



Ministry
of Defence

ACP-2021-078

**GATEWAY DOCUMENTATION:
STAGE 1 - DEFINE**

**STEP 1B - DESIGN PRINCIPLES
AND
STAKEHOLDER ENGAGEMENT**

Document Authorship and Approval

Action	Role	Date
Produce	Airspace Change Proposal Team	1 Mar 22
Review	DAATM	3 Mar 22
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Introduction

The Ministry of Defence (MOD), specifically Defence Airspace and Air Traffic Management (DAATM), is the Change Sponsor for this proposal on behalf of the United States Air Force Europe (USAFE). The proposal seeks to enable Remote Piloted Aircraft Systems (RPAS) to operate Beyond Visual Line of Sight (BVLOS) from RAF Fairford from summer 2023.

The purpose of this document is to provide evidence to the Civil Aviation Authority (CAA) that the Change Sponsor has followed the process laid out in CAP1616 and forms part of the overall requirements for the Stage 1- Define Gateway, Step 1B - Design Principles.

The Change Sponsor has engaged with a wide range of potential stakeholders and sought their views on the initial proposed Design Principles. The feedback received has been reviewed and summarised in this document in order to finalise the proposed Design Principles that will then be used in the development of the Design Options during Stage 2.

This document is laid out as follows:

Section 1 – Stakeholder Engagement. This section outlines how stakeholders were identified, the engagement methodology and a timeline.

Section 2 – Design Principles Development. This section describes the initial draft Design Principles, summarises feedback and then proposes a final set of Design Principles.

Section 3 – Next Steps. Outline of the next steps in the ACP process, including adherence to the revised timeline.

Annex A – Engagement Letters. Copies of the engagement letters distributed to stakeholders, along with the accompanying email, have been included.

Annex B – Stakeholder Feedback Analysis. This will highlight the rationale for accepting or rejecting feedback from stakeholders and includes additional feedback received at this stage.

Annex C – Raw Stakeholder Feedback. All stakeholder feedback that was received by the Sponsor.

Executive Summary

The Change Sponsor conducted stakeholder analysis to ensure that all potential stakeholders were identified and given the opportunity for engagement during the Design Principles development.

Stakeholders were engaged in writing, via a letter distributed by email, and included:

- National Air Traffic Management Advisory Committee (NATMAC) members
- Local aviation stakeholders
- Local County and District Councils
- Other national and local organisations

Engagement began on 9 Dec 21 and was primarily conducted by email, with 18 responses received over the course of two months.

The Change Sponsor also delivered a brief at the Oxfordshire Regional Airspace Users Working Group (RAUWG), held on 9 Mar 22. This provided an opportunity for in-person discussion with local airspace users and representatives from national aviation organisations on the requirement for airspace change to enable RPAS activity at RAF Fairford, activities undertaken so far and how we plan to continue engagement through the next stage of the ACP process.

There was a relatively low response rate at this stage and some feedback was deemed to fall outside of specific feedback on Design Principles. The overarching theme from general aviation stakeholders was concerns over 'removal' of Class G airspace in the area and the restrictions that may be placed on them that would limit their freedom of manoeuvre around the Fairford area.

An additional concern from NATS was that any change should not adversely impact traffic using the national air traffic services route structure. It was also suggested that there be alignment of Design Principles across MOD RPAS ACPs¹.

As a result of the engagement, one Design Principle was amended, and two new Design Principles were included. The final proposed Design Principles are listed in order of priority, though the feedback on priorities produced some conflicting views and led to a joint priority 3 allocation.

¹ MOD has ACP-2019-18 (Protector BVLOS operations from RAF Waddington) and ACP-2021-006 (Watchkeeper BVLOS operations from Keevil) also in progress.

Section 1 – Stakeholder Engagement

Stakeholder Identification

National Stakeholders. NATMAC stakeholders were identified and can be found in the table later in this section. There was an assumption that NATMAC organisations, as national over-arching bodies, would cascade information to representatives at an appropriate level as they saw fit, and this was requested in the written communication. This may have resulted in some stakeholders being contacted twice but reduced the likelihood of the Sponsor not engaging with relevant stakeholders that it may otherwise have inadvertently omitted.

Local Stakeholders. Initial research was conducted to identify stakeholders within the local aviation and authority groups. Without having explored Design Options, an initial assumption was made that any potential airspace changes will be restricted to within the vicinity of RAF Fairford, therefore local authority engagement was aimed at County and District Councils within a 15-mile radius of the base. District Council level was considered to be important as this is the level at which planning committees sit. The decision was made not to engage at Parish level until Stage 2, when the Design Options will enable a more targeted approach.

Although the assumption was made that the proposed airspace change will be in the vicinity of RAF Fairford, it is acknowledged that it may still affect airspace users from across the wider region. For this reason, airspace stakeholders were selected from a geographical area within a 30-mile radius of the base. The list was produced with reference to aeronautical charts and through discussion with RAF Fairford and RAF Brize Norton Air Traffic Control.

Other National and Local Organisations

It was deemed important to engage with other organisations outside of the aviation and local authority spheres to ensure that all interests can be considered. This was particularly important for gaining better understanding of the geographical aspects of the area and potential for environmental impacts on tranquility and biodiversity.

The following stakeholders received a written introduction to the ACP and Design Principles:

NATMAC Stakeholders		
Aircraft Owners and Pilots Association (AOPA UK)	Airport Operators' Association (AOA)	Airfield Operators' Group (AOG)
Airspace4All (A4A)	Airspace Change Organising Group (ACOG)	Aviation Environment Federation (AEF)
Association of Remotely Piloted Aircraft Systems UK (ARPAS UK)	British Airline Pilots' Association (BALPA)	British Balloon and Airship Club (BBAC)

British Business and General Aviation Association (BBGA)	British Gliding Association (BGA)	British hang Gliding and paragliding Association (BHPA)
British Helicopter Association (BHA)	British Microlight Aircraft Association (BMAA)	British Model Flying Association (BMFA)
British Skydiving	Drone Major	General Aviation Alliance (GAA)
General Aviation Safety Council (GASCo)	Guild of Air Traffic Controllers (GATCO)	Heavy Airlines
Helicopter Club of Great Britain (HCGB)	Light Aircraft Association (LAA)	Ministry of Defence (MOD)
National Air Traffic Services (NATS)	PPL/IR Europe	The Honourable Company of Air Pilots (HCAP)
UK Airprox Board (UKAB)	UK Flight Safety Committee (UKFSC)	

Local Aviation Stakeholders		
Bristol & Gloucestershire Gliding Club / Nympsfield Airfield	Cotswold Airport (Kemble)	Cotswold Gliding Club / Aston Down Airfield
Dalton Barracks, Abingdon	Enstone Airfield	Gloucestershire Airport
London Oxford Airport	RAF Benson	RAF Brize Norton
RAF Little Rissington	RAF Weston-on-the-Green	Rendcomb Airfield
RLC Silver Stars, South Cerney		

Local Authority Stakeholders		
Cotswold District Council	Gloucester City Council	Gloucestershire County Council
Oxfordshire County Council	Swindon Borough Council	West Oxfordshire District Council
Wiltshire County Council		

Other Local and National Organisations		
Campaign to Protect Rural England	Cotswold AONB	County Land and Business Association
Environment Agency	Local Resilience Forum	Natural England

Additionally, several local aviation stakeholders responded directly to the engagement letter and will be added to the stakeholder list for future engagement. Where other potentially affected stakeholders are identified, they will also be included for all future engagement.

Engagement Methods

Written Communication

The primary method of engagement was written communication via email. An attached letter introduced the requirement for the ACP, outlined the draft Design Principles and provided details on how to provide feedback directly to the Sponsor's email address. A link to the CAA's airspace change portal was provided in the letter. A copy of the engagement letter has been uploaded to the portal and can also be found at Annex A.

Verbal Presentation to the Oxfordshire RAUWG

The Sponsor was given the opportunity to deliver a face-to-face brief at the Oxfordshire Regional Airspace Users' Working Group, held at RAF Brize Norton on 9 Mar 22. Although several weeks after the deadline for feedback on the engagement letter, this provided an opportunity to directly brief and take questions from stakeholders, both civilian and military, who operate aircraft (gliders, helicopters, hang-gliders and fixed wing light aircraft) and have an interest in the local airspace. There was a keen interest in what the airspace design will be, future plans to integrate its RPAS rather than utilising segregated airspace, and also in understanding operating procedures including lost-link. Airspace design will be covered in Stage 2, integration is an aspiration but not yet approved and operating procedures, including contingencies/emergencies, are being addressed as part of USAFE's work to gain approval to operate RPAS in the UK.

Methods Discounted at Stage 1

Wider verbal briefs. At this stage of the engagement, and given the written feedback, it was felt that there would be little value in holding wider briefing sessions (online or face-to-face) without having information to share about potential Design Options. It is anticipated that such briefs would be more beneficial during Stages 2 and 3 of the ACP.

Surveys. Although surveys can be a useful engagement method, it was felt that direct written communication would provide more effective engagement feedback on proposed Design Principles. Surveys will be considered during later engagement and consultation.

Engagement Chronology

Feedback was initially requested to be received by 10 Jan 22 however, one respondent suggested that 4 weeks was insufficient time for distribution and consideration due to the Christmas period, which led to the deadline being extended for all stakeholders. Throughout the engagement period, feedback was acknowledged by email and stakeholders that had been made aware of the ACP through NATMAC organisations or other means were added to the engagement matrix to be included directly in future communications

Date	Action	Remarks
12 Nov 21	Sponsor email address and Stage 1A documentation (SoN) published on CAA ACP portal.	
9 Dec 21	Engagement letter emailed to stakeholders	Feedback requested by 10 Jan 22.
20 Jan 22	Email to all stakeholders extending the engagement period	Feedback requested by 10 Feb 22.
10 Feb 22	Engagement period finished	18 responses received
9 Mar 22	Presentation at the Oxfordshire Regional Airspace Users' Working Group ²	Face-to-face brief at RAF Brize Norton. Attended by local military and civilian airspace users, national aviation organisations and the CAA.

² Slides uploaded to Airspace Change portal. Minutes of the meeting will be added once finalised.

Section 2

Initial Draft Design Principles

The draft Design Principles initially presented for feedback were as follows:

Design Principle		Rationale
a	Provide a safe environment for airspace users	A planning assumption is that no CAA-approved DAA will be available on any RPAS operating from RAF Fairford, hence segregated airspace is required to enable safe BVLOS operations in Class G airspace.
b	Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes	The volume of airspace must be large enough to allow an RPAS to fly its procedures while remaining segregated from other airspace users and also provide efficient routing, which will minimise the time segregated airspace is required and support the achievement of operational objectives.
c	Where possible and practicable, accommodate the Airspace Modernisation Strategy ³	The MOD supports the CAA's current and emerging Airspace Modernisation Strategy (which commits to facilitating defence and security objectives) but may not be able to accommodate all aspects due to operational requirements.
d	Minimise the impact to other airspace users	The MOD understands that introduction of segregated airspace has an impact on other airspace users and will endeavour to utilise a variety of methods to minimise those impacts where possible, given that the primary reason for the airspace change is to accommodate RPAS operations e.g. minimise volume and activation time, enabling access where possible.
e	Use Flexible Use of Airspace ⁴ (FUA) principles to manage the airspace as far as is practicable	FUA principles of airspace management enable civil/military coordination that can improve efficiency and airspace sharing for both. This is particularly important given that the primary user will not have CAA-approved DAA capability.

Given the provisional M1³ categorisation of this proposal, it was initially assessed that environmental impacts could be accounted for under a single design principle to minimise the impact on other airspace users.

³ For a Level M1 change, a military proposal anticipated to affect civil operations must take the environmental impact of those effects into account. Therefore, in this scenario, the Ministry of Defence must discuss options with local communities.

Feedback on Draft Design Principles

Much of the feedback received did not specifically relate to the proposed Design Principles. Those responses were still analysed and can be found in Annex B.

Relevant comments from all stakeholders were collated and arranged under the related draft Design Principle. Where it was assessed that a new Design Principle had been proposed, these were listed separately. All comments were reviewed and responded to. Where a change to the draft Design Principle was accepted, this was annotated, and a revised Design Principle was proposed.

DP (a). Provide a safe environment for airspace users

The requirement for a safe operating environment as a Design Principle was not contested during the Stage 1 engagement, and only limited specific feedback was received. There was a comment from GA referring to appropriate safety case work associated with the airspace change, which will be required as part of the process.

Outcome: DP (a) wording remains unchanged and is deemed to be the most important Design Principle.

DP (b). Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes

There was only one specific comment on the Design Principle, which was NATS requesting more clarification on potential methods of operating and integration. As with other military RPAS, until it is possible to approve safely integrated BVLOS operations, the requirement will include segregated airspace in which to operate.

There were no specific objections to this Design Principle, but there were several comments from GA and airports noting the lack of detail on the airspace design. Initial Options will be developed in Stage 2 and shaped through continued stakeholder engagement and consultation, as per the CAP1616 process.

Outcome: DP (b) wording remains unchanged and is allocated priority 2.

DP (c). Where possible and practicable, accommodate the Airspace Modernisation Strategy

There was specific feedback on this Design Principle from NATS, requesting an amendment to the wording to 'Deliver the aims of the AMS'. The original wording was chosen to align with other MOD RPAS ACPs, and recognises that the AMS has very broad aims, one of which relates is to facilitate defence and security objectives. The MOD does fully support the AMS but is cognisant that it may not be possible to always meet all of the aims of the AMS.

Other feedback highlighted that the segregation required due to lack of approved onboard DAA capability means the RPAS operations are not aligned with the AMS.

The MOD supports integration, and USAFE will be working with the regulators to achieve DAA approvals in the longer-term, but until that can safely be achieved there will be a requirement for segregation.

Although there were no comments about priority, general support for DP(d) was evident, with specific feedback on the use of electronic conspicuity, mandatory transponder zones, efficient transition between upper and lower airspace levels, minimum airspace volumes and flight profiles.

Outcome: DP (c) wording remains unchanged.

DP (d). Minimise the impact to other airspace users

This Design Principle received a large amount of feedback, both specific and generally referencing potentially affected airspace users and the need to fully understand the historical activity in the region. Along with DP (e), it also received the most support for being afforded high priority.

NATS requested that the words 'both in terms of activation and volume of airspace required' be added for alignment with the MOD's Protector RPAS ACP. The wording was specifically chosen because the Protector ACP received feedback on that DP that the additional statement was not required, and subsequently removed it before submitting final Design Principles. The rationale in this ACP has been presented that there are multiple methods of minimising impact on other airspace users, not only with activation and volume of airspace (though the aspiration is to minimise both), and all will be considered during the process.

Outcome: DP (d) wording remains unchanged.

DP (e). Use Flexible Use of Airspace (FUA) principles to manage the airspace as far as is practicable

There was general support for this Design Principle and, along with DP (d), it received the most requests to be afforded high priority.

NATS requested that the wording be amended to 'Adhere to FUA principles and strategy'. This DP was written to align with other MOD RPAS ACPs, which has been cited as important in feedback on other DPs, and DP (b) remains a higher priority and may impact on flexibility. However, the suggested wording still meets the intent of the DP and has been accepted.

Outcome: DP (e) wording amended.

Additional Suggested Design Principles

There were five additional DPs suggested as follows:

Suggested Design Principle		Analysis by Change Sponsor	Design Principle Accepted?
1	Be in accordance with current airspace regulation	This DP was proposed and discounted during the MOD's Protector ACP stage 1 because it was deemed that the airspace must meet current regulation, therefore the DP is not required.	No
2	Endeavour to make the airspace as accessible as possible	The rationale was that access to the airspace would be covered through DP d. Availability of air traffic services will affect accessibility and will be a key point during stage 2. Content to add a DP to cover accessibility specifically.	Yes
3	Use standard airspace structure where possible (Conformity, Simplicity and Safety)	Without a rationale, it is difficult to fully understand the intent of this suggested DP, though it has been used in other ACPs including Protector. What standard? There is no intention to 'invent' a new type/classification of airspace. The benefits of simplicity are acknowledged but there is a balance to be achieved in providing flexibility and complementing the current and planned airspace designs and concepts under the AMS.	No
4	Minimise the environmental (fuel and CO2) impact to non-participating aircraft	CAP1616 requires that environmental impact analysis be conducted at stages 2, 3 and 4 in order to carry out options appraisal. The intent was to capture environmental impact under DP (d). The MOD recognises that minimising the environmental impact is important and is content to include this as a separate DP, though with slightly amended wording.	Yes, with amended wording
5	Only be activated when required for RPAS launch and recovery	It has been suggested and agreed that DP (c) be amended to include 'in terms of activation and volume...'. The sponsor feels that there is no benefit in an additional DP to state that the airspace will only be activated when required for launch and recovery. This is also a CAP 740 requirement for airspace management.	No

Two of the suggested Design Principles were accepted and added to the list of Proposed Design Principles.

Final Proposed Design Principles

Safety is the highest priority and so DP(a) is automatically assigned Priority 1.

Providing airspace that enables efficient RPAS transition between RAF Fairford and transit routes is the next most important factor to the MOD and, since no stakeholder contested this, DP(b) is assigned Priority 2.

The remaining Design Principles are all important to the MOD and feedback showed, as discussed in CAP1616, that different stakeholders would afford them differing levels of priority depending on the impact on their activities. Based on the comments received, not purely upon the volume of responses, the remaining Design Principles were allocated priority as shown below:

Design Principle		Priority
a	Provide a safe environment for airspace users	1
b	Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes	2
c	Minimise the impact to other airspace users	3
d	Adhere to FUA principles and strategy	3
e	Where possible and practicable, accommodate the Airspace Modernisation Strategy	4
f	Endeavour to make the airspace as accessible as possible	5
g	Minimise the environmental impact of non-participating aircraft	6

Section 3

Next Steps

This document aims to provide evidence to the CAA in support of Step 1B of the CAP1616 process and will be submitted in time to meet the Define Gateway on 24 Mar 22.

The planned, revised timeline, as agreed with the CAA on 10 Jan 22, is as follows:

Stage	Submission	Gateway
DEFINE GATEWAY	11 Mar 22	25 Mar 22
DEVELOP AND ASSESS GATEWAY	15 Jul 22	29 Jul 22
CONSULT GATEWAY	12 Aug 22	26 Aug 22
UPDATE AND SUBMIT	6 Jan 23	
DECIDE GATEWAY		28 Apr 23
IMPLEMENT		10 Aug 23

It is noted that submission to AIS is 12 May 23 to achieve AIRAC 08/2023.

Engagement Letters

Original email sent to local authorities and local/national organisations

Dear stakeholder,

The MOD has initiated an Airspace Change Proposal (ACP) to enable Remotely Piloted Aircraft Systems (RPAS) to operate from RAF Fairford, with a view to commencing operations in late summer 2023. Please find attached a letter providing more details about the requirement, the process we will follow to ensure that the interests of all potentially affected stakeholders are taken into account, and our draft Design Principles, which we intend to use as a framework when designing options.

Please promulgate the letter to ensure that as many potentially affected local community stakeholders as possible have the opportunity to engage. We welcome feedback on the proposed Design Principles and ask that it be sent by email, to be received by Mon 10 Jan 22.

Kind regards,

ACP Sponsor

Original email sent to airspace users and NATMAC

Dear stakeholder,

The MOD has initiated an Airspace Change Proposal (ACP) to enable Remotely Piloted Aircraft Systems (RPAS) to operate from RAF Fairford, with a view to commencing operations in late summer 2023. Please find attached a letter providing more details about the requirement, the process we will follow to ensure that the interests of all potentially affected stakeholders are taken into account, and our draft Design Principles, which we intend to use as a framework when designing options.

Please pass on this email across your organisation or to any other airspace users you think may be affected. We welcome your feedback on the proposed Design Principles and ask that it be sent by email, to be received by Mon 10 Jan 22.

Kind regards,

ACP Sponsor

Email sent to all stakeholders to extend the engagement period

Dear stakeholders,

Thank you to those of you who have already provided feedback on our proposed Design Principles. Following some comments that there may have been insufficient time to fully promulgate and respond over the Christmas and New Year period, and given that our Stage 1 Gateway has been deferred until the end of March, we are happy to continue accepting feedback on the Design Principles until Thursday 10th February 2022.

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: █ | Skype: █ MOD Net: DAATM-AirspaceStrategySO2 | E-Mail: █

The following two letters were sent to local authorities and local/national organisations, and airspace users and NATMAC respectively.



Ministry
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8 December 2021

AIRSPACE CHANGE PROPOSAL – ACP-2021-078

Introduction

In order to support NATO, the US Air Force is making significant infrastructure investments on airbases in the UK and other allied nations. There is an emerging requirement for military aircraft, including Remotely Piloted Aircraft Systems (RPAS), to operate regularly from RAF Fairford. Although any RPAS will be operated by fully qualified pilots, it is anticipated that they will not have the required onboard Detect and Avoid (DAA) capability to permit flight in unsegregated airspace. In accordance with Civil Aviation Publication (CAP) 722 – Unmanned Aircraft System Operations in UK Airspace – Guidance and Policy, beyond visual line of sight (BVLOS) operations require either a Civil Aviation Authority (CAA)-approved DAA capability or to remain within a block of airspace that is segregated from other airspace users.

Airspace Change Proposal

The Ministry of Defence (MOD) has initiated an Airspace Change Proposal (ACP) to establish suitable segregated airspace to enable RPAS operations from RAF Fairford.

Changes to UK airspace are legally required to follow the process laid down in the CAP1616, details of which can be found online⁴. Following this process ensures a fair and transparent flow of information between the Change Sponsor and any affected stakeholders. It also ensures that the changes are not arbitrarily applied without full engagement and formal consultations. The CAA, as an impartial regulator, will hold Change Sponsors to account and ensure that CAP1616 is followed correctly as part of its decision-making responsibility.

The CAP1616 process comprises seven stages. The stages are each considered by the CAA separately and sequentially. The process is not solution-driven, and each stage informs the next. In this instance, the requirement is to fly RPAS between RAF Fairford and medium or high-level transit routes in and out of UK airspace. This has been presented to the CAA at Step 1a of Stage 1 of the ACP process and the CAA has agreed that an airspace change is an appropriate means by which to achieve the MOD's requirement. Details of this step can be found on the CAA's online airspace change portal⁵. The MOD will follow the next steps of

⁴ [CAP1616: Airspace change: Guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic, and on providing airspace information \(caa.co.uk\)](#)

⁵ [Airspace change proposal public view \(caa.co.uk\)](#)

CAP1616 to develop options which will help to deliver the most appropriate solution and address the requirement.

Stage 1 Step 1b – Design Principles

The generation of options for any new airspace or procedures first requires airspace design principles to be developed. The Design Principles stage lies within the first stage of the CAP1616 process. The MOD is keen to engage with stakeholders and is asking for your feedback.

At this early stage, it is given that airspace changes will be required within the vicinity of the RAF Fairford, but it is not known whether they will be restricted to the vicinity or whether changes will be required at greater distances from the base. For this reason, the MOD has elected to select its Local Authority stakeholders from an area within a radius of approximately 15 miles from RAF Fairford.

The MOD has compiled a set of draft design principles, which are presented here for your comment. When finalised, these design principles will be utilised to inform the development and design of any airspace change options. Engagement with local community is of great importance to the MOD and, given that your authority's area could provide airspace that lies in proximity to RAF Fairford, the MOD would like to understand which elements of the airspace design principles you, as another airspace user, deem important and would like to be considered.

You are now invited to consider the design principles. The list below is not exhaustive, but you may like to comment on the following:

- Are there any other design principles you would like the MOD to consider?
- Would you like the MOD to discount any of its draft design principles?
- Should the MOD prioritise some design principles ahead of others?
- Do you require / would you like any more detail to be included in the design principles?

The MOD views principles a and b as its priorities because:

- Safety is paramount and underpins all airspace change.
- Access to sufficient suitable airspace for efficient transit will be key to RPAS achieving operational objectives in support of NATO.

Any additional detail and reasoning behind your feedback is encouraged.

The MOD’s draft design principles, as a basis for engagement, are below.

The design should:

	Design Principle	Rationale
a	Provide a safe environment for airspace users	A planning assumption is that no CAA-approved DAA will be available on any RPAS operating from RAF Fairford, hence segregated airspace is required to enable safe BVLOS operations in Class G airspace.
b	Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes	The volume of airspace must be large enough to allow an RPAS to fly its procedures while remaining segregated from other airspace users and also provide efficient routing, which will minimise the time segregated airspace is required and support the achievement of operational objectives.
c	Where possible and practicable, accommodate the Airspace Modernisation Strategy ⁶	The MOD supports the CAA’s current and emerging Airspace Modernisation Strategy (which commits to facilitating defence and security objectives) but may not be able to accommodate all aspects due to operational requirements.
d	Minimise the impact to other airspace users	The MOD understands that introduction of segregated airspace has an impact on other airspace users and will endeavour to utilise a variety of methods to minimise those impacts where possible, given that the primary reason for the airspace change is to accommodate RPAS operations e.g. minimise volume and activation time, enabling access where possible.
e	Use Flexible Use of Airspace ⁷ (FUA) principles to manage the airspace as far as is practicable	FUA principles of airspace management enable civil/military coordination that can improve efficiency and airspace sharing for both. This is particularly important given that the primary user will not have CAA-approved DAA capability.

How to Provide Feedback

Feedback on the proposed Design Principles should be sent to:

The Airspace Change Sponsor for this airspace change at DAATM-AirspaceConsultation@mod.gov.uk

All the details of this ACP are available on the CAA’s airspace change portal. The identification number is ACP-2021-078. Although, at this stage, the request is for feedback on Design Principles, general feedback on the proposed change and what is important to you can be left at any point of the process on the portal at:

[Airspace change proposal public view \(caa.co.uk\)](https://www.caa.co.uk/air-space/air-space-change-proposals)

Please advise if you require further engagement and, if so, your preferred point of contact.

Reponses regarding the draft Design Principles must be received by 10 Jan 2022.

⁶ [About the strategy | UK Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/air-space/air-space-change-proposals)

⁷ [Skybrary - Flexible Use of Airspace.](https://www.caa.co.uk/air-space/air-space-change-proposals)



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CAP1616 to develop options which will help to deliver the most appropriate solution and address the requirement.

Stage 1 Step 1b – Design Principles

The generation of options for any new airspace or procedures first requires airspace design principles to be developed. The Design Principles stage lies within the first stage of the CAP1616 process. The MOD is keen to engage with stakeholders and is asking for your feedback.

At this early stage, it is given that airspace changes will be required within the vicinity of the RAF Fairford, but it is not known whether they will be restricted to the vicinity or whether changes will be required at greater distances from the base. For this reason, the MOD has elected to select its aviation stakeholders from an area within a radius of approximately 30 miles from RAF Fairford and to use the National Air Traffic Management Advisory Committee (NATMAC) as a means of broader engagement.

The MOD has compiled a set of draft design principles, which are presented here for your comment. When finalised, these design principles will be utilised to inform the development and design of any airspace change options. The MOD would like to understand which elements of the airspace design principles you, as another airspace user, deem important and would like to be considered.

You are now invited to consider the design principles. The list below is not exhaustive, but you may like to comment on the following:

- Are there any other design principles you would like the MOD to consider?
- Would you like the MOD to discount any of its draft design principles?
- Should the MOD prioritise some design principles ahead of others?
- Do you require / would you like any more detail to be included in the design principles?

The MOD views principles a and b as its priorities because:

- Safety is paramount and underpins all airspace change.
- Access to sufficient suitable airspace for efficient transit will be key to RPAS achieving operational objectives in support of NATO.

Any additional detail and reasoning behind your feedback is encouraged.

The MOD’s draft design principles, as a basis for engagement, are below.

The design should:

	Design Principle	Rationale
a	Provide a safe environment for airspace users	A planning assumption is that no CAA-approved DAA will be available on any RPAS operating from RAF Fairford, hence segregated airspace is required to enable safe BVLOS operations in Class G airspace.
b	Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes	The volume of airspace must be large enough to allow an RPAS to fly its procedures while remaining segregated from other airspace users and also provide efficient routing, which will minimise the time segregated airspace is required and support the achievement of operational objectives.
c	Where possible and practicable, accommodate the Airspace Modernisation Strategy ¹⁰	The MOD supports the CAA’s current and emerging Airspace Modernisation Strategy (which commits to facilitating defence and security objectives) but may not be able to accommodate all aspects due to operational requirements.
d	Minimise the impact to other airspace users	The MOD understands that introduction of segregated airspace has an impact on other airspace users and will endeavour to utilise a variety of methods to minimise those impacts where possible, given that the primary reason for the airspace change is to accommodate RPAS operations e.g. minimise volume and activation time, enabling access where possible.
e	Use Flexible Use of Airspace ¹¹ (FUA) principles to manage the airspace as far as is practicable	FUA principles of airspace management enable civil/military coordination that can improve efficiency and airspace sharing for both. This is particularly important given that the primary user will not have CAA-approved DAA capability.

How to Provide Feedback

Feedback on the proposed Design Principles should be sent to:

The Airspace Change Sponsor for this airspace change at DAATM-AirspaceConsultation@mod.gov.uk

All the details of this ACP are available on the CAA’s airspace change portal. The identification number is ACP-2021-078. Although, at this stage, the request is for feedback on Design Principles, general feedback on the proposed change and what is important to you can be left at any point of the process on the portal at:

[Airspace change proposal public view \(caa.co.uk\)](https://www.caa.co.uk/air-space-change-proposal-public-view)

Please advise if you require further engagement and, if so, your preferred point of contact.

Reponses regarding the draft Design Principles must be received by 10 Jan 2022.

¹⁰ [About the strategy | UK Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/about-the-strategy)

¹¹ [Skybrary - Flexible Use of Airspace.](https://www.caa.co.uk/skybrary-flexible-use-of-airspace)

Stakeholder Feedback Analysis

Specific Draft Design Principles Feedback						
DP No	Design Principle	Response From	Stakeholder Feedback	Analysis by Change Sponsor	DP Change Required?	Proposed Revision
a	Provide a safe environment for airspace users	RAF Weston on the Green	Having reviewed your letter with the RAF Weston on the Green Aerodrome Operator we believe the Design Principle A " Provide a safe environment for airspace Users" to be of most important priority.	Safety remains priority 1.	No	
		NATS	Whilst noting the primary principle of ensuring safety [DP a] NATS would welcome prioritisation of FUA principles [DP e] and the minimising of impact to other airspace users [DP d].	Safety remains priority 1. Weighting for DPs (e) and (d) noted.	No	
b	Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes	NATS	Please can you provide clarity about "Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes" Is it the MOD/USAFE's intent to join established routes as GAT or plan an OAT route? If the former, notwithstanding the amount of work to achieve, a new DP may be required to ensure it compliments rather than conflicts with the current and planned future	There is a longer-term intent to integrate BVLOS RPAS activity when permitted by UK regulation and USAF policy, but current USAF platforms do not meet the minimum capability for integration. As this capability matures, USAFE would welcome that option, where feasible. Until then, the intent is to utilise segregated airspace and operate OAT.	No	

			airspace design and concepts.			
c	Where possible and practicable, accommodate the Airspace Modernisation Strategy	NATS	We would suggest amending it to 'Deliver the aims of the AMS'. We would anticipate any ACP sponsor to be aiming towards the State vision for the UK's future airspace, especially as the MOD formally and actively supports the AMS and under Advance FUA (AFUA) to ensure their airspace requirements are captured. This is also where, through the Flexible Use of Airspace State Programme (FSP), Defence has committed to applying UK ASM Policy and FUA principles in full.	This wording was chosen to align with that used in other MOD RPAS ACPs. The MOD is fully supportive of delivering the aims of the AMS, one of which directly relates to achieving Defence and Security objectives but recognises that some Defence activity may not be able to deliver all of the aims of the AMS at all times.	No	
		BGA	We note that it is anticipated that the RPAS operations will not have the required onboard Detect and Avoid (DAA) capability to permit flight in unsegregated airspace. This is a fundamental issue that impacts significantly on alignment with lower airspace modernisation and in limiting impacts on other stakeholders. We will follow that up separately with MoD and DfT. If DAA is subsequently available, presumably the consultation will be restarted.	While there is a long-term aspiration to integrate BVLOS activity, until the correct approvals can be achieved for each RPAS to safely integrate, there will be a requirement to have segregated airspace established.	No	
		BMAA	In line with the principles of the Airspace Modernisation (was FAS) principles the ACP must respect the requirement for minimum airspace volumes designed for efficiency and reduced environmental impact. These principles will include:	DP (c) supports the AMS. DP (d) relates to minimising impact on other airspace users and has been amended to include specific wording about activation and volume of	No	

			<ul style="list-style-type: none"> • Minimum size of controlled airspace • Minimum number of departure/arrival routes • Steeper and continuous climbs and descents for cost and environmental benefits as well as minimisation of CAS footprint. 	airspace.		
d	Minimise the impact to other airspace users	Bath, Wilts and Dorset Gliding Club	<p>Draft design principles d and e are the most relevant to our operations, as a potentially affected operation. Minimise the impact to other airspace users Use Flexible Use of Airspace4 (FUA) principles to manage the airspace as far as is practicable We note the wording in these statements, notably the terms, “minimise” and “as far as is practicable”. We wish to observe that such terms require a deep understanding of the current and historical use of airspace by affected parties and of the impact on their operations of significant changes to airspace structures. We would expect to be fully consulted as an affected user at every stage, for our views to be taken seriously, and to participate in the generation of solutions taking proper account of our needs.</p>	<p>CAP1616 requires sponsors to establish a baseline of activity in order to then conduct appropriate impact analysis.</p> <p>The club has been added to stakeholder engagement matrix and will be included in all future engagement. Views of all potentially affected stakeholders will be taken into account during options design and appraisal, iaw CAP1616.</p>	No	
		BGA	<p>The proposed design principles appear to be relevant. The ACP letter indicates that the design principles are listed in order of priority. We propose that principles d and e are of higher priority than principle c.</p>	<p>The letter only stated that (a) was highest priority, followed by (b). No further priority was assigned to the remaining DPs, but they will be placed in order of priority after reviewing</p>	No	

			<p>We note that it is anticipated that the RPAS operations will not have the required onboard Detect and Avoid (DAA) capability to permit flight in unsegregated airspace. This is a fundamental issue that impacts significantly on alignment with lower airspace modernisation and in limiting impacts on other stakeholders. We will follow that up separately with MoD and DfT. If DAA is subsequently available, presumably the consultation will be restarted.</p>	<p>feedback.</p> <p>Weighting for DPs (d) and (e) noted.</p> <p>Comments on lack of approved DAA are noted. When DAA capability becomes available (noting limitations in different classifications of airspace), use of segregated airspace will be reduced/not required.</p>		
		NATS	<p>Minimise the impact to other airspace users should be clearer as it is with other MOD DPs relating to RPAS operations. Therefore may we suggest that it is amended to: "Minimise the impact to other airspace users, both in terms of activation and volume of airspace required." We believe this would further demonstrate intent to conform to UK Policy for FUA and ASM</p> <p>Whilst noting the primary principle of ensuring safety [DP a] NATS would welcome prioritisation of FUA principles [DP e] and the minimising of impact to other airspace users [DP d].</p>	<p>The DP rationale gave examples of how to minimise impact e.g., minimise volume and activation time and enable access when possible.</p> <p>Weighting for DPs (e) and (d) noted.</p>	No	
e	Use Flexible Use of Airspace (FUA) principles to manage the airspace as far as is practicable	Bath, Wilts and Dorset Gliding Club	<p>Draft design principles d and e are the most relevant to our operations, as a potentially affected operation. Minimise the impact to other airspace users Use Flexible Use of Airspace (FUA) principles to</p>	<p>Weighting for DPs (d) and (e) noted.</p> <p>MOD intends to use FUA principles.</p>	No	

			manage the airspace as far as is practicable We note the wording in these statements, notably the terms, “minimise” and “as far as is practicable”. We wish to observe that such terms require a deep understanding of the current and historical use of airspace by affected parties and of the impact on their operations of significant changes to airspace structures. We would expect to be fully consulted as an affected user at every stage, for our views to be taken seriously, and to participate in the generation of solutions taking proper account of our needs.			
		BGA	The proposed design principles appear to be relevant. The ACP letter indicates that the design principles are listed in order of priority. We propose that principles d and e are of higher priority than principle c.	Weighting for DPs (d) and (e) noted.	No	
		NATS	The UK has a FUA Policy and an FUA strategy. May we suggest that the DP should read something along the lines of ‘Adhere to FUA principles and strategy’, also adding ASM Principles and Policy. Whilst noting the primary principle of ensuring safety [DP a] NATS would welcome prioritisation of FUA principles [DP e] and the minimising of impact to other airspace users [DP d].	This DP was worded to align with other MOD RPAS ACPs, but no objection to amending. Weighting for DPs (e) and (d) noted.	Yes	Adhere to FUA principles and strategy

Additional Proposed Design Principles						
DP No	Design Principle	Response From	Stakeholder Feedback	Analysis by Change Sponsor	DP Change Required?	Proposed Revision
	Be in accordance with current airspace regulation	NATS		This DP was proposed and discounted during the MOD's Protector ACP stage 1 because it was deemed that the airspace must meet current regulation, therefore the DP is not required.	No	
	Endeavour to make the airspace as accessible as possible	NATS	On the assumption that the airspace is planned, managed and notified correctly, provisions should be made for other users to access the airspace through some form of service or coordination to provision for when RPAS has moved on, delayed etc.	The rationale was that access to the airspace would be covered through DP d. Availability of air traffic services will affect accessibility and will be a key point during stage 2. Content to add a DP to cover accessibility specifically.	Yes	Endeavour to make the airspace as accessible as possible
	Use standard airspace structure where possible (Conformity, Simplicity and Safety)	NATS		Without a rationale, it is difficult to fully understand the intent of this suggested DP, though it has been used in other ACPs including Protector. What standard? There is no intention to 'invent' a new type/classification of airspace. The benefits of simplicity are acknowledged but there is a balance to be achieved in providing flexibility and complementing the current	No	

				and planned airspace designs and concepts under the AMS.		
	Minimise the environmental (fuel and CO2) impact to non-participating aircraft	NATS	The MoD has to consider the environmental impact to non-military flights. Although they have included a DP referencing 'impact to other airspace users', this is not specific, nor may it necessarily be directed at en-route traffic.	CAP1616 requires that environmental impact analysis be conducted at stages 2, 3 and 4 in order to carry out options appraisal. The intent was to capture environmental impact under DP (d). The MOD recognises that minimising the environmental impact is important and is content to include this as a separate DP, though with slightly amended wording.	Yes	Minimise the environmental impact of non-participating aircraft
	Only be activated when required for RPAS launch and recovery	NATS	Although it is implied that the airspace will only be activated when required for RPAS launch and recovery, may we suggest that this is outlined as an explicit design principle.	It has been suggested and agreed that DP c be amended to include 'in terms of activation and volume...'. The sponsor feels that there is no benefit in an additional DP to state that the airspace will only be activated when required for launch and recovery. This is also a CAP 740 requirement for airspace management.	No	

General Feedback from Stakeholders						
	Theme	Response From	Stakeholder Feedback	Analysis by Change Sponsor	DP Change Required?	Proposed Revision
	Clarification of Operating Requirements (Segregation vs Integration)	NATS	<p>Within design principles and discussions with the MoD on previous RPAS integration airspace changes, it has been clearly articulated to NATS that the aim is to utilise existing controlled airspace constructs with their associated separation requirements in lieu or segregated airspace for the purpose of transit, even if the RPAS is not equipped with a Detect and Avoid System. This principle does not appear in the pre-ambule of this document; instead, a level of uncertainty is introduced in paragraph 2 of the text (Stage 1 Step 1b – Design Principles): “At this stage, it is a given that airspace changes will be required within the vicinity of [the] RAF Fairford, but it is not known whether they will be restricted to the vicinity or whether changes will be required at greater distances from the base”. Consequently, NATS is unable to determine if additional design principles are required that could include, but are not limited to, factors such as disruption to En-route traffic, or segregation criteria associated</p>	<p>Although this ACP has MOD as Sponsor, MOD and USAFE are two different organisations and have different policy and regulation for operating. All background discussion so far has been with a view to segregation due to no RPAS meeting the minimum capability for DAA, but as that capability matures or there is more guidance on what can be permitted, integration in different airspace classifications can be considered.</p> <p>There has been an informal engagement session with Western Airspace Development, Bristol Airport and LAMP team.</p> <p>Sponsor is engaging closely with RAF Brize Norton, both as ATS provider for RAF Fairford traffic and due to potential impact on the CTR.</p> <p>We are engaging with all</p>	No	

		<p>to the CAA's SUA Safety Buffer Policy etc. As a result, further information on the scope of change is required prior to confirmation that the principles associated to the design are appropriate. Moreover, clarification / confirmation that the MoD is now moving away from its assertion that RPAS activity can and should be integrated into controlled airspace as opposed to segregated, would be welcome. Consideration should be given to the West Airspace Development, which is systemising lower routes in West End sectors, including S23 and is currently planned to be introduced in 2023. In addition, the Bristol Airport ACP is ongoing and approaching the stage 2 gateway – this will comprise changes to routes and CAS in the Bristol area of interest as depicted in the ACP. Given that there are likely to be common areas of interest we request that Bristol Airport is added to the MoD's list of stakeholders to ensure effective engagement throughout the airspace design process. There is also a potential RAF Brize Norton ACP for contiguous CAS to enable CAS protection between the Brize CTR and S23. We are not quite sure of the status of this</p>	<p>potential users of the AIAA</p>		
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			<p>ACP; however, this change could also impact any planned segregated areas for Fairford; hopefully, this will be considered in an integrated way between RAF and USAF sponsors? As Fairford currently sits in an Area of Intense Aerial Activity. This will need to be considered when siting and operating any segregated area. In addition to procedures for transfer of control between NERL S23 and Fairford, the sponsor will need to consider how operations outside CAS is conducted between NATS and Fairford.</p>			
	<p>Comparison with DPs proposed in MOD's Protector RPAS ACP</p>	NATS	<p>There are only 5 design principles used in this document, whereas the equivalent Design Principles (DP) used for RPAS introduction at RAF Waddington has 8. Specifically, these include:</p> <ul style="list-style-type: none"> • 'be in accordance with current airspace regulation', • 'endeavour to make the airspace as accessible as possible' • 'use standard airspace structure where possible (Conformity, Simplicity and Safety)'. <p>Additionally, DP [d] omits the following additional text from that used previously: Minimise the impact to other airspace users, both in activation and volume of</p>	<p>The Protector ACP team discounted 'be in accordance with current airspace regulation' because it was deemed a given requirement.</p> <p>The sponsor has agreed to include suggested DPs relating to accessibility, environmental impacts and airspace structure.</p> <p>The suggestion is that the MOD should apply the same DPs to all RPAS ACPs, but the nature of each ACP is different and that is recognised in the application of CAP1616.</p>	No	

			airspace required. Consequently, and whilst noting that some of these omissions are included within the rationale for the 5 provided, NATS would welcome the inclusion of these principles to ensure consistency across the application of future design options.			
	Suggested Airspace Design Option	London Oxford Airport	The design principles are fine. Like all things it is the detail where the conversation will take place. From my perspective it should be a circular area that allows safe climb into CAS that is turned on/off as needed (as was proposed by Waddington).	Designs will be developed from stage 2.	No	
	Observation of No Proposed Design Options	BHA	I have forwarded this email on to 3 helicopter operators in the local area of Fairford, who will be affected by your ACP but as you will be well aware there will be other operators who will wish to transit the area. I note with interest that that you have not given any details of what you consider to be the type of "suitable segregated airspace". I guess I will just have to wait to the further stages of the ACP process.	Designs will be developed from stage 2.	No	
	Representation and Engagement	BGA	The British Gliding Association (BGA) is the governing body of sport gliding in the UK and represents the interests of some 6500 members of the UK's 78 gliding clubs including the operators of some 2200	The BGA has been included from stage 1 and there will be continued engagement throughout the ACP process. Comments on DAA are		

			<p>sailplanes. We expect the sponsor to engage meaningfully with the gliding community as this ACP develops. This will of course ensure that the sponsor and gliding stakeholders are fully aware of each other's needs as early as possible in the process, which will help to avoid issues further downstream. Unless we advise otherwise, please use the undersigned as point of contact for BGA. You can read more about gliding activity at AIC 036/2020.</p>	<p>noted, though do not relate to DPs. As this ACP relates to non-UK military RPAS, any certification would need to be endorsed by the CAA rather than the MAA.</p>		
	<p>Engagement and Cumulative ACP Impact</p>	<p>Bristol Airport</p>	<p>Through a third party, we have received a copy of the attached engagement letter in respect of the proposed ACP at RAF Fairford. Please be advised that as part of the wider FASI(S) programme, Bristol Airport has an ongoing ACP that is approaching the stage 2 gateway.</p> <p>The Bristol ACP will comprise proposed changes to routes and CAS in the Bristol area of interest, as depicted in the Bristol ACP. Given that there are likely to be common areas of interest with the RAF Fairford ACP, we kindly request that Bristol Airport is added to the MoD's list of stakeholders for RAF Fairford to ensure effective</p>	<p>Bristol Airport has been added to the stakeholder engagement matrix and will be included in all future engagement. It was initially excluded due to distance from RAF Fairford, but with the intent to revise the list of potentially affected stakeholders once initial options were developed.</p>	<p>No</p>	

			engagement throughout your airspace design process.			
	Representation and Engagement	BMAA	<p>The British Microlight Aircraft Association represents 4000 members and 1800 aircraft. I attach our Policy for Design Principles during ACP Engagement for your information, and we look forward to engaging with you on this proposal.</p> <p>The BMAA welcomes the opportunity to engage in consultation at an early stage within the ACP CAP 1616 process.</p> <p>Sponsors are encouraged to engage with the BMAA and its members as early as possible during the development of the ACP. Previous ACPs have missed the opportunity for early engagement and dialogue resulting in significant and costly delays.</p>	The BMAA has been included from stage 1 and will continue to be engaged throughout the ACP process.	No	
	Airspace Classification and Alternatives to Controlled Airspace	BMAA	<p>The BMAA considers that the UK airspace's default classification is G and that sponsors must establish a safety case for proposing to change this class or add any further restrictions or requirements by their ACP.</p> <p>All sponsors must demonstrate that alternatives have been considered such as RMZ and TMZ before considering</p>	<p>CAP1616 requires airspace change proposals to consider all feasible options to achieve the requirement. This will be covered from stage 2 onwards.</p> <p>The MOD recognises that airspace is a shared resource.</p> <p>DP e relates to FUA.</p>	No	

			controlled airspace. Where Class E is proposed, without a TMZ or RMZ should be considered as the default option.	The MOD supports interoperable electronic conspicuity.		
	Access by GA	BMAA	<p>Sponsors must accept the assumption that GA including sporting and recreational aviation is entitled to continued safe use of airspace and that commercial aviation does not have a right to limit airspace access.</p> <p>Sponsors should ensure that there will be measures to allow flexible use of airspace and prepare for the wider use of electronic conspicuity devices and interoperability with existing e-conspicuity, e.g. FLARM and Pilot Aware etc...</p>	<p>The MOD recognises that airspace is a shared resource and is supporting of interoperable electronic conspicuity.</p> <p>DP (a) prioritises safety.</p> <p>DP (e) relates to FUA and there will be an additional DP relating to accessibility.</p>		
	Justification	BMAA	<p>Sponsors must conduct and present proper analysis of overall airspace safety changes i.e. based on modelling and evidence rather than purely subjective opinion.</p> <p>Sponsors must provide proper validation of forecast traffic levels. There is an expectation that data used, particularly forecasts, will be verifiable including details of any and all assumptions.</p>	<p>CAP1616 requires appropriate qualitative and quantitative analysis during options appraisal from stage 2 onwards, including safety assessment.</p>		
	Airspace Integration	BMAA	<p>Sponsors must show how they are integrating their proposal within the overall UK airspace modernisation context, for example proposals which do not connect efficiently between</p>	<p>Feedback noted. Options will be developed from Stage 2.</p>		

			upper and lower airspace (potentially under different airspace "management") would only inhibit overall airspace efficiency and therefore not receive our support) Optimisation of the development work above and below the 7,000ft NATS en-route split.			
	Potential Impact on Flying	RAF Benson	The initial request does not provide definitive lateral or vertical limits for the proposed airspace. However, the feedback I have received from the Sqns suggests that if the airspace were to be directly above the Fairford MATZ or to the west of it, then it would not impact day-to-day operations in the Vale. If the airspace was to the east of Fairford, then it would impact JHC and 6FTS training in the area. 6FTS also operates above the Brize CTR, so any restrictions in that area would have an impact to their output.	Initial design options will be proposed and developed from stage 2.	No	
	Representation	Bath, Wilts and North Dorset Gliding Club	Please find attached the response of the Bath Wilts and North Dorset Gliding Club. We ask specifically that this Club response should be treated as representing the views of its 120 members and not treated as that of an individual.	Noted.	No	
	Potential Impact on Flying	Bath, Wilts and North Dorset Gliding Club	Ours is an operation that could be significantly impacted by the introduction of airspace as outlined in the ACP. We operate	The club has been added to the engagement matrix and will be included in all future engagement.	No	

			cross-country glider flights from our base airfield, transiting the Fairford area quite frequently in the spring, summer and autumn months. Many other gliding clubs also use the airspace as we do, some quite local to Fairford but others from much further away into SE England, the Midlands, East Anglia and Wales.			
	Application of CAP1616	Bath, Wilts and North Dorset Gliding Club	<p>The MOD Design Principles consultation document dated 8th Dec 2021 forms the basis for this stage of the consultation. However, it was not apparently published on the CAA's Airspace Change Portal as a relevant document until 21st December, when the closing date for submissions was stated in that document to be 10th January. This delay damages confidence in the application of the CAP1616 process and undermines the MOD's stated desire for a fair and transparent dialogue. Others who may wish to comment have been denied access to the relevant information. The publication and consultation over the Christmas holiday period is also less than helpful in the quest for full consultation transparency. In that document under the heading of Design Principles, is this statement. "For this reason, the MOD has elected to select its aviation stakeholders from an</p>	<p>The DP engagement letter was emailed out to potentially affected stakeholders on 9th Dec but not uploaded to the CAA portal until the CAA assessment meeting minutes were agreed and ready for upload. There is no specific timeline requirement for uploading engagement letters to the portal, though the sponsor's intent will be to do so at the earliest opportunity. The portal is not the primary means of communication.</p> <p>The sponsor considered that one month would be a sufficient period of time to consider the DPs and respond, but after receiving this feedback elected to extend the feedback period (by email to all stakeholders) to 10th Feb 22.</p>	No	

			<p>area within a radius of approximately 30 miles from RAF Fairford and to use the National Air Traffic Management Advisory Committee (NATMAC) as a means of broader engagement.” It remains unclear to us who has been “selected” by the MOD for consultation and what rigour has been applied to creating the list of those to be consulted. Evidence should be published of who exactly has been included in this consultation. We would expect, as a minimum, all airfields, airstrips and flying clubs within that radius to be contacted directly. To date, despite registering on behalf of the Club through the CAA portal on 4th Dec 2021 to receive documents relating to this ACP, no such documents have been received. This current response is based on a separate notification through the BGA as a NATMAC addressee. This causes us to question the commitment of the sponsor to the full transparency required under CAP 1616 and to its own statement in the document regarding its keenness to engage.</p>	<p>The stage 1 submission includes more information about stakeholder identification and selection.</p> <p>The CAA’s portal does not have a function to send documents to stakeholders who register an interest but should alert them when the sponsor adds documents or changes the ACP status.</p> <p>The responder was notified about the ACP by the BGA, which shows that use of the NATMAC for dissemination works. This is the process articulated in CAP1616.</p> <p>The MOD is fully committed to transparency and engagement.</p>		
	Potential Impact on Activity	RAF Weston on the Green	At this stage we do not foresee this ACP affecting air or parachute operations at RAF WOTG or within our 2nm Danger Area 129. We would like to	Will remain on stakeholder matrix.		

			remain a ACP stakeholder so as we are informed of developments as the ACP progresses.			
	Potential Impact on Special Area of Conservation / Site of Special Scientific Interest	Natural England	<p>We welcome the consultation and ask that you continue to consult us and keep us updated.</p> <p>We provide the following feedback on the above:</p> <p>We would advise that you need to consider what potential impacts the proposed airspace change could have on designated sites (namely but not limited to: Cotswold Water Park Site of Special Scientific Interest (SSSI), Whelford Meadow SSSI and North Meadow & Clattinger Farm Special Area of Conservation (SAC)/ SSSI).</p> <p>Potential impacts include (but not limited to):</p> <p>bird disturbance and death air quality/pollution.</p>	Environmental impact analysis is required as part of CAP1616.		
	Engagement and ACP Portal	Cotswold Gliding Club	<p>I registered to receive email updates on this ACP in December and have just received an email to inform me of new documents, including a change of timescale for some steps.</p> <p>Reading the document about Aviation Stakeholder Design Principles I saw a statement that</p>	<p>Cotswold Gliding Club was included in the initial email to local aviation stakeholders. The sponsor is not aware of how the onward dissemination would take place. The responder has been added as an individual to the stakeholder engagement</p>	No	

			<p>engagement would be with stakeholders up to 30 miles from Fairford. The Cotswold Gliding Club is definitely affected by this ACP, but I do not know of any formal contact with the club to seek feedback or any comments on the points raised in the Design Principles document. The document (published on 11 January) also says it closed for comment on the 10th! Has this now been extended and if so until when?</p>	<p>matrix.</p> <p>The engagement letter was originally added to the portal on 21st Dec but was deleted and re-uploaded on 11th Jan when the ACP was progressed from stage 1A to stage 1B (so the document could have the correct label).</p>		
	Detect-and-Avoid Capability	██████████	<p>Perhaps the first step is to ensure that the design principles support the temporary nature of BVLOS segregation and that the adoption of DAA (Detect and Avoid) is a serious safety benefit that must be introduced within 12 months of arrival.</p> <p>ALL government agencies (particularly MOD) must have a programme with deadlines that supports DAA and the ability to sense and avoid ALL EC.</p>	<p>The Sponsor is not aware of any policy that states DAA must be introduced in a set timeframe or that MOD must have programme for DAA (noting this is ACP is not for MOD platforms) but would happily review any documents that can be provided. USAFE and MOD are committed to integration when it can be achieved safely.</p>	No	
	Airspace Integration / Use of TDA/DAs	██████████	<p>I am a member of General Aviation, who is keen to ensure that class G airspace remains open to all classes of air traffic. I have a letter from Sir Stephen Hillier advising me that TDA's are "not the first option" when introducing RPVs into class G airspace. On his recommendation, I</p>	<p>In accordance with CAP722, when no certified DAA capability is available, a RPAS needs to be segregated from other airspace users. Methods will be explored at stage 2, but the primary recognised means is by use of a DATDA.</p>	No	

			<p>submitted the attached proposal to the CAA's innovation team in March 2020 which received a positive response in July 2020. General Aviation is committed to integration not segregation when it comes to utilising class G airspace.</p> <p>Please include me in the public consultation for this application at which point you will find a spirited defence of GA's freedom to fly in class G airspace. Class G airspace is a dwindling resource which needs to be maintained for all airspace users. I welcome all air vehicles into this airspace.</p> <p>The employment of restricted areas has been exploited, not least by the MOD, in that, having been granted a TDA for RPAV development we have now witnessed the first attempt to convert a TDA into a permanent DA (by the MOD).</p> <p>I predicted this a year ago and this trend has to be resisted at all costs to prevent the wholesale dissolution of class G airspace. Both armed forces and civilian traffic rely on class G airspace for both VFR and IFR operations.</p>	<p>To convert a TDA to a permanent DA requires the sponsor to utilise the CAP1616 process.</p> <p>The responder has been added to the stakeholder engagement matrix and will be included in all future engagement.</p>		
	No comments	RAF Little Rissington	Nil response from 2 FTS.	No comment.	No	
	Supportive of DPs	UKFSC	I have reviewed the Design Principles and believe they are accurate and in the correct	Noted support for DPs.	No	

			order. As an additional comment, I believe this ACP will be an important step in enabling BVLOS operations for non-military RPAS.			
	Request for Information – Brize ACP Interface	ARPAS-UK	Thank you for your email and the attached letter. I would much appreciate a telephone conversation on the subject of your ACP. ARPAS UK is the UK's Trade Association for RPAS Operators and as such is keen to support the development of that sector of aviation. In particular I would like to understand how your ACP will interface with the proposed airspace changes at Brize Norton to the East.	Short Teams meeting held to discuss interactions between RAF Fairford and RAF Brize Norton.	No	
	No comments	Gloucestershire County Council	Officers can confirm that the establishment of airspace design principles is not a matter of interest for Gloucestershire County Council in its capacity as a local Mineral and Waste Planning Authority.	No comment.	No	

Raw Stakeholder Feedback

ARPAS-UK

From: [REDACTED] Sqn Ldr (DAATM-Airspace Strategy SO2)
Sent: 18 February 2022 14:31
To: [REDACTED]
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford - Extended Stage 1 Engagement

Good afternoon [REDACTED],

First of all, thank you for your email and apologies for my delayed response. RAF Brize Norton is expecting to initiate a new ACP in summer 2022 but is currently still trying to understand its requirements, which may have changed since their previous ACP was initiated. Given the proximity of Brize and Fairford, and that Brize ATC provides radar services to Fairford traffic, there will be close liaison throughout the process, but the ACPs will remain separate.

I'm happy to schedule a call next week if you're available at any of the times below?

Mon 1100-1400, 1500-1700
Tue 0900-1200
Thu 0900-1100, 1300-1700

I look forward to our continued engagement throughout this process.

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 0 Y R | C i l i T l p h [REDACTED]
[REDACTED] | Skype: [REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

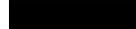
From: [REDACTED] >
Sent: 02 February 2022 10:06
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: Re: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford - Extended Stage 1 Engagement

Good morning Sqn Ldr [REDACTED]

Thank you for your email and the attached letter. I would much appreciate a telephone conversation on the subject of your ACP. ARPAS UK is the UK's Trade Association for RPAS Operators and as such is keen to support the development of that sector of aviation. In particular I would like to understand how your ACP will interface with the proposed airspace changes at Brize Norton to the East. I have tried to reach you by telephone to no avail. Would you be available for a Teams call?

kind regards




Regulation Director

ARPAS-UK



www.arpas.uk

Twitter: @ARPASUK

LinkedIn: ARPAS-UK

rupertdent@arpas.uk



BGA

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Sent: 14 January 2022 16:23
To: [REDACTED]
Subject: RE: ACP-2021-078 British Gliding Association response

[REDACTED]

Thank you for your response on behalf of the BGA. We will take on board your feedback while determining the final proposed list of Design Principles. We understand that there are concerns about the impact of segregated airspace and will engage fully throughout the ACP process to ensure that your organisation can contribute to our development of a suitable solution.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 0 Y R | C i l i T l p h [REDACTED]
[REDACTED] | Skype: [REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED]
Sent: 07 January 2022 13:41
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: ACP-2021-078 British Gliding Association response

Thanks for engaging re this ACP.

The British Gliding Association (BGA) is the governing body of sport gliding in the UK and represents the interests of some 6500 members of the UK's 78 gliding clubs including the operators of some 2200 sailplanes. We expect the sponsor to engage meaningfully with the gliding community as this ACP develops. This will of course ensure that the sponsor and gliding stakeholders are fully aware of each others needs as early as possible in the process, which will help to avoid issues further downstream. Unless we advise otherwise, please use the undersigned as point of contact for BGA.

You can read more about gliding activity at AIC 036/2020.

We note that it is anticipated that the RPAS operations will not have the required onboard Detect and Avoid (DAA) capability to permit flight in unsegregated airspace. This is a fundamental issue that impacts significantly on alignment with lower airspace modernisation and in limiting impacts on other stakeholders. We will follow that up separately with MoD and DfT. If DAA is subsequently available, presumably the consultation will be restarted.

The proposed design principles appear to be relevant. The ACP letter indicates that the design principles are listed in order of priority. We propose that principles d and e are of higher priority than principle c.

Kind regards

[REDACTED]

██████████
Chief Executive Officer

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

T 0044 (0)116 2892956 M ██████████
www.gliding.co.uk



Registered in England 422605

[Womens World Gliding Championship 2022](#)

13th-27th August at The Gliding Centre, Husbands Bosworth, Leicestershire

BHA

From: DAATM-AirspaceConsultation (MULTIUSER)
Sent: 14 January 2022 16:29
To: ceo
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

[REDACTED]

Thank you for your response and for identifying other potential stakeholders. We are only in the very early stages of options development right now but will, of course, re-engage in the coming weeks for views on the options development process and options themselves, and then throughout the remaining ACP process.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 0 Y R | C i i l i T l p h [REDACTED]
[REDACTED] | Skype: [REDACTED] | MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: ceo <ceo@britishhelicopterassociation.org>
Sent: 15 December 2021 17:09
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: Re: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

DAATM

I have forwarded this email on to 3 helicopter operators in the local area of Fairford, who will be affected by your ACP but as you will be well aware there will be other operators who will wish to transit the area. I note with interest that that you have not given any details of what you consider to be the type of "suitable segregated airspace". I guess I will just have to wait to the further stages of the ACP process.

Yours

[REDACTED]

CEO British Helicopter Association

BMAA

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Sent: 14 January 2022 16:17
To: [REDACTED]
Subject: RE: ACP-2021-078 - BMAA engagement principles

[REDACTED]

Thank you for your response on behalf of the BMAA. We will take on board your feedback while determining the final proposed list of Design Principles and look forward to continued engagement throughout the ACP process.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1F Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: + [REDACTED] | Skype: [REDACTED] | MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED]
Sent: 07 January 2022 15:47
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: ACP-2021-078 - BMAA engagement principles

Dear Sirs,

Thank you for the introductory letter with reference to ACP-2021-078.

The British Microlight Aircraft Association represents 4000 members and 1800 aircraft. I attach our Policy for Design Principles during ACP Engagement for your information and we look forward to engaging with you on this proposal.

Please send all future correspondence to me at [REDACTED]

Regards,

[REDACTED]

[REDACTED]

Chief Executive Officer

[REDACTED]

www.bmaa.org



British Microlight Aircraft Association

Policy for Design Principles during ACP engagement

Introduction

The following text describes the underlying principles that the British Microlight Aircraft Association (BMAA) believes must be followed by applicants for airspace change proposals.

Consultation

1. The BMAA welcomes the opportunity to engage in consultation at an early stage within the ACP CAP 1616 process.
2. Sponsors are encouraged to engage with the BMAA and its members as early as possible during the development of the ACP. Previous ACPs have missed the opportunity for early engagement and dialogue resulting in significant and costly delays.

Airspace classification

1. The BMAA considers that the UK airspace's default classification is G and that sponsors must establish a safety case for proposing to change this class or add any further restrictions or requirements by their ACP.
2. All sponsors must demonstrate that alternatives have been considered such as RMZ and TMZ before considering controlled airspace.
3. Where Class E is proposed, without a TMZ or RMZ should be considered as the default option.

Access by GA

1. Sponsors must accept the assumption that GA including sporting and recreational aviation is entitled to continued safe use of airspace and that commercial aviation does not have a right to limit airspace access.
2. Sponsors should ensure that there will be measures to allow flexible use of airspace and prepare for the wider use of electronic conspicuity devices and interoperability with existing e-conspicuity, e.g. FLARM and Pilot Aware etc...

Airspace volume

1. In line with the principles of the Airspace Modernisation (was FAS) principles the ACP must respect the requirement for minimum airspace volumes designed for efficiency and reduced environmental impact. These principles will include:
 - Minimum size of controlled airspace
 - Minimum number of departure/arrival routes
 - Steeper and continuous climbs and descents for cost and environmental benefits as well as minimisation of CAS footprint.

Justification

1. Sponsors must conduct and present proper analysis of overall airspace safety changes i.e. based on modelling and evidence rather than purely subjective opinion.
2. Sponsors must provide proper validation of forecast traffic levels. There is an expectation that data used, particularly forecasts, will be verifiable including details of any and all assumptions.

Airspace integration

1. Sponsors must show how they are integrating their proposal within the overall UK airspace modernisation context, for example proposals which do not connect efficiently between upper and lower airspace (potentially under different airspace "management") would only inhibit overall airspace efficiency and therefore not receive our support)
2. Optimisation of the development work above and below the 7,000ft NATS en-route split.

Bristol Airport

From: [REDACTED]
Sent: 12 January 2022 10:45
To: DAATM-AirspaceConsultation (MULTIUSER)
Cc: [REDACTED]
Subject: RE: Airspace Change - Stakeholder request, Bristol Airport

Thanks [REDACTED] appreciated!

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Sent: 11 January 2022 14:38
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Airspace Change - Stakeholder request, Bristol Airport

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi [REDACTED],

Thanks for your email. I have added you and [REDACTED] to the engagement matrix and will absolutely include you in future communications. As the team moves towards options development and better understanding the operating parameters, it will be easier to identify where we need to reach out further to potentially affected stakeholders, but at this stage kept it deliberately to a manageable local field, plus the NATMAC.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 O Y R | C i i l i T l p h [REDACTED]

From: [REDACTED]
Sent: 07 January 2022 14:43
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: [REDACTED]
Subject: Airspace Change - Stakeholder request, Bristol Airport

Dear DAATM,

Airspace Change Proposal – ACP-2021-078

Through a third party, we have received a copy of the attached engagement letter in respect of the proposed ACP at RAF Fairford. Please be advised that as part of the wider FASI(S) programme, Bristol Airport has an ongoing ACP that is approaching the stage 2 gateway.

The Bristol ACP will comprise proposed changes to routes and CAS in the Bristol area of interest, as depicted in the Bristol ACP. Given that there are likely to be common areas of interest with the RAF Fairford ACP, we kindly

request that Bristol Airport is added to the MoD's list of stakeholders for RAF Fairford to ensure effective engagement throughout your airspace design process.

Please can you add myself and [REDACTED] (Bristol Airport NATS ATC GM, copied above) as contacts for any correspondence?

Many thanks and regards

[REDACTED]

[REDACTED]

Airfield Technical and Compliance Manager
Bristol Airport
Bristol
BS48 3DW
0117 457 5091
[REDACTED]

www.bristolairport.co.uk



Bath, Wilts and North Dorset Gliding Club

From: DAATM-AirspaceConsultation (MULTIUSER)
Sent: 14 January 2022 16:15
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Fairford ACP 2021-078. The response of the Bath, Wilts and North Dorset Gliding Club

[REDACTED]

Thank you for your response on behalf of Bath, Wilts and North Dorset Gliding club. We will take on board your feedback while determining the final proposed list of Design Principles and look forward to continued engagement throughout the ACP process.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 0 Y R | C i l i T | p h [REDACTED]

From: [REDACTED]
Sent: 09 January 2022 18:29
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: [REDACTED]
Subject: Fairford ACP 2021-078. The response of the Bath, Wilts and North Dorset Gliding Club

Dear Sirs

Please find attached the response of the Bath Wilts and North Dorset Gliding Club.

We ask specifically that this Club response should be treated as representing the views of its 120 members and not treated as that of an individual.

We express some concerns over your compliance with the principles of CAP 1616.

We indicate our views on the draft Design Principles as proposed in your document of 8th Dec 2021.

Please respond to me as Airspace Representative for the Club.

Yours faithfully

[REDACTED]

www.bwnd.co.uk

The Airfield
Kingston Deverill Warminster Wilts BA12 7HF

Response to ACP-2021-078

Operation of Remotely Piloted Systems from Fairford.

Design Principles Stage 1a.

The response of the Bath, Wilts and North Dorset Gliding Club.

The Bath, Wilts and North Dorset Gliding Club operates from the airfield known as The Park at Kingston Deverill, between Warminster and Mere. It is an active BGA affiliated club with a membership of approximately 120, many of whom are cross country glider pilots and active users of mainly class G airspace by choice.

This response represents the input of the Bath Wilts and North Dorset Gliding Club, and not that of an individual. We require that it should be treated as such.

Ours is an operation that could be significantly impacted by the introduction of airspace as outlined in the ACP. We operate cross-country glider flights from our base airfield, transiting the Fairford area quite frequently in the spring, summer and autumn months. Many other gliding clubs also use the airspace as we do, some quite local to Fairford but others from much further away into SE England, the Midlands, East Anglia and Wales.

Our response to the Design Principles Consultation at this stage is as follows.

1. Support for the British Gliding Association (BGA) response.

As a BGA affiliated Gliding Club **we fully support the BGA response** to this ACP, dated 7th Jan 2022

2. Transparency and fairness in the application of CAP 1616

The MOD Design Principles consultation document dated 8th Dec 2021 forms the basis for this stage of the consultation. However, it was not apparently published on the CAA's Airspace Change Portal as a relevant document until 21st December, when the closing date for submissions was stated in that document to be 10th January. This delay damages confidence in the application of the CAP1616 process and undermines the MOD's stated desire for a fair and transparent dialogue. Others who may wish to comment have been denied access to the relevant information. The publication and consultation over the Christmas holiday period is also less than helpful in the quest for full consultation transparency.

In that document under the heading of Design Principles, is this statement. "For this reason, the MOD has elected to select its aviation stakeholders from an area within a radius of approximately 30 miles from RAF Fairford and to use the National Air Traffic Management Advisory Committee (NATMAC) as a means of broader engagement." It remains unclear to us who has been "selected" by the MOD for consultation and what rigour has been applied to creating the list of those to be consulted. **Evidence should be published of who exactly has been included in this consultation.** We would expect, as a minimum, all airfields, airstrips and flying clubs within that radius to be contacted directly.

To date, despite registering on behalf of the Club through the CAA portal on 4th Dec 2021 to receive documents relating to this ACP, no such documents have been received. This current response is based on a separate notification through the BGA as a NATMAC addressee. This causes us to question the commitment of the sponsor to the full transparency required under CAP 1616 and to its own statement in the document regarding its keenness to engage.

3. Comments on the Draft Design Principles

As stated above we **fully endorse the BGA response** to this consultation, and with specific reference here to the draft design principles.

Draft design principles d and e are the most relevant to our operations, as a potentially affected operation.

Minimise the impact to other airspace users

Use Flexible Use of Airspace⁴ (FUA) principles to manage the airspace as far as is practicable

We note the wording in these statements, notably the terms, “minimise” and “as far as is practicable”. We wish to observe that such terms require a deep understanding of the current and historical use of airspace by affected parties and of the impact on their operations of significant changes to airspace structures. We would expect to be fully consulted as an affected user at every stage, for our views to be taken seriously, and to participate in the generation of solutions taking proper account of our needs.

Conclusion

We look forward to an open and transparent process within the terms of CAP1616, in which timely and full consultation will give everyone concerned the confidence that the full interests of all concerned have been considered.



For Bath Wilts and North Dorset Gliding Club.
8th January 2022

Please ensure that this response is considered as representing the 120 members of the Club. It is not an individual response and should not be considered as such.

Cotswold Gliding Club

From: DAATM-AirspaceConsultation (MULTIUSER)
Sent: 11 January 2022 12:02
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

[REDACTED]
Sorry, I do see Cotswold Gliding Club already on the engagement matrix under Aston Down Airfield. The email was sent to office@cotswoldgliding.co.uk on 9 Dec. I will add you as a secondary email for future correspondence, unless there is another preferred central contact?

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-[AirspaceConsultation@mod.gov.uk](mailto:DAATM-AirspaceConsultation@mod.gov.uk)>
Sent: 11 January 2022 11:55
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

[REDACTED]
Thank you for engaging with us regarding the Fairford RPAS ACP. The letters were sent to Cotswold Airport and the BGA on 9 Dec 21 and uploaded to the Airspace Change Portal shortly after, hence the response date of 10 Jan 22. They were removed and re-uploaded yesterday after moving the ACP to Stage 1B, which I think is what gave you the notification.

Apologies for not capturing your club specifically in the first tranche. You have been added to the engagement list and will of course be included in all future communications. We intend to deliver a brief at the Regional Airspace Users' Working Group currently being planned for March, as well as more opportunities for questions and discussion once we start to develop options.

As there were new stakeholders identified, and with the timeline being extended for Stage 1, please provide any feedback on Design Principles by Thu 10 Feb 22.

From: [REDACTED]
Sent: 11 January 2022 10:34
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: [REDACTED]
Subject: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

Dear sir or madam,

I registered to receive email updates on this ACP in December and have just received an email to inform me of new documents, including a change of timescale for some steps.

Reading the document about Aviation Stakeholder Design Principles I saw a statement that engagement would be with stakeholders up to 30 miles from Fairford. The Cotswold Gliding Club is definitely affected by this ACP

but I do not know of any formal contact with the club to seek feedback or any comments on the points raised in the Design Principles document.

The document (published on 11 January) also says it closed for comment on the 10th! Has this now been extended and if so until when?

Regards,

[REDACTED]

Airspace, Cotswold Gliding Club

[REDACTED]

Environment Agency

From: Enquiries, Unit <enquiries@environment-agency.gov.uk>
Sent: 10 December 2021 14:30
To: DAATM-AirspaceConsultation (MULTIUSER)
Subject: 211210/DM06 Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Dear Sir/ Madam

I have passed your e-mail to the local customer team who will deal with your request.

The Freedom of Information Act and Environmental Information Regulations state that a public authority must respond to requests for information within 20 working days.

You can find more information about our service commitment by clicking on the link below:

<https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.gov.uk%2Fgovernment%2Fpublications%2Fenvironment-agency-customer-service-commitment&data=04%7C01%7CDAATM-AirspaceConsultation%40mod.gov.uk%7C1d127fe2a1ac41abe0c508d9bbe98171%7Cbe7760ed5953484bae95d0a16dfa09e5%7C0%7C0%7C637747433973073753%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLjBtIi6k1haWwiLCJXVC16Mn0%3D%7C3000&sdata=sxoGh9YhVOu0g4eCbrxMQVMY0j7cBmMrI2gjFTOfcuA%3D&reserved=0>

You can contact our customer team directly on the contact details below, or call the National Customer Contact Centre on 03708 506506 who will transfer you to the area team.

Please quote your enquiry reference 211210/DM06 in any correspondence with us regarding this

[matter. Enquiries_THM@environment-agency.gov.uk](mailto:Enquiries_THM@environment-agency.gov.uk)

Customers and Engagement
Environment Agency
Thames Area
Redkite House
Howbery Park
WALLINGFORD
OX10 8BD

Kind regards,



National Customer Contact Centre
Environment Agency

E Tel: 03708 506 506

T Web Site: <https://gbr01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.gov.uk%2Fenvironment-agency&data=04%7C01%7CDAATM-AirspaceConsultation%40mod.gov.uk%7C1d127fe2a1ac41abe0c508d9bbe98171%7Cbe7760ed5953484bae95d0a16dfa09e5%7C0%7C0%7C637747433973073753%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLjBtIi6k1haWwiLCJXVC16Mn0%3D%7C3000&sdata=sxoGh9YhVOu0g4eCbrxMQVMY0j7cBmMrI2gjFTOfcuA%3D&reserved=0>

Gloucestershire County Council

From: [REDACTED] > on behalf of Environment - Minerals & Waste Plans <m-wplans@gloucestershire.gov.uk>
Sent: 30 December 2021 11:16
To: DAATM-AirspaceConsultation (MULTIUSER)
Subject: PR2021/0256/1/ENQ | GCC Consultees for proposed MOD Airspace Consultation @ RAF Fairford (GCC Customer Services Reference: GEN-1777557)
Attachments: PR2021_0256_1_ENQ (GCC Consultees for proposed MOD Airspace Consultation @ RAF Fairford).pdf
Follow Up Flag: Follow up
Flag Status: Flagged

Please see attached a GCC M&W officer response to your enquiry concerning a future airspace consultation(s) @ RAF Fairford (**GCC Customer Services Reference: GEN-1777557**)

If you have any further queries please do not hesitate to contact us again at: [m-](mailto:m-wplans@gloucestershire.gov.uk)

wplans@gloucestershire.gov.uk Kind regards,



Minerals & Waste Planning Policy
Strategic Infrastructure
Economy, Environment, Infrastructure
Gloucestershire County Council
Shire Hall
Westgate Street
Gloucester GL1 2TG

m-wplans@gloucestershire.gov.uk



Minerals Local Plan for Gloucestershire (2018 – 2032)
RTPI South West Awards for Planning Excellence 2020
Excellence in Plan Making Practice | Commendation

www.gloucestershire.gov.uk

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GCC M&W reference:	PR2021/0256/1/ENQ
Alternative reference:	ENQUIRY - GCC Consultees for proposed MOD Airspace Consultation @ RAF Fairford
Response date:	30 th December 2021
To:	██████████ – Ministry of Defence daatm.airspaceconsultation@mod.gov.uk
Responding GCC M&W Officer	██████████

Summary of recommendation:

No comments / observations	<input type="checkbox"/>
Comments / advice offered without a recommendation (see comments section)	<input checked="" type="checkbox"/>
Further information is required (see comments section)	<input type="checkbox"/>
No objection subject to conditions / informatives (see comments and conditions section)	<input type="checkbox"/>
Refusal or objection if details remain unchanged (see comments section)	<input type="checkbox"/>

Response by topic: (more than one topic can be selected)

Non-minerals and / or waste development proposal (M&W Infrastructure safeguarding)	<input type="checkbox"/>
Non-minerals and / or waste development proposal (Mineral resource safeguarding)	<input type="checkbox"/>
Non-minerals and / or waste development proposal (Waste Minimisation Statement)	<input type="checkbox"/>
Minerals and / or waste development proposal	<input type="checkbox"/>
Specific local development plan document consultation (DPDs, SPDs, AAPs, NDPs, SCIs)	<input type="checkbox"/>
Duty to Cooperate-related consultation	<input type="checkbox"/>
All other general enquires	<input checked="" type="checkbox"/>



Minerals and Waste Policy officer comments

All of the details set out within this section are made by officers on behalf of Gloucestershire County Council in its capacity as the Mineral and Waste Planning Authority (MWPA): -

Gloucestershire County Council (GCC) is responsible for a number of local government functions that could impact on the site and sphere of influence of RAF Fairford, including any potential proposed changes to the management of the air space around the airfield.

In the first instance, officers can confirm that the GCC in its capacity as the local Minerals and Waste Planning Authority (MWPA) would like to be included with any future airspace-related consultations. Email communication would be the preferred means of communication: - m-wplans@gloucestershire.gov.uk;

From experience of considering land use-related matters in this part of Gloucestershire, officers can also recommend additional GCC consultees who may also have an interest in any future airspace-related consultations: -

GCC Property Services who act on behalf of the County Council as a local landowner: - property@gloucestershire.gov.uk;

GCC Heritage & Ecology which covers the local regulatory responsibilities for the safeguarding, protection, preservation and enhancement of heritage and ecological assets: planadvice@gloucestershire.gov.uk;
ecology@gloucestershire.gov.uk;

And GCC Highways who act as local Highways Authority (LHA): - devcoord@gloucestershire.gov.uk

Important Note:

If you have any further queries with this consultation response please **do not** contact the responding

GCC M&W officer direct. All queries must arrive through m-wplans@gloucestershire.gov.uk

From: [REDACTED] > on behalf of Environment - Minerals & Waste Plans <m-wplans@gloucestershire.gov.uk>
Sent: 18 February 2022 09:44
To: [REDACTED] Sqn Ldr (DAATM-Airspace Strategy SO2)
Subject: RE: PR2022/0015/1/DOC | Ministry of Defence Airspace Change Proposal (ACP-2021-078) - RAF Fairford Consultation
Attachments: PR2022_0015_1_DOC (Ministry of Defence Airspace Change Proposal (ACP-2021-078) - RAF Fairford Consultation).pdf

Apology this was missing.



Minerals & Waste Planning Policy
Strategic Infrastructure
Economy, Environment, Infrastructure
Gloucestershire County Council
Shire Hall
Westgate Street
Gloucester GL1 2TG
m-wplans@gloucestershire.gov.uk



Minerals Local Plan for Gloucestershire (2018 – 2032)
RTPI South West Awards for Planning Excellence 2020
Excellence in Plan Making Practice | Commendation

www.gloucestershire.gov.uk

From: [REDACTED] Sqn Ldr (DAATM-Airspace Strategy SO2) [REDACTED]
Sent: 18 February 2022 09:34
To: Environment - Minerals & Waste Plans <m-wplans@gloucestershire.gov.uk>
Subject: RE: PR2022/0015/1/DOC | Ministry of Defence Airspace Change Proposal (ACP-2021-078) - RAF Fairford Consultation

Hi [REDACTED],

Are you able to resend with the attachment please?

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: +[REDACTED] | Skype: [REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED] **On Behalf Of** Environment - Minerals & Waste Plans
Sent: 18 February 2022 09:21
To: [REDACTED] Sqn Ldr (DAATM-Airspace Strategy SO2) [REDACTED]; DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: PR2022/0015/1/DOC | Ministry of Defence Airspace Change Proposal (ACP-2021-078) - RAF Fairford Consultation

Please see attached GCC M&W policy comments covering the **Ministry of Defence Airspace Change Proposal (ACP-2021-078) - RAF Fairford Consultation**

If you have any further queries please do not hesitate to contact us again at: m-wplans@gloucestershire.gov.uk

Kind regards,



Minerals & Waste Planning Policy
Strategic Infrastructure
Economy, Environment, Infrastructure
Gloucestershire County Council
Shire Hall
Westgate Street
Gloucester GL1 2TG

m-wplans@gloucestershire.gov.uk



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RTPI South West Awards for Planning Excellence 2020
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M&W officers have reviewed the consultation information and have no further comments to make. ¶

X¶

...any other matters that M&W policy officers consider relevant to the consultation ¶

Officers can confirm that the establishment of airspace design principles is not a matter of interest for Gloucestershire County Council in its capacity as a local Mineral and Waste Planning Authority. ¶

London Oxford Airport

From: DAATM-AirspaceConsultation (MULTIUSER)
Sent: 14 January 2022 16:32
To: [REDACTED]
Subject: RE: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

[REDACTED]

Thank you for your response on behalf of London Oxford Airport. We are now in the very early stage of options development and will take on board your early feedback. We look forward to continued engagement throughout the ACP process

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1E B h i R i g d C l y W t S RH6 0YR | C i l i T l p h [REDACTED]
[REDACTED] | Skype: [REDACTED] | MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED] >
Sent: 09 December 2021 16:26
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

Good afternoon,

The design principles are fine. Like all things it is the detail where the conversation will take place. From my perspective it should be a circular area that allows safe climb into CAS that is turned on/off as needed (as was proposed by Waddington).

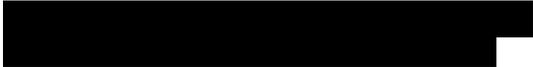
Waiting out for more information as it becomes available but no issues at this stage for Oxford Airport.

Kind Regards,

[REDACTED]

HATS
Oxford Aviation Services Limited
London Oxford Airport
Langford Lane
Kidlington
OXON
OX5 1RA

Tel: [+44 \(0\)1865 290777](tel:+44(0)1865290777)



www.londonoxfordairport.co.uk

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NATS

Proposed Airspace Change to Enable RPAS Operations from RAF Fairford (ACP 2021-078)

NATS Operation Policy

Question 1: Are there any other design principles you would like the MOD to consider?

Although it is implied that the airspace will only be activated when required for RPAS launch and recovery, may we suggest that this is outlined as an explicit design principle.

There are only 5 design principles used in this document, whereas the equivalent Design Principles (DP) used for RPAS introduction at RAF Waddington has 8.

Specifically, these include:

- 'be in accordance with current airspace regulation',
- 'endeavour to make the airspace as accessible as possible'
- 'use standard airspace structure where possible (Conformity, Simplicity and Safety)'.

Additionally, DP [d] omits the following additional text from that used previously: Minimise the impact to other airspace users, both in activation and volume of airspace required.

Consequently, and whilst noting that some of these omissions are included within the rationale for the 5 provided, NATS would welcome the inclusion of these principles to ensure consistency across the application of future design options.

Minimise the environmental (Fuel and CO2) impact to non-participating aircraft – the MoD has to consider the environmental impact to non-military flights. Although they have included a DP referencing 'impact to other airspace users', this is not specific, nor may it necessarily be directed at en-route traffic.

New DP proposed on a similar theme and also used in other MOD RPAS ACPs: "Endeavour to make the airspace as accessible as possible".

Rationale; on the assumption that the airspace is planned, managed and notified correctly, provisions should be made for other users to access the airspace through some form of service or coordination to provision for when RPAS has moved on, delayed etc.

Question 2: Would you like the MOD to discount any of it's draft design principles?

No Comment

Question 3: Should the MOD prioritise some design principles ahead of others?

Whilst noting the primary principle of ensuring safety [DP a] NATS would welcome prioritisation of FUA principles [DP e] and the minimising of impact to other airspace users [DP d].

Question 4: Do you require / would you like any more detail to be included in the design principles?

AMS DP:

We would suggest amending it to 'Deliver the aims of the AMS'. We would anticipate any ACP sponsor to be aiming towards the State vision for the UK's future airspace, especially as the MOD formally and actively supports the AMS and under Advance FUA (AFUA) to ensure their airspace requirements are captured. This is also where, through the Flexible Use of Airspace State Programme (FSP), Defence has committed to applying UK ASM Policy and FUA principles in full. ()

FUA DP:

The UK has a FUA Policy and an FUA strategy. May we suggest that the DP should read something along the lines of 'Adhere to FUA principles and strategy', also adding ASM Principles and Policy.

DP b:

Please can you provide clarity about "Provide access to sufficient suitable airspace to enable efficient RPAS transition between the ground and medium/high-level transit routes" Is it the MOD/USAFE's intent to join established routes as GAT or plan an OAT route?

If the former, notwithstanding the amount of work to achieve, a new DP may be required to ensure it compliments rather than conflicts with the current and planned future airspace design and concepts.

DP d:

Minimise the impact to other airspace users should be clearer as it is with other MOD DPs relating to RPAS operations. Therefore may we suggest that it is amended to: "Minimise the impact to other airspace users, *both in terms of activation and volume of airspace required.*"

We believe this would further demonstrate intent to conform to UK Policy for FUA and ASM

Any other comments:

Within design principles and discussions with the MoD on previous RPAS integration airspace changes, it has been clearly articulated to NATS that the aim is to utilise existing controlled airspace constructs with their associated separation requirements in lieu or segregated airspace for the purpose of transit, even if the RPAS is not equipped with a Detect and Avoid System.

This principle does not appear in the pre-amble of this document; instead, a level of uncertainty is introduced in paragraph 2 of the text (Stage 1 Step 1b – Design Principles): "At this stage, it is a given that airspace changes will be required within the vicinity of [the] RAF Fairford, but it is not known whether they will be restricted to the vicinity or whether changes will be required at greater distances from the base".

Consequently, NATS is unable to determine if additional design principles are required that could include, but are not limited to, factors such as disruption to En-route traffic, or segregation criteria associated to the CAA's SUA Safety Buffer Policy etc.

As a result, further information on the scope of change is required prior to confirmation that the principles associated to the design are appropriate. Moreover, clarification / confirmation that the MoD is now moving away from its assertion that RPAS activity can and should be integrated into controlled airspace as opposed to segregated, would be welcome.

Consideration should be given to the West Airspace Development, which is systemising lower routes in West End sectors, including S23 and is currently planned to be introduced in 2023.

In addition, the Bristol Airport ACP is ongoing and approaching the stage 2 gateway – this will comprise changes to routes and CAS in the Bristol area of interest as depicted in the ACP. Given that there are likely to be common areas of interest we request that Bristol Airport is added to the MoD's list of stakeholders to ensure effective engagement throughout the airspace design process.

There is also a potential RAF Brize Norton ACP for contiguous CAS to enable CAS protection between the Brize CTR and S23. We are not quite sure of the status of this ACP; however, this change could also impact any planned segregated areas for Fairford; hopefully, this will be considered in an integrated way between RAF and USAF sponsors?

As Fairford currently sits in an Area of Intense Aerial Activity. This will need to be considered when siting and operating any segregated area.

In addition to procedures for transfer of control between NERL S23 and Fairford, the sponsor will need to consider how operations outside CAS is conducted between NATS and Fairford.

From: Read, Kate Sqn Ldr (DAATM-Airspace Strategy SO2)
Sent: 03 March 2022 17:00
To: [REDACTED]
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Hi [REDACTED]

I have been compiling and analysing DP feedback and realised that I never responded to you. Possibly the continued JFADT engagement since end Dec made me think that I had, so apologies for that.

Obviously there was a lot to unpack in your feedback, and I think that there will be more clarity as we both work with USAFE to understand what kind of operating model will be acceptable (to them and the CAA) and what the designs might need to look like to support.

Regarding the DPs, because of the commonalities, we did use the Protector final proposed DPs as our starting point, given that they had already carried out engagement and received extensive feedback from similar audiences. Some of the inclusions you have suggested were actually omitted by that team after they had finished analysis. We also still believe that environmental impact to en route traffic can be considered under the proposed DP to minimise impact on other airspace users. I don't think that was suggested as a DP to the Protector team, but possibly due to their aspiration to integrate.

That said, we are still analysing and considering our final proposed DPs and could possibly discuss with you after the session planned for tomorrow?

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E
Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: [REDACTED] | Skype: [REDACTED]
[REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

----- Original Message -----

From: [REDACTED]
Sent: 10 January 2022 14:58
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Thank you for providing NATS the opportunity to respond to Stage 1, Step 1B of your ACP.

Please find attached our comments for your attention.

Please do not hesitate to contact me if you require any further information.

Rgds

[REDACTED]

Manager NATS Operational Policy

[REDACTED]

NATS Internal

Natural England

From: DAATM-AirspaceConsultation (MULTIUSER)
Sent: 14 January 2022 16:08
To: [REDACTED]
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

[REDACTED]

Thanks you very much for your feedback and we look forward to continuing engagement throughout this ACP.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1 E B h i R i g d C l y W t S R H 6 O Y R | C i i l i T l p h [REDACTED] |

From: [REDACTED]
Sent: 10 January 2022 17:07
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Dear MOD

Re: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Thank you for your consultation on the above.

We welcome the consultation and ask that you continue to consult us and keep us updated.

We provide the following feedback on the above:

- We would advise that you need to consider what potential impacts the proposed airspace change could have on designated sites (namely but not limited to: Cotswold Water Park Site of Special Scientific Interest (SSSI), Whelford Meadow SSSI and North Meadow & Clattinger Farm Special Area of Conservation (SAC)/ SSSI).

Potential impacts include (but not limited to):

- > bird disturbance and death
- > air quality/pollution.

- Please see links below for further information on SSSIs and SAC:

Cotswold Water Park
SSSI- <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1006005&SiteName=cotswold&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

Whelford Meadow SSSI
<https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1003804&SiteName=whelford&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

North Meadow & Clattinger Farm SAC

<https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK0016372>

Kind regards

[REDACTED]

Lead Adviser

Planning for a Better Environment – West Midlands Team

Natural England, Worcester County Hall, Spetchley Road, Worcester, WR5 2NP

Direct Dial: 0208 02 60995 / [REDACTED]

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RAF Benson

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Sent: 20 January 2022 11:03
To: [REDACTED] Flt Lt (BEN-OPSWG-ATC-CONTR8)
Cc: [REDACTED] Sqn Ldr (BEN-OpsWg-ATC-SATCO)
Subject: RE: 20220109-Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Hi [REDACTED]

Thanks for your feedback so far. The CAP1616 process has a specific set of steps/stages to follow, hence we have engaged only on design principles initially. We are now in the very early stages of options development and will ensure that RAF Benson remains a stakeholder for engagement throughout the process.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
Aviation House | 1E Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: [REDACTED] |
Skype: [REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED] Flt Lt (BEN-OPSWG-ATC-CONTR8) <[REDACTED]>
Sent: 09 January 2022 14:59
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: [REDACTED] Sqn Ldr (BEN-OpsWg-ATC-SATCO) <[REDACTED]>
Subject: 20220109-Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Sir/Ma'am

I am emailing you to provide you with some feedback for the above airspace change proposal from the perspective of RAF Benson.

The initial request does not provide definitive lateral or vertical limits for the proposed airspace. However, the feedback I have received from the Sqns suggests that if the airspace were to be directly above the Fairford MATZ or to the west of it, then it would not impact day-to-day operations in the Vale. If the airspace was to the east of Fairford, then it would impact JHC and 6FTS training in the area. 6FTS also operates above the Brize CTR, so any restrictions in that area would have an impact to their output.

If you require any more information or would like clarification on anything, please let me know. Kind regards,

[REDACTED]

Flt Lt [REDACTED] BMUE | Royal Air Force Benson | Wallingford | Oxon | OX10 6AA | Mil: 95261 7017 | [Email:](mailto:[REDACTED]) [REDACTED]

RAF Little Rissington

From: [REDACTED] Wg Cdr (SYE-2FTS-HQ-Ops OC)
Sent: 20 January 2022 22:52
To: DAATM-AirspaceConsultation (MULTIUSER)
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford
- Extended Stage 1 Engagement

[REDACTED]

I think I've already replied to this one, but just in case I haven't, nil response from 2 FTS.

Regards

[REDACTED]

[REDACTED]

Wing Commander [REDACTED] 2 FTS OC Ops Wg (Senior Operator, Aerodrome Operator & Regulation) |
Aerodrome Operator for RAF Kenley, RAF Kirknewton, RAF Little Rissington, RAF Syerston, RAF Topcliffe & AO
Desig for Swanton Morley | 2 Flying Training School, RAF Syerston, Newark NG23 5NN | Tel: [REDACTED]

[REDACTED]

RAF Weston on the Green

From: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Sent: 20 January 2022 10:59
To: [REDACTED] Flt Lt (CRN-RAR-JSPCW-OC)
Cc: [REDACTED] Sqn Ldr (CRN-RAR-RRCW-OC); [REDACTED] Wg Cdr (CRN-RobsonAcademy-COS); [REDACTED] Sqn Ldr (CRN-RAR-HFTS-OC)
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Hi [REDACTED]

Thanks for your feedback so far. We are in the very early stages now of options development and the ACP team will continue to engage with you throughout the process.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: [REDACTED] | Skype: [REDACTED]
[REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

----- Original Message -----

From: [REDACTED] Flt Lt (CRN-RAR-JSPCW-OC) <[REDACTED]>
Sent: 10 January 2022 13:54
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: [REDACTED] Sqn Ldr (CRN-RAR-RRCW-OC) <[REDACTED]>; [REDACTED] Wg Cdr (CRN-RobsonAcademy-COS) <[REDACTED]>; [REDACTED] Sqn Ldr (CRN-RAR-HFTS-OC) <[REDACTED]>
Subject: FW: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford

Hello ACP Sponsor,

Having reviewed your letter with the RAF Weston on the Green Aerodrome Operator we believe the Design Principle A " Provide a safe environment for airspace Users" to be of most important priority. At this stage we do not foresee this ACP affecting air or parachute operations at RAF WOTG or within our 2nm Danger Area 129. We would like to remain a ACP stakeholder so as we are informed of developments as the ACP progresses.

Kind regards

Flight Lieutenant [REDACTED] OC JSPC(W) | Robson Resilience Centre (Weston) | RAF Weston On The Green, Bicester, OXON, OX25 3TQ | Tel: [REDACTED] | Skype: [REDACTED] | Mobile: [REDACTED] | [Email: \[REDACTED\]](mailto:[REDACTED])

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[REDACTED]

From: [REDACTED]
Sent: 15 January 2022 10:56
To: DAATM-AirspaceConsultation (MULTIUSER)
Subject: Re: ACP-2021-078

Thank you,

Perhaps you'll keep me informed.

Class G airspace is a dwindling resource which needs to be maintained for all airspace users. I welcome all air vehicles into this airspace.

The employment of restricted areas has been exploited, not least by the MOD, in that, having been granted a TDA for RPAV development we have now witnessed the first attempt to convert a TDA into a permanent DA (by the MOD).

I predicted this a year ago and this trend has to be resisted at all costs to prevent the wholesale dissolution of class G airspace. Both armed forces and civilian traffic rely on class G airspace for both VFR and IFR operations.

Regards
[REDACTED]

On 14 Jan 2022 at 16:36, DAATM-AirspaceConsultation (MULTIUSER) <daatm-airspaceconsultation@mod.gov.uk> wrote:

[REDACTED]

Thank you for your feedback on this Airspace Change Proposal. We are still working toward a final list of proposed Design Principles and are in the early stages of options development, but look forward to continued engagement throughout the process. The consultation, which will take place during Stage 3, is currently anticipated to be during Sep-Nov 22, however the timeline is always subject to change.

Kind regards,

[REDACTED]

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management |
A i t i H | 1EB hi Ri g dC l yW tS RH6 0YR | Ci ili T l ph
[REDACTED] | Skype: [REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

From: [REDACTED]
Sent: 04 December 2021 21:59
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Cc: Airspace.Policy@caa.co.uk; [REDACTED]
Subject: ACP-2021-078

[REDACTED]

[REDACTED]
[REDACTED]
Dear Sir

I am a member of General Aviation, who is keen to ensure that class G airspace remains open to all classes of air traffic.

I have a letter from Sir Stephen Hillier advising me that TDA's are "not the first option" when introducing RPVs into class G airspace.

On his recommendation, I submitted the attached proposal to the CAA's innovation team in March 2020 which received a positive response in July 2020.

General Aviation is committed to integration not segregation when it comes to utilising class G airspace.

Please include me in the public consultation for this application at which point you will find a spirited defence of GA's freedom to fly in class G airspace.

Yours faithfully
[REDACTED]

Title	Drone Integration into UK airspace
Issue	Draft A
Date	7 th March 2021
Author	[REDACTED]

Abbreviations

UAV Unmanned aerial vehicle

BVLOS Beyond Visual Line of Sight

MD manoeuvring distance

LOS Line of Sight

VFR Visual Flight Rules

IFR Instrument Flight Rules

VLOS Visual Line of Sight

EC Electronic Conspicuity

BAU Business as usual

Introduction

This document sets out a series of practical trials that demonstrate the safe operation of commercial UAVs (drones) both in visual LOS and BVLOS in class G airspace. These trials advocate the Integration of UAVs into existing airspace without segregation.

Problem definition

UAVs undertake a flight cycle that is the same as other airspace users. Whilst flight in a conventional aircraft may be conducted entirely detached from air traffic units (and under full automation), commercial drone operations introduce the added complication of the pilot being detached from the aircraft.

In much the same way that automation has grown to be the norm in the aviation industry, so this problem is one of gaining confidence in remote systems and the integration of a different aircraft type into existing airspace.

Solution Overview

This proposal sets out 3 trial phases. The first phase uses a high density of observers to verify that a UAV is being flown to a satisfactory standard both Visual LOS and BVLOS with hazards introduced at predetermined intervals. The second phase uses observers at key points to record that a UAV is being flown to a satisfactory standard BVLOS and when hazards are introduced randomly. The third phase builds up statistics on BAU operations and the procedures needed to keep the operation safe.

Non segregated flight trials

Appendix A is an analysis of UAV phases of flight, and is remarkably similar to standard Visual Flight phases in General Aviation aircraft. It argues how UAVs currently operate within class G airspace, without being segregated. Only one part of the UAV flight envelope demands closer attention, and CAP1861 (4) sets out the hazards that UAVs in BVLOS must cope with. Collaboration between airspace users will be put in place as shown in Appendix A.

The UAV operator will offer their technical solution, and the trial environment will verify its correct operation and safety. The UAV operator may carry a payload at their discretion and the trial can be set to deliver the payload to a predetermined destination, the UAV operator is responsible for managing the payload in the event that the mission is aborted. Observers will be used to maintain safe operation.

Appendix B argues the case for 3 safety zones extending progressively out from and managed through the UAV. The UAV will be configured to escalate any threat either automatically or under direct control of the UAV handling pilot. The UAV handling pilot is always alerted to any action. Appendix B argues how the safety zone should be calculated together with the criteria for action. The objective of these trials is that the UAV operator shows that its service can be operated safely and consistently.

Trial plan

Overview

Trials will be conducted in non-segregated class G airspace in collaboration with existing airspace users. It will be conducted in three phases, each progressively relaxing the constraints on the UAV operator. Each phase will consist of 100 missions and at the end of each phase the UAV will demonstrate

1. 100% Successful detection of all hazards in CAP 1861 whilst containing the position of the hazard outside of its primary safety zone. These include: -
 - a. Terrain and obstacles
 - b. Meteorological conditions
 - c. Conflicting traffic; whether wearing EC or not.
 - d. Ground operations
 - e. Other airborne hazards (e.g. Geese balloons etc)
 - f. Emergencies
2. 100% Successful detection of hazards crossing into its secondary safety zone, with an alert generated to record a potential conflict.
3. 100% Successful detection of hazards crossing into its tertiary safety zone.

A UAV operator flying 4 successful missions a day will complete each phase in one calendar month.

Observers

Observer. *A person or automated machine at a geographic location that is capable of:* -

1. *Judging whether a UAV is operating in an unsafe manner against standard criteria.*
2. *Aborting a UAV mission either automatically or by direct communication with the Drone (UAV) pilot in command*
3. *Recording the mission characteristics of the UAV*

Observers are responsible for ensuring that UAVs are flown safely and consistently. **Blueprinting**

In order to maintain consistency throughout the trials, the UAV operator will record the serial numbers of each system component together with its software and firmware versions logged against the UAV airframe. The UAV operator is responsible for declaring any change in the blueprint of its trial drone, together with the impact. In the event that a UAV operator doesn't comply with this blueprint strategy then those missions extending back to a previous declaration (or the start of the phase) will be treated as if they had been aborted.

Aborted mission

A mission can be aborted by an observer, the UAV, the UAV pilot or under the instruction of the UAV operator,

A mission that is aborted either will cause the UAV to land immediately, or returned to base only if the UAV is fit to fly. Aborted missions will not count towards the final total of successful missions in a specific phase. A strategy for the deployment of observers is given in Appendix C.

Phase 1 Highest level of observation

In this phase missions will be planned with the UAV operator in an environment with a higher density of observers across the published route. In collaboration with other airspace users the operator may vary its published route to conduct hazard testing. These missions will be fully planned.

Phase 2 Lower level of observation

Whereas Phase 1 is a planned exercise of hazard detection, phase 2 introduces randomness into the operation. The Introduction of a hazard will be at the discretion of the trial organiser who may request a change in route or introduce conflicting traffic without notice. The trial organiser will ensure sufficient observers are present at points of interest. No member of the UAV operation will be advised of the event in advance.

Phase 3 lowest level of observation

In this phase the UAV will be operated in its commercial mode and the trial will focus on identifying that an appropriate level of safety is present in day-to-day use.

Serendipitous events will be exploited and occasional hazard interceptions planned. This phase tests and builds the knowledge of the operational fitness of the unit and its readiness for service.

Appendix A Flight phase analysis

By examining each of the phases of UAV flight we can analyse each of the phases of flight **Arrival and Departure**

These flight phases have been combined since they evoke the same challenge. Commercial operations are conducted from either an existing aerodrome or airfield, or from a new operational site. The only issue is how this new type of aircraft can be integrated.

Aerodromes and airfields

Aircraft of all types have always been integrated in different ways at these sites. Microlights, ultralight, light aircraft, heavy aircraft, gliders, commercial aircraft, helicopters, model aircraft, military aircraft, parachutists and even seagulls are amongst the types of flying objects that have coexistence on airfields that I have been resident on.

I learned to fly at a site where gliders and light aircraft landed on a licenced strip using parallel grass runways without incident. At the very most a local procedure may be recorded to recognise the different capabilities of each type without the imposition of special airspace.

Dedicated operational sites

Dedicated operational site have always been around for gliding, microlights and even grass stripes for light aircraft. They are marked on the chart, pilots flying in their local area inform themselves of the risks involved and factor that in.

Summary

I see nothing new in drone operations. We do have incidents, in parts of the airspace at the moment, but as objects as small as a bird are being coped with, UAVs will be accommodated, at the most, by local flying procedures.

En route visual flight operation

Within LOS of the Drone Handling pilot, this phase UAV of flight is at present conducted within the limits of the rules of the air and under Visual Flight Rules (VFR).

Visual Line of Sight (VLOS) (3) Flights are at present permitted without further restriction. **En route**

BVLOS operations

BVLOS is the only part of the flight envelope that is a new concept. Whilst it feels akin to IFR operations UAV operators seek the freedom of Visual Flight in this part of the flight profile. The trials supporting this proposal has a primary focus on this part of the flight envelope to demonstrate safe operation.

Emergencies

A second objective of this proposal is to ensure that a UAV can demonstrate safe operation in an emergency.

Appendix B Safety Zone

The KISS principle (1) can help in an effort to set simple rules for a safety zone.

An aircraft is moving at a certain velocity and it takes a time to manoeuvre out of the way of an obstacle or another moving aircraft. In aviation, pilots and controllers use the concept of a standard rate turn, also known as a rate 1 turn, on instrument approaches. This concept is convenient in setting a safety zone: -

1. Provides a worst case for manoeuvrability. The aircraft may improve on this principle metric.
2. Familiar to existing airspace users
3. Looks forward to a time when UAVs may operate in controlled airspace.

Taking a rule of thumb that the UAV will move through 90 degrees to avoid an obstacle or other moving object then a safety zone can be defined as the distance travelled in the time the UAV executes a rate 1 turn through 90 degrees. This caters for the situation where the UAV cannot turn and continues in a straight line. The concept can be extended to provide concentric levels of safety. The manoeuvring distance (MD) extends in all dimensions.

Distance	Level of safety	Outcome
1x MD – primary safety	Unsafe	Risk of collision
2x MD – secondary safety	Warning	UAV must detect, record and arm for manoeuvre
3x MD – tertiary safety	Observable event	UAV must detect and record the threat

Example:

For a UAV travelling at 70 knots the manoeuvring distance over 90 degrees.

1 knot = 6076.12 ft travelled in 1 hour

Std rate turn over 90 degrees takes 30 seconds (by definition)

manoeuvring distance = $70 \times 6076.12 \div 60 \div 2 = 3544$ ft or

Around a 1200 yard primary safety zone (0.7 miles)

Around a 2400 yard secondary safety zone (1.4 miles)

Around a 3600 yard tertiary safety zone (2.1 miles)

Appendix C Observer density strategy

Observers are placed along the UAV published route to verify and validate the behaviour of the UAV, and where necessary to activate the abort process. Observers provide assurance that UAVs are being operated in a safe manner.

In early phase 1 trials observers will be placed at intervals along the route at between 5-10 km spacing (2.5km LOS being an average capacity for an eye on a poor day and 5km on a clear day). Automated observers may have a greater range but their performance and abilities will need to be assessed. Additional observers will be necessary at the points of hazard conflict.

In phase 2, assuming sufficient confidence has been arrived at in the en route transit of a UAV then observers will only be placed at points of hazard conflict.

Definitions

Observer. *A person or automated machine at a geographic location that observes the operation of a subject UAV -*

Drone (UAV) pilot in command. *A licenced person who is responsible for the safe operation of the UAV. The drone may or may not be the handling pilot. This person must check that the handling pilot has determined that the drone is fit to fly,*

Drone (UAV) handling pilot. *A licenced person who is responsible for managing the UAV in all phases of its flight either directly or by automated systems. This person must check at each flight that the drone is fit to fly,*

Drone operator. *A person or organisation licensed to organise and conduct commercial drone operations.*

Drone maintainer. *A licenced person responsible for the build state, and maintenance state of the UAV. The drone maintainer signs off the drone as fit to fly.*

References

1. KISS principle https://en.m.wikipedia.org/wiki/KISS_principle
2. Standard rate turn https://en.m.wikipedia.org/wiki/Standard_rate_turn
3. Visual Line of Sight <https://www.caa.co.uk/Consumers/Unmanned-aircraft/Our-role/An-introduction-to-unmanned-aircraft-systems/>
4. CAP1861 Beyond Visual Line of Sight in Non-Segregated Airspace
https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=929_4

[REDACTED]

From: [REDACTED]
Sent: 11 January 2022 10:40
To: [REDACTED] Aston Down
Cc: DAATM-AirspaceConsultation (MULTIUSER); [REDACTED]
Subject: Re: AIRSPACE CHANGE PROPOSAL – ACP-2021-078

All noted thanks Gents,

Perhaps the first step is to ensure that the design principles support the temporary nature of BVLOS segregation and that the adoption of DAA (Detect And Avoid) is a serious safety benefit that must be introduced within 12 months of arrival.

ALL government agencies (particularly MOD) must have a programme with deadlines that supports DAA and the ability to sense and avoid ALL EC.

[REDACTED]

On 11 Jan 2022, at 10:33, [REDACTED] > wrote:

Dear sir or madam,

I registered to receive email updates on this ACP in December and have just received an email to inform me of new documents, including a change of timescale for some steps.

Reading the document about Aviation Stakeholder Design Principles I saw a statement that engagement would be with stakeholders up to 30 miles from Fairford. The Cotswold Gliding Club is definitely affected by this ACP but I do not know of any formal contact with the club to seek feedback or any comments on the points raised in the Design Principles document.

The document (published on 11 January) also says it closed for comment on the 10th! Has this now been extended and if so until when?

Regards,

[REDACTED]

Airspace, Cotswold Gliding Club

[REDACTED]

UKFSC

From: Read, Kate Sqn Ldr (DAATM-Airspace Strategy SO2)
Sent: 18 February 2022 14:22
To: [REDACTED]
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford - Extended Stage 1 Engagement

[REDACTED],
Thank you for your feedback on this Airspace Change Proposal. We look forward to continued engagement throughout the process.

Kind regards,

[REDACTED] | Sqn Ldr | SO2 Airspace Strategy | Defence Airspace and Air Traffic Management | Aviation House | 1E
Beehive Ringroad Crawley West Sussex RH6 0YR | Civilian Telephone: [REDACTED] | Skype: [REDACTED]
[REDACTED] MOD Net: DAATM-AirspaceStrategySO2 | [REDACTED]

----- Original Message -----

From: [REDACTED] <Chief.Executive@UKFSC.co.uk>
Sent: 24 January 2022 11:41
To: DAATM-AirspaceConsultation (MULTIUSER) <DAATM-AirspaceConsultation@mod.gov.uk>
Subject: RE: Proposed Airspace Change to Enable RPAS Operations from RAF Fairford - Extended Stage 1 Engagement

I have reviewed the Design Principles and believe they are accurate and in the correct order. As an additional comment, I believe this ACP will be an important step in enabling BVLOS operations for non-military RPAS.

[REDACTED]
Chief Executive
UK Flight Safety Committee
01276 855193
[REDACTED]