

RAF Brize Norton Airspace Change Proposal

Consultation Feedback Report

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Executive Summary

RAF Brize Norton (BZN) would like to extend thanks to all the organisations and individuals that took the time to participate and provide feedback to the Public Consultation held between 15th December 2017 and 5th April 2018.

The Ministry of Defence (MOD) is the Sponsor of a proposed change to the current arrangements and procedures in the immediate airspace surrounding the airport. As the airport operators, and operators of the current Class D Controlled Airspace (CAS), RAF Brize Norton is managing this process on behalf of the MOD. If approved, the proposed change will provide enhanced protection to aircraft on the critical stages of flight in departure and final approach, and will provide connectivity between the RAF Brize Norton Control Zone (CTR) and the UK Airways network. In addition, the Airspace Change will deliver new Instrument Flight Procedures (IFP) utilising Satellite Based Navigation which will futureproof the procedures used at the Station.

As part of the Civil Aviation Authority's (CAA) Guidance on the Application of the Airspace Change Process (Civil Aviation Publication (CAP) 725) [Reference 1], BZN is required to submit a case to the CAA to justify its proposed Airspace Change, and to undertake consultation with all relevant stakeholders. This ensures that all aviation or non-aviation stakeholders who may be directly or indirectly affected by the proposed change have an opportunity to provide comment on the proposal.

This document is a report on the Public Consultation carried out by BZN between 15th December 2017 and 5th April 2018 in accordance with the requirements of CAA CAP 725 [Reference 1]. It includes an analysis of all submissions received throughout the Consultation Period, provides a summary of consultees that supported the development of an increase to the CAS construct and identifies the key issues raised by consultees that raised objections. It also provides BZN's views in relation to those issues and outlines the post-consultation action already taken, or planned to be undertaken, by BZN.

This document will form part of the Formal Airspace Change Proposal (ACP) submission to the CAA. The ACP will detail the case for the proposed change to the current arrangements and procedures in the immediate airspace surrounding RAF Brize Norton.

Subject of the Consultation

The purpose of this consultation was to gather and analyse the views of the various aviation and non-aviation stakeholders concerning a proposal to change the current airspace arrangements in the immediate airspace surrounding BZN. Fundamentally, the consultation enabled BZN to obtain or confirm views and opinions about the potential impact of the proposed airspace change.

Consultation Statistics

The Consultation Document was circulated to a total of 714 organisations and individuals via email, online form and letter. The aviation consultees included local aerodromes, local airspace users and the national bodies representing all UK aviation interests who may be affected by the proposed changes. National bodies such as the Light Aircraft Association (LAA), the British Airline Pilots' Association (BALPA), and the Airport Operators Association

(AOA) were represented through the auspices of the National Air Traffic Management Advisory Committee (NATMAC), sponsored by the CAA. A number of military organisations are also members of the NATMAC.

A total of 48 responses (6.7 %) were received from the 714 consultees contacted.

In addition, BZN received a total of 1,598 responses from other individual members of the General Aviation (GA) community and local residents.

Of the total of 1,646 responses received; 10 consultees supported the proposal; 1,597 consultees objected to the proposal; and 16 consultees provided a neutral response, whereby the consultee did not object or provided no specific comments on the proposal. A further 23 responses included clarification questions, but after their questions were answered the stakeholder did not respond again to express their opinion regarding the consultation.

BZN Conclusions

The Public Consultation has produced significant opposition, primarily from the GA community supported by local and regional aviation clubs and national organisations such as the British Gliding Association (BGA). There was also a significant number of objections from the local community.

The main emphasis¹ of the concerns from the GA community are as follows:

- The extent of the proposed CAS construct is considered to cause a reduction in the current levels of safety for GA pilots, because the design is considered to produce a funnelling effect. Aircraft will avoid and go around CAS rather than transit through it, which increases the risk of mid-air collision (MAC) to GA operators outside of the proposed BZN CAS;
- The extent of the proposed CAS construct is considered disproportionate to the expected requirements of BZN, and unjustified based on the anticipated number of aircraft movements, now and in the future;
- The safety argument is not sufficiently compelling to warrant the changes being proposed;
- There has been insufficient consultation with the hang gliding and paragliding community, and the impact on these communities has not been suitably reviewed; and
- The incorrect process has been used to undertake the consultation phase of BZN's ACP due to the CAA's transition from CAP 725 to CAP 1616. This has been seen by many stakeholders as a cynical use of CAP 725 to deliberately avoid the requirement for enhanced engagement with affected stakeholders.

The proportion of objections from local residents was significantly lower than that of the GA community, however the main emphasis of the concerns in many cases echoed that of the GA community. Additionally, local residents raised concerns regarding:

- A perceived increase in noise and pollution as a result of a perceived increase in number of aircraft, in part as a result of GA aircraft changing established flying routes.

¹ Due to the scale of responses there were a large number of issues that raised significant numbers of objections. The five most prevalent objections raised are described here, however all objections with significant levels of responses will be discussed in detail in this report.

NATS objected to the proposal because they considered that there had been insufficient engagement following initial discussions of the airspace change plans communicated in 2016. NATS raised some concerns regarding the proximity of the proposed airspace to established NATS airspace that they currently delegate to other ATC agencies. They also raised concerns that the airspace design was overly complex and could increase the incidence of airspace infringements.

Next Stages

Following the Public Consultation, BZN has participated in a workshop with the airspace designer and the procedure designers, to analyse the objections and consider how the issues raised could be mitigated, where possible. This has led to potential design modifications that aim to reduce the perceived impact on the GA community. This will be achieved by attempting to reduce the pressure in 'choke points' around the airspace and by working together with London Oxford Airport (LOA) to reduce the combined volume of airspace as far as practicable. The workshop also re-considered the use of alternative mechanisms, contained within the Consultation Document, to provide a known traffic environment. Further meetings were held with NATS to understand the full nature of their concerns and an agreement was reached in principle that will lead to a formalised Letter of Agreement if the ACP is successful.

Once the final design is established, BZN will submit a Formal Proposal to the CAA for consideration. Following receipt of the ACP submission, the CAA will assess the documentation to determine if there is sufficient information presented on which to base a decision. Thereafter, a 16-week period follows during which the CAA conducts its own internal analysis of the final proposal and consultation results, before arriving at a Regulatory Decision.

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1 Glossary

Acronym	Meaning
ACP	Airspace Change Process
AIAA	Area of Intense Aerial Activity
AIRAC	Aeronautical Information Regulation and Control
ALARP	As Low as Reasonably Practicable
AOA	Airport Operators Association
AOPA UK	Aircraft Owners and Pilots Association UK
ATC	Air Traffic Control
BALPA	British Airline Pilots Association
BGA	British Gliding Association
BHPA	British Hang Gliding and Paragliding Association
BMAA	British Microlight Aircraft Association
BPA	British Parachute Association
BRA	British Rotorcraft Association
BZN	RAF Brize Norton
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAS	Controlled Airspace
CTA	Control Area
CTR	Control Zone
ft	feet

Acronym	Meaning
FAS	Future Airspace Strategy
GA	General Aviation
GAA	General Aviation Alliance
GNSS	Global Navigation Satellite System
HCAP	Honourable Company of Air Pilots
HCGB	Helicopter Club of Great Britain
HG	Hang Gliders
IFP	Instrument Flight Procedures
LAA	Light Aircraft Association
LoA	Letter of Agreement
LOA	London Oxford Airport
MAC	Mid-air collision
MATZ	Military Aerodrome Traffic Zone
MOD	Ministry of Defence
NATMAC	National Air Traffic Management Advisory Committee
nm	nautical mile
OAIAAUWG	Oxfordshire Area of Intense Aerial Activity Users Working Group
PG	Paraglider
RAF	Royal Air Force
RMZ	Radio Mandatory Zone
RAUWG	Regional Airspace Users Working Group
SARG	Safety and Airspace Regulation Group
SOP	Standard Operating Procedures

Acronym	Meaning
TMZ	Transponder Mandatory Zone
UKFSC	UK Flight Safety Committee

2 Introduction

2.1 RAF Brize Norton Airspace Change Proposal

MOD is the sponsor of a proposed change to the current airspace arrangements in the immediate area around BZN, aimed at providing enhanced levels of safety to aircraft in the vicinity of the airport, connectivity between BZN and the UK airways network and to protect new Instrument Flight Procedures (IFPs). As part of the Civil Aviation Authority's (CAA) Guidance on the Application of the Airspace Change Process (Civil Aviation Publication (CAP) 725) [Reference 1], the MOD is required to submit a case to the CAA to justify its proposed airspace change and to undertake a formal Public Consultation with aviation and non-aviation stakeholders. This ensures that stakeholders who may be directly or indirectly affected by the proposed change have an opportunity to provide comment on the proposal. As the airport operators and operators of the current Class D Controlled Airspace (CAS), RAF Brize Norton is managing this process on behalf of the MOD. BZN has engaged Osprey Consulting Services Ltd (Osprey) to provide support to the Airspace Change Process on their behalf. The MOD is not required to consult on changes to Instrument Flight Procedures, only the proposed change to the volume of CAS.

This document is a Consultation Feedback Report providing the results of the Public Consultation carried out by BZN between 15th December 2017 and 5th April 2018. The background to this consultation and the methodology used are detailed in Annex A1 to this document. The aim of this report is to present details on the statistical data arising from the responses to the consultation, together with an analysis of the feedback received.

BZN would like to take this opportunity to thank all consultees and other individuals who took the time to participate in the Public Consultation and for providing us some very useful feedback.

2.2 Subject of the Consultation

The subject of the consultation was BZN's proposal to increase the volume of Controlled Airspace (Class D) to contain existing and proposed Instrument Flight Procedures (IFPs) and to provide connectivity with the UK airways network.

The overall objective of the BZN Airspace Change Proposal (ACP) is to resolve the following issues:

- The existing airspace arrangements are not fit for purpose in that they do not contain the current or future planned standard procedures for BZN, leaving aircraft vulnerable at critical stages of flight;
- Despite following best practice and the introduction of a range of short-term measures, analysis demonstrates that risks to aircraft arriving at and departing from BZN are not "As Low as Reasonably Practicable" (ALARP); and

- New airspace arrangements will aim to enhance efficiency and improve flight safety for all stakeholders and will provide connectivity to the UK airways network.

This will be achieved through:

- The introduction of Global Navigation Satellite System (GNSS) approach procedures; and
- The increase in volume of Controlled Airspace (Class D) to contain the new procedures and provide connectivity to the UK airways network (via L9).

The MOD, as the sponsor of the proposed airspace change, is required to submit a case to the CAA to justify the change in airspace surrounding RAF Brize Norton. In addition, as part of the CAA's Airspace Change Process, it is the MOD's responsibility to consult with all relevant stakeholders (aviation and non-aviation) who may be directly or indirectly affected by the proposal.

The purpose of the Public Consultation was to gather and analyse the views of the aviation and non-aviation stakeholders, including local authorities, who may be concerned regarding the effects of the proposed airspace change.

2.3 Development of the Consultee List

A full list of consultees was developed with the advice of the CAA and is given at Annex A2.

At the start of the consultation, BZN sent out notification to 714 consultees, comprising:

- 33 Aviation "National Organisations" (CAA National Air Traffic Advisory Committee (NATMAC list);
- 36 Members of the Oxfordshire Area of Intense Aerial Activity Users Working Group (OAIAAUWG);
- 15 Local Aerodromes/Aviation Consultees;
- 193 County and Town Councils and Councillors;
- 413 Parish Councils or Meetings;
- 19 Members of Parliament; and
- 5 conservation organisations.

The 714 consultees were contacted predominantly via email; however, some organisations were contacted using online forms or via letter. No emails were returned as undelivered. In addition, the consultation was advertised on local media and was widely discussed as a standing agenda item at the Oxfordshire Area of Intense Aerial Activity (AIAA) Users Working Group (now known as the Oxfordshire Regional Airspace Users Working Group or RAUWG).

Further detail on the categories of organisations consulted is provided in Annex A2 of this report.

2.4 Consultation Confidentiality

The CAA Safety and Airspace Regulation Group (SARG) requires that all consultation material, including copies of responses from consultees and others, is included in any formal submission to the CAA of an ACP.

BZN undertakes that, apart from the necessary submission of material to the CAA and essential use by Osprey for analytical purposes in developing this report and subsequent ACP material, BZN will not disclose personal details or content of responses or submissions to any third parties.

2.5 Document Structure

This document contains six main Sections and four Annexes, outlined below for convenience:

- Section 1 provides a Glossary;
- Section 2, this section, introduces the document;
- Section 3 details the consultation statistics;
- Section 4 provides an overview of the responses, support ratio and objections raised;
- Section 5 outlines the next stages with respect to the BZN ACP; and
- Section 6 provides a list of references.

Annexes:

- Annex A1 details the methodology to this consultation;
- Annex A2 lists the consultees;
- Annex A3 provides a review of the proposed alternative suggestions provided by consultees and a description of the work BZN will undertake as a result; and
- Annex A4 illustrates the consulted airspace design.

3 Consultation Statistics

3.1 Overview

This section describes the categories of consultee organisations and individuals that were contacted and gives a breakdown of the responses received.

3.2 Consultee Organisations

The publication of the BZN Consultation Document was notified to stakeholders via email, online form and letter to a total of 714 stakeholder consultees, including 33 NATMAC organisations, and other individuals detailed in Annex A2.

The Consultation Document was also posted on the RAF Brize Norton website. Of the 714 organisations consulted, only 48 responded; however a further 1,598 responses were received by other individuals and organisations.

The Consultation Document was made available for general distribution online through a dedicated link on the BZN website.

On 1st March 2018, the RAF Brize Norton website was updated as part of a larger RAF-wide website update. As a result, the RAF Brize Norton consultation website was briefly unavailable; however London Oxford Airport (LOA) agreed to host the BZN Consultation Document whilst the RAF website was updated, and any enquiries were re-directed to the relevant information in its alternate location. The consultation material was restored to the new site on 2nd March 2018.

Aviation stakeholder consultees included members of the Oxfordshire Area of Intense Aeronautical Activity Working Group (OAIAAWG), adjacent aerodromes, the national bodies representing UK aviation interests who may be affected by the proposed changes and other MOD operators. National bodies such as the Light Aircraft Association (LAA), British Airline Pilots Association (BALPA), and Airport Operators Association (AOA) etc. are represented through the auspices of the NATMAC, sponsored by the CAA. A number of military organisations are also members of the NATMAC.

In addition, local authorities and Members of Parliament that represent affected areas were consulted.

The consultee groups are detailed in Figure 1 below.

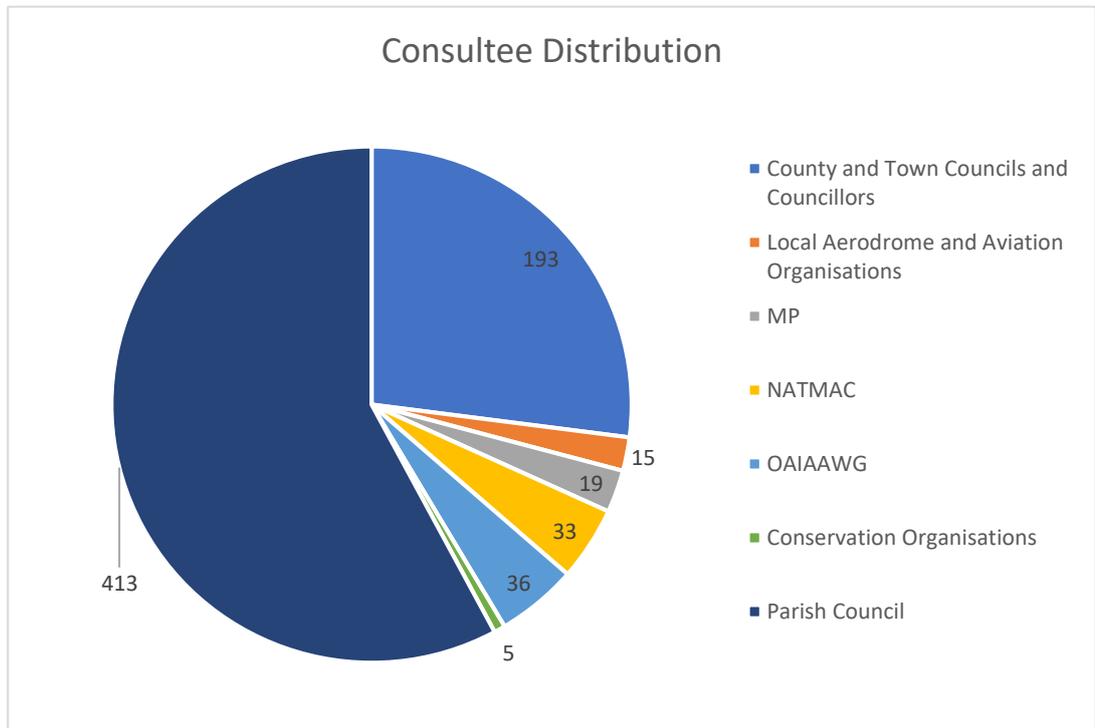


Figure 1 - Consultee Distribution

3.3 Consultation Responses

A total of 48 responses (6.7%) to this consultation were received from the direct consultees. A breakdown of these is provided in Table 1 and Figure 2 below.

	Consultee Group	Number Consulted	Responses	% ²
1	County and Town Councils and Councillors	193	1	0.5%
2	Local Aerodromes and Aviation Organisations	15	2	13.3%
3	Members of Parliament	19	3	15.8%
4	NATMAC	33	14	42.4%
5	OAIAGWG	36	5	13.9%
6	Other National Bodies	5	1	20.0%
7	Parish Councils	413	22	5.3%
	Totals	714	48	6.7%

Table 1 - Consultee Responses

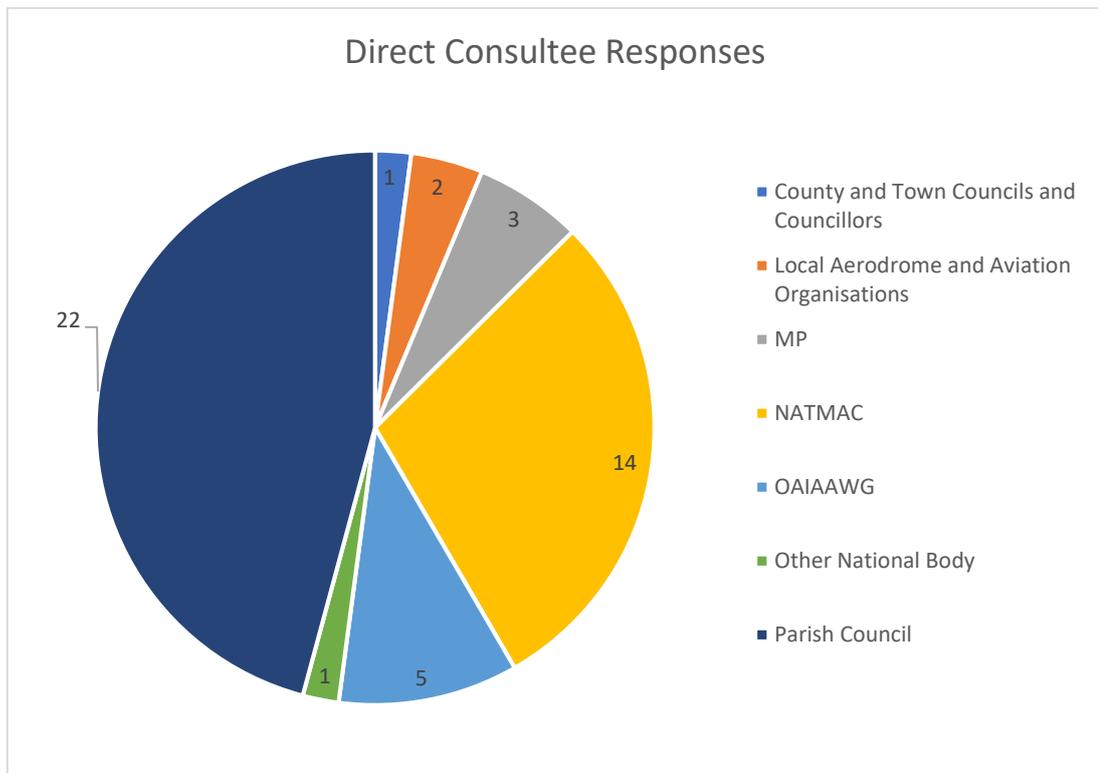


Figure 2 - Breakdown of Direct Consultee Responses Received

² Percentage of those originally consulted.

In addition to the 48 responses received from direct consultees (distribution shown in Figure 2), a further 1,598 submissions were received from other individuals or organisations making the total number of responses equal to 1,646.

It should be noted that “NATMAC” comprises those organisations who are members of the CAA’s NATMAC. The NATMAC consultee list includes some CAA Departments who, for reasons of CAA impartiality, do not respond to consultations.

The majority of the responses received were from glider pilots and individuals associated with general aviation groups and organisations.

3.4 Meetings with Aviation Stakeholders

Prior to the commencement of the consultation period, a number of meetings were held with some of the local aviation stakeholders. The purpose of these meetings was to allow a variety of local airspace users an opportunity to view the initial designs and offer advice on the possible issues that BZN would be facing.

Information concerning the proposed Airspace Change was circulated via several forums including the Oxfordshire Area of Intense Aerial Activity (AIAA) Users Working Group (now known as the Regional Airspace Users Working Group or RAUWG). The project was briefed to the Military Airspace Users Working Group (MAUWG) (previously known as the Military Users Airspace Coordination Team or MUACTION) on 22nd May 2014.

Details of the consultation meetings that were organised with the aviation stakeholders are given in Table 2 below.

Meeting	Meeting Date	Notes
London Oxford Airport	7 th August 2014 8 th May 2016	
NATS Sector 23 and LAMP	19 th May 2014	
Oxfordshire AIAA RAUWG	4 th June 2014 10 th September 2014 8 th December 2014 11 th March 2015 17 th June 2015 9 th September 2015 9 th December 2015 29 th March 2016 1 st June 2016 7 th September 2016 11 th January 2017	BZN ACP is a standing agenda item at Oxfordshire AIAA RAUWG

Meeting	Meeting Date	Notes
	19 th April 2017 6 th July 2017 5 th October 2017 8 th February 2018	
Cotswold Airport (Kemble)	13 th October 2014	
Gloucester Airport	13 th October 2014	
22 Gp	20 th October 2014	
Joint Helicopter Command (JHC)	20 th October 2014	
RAF Fairford	21 st October 2014	
RAF Brize Norton Flying Club	21 st October 2014	
Redlands Airfield	28 th November 2014	
Sandhill Farm Airfield	28 th November 2014	
Nympsfield Airfield (Aston Down)	28 th November 2014	
BGA	15 th August 2017	
BMAA	15 th August 2017	
GAA	28 th September 2017	

Table 2 - Pre-Consultation Stakeholder Meetings

3.4.1 Additional Meetings

During the period of the Public Consultation, additional meetings with stakeholders were conducted. Details of the consultation meetings that were organised with stakeholders are given in Table 3.

Stakeholder	Meeting Date	Notes
Public Drop-in Session	20 th February 2018	Public drop-in session held at BZN Community Centre to allow members of the public and aviation stakeholders to ask questions of airport representatives including BZN executive staff and ATC
Public Drop-in Session	28 th February 2018	Public drop-in session held at BZN Community Centre to allow members of the public and aviation stakeholders to ask questions of airport representatives including BZN executive staff and ATC

Table 3 - Additional Consultation Meetings

4 Analysis of Responses

4.1 Overview

This section provides details on the number of responses received from the various organisations and individuals that were consulted. It also studies the percentage of stakeholder consultees that raised concerns about the proposal and explores the support ratio of consultee responses received to give a general indication on the stakeholder acceptance of this proposal. Of the 1,646 individual responses received in total, 10 supported the proposal, 1,597 consultees objected to the proposal and 16 provided a neutral response or had no comments on the proposal. A total of 23 consultees asked questions but did not register a formal response.

4.2 Response Ratios

Of the 1,646 responses received during the consultation period:

- 10 consultees (0.6 %) supported the proposal;
- 1,597 consultees (97.0 %) objected to the proposal;
- 16 consultees (1.0 %) provided a neutral response or provided no comments on the proposal; and
- 23 consultees (1.4 %) provided questions for clarification purposes but did not formally provide a response.

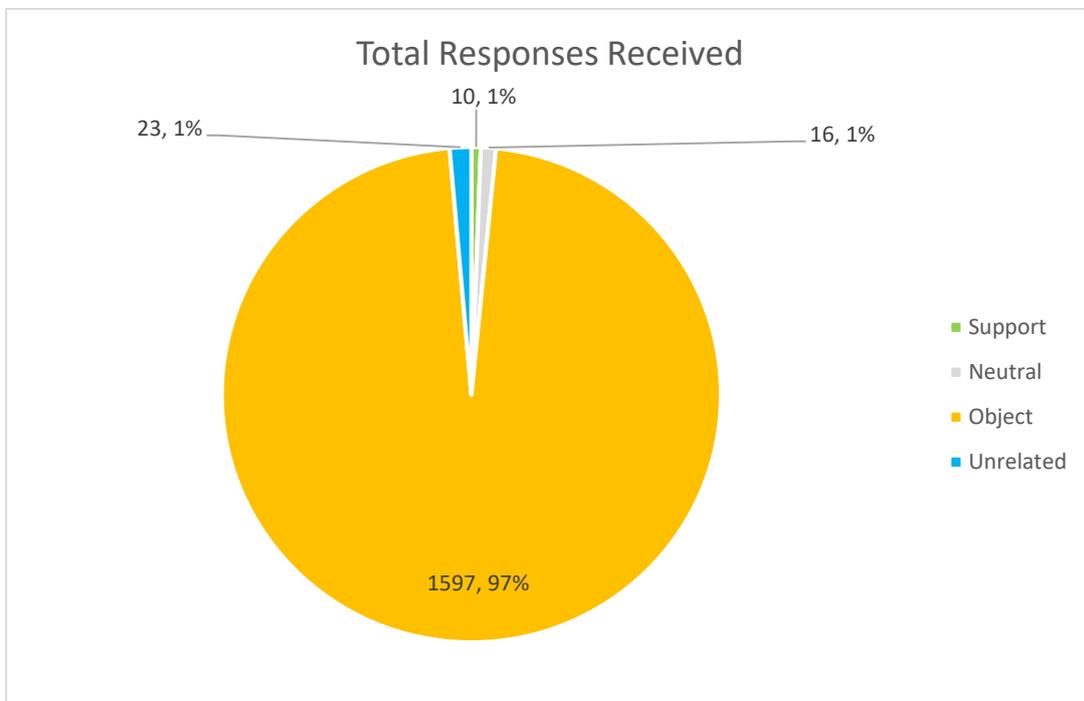


Figure 3 – Breakdown of all Responses Received

4.3 NATMAC Responses

4.3.1 Aircraft Owners and Pilots Association UK

The Aircraft Owners and Pilots Association UK (AOPA UK) objected to the proposal. Whilst they understood the need for increased CAS protection for RAF Brize Norton's large military aircraft, they considered that the current ACP included areas of airspace that, following analysis, were not justified. Whilst they recommended that all airspace extensions should be reviewed, they considered that the southerly and easterly extension of CTR 1 was not justified and should be removed. AOPA UK also recommended that a BZN Zone Transit Corridor should be established to facilitate north-south transits which would involve including an area of Class E and Transponder Mandatory airspace from 3,500ft to 5,500 ft amsl above the existing Class D airspace as shown in Figure 4 below.



Figure 4 - Image provided by AOPA to demonstrate the BZN Zone Transit Corridor

4.3.2 British Gliding Association

The British Gliding Association (BGA) objected to the proposal on the grounds that the consultation and its proposal were flawed. The BGA considers that the consultation document was inaccurate and misleading and that BZN movements data had been deliberately withheld. They contended that there was no justification for the expansion of CAS as, in their opinion, procedures could be

contained within the existing airspace. The BGA also contended that there was insufficient stakeholder engagement both prior to, and during, the consultation period.

The BGA also considers that the proposed design would increase risk to more airspace users by intensifying the existing choke points and by creating new ones, thus increasing the risk of mid-air collision. The BGA contended that the proposed airspace design would damage the sport of gliding and force the closure of 7 local gliding clubs by closing established cross-country routes.

The BGA also stated their concern that the process followed under CAP 725, is unreasonably weighted towards the ACP proposer.

4.3.3 British Hang Gliding and Paragliding Association

The British Hang Gliding and Paragliding Association (BHPA) objected to the proposal. They contended that hang gliders and paragliders had not been considered during the airspace design process and neither the BHPA nor local hang gliding and paragliding clubs were contacted during the process.

The BHPA considers that the airspace design lowers the risk of mid-air collision between military aircraft and GA aircraft at the expense of an increased risk of mid-air collision outside of the proposed airspace, and current choke points would be exacerbated by the design.

The BHPA support the utilisation of an alternative design proposed by the GAA (detailed in Section 4.3.8) which they consider would allow the current BZN airspace to connect with airway L9 without impacting GA operations.

4.3.4 British Helicopter Association

The British Helicopter Association (BHA) objected to the proposal. They consider that an increase in CAS has the potential to decrease the level of safety for other airspace users in the surrounding area. The BHA also contends that some of the flight safety incidences listed were not relevant to the proposal and were therefore misleading. The BHA recommends that BZN crews are taught to remain within the existing CAS by flying procedures slower to decrease their radius of turn.

4.3.5 British Microlight Aircraft Association

The British Microlight Aircraft Association (BMAA) objected to the proposal. They consider that the proposal does not establish a safety requirement that needs to be met and contend that the proposal would lead to a decrease in flight safety and disadvantage to current airspace users. They also consider that the volume of CAS proposed is unjustified and that the proposal had not met the environmental requirements of the Future Airspace Strategy (FAS) nor did it conform to the CAA Airspace Charter.

4.3.6 British Parachute Association

The British Parachute Association (BPA) objected to the proposal. They consider that the area of Class D was not proportional to the requirement and would see benefit for a relatively small number of military aircraft whilst negatively impacting the safety and convenience of a large number of GA aircraft.

The BPA contend that a large number of GA operators would choose to avoid the proposed airspace, resulting in an increase in aircraft immediately outside CAS,

which they perceive will increase the danger of GA infringements of drop zones. Additionally, the BPA considers that the proposed airspace would lead to an increase in airspace infringements within the Class D airspace and cited the example of Stansted Airport where additional airspace restrictions had been mandated as a result of an increased number of infringements.

The BPA also considers that the continued use of CAP 725 is cynical and that the Consultation Document publication was rushed to beat the deadline of the introduction of the new ACP process CAP 1616.

4.3.7 British Rotorcraft Association

The British Rotorcraft Association (BRA) objected to the proposal. The BRA contends that the proposal has been rushed and that resulted in errors in the documentation and the proposed airspace design was not user friendly and, in some cases, designed for the benefit of London Oxford Airport. The BRA considers that the proposal did not produce any additional safety benefit for BZN nor did it adequately explain how controllers at BZN and LOA would interact.

4.3.8 General Aviation Alliance

The General Aviation Alliance (GAA) objected to the proposal because they consider that it does not represent an equitable use of airspace and would increase risk for other airspace users.

The GAA considers that the approach to consultation both with aviation and non-aviation stakeholders was insufficient and they were disappointed that BZN did not establish a Focus Group. They contend that the Consultation Document contained incomplete and misleading data and did not appropriately assess the impact on the GA community. They also consider that there was insufficient analysis of the alternative options that would not involve the increase in Class D airspace. The GAA does not consider it appropriate for the ACP to continue under the CAP 725 process and they stated that they had requested Government intervention.

Whilst the GAA has fundamental concerns regarding the consultation process they did believe that through enhanced engagement it would be possible to meet the needs of the sponsor, the MOD, and other aviation stakeholders, and they provided a proposed airspace design shown in Figure 5 below.

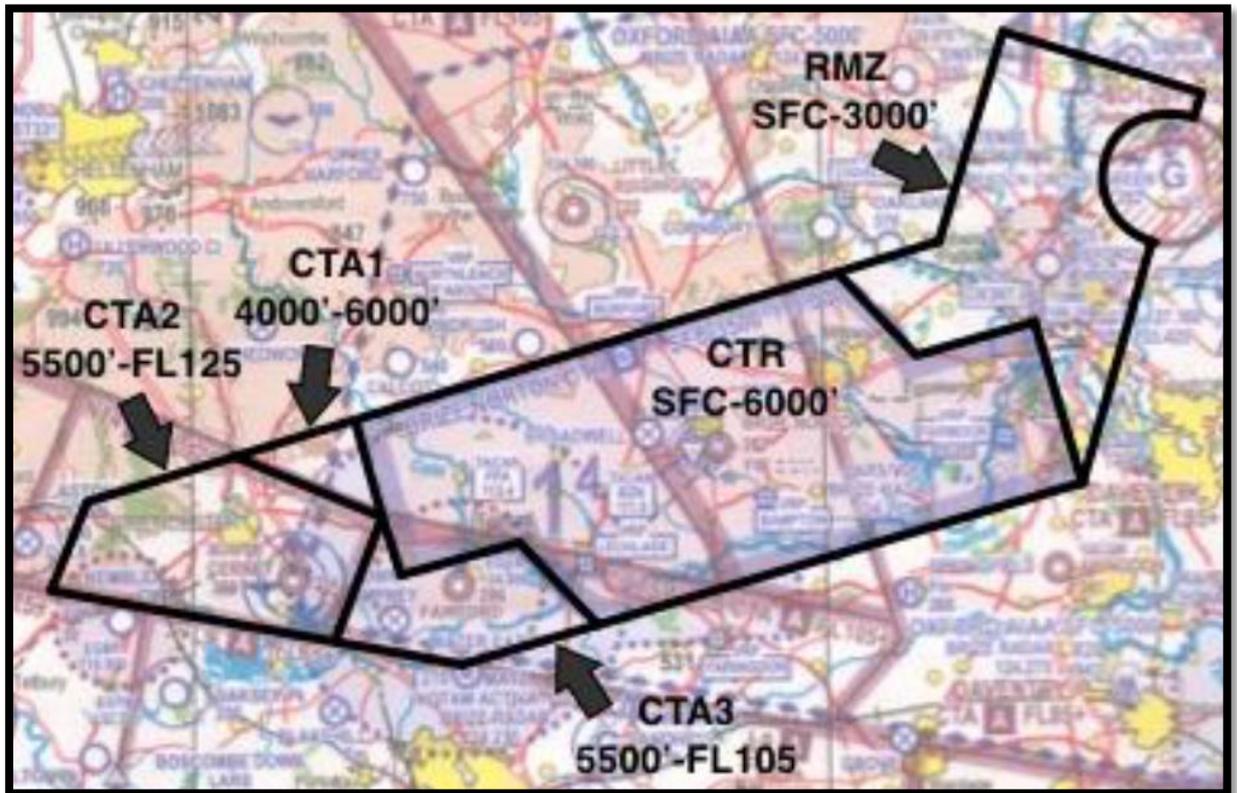


Figure 5 – GAA Proposed Airspace Design for RAF Brize Norton (and LOA) (Image kindly provided by the GAA)

4.3.9 Helicopter Club of Great Britain

The Helicopter Club of Great Britain (HCGB) responded to provide their support to the GAA's response to the consultation.

4.3.10 Honourable Company of Air Pilots

The Honourable Company of Air Pilots (HCAP) objected to the proposal. They recognise the desire for RAF military transport aircraft to operate safely but they consider that the option of expanding Class D airspace needs to be re-considered in the wider context of all users of UK airspace. The HCAP considers that an increase in CAS would lead to an increased incidence of airspace infringement due to the tightening of choke points on the periphery of the proposed airspace. The HCAP does not consider there to be sufficient evidence to increase the existing Class D airspace and contends that even if there was the evidence required, BZN must be able to ensure that controlling manpower is sufficient for the expected increase in traffic requesting to use the airspace.

The HCAP recommends that there is more consideration of the proposed alternatives and suggested that a Radio Mandatory Zone (RMZ)/ Transponder Mandatory Zone (TMZ) solution would offer the potential to avoid compressing GA

aircraft whilst increasing the safety of all users by providing a known traffic environment.

4.3.11 Light Aircraft Association

The Light Aircraft Association (LAA) objected to the proposal on the grounds of safety and airspace modernisation strategy. The LAA contends that the proposed airspace is disproportionate to BZN's requirement and if approved in its current form, would increase the risk to aircraft in the airspace surrounding it with no significant safety benefit. They also consider that the proposal was hastily prepared to avoid CAP 1616 and should be resubmitted under the new CAP 1616 guidelines.

The LAA recommends that an RMZ should be reassessed as an option to provide a known traffic environment without the demands of controlled airspace.

4.3.12 NATS

NATS objected to the proposal. NATS commented that whilst they were content with the design principles, there had been no engagement with NATS regarding the designs since 2016. NATS' principle concern was the proximity of the BZN airspace to the Cotswold CTAs. NATS provided a potential solution to the problem described but also stated that they were happy to help in the development of a mutually acceptable solution.

NATS expressed concern that the proposed airspace would affect the arrivals and departures of Gloucestershire, Kemble and London Oxford Airport and suggested that Letters of Agreement (LoAs) would need to be agreed by all parties.

NATS also expressed concern that the lateral and vertical extents of the proposed airspace appear overly complex, and that the CAS bases do not follow a typical CTR/CTA structure which has the potential for an increased risk of airspace infringements.

4.3.13 UK Flight Safety Committee

The UK Flight Safety Committee (UKFSC) objected to the proposal on the grounds that it considers it to be disproportionate in its effect on other users of that airspace and there was insufficient justification provided for this level of increase of CAS.

The UKFSC considered that the Consultation Document contained suppositions and misleading information that had no bearing on the case for change. They also consider that the number of civilian passenger aircraft routing through BZN did not justify an increase in CAS.

The UKFSC suggested that a Class E and TMZ airspace design could be a better approach to airspace redesign.

4.4 Submissions from Individuals and Other Aviation Organisations

Of the 1,598 responses to the consultation received from those not in the formal consultee list, the majority were from GA pilots, particularly glider, hang glider and paraglider pilots, many of whom are also members of local flying clubs.

Notwithstanding that their representative organisations may have submitted detailed responses to the consultation on behalf of their membership, all of the

additional individual submissions have been documented and analysed by BZN and will form part of the ACP submission to be made to the CAA in due course. Any new issues identified in the individual submissions which had not already been raised by the formal consultees are embraced within the key issues (Table 4) in Section 4.8.

Responses were received from the following flying clubs and local aviation organisations:

- Abingdon Airshow;
- Army Hang Gliding and Paragliding Association;
- Avon Aerotow Group;
- Avon Hang Gliding and Paragliding Club;
- Banbury Gliding Club;
- Baths Wilts and North Dorset Gliding Club;
- Bicester Gliding Centre;
- Bidford Gliding and Flying Club;
- Booker Gliding Club;
- Bristol and Gloucestershire Gliding Club;
- Buckinghamshire Microlight Club;
- Calcot Airfield;
- Cambridge Gliding Club;
- Challow Paramotor Club;
- Chiltern Gliding Club;
- Cloudbase Microlighting;
- Cotswold Airport;
- Cotswold Gliding Club;
- Deeside Gliding Club;
- Derby Aero Club;
- Devon and Somerset Gliding Club;
- Dunstable Hang gliding and Paragliding Club;
- East of Scotland Microlights;
- East of Scotland Strut of the LAA;
- Gloucestershire Airport;
- Holmbeck Farm Airfield;
- Kemble Flying Club;
- Lasham Gliding Society;
- Malvern Hang Gliding Club;
- North Devon Hang gliding and Paragliding Club;
- Oxford Gliding Club;
- Rendcomb Aerodrome;
- Sherington Gliding Club;
- South East Wales Hang Gliding and Paragliding Club;
- South Wales Gliding Club;
- Southcombe Farm Airstrip;
- Southdown Gliding Club;
- Stratford on Avon Gliding Club;
- Thames Valley Hang Gliding Club;
- The Cotswold Aero Club;

- The Isle of Wight Hang Gliding and Paragliding Club;
- University of Surrey Gliding Club;
- Upper Harford Airstrip;
- V1 Flight School;
- Vale of White Horse Gliding Centre;
- Vintage Aircraft Club;
- Wessex Strut of LAA; and
- Xclent Paragliding.

4.5 Support Responses

A number of stakeholders have offered their support for the airspace and procedure developments. The support responses came from a NATMAC organisation, councils, local residents and members of the GA community.

The rationale behind these individuals and organisation supporting the proposal included:

- The justification for airspace change was fully and comprehensively made;
- The proposal improves safety for all concerned; and
- The safety and protection of the country is paramount.

4.6 Stakeholder Objection Responses

A total of 1,597 objections to the proposal were received throughout the consultation period. The consultee types and respective numbers are given below:

- 42 objections from local aerodromes/aviation organisation;
- 3 objections from members of the OAIAAWG;
- 2 objections from Members of Parliament;
- 13 objections from NATMAC consultees;
- 13 objections from local authorities;
- 1,514 objections from individuals within the aviation community;
- 8 objections from individuals outside the aviation community; and
- 2 objections from other organisations not associated with aviation or based overseas.

4.7 Key Issues Arising

The response analysis process identified a number of key themes in the objections to the proposal. These are outlined in Table 4 below together with the number of consultees who expressed that view in their response. The objections are divided into a series of tranches to reflect the volume of responses received pertaining to a key issue arising. Many of the themes are very similar in nature, which has led to a degree of repetition or overlap in the tranches.

Number of Responses	Nature of Objection	Number of Responses
Tranche 1 (Over 100 responses refer to the issue)	Reduction in safety for GA	902
	Choke points	871
	Disproportionate	464
	Increased risk of mid-air collision	430
	Impact on cross country flying	281
	Cynical use of CAP 725	199
	Uncompelling safety argument	173
	Benefit the few over the many	134
	Restriction of free flying	131
	No consultation with HG/PG	131
	Does not consider GA	122
	Unjustified based on movements	117
	Impact on Avon Aerotow Group	116
	Increased incidence of airspace infringements	111
	Impact on HG/PG	106
	Designed to make airport operations easier	104
	Unnecessary	103
Tranche 2 (50 – 100 responses refer to the issue)	Unjustified	100
	Airspace design too complicated	96
	Inadequate stakeholder engagement	82
	Impact on gliding	80

Number of Responses	Nature of Objection	Number of Responses
	Controller workload doubt	71
	Airspace design does not consider prominent geographical features	66
	Impact on GA	53
Tranche 3 (10 – 50 responses refer the issue)	Barrier to transit	49
	Financial impact on GA	47
	Increased risk of land outs	47
	Proposal based on commercial gain	47
	Incorrect CAP Process	46
	Insufficient consultation	46
	Access is likely to be denied	45
	Consultation document misleading	41
	Devastating blow for VFR flying	37
	Does not consider the safety of GA	34
	Increase in noise	32
	Airspace too big	29
	Impact on local gliding clubs	29
	No prior consultation with paragliders	25
	Impact on Enstone Airfield	23
	Barrier to flight	21
Barrier to NS transit	19	
Impact on downwind flights	17	

Number of Responses	Nature of Objection	Number of Responses
	Excessive	16
	Consultation document deliberately misleading	15
	Does not comply with Transport Act 2000 Sect 70	15
	Impact on GA airfields	14
	Impact on gliding clubs	14
	Poor consultation document	14
	Impact on local GA airfields	13
	Distorted consultation images	12
	Exclusion of GA	12
	Reduction in airspace for GA	12
	Closure of gliding clubs	11
	Flawed process	11
	Impact on small GA airfields	11
	Inaccessible to gliders	11
	Airspace base too low	10
	Airspace poorly designed	10
	Does not consider environmental impact	10

Table 4 - Nature of Objections Raised by Consultees

4.8 Proposed Alternative Suggestions

Table 5 details the suggested changes to the proposed airspace and procedures raised by consultees.

Nature of Concerns	Proposed Solution or Redesign
Creation of a known traffic environment	<ul style="list-style-type: none"> – Generate utilising a Radio Mandatory Zone (RMZ). – Generate utilising a Transponder Mandatory Zone (TMZ). – Generate utilising Class E airspace. – Generate utilising ADS-B. – Generate utilising FLARM. – Generate utilising a combination of the above options. – Change the entire OAIAA to a RMZ/TMZ. – Activate airspace required using NOTAMs. – Make the established listening squawk mandatory.
Alternatives to airspace	<ul style="list-style-type: none"> – Allow more time for the listening squawk to be used before making any airspace changes. – Increase controller manning to facilitate BZN operations. – Use commercial airports such as Heathrow for military transport movements. – Maximise the use of simulators at BZN to avoid the need for airspace. – Cease military operations at BZN and move them to a less busy area of the country.

Nature of Concerns	Proposed Solution or Redesign
Enhanced cooperation	<ul style="list-style-type: none"> – Co-locate BZN and LOA (and RAF Benson) ATC. – Utilise one area controller for all BZN and LOA approach and departures. – Airspace should be delegated to GA organisations when not in use. – Time based CAS (e.g. Class D that reverts to Class G at weekends, or Class D only at night). – Establish VFR corridors for GA transits. – Establish Letters of Agreement (LoA) that guarantee access to the airspace for GA. – BZN and LOA should operate with enhanced coordination to remove need for airspace. – BZN should engage more with the BGA and the Vale of White Horse Gliding Club.

Nature of Concerns	Proposed Solution or Redesign
Redesign airspace	<ul style="list-style-type: none"> – Redesign the airspace to reduce the impact on GA operations and gliding clubs. – Redesign the airspace in line with steeper approach and descent gradients. – Redesign airspace for BZN aircraft performing slower approaches. – Redesign the airspace based on the number of aircraft movements at BZN. – Only increase the current airspace by a width of 1nm to contain current procedures. – Increase the height of the existing airspace, but not the width. – Redesign the airspace to only consider the requirements to join airway L9. – Move the existing airways joining point. – Utilise a common base altitude for all CTAs. – Simplify the airspace design. – Only fly instrument patterns to the south of BZN – Request the CAA facilitate a resolution to the airspace design issue. – Extend the consultation period by 6 months and ensure that every affected household is consulted with.
Reduce airspace	<ul style="list-style-type: none"> – Remove the BZN ‘long’ procedures. – Only increase airspace to the East. – Remove the easterly extension of CTR 1. – Reduce the southerly extension of CTR 1. – Reduce the current BZN airspace. – Reclassify current BZN airspace as a MATZ (Class G). – Close RAF Brize Norton.

Nature of Concerns	Proposed Solution or Redesign
Process	<ul style="list-style-type: none"> – Correct the errors in the proposal and resubmit. – Resubmit the proposal under CAP 1616.
Testing	<ul style="list-style-type: none"> – BZN should undertake a study to confirm that they are able to receive radio calls from anticipated call points.
Update Procedures	<ul style="list-style-type: none"> – Change RAF procedures in line with civilian Standard Operating Procedures (SOP).
Pay for delegated airspace	<ul style="list-style-type: none"> – CAS airspace should be charged at a rate per nm³ and BZN should pay for the airspace requested.

Table 5 - Issues raised and potential solutions regarding the proposed CAS and procedures at RAF Brize Norton

Table 6 below provides the alternative suggestions that relate to specific areas of the BZN proposed airspace design.

Proposed Solution or Redesign
<ul style="list-style-type: none"> – Raise all CTA bases to 5,000ft.
<ul style="list-style-type: none"> – Resize Brize CTR to contain all military aircraft, give all CTAs a minimum base of at least 3,000ft, remove CTAs 2, 3 and 4 and reduce the size of CTAs 9 and 10.
<ul style="list-style-type: none"> – Set CTA 5 base level to the top level of the Fairford MATZ.
<ul style="list-style-type: none"> – Raise base of CTA 9 & 10 to 5,000 and 6,000; reduce size of CTA 9; CTR1 raised to 6,000ft, remove CTA 5, 6, 7 & CTR2, remove CTA 2,3,4,8.
<ul style="list-style-type: none"> – Reduce the western extent of CTA 9 and 10 to what is necessary for procedures rather than to make the airspace coincidental with existing CAS.
<ul style="list-style-type: none"> – Remove CTA 8 and OX CTA1 and lift CTA 10 to 5,000ft; Raise base of CTA 9 to 5,500ft; reshape CTA1 and 2 so aircraft can pass more easily to the southeast.

Proposed Solution or Redesign
– Raise base of CTA 8, 9 and 10 in light of only occasional use of worst performing aircraft types; move northern edge of CTA 8 to south of Charlbury and Northleach VRPs.
– Increase base of CTA 9 &10 to 5,500ft, reduce the western extent of CTA 9 & 10, move CTA 8 boundary south and raise base to 4,500ft.
– Revise CTA 9 & 10 to allow continued paragliding operations.
– Raise base of CTA 10 to 4,500ft.
– Raise base of CTA 10 to 5,000ft.
– Institute a TMZ instead of CTA 9 &10.

Table 6 - Alternative Solutions Proposed by Consultees

The key concerns and BZN’s consideration of them, are detailed at Annex A3 of this report.

5 Post Consultation Actions

5.1 Post-Consultation Review

Following the 15th December 2017 to 5th April 2018 Public Consultation period, all comments received have been thoroughly reviewed by BZN in order to identify the key issues and areas of concern. The approach taken by BZN was to review the airspace design in light of the significant points of objection raised by consultees and adapt the design where possible to address these objections.

5.2 Post-Consultation Airspace Development

Figure 6 in Annex A4 shows the consulted design for the proposed BZN CAS as defined within the 15th December 2017 to 5th April 2018 Public Consultation.

In the light of the responses received during the Public Consultation, BZN has undertaken a detailed review of the proposed airspace design to identify areas where the airspace can be reduced in size or modified in order to alleviate the concerns of those that objected to the proposal and has considered where, and how, proposed alternative solutions could be implemented. BZN has considered the suggestions in general terms but has also considered specific alternative solutions for each element of the proposed airspace and provided reasons, where applicable, why alternative solutions could not be instigated. Some of the suggestions put forward require further analysis to understand if they can be pursued as part of the ACP. A summary of the review is shown at Annex A3. The key themes raised from objections were:

- The perceived reduction in safety for aircraft outside of CAS as a result of an increase in traffic density, choke points and associated risk of mid-air collisions;
- The disproportionate size of CAS requested based on the volume of aircraft;
- The impact on the ability for pilots to conduct cross country flying;
- The incorrect or cynical use of the CAP 725 process;
- The safety case was not considered to be compelling;
- The perceived unfair benefit for aircraft operated by BZN at the expense of GA; and
- The restriction on free flying as a result of the reduction of available Class G airspace.

5.3 Key Issues Identified Within the Consultation

5.3.1 General Aviation (GA) Community

BZN recognises that the GA community perceives Class D airspace to be a barrier to flight, and as such, the imposition of this airspace will result in some GA operators routing around the proposed airspace, leading to increased traffic density and an exacerbation of choke points. During the redesign process BZN has analysed the potential to reduce the overall volume of proposed airspace, and where possible to raise the base levels of some of the proposed CTAs. This is entirely dependent upon further analysis of the climb and descent profiles proposed for the new IFPs, but analysis is being conducted to understand if these can also be altered.

A large number of objections stated that the size of the airspace proposed was considered to be disproportionate to the requirements of BZN. BZN has re-evaluated the proposed design in light of the objections received and as a result, a design modification is being drawn up that with the intention of reducing the overall volume of Class D airspace proposed.

5.3.2 Cross Country Flying

BZN recognises that a number of important GA cross-country routes transect the proposed airspace. Whilst it remains the intent of BZN ATC to facilitate GA movements as widely as possible, it is recognised that many GA pilots will not enter CAS, either because the aircraft they operate is not equipped with a radio, or because they simply prefer to operate without an air traffic control service of any kind. BZN will review the VFR Crossing Guide to reflect the changes in the design of airspace (if the final design is approved) and will provide guidance on RT procedures and preferred crossing routes in order to make it as simple as possible for aircraft to cross the CAS safely and expeditiously.

5.3.3 Safety Arguments

A large number of responses contended that the safety evidence given does not provide compelling rationale for airspace change, and indeed many consider that some of the reported safety events would have occurred regardless of the class of the airspace or would have been exacerbated by the Class D airspace. The inclusion of the safety data and events within the Consultation Document was not intended to be misleading. The data is representative of the complex area that BZN and other aviators operate within the Oxfordshire area. The safety concerns are borne out of a study conducted for RAF Brize Norton at the outset of this project that indicated that the highest risk held by the Operational Duty Holder (ODH) is that of a Mid-Air Collision (MAC) of a BZN asset with another aircraft. This information will be submitted to the CAA when the formal ACP submission is made. It is for the CAA to determine if the case for additional CAS is justified. The purpose of the Public Consultation was to seek the views of those stakeholders who may be affected by the change.

Many responses to the consultation also considered that during the initial design phase BZN had not considered the overall safety of all aircraft. Instead it was contended that the only consideration was for aircraft within the proposed airspace. Responders considered that BZN should have prepared a risk analysis for the perceived increased risk to aircraft operating in the area surrounding the

proposed airspace. BZN considers that undertaking a risk analysis exercise was impractical, as there were too many variables to generate a realistic evaluation of the level of risk.

5.3.4 CAP 725 ACP Process

A large number of responses contended that BZN is utilising the incorrect CAA process, and in most cases, this was considered to be due to BZN's desire to avoid enhanced stakeholder engagement. A new process, CAP 1616, was introduced by the CAA on 4th January 2018. The announcement that the new process would be implemented was made by the government in October 2017. By this stage, the BZN project was almost ready to start the Formal Consultation process. The CAA articulated transition arrangements for those projects that had already commenced an ACP under CAP 725; this meant that any project that had started Stage 4 of CAP 725 could remain on the existing process. Had the CAA insisted that the process be run on CAP 1616, it is not clear at which stage the process would commence since the project was already significantly mature. The CAA has always been kept informed about project delays and timelines and since the Public Consultation period commenced prior to the implementation of CAP 1616, the project has remained on CAP 725. A change to the new process would have undoubtedly meant extra work and a delay to the project, which has already suffered many delays.

5.4 Conclusions

The Public Consultation has produced significant opposition from the GA community supported by GA clubs around the UK, including inter alia the BGA, the BHPA, the BPA, the LAA, the GAA, and the All Party Parliamentary Group on General Aviation. The main emphasis of the concerns are as follows:

- The perceived reduction in safety for aircraft outside of CAS as a result of an increase in traffic density, choke points and associated risk of mid-air collisions;
- The disproportionate size of CAS requested based on the volume of aircraft;
- The impact on the ability for pilots to conduct cross country flying;
- The incorrect or cynical use of CAP 725 ACP;
- The safety case was not considered to be compelling;
- The perceived unfair benefit for aircraft operated by BZN at the expense of GA; and
- The restriction on free flying as a result of the reduction of available Class G airspace.

5.5 ACP - Next Stages

The consultation process constitutes the fourth stage of a seven-stage process for an ACP articulated within CAP 725 [Reference 1].

BZN has undertaken a further period of airspace design analysis the results of which are contained within Annex A3 of this document, BZN will finalise the designs and compile an ACP prior to submitting it to the CAA, presenting the case for the proposal. It is a requirement of the consultation process that BZN provides the CAA with full details of the consultation (including copies of all responses and

correspondence) together with the documentation necessary for the promulgation of the proposed airspace change.

Following receipt of the formal ACP submission, the CAA then requires a 16-week period to conduct its own internal analysis of the final proposal and consultation results, before arriving at a Regulatory Decision.

BZN would like to notify consultees that should any representative organisation wish to present new evidence or data to the Group Director, SARG for his consideration prior to making his regulatory decision regarding a Change Sponsor Proposal, the representative organisation must submit, in writing, the information to the following address:

Group Director,
Safety and Airspace Regulation Group,
CAA House,
45-59 Kingsway,
LONDON
WC2B 6TE

In the event that the CAA accepts the ACP, without the need for further design optimisation or analysis, then it is proposed that implementation takes place on a single date. All new IFPs and new airspace would be activated simultaneously, on a double AIRAC (Aeronautical Information Regulation and Control) cycle although the IFPs will be published in the Military AIP.

6 References

Reference	Name	Origin
1	CAP 725 CAA Guidance on the Application of the Airspace Change Process Fourth Edition 15 th March 2016	CAA
2	Code of Practice on Consultation July 2008	Cabinet Office URN 08/1097

Table 7 - Table of References

A1 Consultation Methodology

A1.1 Methodology

The BZN ACP consultation was conducted in accordance with the principles set out in the Cabinet Office Code of Practice on Consultation [Reference 2], as required by the CAA.

A Consultation Document was prepared by BZN, presenting the proposal, rationale for the change, the perceived effects, and mitigation measures considered by BZN.

A link to the Consultation Document was made available on the BZN website (hosted on the MOD network). Consultees were notified by email alerting them to the consultation and how to access the Consultation Document.

This project has taken several years to develop and has been subject to many delays due to its complexity. Local aviation stakeholders were engaged at an early stage during the design process. Prior to the preparation of the Consultation Document, meetings were conducted with the following major stakeholders:

Meeting	Meeting Date
London Oxford Airport	7 th August 2014
	8 th May 2016
NATS Sector 23 and LAMP	19 th May 2014
Oxfordshire AIAA RAUWG	4 th June 2014
	10 th September 2014
	8 th December 2014
	11 th March 2015
	17 th June 2015
	9 th September 2015
	9 th December 2015
	29 th March 2016
	1 st June 2016
	7 th September 2016
	11 th January 2017
19 th April 2017	
6 th July 2017	

Meeting	Meeting Date
	5 th October 2017 8 th February 2018
Cotswold Airport (Kemble)	13 th October 2014
Gloucester Airport	13 th October 2014
22 Gp	20 th October 2014
Joint Helicopter Command (JHC)	20 th October 2014
RAF Fairford	21 st October 2014
RAF Brize Norton Flying Club	21 st October 2014
Redlands Airfield	28 th November 2014
Sandhill Farm Airfield	28 th November 2014

The primary purpose of these meetings was to expose the stakeholders to the proposed airspace designs and to try to garner feedback in order to shape the designs.

Full consultation commenced with wide circulation of the electronic Consultation Document and conceptual airspace designs to all identified stakeholders on 15th December 2017. The CAA recommends a minimum period of twelve weeks for formal consultation although allowance should be made for public holidays. Therefore BZN Public Consultation was due to run for fourteen weeks. However, in early January, the period was extended by a further two weeks to allow consultees to consider some new images provided on the BZN website. The Public Consultation closed on 5th April 2018 after a period of sixteen weeks.

Consultees were asked to consider the proposal and submit a response to BZN using a dedicated email address (RAFBrizeNortonConsultation@ospresl.co.uk). Responses sent by post were also accepted.

A2 Stakeholder Consultee List

A2.1 County and Town Councils and Councillors

County and Town Councils and Councillors	
Gloucestershire Country Council	Swindon Borough Council
Oxford City Council	Wiltshire Council
South Oxfordshire District Council	

A2.2 Local Aerodromes and Aviation Organisations

Local Aerodromes and Aviation Organisations	
637 VGS Little Rissington	London Oxford Airport
Bucks Microlite Club	London Parachute School
Chiltern Park Aerodrome	RAF Benson
Cotswold Airport	RAF Fairford
Dalton Barracks, Abingdon	RAF Halton
Enstone Airfield	Weston on the Green
Gloucestershire Airport Ltd	Wycombe Air Park
London Gliding Club	

A2.3 Members of Parliament

Member of Parliament	Constituency
Victoria Prentis	Banbury
John Bercow	Buckingham
Alex Chalk	Cheltenham
Geoffrey Clifton-Brown	Cotswolds
Mark Harper	Forest of Dean

Member of Parliament	Constituency
Richard Graham	Gloucester
John Howell	Henley
Jeremy Wright	Kenilworth and Southam
Justin Tomlinson	North Swindon
James Gray	North Wiltshire
Anneliese Dodds	Oxford East
Layla Moran	Oxford West and Abingdon
Andrea Leadsom	South Northamptonshire
David Drew	Stroud
Robert Buckland	Swindon South
Laurence Robertson	Tewkesbury
Ed Vaizey	Wantage
Robert Courts	Witney
Steve Baker	Wycombe

A2.4 NATMAC

NATMAC	
3AF	DAATM
AOA	GAA
AOPA	GATCO
Aviation Division NCHQ	HCAP
Aviation Environment Federation	HCGB
BA	Heavy Airlines
BAE Systems	IoM CAA

NATMAC	
BALPA	LAA
BBAC	Light Airlines
BBGA	Low Fares Airlines
BGA	NATS
BHA	NCHQ
BHPA	PPL/IR
BMAA	UAVS
BMFA	UKAB
BPA	UKFSC
CAA	

A2.5 Conservation Organisations

Conservation Organisations	
Blenheim Palace	National Trust
Campaign to Protect Rural England	Natural England
National Parks	

A2.6 Parish Councils

Parish Councils	
Abingdon on Thames	Hornton
Adderbury	Horspath
Adwell	Horton-cum-Studley
Aldsworth	Ickford
Alvescot	Idbury
Ambrosden	Inglesham
Ampney Crucis	Ipsden

Parish Councils	
Ampney St Mary	Islip
Ampney St Peter	Kelmscott
Appleford	Kemble
Appleton-with-Eaton	Kempsford
Ardington and Lockinge	Kencot
Ardley	Kennington
Arncott	Kiddington with Asterleigh
Ascott-under-Wychwood	Kidlington
Ashley	Kidmore End
Ashton Keynes	Kingham
Asthall	Kings Sutton
Aston Rowant	Kingston Bagpuize with Southmoor
Aston Tirrold and Aston Upthorpe	Kingston Lisle
Aston, Cote, Shifford and Chimney	Kirtlington
Avening	Langford
Aynho	Latton
Bagendon	Launton
Baldons (Toot and Marsh)	Leafield
Bampton	Lechlade
Banbury	Leigh
Barford St John and St Michael	Letcombe Bassett
Barnsley (Cotswold)	Letcombe Regis
Barrington	Lewknor
Baulking	Little Coxwell

Parish Councils	
Baunton	Little Milton
Beckley and Stowood	Little Rissington
Begbroke	Little Tew
Benson	Little Wittenham
Berinsfield	Littlemore
Berrick Salome	Littleworth
Besselsleigh	Long Wittenham
Bibury	Longcot
Bicester Town	Longworth
Binfield Heath	Lower Heyford
Bisley-with-Lypiatt	Lyford
Bix and Assendon	Lyneham
Black Bourton	Mapledurham
Blackbird Leys	Marcham
Blackthorn	Marston Meysey
Bladon	Merton
Blenheim	Meysey Hampton
Bletchington	Middle Aston
Blewbury	Middleton Cheney
Bloxham	Middleton Stoney
Blunsdon St Andrew	Milcombe
Boarstall	Milton
Bodicote	Milton (Abingdon)
Bourton-on-the-Water	Milton-under-Wychwood

Parish Councils	
Bourtons	Minchinhampton
Brightwell Baldwin	Minster Lovell
Brightwell-cum-Sotwell	Miserden
Brimpsfield	Mixbury
Britwell Salome	Mollington
Brize Norton	Moulsford
Broadwell	Nettlebed
Broughton	Newbottle
Bruern	Newington
Buckland	Newton Purcell
Bucknell	Noke
Burford	North Aston
Buscot	North Cerney
Carterton	North Hinksey
Cassington	North Leigh
Castle Eaton	North Moreton
Caversfield	North Newington
Chacombe	Northleach with Eastington
Chadlington	Northmoor
Chalford	Nuffield
Chalgrove	Nuneham Courtney
Charlbury	Oakley
Charlton-on-Otmoor	Oaksey
Charney Bassett	Oddington

Parish Councils	
Chastleton	Old Marston
Checkendon	Over Norton
Chedworth	Overthorpe
Cherington	Oxford, unparished area
Chesterton	Piddington
Childrey	Pishill with Stonor
Chilson	Poole Keynes
Chilton	Poulton
Chinnor	Prescote
Chipping Norton	Preston (Cotswold)
Cholsey	Pusey
Churchill and Sarsden	Pyrton
Cirencester	Quenington
Clanfield	Radley
Clapton	Ramsden
Claydon with Clattercote	Rendcomb
Clifton Hampden	Risinghurst and Sandhills
Coates	Rodmarton
Coberley	Rollright
Cold Aston	Rotherfield Greys
Colesbourne	Rotherfield Peppard
Coleshill	Rousham
Coln St Aldwyns	Salford
Coln St Dennis	Sandford St Martin

Parish Councils	
Combe	Sandford-on-Thames
Compton Abdale	Sapperton
Compton Beauchamp	Shabbington
Cornbury and Wychwood	Shellingford
Cornwell	Shennington with Alkerton
Cottisford	Sherborne
Cowley	Shilton
Crawley (West Oxfordshire)	Shiplake
Cricklade	Shipton-on-Cherwell and Thrupp
Cropredy	Shipton-under-Wychwood
Croughton	Shirburn
Crowell	Shotteswell
Crowmarsh	Shrivenham
Crudwell	Shutford
Cuddesdon and Denton	Sibford Ferris
Culham	Sibford Gower
Cumnor	Siddington
Curbridge and Lew	Somerford Keynes
Cuxham with Easington	Somerton
Daglingworth	Sonning Common
Deddington	Souldern
Denchworth	South Cerney
Didcot	South Hinksey
Dorchester	South Leigh

Parish Councils	
Down Ampney	South Moreton
Drayton (Abingdon)	South Newington
Drayton (Banbury)	South Stoke
Drayton St Leonard	Southrop
Driffield	Sparsholt
Ducklington	Spelsbury
Duns Tew	St Helen Without
Duntisbourne Abbots	Stadhampton
Duntisbourne Rouse	Standlake
East Challow	Stanford in the Vale
East Hagbourne	Stanton Harcourt
East Hanney	Stanton St John
East Hendred	Steeple Aston
Eastleach	Steeple Barton
Eaton Hastings	Steventon
Edgeworth	Stoke Lyne
Elkstone	Stoke Row
Elsfield	Stoke Talmage
Enstone	Stonesfield
Epwell	Stratton Audley
Evenley	Sunningwell
Ewelme	Sutton Courtenay
Eye and Dunsden	Swalcliffe
Eynsham	Swerford

Parish Councils	
Fairford	Swinbrook and Widford
Farmington	Swyncombe
Fawler	Syde
Fawley	Sydenham
Fencott and Murcott	Tackley
Fernham	Tadmarton
Fifield	Taynton
Filkins and Broughton Poggs	Tetsworth
Finmere	Thame
Finstock	Tiddington with Albury
Forest Hill with Shotover	Towersey
Freeland	Turkdean
Frilford	Uffington
Fringford	Upper Heyford
Fritwell	Upper Rissington
Fulbrook	Upton
Fyfield and Tubney	Wallingford
Garford	Wantage
Garsington	Warborough
Glympton	Wardington
Godlington	Warkworth
Goosey	Watchfield
Goring Heath	Waterperry with Thomley
Goring-on-Thames	Waterstock

Parish Councils	
Gosford and Water Eaton	Watlington
Grafton and Radcot	Wendlebury
Great Coxwell	West Challow
Great Faringdon	West Hagbourne
Great Haseley	West Hanney
Great Milton	West Hendred
Great Rissington	Westcote
Great Tew	Westcote Barton
Grove	Weston-on-the-Green
Hailey	Westwell
Hampnett	Wheatfield
Hampton Gay and Poyle	Wheatley
Hanborough	Whitchurch-on-Thames
Hannington	Wigginton
Hanwell	Windrush
Hardwick with Tusmore	Winson
Hardwick-with-Yelford	Winstone
Harpsden	Withington
Harwell	Witney
Hatford	Woodcote
Hatherop	Woodeaton
Hazleton	Woodstock
Henley-on-Thames	Woolstone
Hethe	Wootton (Vale of White Horse)

Parish Councils	
Heythrop	Wootton (West Oxfordshire)
Highmoor	Worminghall
Highworth	Worton
Hinton Waldrist	Wroxton and Balscote
Holton	Wytham
Holwell	Yanworth
Hook Norton	Yarnton
Horley	

A3 Review of Proposed Alternative Suggestions

Proposed Change	Summary of Discussion
<ul style="list-style-type: none"> Raise all CTA bases to 5,000ft. 	<p>This change would mean that some of the procedures would not be contained within CAS in accordance with PANS Ops Requirements, however the IFP profiles will be examined to see if the airspace volume can be reduced and still maintain compliance with PANS Ops. This work involves re-assessing climb and descent gradients to ensure that the minimum volume of airspace is required to contain aircraft. BZN is working with the Procedure Designer to understand what may be permissible.</p>
<ul style="list-style-type: none"> Resize Brize CTR to contain all military aircraft, give all CTAs a minimum base of at least 3,000ft, remove CTAs 2, 3 and 4 and reduce the size of CTAs 9 and 10. 	<p>The extent of the airspace required is being closely re-examined in light of the consultation responses, however, it was considered unlikely that all CTA's could be given the same base altitude without increasing the airspace volume proposed. Where reductions in the volume of airspace required are possible, the airspace design will be adjusted accordingly.</p>
<ul style="list-style-type: none"> Set CTA 5 base level to the top level of the Fairford MATZ. 	<p>The rationale behind this request is unclear. IFR arrivals to and departures from RAF Fairford are controlled by RAF Brize Norton Air Traffic Controllers and any access over this area would routinely be handled by RAF Brize Norton.</p>
<ul style="list-style-type: none"> Raise base of CTA 9 & 10 to 5,000 and 6,000ft; reduce size of CTA 9; CTR 1 raised to 6,000ft, remove CTA 5, 6, 7 & CTR 2, remove CTA 2, 3, 4 & 8. 	<p>The RAF Brize Norton flight profiles are being reviewed to determine if steeper approaches are operationally feasible. If steeper approaches are feasible, the volume of CTAs 9 and 10 will be reviewed and reduced in volume where possible.</p> <p>Following a review of the consultation responses, in light of the fact the Long Procedures will not be used frequently, RAF Brize Norton will consider non-containment of the Long Procedures. This will result in the modification or</p>

Proposed Change	Summary of Discussion
	removal of CTA 1 and 2 from the proposed airspace design. This proposal is currently being analysed to see if it is acceptable to the MAA.
<ul style="list-style-type: none"> – Reduce the western extent of CTA 9 and 10 to what is necessary for procedures rather than to make the airspace coincidental with existing CAS. 	See above point.
<ul style="list-style-type: none"> – Remove CTA 8 and OX CTA 1 and lift CTA 10 to 5,000ft; raise base of CTA 9 to 5,500ft; reshape CTA 1 and 2 so aircraft can pass more easily to the southeast 	<p>Following discussions it was considered that CTA 8 is necessary to protect departures from Runway 07 on the MALBY departure profile, however where possible the airspace design team will look to ensure that the minimum airspace volume possible is being proposed to contain RAF Brize Norton procedures and ensure operational flexibility.</p> <p>Following a review of the consultation responses, in light of the fact that the Long Procedures will not be used frequently, RAF Brize Norton will consider the non-containment of the Long Procedures. This will result in the modification or removal CTA 1 and 2 from the proposed airspace design. This proposal is currently being analysed to see if it is acceptable to the MAA.</p>
<ul style="list-style-type: none"> – Raise base of CTA 8, 9 and 10 in light of only occasional use of worst performing aircraft types; move northern edge of CTA 8 to south of Charlbury and Northleach VRPs. 	The RAF Brize Norton flight profiles are being reviewed to determine if steeper approaches are operationally feasible. If steeper approaches are feasible the volume of CTAs 9 and 10 will be reviewed and reduced in volume if possible.
<ul style="list-style-type: none"> – Increase base of CTA 9 & 10 to 5,500ft, reduce the western extent of CTA 9 & 10, move CTA 8 boundary south and raise base to 4,500ft. 	See above point.
<ul style="list-style-type: none"> – Revise CTA 9 and 10 to allow continued paragliding operations 	The RAF Brize Norton flight profiles are being reviewed to determine if steeper approaches are operationally feasible. If steeper approaches are feasible, the volume of CTAs 9 and 10 will be reviewed and reduced in volume where possible.

Proposed Change	Summary of Discussion
– Raise base of CTA 9 to 4,500ft	See above point.
– Raise base of CTA 9 to 5,000ft	See above point.
– Institute a TMZ instead of CTA 9,10	<p>CTAs 9 and 10 adjoin the existing UK Airways network and if the ACP is approved, some of this airspace will be the subject of a Letter of Agreement with NATS to ensure that their procedures are not affected by the adjoining CAS. In order for this agreement to work efficiently, NATS requires assurance that this volume of airspace is a fully 'known traffic environment' particularly if civil aircraft are released to other air traffic control agencies. A TMZ would not provide the same degree of protection or assurance.</p> <p>That said, RAF Brize Norton flight profiles are being reviewed to determine if steeper approaches are operationally feasible in order to reduce the volume of CAS required to contain them.</p>
– Remove the easterly extension of CTR 1.	<p>Following a review of the consultation responses, it has been decided that RAF Brize Norton will consider the non-containment of the Long Procedures. This will result in the modification or removal of CTA 1 and 2 from the proposed airspace design. This proposal is currently being analysed to see if it is acceptable to the MAA. However, CTR 1 is required to safely contain aircraft conducted approaches using the RAF Brize Norton Short Procedures.</p>
– Reduce the southerly extension of CTR 1	<p>The southerly extension of CTR 1 is required to ensure that there is sufficient airspace for aircraft to be positioned on to the final approach for Runway 25 on the Short Procedure. This reduces the conflict between LOA aircraft and reduces the demand for CAS to the east of the CTR.</p>

Nature of Concern	Proposed Solution or Redesign	Summary of Discussion
Creation of a known traffic environment	<ul style="list-style-type: none"> - Generate utilising a Radio Mandatory Zone (RMZ). - Generate utilising a Transponder Mandatory Zone (TMZ). - Generate utilising Class E airspace. - Generate utilising ADS-B. - Generate utilising FLARM. - Generate utilising a combination of the above options. - Change the entire Oxfordshire AIAA to a RMZ/TMZ. - Activate airspace required using NOTAMs. - Make the established listening squawk mandatory. 	<p>Following the consultation, analysis of the responses has prompted a full review of the proposed design. Significant changes are proposed that involve a reduction in the volume of airspace required. This will be achieved by either choosing not to contain some IFPs, and/or by altering the climb and descent profiles; a risk that would need to be accepted by the Operating Duty Holder (ODH).</p> <p>The discussion concluded that whilst FLARM is an excellent tool to assist pilot situational awareness, it is not certified for use in the provision of ATC services and is not a suitable mitigation. Additionally not all aircraft carry FLARM, therefore it could not be relied upon to provide a complete air picture.</p> <p>The discussion concluded that NOTAM activation would not be suitable for use in the establishment of airspace at RAF Brize Norton because NOTAM activation is not permissible for periods longer than 90 days and it would be impractical to operate as BZN operates 24 hrs a day.</p> <p>Altering the airspace classification of the Oxfordshire AIAA is outside of the scope of this ACP.</p>

Nature of Concern	Proposed Solution or Redesign	Summary of Discussion
Alternatives to airspace	<ul style="list-style-type: none"> - Allow more time for the listening squawk to be used before making any airspace changes. - Increase controller manning to facilitate BZN operations. - Use commercial airports such as Heathrow for military transport movements. - Maximise the use of simulators at BZN to avoid the need for airspace. - Cease military operations at BZN and move them to a less busy area of the country. 	<p>The discussion determined that the alternatives to airspace solutions would not resolve the issues that RAF Brize Norton is seeking to resolve and therefore they are considered to be outside the scope of the consultation.</p>

Nature of Concern	Proposed Solution or Redesign	Summary of Discussion
Enhanced cooperation	<ul style="list-style-type: none"> – Co-locate BZN and LOA (and RAF Benson) ATC. – Utilise one area controller for all BZN and LOA approach and departures. – Airspace should be delegated to GA organisations when not in use. – Time based CAS (e.g. Class D that reverts to Class G at weekends, or Class D only at night). – Establish VFR corridors for GA transits. – Establish Letters of Agreement (LoA) that guarantee access to the airspace for GA. – BZN and LOA should operate with enhanced coordination to remove need for airspace. – BZN should engage more with the BGA and the White Horse Gliding Club. 	<p>Through Programme MARSHALL, the RAF is in the process of locating Air Traffic Control Services from different units at a small number of “hub” units and RAF Benson ATC will eventually be located at RAF Brize Norton as a result. The discussion concluded that the co-location of LOA controllers would not resolve the issues of protecting aircraft as they join the UK airways structure.</p> <p>Time based CAS does not currently exist within the UK and it is considered that the Safety Case required to underpin any time based activation would be extremely complex. In essence there is established no safe way to dynamically turn airspace ‘on and off’.</p> <p>Whilst it was considered unlikely that prescribed VFR corridors could be established, RAF Brize Norton will revise the VFR Guide. Further RAF Brize Norton has commenced engagement with a number of agencies with a view to developing Letters of Agreement (in principle) with a variety of aviation organisations to establish access arrangements.</p> <p>Engagement with the BGA took place on two occasions during the summer of 2017.</p>

<p>Redesign airspace</p>	<ul style="list-style-type: none"> – Redesign the airspace to reduce the impact on GA operations and gliding clubs. – Redesign the airspace in line with steeper approach and descent gradients. – Redesign airspace for BZN aircraft performing slower approaches. – Redesign the airspace based on the number of aircraft movements at BZN. – Only increase the current airspace by a width of 1nm to contain current procedures. – Increase the height of the existing airspace, but not the width. – Redesign the airspace to only consider the requirements to join airway L9. – Move the existing airways joining point. – Utilise a common base altitude for all CTAs. – Simplify the airspace design. – Only fly instrument patterns to the south of BZN – Request the CAA facilitate a resolution to the airspace design issue. – Extend the consultation period by 6 months and ensure that every affected household is consulted with. 	<p>In light of the consultation responses received a thorough review of the IFP designs is being undertaken. All of the redesign options listed here will be considered as part of this process.</p> <p>The requests to extend the consultation period were considered however it was determined that sufficient time had been allowed for consultees to consider the impact of the proposed changes. The project had been well advertised locally within the aviation community, and details of the proposal were shared openly in summer 2017 with the GAA, BGA and BMAA. The consultation period was approved by the CAA. The minimum period is 12 weeks; the initial period was set at 14 weeks to take into account the Christmas and New Year period. The consultation was extended by a further 2 weeks to 5th April 2018 following the publication of new images of the proposed airspace designs. This led to a total of 16 weeks for consultation.</p>
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Nature of Concern	Proposed Solution or Redesign	Summary of Discussion
Reduce airspace	<ul style="list-style-type: none"> - Remove the BZN 'long' procedures. - Only increase airspace to the East. - Remove the easterly extension of CTR 1. - Reduce the southerly extension of CTR 1. - Reduce the current BZN airspace. - Reclassify current BZN airspace as a MATZ (Class G). 	<p>Following a review of the consultation responses, it has been decided that RAF Brize Norton will consider the non-containment of the Long Procedures. This will result in the modification or removal of CTA 1 and 2 from the proposed airspace design. This proposal is currently being analysed to see if it is acceptable to the MAA.</p> <p>However, CTR 1 is required to safely contain aircraft conducting approaches using the RAF Brize Norton Short Procedures. The extension of the airspace to the south is required to give sufficient space for radar vectoring and for radius of turn for aircraft positioning for the 'short' final approach.</p>
Process	<ul style="list-style-type: none"> - Correct the errors in the proposal and resubmit. - Resubmit the proposal under CAP 1616. 	<p>The CAA was kept apprised of the documentation and the corrections made via the RAF Brize Norton website. The project has met the criteria to remain under the CAP 725 process.</p>
Testing	<ul style="list-style-type: none"> - BZN should undertake a study to confirm that they are able to receive radio calls from anticipated call points. 	<p>RAF Brize Norton will investigate this issue to determine if radio coverage is a problem; however RAF Brize Norton ATC has stated that they are unaware of any issues at present.</p>
Update Procedures	<ul style="list-style-type: none"> - Change RAF procedures in line with civilian Standard Operating Procedures (SOP). 	<p>This suggestion was considered to be outside the scope of this consultation as it is a matter of UK Government Policy.</p>

Nature of Concern	Proposed Solution or Redesign	Summary of Discussion
Pay for delegated airspace	<ul style="list-style-type: none"> - CAS airspace should be charged per nm³ and BZN should pay for the airspace requested. 	This suggestion was considered to be outside of the scope of this consultation as it would be appropriate to instigate this change UK-wide and therefore would be a matter for the CAA to address.

A4 The Consulted BZN CAS Design Proposal

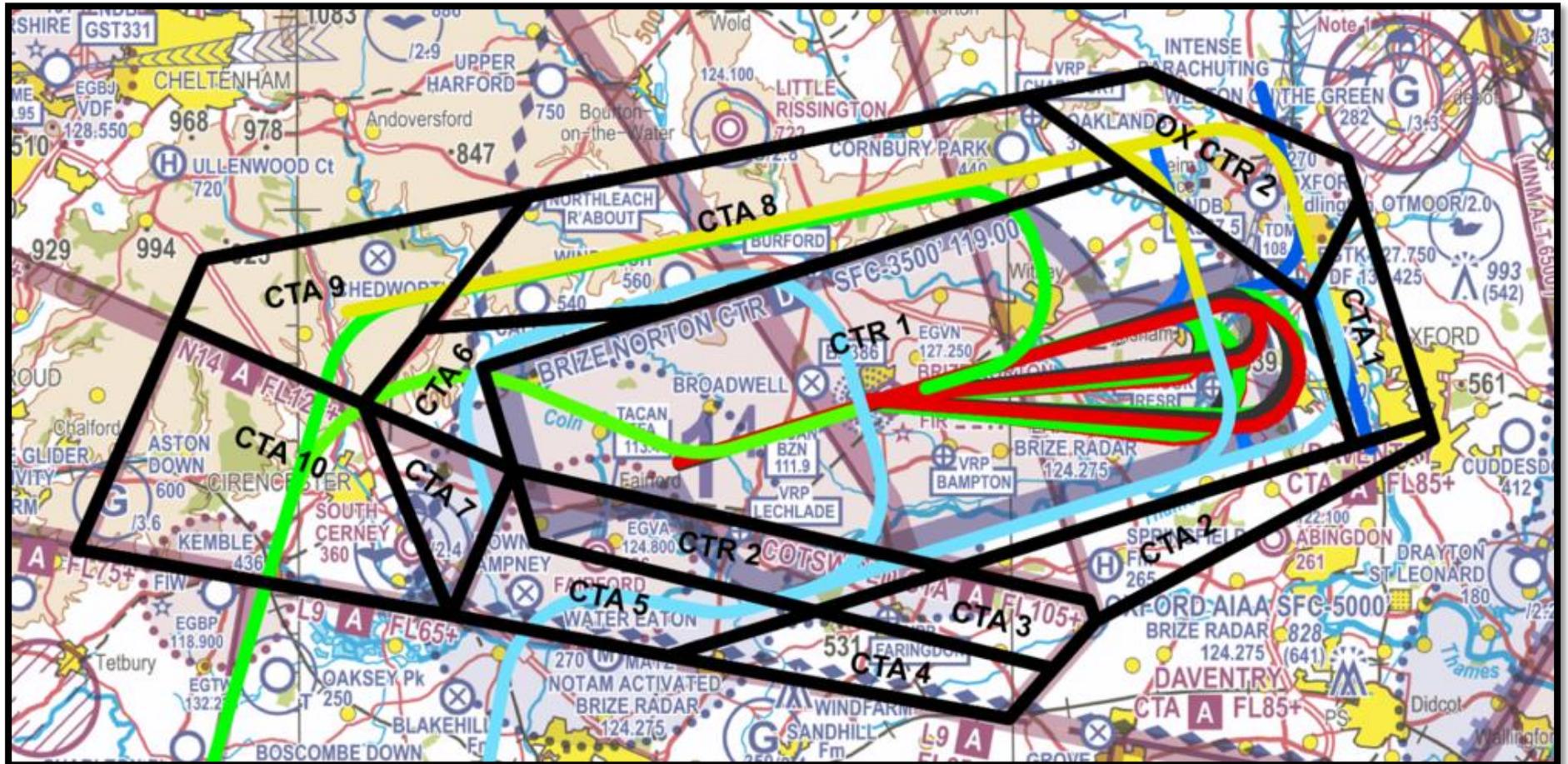


Figure 6 - Consulted CAS Design Concept