

CAA Operational Assessment

Title of airspace change proposal	E-7 Wedgetail Operating Areas
Change sponsor	MOD
Project reference	ACP-2020-24
Account Manager	[REDACTED]
Case study commencement date	22 Jan 25
Case study report as at	17 Feb 25
<p><i>Instructions</i></p> <p>In providing a response for each question, please ensure that the 'status' column is completed using the following options:</p> <ul style="list-style-type: none"> • YES • NO • PARTIALLY • N/A <p>To aid the SARG Lead it may be useful that each question is also highlighted accordingly to illustrate what is:</p> <p>resolved YES not resolved PARTIALLY not compliant NO</p>	

Executive Summary

This proposal from the MOD is to enable airborne surveillance missions in the UK by E-7 Wedgetail aircraft. The aircraft, about to enter service with the RAF, will replace the capability previously provided by the E-3D. Whilst the UK no longer operates E-3 aircraft, variants are still used by NATO forces, and the operating areas established for these flights remain in place. The E-3 operating areas have been used for many years – this proposal introduces new operating areas for E-7 sorties in similar areas, with the same operating procedures employed through airspace sharing agreements between the MOD and NATS.



The E-7 requires racetrack orbit areas (with approximately 100NM legs), whereas the E-3s require circular areas (nominally 15NM radius). As such, 21 new areas have been developed within the Scottish UIR and London UIR through engagement with NATS. The locations have been chosen to best support Defence tasks, principally routine training activities and exercises, whilst minimising the impact on the ATS Network. The E-7s would operate between FL270 and FL350 under non-deviating status, under the control of 78 Sqn (Swanwick Military) or a UK Air Surveillance and Control Systems unit. Neither the existing E-3 areas or proposed new E-7 areas are considered as airspace structures – more that they are pre-defined areas where airspace sharing arrangements apply, with integration of OAT and GAT achieved through routine coordination methods.

1.	Justification for change and options analysis (operational/technical)	Status
1.1	Is the explanation of the proposed change clear and understood?	YES
	Introduction of 21 new non-segregated high altitude operating areas for E-7 Wedgetail aircraft, all based in the same areas as the current E-3 orbit areas, and managed/operated in the same manner.	
1.2	Are the reasons for the change stated and acceptable?	YES
	The UK MOD has replaced the E-3D with the more modern E-7 AEW Mk1 Wedgetail, which introduces a step change in capability. New operating areas are required to enable effective use of the E-7 sensor suite.	
1.3	Have all appropriate alternative options been considered, including the 'do nothing' option?	YES
	Do nothing - Without designated E-7 Operating areas the MOD will be less likely to efficiently meet its mandated Defence Tasks. Do minimum - The sponsor considered whether the current E-3 orbit areas could support E-7 activities, but this was rejected. Create dedicated areas - The design and location of bespoke new operating areas has been determined through engagement with NATS.	
1.4	Is the justification for the selection of the proposed option sound and acceptable?	YES
	The design and location of bespoke new operating areas has been determined through engagement with NATS. The operating procedures have been utilised by UK and NATO E-3 aircraft for many years – the E-7 operating areas will be utilised in the same way, are non-segregated and are supported by operational procedures agreed between MOD and NATS.	

2.	Airspace description and operational arrangements	Status
2.1	Is the type of proposed airspace design clearly stated and understood?	YES
	Introduction of 21 new non-segregated high altitude operating areas for E-7 Wedgetail aircraft, all based in the same areas as the current E-3 orbit areas, and managed/operated in the same manner.	
2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?	YES
	<p>The operating areas are not airspace volumes – they are pre-determined areas for E-7 operations where standard ATC rules for separation from other aircraft will apply. It is anticipated that there will be approximately one sortie per day (Mon to Fri) utilising one or more operating areas. The duration of the flight will be approximately 10 hours, of which 2 hours may be used to transit to/from the area. Additional flights may be required in support of major National/International/NATO exercises (likely 3 to 4 exercises per year of up to 2 weeks duration), or in support of National Security tasks. E-7s will routinely be tasked to support UK/USAFE Fast Jet training in existing Special Use Airspace, which routinely occurs during daylight hours but also includes a less frequent element of night flying.</p>	
2.3	Is any interaction with adjacent domestic and international airspace structures stated and acceptable including an explanation of how connectivity is to be achieved? Has the agreement of adjacent States been secured in respect of High Seas airspace changes?	YES
	<p>The operating areas are not airspace volumes – they are pre-determined areas for E-7 operations where standard ATC rules for separation from other aircraft will apply. Their design and locations have been determined through engagement with NATS. The operating procedures have been utilised by UK and NATO E-3 aircraft for many years – the E-7 operating areas will be utilised in the same way, are non-segregated and are supported by operational procedures agreed between MOD and NATS. Transits to/from the operating areas will be through existing routine mechanisms for Operational Air Traffic.</p> <p>Whilst some operating areas extend into high seas airspace, they do not cross FIR boundaries of neighbouring states. The CAA has determined that a high seas notification letter to the ICAO EUR/NAT Regional Office is not required in this case. The project is pre-notified to Eurocontrol via ERNIP Part 1 and this proposal does not introduce airspace structures.</p>	

2.4	Is the supporting statistical evidence relevant and acceptable?	YES
	<p>To determine a baseline 'snapshot' for the use of airspace in the vicinity of the existing E-3 areas, the sponsor... <i>'purchased Automatic Dependent Surveillance-Broadcast (ADSB) historical data and ran a program for the 8-hour period 0800Z-1600Z, which represents a typical "on station" time for an E-3D. The data was filtered to include aircraft in the FL260 – FL360 bracket which allows a 1000ft buffer on the actual vertical limits. The Change Sponsor ran the programme at x10 actual speed and counted all the tracks routing through the areas.'</i></p> <p>Whilst there isn't much detail on this assessment, such as what data was included/excluded, why they chose particular dates/times etc, as a Level 3 ACP where there is little to no anticipated impact to other airspace users, this is proportionate.</p>	
2.5	Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?	YES
	See 2.4.	
2.6	Are any draft Letters of Agreement and/or Memoranda of Understanding included and, if so, do they contain the commitments to resolve ATS procedures (ATSD) and airspace management requirements?	NO
	<p>The sponsor provided a draft 'interface document' that is stated as being a letter of agreement between the MOD and NATS: <i>Interface Document No8 - PROCEDURES FOR AEW AIRCRAFT OPERATIONS WITHIN THE UK FIR/UIR IN PEACETIME</i></p> <p>In addition to incorrect references to airspace structures, CAA policies and signatories, the document does not address the air traffic management procedures between NATS and MOD organisations. Instead, it is more of a technical document about the capabilities of the aircraft that are largely irrelevant to the use of the E-3 and E-7 operating areas. It also captures details about the capability that would seem to be of more use for other military organisations that again do not relate to the use of the operating areas. Some of the details may not be suitable for publication on the ACP Portal.</p> <p>As the operating areas rely on airspace sharing arrangements and coordination between multiple ATS units, a letter of agreement between NATS and MOD is required that fully describes the air traffic management procedures for use of the operating areas. This is likely to be best achieved through use of the Eurocontrol Common Format Letter of Agreement (currently at Edition 6). The guidance and template have been created '<i>... for negotiating, establishing, and describing the conditions for coordination and transfer of aircraft and describing the specific ATS coordination procedures between ATS units of the ECAC Member States</i>'; it is already used by NATS and MOD for other similar air traffic management agreements.</p>	

	CONDITION: Before the E-7 operating areas can be used, the sponsor must develop an appropriate agreement that describes the air traffic management procedures for them.	
2.7	Should there be any other aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the new airspace structure and no suitable operating agreements or ATC Procedures can be devised, what action has the change sponsor carried out to resolve any conflicting interests?	N/A
2.8	Is the evidence that the airspace design is compliant with ICAO SARPs, airspace design & FUA regulations, and Eurocontrol guidance satisfactory?	YES
	The proposal enables shared use of controlled airspace through agreed procedures.	
2.9	Is the proposed airspace classification stated and justification for that classification acceptable?	N/A
	No change.	
2.10	Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	N/A
	No change. This proposal is about enabling access for loitering OAT flights.	
2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.)	N/A
	No change. Standard ATC rules and procedures will apply for ensuring safe separation between participating aircraft and GAT.	

2.12	Is there a commitment to allow access to all airspace users seeking a transit through controlled airspace as per the classification, or in the event of such a request being denied, a service around the affected area?	YES
	The proposal enables shared use of controlled airspace through agreed procedures.	
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	YES
	No change.	
2.14	Are any airspace user group's requirements not met?	NO
	No change.	
2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
	No change. Existing NATS/MOD procedures will be employed.	
2.16	Is the airspace design of sufficient dimensions with regard to expected aircraft navigation performance and manoeuvrability to contain horizontal and vertical flight activity (including holding patterns) and associated protected areas in both radar and non-radar environments?	YES
	The operating areas have been designed to meet the requirements of E-7 aircraft whilst minimising the impact on GAT.	

2.17	Have all safety buffer requirements (or mitigation of these) been identified and described satisfactorily (to be in accordance with the agreed parameters or show acceptable mitigation)? (Refer to buffer policy letter.)	N/A
	No change.	
2.18	Do ATC procedures ensure the maintenance of prescribed separation between traffic inside a new airspace structure and traffic within existing adjacent or other new airspace structures?	N/A
	No new airspace structures. Standard ATC rules and procedures will apply for ensuring safe separation between E-3 aircraft and other flights.	
2.19	Is the airspace structure designed to ensure that adequate and appropriate terrain clearance can be readily applied within and adjacent to the proposed airspace?	YES
	The proposed operating areas are not below FL270.	
2.20	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?	N/A
	The proposal enables shared use of controlled airspace through agreed procedures.	
2.21	Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?	N/A

3.	Supporting resources and communications, navigation and surveillance(CNS) infrastructure	Status
3.1	Is the evidence of supporting CNS infrastructure together with availability and contingency procedures complete and acceptable? The following are to be satisfied:	
	<ul style="list-style-type: none"> • Communication: Is the evidence of communications infrastructure including RT coverage together with availability and contingency procedures complete and acceptable? Has this frequency been agreed with AAA Infrastructure? 	N/A
	No change.	
	<ul style="list-style-type: none"> • Navigation: Is there sufficient accurate navigational guidance based on in-line VOR or NDB or by approved RNAV-derived sources, to contain the aircraft within the route to the published RNP value in accordance with ICAO/ Eurocontrol standards? For example, for nav aids, has coverage assessment been made, such as a DEMETER report, and if so, is it satisfactory? 	N/A
	No change.	
	<ul style="list-style-type: none"> • Surveillance: Radar provision – have radar diagrams been provided, and do they show that the ATS route/airspace structure can be supported? 	N/A
	No change.	
3.2	Where appropriate, are there any indications of the resources to be applied, or a commitment to provide them, in line with current forecast traffic growth acceptable?	N/A
	No change.	

4.	Maps/charts/diagrams	Status
4.1	<p>Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 coordinates?</p> <p>(We would expect sponsors to include clear maps and diagrams of the proposed airspace structure(s) – they do not have to accord with aeronautical cartographical standards (see airspace change guidance), rather they should be clear and unambiguous and reflect precisely the narrative descriptions of the proposals.)</p>	YES
	Aviation-style charts have been used to depict the proposed operating areas. Coordinates have been provided in an aerodata spreadsheet.	
4.2	Do the charts clearly indicate the proposed airspace change?	YES
4.3	Has the change sponsor identified AIP pages affected by the change proposal and provided a draft amendment?	YES
	The sponsor has provided an aerodata sheet describing the changes required for ENR5.3, along with a minor change to ENR1.1. Additionally, the sponsor has proposed the creation of a new chart in ENR6; this has a knock-on effect to existing charts and relates to ongoing work by the CAA to review ENR6, therefore the CAA has agreed to consider the need for a new chart in ENR6 outwith this proposal.	
4.4	Has the change sponsor completed the WGS84 spreadsheet and submitted to the CAA for approval?	YES

5.	Operational impact	Status
5.1	Is the change sponsor's analysis of the impact of the change on all airspace users, airfields and traffic levels, and evidence of mitigation of the effects of the change on any of these, complete and satisfactory? Consideration should be given to:	YES
	a) Impact on IFR General Aviation traffic, on Operational air traffic or on VFR General Aviation traffic flow in or through the area.	YES
	The operating areas have been designed to meet the requirements of E-7 aircraft whilst minimising the impact on GAT.	
	b) Impact on VFR Routes.	N/A
	c) Consequential effects on procedures and capacity, i.e. on SIDs, STARs, holds. Details of existing or planned routes and holds.	YES
	The operating areas have been designed to meet the requirements of E-7 aircraft whilst minimising the impact on GAT.	
	d) Impact on airfields and other specific activities within or adjacent to the proposed airspace.	YES
	The operating areas have been designed to meet the requirements of E-7 aircraft whilst minimising the impact on GAT.	
	e) Any flight planning restrictions and/ or route requirements.	YES
	The operating areas have been designed to meet the requirements of E-7 aircraft whilst minimising the impact on GAT.	

5.2	Does the change sponsor consultation material reflect the likely operational impact of the change?	YES
	As a Level 3 ACP, this proposal did not require consultation. Extensive engagement was carried out with NATS to ensure the orbit areas were designed to minimise the operational impact on the provision of ATS and other airspace users.	

Case study conclusions – to be completed by Airspace Regulator (Technical)	Yes/No
Has the change sponsor met the SARG airspace change proposal requirements and airspace regulatory requirements above?	YES
<p>This proposal was originally allocated as a Level M2 change. On release of CAP1616 Version 5 it was reallocated as a Level 3; this occurred during Stage 3.</p> <p>The sponsor has used the final airspace change proposal template from CAP1616f, although some minor adjustments have been made. This is proportionate and acceptable in this case.</p>	

RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS	Yes/No
Are there any Recommendations which the change sponsor should try to address either before or after implementation (if approved)? If yes, please list them below.	NO
<p><i>GUIDANCE NOTE:</i> Recommendations are something that the change sponsor should try to address either before or after implementation, if indeed the airspace change proposal is approved. They may relate to an area in which the change sponsor is reliant upon a third party to actually come to an agreement and consequently they do not carry the same ‘weight’ as a Condition.</p>	
Are there any Condition(s) which the change sponsor must fulfil either before or after implementation (if approved)? If yes, please list them below.	YES
<p><i>GUIDANCE NOTE:</i> Conditions are something that the change sponsor must fulfil either before or after implementation, if indeed the airspace change proposal is approved. If their proposal is approved, change sponsors must observe any condition(s) contained within the regulatory decision; failure to do so will usually result in the approval being revoked. Conditions should specify the consequence of failing to meet that condition, whether that be revoking the ACP or some alternative.</p> <p>CONDITION: Before the E-7 operating areas can be used, the sponsor must develop an appropriate agreement that describes the air traffic management procedures for them.</p>	

Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	NO
<p><i>GUIDANCE NOTE:</i> PIR data requirements concerns any specific data which the change sponsor <i>must</i> collate post-implementation, if indeed the airspace change proposal is approved. Please use this section to list any such requirements so that they can be captured in the regulatory decision accordingly.</p>	

General summary

The proposal for introducing 21 operating areas that support use of E-7 Wedgetail aircraft is in keeping with the existing arrangements for use of the E-3 areas that have been utilised for many years. They have been developed through engagement with NATS to minimise the impact on the ATS Network and are unlikely to impact on aircraft behaviours beyond that which can be expected under business as usual for the airspace sharing arrangements between NATS and the MOD.

Comments and observations

Nil.

Operational assessment sign-off	Name	Signature	Date
Operational assessment completed by Airspace Regulator (Technical)	[REDACTED]	[REDACTED]	17 Feb 25