engagement Letter. Stakeholders identified that Moreton-In-Marsh had been incorrectly inserted into a piece of documentation.
- Alleged breach of CAP 1616 Delayed upload of Assessment Meeting Presentation. The GAA highlight that the Assessment Meeting supporting presentation was not uploaded by the Sponsor until 26 September 2021.
- 7. Provision of a DAAIS.
- 8. Alleged breach of CAP 1616 Delayed upload of Stakeholder Engagement Letter. Some Stakeholders felt the upload of the Stakeholder Engagement



Letter to the ACP Portal on 31<sup>st</sup> August 2021 had reduced the length of the Stakeholder Engagement Period to 6 weeks.

## Sponsor Response

- 1. The Sponsor acknowledges that any introduction of additional airspace will have an impact on Stakeholders. The TDA has planned activity of 18 days (out of a possible 90) will not cause significant disruption in this rural location. This impact is further reduced by the TDA being planned in winter months when GA activity is at its annual seasonal low. Nonetheless, the Sponsor has amended the TDA design to further reduce the impact for airspace users during its short periods of activity. Details of the revised design can be found in Section 5.
- 2. The Sponsor clarified that there would be no electromagnetic effects as a result of UAS activity in the proposed TDA.
- 3. As outlined to the Regulator, the Sponsor has somewhat unique requirements for some of their business activities. These make other, commercially available sites unsuitable due to their geography, safety aspects, suitability as test sites and availability.
- 4. The Sponsor accepts these comments as fair and accurate. We apologise for the location error used once in the Stakeholder Engagement Letter.
- 5. Although not confirmed at the time of engagement, a DAAIS provider (London Information) has been secured for this proposed TDA.
- 6. The Sponsor's adherence to CAP1616 will be determined by the Regulator.

## Disruption level to the Stakeholders

The Sponsor is cognisant that an element of disruption would be caused to Stakeholders as a result of this TDA. The Sponsor is committed to accurate and timely issuing of NOTAMs to ensure the airspace is available to other air users outside planned times of operation. The Sponsor is more than happy to work with local Stakeholders to deconflict, where possible, with significant sporting competitions.

## Mitigations:

- 1. Low TDA usage. With only 18 of a possible 90 days of activity planned for the TDA, this amounts to 20% utility. During this period the Sponsor will responsibly schedule activity via the NOTAM system to ensure that within those periods the airspace is utilised and disruption is not unnecessarily caused. Accounting for a daily schedule, the Sponsor estimates utility of the TDA will be approximately 5% within the 90-day window.
- 2. Provision of a DAAIS. London Information have agreed to provide a DAAIS, should the TDA be approved. This will enable timely and accurate information to be available to Stakeholders. This will be coupled with a contact telephone number available during periods of operation; this will be published via the NOTAM.
- 3. Amending the TDA design. Having understood the concerns of some Stakeholders, the Sponsor has created a more flexible design of TDA. This



- will enable the Sponsor to meet their test objectives, but moreover, further reduce the impact on other air users. Details of the amendments can be found in Section 5.
- 4. Continued Stakeholder Engagement. The Sponsor will publish activity as far in advance as practical, but also would welcome the chance to engage with organisations such as the BHPA, BMAA and Herefordshire Gliding Club. This may enable the timely deconfliction of planned GA events.

## Flight Safety risk to the Stakeholders

Whilst there are a number of local Stakeholders within the Radnor area, this remains a relatively low-density area of aviation activity. The Sponsor believes there is adequate lateral separation from features such as Shobdon Airfield, D203 and D216. The nature of the hilly/mountainous terrain in this location also leads transiting GA to utilise altitudes of approximately 3500', thus requiring a good VFR day to transit the area.

#### Community Engagement

Stakeholder	Contact Means	Stakeholder Responded
New Radnor Parish Council	Direct	Yes

#### Method of Engagement

Radnor Range Ltd sits within a largely rural area. The only habitation of notable size within the bounds of the proposed TDA is the village of New Radnor. The Sponsor approached the Clerk to New Radnor Parish Council to understand any potential impacts on the local community. Due to Parish Council meeting schedules, the next available opportunity for discussion of our proposal was outside the Engagement Period. The Stakeholder requested to submit a response on 15<sup>th</sup> October 2021 which the Sponsor gratefully accepted.

#### Key Issues

None identified.

### Sponsor Response

None required.

#### Disruption level to the Stakeholders

No issues raised by the Parish Council. The Sponsor also highlights that flight near the village of New Radnor would be avoided in any instance.

## Flight Safety risk to the Stakeholders

Not applicable.



## Section 4 – Other Considerations

## **Environmental Impact**

Under the requirements of CAP 1616 the Sponsor is required to make a noise impact assessment as a result of operations within the proposed TDA. Other environmental factors such as CO<sup>2</sup> emissions, local air quality and tranquillity are not required in this strand of the CAP 1616 process.

## Drone Flyover Noise Exposure

The Sponsor intends to operate a variety of both fixed and multi-rotor platforms within the TDA at a variety of heights. Rather than assessing the implications of each platform the sponsor has taken the data provided by the CAA with relation to drone flyover noise exposure and applied it to our platform that is deemed to be the loudest. Whilst specific data is not available for each individual platform, the Sponsor believes the data available is comparable to that of our Vulcan Raven Octocopter, which is of similar dimensions and weight.

The formulas for Noise Exposure ( $L_{Aeq16h}$ ) and Sound Exposure Level ( $SEL_{avg}$ ) is given by:

$$L_{Aeq16h} = SEL_{avg} + 10 \times log_{10}N - 47.6$$

Where SEL is the average Sound Exposure Level for operations between 0700-2300 N is number of operations between 0700 and 2300.

$$SEL = L_{ASmax} + (2.4 + 0.03897 \times height - 0.0000541 \times height^2)$$

Our Vulcan Raven has a L<sub>ASmax</sub> of 64.1 at 400 feet. Whilst we might reasonably expect to conduct 20 sorties within a day, it should be noted that these will not all be conducted by this larger platform, nor will they all be conducted in the same direction. The Sponsor has, therefore, adjusted the flyover events to an average of 8 events per day to reflect this ability to both 'spread' the operating area and fly quieter platforms. Our calculated L<sub>Aeq16h</sub> at 400' operating height is therefore:

$$L_{Aeq16h} = 64.1 + (2.4 + 0.03897 \times 400 - 0.0000541 \times 400^2) + 10 \times log_{10} 8 - 47.6$$

 $L_{Aeq16h} = 34.86 dB$ 

Furthermore, since the Sponsor intends to fly the platforms BVLOS, it is reasonable to expect operating heights to regularly be in excess of 400'. Consequently, an adjusted SEL value is:

$$SEL = LASmax + 10 = 64.1 + 10 = 74.1$$

Therefore  $L_{Aeq16h} = 35.53 \text{ dB}$ 



Since the Sponsor will be operating multi-rotor platforms a +10 dB tonal adjustment must be made.

 $L_{Aeq16h} = 45.53 \text{ dB}$ 

## Flying Neighbourly

Notwithstanding the calculated figures above, the Sponsor has no specific requirement to fly close to any areas of habitation, livestock or infrastructure. The Sponsor intends to conduct operations over open space, away from people, with the aim to cause least nuisance to the local population. Given Radnor's rural location, this is assessed to be easily achievable.

Furthermore, Radnor is a long-established munitions testing site with explosives regularly being tested on site. Consequently, the local population is used to the noise that such tests bring. The Sponsor assesses that the impact of drone operations is likely to be less intrusive than the ongoing munitions testing.

Notwithstanding this, the Sponsor will set up and publicise, an email address for the local population to be able to feedback to the Sponsor any adverse effects of the UAS activities. This will enable the Sponsor to consider planning around particularly sensitive areas, whilst still achieving the aims of the TDA.

## Effect on Transiting Aircraft

CAP 1616 also requires an assessment on the noise effect of transiting aircraft having to route around the TDA, therefore causing choke points to develop with associated increases in noise. In order to assess this, the Sponsor conducted a Traffic Flow Study. Flying windows on weekdays between the hours of 0900 and 1700 were examined (likely UAS operating times). This aimed to assess how many aircraft would have infringed the proposed TDA on a given day, in given weather conditions. It therefore follows that if the TDA were approved, then a similar number of aircraft would have to route around the TDA, thus causing disruption to the aircraft and associated noise to the local population. The Sponsor used the historical trace feature of the Flightradar 24 package to conduct this analysis. This uses transponder traces to identify aircraft positions and altitudes at any given time. Whilst not all aircraft might be fitted with a transponder, the Sponsor believes this is a fair representation of aviation patterns for transiting powered aircraft and many gliders. The Sponsor elected to conduct this study based in September 2021; this was for a number of reasons:

- 1. Higher volumes of GA activity. Being in the summer months, the Sponsor assesses that more traffic would be airborne, when compared to the proposed TDA timings in the winter of 2021/22. This gives a reasonable, worst-case scenario.
- 2. Reduced effect of lockdown. With many restrictions still in place due to Covid 19 during the winter of 2020/21, the Sponsor felt this would give an unrepresentative view of traffic patterns if analysis were conducted during this time period. Consequently, by using the summer of 2022, a better representation could be achieved.



 Better weather. The terrain around Radnor sits up to 2200' AMSL, requiring aviators to have good weather conditions to operate in the area – thus biasing towards the summer. Traffic modelling without the restrictions of winter cloud, visibility and icing conditions provided a better representation of aviation activity.

Two dates in September 2021 were chosen. One was chosen for good weather conditions that would not have hindered aviation. Crucially, good weather would mean that aircraft would have been able to transit above the TDA (3500' AMSL) if they had chosen to. This gives an indication as to whether the TDA would affect normal traffic flow.

A second date was chosen when cloud bases would have likely prevented VFR traffic from transiting above the TDA, yet would have allowed legal VFR transit above 500' AGL. Consequently, traffic modelled here would have to route around the TDA if it were in place, with associated disruption and noise impact.

Dates were chosen as the first dates in September that met the above criteria. With no historical local weather available at Shobdon or Welshpool, historical data for Cardiff Airport, some 50nm South of Radnor, was utilised. This is the nearest suitable location and sits on a similar longitude. The Sponsor does acknowledge that the terrain may have an impact on local weather conditions but does not envisage this unduly skewing results.

The results of the study are shown below:

## Good Weather Day - Tues 7th September 2021

Time	Callsign	Туре	Flight Level
1429	GBHAA	C152	030
1449	GAVOZ	PA28	030

Total affected traffic in 8-hour window: 2

## Moderate Weather Day – Weds 1st September 2021

Time	Callsign	Туре	Flight Level
1301	VYT779	Texan	FL007
1316	VYT72	Texan	FL008
1509	VYT77	Texan	FL011

Total affected traffic in 8-hour window: 3

Based on the results of this study the Sponsor assesses that there would be a negligible impact on both disruptions to transiting traffic and additional noise footprint for local residents.



#### **DACS Vs DAAIS**

In addition to the Sponsor's views, a number of Stakeholders raised the question as to whether a DACS would be provided for TDA applications. It had been raised by the CAA Case Officer that other TDAs seeking to employ a DACS had encountered difficulties, which in turn disrupted aviation users as they found they were unable to cross TDAs, despite the DACS provision. The Sponsor investigated the requirements of a DACS in terms of infrastructure (especially given the terrain for antennas), training, likelihood of infringement and, most importantly risk of collision with UAS. It is the Sponsor's firm view that, for a TDA only likely to be active for 18 days and 6nm in diameter, that the provision of a DACS is not warranted. The Sponsor believes that the relatively open airspace offers ample space for transiting traffic to route around the TDA with minimal disruption. This is reinforced by the requirement, should a DACS be offered, for the Sponsor to recover their UAS and collapse the TDA prior to aircraft crossing the airspace. The Sponsor believes this TDA collapse process would cause a greater delay to other aviation users than simply routing around. Additional risks for reinstating the TDA post-crossing do not meet the reward for this short duration ACP, in the Sponsor's view. The Sponsor investigated a number of locations for the provision of a DAAIS. Shobdon was ruled out due to terrain masking of radio signals on the Western side of the TDA and their operating hours. Cardiff, whilst having a rebroadcast antenna, has poor radar coverage north of the Brecon Beacons making it unsuitable. After discussions, an agreement was reached with London Information for the provision of a DAAIS for the TDA.



## Section 5 – Final Proposal Design

#### Overview

The purpose of this TDA is to enable the Sponsor to test and evaluate the performance and operating ranges of each of its platforms in the BVLOS environment. With most platforms operating up to 10km (5.4nm) the Sponsor believes a maximum radius TDA of 3nm is reasonable and allows a full understanding of platform capabilities.

The Sponsor has endeavoured to responsibly and respectfully understand the concerns and impact for all Stakeholders when submitting their final design. It is clear that procedures must be put into place to ensure all Emergency Services aircraft can have unhindered access to the TDA as swiftly as possible. Moreover, the frequent local GA user community should not be disrupted any more than is reasonable during this short-duration ACP. The Sponsor has taken on board feedback from both this ACP alongside meaningful engagement suggestions from ACP-2021-029 (Moreton-In-Marsh), with the aim of minimising disruption.

#### **TDA Dimensions**

The Sponsor proposes two concentric TDAs of differing radius; one at 1.5nm and one at 3nm. The 3nm radius allows the Sponsor to test their platforms at suitable range to understand their operating capabilities in the environment. However, some testing will only require shorter range operations. By utilising two different radii, the Sponsor is able to keep as much airspace free for the GA community as possible, activating the larger of the two TDAs only when required. The Sponsor believes the risk of lateral airspace incursion, due to confusion of TDA radius, is outweighed by the reduced impact to airspace users. The severity of an airspace incursion is also mitigated by the Sponsor's CAA approved Operating Safety Case.

Each TDA would still have a ceiling of 3500' due to surrounding terrain. This also reduces the likelihood of confusion for other airspace users around the two TDA parameters.

#### Validity and Activation

Whilst the TDAs would be valid in the AIP for 90 days, the Sponsor plans on using them for approximately 18 of those 90 days. Additional dates may be utilised within the 90-day window of validity if flying has been lost due to, for example, weather. The TDAs would be activated by NOTAM and the Sponsor would schedule these both simply, to avoid confusion, yet sympathetically, so as not to block out airspace when activity is not taking place. An example might be 0900 to 1130 and 1300 to 1530 thus enabling a 5-hour flying day with a break in the middle.

A telephone/satellite phone number will be provided for the on-site Remote Pilot for the duration of daily activity.

#### **DAAIS**

A DAAIS will be provided by London Information on 124.75 for the duration of activities. If planned flying is curtailed or cancelled then London Information will be informed to ensure the airspace is made available to other airspace users.



## **Letters of Agreement**

LOAs will be written for HEMS Babcock and NPAS to ensure swift, safe access to the TDA.

#### Stakeholder Feedback

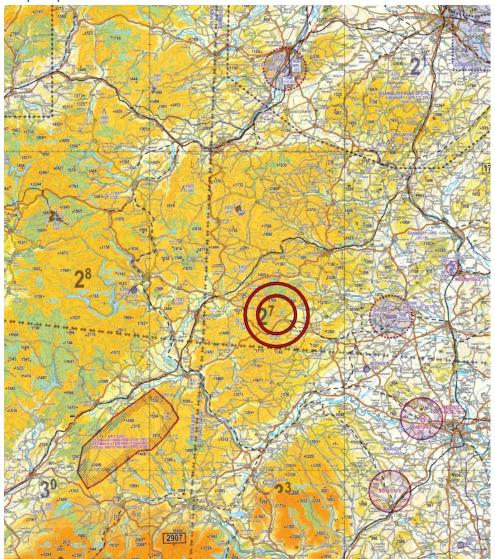
The email address <a href="mailto:radnorfeedback@nexusnine.co.uk">radnorfeedback@nexusnine.co.uk</a> will be publicised for Stakeholders to feed back to the Sponsor during the TDA activity window. Where possible, the Sponsor will engage with local GA organisations and UAS operators regarding proposed TDA activation times.

## Complaints

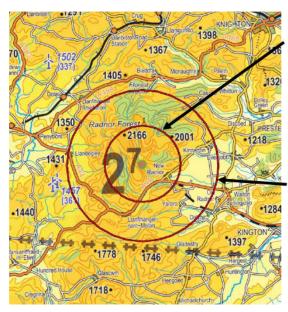
The Sponsor is committed to responsible utilisation of airspace in a professional manner. Should a Stakeholder wish to raise a formal complaint regarding UAS activity, they may do so utilising the email address

<u>radnorcomplaints@nexusnine.co.uk</u>. All Stakeholders raising a complaint will be replied to and the Sponsor will discuss potential solutions. A record of all complaints will be held by the Sponsor.

## **Map Representations**







## TDA<sub>1</sub>

1.5nm centred on Radnor Range (N52°14.89 W003°10.77)

Surface to 3500' AMSL.

Activated by NOTAM.

DAAIS: London Information 124.75

## TDA 2

3.0nm centred on Radnor Range (N52°14.89 W003°10.77)

Surface to 3500' AMSL.

Activated by NOTAM.

DAAIS: London Information 124.75



## Appendix A – Radnor Stakeholder Engagement Letter



16th August 2021

## Airspace Change Proposal (Temporary Danger Area)

Engagement Period: 16th August - 10th October 2021

Dear Sir/Madam,

We write to you with reference to an application for a Temporary Danger Area for the conduct of Unmanned Aerial System (UAS) activity. This letter forms part of the Civil Aviation Authority (CAA) Targeted Engagement Process which aims to understand your views and the potential impact for your organisation or airspace users, as a result of this proposal. We hope to develop and shape our application to best suit all aviation stakeholders as a result of your input into our consultation process.

## Airspace Change Proposals (ACPs)

All ACPs are vetted and managed by the CAA in line with strict processes documented in CAP 1616. This document outlines the requirements of us as a Sponsor, who we must engage with and the thresholds we must meet if our application is to be successful. A copy of CAP 1616 can be downloaded from the CAA's website and all stages of these applications are made available to the public via the Airspace Change Portal (https://airspacechange.caa.co.uk).

## **About the Sponsor**

This ACP is sponsored by Nexus Nine Ltd. As an organisation, our core activities focus around the independent test and evaluation of UAS and Counter UAS systems on behalf a number of customers including the UK Government. Furthermore, we conduct training of UAS Remote Pilots in Enhanced Operations including Beyond Visual Line of Sight flight to ensure the safe integration of UAS amongst the busy airspace of the UK. Our aviation expertise comes from a background of both manned and unmanned pilots and engineers focussed on the safe delivery of UAS operations in the national interest.



## **Sponsor Requirement and Opportunities**

To date, our test and evaluation activities have taken place within the boundaries of the disused airfield at Moreton-In-Marsh. This has enabled us to conduct short-range testing of Counter UAS systems over a number of years. We have flown a variety of different types of UAS with great success and have a strong safety record. However, as technology in both UAS and Counter UAS develops, we see the need to be able to expand the scale and range of testing to provide assurance to our customers as to the effectiveness of the Counter UAS systems under test. As a result of this, we need to understand the capability of our platforms to operate Beyond Visual Line of Sight (BVLOS) within the Radnor area. Such evaluations will include looking at command and control operating ranges, effect of local electromagnetic interference (e.g. Wi-Fi signals etc) and topography. Under current CAA regulation, all BVLOS UAS activity must be conducted within segregated airspace – in this case a Temporary Danger Area (TDA).

## **Your Input**

We recognise that any potential airspace change, even temporary ones, have an impact on the wider aviation community. We are committed to a flexible approach, aiming to minimise the potential adverse effects that this ACP may bring to your organisation or clients. To ensure your views are represented, and impacts mitigated, we would encourage you to raise questions and reply with the short feedback form in Appendix B.

Details of the initial application, and subsequent ACP progress can be found by searching the Airspace Change Portal (<a href="https://airspacechange.caa.co.uk">https://airspacechange.caa.co.uk</a>).

We will respond to any requests for clarification or questions you might have as swiftly as we can but the engagement period will close after 8 weeks on 10<sup>th</sup> October 2021. Comments made after this date may not be included in any engagement feedback that we provide to the CAA.

We thank you for your time and look forward to hearing from you in the near future.

Best Regards

Accountable Manager
Nexus Nine Ltd
Email: @nexusnine.co.uk



## Appendix A - ACP-2021-030 (Radnor TDA)

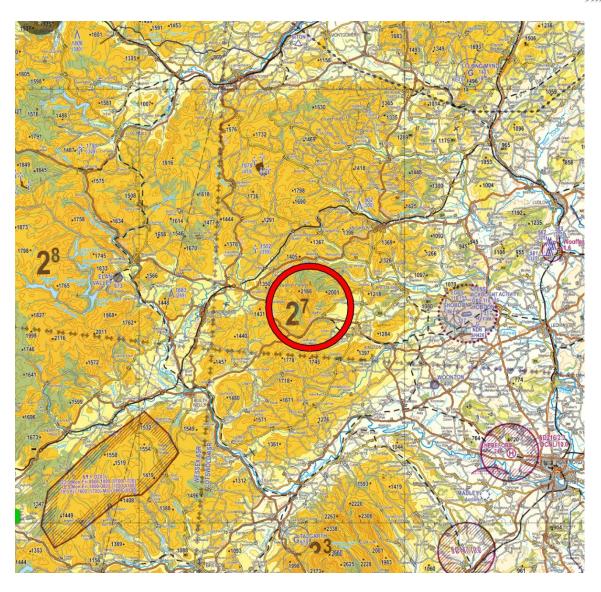
Radnor is a commercial munitions test and evaluation facility located in an austere location within Class G airspace. It is approximately 11nm West of Shobdon airfield. This ACP application is for a TDA lasting up to 90 days centred on the munitions range with a radius of 3nm. The proposal activates the airspace from the surface to 3500' AMSL due to the height of surrounding terrain. Initial TDA activity is planned to commence from AIRAC 2204 (21 Apr 22).

The TDA will be activated by NOTAM via the NATS system, aiming to give at least a weeks' notice of intended activity. Options for the provision of a Danger Area Activity Information Service (DAAIS) are currently being reviewed and the Sponsor would provide a mobile number for PPR co-ordinated activity within the TDA where it is practical. UAS operations would always immediately cease upon requests to enter the TDA by Emergency Services aircraft.

It is anticipated that the TDA will only be utilised during weekday daylight hours in blocks of up to 3 days at a time. We will aim to conduct 2 'blocks' of activity per month, totally approximately 18 days of activity during the 90-day TDA validity period. We would though, reserve the right to amend this plan.

A map of the suggested TDA is given below:





**TDA Origin:** N52°14.89 W003°10.77

Radius: 3nm

Vertical Extent: SFC-3500' AMSL

**Activated by: NOTAM** 

**DAAIS: TBC** 



## Appendix B - ACP-2021-030 (Radnor) Feedback Form

Name of Contact	
Organisation	
Postal Address	
Email Address	

**Feedback Points:** 



## Appendix B - Stakeholder Engagement Evidence

**Emergency Services** 

**HEMS Babcock** 

From: @babcockinternational.com>

Sent: 26 August 2021 12:03
To: @nexusnine.co.uk

Subject: RE: CAUTION: External email - Temporary Danger Area Application Engagement (ACP-

2021-029 & 030) (UNCLASSIFIED)

Classification: UNCLASSIFIED

Hi

All good and happy. Let me know what detail you require from us.

BW,

MSc cfs | Chief Pilot

UK Aviation | Aviation

Babcock International Group

Babcock Onshore | Building Se32-33 | Gloucestershire Airport | Cheltenham | Gloucestershire | GL51 6SP

Tel: +

@babcockinternational.com

www.babcockinternational.com



A Please consider the environment before printing this email

@nexusnine.co.uk @nexusnine.co.uk>

Sent: 18 August 2021 16:44

To: @babcockinternational.com>

Subject: RE: CAUTION: External email - Temporary Danger Area Application Engagement (ACP-2021-

030 & 030) (UNCLASSIFIED)

Great to chat yesterday, and hopefully a little more productive than email bat & ball. As discussed a brief summary of how we intend to instil a robust process to facilitate HEMS safe access to the TDA in the event of a tasking:

- NOTAMS will be issued via the NATS system well in advance which should come through to your crews via their ACANS ipads. This will have the mobile number for our on-site pilot.
- More accurate NOTAM timing will be phoned through to our DAAIS provider (tbc) which should enable better SA if your crews have the time to contact the ATSU.
- Our team will ensure all your Air Desks receive an email of the TDA details, contact phone numbers and planned times of operation for them to keep handy.
- Assuming the worst case an airborne retask to a job within the TDA then we envisage the following happening:
  - HEMS aircraft contacts the Air Desk to explain they will need to enter the TDA
  - Air Desk contact our flying team (via mobile number provided) to get UAS activity stopped
  - Nexus will recover our platforms to launch point and advise the air desk that UAS activity has ceased



- o HEMS have freedom of manoeuvre in the TDA as long as is required
- Ideally Air Desk call our team once the tasking is complete but it is our responsibility to ensure the HEMS aircraft is clear before resuming UAS flying
- You mentioned your exemption to enter airspace regardless of co-ordination, so long as your Captain believes it is safe. We'll brief our team on this, needless to say if they see the aircraft they'll cease flying. I'd just raise the point of caution that some of our platforms weight up to 25kg and would do some significant damage to a helo so we should aim for the controlled cessation of UAS Ops before your guys enter the TDA if at all possible.

Just to also expand on your couple of original questions below. Our platforms are both fixed and rotary wing weighing anything from 250g to 25kg. Platforms should have lights on, some of the OEM lighting is pretty poor so, where we can, we mount small HISLs and dayglo conspicuity tape onto the platforms to aid visibility.

Due to their size and manufacturer, most platforms do not have onboard ADS-B. We have a base station receiver which generally can be displayed on our mission systems so we can at least see your aircraft coming.

I'll check with the CAA as to whether they want that formal LoA and get back to you. Just let me know if there are any tweaks/additions to the above that you'd be looking for.

**Best Regards** 

From: @babcockinternational.com>

Subject: RE: CAUTION: External email - Temporary Danger Area Application Engagement (ACP-

2021-030 & 030) (UNCLASSIFIED)
Classification: UNCLASSIFIED

Hi

Many thanks for early sight of your two proposed TDAs at Moreton-In-Marsh and Radnor. As the operators of HEMS aircraft that regularly operate in the area of both locations our main concern would be in regards to ensuing that HEMS operations remain unimpeded. As you will be aware, as HEMS operators we only have to be content that we can enter safely rather than gain 'permission' to enter a TDA.

Therefore, if we could establish an agreement which captures the ability to ensure that we are made aware of any activation as well as a establish a clear means of gaining access into the TDA, be it as we are tasked or if re-tasked at short notice whilst airborne so that we, or our tasking desk, can establish the status of the TDA. Can you also confirm what type of UAV it will be, does it have lights / ADS-B etc.

Many thanks and I look forward to hearing from you.

DVV,

MSc cfs | Chief Pilot

UK Aviation | Aviation

Babcock International Group

Babcock Onshore | Building Se32-33 | Gloucestershire Airport | Cheltenham | Gloucestershire | GL51 6SP

Tel:

@babcockinternational.com

www.babcockinternational.com



## **Specialist Air Services**

**From:** @specialist-aviation.com>

Sent: 13 September 2021 15:06
To: @nexusnine.co.uk

Subject: RE: UAS TDA Applications

Hello,

I do often respond to ACP stakeholder engagements at length when the TDA falls without our core area of Helicopter Emergency Services Activity to ensure Air Ambulances are unaffected in their ability to conduct their role. However, in this case we don't operated any of the local air ambulances to these areas. I'm guessing Babcock will be engaging on such matters.

I have no further comment – as proposed these should not have any significant impact my organisations operations.

Best regards

**Group Chief Pilot** 

Tel: Mob:

BE GREEN. READ FROM THE SCREEN



t: +44 (0) 1452 857900 e: sales@specialist-aviation.com w: www.specialist-aviation.com

Specialist Aviation Services Limited – Registered in England and Wales No:1848773 Registered office / HQ: Gloucestershire Airport, Staverton, Cheltenham, Gloucestershire GL51 6SS



## National Police Air Service

From: @npas.police.uk>

Sent: 17 August 2021 12:01 To: @nexusnine.co.uk

Subject: RE: Stakeholder Engagement

This seems entirely reasonable and as you say it is unlikely that we would need to enter the TDA, but need to have a plan just in case.

regards

**MSC** Capt **Head of Flight Operations** 

National Police Air Service

Mobile: Email: @npas.police.uk

Web: www.npas.police.uk











@nexusnine.co.uk < @nexusnine.co.uk>

Sent: 17 August 2021 11:57

To: @npas.police.uk>

Subject: RE: Stakeholder Engagement

Many thanks for your prompt response. I think key to both these ACPs is the swift clearance for NPAS, HEMS and SAR to be able to enter any TDA and, crucially, have the assurance that they aren't going to have a conflict with a UAS.

as my main job, so hopefully this reassures that I'm keen To place in context, I'm a to get the Emergency Services piece right with the priorities where they should rightly lie. Ultimately though, I'm sure you'll agree, the safety of your people is our over-riding consideration. If I might clarify how we envisage the interaction working and then if you could come back to me with any issues from your specific setup – I appreciate how busy the cockpit is during tasking!

- NOTAMS should be issued well in advance and will be visible via normal NATS means as well as the usual Skydemon/Panda systems etc which will include a direct phone number.
- We're hoping to secure a DAAIS from local aviation facilities (details also published in the NOTAM), but I think this is unlikely to go as far as a DACS so the mobile number will be key. The DAAIS will clearly be advised at actual start of flying and on completion to narrow down



- actual activity over pre-published NOTAM timings; they would also have the on-site mobile number readily available if your crews didn't have it.
- For transits, I'd respectfully suggest going around the TDA at 3nm radius it'd be a minimal delay and save you a busy workload period.
- We would suggest clearances into the TDA are made via Airwave direct to the NOTAMprovided mobile phone number. This provides assurance to your Capts that the UAS are out of your way.
- Once entry is requested, in general we'd look to immediately recover our UAS to point of launch despite the slight time delay (absolute max of 8 mins at 3nm range but for most platforms max 4 mins), this is for several key reasons which its worth explaining...
  - Landing the UAS out in the field still takes time to recce (if there is a camera fitted) and risk assess - for a 3nm TDA I think an RTB will be more expeditious
  - At longer ranges and low level we're likely to lose connectivity to the platform if we try
    and land it away from base in this case it would activate a software safety default to
    RTB anyway but this would be done at a sanctuary height, slower and likely cause
    you greater delay
- The CAA will not allow UAS Beyond Visual Line of Sight (BVLOS) to operate in the same airspace as manned aviation. Consequently, we're unable to offer a simple height/lateral deconfliction, irrespective of weather. As soon as our operators can see our platform, the rules change and we take visual clearance from you, enabling the crews to crack on with the tasking.
- Once the UAS is in sight of our operators, or on the ground, we'd let the NPAS pilot know (I'd suggest they stay on the Airwave line) and your aircraft could safely enter. This sounds pretty protracted but we've done this in the past down at Predannack so our team are pretty swept up with the safety processes.
- We wouldn't resume BVLOS until we'd received a positive clearance that your aircraft had left the TDA. Ideally for us, this would be to the mobile phone again but if that's difficult with your crew setup then it could be co-ordinated via the DAAIS – ultimately this is going to be a slowtime activity with the onus on us to ensure all of our safety protocols are back in force before re-activating the TDA.

Realistically, given the 2 locations and duration of activity, I think it's incredibly unlikely for you to get a tasking to the area whilst we're flying but we obviously need to cover off the eventuality with a robust process.

I'd be grateful for your thoughts.

Best Regards

<u>@npas.police.uk</u>>

**Subject:** Stakeholder Engagement

Dear

I have added our feedback to the attached document.

Best regards

Capt MSC
Head of Flight Operations
National Police Air Service
Mobile:

**Email**: <a href="mailto:one-pas.police.uk">one-pas.police.uk</a>

Web: www.npas.police.uk





# Appendix B - ACP-2021-030 (Moreton-In-Marsh) Feedback Form

Name of Contact	Capt	
Organisation	National Police Air Service	
Postal Address	NPAS, PO Box 9	
	WYP HQ	
	Laburnum Road	
	Wakefield	
	WF1 3 QP	
Email Address	@npas.police.uk	

### **Feedback Points:**

In the event that an NPAS aircraft needed to enter the TDA to attend an incident we would need either a DAAIS or an alternative means by which the crew could contact the UAS operator from the aircraft, in order to agree separation (usually achieved by the UAS landing).



### Maritime & Coastguard Agency

From: @mcga.gov.uk>

**Sent:** 20 September 2021 11:41 To: @nexusnine.co.uk

Subject: RE: ACP

Good morning

Please see attached your Stakeholder Engagement document.

I have completed the feedback sections for each proposal and I assess that there should be little or no day-today impact on SAR helicopters.

Please don't hesitate to contact me if you need anything else.

Regards

From:

**Sent:** 15 September 2021 07:47

To: @nexusnine.co.uk

Subject: ACP

Good morning

I'm sorry that you have not yet received a reply reference your ACP engagement.

I have this scheduled to look at on Friday morning and you should have a reply by COP Friday.

Regards



**Aviation Policy Lead** Stakeholder and Policy







#### **HM Coastguard**

Joint Rescue Coordination Centre, Kites Croft Business Park, Fareham, PO14 4LW

To Search, To Rescue, To Save www.gov.uk/mca



Maritime & Coastguard Agency

### Appendix B - ACP-2021-030 (Moreton-In-Marsh) Feedback Form

Name of Contact		
Organisation	Maritime and Coastguard Agency	
Postal Address	Joint Rescue Coordination Centre Kites Croft Business Park Fareham PO14 4LW	



Email Address	@mcga.gov.uk
	es magariga vian

# Feedback Points:

The proposed TDA should have little or no impact on the day-to-day operations of SAR helicopters.



### **National Air Traffic Services**

### **London Information**

From: @nats.co.uk>

Sent: 05 October 2021 12:34

To: @nexusnine.co.uk

Subject: RE: UAS TDA DAAIS

Hi

As long as it's all NOTAM'd (which I'm sure they are) then no problem.

Many Thanks,



Manager ATM Procedures
Ops and Integration for NATS Airports

**NATS Swanwick** 

www.nats.co.uk



**NATS** Internal

From: @nats.co.uk>

**Sent:** 05 October 2021 12:29

To: @nats.co.uk>

Subject: RE: UAS TDA DAAIS

Hi,

As long as it is NOTAMed then that's fine.

Cheers

**NATS Internal** 

From: <u>@nats.co.uk</u>>

Sent: 05 October 2021 09:41

To: <u>@nats.co.uk</u>>

Subject: FW: UAS TDA DAAIS

Hi



Can you pass this onto the FIR for their opinion on whether they are happy to provide a DAAIS please? I suspect they'll be fine with it but don't want to just answer without checking first.

Many Thanks,



Manager ATM Procedures
Ops and Integration for NATS Airports

**NATS Swanwick** 

www.nats.co.uk



**NATS** Internal

@nexusnine.co.uk

Sent: 29 September 2021 11:11

To: @nats.co.uk>

Subject: UAS TDA DAAIS

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.



I hope this finds you well.

I've been given your email address by the CAA as a good point of contact for consideration of DAAIS provision. To paint the picture, we currently have an Airspace Change Proposal in with the CAA for 2 TDAs; one located at Moreton-In-Marsh (Cotswolds) [ACP-2021-029] and one at Radnor (near Hereford) [ACP-2021-030]. We would anticipate these TDAs, if approved, to be active for a period of up to 18 days, probably in daylight hours in blocks of about 3 days at a time. This is to facilitate the testing of UAS Beyond Visual Line of Sight testing at each of the locations.

I was wondering if you might consider IF London Information might provide a DAAIS during these periods of activity and would be grateful to hear your thoughts. As a little background I've attached our stakeholder engagement material to provide you with a bit more information on the ACPs themselves.

Thank you for your time.

Best Regards





# Ministry of Defence

# **DAATM**

From: Sqn Ldr (DAATM-Airspace Strategy SO2) @mod.gov.uk>

Sent: 15 September 2021 15:08
To: @nexusnine.co.uk

Subject: RE: Temporary Danger Area Application Engagement (ACP-2021-029 & 030)



Thank you for your engagement regarding ACPs 2021-029 and 2021-030. Having consulted across Defence aviation stakeholders, the MOD has no objection to either proposal.

Kind regards,



| Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: +44 (0)

MOD Net: DAATM-AirspaceStrategySO2| E-Mail: @mod.gov.uk

om: Sqn Ldr (DAATM-Airspace Strategy SO2) @mod.gov.uk>

Sent: 14 September 2021 10:49
To: @nexusnine.co.uk

Subject: RE: UAS TDA Applications



I'm collating the MOD response for your ACPs and had actually given my stakeholders until today to provide feedback to me. So far there have been no specific objections to either TDA, but I will provide the official response tomorrow.

Kind regards,



| Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: +44 (0)

MOD Net: DAATM-AirspaceStrategySO2| E-Mail: @mod.gov.uk

@nexusnine.co.uk < @nexusnine.co.uk>

**Sent:** 13 September 2021 15:17

To: DAATM-AirspaceConsultation (MULTIUSER) < DAATM-AirspaceConsultation@mod.gov.uk>

Subject: UAS TDA Applications

Dear Sir.

We contacted you on the 16<sup>th</sup> August 2021 regarding 2 proposals for Temporary Danger Areas in the Moreton-In-Marsh and Radnor areas; this formed part of our CAA Engagement Period from 16<sup>th</sup> Aug to 10 Oct 2021.



As we approach the halfway point I just wanted to check in with you as, according to my records, I have not as yet received a response from your organisation. It may be that any response may have gone astray or that you've not had to the opportunity to reply as yet. I attach a copy of the original Engagement Letter in case it is not immediately available to you but we look forward to hearing your thoughts.

**Best Regards** 

Accountable Manager

Nexus Nine Ltd

Email: @nexusnine.co.uk

From: @nexusnine.co.uk @nexusnine.co.uk>

**Sent:** 16 August 2021 11:25

To: DAATM-AirspaceConsultation (MULTIUSER) < DAATM-AirspaceConsultation@mod.gov.uk>

Subject: Temporary Danger Area Application Engagement (ACP-2021-029 & 030)

Dear Sir/Madam,

Engagement Period: 16th August - 10th October 2021

Please find attached a letter outlining two independent applications submitted to the Civil Aviation Authority for non-concurrent Temporary Danger Areas at Moreton-In-Marsh and Radnor. We would be grateful if you might have the opportunity to review this document, raise any questions you might have and provide vital feedback with respect to these proposals via the enclosed form.

I look forward to engaging with you in this matter.

**Best Regards** 

Accountable Manager Nexus Nine Ltd

Email: @nexusnine.co.uk



#### RAF Benson

From: Sqn Ldr (BEN-OpsWg-ATC-SATCO) @mod.gov.uk>

Sent: 16 September 2021 13:43
To: @nexusnine.co.uk

Subject: RE: TDA Engagement (ACP-2021-029 & 030)

Hi ,

Thanks for getting back to us. I've spoken to some aircrew colleagues and they are all in content with your proposal below – we appreciate your cooperation with this. If there's anything further you ever need from us please just get in touch.

Kind regards,

@nexusnine.co.uk

**Sent:** 15 September 2021 17:13

To: Sqn Ldr (BEN-OpsWg-ATC-SATCO)

Subject: RE: TDA Engagement (ACP-2021-029 & 030)

Many thanks for your feedback; it all helps to shape our understanding of the airspace user requirements.

Your points regarding NS/OAT are important ones and sensibly we should treat access in the same way as we would for HEMS/NPAS etc. I'd suggest the most 'efficient' solution might be for transiting crews to navigate around the TDA, especially since its only 3nm radius, but we should allow for the contingency of needing to enter the TDA on tasking. Our processes vary for NPAS & HEMS based on their setup, for NS I'd suggest a simple call to the NOTAM contact details (which will be manned at all times during UAS activity) with requested 'cold' times should allow you the access required.

Could you foresee this providing you with an adequate solution or does this raise issues for you?

**Best Regards** 

From: Sqn Ldr (BEN-OpsWg-ATC-SATCO)

Sent: 14 September 2021 15:24
To: @nexusnine.co.uk

Subject: FW: TDA Engagement (ACP-2021-029 & 030)

Good afternoon.

I was forwarded the email below from Sqn Ldr Dan Gill re proposed TDAs to facilitate UAS BVLOS activities.

The only point from Benson would be a request that the CAA stipulate UK NS/Operational Air Traffic sorties are included under the definition of Emergency Services in the following quote from the



proposal: "UAS operations would always immediately cease upon requests to enter the TDA by Emergency Services aircraft".

If you require any further detail please do not hesitate to get in touch.

Kind regards,

Squadron Leader | SATCO | Royal Air Force Benson | Wallingford | Oxon | OX10 | 6AA | @mod.gov.uk

From: Sqn Ldr (BZN-OSW-ATC-SATCO)

Subject: FW: TDA Engagement (ACP-2021-029 & 030)

Good Evening RAUWG Members,

I have been asked to send this email and attachment to members of the RAUWG to assist with the engagement from Nexus Nine. If you have any questions or queries please direct them to Matt at NexusNine.

Regards.

Sqn Ldr BEng RAF | SATCO | RAF Brize Norton | Carterton | Oxfordshire | OX18 3LX |

Mil: 8 | E-mail: @mod.gov.uk

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All,

PSA and below for information on two proposed TDAs to facilitate UAS BVLOS activity. Please engage as required across your AOR and provide feedback on any negative impact on ability to operate by COP Tue 14 Sep.

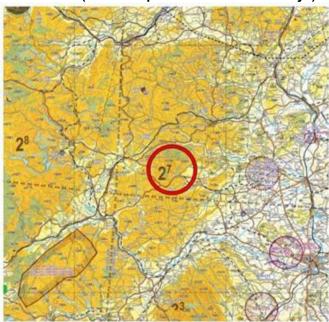
Moreton-in-Marsh TDA (start 2 Dec 21 for 18 out of 90 days)





TDA Origin: N51'59.67 W001'41.06 Radius: 3nm Vertical Extent: SFC-2500' AMSL Activated by: NOTAM DAAIS: TBC

# Radnor TDA (start 21 Apr 22 for 18 out of 90 days)



TDA Origin: N52\*14.89 W003\*10.77 Radius: 3nm Vertical Extent: SFC-3500' AMSL Activated by: NOTAM DAAIS: TBC



# 658 Sqn, AAC

From: @nexusnine.co.uk
Sent: 10 September 2021 11:04
To: @mod.gov.uk

Subject: Radnor Drone TDA Application

Attachments: 20210810 Radnor Stakeholder Engagement.docx



Good to chat today, as discussed please find attached our engagement information relating to the TDA application at Radnor and a feedback form at the end. Happy to field any questions/suggestions via email as you get a feel for how this might affect what you need to do.

Cheers

Accountable Manager Nexus Nine Ltd



# **Commercial Operators**

Heli Air

From: @heliair.com>

Sent: 14 September 2021 18:25
To: \_\_\_\_\_ @nexusnine.co.uk

Subject: Re: UAS TDA Applications



Apologies for not responding sooner. The site at Radnor will not affect our flight operations, the Moreton-in-Marsh one potentially will. The Fire Training College is a good geographical feature for students to look for when practicing navigation exercises. As you are only planning to operate a few days per month we can work around this without causing us any problems. Our students and pilots would normally be on frequency with Brize and should be checking the NOTAMS prior to flight, but a confirmation message from Brize highlighting the activity may be a good idea.

Kind regards

Director : Chief Pilot

**Heli Air Limited** 

Tel: +44 (0) Mob: +44 (0)

Email: @heliair.com

www.heliair.com







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Heli Air Ltd

Registered Office: Wellesbourne Airfield, Loxley Lane, Wellesbourne, Warwickshire CV35 9EU

Registered Number: 2028932

From: ' @nexusnine.co.uk"

Date: Monday, 13 September 2021 at 14:55



To: <a href="mailto:@heliair.com">@heliair.com</a>

Subject: UAS TDA Applications

Dear Sir,

We contacted you on the 16<sup>th</sup> August 2021 regarding 2 proposals for Temporary Danger Areas in the Moreton-In-Marsh and Radnor areas; this formed part of our CAA Engagement Period from 16<sup>th</sup> Aug to 10 Oct 2021.

As we approach the halfway point I just wanted to check in with you as, according to my records, I have not as yet received a response from your organisation. It may be that any response may have gone astray or that you've not had to the opportunity to reply as yet. I attach a copy of the original Engagement Letter in case it is not immediately available to you but we look forward to hearing your thoughts.

**Best Regards** 

Accountable Manager Nexus Nine Ltd

Email: @nexusnine.co.uk



# **Helicentre Aviation**

# Appendix D - ACP-2021-030 (Radnor) Feedback Form

Name of Contact		
Organisation	Helicentre Aviation	
Postal Address	Leicester Airfield,	
	Gartree Road	
	Leicester	
	LE2 2FG	
Email Address	@flyheli.co.uk	

# **Feedback Points:**

Thank you for the notification of the proposed TDA at Radnor. From the details you have sent I do not see the TDA effecting our operations.



## National Grid

@nexusnine.co.uk < @nexusnine.co.uk>

Sent: 25 August 2021 21:39

To: @nationalgrid.com>

Subject: RE: EXT | Temporary Danger Area Application Engagement (ACP-2021-029 & 030)



Many thanks for this feedback. Should any potential issues arise, please don't hesitate to contact us.

Best Regards



From: @nationalgrid.com>

Subject: RE: EXT || Temporary Danger Area Application Engagement (ACP-2021-029 & 030)

Hi ,

National Grid have no HV assets in those 2 areas so I do not see a conflict with our aerial survey powerline patrols.

Chief Pilot, Helicopter Unit

Electricity Transmission Engineering Services

nationalgrid

M

@nationalgrid.com

National Grid Stores, Old Milton Rd, Didcot, UK OX117HH

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Please consider the environment before printing this email.

@nexusnine.co.uk @nexusnine.co.uk>

Sent: 16 August 2021 11:25

To: @nationalgrid.com>

Subject: EXT | Temporary Danger Area Application Engagement (ACP-2021-029 & 030)

Dear Sir/Madam.

Engagement Period: 16th August – 10th October 2021

Please find attached a letter outlining two independent applications submitted to the Civil Aviation Authority for non-concurrent Temporary Danger Areas at Moreton-In-Marsh and Radnor. We would be grateful if you might have the opportunity to review this document, raise any questions you might have and provide vital feedback with respect to these proposals via the enclosed form.

I look forward to engaging with you in this matter.

**Best Regards** 

Accountable Manager Nexus Nine Ltd



#### **Local Airfields**

#### Shobdon

From: Airfield Manager <airfieldops@shobdonairfield.co.uk>

Sent: 15 September 2021 13:41
To: @nexusnine.co.uk

Subject: RE: Radnor TDA Application

Dear ,

Thank you for your email.

I have copied in our ATSU Manager,

and he will be responding.

Best regards,



#### **Airfield Operations Manager**



Home of the Herefordshire Aero Club Ltd

T: 01568 708369 F: 01568708508

www.shobdonairfield.co.uk









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\_\_\_\_\_

Herefordshire Aero Club Ltd, Registered Office Shobdon Airfield, Leominster, Herefordshire HR6 9NR Registered in England, No. 746513

\_\_\_\_\_\_



@nexusnine.co.uk [mailto @nexusnine.co.uk]

**Sent:** 13 September 2021 15:05

To: Airfield Manager <a irfieldops@shobdonairfield.co.uk>

Subject: Radnor TDA Application

Dear Sir/Madam,

We contacted you on the 16<sup>th</sup> August 2021 regarding a proposal for a Temporary Danger Area in the Radnor area; this formed part of our CAA Engagement Period from 16<sup>th</sup> Aug to 10 Oct 2021.

As we approach the halfway point I just wanted to check in with you as, according to my records, I have not as yet received a response from your organisation. It may be that any response may have gone astray or that you've not had to the opportunity to reply as yet. I attach a copy of the original Engagement Letter in case it is not immediately available to you but we look forward to hearing your thoughts.

**Best Regards** 

Accountable Manager Nexus Nine Ltd

Email: @nexusnine.co.uk



## Cardiff

From: @nexusnine.co.uk < @nexusnine.co.uk>

Sent: 29 September 2021 11:19

To: @nats.co.uk>

Subject: RE: Radnor TDA Application (ACP-2021-030)



Many thanks for getting back to me on this. I'll log that Cardiff have no issue with the proposal for the purposes of our report to the CAA.

DAAIS restrictions completely understood; it's a pretty long was North for you guys so very grateful that you've considered it – ultimately it's a pretty remote location for most service providers.

**Best Regards** 



From: @nats.co.uk>

Sent: 29 September 2021 10:51
To: @nexusnine.co.uk

Subject: Re: Radnor TDA Application (ACP-2021-030)



We've kicked this about for a couple of days.

Your proposed ops will not affect Cardiff. As you say, it's just too far away and too low.

And for the same reason we would not be able to provide a DAAIS – With the Brecon Beacons in the way, we have very poor RT coverage there at that low level.

We suggest Shawbury or Shobdon might be an alternative?

But thanks for letting us know.

All the best.



ATCO/Assessor/DWM Blue Watch Cardiff Airport

D: M: E: @nats.co.uk



@nexusnine.co.uk < @nexusnine.co.uk> Sent: Wednesday, September 22, 2021 6:49:26 PM l@nats.co.uk> Subject: Radnor TDA Application (ACP-2021-030) Apologies for the delay in getting in touch, I seem to consistently miss you on shift. I'm one of the but we've also chatted on NSFs regarding drone flying in over at . I wanted to engage with you on a different, although UAS related, topic for an ACP we have proposed to the CAA for Beyond Visual Line of Sight work out of Radnor - just NE of Sennybridge. My gut instinct says that this will be a little far away and too low to influence operations at Cardiff but thought it prudent to get your thoughts directly. I attach the targeted stakeholder engagement literature that we have published for national and regional stakeholders (e.g. Shobdon) for your information. We'd be grateful if you might review it and see if this is likely to have an impact on Cardiff so we can discuss any potential issues and amend our proposal accordingly. I'd also be grateful for your thoughts on the potential for Cardiff to provide a DAAIS for this TDA. As the literature suggests, we'd anticipate 18 days of activity over the 90 day validity period but would consider Cardiff as the most appropriate ATSU to guide GA on activity. Is this something that you might consider providing for us? I'd be grateful for your thoughts. **Best Regards** 



#### National GA Bodies

### British Helicopter Association

From: @nexusnine.co.uk < @nexusnine.co.uk>

Sent: 25 August 2021 21:41

To: 'ceo' <ceo@britishhelicopterassociation.org>

Subject: RE: Temporary Danger Area Application Engagement (ACP-2021-029 & 030)



Many thanks for your feedback; we've already had discussions with NPAS and HEMS. We await feedback from the SAR helicopters too.

**Best Regards** 



From: ceo < ceo@britishhelicopterassociation.org >

Subject: RE: Temporary Danger Area Application Engagement (ACP-2021-029 & 030)



The BHA has no objection in principle to the 2 applications as long as there is a manned emergency telephone number for the use of the emergency service helicopters.

Yours

CEO BHA

From: @nexusnine.co.uk
Sent: 16 August 2021 11:25

To: ceo <ceo@britishhelicopterassociation.org>

Subject: Temporary Danger Area Application Engagement (ACP-2021-029 & 030)

Dear Sir/Madam,

Engagement Period: 16th August – 10th October 2021

Please find attached a letter outlining two independent applications submitted to the Civil Aviation Authority for non-concurrent Temporary Danger Areas at Moreton-In-Marsh and Radnor. We would be grateful if you might have the opportunity to review this document, raise any questions you might have and provide vital feedback with respect to these proposals via the enclosed form.

I look forward to engaging with you in this matter.

**Best Regards** 

Accountable Manager Nexus Nine Ltd

Email: @nexusnine.co.uk



#### General Aviation Alliance

From: GAA Programme Manager <Prog.Man@gaalliance.org.uk>

Sent: 14 October 2021 16:32

To: @nexusnine.co.uk>

Subject: RE: ACP-2021-030 RADNOR BVLOS UAS TDA STAKEHOLDER RESPONSE

Caution: External Message

Hi .

Thank you for your email acknowledgement.

your email dated 10<sup>th</sup> October 2021 falls within our Engagement Period and, therefore will be included in our report to the CAA

Thank you for this assurance. We trust that this email exchange will also be included.

It is extremely disappointing that a national representative body such as the GAA could have had an invaluable input into shaping these two ACPs and your members' views could have been better represented.

Firstly, I am merely a part time paid official of the GAA and therefore I have passed your email and this response on to the members for their due consideration.

It would probably be wise for Nexus Nine to be wary of commenting upon others use of the stakeholder engagement system when:

- Nexus Nine delayed the posting on to the CAA CAP 1616 portal of the key "Assessment Meeting Presentation" document. It was eventually posted on 26Sep2021, some 6 weeks into the 8 week engagement period, and over 9 weeks after the associated meeting minutes were posted. We believe this delay in posting of the document to be a breach of CAP 1616.
- There was no notification to stakeholders of the "Assessment Meeting Presentation" document's existence the GAA found out about the document on the 08Oct2021, registered that it fundamentally altered the engagement and responded with 2 days. Would it have been preferable to call foul to the CAA and seek an extension of the engagement period? We thought not.
- There are significant differences between the stakeholder engagement document and the "Assessment Meeting Presentation" document, as commented upon in our email of 10Oct2021. At best this reflects badly upon the skills of the producers of the stakeholder engagement document and at worst it makes the stakeholder document disingenuous. Either way we regard this as a serious breach of CAP 1616.

We look forward to the responses to our email of 10Oct2021.

Regards

Programme Manager General Aviation Alliance

Email: proq.man@gaalliance.org.uk

From: @nexusnine.co.uk>

Sent: 14 October 2021 15:09

To: <Prog.Man@gaalliance.org.uk>

Subject: RE: ACP-2021-030 RADNOR BVLOS UAS TDA STAKEHOLDER RESPONSE



Mr ,

Thank you for your recent emails.

Nexus Nine, as the Change Sponsor for ACP-2021-029 and ACP-2021-030, initially contacted your organisation on the first day of our Engagement Period (16<sup>th</sup> August 2021). Your organisation was carefully selected, amongst others, from the CAA's NATMAC Distribution List as a key representative of Stakeholders in this area; particularly as you rightfully list those organisations that you speak on behalf of. Distribution email addresses came directly from the CAA and we fully outlined the duration of this 8-week engagement process in our attached Stakeholder Engagement Letter.

Having heard nothing from your organisation by approximately half way through our Engagement Period, I sent a hastener to your organisation on 13<sup>th</sup> September encouraging you to take advantage of the remaining 28 days to make your representations to us and ask any questions.

Having provided a clear 56-day Engagement Period, your organisation elected to make first contact with us 29 minutes before our Engagement Period closed, on a Sunday evening with an extensive list of questions. By any stretch of the imagination, we firmly believe this is entirely unreasonable request for any organisation.

Nonetheless, your email dated 10<sup>th</sup> October 2021 falls within our Engagement Period and, therefore will be included in our report to the CAA.

It is extremely disappointing that a national representative body such as the GAA could have had an invaluable input into shaping these two ACPs and your members' views could have been better represented.

Regards



From: < Prog.Man@gaalliance.org.uk>

Sent: 14 October 2021 13:07

To: @nexusnine.co.uk>

Subject: RE: ACP-2021-030 RADNOR BVLOS UAS TDA STAKEHOLDER RESPONSE

Caution: External Message

Dear Sir.

> please acknowledge receipt of this e-mail with an indication of when the full answer can be expected.

We are concerned that we have apparently heard nothing?

Regards



Programme Manager General Aviation Alliance

Email: prog.man@gaalliance.org.uk



From: < Prog.Man@gaalliance.org.uk >

Sent: 10 October 2021 23:31

@nexusnine.co.uk' < @nexusnine.co.uk>

Subject: ACP-2021-030 RADNOR BVLOS UAS TDA STAKEHOLDER RESPONSE

Dear Sir,

Due to the vagaries of e-mail, unless you are able to respond immediately to the points raised, please acknowledge receipt of this e-mail with an indication of when the full answer can be expected.

This response is on behalf of the General Aviation Alliance to your attached stakeholder engagement on ACP-2021-030 Radnor BVLOS UAS TDA.

Please forgive any repetition of details that you already know. The GAA (<a href="www.gaalliance.org.uk">www.gaalliance.org.uk</a>) is an independent group and partnership of organisations representing, as far as possible, UK General Aviation (GA), and Sports and Recreational Aviation interests (S&RA). Its objective is to promote and protect the cost-effective use of GA and S&RA aircraft, and their owners, pilots and the associated operations, and to actively participate in the formulation of regulations and actions that may affect their interests so as to ensure the welfare and the free and safe movement of these aircraft, pilots, owners and the associated operations. By using the GAA as a consultee you can be sure that an appropriate person within all of the following organisations will be kept informed of the progress of your ACP and thereby reach the vast majority of UK GA operations:

BBAC - British Balloon and Airship Club

BGA - British Gliding Association

BHPA - British Hang Gliding and Para Gliding Association

BMAA - British Microlight Aircraft Association

BMFA - British Model Flying Association

BPA - British Parachute Association

HCGB - Helicopter Club of Great Britain

LAA - Light Aircraft Association

PPL/IR Europe - European Association of Instrument Rated Private Pilots

RAeC - Royal Aero Club of the United Kingdom

The individual organisations may choose to also submit their own responses directly to you.

It is important to state that the GAA is not anti-drone

The GAA finds that it must object to the proposed TDA for the following reasons:

1. The provided stakeholder engagement documentation is disingenuous in that there is no mention that the application is a precursor to a permanent TDA application. All that the documentation says is, "This ACP application is for a TDA lasting up to 90 days .... Initial TDA activity is planned to commence from AIRAC 2204 (21 Apr 22)."

Whereas the "Assessment Meeting Presentation" (copy attached), which was posted on to the CAP

1616 Portal over 7 weeks after the event and with only 2 weeks of the stakeholder engagement remaining shows a plan for "Permanent Segregated Airspace 2022+"

- 2. Both the CAA and GAA have a common position that unless drones and manned aviation can fully integrate both sides will suffer from significant limitations segregation is NOT the way forward. This proposal is entirely about segregation with no indications of any movement at all to integration.
- 3. We find it hard to believe that each flight needs the over 9 cubic nm as enclosed by the proposed TDA.
- a. Surely the TDA could be sub-divided so as to only activate the airspace actually needed?
- b. Merely drawing a circle on a map will inevitably encompass airspace that is not needed and is indicative a poorly planned application.



- 4. We find it unbelievable that flights will occupy an entire day yet there are no indications as to what time windows will be used for NOTAMs to activate the TDA beyond "It is anticipated that the TDA will only be utilised during weekday daylight hours in blocks of up to 3 days at a time".
- 5. If the espoused position of only weekday flying is true then the TDA need only be promulgated as "Monday to Friday excluding Bank Holidays".
- 6. The documents states, "we see the need to be able to expand the scale and range of testing to provide assurance to our customers as to the effectiveness of the Counter UAS systems under test"

So as to minimise risks to third parties on the ground we fail to see how counter drone measures can be deployed on drones other than when they are above land controlled by Nexus Nine. Why then are the lateral dimensions of the proposed TDA so far from land that they can directly manage? Maybe this links in with point 2 above.

- 7. The offering of a Danger Area Activity Information Service (DAAIS) as a mitigation is pointless as all a DAAIS can offer is exactly what the GA pilot can, and has a duty to, pick up from various sources prior to take off. If the TDA is to go ahead it needs to have a Danger Area Cross Service (DACS).
- 8. The document says, "the Sponsor would provide a mobile number for PPR co-ordinated activity within the TDA where it is practical."
  At best this proposed mitigation displays an ignorance that once a TDA has been activated by NOTAM the only way that a GA flight can access it without a risk of prosecution is by DACS, and at worst it is disingenuous.
- 9. In the "Assessment Meeting Presentation" it clearly states that the finally desired result is "Permanent Segregated Airspace 2022+". The GAA cannot accept that this is an acceptable result.
- 10. The document talks about evaluating the "effect of local electromagnetic interference". Surely if it is sufficient to act as a counter to drones it will also potentially have an impact upon GA aircraft.
- 11. There are already Danger Areas established within the UK for both drone and electromagnetic work. Why can these not be used?

Regards

Programme Manager General Aviation Alliance

Email: prog.man@gaalliance.org.uk



# **British Gliding Association**

From:

Subject: Radnor BVLOS UAS TDA

We've looked at the Radnor BVLOS UAS TDA ACP and discussed it with local gliding stakeholders. There are no significant issues that we are aware of.

The BGA has advised the Herefordshire gliding club at Shobdon to respond to you direct. You should hear from , who is aware of the detail including stakeholder engagement at that Shobdon airfield.

Kind regards

**Chief Executive Officer** 

British Gliding Association 8 Merus Court Meridian Business Park Leicester LE19 1RJ

www.gliding.co.uk



Registered in England 422605



# **Local General Aviation Users**

Hereford Gliding Club

From: @nexusnine.co.uk>

Sent: 01 October 2021 11:33

To:

Subject: Re: Radnor BVLOS UAS TDA



Many thanks for your reply. It's great to hear this solution has the potential to work for you, we only hope the weather is kind to you for your gliding.

Permanent airspace in this location remains firmly within our business plan, but as you suggest, we have not yet submitted an ACP for this. Whilst the potential results of TDA testing will provide important data for us to shape a proposal, this ACP will take a very different path within CAP 1616. We would expect permanent airspace ACPs to take 18 to 24 months to process which would include a fresh, wider and longer stakeholder engagement period. Your organisation would be a natural stakeholder when the time comes.

Hope this clarifies.



Get Outlook for Android

From:

Sent: Wednesday, September 29, 2021 2:33:29 PM

To: @nexusnine.co.uk < @nexusnine.co.uk>

Subject: RE: Radnor BVLOS UAS TDA



Thanks for your speedy response.

Our ability to fly is, as you say, sometimes limited by the weather. For this reason we are very keen not to suffer any unnecessary restrictions imposed on those days when the weather is suitable.

Your confirmation that you will not be emitting any interference to affect our operations is very reassuring.

Your suggestion of having a smaller radius TDA and only activating the larger TDA infrequently would be much appreciated. I look forward to seeing that reflected in your proposal to the CAA.

I note that the Assessment Meeting Presentation states that for the "run" stage of the timeline there will be: Permanent Segregated Airspace

- Robust and safe test & training environment
- Activated by NOTAM
- 2022+

Will this be addressed by a future ACP?

**Best Regards** 





@nexusnine.co.uk

**Sent:** 29 September 2021 11:58

To:

Cc: <a href="mailto:airfield.co.uk">(<a href="mailto:airfield.co.u

Subject: RE: Radnor BVLOS UAS TDA



Thank you for taking the time to reply to our proposal. Moreover, may I also add you are one of the very few organisations that have taken this as an opportunity to engage with us to discuss potential solutions to the issues that you have raised as opposed to a flat out opposition. We're very grateful for this and are keen to reduce any impact you might have on ongoing gliding activities whilst equally achieving the objectives of our important Government work.

Initially, to place our plans in a little context, hopefully some of the points you rightly raise will be put at ease. The TDA has been requested so we can conduct some testing of UAS in the Beyond Visual Line of Sight arena. We anticipate using the TDA for up to 18 days (approx.) but this is also likely to be in the early part of 2022 when I'd imagine your ability to fly is limited by weather etc.

Furthermore, whilst we have expertise in the Counter UAS world, there will be no CUAS systems tested during the TDA period – it is simply to see how high and far we can operate various platforms in and around Radnor. As you'll no doubt be aware, the terrain here is quite challenging – we expect connectivity with our platforms to be reduced and hence the purpose of our TDA work is simply to identify the limits of those platforms. Consequently, this might give you good news in that we will not be emitting any interference to affect your operations – this is also tightly controlled by OFCOM who we regularly work with in other areas.

Since the purpose of our TDA is to test how far and high we can fly, we're keen to utilise a reasonably large TDA during our expected 18 day period of testing; this is how we derived the 3nm/3500' proposal. However, I think we'll run into connectivity range issues pretty quickly since there is much high ground to block our signals. Obviously if this is the case there would be little benefit for us in having a full 3nm TDA if we physically cant use it, and more importantly for you, we'd be restricting your gliding activities for no benefit.

What I might suggest is that we actually propose to the CAA 2 TDAs at Radnor, both centred around the Radnor Range valley. One would be smaller, perhaps 1.5nm radius up to 3500' which would allow us the ability to conduct the majority of our testing. We'd then request a second TDA out to the full 3nm and 3500' which we would activate even more infrequently – this would enable us to conduct our proposed longer range tests. If we found early on that our range is limited to within the smaller TDA then clearly we wouldn't use the larger one but we hope you understand that it's incredibly useful for us to fully understand the effectiveness of our systems in this environment. Our maximum altitude is reasonably high at 3500', this is to allow us to test a reasonable height above the highest terrain and gives us the ability to see how range is extended at greater altitude due to the increased 'line-of-sight'. Each TDA would be activated by NOTAM so for most of the time the airspace will remain as Class G, only being utilised when we're flying.

I hope this suggestion would significantly reduce the likelihood of our testing having an impact on your activities, but we couldn't honestly rule out this possibility. We genuinely have no interest in causing you disruption for no gain in our evaluation and would always carefully consider the implication of airspace activations on the GA community. I'd be very grateful to hear your thoughts on this proposal so we can work to a mutually agreeable solution.

**Best Regards** 



From: **Sent:** 28 September 2021 17:53

To: @nexusnine.co.uk



Cc: <a href="mailto:square;"><a irrfieldops@shobdonairfield.co.uk</a> <a href="mailto:square;">Subject: FW: Radnor BVLOS UAS TDA</a>

Hi ,

I attach a feedback form for your attention.



#### Appendix B - ACP-2021-030 (Radnor) Feedback Form

Name of Contact	
Organisation	Herefordshire Gliding Club
Postal Address	Shobdon Airfield Shobdon HR6 9NR
Email Address	

#### **Feedback Points:**

Dear ,

Thank you for the opportunity to engage with Nexus Nine Ltd regarding your application for a Temporary Danger Area at Radnor. I am writing on behalf of Herefordshire Gliding Club Ltd which operates from Shobdon Airfield and is a member of the British Gliding Association (BGA). Gliders have flown from Shobdon for 50 years and the club was established to make use of the exceptional soaring opportunities that arise in the lee of Radnor Forest in the prevailing winds. The part of the proposed TDA most commonly used for gliding is the Radnor valley – i.e. the quadrilateral defined by Yardro, Kinnerton, Evenjobb and Walton. Usage is from 2500' AMSL upwards. Reducing the radius of the TDA in the SE quadrant from 3nm to 2nm would greatly reduce the impact on gliding. Alternatively shifting the centre of the TDA a mile to the NW would be equally helpful to us.

The proposal gives no details about the counter UAS systems under test. Gliders use GNSS (e.g. GPS) for navigation and to record flight paths to validate sporting achievements. Gliders carry complex electronic equipment. If the counter UAS systems cause interference outside the TDA this could impact gliders negatively.

If you haven't also contacted the British Hang Gliding & Paragliding Association, I suggest that you should do so. They have different requirements from us and will very likely have different concerns.

#### **Best Regards**

, HGC Airspace Representative



## British Hang Gliding & Paragliding Association

From: @BHPA.co.uk>

Sent: 09 October 2021 10:38

To: @nexus-nine.co.uk>

Subject: Radnor BVLOS UAS TDA, Airspace change ACP-2021-030

Caution: This message originated externally, please use caution when clicking on links or opening attachments! When in doubt, contact your IT Department

Dear Sir / Madam,

I am writing in response to the ACP-2021-030 (Radnor TDA) Radnor UAS consultation.

On behalf of the BHPA (British Hang gliding and Paragliding Association) I would strongly object to this proposal as the immediate vicinity of Radnor is an important area for UK Hang gliding and Paragliding competitions and the proposed area actually encompasses one of the one of the main launch sites for such competitions.

Additionally, because of the terrain and airspace, this area is also one of the busier cross-country areas for free flight sports.

I am concerned that there appears to have been no attempt to consult with any of the more then 7000 active members of our association or its representatives at a club or national level.

Despite the significant and direct impact on our activities we were not consulted and I have only just been alerted by aviation colleagues in other disciplines to the ACP consultation which closes shortly so any response is limited by the brief window available.

The attempt to grab this important part of the UK airspace for private use is wrong in depriving large numbers of pilots access to an important part of the open FIR since few areas of comparable size are available to non-radio free flight traffic that is unable to operate under traffic control, wrong in seeking to deny a large section of airspace in both time and space for what is clearly short periods of actual usage and wrong in failing to directly consult those affected.

When other more suitable and less disruptive areas for UAV testing already exist it would seen entirely the wrong location for such tests which clearly do not require to be in what is to a significant number of users an important and irreplaceable section of the UK airspace.

We oppose this proposal and strongly suggest it is moved to a more suitable and less disruptive location.

BHPA Director of Competition



#### British Microlight Aircraft Association

From: Sent: 08 October 2021 16:00

To: @nexus-nine.co.uk>

@bmaa.org>; Cc: @bmaa.org

Subject: ACP-2021-030 Radnor TDA

Caution: This message originated externally, please use caution when clicking on links or opening attachments! When in doubt, contact your IT Department

Dear

Please see attached engagement response to your ACP-2021-030 Radnor, on behalf of the British Microlight Aircraft Association (BMAA).

Thanks, regards

BMAA Airspace Team

## ACP-2021-030 RADNOR ENGAGEMENT RESPONSE

Name of Contact:

Organisation: British Microlight Aircraft Association (BMAA)

Postal Address:

Email Address:

Feedback Points:

1. The BMAA acknowledge that this proposed TDA is in a reasonably remote area but would note that it is Class G airspace, which is increasingly being reduced by such segregated use and is also close to General Aviation airfields of:

Shobdon 5.7nm Lane Farm 5.2nm Woonton 7<sub>nm</sub> Hardwicke 8<sub>nm</sub> Elan Valley 11nm Long Mynd gliding 16nm

(Distances from edge of proposed TDA)

As such the BMAA would like to ask if all these airfields have been engaged with sufficient time to view the information on the ACP, understand any potential impact and to respond?

2. This ACP appears to be a duplication of ACP-2021-029, other than proposed date of activation. In fact in this ACP the Sponsor Requirement and Opportunities refers to Moreton-in-Marsh:



"As a result of this, we need to understand the capability of our platforms to operate Beyond Visual Line of Sight (BVLOS) within the Moreton-In-March area"

It is confusing as to which location the sponsor wishes to carry out BVLOS operations.

Why does the sponsor need two TDAs for exactly the same use? Why cannot the use be merged, especially as the sponsor says the use of either TDA will be for 18 out of 90 days?

It seems that the sponsor is hedging its bets by applying for two TDAs at different locations in case one gets rejected.

The BMAA would maintain that ACP-2021-029 Moreton-in-Marsh is a bad location for a TDA for the reasons stated in our response to that ACP.

- 3. There is insufficient justification as to why BVLOS operations cannot be carried out elsewhere within existing segregated airspace, e.g. Llanbedr's puropose designed UAV DAs, other than for the sponsor's convenience which would negatively impact many other airspace users.
- 4. The BMAA also wish to complain about the sponsor's inadequacies in the Engagement process, some of which should be enforced by the CAA:
  - a. Engagement start date was stated as 16 August but the Stakeholder Letter was not uploaded to the ACP portal until 31 August. Thus the engagement period is effectively over 2 weeks shorter than claimed.

This does not comply with CAP 1616.

- b. The sponsor admits it has not contacted all NATMAC stakeholders, as directed by the CAA in the Assessment Meeting: "Consultation and engagement: This process must encompass:
  - Aviation stakeholders
  - · Other airspace users
  - NATMAC
  - Aerodromes
  - Anyone directly, indirectly or potentially impacted, including elected representatives and/or environmental interest groups representing communities likely to be affected by potential impacts"

The BMAA only received the information on 31 August.

This also does not comply with CAP 1616.

c. Assessment Meeting Presentation, dated 05 July, was not uploaded to the ACP portal until 26 September and then only because a BMAA member pointed out the omission. Thus this information was not available for most of the supposed engagement period.



**From:** @nexusnine.co.uk < @nexusnine.co.uk>

**Sent:** 28 September 2021 15:47

To:

Subject: RE: Your rediculous TDA

Mr

With a title to your email of "Your ridiculous TDA", you might perhaps see why we take a different view.

Our TDA application is for Beyond Visual Line of Sight operations which are not limited to the usual regulation. Our operations must be confined within the bounds of segregated airspace and in line with maximum operating heights and ranges of our platforms. To place into context typical platform limitations for an 'off-the-shelf' UAS are 5nm and 4500' although our largest platform can operate up to 85km and 9000'.

I hope this clarifies.

**Best Regards** 

From:

**Sent:** 28 September 2021 15:23

**@**nexusnine.co.uk

Subject: Re: Your rediculous TDA

Both

I don't see anything disrespectful or unprofessional about asking a very simple question - why you need a TDA of 2500ft vertical for your little toys - your toys are limited to a maximum height of 400 ft

On 28/09/2021 14:49, <u>@nexusnine.co.uk</u> wrote: Dear ,

Your comments regarding our TDA applications have been noted and will be recorded in our report to the CAA. We would ask that if you wish to engage with us (which we welcome) on our TDA applications it is done in a professional and respectful manner. At this stage we will be making no further comment regarding you initial email but would welcome further professional communication from you in the future.

We would also be grateful to understand which ACP(s) your comments refer to (ACP-2021-029 is Moreton-In-Marsh, ACP-2021-030 is Radnor) and if you represent an organisation, business or yourself so we can accurately log your comments in our feedback report.

**Best Regards** 

rioiii.



How come you need 2500 ft vertical for your little toys



FCSD Chartered Designer MIWFM Fellow-Chartered Society of Designers





w: www.designcambridge.come: info@designcambridge.com



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## , Glider Pilot

Le mercredi 15 septembre 2021 à 17:59 +0100, @nexusnine.co.uk a écrit :

Thank you for getting in touch and we're more than happy to provide you with a little more detail as below:

Are the various UAS being flown going to be equipped with electronic conspicuity (EC)? If yes, which one and whether out only, or, in and out?

Generally speaking, for the platforms we operate, they are not equipped with EC devices. This is due to the relatively small size of platforms and poor integration with many Commercial Off-The-Shelf products. We have an ADS-B receiver at our base station to provide us with SA of traffic in the area, however the safe segregation of UAS from manned aviation is provided by the TDA in accordance with CAA regulation.

Your letter mention DAAIS. Have you been able to progress this point since last month? That would provide extra granularity to the activation which is not possible via NOTAM.

At present the provision of a DAAIS remains an open topic. Our envisaged provider has expressed reluctance to provide this service so we are in discussions with the CAA as to acceptable means of providing a DAAIS; this may include agencies such as London Info. Notwithstanding this, any activation NOTAMs would provide an accurate schedule – we are very much alive to the disruption for other air users by activating a TDA and hence use will be very much kept to a minimum.

I understand that UAS VLOS or BVLOS are restricted to 400' agl. Even considering the elevation to the west of Moreton (~800') or around Radnor (~2200'), I am not sure how the respective 2500' and 3500' of the proposed TDA was established. Could you explain how these altitudes were calculated?

You rightly state Visual Line Of Sight UAS operations are limited to 500m laterally and 400' agl. Since our platforms would be operating Beyond Visual Line of Sight, the regulator mandates the use of segregated airspace to safely deconflict UAS from manned aviation – hence the requirement for a TDA. In order to conduct our assessment of BVLOS UAS operations in the Moreton & Radnor areas we have proposed the TDA altitudes of 2500' and 3500' AMSL as you describe. This offers us the ability to test up to approx. 1500' agl in each locality.

Likewise about the diameter of the TDA, is there not room to reduce them? Could the UAS operate above the disused airfield at Moreton-in-Marsh and the operator be located further away?

I'm currently evaluating the impact of the radius of the TDA. For modern UAS a 3nm radius area is covered relatively quickly but we would like the ability to test our platforms at good range to see what we can achieve in each location. A balance does need to be struck though with the impact this has on other aviation users. It may be that we amend our proposal to the CAA for 2 TDAs at Moreton – one smaller and one towards the proposed 3nm/2500' dimensions. This will enable us to segregate the airspace when we have the specific requirement for longer range/higher work, and at other times using a TDA that is less intrusive for other air operators.

Could the UAS operate above the disused airfield at Moreton-in- Marsh and the operator be located further away?

Unfortunately our testing infrastructure is located at Moreton so this is where we would need to see how far the UAS can be operated around this location, not within it. It would not be within the CAA regulation to operate the platforms from another location and remain within the rules of VLOS or Extended VLOS flight unfortunately.

I hope this clarifies your questions. Best Regards

----Original Message-----

From:

Sent: 14 September 2021 23:38



To: @nexusnine.co.uk

Subject: Questions about ACP-2021-029 and ACP-2021-030 Hello, I have some questions on your ACP before being able to provide feedback.

Are the various UAS being flown going to be equipped with electronic conspicuity (EC)? If yes, which oe and whether out only, or, in and out?

Your letter mention DAAIS. Have you been able to progress this point since last month? That would provide extra granularity to the activation which is not possible via NOTAM.

I understand that UAS VLOS or BVLOS are restricted to 400' agl. Even considering the elevation to the west of Moreton (~800') or around Radnor (~2200'), I am not sure how the respective 2500' and 3500' of the proposed TDA was established. Could you explain how these altitudes were calculated?

Likewise about the diameter of the TDA, is there not room to reduce them? Could the UAS operate above the disused airfield at Moreton-in-Marsh and the operator be located further away?

Best regards,



@nexusnine.co.uk @nexusnine.co.uk>

**Sent:** 28 September 2021 15:36

To: > Subject: RE: ACPs-2021-029 & 030

Mr ,

Thank you for your feedback.

It might appear that there has been some misunderstanding as to our Engagement Strategy and whom we have spoken to. As mentioned, we were given the NATMAC list by the CAA immediately after our Assessment Meeting. We produced an engagement plan which for which we sought out additional guidance from the Regulator. In total 17 organisations on the NATMAC list were contacted, we have actively engaged with many of them and their views form a significant part of our engagement material. Alongside this, for Moreton-In-Marsh, we contacted 4 local airfields and 4 local parish councils for their thoughts with a similar number of local stakeholders contacted for Radnor. It is our firm belief we have engaged in line with the requirements of CAP 1616; a view that was reinforced and supported following an update meeting with our CAA Case Officer approximately 3 weeks ago.

Whilst the documentation that you have attached in your previous email will be included in our report to the CAA, it is disappointing that you have not given us the opportunity to engage with you regarding the issues that you have raised. The whole purpose of the Engagement Period is so we can understand the issues that our proposal will have for airspace users and for us to work together to shape a proposal that works mutually as well as it can. We have been very clear with the many stakeholders that we have engaged with – a TDA will cause an impact on airspace users when the airspace would otherwise remain as Class G airspace. However, others have made many constructive comments that, we believe, have shaped a better proposal that we intend to submit to the CAA. It is regrettable that your recent email suggests you are unable to engage in this way. Our Engagement Period remains open until 10<sup>th</sup> October 2021 so, if your availability changes, we would welcome the opportunity to discuss your comments.

**Best Regards** 



From:

Sent: 28 September 2021 13:35

**To:** @nexusnine.co.uk

Subject: RE: ACPs-2021-029 & 030

### Good evening

Quite frankly I'm amazed and cannot believe that you took the CAA statement that "Consultation and engagement must encompass NATMAC" to mean that you need not seek feedback from any of the organisations. However, I will raise that separately with the CAA.

Due to the truncated engagement period I no longer have time to devote to these ACPs so my Feedback is attached.

Kind regards





### [Attached Feedback Document]

### ACPs-2021-029 & 030 MORETON-in-MARSH & RADNOR TDAs

#### Ref Docs:

- 1. Statement of Need ('SoN')
- 2. Stakeholder Engagement Letter ('Letter')
- 3. CAP 1616 Airspace Change ('CAP')
- 4. CAA Policy for the Establishment of Permanent and Temporary Danger Areas ('Policy')
- 5. E-mail exchange Sponsor & H T Cook 20-24 Sep 2021 pre-Feedback (E-mail)

NOTE. These 2 ACPs - 029 & 030 - are to all intents and purposes the same, often using significant sections of each other in the various documents. The only material difference seems to be the proposed height agl, with the Radnor one rather higher in an area of high terrain.

Therefore, this feedback addresses both ACPs and should be taken as feedback for each of them.

#### **SUMMARY**

All-in-all neither ACP deserves support because of the totally inadequate stakeholder engagement. There are additional reasons, but for the very poor engagement alone I object to ACP-2021-029 and ACP-2021-030 entirely.

### 1. OPERATIONAL ASSESSMENT

#### 1.1 Justification for Change/Options Analysis

It is quite unclear to me what single issue or opportunity is being addressed by this ACP. Both Proposals are materially the same, or at least they are quite unclear in specifically how they differ.

Because of that lack of clarity it seems to me that the Sponsor has made 2 applications for TDAs in the hope that one is approved.

#### 1.2 Operational Arrangements

There appears to have been no impact assessments undertaken on traffic flows around the proposed areas, suggesting a lack of knowledge on either likely traffic levels or the risks added by this Proposal.

No consideration seems to have been taken of and no engagement with nearby airfields.

Equally neither proposal makes any reference to any form of ATS – eg DAACS – for traffic seeking to fly across or very close to the TDAs.

1.2.1 <u>ACP 029 - Moreton-in-Marsh</u> The lower airspace over the Cotswolds is already heavily utilised by a wide range of air vehicles, inc balloons and paragliders, gliders, microlights, light aircraft and large military aircraft. Yet the Sponsor seems to have made no assessment of the impact of the TDA on traffic in the area.

The Proposal will locate a large 'no-fly' area in very busy Class G airspace, creating choke points between the Brize Norton CTR and Little Rissington ATZ to the S, Bidford airfield/R204 and Wellesbourne Mountford ATZ to the N.

The TDA will create choke points leading to an increased risk of airprox/mid-air collision. There is also an increased risk of airprox/mid-air collision between traffic forced to route closer to airfields and those airfields' local traffic to the N & S of the TDA.

The centre of the Moreton-in-Marsh TDA would be only just over 2nm from the edge of the Oxford AIAA so that the TDA will intrude into the AIAA by a significant amount. By its very name the AIAA requires great caution; caution which seems missing from this Proposal.



## 1.2.2 ACP 030 - Radnor

Again, the Sponsor has presented no evidence about the utilisation of this Class G airspace nor have they attempted to explain how there will be little or no impact on traffic at Shobden and D203.

The Radnor TDA will be only 9nm from Shobden which is an extremely busy GA airfield with gliders, helos, microlights and single/twin engine light air. While D203 is a major Army range with significant helo activity, and the range boundary is only 13nm away from the proposed TDA.

The Proposal would create choke points between TDA & Shobden, and the TDA & D203 with an increased risk of airprox/mid-air collision

#### 2. CONSULTATION ASSESSMENT

#### 2.1. Audience

It is clear from the e-mail exchange between H Cook and the sponsor (E-mail, reproduced at the end of this Feedback) that only cursory attempts have been made to engage with the GA community. Despite being instructed (Minutes) by the CAA that the engagement process:

"must encompass:

- Aviation stakeholders
- Other airspace users
- NATMAC
- · Aerodromes"

The sponsor declined stating: "our suggested list of stakeholders was run past the CAA Engagement Team prior to commencing the process", that 'list' did not include the BMAA or the LAA.

Indeed, the Sponsor states of NATMAC/BMAA/LAA engagement "it would not be appropriate for a TDA of only 90 days".

This clearly demonstrates the Sponsor's lack of understanding of GA and the CAP which states that all TDAs are 90 days or less:

"a temporary change to the published (notified) airspace design (usually less than 90 days, except in extraordinary circumstances)"

The Moreton-in-Marsh TDA will be only 2nm from the Oxford AlAA, 8nm from Little Rissington, 10nm from Enstone (an extremely busy GA airfield) and 12nm from the RAF Brize Norton CTR!!

While the Radnor TDA is only 9nm from Shobden which is an extremely busy GA airfield with gliders, helos, microlights and single/twin engine light aircraft. D203 is a major Army range with significant helo activity craft and the range boundary is only 13nm away.

It is not stated by the Sponsor (no published engagement list) who local to the TDA sites has been consulted but it is of concern that that neither Oxford, the MoD, Enstone nor Shobden has been mentioned as being consulted about either Proposal.

#### 2.2 Timescale

The engagement period started 2 weeks before the Engagement Letter was loaded onto the Portal and 6 weeks before the Presentation was loaded – both timescales are unacceptable and contrary to the policy in the CAP.

### 2.3 Attention to Detail



In almost all professional operations attention to detail is vital and in none more so than aviation. The Minutes for both Engagement Meetings - meetings for separate ACPs - reference the same Proposal ID as "ACP-2021-030".

In addition, the Engagement Letter for 030 – Radnor - refers to:

"As a result of this, we need to understand the capability of our platforms to operate Beyond Visual Line of Sight (BVLOS) within the Moreton-In-March area".

The spelling error (the Cotswold site is 'Moreton-in-Marsh' not 'March') is bad enough but to get the location completely wrong (this proposal is for Radnor) is inexcusable. I have an aviation trials background and in my opinion and experience such a lack of attention to detail causes serious questions about whether the TDA could be managed professionally or the trials conducted safely.

These errors and the duplication of the "Sponsor Requirement and Opportunities" in the Engagement Letters reinforce my view that these 2 Proposals are one and the same, aimed at achieving one TDA.

#### 3. PERMANENT DANGER AREA (DA)

For both Proposals the Sponsor's stated aim is for: "Permanent segregated airspace activated by NOTAM in 2022+."

Over the past few years Class G airspace has been 'taken' specifically for use by RPAS operating BVLOS at West Wales Airport and Llanbedr; there is not only no justification for any further permanent DAs but there is a strong argument that the activities proposed in these ACPs should be and would best be carried out in those existing RPAS DAs.

I have no doubt that any attempt to take more Class G airspace for RPAS DAs would be strongly resisted by all the GA Community.

### 4. CONCLUSION

These 2 Proposals are, to all intents and purposes, the same and seem to be an attempt to use 2 'bids' to achieve one TDA.

It may be that the Sponsor has just not explained the differences clearly enough but that means that meaningful engagement with stakeholders (a key requirement of the ACP process and CAP) is impossible.

Even ignoring the duplication, the Proposals show a woeful lack of engagement despite the instructions of the CAA. This lack of engagement is further compounded by a seriously truncated engagement period which has limited my ability to study them fully. By itself, this extremely poor engagement leads me to object entirely to both Proposals.

Ignoring the engagement, the lack of assessment of traffic in the areas is also of considerable concern. The creation of choke points should always be avoided and especially so in areas of dense GA activity like Moreton-in-Marsh, while the failure to consult widely risks missing smaller airfields and is inexcusable. This lack of assessment of airspace activity or a lack of willingness to consult all users leads me to object entirely to these Proposals.

A well-presented, broadly-consulted and truly temporary Proposal might have generated support in the Radnor area although I doubt any proposal in the Moreton-in-Marsh area would ever be supported. Regrettably, in my opinion neither Proposal exhibits any of those key traits and as they are presented I object most strongly to ACPs 029 and 030.





**@nexusnine.co.uk** [mailto @nexusnine.co.uk]

**Sent:** 24 September 2021 16:53

10:

**Subject:** RE: ACPs-2021-029 & 030

Hi,

The CAA did, in fact, provide the exact list that you suggest. It was made clear to us that we did not have to engage with everyone on the list (indeed it would not be appropriate for a TDA of only 90 days) and our suggested list of stakeholders was run past the CAA Engagement Team prior to commencing the process.

I will upload a copy of the initial presentation to the Airspace Portal, all information regarding this ACP was encompassed in our Targeted Engagement material – we therefore have no plan to extend the engagement period.

I would though be grateful for a little understanding as to what your particular interest is with these ACPs so I might be able to provide you with more targeted information.

**Best Regards** 



From: >

**Sent:** 24 September 2021 07:28

**@**nexusnine.co.uk

Subject: RE: ACPs-2021-029 & 030

Thanks

I'm surprised that the CAA did not provide you with the list of NATMAC (National Air Traffic Management Advisory Committee) members but it did state (Assessment Meeting Minutes):

"Consultation and engagement

This process must encompass:

- Aviation stakeholders
- Other airspace users
- NATMAC
- · Aerodromes"

NATMAC members include all the national GA Associations who should have been contacted directly, and I believe the CAA would provide contact details.

A link listing the members is below and ARPAS is also a member, as you can see from the link

https://www.arpas.uk/arpas-uk-invited-to-join-natmac/

I notice also from the Minutes of the Assessment Meetings that you gave a presentation to the CAA and that the CAA required the presentation to be published on the Portal (a requirement of the CAP), but I cannot see the document anywhere. Can you confirm if/when it was/will be published, and whether as a result the engagement period will be extended?

Kind regards



@nexusnine.co.uk [mailto @nexusnine.co.uk]

**Sent:** 20 September 2021 22:29

Subject: RE: ACPs-2021-029 & 030

Many thanks for your reply; my apologies for my misunderstanding and I now see where you're coming from. I shall explain all I can to help you determine where the delays might have come from.

As suggested, our engagement period began on 16<sup>th</sup> August with emails sent to both local stakeholders for each ACP and a number of national stakeholders who received information on both our ACPs. Our suggested list of national stakeholders was run past the CAA where a number of additional stakeholders were added at their suggestion. I can confirm that the below national association stakeholders were contacted on 16<sup>th</sup> August using the latest contact information provided directly from the CAA Engagement Team:

Aircraft Owners & Pilot's Association British Helicopter Association Airspace4all General Aviation Alliance

Whilst I cannot speak for the national bodies that represent the GA community, I might surmise that it simply took a while for our ACP email to come to the top of their inbox, and then distribute amongst the membership.

I hope this clarifies from our end for you. If you require any more information, please do not hesitate to get back in touch.

**Best Regards** 

From: > Sent: 20 September 2021 18:08

To: 'nexusnine.co.uk>

Subject: RE: ACPs-2021-029 & 030

**Dear Sponsor** 

Thanks for your prompt response.

- 1. Can you explain please why, if the engagement period started on 16 Aug, the engagement letter was not published for individual stakeholders like me until 31 Aug?
- 2. You have misunderstood my question as I represent only myself. I am, though, active in several GA organisations and would have expected to be made aware of your ACPs by some or all of them. Can you please tell me which GA bodies you contacted and when?

Kind regards

From: @nexusnine.co.uk]

**Sent:** 20 September 2021 17:40



**To:** > **Subject:** Re: ACPs-2021-029 & 030

Dear Sir/Madam,

Many thanks for your enquiry regarding our 2 ACPs. I can confirm that our engagement period began on the 16th of August 2021 and will continue to run for the 8 week duration as stated in our literature.

In order to fully understand the timeline for your receipt of our proposal and identify if your organisation was part of our original engagement list it would be useful for you to identify whom you are representing. I will then be able to provide you with a more detailed explanation for any delays.

Many thanks



From:

**Subject:** ACPs-2021-029 & 030

Dear Sponsor

ACPs 030 (Radnor) and 029 (Moreton-in-the-March) both had engagement letters issued on 31 Aug 2021 with an 8 week engagement period. Yet the closing date for submission is 10 Oct 21 – just 6 weeks after publication of the letter. Are you going to extend the deadline to end Oct to provide 8 weeks?

Unlike many other ACPs you have not provided list of organisations actually contacted, especially GA organisations. I am a member of a formal ACP Assessment Team and have received no notification of engagement from my GA organisation, can you provide a list of organisations contacted please?

Kind regards



## Community Engagement

## New Radnor Parish Council

From: New Radnor Community Council <newradnorcc@outlook.com>

Sent: 15 October 2021 09:59

To: @nexusnine.co.uk>

Subject: Re: Radnor Unmanned Aerial System Airspace Consultation

Caution: External Message

Dear ,

As agreed with you previously your proposal was discussed at the Council meeting held last night and Members did not have any comment to make.

Regards

,

, CiLCA (Wales), PSLCC

Clerk and Responsible Financial Officer New Radnor Community Council

From: New Radnor Community Council <newradnorcc@outlook.com>

Sent: 13 September 2021 20:17

To: @nexusnine.co.uk>

Subject: Re: Radnor Unmanned Aerial System Airspace Consultation

Many thanks.

,

, CiLCA (Wales), PSLCC

Clerk and Responsible Financial Officer New Radnor Community Council

From:

@nexusnine.co.uk>

Sent: 13 September 2021 19:00

**To:** New Radnor Community Council <<u>newradnorcc@outlook.com</u>> **Subject:** Re: Radnor Unmanned Aerial System Airspace Consultation

,

Absolutely, no problem at all.





From: New Radnor Community Council < newradnorcc@outlook.com >

Sent: Monday, September 13, 2021 6:59:05 PM

To: nexusnine.co.uk nexusnine.co.uk>

Subject: Re: Radnor Unmanned Aerial System Airspace Consultation

Thank you was. You just missed our Sept meeting. May I submit comments to you on 15th October, a few days after your deadline? It would be a real help as we can then discuss at our October meeting.

I look forward to hearing from you.

,

, CiLCA (Wales), PSLCC

Clerk and Responsible Financial Officer New Radnor Community Council

@nexusnine.co.uk < @nexusnine.co.uk>

**Sent:** 13 September 2021 15:36

**To:** 'New Radnor Community Council' < <a href="mailto:newradnorcc@outlook.com">newradnorcc@outlook.com</a> **Subject:** Radnor Unmanned Aerial System Airspace Consultation

Many thanks for the email address....

Please find attached details regarding a proposed temporary air danger area to conduct Unmanned Aerial Systems (drone) activity from the test range at Radnor. If you have any questions regarding this proposal, please do not hesitate to contact me but we would also welcome your feedback regarding this proposal.

**Best Regards** 

Accountable Manager Nexus Nine Ltd

From: New Radnor Community Council < newradnorcc@outlook.com >

Subject: Fw: Contact Form message from newradnor.net/community-council/council-members/ to

Dear

You can reply to this email.



, CiLCA (Wales), PSLCC Clerk and Responsible Financial Officer New Radnor Community Council



# Appendix C – Traffic Flow Study

## Good Weather Day

## Tues 7th September 2021

Summary: Cardiff saw a good weather day throughout the period with no cloud detected for the majority of the day. Freezing level estimated > 10,000' AMSL. Traffic transiting over the proposed TDA is likely to have been VFR and therefore able to fly above 3500' (max elevation of TDA) if they had wished to.

07/09/2021 09:20-> METAR EGFF 070920Z AUTO 07009KT 9999 NCD 23/17 Q1021=
07/09/2021 09:50-> METAR EGFF 070950Z AUTO 07009KT 9999 NCD 23/16 Q1021=
07/09/2021 10:20-> METAR EGFF 071020Z AUTO 07010KT 9999 NCD 24/17 Q1020=
07/09/2021 10:50-> METAR EGFF 071050Z AUTO 09009KT 9999 NCD 25/17 Q1020=
07/09/2021 11:20-> METAR EGFF 071120Z AUTO 09008KT 9999 NCD 26/17 Q1020=
07/09/2021 11:50-> METAR EGFF 071150Z AUTO 09009KT 9999 NCD 26/17 Q1019=
07/09/2021 12:20-> METAR EGFF 071220Z AUTO 09008KT 060V140 9999 NCD 27/17 Q1019=
07/09/2021 12:50-> METAR EGFF 071250Z AUTO 10009KT 070V140 9999 NCD 28/17 Q1019=
07/09/2021 13:20-> METAR EGFF 071320Z AUTO 10010KT 070V140 9999 NCD 28/16 Q1019=
07/09/2021 13:50-> METAR EGFF 071350Z AUTO 11010KT 9999 NCD 28/16 Q1018=
07/09/2021 14:20-> METAR EGFF 071420Z AUTO 10010KT 9999 NCD 28/16 Q1018=
07/09/2021 14:50-> METAR EGFF 071450Z AUTO 11009KT 9999 NCD 28/15 Q1018=
07/09/2021 15:20-> METAR EGFF 071520Z AUTO 11010KT 9999 NCD 28/15 Q1017=
07/09/2021 15:50-> METAR EGFF 071550Z AUTO 12011KT 9999 NCD 28/15 Q1017=
07/09/2021 16:20-> METAR EGFF 071620Z AUTO 13011KT 9999 NCD 27/14 Q1017=
07/09/2021 16:50-> METAR EGFF 071650Z AUTO 12010KT 9999 VCTS /////CB 26/14 Q1017=

Aircraft that would have infringed the TDA laterally and vertically based on QNH 1018 (for today this is FL034 and below):

Time	Callsign	Type	Flight Level
1429	GBHAA	C152	030
1449	GAVOZ	PA28	030

Total affected traffic in 8-hour window: 2



## Moderate Weather Day

## Weds 1st September 2021

Summary: Cardiff saw stable cloud bases between 2500' and 3600' for the majority of the day with good visibility throughout. Freezing level estimated >10,000'. Traffic transiting over the proposed TDA is likely to have been unable to elect to fly above 3500' and maintain VFR.

01/09/2021 09:20-> METAR EGFF 010920Z AUTO 06013KT 9999 OVC034 16/11 Q1032=
01/09/2021 09:50-> METAR EGFF 010950Z AUTO 07011KT 9999 OVC036 16/10 Q1032=
01/09/2021 10:20-> METAR EGFF 011020Z AUTO 06011KT 9999 OVC032 16/10 Q1032=
01/09/2021 10:50-> METAR EGFF 011050Z AUTO 06011KT 9999 OVC031 16/11 Q1032=
01/09/2021 11:20-> METAR EGFF 011120Z AUTO 07012KT 9999 OVC026 16/10 Q1032=
01/09/2021 11:50-> METAR EGFF 011150Z AUTO 07010KT 9999 BKN028 OVC033 16/10 Q1032=
01/09/2021 12:20-> METAR EGFF 011220Z AUTO 07011KT 030V110 9999 SCT023 0VC029 16/11 Q1032=
01/09/2021 12:50-> METAR EGFF 011250Z AUTO 07012KT 9999 OVC025 16/11 Q1031=
01/09/2021 13:20-> METAR EGFF 011320Z AUTO 06013KT 9999 BKN026 OVC031 16/10 Q1031=
01/09/2021 13:50-> METAR EGFF 011350Z AUTO 04009KT 9999 OVC031 16/11 Q1031=
01/09/2021 14:20-> METAR EGFF 011420Z AUTO 05009KT 9999 OVC032 17/11 Q1031=
01/09/2021 14:50-> METAR EGFF 011450Z AUTO 04009KT 9999 OVC036 17/11 Q1031=
01/09/2021 15:20-> METAR EGFF 011520Z AUTO 05009KT 9999 OVC031 16/11 Q1031=
01/09/2021 15:50-> METAR EGFF 011550Z AUTO 06008KT 030V090 9999 OVC033 17/11 Q1031=
01/09/2021 16:20-> METAR EGFF 011620Z AUTO 08007KT 9999 OVC036 17/11 Q1030=

Aircraft that would have infringed the TDA laterally and vertically based on QNH 1030 (for today this is FL030 and below):

01/09/2021 16:50-> METAR EGFF 011650Z AUTO 06010KT 9999 OVC036 17/11 Q1030=

Time	Callsign	Туре	Flight Level
1301	VYT779	Texan	FL007
1316	VYT72	Texan	FL008
1509	VYT77	Texan	FL011

Total affected traffic in 8-hour window: 3

