CAA Decision Log

Title of Airspace Change Proposal (ACP)	Enabling Remotely Piloted Air System Operations at RAF Fairford - HALE
Airspace Change Proposal Reference	ACP-2021-078
Change Sponsor	Ministry of Defence (MoD)
AIS Submission Target Date	Submission Date: 16 February 2024 for AIRAC 05/2024
CAA Decision Target Date	16 February 2024

Instructions

In providing a response to each question and/or status, the following colour coding should be used:

COMPLIANT/NOT APPLICABLE

NOT COMPLIANT/ACTION REQUIRED

ISSUE/CONCERN TO HIGHLIGHT

Executive Summary

The original intent of this ACP was to establish suitable airspace structures in the vicinity of Royal Air Force (RAF) Fairford to enable the operation of the United States (US) Air Force's High Altitude Long Endurance (HALE) and Medium Altitude Long Endurance (MALE) Remotely Piloted Aircraft (RPA) from the unit. The US RPAs do not have a CAA-approved Detect and Avoid (DAA) capability to operate beyond visual line of sight (BVLOS) in UK airspace. Therefore, suitable airspace structures are necessary to enable the transit of US RPAs through the UK airspace before reaching the desired operational location in accordance with an Operational Agreement between the CAA and MoD (which doesn't form part of this ACP).

However, due to complexity and increased impacts of operating the US MALE RPA in the UK, the ACP was split at Stage 2 and is now only concerned with the US HALE RPA operations. A process to achieve this, while remaining in-process of CAP1616 v4, was agreed and completed after the stage 2 Gateway sign-off.

The proposal developed and evolved during the ACP process, in response to stakeholder feedback, and now consists of a proposal to introduce 4 Danger Area (DA) structures:

- **EDG218 A** SFC to FL75;
- **EDG218 B** FL50 to FL240;
- **EDG218 C** FL160 to FL500; and
- **EDG218 D** FL200 to FL500.

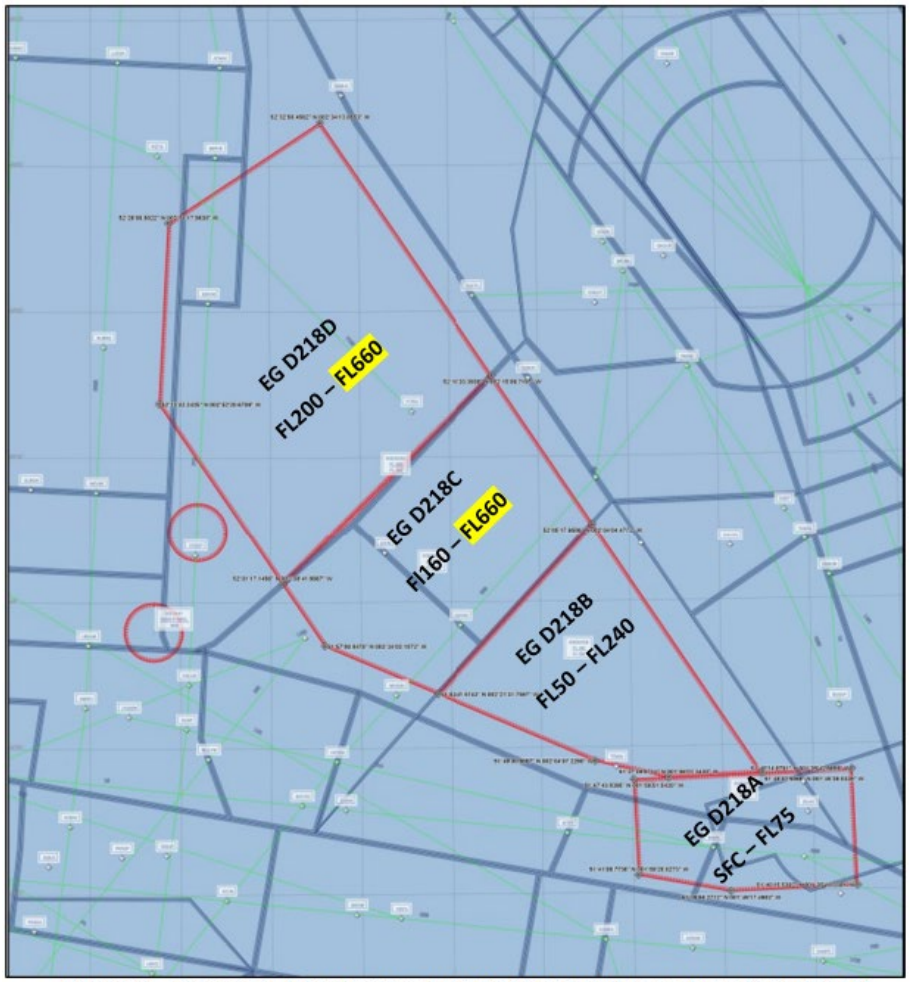

Figure 3 – Proposed Amendment of EGD218 C & D (Upper Altitude to FL660)

The DAs will need to be activated by NOTAM to enable the operation of US HALE RPA and its transit into operational airspace. In addition, the sponsor seeks dispensation from the SARG Special Use Airspace (SUA) Buffer Policy to enable operation of US HALE RPA in airspace structures.

<u>Technical Amendment</u>: Following a request by the CAA to the sponsor for clarification in relation to onwards operations, the sponsor was asked to consider a technical amendment to the airspace design. That amendment sees the upper level of the DA complex (segment C and D) rise to FL660 rather than FL500 as stated in the final submission.

A number of Letters of Agreement (LoAs) associated with the proposal are at a mature stage of development but remain to be finalised. The sponsor has also committed to the provision of a Danger Area Crossing Service (DACS) and Danger Area Activity Information Service (DAAIS) to facilitate access to the DAs for other airspace users and provide relevant information on the status of the DAs.

The recommendation of the assessment team is that the proposal is approved for notification of the 4 DAs; however, approval for activation of the DAs should be conditional upon the sponsor satisfying the recommended draft conditions stipulated in this Decision Log.

In addition, the assessment team recommend the request for dispensation from the SARG SUA Buffer Policy be approved in full.

Implementation of the proposed DAs is planned to be completed through AIRAC 05/2024, which has an AIS submission deadline of 16 February 2024 and becomes effective 16 May 2024.

PART A – Airspace Change Process – GATEWAYS		
A.1	**Airspace Change Portal**	
A.1.1	ACP-2021-078 Airspace Change Proposal Portal Link (caa.co.uk)	
A.2	**CAA SharePoint site**	
A.2.1	Enabling RPAS Operations from RAF Fairford - HALE (sharepoint.com)	
A.3	**Stage 1 DEFINE Gateway**	25/03/2022
A.3.1	20220311-ACP-2021-078 RPAS Ops RAF Fairford Stage 1 Gateway Recommendation (1).docx	
A.4	**Stage 2 DEVELOP AND ASSESS Gateway**	29/07/2022
A.4.1	20220608-ACP-2021-078 RPAS Ops at RAF Fairford Stage 2 Gateway Recommendation.docx	
A.5	**Stage 3 CONSULT Gateway**	12/10/2023

A.5.1	20230915-ACP-2021-078 RPAS Ops from RAF Fairford HALE Stage 3 Gateway Recommendation.docx
A.6	**Chronology**
A.6.1	The sponsor has progressed well through the various stages of the regulatory process and has been proactive and receptive to all feedback and guidance from the CAA and key stakeholders (primarily NATS). The sponsor has passed through all Gateways at the first attempt with only minor actions and recommendations. They have displayed a strong understanding of the process requirements. **17 November 2021** – SoN v1 uploaded to SPO and ACP initiated. **7 December 2021** – Assessment Meeting (AM) held at via Microsoft Teams. **21 December 2021** – AM Minutes and initial timeline agreed and published to ACP Portal. **10 January 2022** – Timeline amended; all stages delayed. **11 March 2022** – Stage 1 Define documents submitted by Sponsor. **28 March 2022** – Stage 1 Define Gateway approved to progress. **14 July 2022** – Document submission for Stage 2 Develop and Assess Gateway. **04 August 2022** – ACP approved to progress through Stage 2 Develop and Assess Gateway. **11 August 2022** – Timeline amended; delayed Stage 3 from August to September 2023. **8 November 2022** – ACP split into 2 separate ACPs; ACP-2021-078 HALE and 2022-083 MALE, letter uploaded to Portal. **28 November 2022** – Timeline amended; delayed Stage 3 to Jun 2023 following ACP split decision. **06 March 2023** – Timeline amended; delayed Stage 3 from June 2023 to September 2023. **14 September 2023** – Stage 3 documents submitted by Sponsor. **29 September 2023** – Stage 3 Gateway held and follow up actions required. **10 October 2023** – Stage 3 Version 2 documents submitted by Sponsor addressing actions. **11 October 2023** - ACP was approved to progress through this Gateway and for the formal consultation to proceed. **11 October 2023** – Formal Consultation opened. **21 November 2023** – Formal Consultation closed.

	5 December 2023 – Step 3D Categorisation of Consultation Responses submitted by Sponsor. **7 December 2023** – Step 3D Categorisation completed. **08 December 2023** – Stage 4 formal submission documents received for Stage 5 Decide. **15 December 2023** – Formal submission document check complete. Assessment period commenced. ***Note**: This ACP started with 2 elements - HALE and MALE. However, due to the complexities involved in the MALE domain, the decision was made to split the ACP in November 2022. Therefore, this ACP (ACP-2021-078) is only concerned with the HALE operations from RAF Fairford. The MALE operations will be considered in ACP-2022-083 which is currently PAUSED while resources are completing the HALE ACP.*	
A.7	**Are there any additional process requirements of the Civil Aviation Authority (Air Navigation) Directions 2023 (the "Air Navigation Directions") and/or the Air Navigation Guidance 2017 which apply to this airspace change, and have they been complied with?**	**No**
A.7.1	No	
PART B – Airspace Change Process – STAGE 5		
B.1	**Was a Public Evidence Session required for this proposal?**	**No**
B.1.1	This ACP is a Level M2 and, as such, no public evidence session was required.	
B.2	**Were any requests made for this decision to be called-in by the Secretary of State?**	**No**
B.2.1	No.	
B.3	**Does the Secretary of State call-in criteria apply to this proposal?**	**N/A**
B.3.1	This ACP is sponsored by the MoD and, as such, is not in scope for call-in by the Secretary of State as per Direction 9(9)(a) of the Air Navigation Directions.	
B.4	**Has the Secretary of State decided to call-in this proposal?** NOTE: if 'Yes' the content of this log concerns the recommendations linked to the 'minded-to' decision that has been presented to the Secretary of State.	**N/A**

B.4.1	This airspace change proposal is sponsored by the MoD and, as such, is not in scope for call-in by the Secretary of State.		
B.5	**Approval Status for Subject Matter Expert (SME) Regulatory Assessments** NOTE: this captures RAG status only – full details contained within each of assessment (hyperlinks inserted below)		
ATM Safety Review ATM Safety Review Acceptance Letter	**RECOMMEND**	Environmental	**ISSUE/CONCERN TO HIGHLIGHT**
Economic Assessment & Statement	**RECOMMEND**	IFP	**NOT APPLICABLE** (due to design not containing IFPs)
Engagement / Consultation	**RECOMMEND**	Operational	**RECOMMEND**
B.5.1	Is there any other information outside of the regulatory assessments above which should be brought to the attention of the decision maker (e.g. outstanding Letters of Agreement)?		
B.6	**Other Relevant Documents (title and hyperlinks to be inserted)**		
20231208-ACP-2021-078 ANNEX E FFD BZN HALE Operations (DRAFT).docx	20231208-ACP-2021-078 DRAFT LETTER OF AGREEMENT - SWN PWK 78 USAFE A3.docx	20231208-ACP-2021-078 Swanwick MAMC-USAFE LOA Draft V1.1.docx	Email from MoD regarding strategic importance of ACP
20240205-ACP-2021-078 RPAS Ops from RAF Fairford Technical Amendment.pdf	Draft AIP ENR5.1 Entry ACP-2021-078.docx	ACP-2021-078 Fairford RPAS Operations Aerodata v3.1.xlsm	
B.7	**Has the relevant legal and policy framework to the airspace change process been taken into account, including:** **the Air Navigation Directions;** **the Airspace Modernisation Strategy (AMS);** **section 70 of the Transport Act 2000;**		**Yes**

	the Air Navigation Guidance 2017 (ANG 2017); and **CAP 1616 and associated publications?**	
B.8	**CAA consideration of whether the proposal is in accordance with the Airspace Modernisation Strategy (Air Navigation Directions, direction 5(1)).** *NOTE: the left column captures RAG status only and the right column captures the rationale – full details will be contained within the SME Regulatory Assessments. Reference should be made to the AMS characteristics. For more information on the AMS strategic objectives, see Airspace Modernisation Strategy 2023-2040 Part 1: Strategic Objectives and Enablers (CAP 1711).*	
Safety	The AMS safety strategic objective states that: "Airspace modernisation should maintain and, where possible, improve the UK's high levels of aviation safety." The purpose of the proposal is to introduce appropriate airspace structures that will enable the safe BVLOS operation of the US Air Force HALE RPA from RAF Fairford, through segregation of these activities using DAs. The submitted proposal was up to FL500. The CAA's policy as stated in CAP 722 (section 2.1.3) is that UAS intended for BVLOS operations require either: ▪ a technical capability which has been accepted as being at least equivalent to the ability of a pilot of a manned aircraft to 'see and avoid' potential conflictions. This is referred to as a Detect and Avoid (DAA) capability; or ▪ an operational mitigation, which reduces the likelihood of encountering another aircraft to an acceptable level, which may be achieved either using airspace segregation, or another suitable method of ensuring such segregation. Therefore, by only having the four DAs up to FL500, the US HALE RPA would be unable to route outside of those DAs as there is no segregated airspace solution in place. The Operational Arrangement associated with the proposed operations is being developed between the CAA and MoD is not in a mature state at the time of this decision. Following a request by the CAA to the sponsor for clarification in relation to onwards operations, the sponsor was asked to consider a technical amendment to the airspace design. That amendment sees the upper level of the DA complex (segment C and D) rise to FL660 rather than FL500 as stated in the submitted proposal, secured by way of a recommended condition on the approval of this ACP. The proposal includes a dispensation from the SARG SUA Safety Buffer Policy while maintaining safety levels.	

	As a result, segregation of these activities is considered appropriate, proportionate and in accordance with CAA policy. Through the implementation of the new design to FL660, the proposal is considered to maintain a high standard of safety in the provision of air traffic services.
Integration of diverse airspace users	The AMS integration strategic objective states that: "airspace modernisation should wherever possible satisfy the requirements of operators and owners of all classes of aircraft, including the accommodation of existing users (such as commercial, General Aviation, military, taking into account interests of national security) and new or rapidly developing users (such as remotely piloted aircraft systems, advanced air mobility, spacecraft, high-altitude platform systems)." The AMS recognises that the military has requirements to all types of airspace, to secure the UK's borders and operate within the confines of segregated DAs. RPAs will want to make use of lower levels, both inside and outside controlled airspace, with an increasing number looking to use higher levels for longer-distance, BVLOS operations. The AMS also identifies that there will be an ongoing requirement to provide areas of restriction in the airspace for safety reasons when certain activities are underway, such as military or emergency services operations and training. The proposal seeks to implement 4 DAs to act as segregation for US HALE RPA operations from RAF Fairford. The airspace is proportionate has been developed in line with the AMS by ensuring it is appropriate in terms of volume, duration and time of day and where possible the sponsor aims to reduce the impacts through dispensation from the SARG SUA Safety Buffer Policy and provision of a DACS and DAAIS.
Simplification of airspace system	The AMS simplification strategic objective states that: "airspace modernisation should wherever possible, secure the most efficient use of airspace and the expeditious flow of traffic, accommodating new demand and improving system resilience to the benefit of airspace users." The sponsor has proposed the least complex airspace design to satisfy the objectives of the airspace change and comply with CAP 722 guidance and policy for BVLOS operations. By doing so the proposed DAs have a detrimental impact on other airspace users which results in aircraft having to reroute around the DAs. However, these impacts have been minimised through the volume of airspace required, time of activation and duration of activation where possible. Dispensation from the SARG SUA Safety Buffer Policy also reduces the size and complexity of the structure.
Environmental sustainability	The AMS environmental sustainability strategic objective states that: "environmental sustainability will be an overarching principle applied through all airspace modernisation activities. Airspace modernisation should deliver the Government's key environmental objectives with respect to air

	navigation as set out in the Air Navigation Guidance." The ANG 2017 sets out the Government's environmental objectives with respect to air navigation. These environmental objectives are 'designed to minimise the environmental impact of aviation within the context of supporting a strong and sustainable aviation sector'. The objectives are, to: ▪ limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise; ▪ ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions; and ▪ minimise local air quality emissions and in particular ensure that the UK complies with its international obligations on air quality. For Level M2 ACPs, the sponsor is only required to assess carbon dioxide (CO_2) emissions associated with the consequential changes on civil aviation patterns (CAP1616 v4 paragraph B12). The Net Present Value of carbon dioxide equivalent emissions of the proposal for the 10-year forecast period (2024 – 2034) for the worst-case scenario is calculated as - £2,339,003. This is a net cost which must be considered against the second key environmental objective of the ANG 2017: 'to ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions.' The AMS recognises that the military has requirements to all types of airspace, to secure the UK's borders and operate within the confines of segregated DAs. In this case, the security requirement needs to be assessed against the overarching AMS environmental sustainability strategic objective stated above in respect of the Government's key environmental objectives.
B.9	**CAA consideration of factors material to our decision whether to approve the change (section 70, Transport Act 2000).** NOTE: the left column captures RAG status only and the right column captures a summary of the rationale – full details will be contained within the SME Regulatory Assessments. Reference should be made to the Section 70 characteristics.
Maintain a high standard of safety in the provision of air traffic services section 70(1)(a)	The four DAs have been shown to be sized efficiently to contain both proposed activities up to FL500, with the designs amended in response to stakeholder feedback to minimise their impact on other airspace users. A condition is recommended securing a change to the design that sees the upper level of the DA complex (segment C and D) rise to FL660 rather than FL500 as stated in the submitted proposal. With this change in place, segregation of the activities is considered appropriate, proportionate and in accordance with CAA policy, and is considered to maintain a high standard of

	safety in the provision of air traffic services. The CAA notes that operation of the US HALE RPA requires segregation from other airspace users and, as such, any arrangements for the provision of a DACS must recognise this requirement. Therefore, at this stage, requests to cross active DAs, within which the US HALE RPA is being operated, are not to be approved and operating procedures must reflect this position.
Secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic section 70(2)(a)	Working in conjunction with NATS, the sponsor confirms that the proposed airspace structures will have some impact on Commercial Air Transport in adjacent airspace. The impact to other airspace users would be minimised through operational procedures that limit the activation period of the airspace structures, the establishment or amendment of LoAs, and through the provision of a DACS and DAAIS. Analysis of the traffic density of General Aviation in the vicinity, that may be impacted by the proposed airspace, has shown the traffic levels to be negligible and, therefore, the consequential impact is considered to be negligible.
Satisfy requirements of operators and owners of all classes of aircraft section 70(2)(b)	The sponsor identified the potential impacts on other airspace users which included no impact to aircraft below 7000ft and some potential rerouting of aircraft above 7000ft. The sponsor has responded appropriately to stakeholder feedback that indicated a likely impact to operations. In particular, the requirements of the local gliding, parachuting and model aircraft communities were taken into consideration. This feedback was used to influence the design of the proposed structures to minimise their impact through activation timings and to initiate the development of appropriate LoAs with the impacted communities.
Take account of the interests of any other person (other than an operator or owner of an aircraft) in relation to the use of any particular airspace or the use of airspace generally section 70(2)(c)	The sponsor identified minimal impact to non-aviation stakeholders. There were some impacts to ANSPs identified which includes the requirement for local management procedures to be in place. The sponsor has taken account of feedback in proposing mitigations to minimise the impact of the airspace design on stakeholders. New LoAs, revisions to existing LoAs and ATM procedures have been agreed. The sponsor has made efforts to minimise impacts on local military and civil airspace users that include provision of a DACS, minimisation of activation periods and deactivation as soon as practicable. Notification procedures will enable all airspace users to be aware of the status of the proposed airspace. NOTAMs will be promulgated as early as possible to assist in flight planning.
Take into account the Secretary of State's guidance relating to spaceflight activities section 70(2)(d)	N/A – this ACP is not related to spaceflight activities.

Take into account the Secretary of State's guidance on environmental objectives section 70(2)(d)	The CAA is required to take into account the Air Navigation Guidance 2017. In the Air Navigation Guidance 2017, the Government has set environmental objectives with respect to air navigation. These environmental objectives are 'designed to minimise the environmental impact of aviation within the context of supporting a strong and sustainable aviation sector. "The objectives are, in support of sustainable development, to: ▪ limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise; ▪ ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions; and ▪ minimise local air quality emissions and in particular ensure that the UK complies with its international obligations on air quality." For Level M2 ACPs, the sponsor is only required to assess CO_2 emissions associated with the consequential changes on civil aviation patterns (CAP1616 v4 paragraph B12).[1] A quantitative assessment of CO_2 emissions was undertaken by NATS Analytics. This included calculation of route length, fuel burn and carbon dioxide equivalent emissions on a per impacted flight per hour basis (for summer and winter periods), and a calculation of the annual minimum and maximum environmental impacts. The environmental assessment and the representation of the assessment in stakeholder engagement materials has been appropriate in terms of scale and proportionality based on the requirements for a Level M2 ACP.[2] Traffic sampling confirmed that no impacts are expected below 7,000 feet as a consequence of the proposed final design option. This conclusion has been confirmed through stakeholder engagement. While impacts to civil traffic patterns below 7,000 feet are evaluated as being highly unlikely, the sponsor has incorporated impact mitigation measures including, NOTAMs when proposed airspace

[1] The CAA is directed not to take into account any environmental impacts resulting from the use of military aircraft or military operations (including civil aircraft carrying out military function under contract) (Air Navigation Directions, direction 4(5)). However, consequential environmental impacts from other airspace users (i.e., civil aviation) that are a result of the proposed change must be assessed in accordance with Level 2 requirements. For Level 2 ACPs, where anticipated changes are in the airspace at or above 7,000 feet, the impact of CO_2 emissions is prioritised over noise, in accordance with the Government's altitude-based priorities in the Air Navigation Guidance 2017.

[2] NATS Analytics confirmed that the subsequent change to the upper limit of segments C and D from FL500 to FL660 did not impact the findings of the assessment, but that this did not take account of future 'new entrant' civilian traffic which may operate from FL500 to FL660. Based on current use patterns and that the number of 'new entrant traffic' is likely to be comparatively small with limited relative impact on fuel burn and CO_2 emissions, the environmental impact assessment is considered to remain relevant.

	would be active, activation during periods of low traffic density, and the utilisation of a DACS. The flights modelled were used to represent a typical 3-hour long activation segment of the DA. Based on a maximum of 9 hours of activation per week, this was scaled up to represent a maximum annual impact of 468 activations. Based on a minimum of 2 activations per week, this equates to a minimum of 1,560 flights impacted per year, and for the maximum of 3 activations per week, an estimated maximum of 2,340 flights impacted per year (based on 2023 traffic data). According to the calculations, the estimated increase in cumulative annual fuel cost in a worst-case scenario equates to an average of ~ £178 in fuel cost per impacted flight. This amounts to an increase in fuel costs for civil aviation of £4.63m over the 10-year forecast period (2024-2033). Using the Defra TAG Greenhouse Gas Workbook, the Net Present Value of carbon dioxide equivalent emissions of the proposal for the 10-year forecast period (2024 – 2034) for the worst-case scenario is calculated as - £2,339,003. The negative value reflects a net cost, i.e., an increase in CO2e emissions.
Facilitate the integrated operation of air traffic services provided by or on behalf of the armed forces of the Crown and other air traffic services section 70(2)(e)	The sponsor has provided mature draft copies of LoAs that define the cooperative ATM procedures that will be used to enable the integrated operation of US HALE RPAs. This includes a LoA between NATS and 78 Sqn RAF (U) Swanwick that will define the notification, coordination and communication procedures, including “lost-link” communication failure. Defence Airspace and Air Traffic Management (DAATM) have provided their continued engagement and support of this ACP, stemming from senior direction and endorsement of US Air Force RPA operations from Fairford. The original requirement has the highest endorsement at Secretary of State for Defence level, and was delegated to SPO Global Issues.
Take account of the interests of national security section 70(2)(f)	This ACP has been developed to introduce the appropriate airspace structures required to enable the operation of US HALE RPAs from RAF Fairford and in UK airspace. The requirement is part of support to NATO’s Agile Combat Employment Concept and is part of a major infrastructure investment on airbases in the UK. The MoD have written to the CAA to explain that this airspace change is both strategically and operationally vital to HMG. It will enable operations which demonstrate and strengthen the UK’s strategic bilateral relationship with US, and with NATO. The MoD have confirmed the requirement for this ACP to enable key strategic operational activity and the original requirement has the endorsement at Secretary of State for Defence level. The DAs will be managed by the Military Airspace Management Cell. RAF Brize Norton ATC and 78 Sqn RAF (U) Swanwick have active roles in the provision of a DACS that will limit impacts on other

	users and ensure the activities in support of national security are not impacted.	
Take account of any international obligations notified to the CAA by the Secretary of State section 70(2)(g)	N/A – no such international obligations have been notified to the CAA under section 70(2)(g) of Transport Act 2000.	
B.10	**Are there any other associated publications relevant to the proposal and, if so, have the requirements of those publications been met?** NOTE: associated publications include Airspace Policy Statements listed here.	**Yes**
B.10.1	The sponsor has requested dispensation from the SARG Special Use Airspace - Safety Buffer Policy. The sponsor has demonstrated that the operation of the US HALE RPA is safe and that suitable measures highlighted in the dispensation are acceptable to the impact stakeholders. CAP 722 applies to this ACP. The CAA's policy as stated in CAP 722 (section 2.1.3) is that RPA intended for BVLOS operations require either: ▪ a technical capability which has been accepted as being at least equivalent to the ability of a pilot of a manned aircraft to 'see and avoid' potential conflictions. This is referred to as a Detect and Avoid (DAA) capability; or ▪ an operational mitigation, which reduces the likelihood of encountering another aircraft to an acceptable level, which may be achieved either using airspace segregation, or another suitable method of ensuring such segregation.	
B.11	**Conclusions in respect of requirement to ensure that the amount of controlled airspace is the minimum required to maintain a high standard of air safety and, subject to overriding national security or defence requirements, that the needs of all airspace users is reflected on an equitable basis.** NOTE: this section only applies if the CAA is classifying or amending the classification of UK airspace.	
B.11.1	Not applicable – background airspace classification remains unchanged by the proposal.	
PART C – Stage 5 Recommendation		
C.1	**Taking the above information into account, what is your recommendation to the decision-maker for this proposal?**	

C.1.1	This ACP is sponsored by the MoD and seeks to establish a segmented DA to facilitate BVLOS US HALE RPA to transit from Royal Air Force Fairford to FL660. The proposed permanent DA complex has been designed to allow US HALE RPAs to arrive and depart the aerodrome and climb to FL660 before transiting to their operational location. As presently proposed, the DA complex comprises four volumes of airspace as follows: ▪ RAF Fairford from surface to FL75 (segment A); ▪ FL50 – FL240 (segment B); ▪ FL160 – FL660 (segment C); and ▪ FL200 – FL660 (segment D). This ACP has evolved over time to focus on US HALE RPA operations only with the original requirement to enable US MALE RPA operations at RAF Fairford being dealt with in ACP-2022-083. The proposed airspace is expected to be activated 2-3 times per week for up to 3 hours per activation. The 3-hour window is intended to accommodate arrivals and departures but also to ensure that the airspace is active for a sufficient time to allow for emergency or contingency scenarios. Activation will be by NOTAM at least 24 hours prior to operations. A DACS is to be provided. The proposed hours of activation will be between 1 hour after sunset and 1 hour prior to sunrise. The CAA has scaled the proposal as a Level M2 ACP (under CAP1616 v4) on the basis that the sponsor has demonstrated that there will be minimal impact on civil aviation traffic patterns below 7,000 ft. The proposal includes a dispensation from the SARG SUA Safety Buffer Policy while maintaining safety levels. The four DAs have been shown to be sized efficiently to contain both proposed activities up to FL500, with the designs amended in response to stakeholder feedback to minimise their impact on other airspace users. A condition is recommended securing a change to the design that sees the upper level of the DA complex (segment C and D) rise to FL660 rather than FL500 as stated in the submitted proposal. With this change in place, segregation of these activities is considered appropriate, proportionate and in accordance with CAA policy, and is considered to maintain a high standard of safety in the provision of air traffic services. The sponsor conducted a consultation, aimed primarily at aviation stakeholders but also including representatives of the wider local community and some national non-aviation organisations, over a sufficient timeframe of 6 weeks from 11 October 2023 to 21 November 2023. This reduced timeframe accords with the accepted scaling of the process set out in CAP 1616 v4. The sponsor demonstrated a willingness to be influenced by feedback, making it clear at consultation launch that feedback would help to shape the final proposal. Although the sponsor did not revise the airspace design in response to consultation feedback and had already proposed mitigations within the consultation material that they are progressing, the sponsor did work with stakeholders to agree procedures for the management of the proposed airspace and to put in place new LoAs. As a result, it is concluded that effective and meaningful consultation has been achieved.

	The ACP is considered to be in accordance with the AMS. The AMS recognises that the military has requirements to all types of airspace, to secure the UK's borders and operate within the confines of segregated DAs. The AMS identifies that there will be an ongoing requirement to provide areas of restriction in the airspace for safety reasons when certain activities are underway, such as military or emergency services operations and training. The sponsor has proposed the least complex airspace design to satisfy the objectives of the airspace change and comply with CAP 722 guidance and policy for BVLOS operations. The airspace is proportionate has been developed in line with the AMS by ensuring it is appropriate in terms of volume, duration and time of day and where possible the sponsor aims to reduce the impacts through dispensation from the SARG SUA Safety Buffer Policy and provision of a DACS and DAAIS. The MoD has provided assurance that the structures will only be activated when RAF Brize Norton ATC and 78 Sqn RAF (U) Swanwick are available to provide a DACS, further minimising the potential impact of the structures on other airspace users. Working in conjunction with NATS, the sponsor confirms that the proposed airspace structures will have some impact on Commercial Air Transport in adjacent airspace. The impact to other airspace users would be minimised through operational procedures that limit the activation period of the airspace structures, the establishment or amendment of LoAs, and through the provision of a DACS and DAAIS. For Level M2 ACPs, the sponsor is only required to assess carbon dioxide (CO_2) emissions associated with the consequential changes on civil aviation patterns (CAP1616 v4 paragraph B12). Based on the sponsor's quantitative assessment, the estimated increase in cumulative annual fuel cost in a worst-case scenario equates to an average of ~ £178 in fuel cost per impacted flight. This amounts to an increase in fuel costs for civil aviation of £4.63m over the 10-year forecast period (2024-2033). Using the Defra TAG Greenhouse Gas Workbook, the Net Present Value of carbon dioxide equivalent emissions of the proposal for the 10-year forecast period (2024 – 2034) for the worst-case scenario is calculated as - £2,339,003. It is noted that the sponsor has sought to minimise impacts associated with the proposal while still maintaining military capability. This has included changing the dimensions of the DA through the options appraisal process and restricting operations to night-time periods. Dispensation from the SARG SUA Safety Buffer Policy also reduces the size and complexity of the structure. The sponsor has also proposed further mitigation through provision of a DACS and has proposed a reduced activation window of 20:00 - 05:30 UTC for day-to-day operations to avoid peak traffic periods.[3] However, the sponsor intends to retain the original activation window to allow for operational flexibility in the event of an unforeseen urgent defence requirement. This is expected to be a rare occurrence but cannot be accurately estimated at this time. Consequently, the change in fuel burn and CO_2 emissions associated with this proposal has not been provided. It is considered that the proposal minimises the environmental impact of non-participating aircraft as much as possible while still permitting military activity to support NATO's Agile Combat Employment concept and in particular, US Air Force operations at RAF Fairford. Minimising the environmental impact of the proposed operations is achieved by utilising the minimum viable volume of airspace, limiting the activation window to times of lower traffic frequency, limiting the frequency of activation to 2-3

[3] The sponsor has stated that an activation window of up to 3 hours is required to provide flexibility in case the planned departure or arrival time is impacted by adverse weather or minor maintenance delays. In normal operations, the airspace is only expected to be in use for 45-55 minutes per activation.

	times per week, and limiting the duration of activation to no more than 3 hours. The proposed provision of a DACS and dispensation from the SARG SUA Safety Buffer Policy should further limit this impact. This ACP has been developed to introduce the appropriate airspace structures required to enable the operation of US HALE RPAs from RAF Fairford and in UK airspace. The requirement is part of support to NATO's Agile Combat Employment Concept and is part of a major infrastructure investment on airbases in the UK. The MoD have written to the CAA to explain that this airspace change is both strategically and operationally vital to HMG. It will enable operations which demonstrate and strengthen the UK's strategic bilateral relationship with US, and with NATO. The MoD have confirmed the requirement for this ACP to enable key strategic operational activity. The original requirement has the highest endorsement at Secretary of State for Defence level. **Overall Recommendation:** In order to approve this ACP, the following recommendations are considered in addition to the draft conditions set out above: **Recommendation 1** It is recommended that a condition is placed on the approval of this ACP such that the airspace may not be activated until suitable airspace arrangements are approved by the CAA to facilitate entry and exit routes into and out of the DAs contained within this ACP. **Recommendation 2** It is recommended that the application for dispensation from the Safety Buffer Policy, as described in the document 20231208-ACP-2021-078 Enabling Remotely Piloted Aircraft Operations from RAF Fairford - HALE Stage 4 - Final Submission, is approved in full. **Recommendation 3** It is recommended that this airspace change application should be approved for notification-only at this stage. A further approval to activate the notified airspace structures by NOTAM should be conditional upon the sponsor providing evidence that the recommended draft conditions are met and all relevant evidence is submitted and assessed by CAA Airspace Regulation. In order to achieve approval to activate the airspace, a minimum of 30 days is required to assess if the conditions placed on the ACP have been fully met. **Engagement and Consultation** **Recommendation for after implementation (if approved)** It is recommended that regional user group forums are used to promulgate information on the airspace change, to inform RAF Brize Norton airspace users about the change.	
C.2	**Are there any Recommendations and/or Conditions for the change sponsor to address prior to implementation (if approved)?**	**Yes**

C.2.1	The following 8 conditions are taken directly from the assessment documents, and all relate to completion of the LoAs associated with this airspace change and the arrangements for flight outside of the DAs: **Operational / Technical** **Recommended draft condition 1** It is recommended that a condition is placed on the approval of this ACP such that the airspace may not be activated until suitable airspace arrangements are approved by the CAA to facilitate entry and exit routes into and out of the DAs contained within this ACP. **Recommended draft condition 2** It is recommended that a condition is placed on the approval of this ACP such that the airspace may not be activated until all LoAs have been completed and signed copies provided to CAA Airspace Regulation and NERL are in receipt of approval from SARG before utilising agreed procedures. **Recommended draft condition 3** It is recommended that a condition is placed on the approval of this ACP such that the airspace access arrangements for priority emergency aircraft, aircraft with an emergency and aircraft acting in support of an emergency and more detail with regards any lost-link procedures are detailed in all LoAs. **Recommended draft condition 4** It is recommended that a condition is placed on the approval of this ACP such that the sponsor is advised that operation of the US HALE RPA requires segregation from other airspace users and, as such, any arrangements for the provision of a DACS must recognise this requirement. Therefore, at this stage, requests to cross active DAs, within which the US HALE RPA is being operated, are not to be approved and operating procedures and LoAs must reflect this position. **Engagement & Consultation** **Recommended draft condition 1** It is recommended that a condition is placed on the approval of this ACP that procedures to address where RAF Brize Norton station-based aircraft could hold when the airspace is active and access to the Daventry and Lichfield Radar corridors for departing/arriving traffic are included within finalised LoA/ATM Procedures. **Recommended draft condition 2** It is recommended that a condition is placed on the approval of this ACP that the sponsor must finalise all LoAs. A copy of the final versions must be provided to the CAA along with evidence of the agreement of all parties (either through signatures on the document or alternative information that confirms acceptance by all parties).

	Recommended draft condition 3 It is recommended that a condition is placed on the approval of this ACP that all Air Traffic Management Procedures must be finalised. A copy of the final versions must be provided to the CAA along with evidence of the agreement of all parties (either through signatures on the document or alternative information that confirms acceptance by all parties).	
C.3	**Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (PIR) (if approved)?**	**Yes**
C.3.1	If the ACP is approved for implementation and activation, it is recommended that the sponsor is provided with a copy of the Stage 7 PIR Data Request Form to use as a guide to the data that will be required to inform the PIR. It should also be emphasised that the following will be of particular interest and should be included within the Sponsor's PIR submission: ▪ Separate record of activation data for each DA, including publication details of NOTAM, time of activation, duration and intended activity. ▪ Record of occurrences of any airspace activation period that is subsequently unused, including duration of activation prior to cancellation and reasons for cancellation, i.e. weather, air system unserviceability, etc. ▪ Requests for DACS, supported and unsupported, with reasoning if unsupported. ▪ Separate detailed records of all inadvertent excursions from each DA. ▪ Separate detailed records of all unauthorised incursions of each DA. ▪ Noting the approval for dispensation from the SARG SUA Safety Buffer Policy, a report will be required to indicate compliance with the dispensation criteria, to include detailed records of all deviations from the dispensation to the Safety Buffer Policy. ▪ The CAA required the sponsor to note that requests to cross active DAs, within which the US HALE RPA would be operating, were not to be approved and that operating procedures were required to reflect this position. A report will be required to indicate whether this restriction remains valid, or the operating procedures require amendment. The change sponsor is required to collate related stakeholder observations (enquiry/complaint data) and present it to the CAA. Any location/area from where more than 10 individuals have made enquiries/complaints must be plotted on separate maps displaying a representative sample of: ▪ aircraft track data plots; and ▪ traffic density plots.	

	The plots should include a typical days-worth of movements from the last month of each standard calendar quarter (March, June, September, December) from each of the years directly preceding and following implementation of the airspace change proposal.	
C.4	**Are any other consents and approvals needed in order to permit the intended operation (title and hyperlinks to be inserted)?**	
Recommendation As detailed in the Stage 5 Operational Assessment, at para 2.17, it is recommended that the application for dispensation from the SARG SUA Safety Buffer Policy, as described in the document 20231208-ACP-2021-078 Enabling Remotely Piloted Aircraft Operations from RAF Fairford - HALE Stage 4 - Final Submission, is approved in full.		
C.5	**Are there any other comments/observations for the decision maker?**	**No**
C.5.1	This CAP is being assessed under CAP1616 v4 due to being in Stage 5 (Decide) when CAP 1616 v5 was published.	

PART D – Draft Regulatory Decision – Comment (for Level 1 Airspace Change Proposal's only)		
D.1	**Was a Draft Regulatory Decision published for this proposal?**	**No**
D.1.1	This ACP is a Level M2 and, as such, no public evidence session was required.	
D.2	**Was any feedback received in relation to the Draft Regulatory Decision?**	**N/A**
D.2.1	N/A	
D.3	**Has the Draft Regulatory Decision been amended in light of feedback received?**	**N/A**
D.3.1	N/A	
PART E – Final Regulatory Decision – Comment/Approval		

Technical Regulator / Account Manager	[redacted]	[redacted]	29 Jan 2024

Manager Airspace Regulation comments and regulatory decision:

This ACP has been progressed as a level 2 airspace change due to the potential timings of activation and the type of activity that is proposed to be conducted in the areas, where the driver for the change is to support the operation of United States of America Military Remotely Piloted Aircraft. This ACP however does identify environmental disbenefits associated with its design due to the consequential rerouting of commercial air traffic. Significantly however the UK MoD has confirmed that this proposal is in direct support of the interests of UK National Security. Furthermore, it is noted that despite the environmental disbenefit this proposal does align with the Airspace Modernisation Strategy (AMS). When balanced alongside the alignment of this proposal with the AMS and the requirement from the perspective of UK National Security interests. I approve this ACP subject to the conditions and recommendations proposed above. In addition to those conditions, I would add two further conditions to ensure the structures are removed as soon as practicable:

1. This ACP is to enable Remotely Piloted Aircraft that do not have a Detect and Avoid capability, therefore when a Detect and Avoid capability is available this structure should be removed as soon as practicable. This consideration should form part of the routine oversight activities.
2. The Danger Area hours of operations will be limited to those described within the ACP, where the AIP should reflect the structure may only be activated after sunset and prior to sunrise. Activation outside of this arrangement would be subject to CAA approval.

Manager Airspace Regulation	[redacted]	[redacted]	16 Feb 2024