

ACP-2021-078 Enabling Remotely Piloted Aircraft Operations from RAF Fairford - HALE

EGD218 Modification Request

Introduction

This document requests a modification to the EGD218 complex to mitigate impacts identified following the implementation of Airspace Change Proposal (ACP)-2021-078, "Enabling Remotely Piloted Aircraft Operations from RAF Fairford - HALE."

Background

On 16 February 2024, the EGD218 complex received approval for notification, contingent upon satisfying specific conditions for use. These conditions were subsequently met, enabling the first two activations on 22 and 24 August 2024. Following the Civil Aviation Authority (CAA) approval of ACP-2021-078, but prior to initial activation, Birmingham Airport raised concerns regarding potential impacts stemming from EGD218. A series of meetings were convened to assess these impacts and explore potential mitigation strategies. Consequently, on 6 August 2024, the CAA imposed supplementary conditions on the approval of ACP-2021-078, mandating the Sponsor to conduct an early Post-Implementation Review (PIR). This PIR specifically focused on the impact on Birmingham Airport operations during the first two planned activations of 22 and 24 August 2024.

Results of Post Implementation Review

The Sponsor submitted a PIR report¹ on 1 Oct 2024 analysing the impacts of the EGD218 complex with specific focus on impacts on Birmingham Airport operations. The report included data on air traffic delays, resource allocation, feedback from airport operators, and track mile analysis. Evidence showed five Birmingham Airport arrivals were impacted during each activation. These impacts resulted in an increase of 20-145 NM of additional track mileage and 1- 21 minutes of additional flight time per impacted flight.

PIR engagement response from Birmingham Airport noted that only EGD218C impacted their operations and detailed two mitigation solutions. The first was to raise the floor of EGD218C from FL160 to FL180. The Sponsor's analysis determined that raising the floor of EGD218C to FL180 would not ensure departing High Altitude Long Endureance (HALE) Remotely Piloted Aircraft (RPA) could reliably remain within the danger area and in compliance with the 2 NM internal safety buffer without a modification of EGD218A and/or EGD218B. The second solution was to permit underflying EGD218C below the current floor of FL160. The Sponsor had no objections to this solution; however, NATS raised concerns regarding adjacent airspace delegated to Cardiff. Specifically, if the Cotswold FUA was not restricted when Cardiff controlled the delegated airspace, Swanwick ATCOs (S23) would be required to coordinate to descend aircraft below EGD218C. If Cardiff declined due to conflicting traffic, S23 would be forced to hold Birmingham arrivals until descent was possible. NATS advised that this would increase workload and operational risk.

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¹ 1 October 2024 PIR Report

Activities Since Post Implementation Review

In the period since the PIR report, there have been no further activations and, consequently, no additional impacts.

NATS has coordinated with Cardiff and Birmingham on interim procedures that would permit underflying of EGD218C until a permanent solution is agreed.

The Sponsor has continued engagement with NATS and developed a solution that is expected to eliminate the impacts to Birmingham Airport arrivals detailed in the 1 October 2024 PIR report. This solution proposes raising the ceiling of EGD218A from FL075 to FL095, which would, in turn, allow the floor of EGD218C to be raised to FL180.

Current EGD218 Complex Design and Rationale

The design of the EGD218 complex was selected to ensure HALE RPA could safely and efficiently transition to and from RAF Fairford to their operating altitude of FL500+ while also minimising impacts on civil traffic.

EGD218A

EGD218A extends from the surface to FL075. Early concepts for EGD218A included ceilings of FL095 and FL150. Through engagement with NATS, the Sponsor determined that these upper limit altitudes would have unacceptable impacts on civil traffic while lowering the ceiling to FL075 would mitigate these impacts. Based on this feedback, the Sponsor resubmitted a new design in Stage 3. One of the notable changes in the new and final design was the FL075 ceiling of EGD218A.

EGD218B

EGD218B was designed for HALE RPA to transit between EGD218A at or below FL070 and EGD218C at or above FL160 on arrival and departure. The lateral dimensions preclude an orbiting climb of a HALE RPA while maintaining the required 2 NM internal safety buffer.

EGD218C

EGD218C was designed to be used in conjunction with EGD218D for climb and descent between FL500+ and FL200. Lowering the upper limit of EGD218A had the follow-on effect of requiring a lower floor for EGD218C to ensure that HALE RPA remain within the Danger Area on their departure climb.

EGD218D

EGD218D was designed to be used in conjunction with EGD218C for climb and descent between FL500+ and FL200.

Additional information on why this design was selected can be found in the Stage 4B Submission².

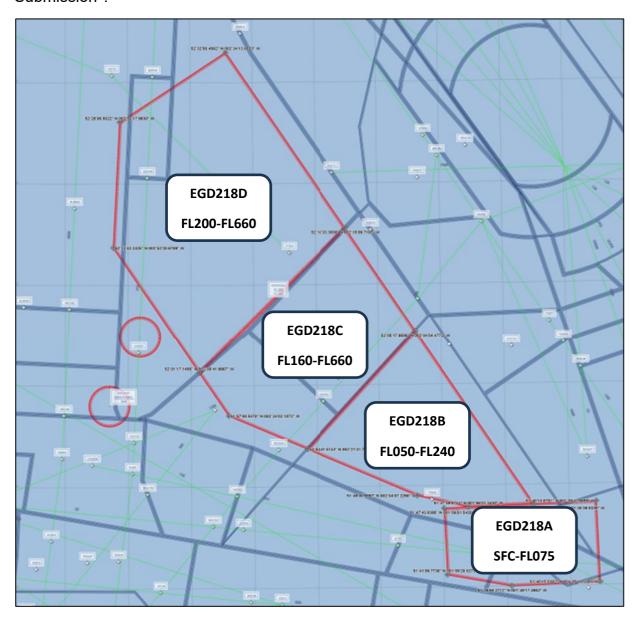


Figure 1 Current EGD218 Complex

² Stage 4B Submission, page 18-21

Details of the Proposed Modification

The lateral dimensions of the EGD218 complex will remain unchanged. The proposed modification involves raising the floor of EGD218C from FL160 to FL180 and raising the ceiling of EGD218A from FL075 to FL095.

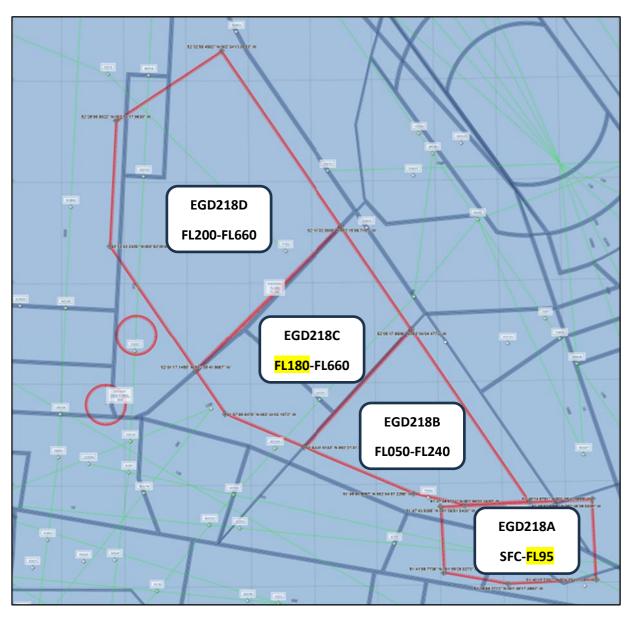


Figure 2 Proposed Change to EGD 218 Complex

Draft AIP Entry

| Identification and Name | | Upper Limit | |
|---|--|--|--|
| Lateral Limits | | Lower Limit | Remarks |
| EGD218A 514814.6781N 514015.5302N 513958.2712N 514109.7736N 514743.8395N 514814.6781N | 0013542.6655W 0013518.3381W 0014917.4903W 0015928.0273W 0015951.5420W 0013542.6655W | Upper limit: FL95 Lower limit: SFC | AMC - Manageable. Activity: Unmanned Aircraft System Beyond Visual Line Of Sight with an Indicated Airspeed (IAS) of 150 KTS or less (BVLOS less than 150 KTS) Service: DACS: Brize Radar on 124.275 MHz when open; at other times Swanwick Mil via London Information on 124.750 MHz. DAAIS: London Information on 124.750 MHz. Contact: Booking: Military Airspace Management Cell – Managed Airspace, Tel: 01489-612495. Danger Area Authority: HQ Air. |
| EGD218B 520517.9586N 514802.5866N 514749.0714N 514900.9897N 515341.5143N 520517.9586N | 0020404.4772W 0014539.0339W 0015601.3430W 0020407.2290W 0022131.7597W 0020404.4772W | Upper limit: FL240 Lower limit: FL50 | Hours: Activated by NOTAM. AMC - Manageable. Activity: Unmanned Aircraft System Beyond Visual Line Of Sight with an Indicated Airspeed (IAS) of 150 KTS or less (BVLOS less than 150 KTS) Service: DACS: Below FL160 Brize Radar on 124.275 MHz when open. At/above FL160 Swanwick Mil via London Information on 124.750 MHz. DAAIS: London Information on 124.750 MHz. Contact: Booking: Military Airspace Management Cell – Managed Airspace, Tel: 01489-612495. Danger Area Authority: HQ Air. Hours: Activated by NOTAM. |
| EGD218C 521533.3938N 520517.9586N 515341.5143N 515700.8470N 520117.1456N 521533.3938N | 0021509.7197W 0020404.4772W 0022131.7597W 0023402.1072W 0023841.6667W 0021509.7197W | Upper limit: FL660 Lower limit: FL180 | AMC - Manageable. Activity: Unmanned Aircraft System Beyond Visual Line Of Sight with an Indicated Airspeed (IAS) of 150 KTS or less (BVLOS less than 150 KTS) Service: DACS: Swanwick Mil via London Information on 124.750 MHz. DAAIS: London Information on 124.750 MHz. Contact: Booking: Military Airspace Management Cell – Managed Airspace, Tel: 01489-612495. Danger Area Authority: HQ Air. Hours: Activated by NOTAM. |
| EGD218D 523258.4562N 521533.3938N 520117.1456N 521342.2425N 522606.8022N 523258.4562N | 0023413.8553W 0021509.7197W 0023841.6667W 0025220.6709W 0025117.9630W 0023413.8553W | Upper limit: FL660 Lower limit: FL200 | AMC - Manageable. Activity: Unmanned Aircraft System Beyond Visual Line Of Sight with an Indicated Airspeed (IAS) of 150 KTS or less (BVLOS less than 150 KTS) Service: DACS: Swanwick Mil via London Information on 124.750 MHz. DAAIS: London Information on 124.750 MHz. Contact: Booking: Military Airspace Management Cell – Managed Airspace, Tel: 01489-612495. Danger Area Authority: HQ Air. Hours: Activated by NOTAM |

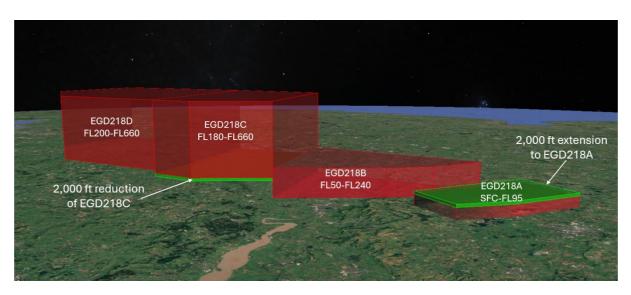


Figure 3 Proposed Change to EGD 218 Complex

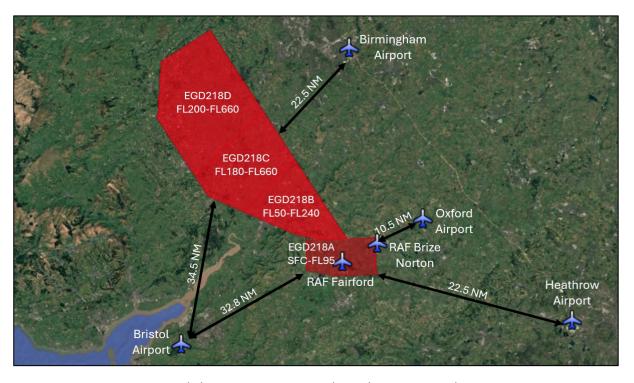


Figure 4 Proposed Change to EGD 218 Complex and Proximity to Adjacent Airports

How the Proposed Modification will Mitigate Impacts to Birmingham Airport

Raising the floor of EGD218C to FL180 will mitigate the impacts to Birmingham Airport by allowing Birmingham Airport arrivals to underfly EGD218C without transiting through airspace delegated to Cardiff. This is Birmingham Airport's preferred solution, as detailed in their 26 September 2024 letter to the Sponsor³.

³ <u>1 October PIR Report, pages 7-8</u>

Potential for Unintended Impacts of the Proposed Modification

Raising the floor of EGD218C is not expected to introduce additional impacts, as that volume of airspace is being reduced. While raising the ceiling of EGD218A from FL075 to FL095 has the potential for unintended impacts, the Sponsor has taken steps to assess and understand these potential impacts.

Engagement Summary

Engagement feedback from NATS during ACP-2021-078 initially prompted the Sponsor to reduce the upper limit of EGD218A to FL75. Following the impacts identified in the PIR, the Sponsor engaged with NATS regarding potential mitigations. When an upper limit of FL95 for EGD218A was revisited, NATS advised that this extended upper limit was no longer expected to cause the impacts initially considered.

Following this feedback from NATS, the Sponsor undertook broad engagement to identify any potential impacts arising from the proposed change. Fifty-one stakeholders were contacted via email on 9 May 2025, with a reminder email sent on 2 June 2025 to non-respondents. Both emails included an engagement document summarising the proposed change and its rationale. Stakeholders contacted included all listed contacts of the National Air Traffic Management Advisory Committee (NATMAC), Birmingham Airport, Brize Norton Airport, London Oxford Airport, and Bristol Airport. Additional engagement was conducted with Gloucestershire Airport and Kemble Airport on 11 July 2025.

The only respondent to identify a potential impact was RAF Brize Norton. The Sponsor is confident that these impacts can be mitigated through schedule deconfliction and pre-established holding procedures for US Military RPA.

Airspace Utilisation

There is no proposed change in airspace utilisation. The EGD218 complex is to be activated up to 2-3 times per week for up to 3 hours per activation. The hours of activation will be between 1 hour after sunset and 1 hour prior to sunrise. The Sponsor additionally has agreed to restrict activation to no earlier than 20:00 UTC and no later than 05:30 UTC for normal operations. Any activations outside of this window are expected to be very rare and will be coordinated as early as possible.

Conclusion

The proposed modifications to the EGD218 complex, specifically raising the floor of EGD218C to FL180 and the ceiling of EGD218A to FL095, are intended to mitigate the impacts on Birmingham Airport operations identified in the Post-Implementation Review of ACP-2021-078. Stakeholder engagement indicates the changes are expected to resolve these impacts while maintaining safe and efficient operations. The Sponsor respectfully requests the CAA's approval of this airspace modification request with a target to implement in AIRAC 03/2026.