

CAA Environmental Statement

Permanent Airspace Change Proposals

Title of airspace change proposal	E-7 Wedgetail
Change sponsor	Ministry of Defence
Project reference	ACP-2020-024
Account Manager	[REDACTED]
<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>	

1. Introduction

The airspace change is sponsored by the Ministry of Defence to introduce non-segregated airspace within the London and Scottish Upper Information Regions (UIR) for use by the E-7 Airbourne Early Warning (AEW) Wedgetail aircraft. The proposed airspace is in the form of 21 x E-7 Operating Areas from Flight Level (FL) 270 – 350 in Class C airspace. The airspace is required to optimise operation of the E-7 Wedgetail which is due to replace the Royal Air Force's current Airbourne Early Warning and Control platform the E-3D Mk 1 Sentry. The current E-3D flies in 15NM circular orbits contained within existing E-3 operating areas however, the E-7 Wedgetail is fitted with an advanced Multi-role Electronically Scanned Array (MESA) Radar which requires a racetrack pattern of approx. 100NM x 20NM to optimise performance which can't be accommodated in the existing E-3 operating areas.

The sponsor has located the proposed Operating Areas within or in the vicinity of the extant E-3 operating areas wherever possible and added new areas where the extant E-3 operating areas are not large enough to accommodate the 100nm racetrack pattern or are in the wrong geographical location/orientation. The proposed operating areas are non-segregated and are intended to be tactically controlled by Air Traffic Control to enable civil aircraft to transit simultaneously to any E-7 operations.

E-7 area activation will be in support of one sortie per day for a period of approximately 8 hours. During a sortie, an E-7 may use more than one area. It is assessed that UK East coast areas will be used more than those elsewhere in the UK due to training requirements and support provided to RAF and USAFE fast jet training.

Weekend activation is only likely to be for a major exercise activity or for national security requirements.

The CAA has assessed the airspace change proposal as a Level 3 change which has been progressed in accordance with CAP 1616h, 'Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals'. Level 3 ACPs are defined as changes to the notified airspace design that have the potential for a low impact to both aviation and non-aviation stakeholders.

2. Statement of Need		Yes/No
2.1	Does the statement of need include any environmental objectives, issues or opportunities to be addressed? (CAP 1616f paragraph 2.11)	No
	The statement of need does not include any environmental objectives.	

3. Current-Day Scenario		Yes/No
3.1	Has the change sponsor described the current-day scenario? (CAP 1616f paragraph 2.36)	Yes
	<p>The change sponsor has provided a detailed description of current airspace and operations. The sponsor indicates that both the extant and proposed operating areas are in Class C airspace which comprises Upper Air Routes and Free Route Airspace used by both military and civilian aircraft, with coordination and separation provided by civilian and military air traffic control. Restricted areas within the airspace have been identified including military Danger Areas (DA) and Temporary Restricted Areas (TRA) (G) specifically utilised by gliders in Scotland. The change sponsor has presented the 21 proposed areas in the Stage 4 Final Submission document (v1.0) broken down into geographical areas (for clarity) and has provided information on operating heights, co-location with extant E-3 areas (where applicable), frequency of usage and potential conflicts with other significant airspace.</p> <p>The Change Sponsor has also provided historical Automatic Dependent Surveillance-Broadcast (ADS-B) information to provide baseline traffic data for 2 of the current E-3 areas. The selected areas were UK3 (East Anglia) chosen as it is a busy air traffic environment being to the East of London and affecting traffic routing to/from Europe and descending/climbing in/out of London airports, and UK6 (North Sea) as this is</p>	

	<p>one of the busiest E-3D operating area utilised for controlling fast jet aircraft in the EGD323 Danger Areas in the North Sea. For UK3 (East Anglia) the average number of conflicting aircraft per hour was 4.1 and for UK6 (North Sea) it was 4.3. The exercise was repeated for one of the proposed new E-7 Operating Areas in the North Sea (F1) to provide a direct comparison to UK6. This indicated an average of 4.6 potentially conflicting aircraft per hour.</p> <p>This information supports the change sponsor’s rationale that further quantitative analysis of consequential impacts on other airspace users is disproportionate as ATC can tactically manage aircraft transiting the area and the E-7 is able to adjust its operation Flight Level or relocate to another Operating Area to deconflict with other aircraft if traffic density is particularly high.</p>
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4. Baseline Scenarios and Traffic Forecasts		Yes/No
4.1	Has the change sponsor developed the baseline scenarios for year 1 and year 10 by taking due consideration of known or anticipated factors that might affect it? (CAP 1616f paragraph 3.12 – 3.13)	Yes
	The sponsor has provided 10 year traffic forecast data to assess airline growth using the Eurocontrol Aviation Outlook 2050 report. This indicates that the average number of potential conflicting aircraft would increase to 5 per hour however, this is indicative only as no quantitative environmental modelling is required for Level 3 ACPs.	
4.2	Has the change sponsor provided traffic forecasts for year 1 and year 10, indicating the traffic growth on the different routes as well as types of aircraft, particularly if a change in fleet mix is anticipated over the period of the forecasts? (CAP 1616i paragraph 3.2 – 3.4)	No
	See 4.1 above.	

5. Final Airspace Design		Yes/No
5.1	Has the change sponsor described the final airspace design at year 1 and year 10 by taking into account any additional growth facilitated by the airspace change? (CAP 1616f paragraph 3.18)	No
	See 4.1 above.	

5.2	To what extent does the final airspace design achieve any mandatory, discretionary, or bespoke environmental design principles?	
	<p>The change sponsor has defined 9 design principles none of which are specifically related to environment. DP(c) 'Defined areas must be the minimum dimension to achieve task' and DP(d) 'Minimise the impact to Commercial Air Traffic flow, sector complexity and sector capacity', indirectly seek to minimise fuel burn/CO2 emissions by reducing the consequential impacts of the ACP on other airspace users.</p> <p>The change sponsor states that the final airspace design (Option 2 – create dedicated E-7 areas) utilises extant E-3 Operating Areas as far as is possible and are in non-segregated airspace, enabling civil traffic to be tactically routed in advance or allocated a transit FL that negates a climb or descent to transit through the Operating Areas when E-7 is active. They also make the case that the E-7 can climb or descend to ensure civil traffic can maintain their allocated FL through the operating area. The change sponsor has submitted a qualitative assessment that the final airspace design would result in nil/negligible additional fuel burn and nil/negligible impact on greenhouse gas emissions.</p>	
5.3	Were there any design options other than the final airspace design that might have better met the environmental design principles and/or produced better environmental impacts as assessed in the full options appraisal? If so, is the rationale for rejecting those design options and selecting the final airspace design adequately explained?	No
	<p>The sponsor presented 2 additional design options, Option 0 - Baseline/Do Nothing (operate in extant E-3 operating areas) and Option 1 - Do Minimum (operate in DA complexes and modified E-3 areas). Option 0 was rejected on the basis that it limited the operational effectiveness of the E-7 Wedgetail surveillance radar and would not therefore meet DP(c) and, Option 1 would not meet DP(d) due to an increase in the unpredictability of operating areas leading to civil air traffic encountering route deviations, resulting in additional track miles being flown and increased CO2 emissions.</p> <p>The sponsor's rationale for selecting design option 2 and reject options 0 and 1 is accepted.</p>	

6. Final Options Appraisal		Yes/No
6.1	Has the change sponsor conducted an options appraisal of the potential environmental impacts of the final airspace design against the baseline scenarios for the implementation year and across the forecast period (normally 10 years)? (CAP 1616f paragraph 3.20)	Yes
	The change sponsor conducted an options appraisal of the final airspace design (Option 1) against the baseline scenario for the	

	implementation year at Stage 2B.	
6.2	If a quantified and monetised environmental assessment has not been undertaken, has the change sponsor presented a robust rationale supported with appropriate evidence justifying that undertaking a specific metric or quantitative assessment of a proposed option would result in no environmental impact? (CAP 1616i paragraph 2.17)	Yes
	<p>The environmental metrics were assessed qualitatively with noise, air quality, tranquillity and biodiversity screened out on the basis that the proposed E-7 operating areas are at FL270-FL330. For greenhouse gas emissions the change sponsor assessed that the impact would be nil/negligible on the basis that civil traffic could be routed in advance to avoid E-7 operating areas or be allocated a transit that negated a climb or descent to route through the operating area.</p> <p>At Stage 2 the change sponsor was required to provide additional qualitative analysis of the baseline traffic in the proposed Operating Areas to support their assessment. This information was submitted as part of the Stage 4 Final Submission (v1.0) document. (See Qu.3.1 above). The additional analysis included a basic assessment across the 10-year forecast period using a generic airline growth factor derived from the Eurocontrol Aviation Outlook 2050 report.</p>	
6.3	Has the change sponsor considered the environmental impacts resulting from its direct airspace operations as well as any environmental impacts caused due to indirect consequential changes on the flight behaviour of other airspace users? (CAP 1616i paragraph 2.18)	Yes
	<p>As per CAP 1616i, 'Environmental Assessment Requirements and Guidance for Airspace Change Proposals', the Ministry of Defence need only ever assess the anticipated environmental impacts of the consequential changes on civil aviation patterns. Environmental impacts that are a direct result of military aircraft or military operations (including civil aircraft carrying out military function under contract) are not required to be considered or assessed. The consequential environmental impacts from other airspace users (i.e., civil aviation) that are a result of the airspace change proposal have been assessed in line with Level 3 requirements.</p>	

7. Noise	Yes/No
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7.1	Has the change sponsor considered and assessed the noise impacts resulting from the airspace change proposal as per the Government's environmental objectives and altitude-based priorities given in the Air Navigation Guidance 2017? (CAP 1616i paragraph 2.4)	Yes
	The Air Navigation Guidance 2017 prioritises the reduction of aircraft CO2 emissions in the airspace at or above 7,000 feet and the minimising of noise is no longer the priority. The proposed Operating Areas for the E-7 ACP are at FL270-FL330 and there is therefore no requirement for the change sponsor to assess noise impacts.	
7.2	Where a quantified and/or monetised assessment for the following noise metrics has been undertaken, does the methodology follow the requirements given in Chapter 5 of CAP 1616i? <ul style="list-style-type: none"> • LAeq and TAG • Number above • Overflight 	N/A
7.3	Has the change sponsor used operational diagrams overlaid on high-quality maps that are clearly legible and have sufficient details? (CAP 1616i paragraph 5.37)	N/A
7.4	Has the change sponsor presented additional analysis on any of the noise impacts using any additional noise metrics? (CAP 1616i paragraph 5.40)	N/A

8. Greenhouse Gas Emissions		Yes/No
8.1	Has the change sponsor considered and demonstrated how the design and operation of the airspace change proposal will impact greenhouse gas emissions? (CAP 1616i paragraph 6.1)	Yes
	The change sponsor has presented a qualitative assessment of the impact of the ACP on greenhouse gas emissions. A qualitative rather	

	<p>than quantitative assessment was accepted by the CAA on the basis of evidence provided by the change sponsor which demonstrated that impacts would be nil/negligible.</p> <p>Evidence of the frequency of GAT transiting the proposed Operational Areas were provided for the baseline scenario and for the 10 year forecast period. Automatic Dependent Surveillance-Broadcast (ADS-B) historical data was used to show a “snapshot” of civilian traffic routing through two of the extant E-3 operating areas on a busy air traffic day (date provided by NATS – 28 Jul 23). The data showed that that there would be an average of between 4.1 and 4.3 potentially conflicting aircraft per hour based on the current day scenario and an average of 5 aircraft per hour for the forecast year (10 years from implementation). However, this would represent worst-case as civil traffic could be tactically routed in advance or be allocated a transit FL that negates a climb or descent to transit through the Operational Area (non-segregated airspace) when the E-7 is active. The E-7 would also be able to adjust its operation Flight Level or relocate to another Operating Area to deconflict with other aircraft if traffic density were anticipated to be particularly high.</p> <p>On this basis the CAA accepts that the ACP is likely to result in a nil/negligible impact on greenhouse gas emissions.</p>	
8.2	Where a quantified and monetised greenhouse gas emissions assessment has been undertaken, does the methodology follow the requirements given in Chapter 6 of CAP 1616i?	N/A

9. Local Air Quality		Yes/No
9.1	Is there a possibility of pollutants breaching legal limits and target values following the implementation of the airspace change proposal (or worsening an existing breach of legal limits and target values)? (CAP 1616i paragraph 7.5)	No
	There is no possibility of pollutants breaching legal air quality limits and targets as the airspace change is above 1,000 feet.	
9.2	Where a quantified and monetised local air quality assessment has been undertaken, does the methodology follow the requirements given in Chapter 7 of CAP 1616i?	N/A

10. Tranquillity		Yes/No
10.1	Has the change sponsor considered and taken account of the impacts on tranquillity by using operational diagrams or overflight contours to identify any tranquillity receptors overflown below 7,000 feet? (CAP 1616i paragraph 8.3)	No
	This airspace change is in the range of FL270 – FL330 and therefore no overflight of tranquillity receptors below 7,000ft.	

11. Biodiversity		Yes/No
11.1	Has the change sponsor used operational diagrams or overflight contours to identify any biodiversity receptors overflown below 7,000 feet? (CAP 1616i paragraph 9.3)	No
	This airspace change is in the range of FL270 – FL330 and therefore no overflight of biodiversity receptors below 7,000ft.	
11.2	Has the change sponsor completed the habitats regulations assessment early screening criteria form and, where relevant, provided any additional assessments for habitats regulations assessment as specified by the CAA? (CAP 1616f paragraph 3.69, 4.18, 5.24)	Yes
	The change sponsor has completed the HRA Early Screening Criteria and concluded there is no requirement for secondary screening as there are no changes to air traffic patterns or number of movements below 3,000ft associated with the ACP.	
11.3	Is the airspace change proposal likely to have a significant effect - either alone or in combination with other plans or projects - on European sites? (CAP 1616i paragraph 2.9)	No
	There are no changes to air traffic patterns or number of movements below 3,000ft associated with the ACP and therefore no likelihood of significant effects on European sites either alone or in combination with other plans or projects.	

12. Linked Airspace Change Proposals		Yes/No
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12.1	Is the airspace change proposal linked in any way with another airspace change proposal? (CAP 1616i paragraph 2.20)	No
12.2	If yes, have the environmental impacts of the linked proposals been assessed on a combined basis? (CAP 1616i paragraph 2.21)	N/A

13. Secretary of State Call-in Noise Criterion		Yes/No
13.1	Has the change sponsor presented their assessment as to whether the anticipated noise impacts meet the Secretary of State's call-in criterion? (CAP 1616f paragraph 5.55) <i>The criterion, as set out in the Civil Aviation Authority (Air Navigation) Directions 2023, Section 6, paragraph (7), and also present in the Air Navigation Guidance (2017), is that the proposed airspace change could lead to a change in noise distribution resulting in a 10,000 net increase in the number of people subjected to a noise level of at least 54 dB¹ <u>as well as</u> having an identified adverse impact on health and quality of life.</i>	N/A
	There is no noise impact anticipated in relation to this proposed airspace change. See Qu.7 above.	
13.2	Should there be a request for a call-in, does the airspace change proposal, as described, meet the call-in criterion for noise impacts? (CAP 1616f paragraph 6.21)	N/A

14. Public Evidence Session		Yes/No
14.1	If a public evidence session has been held, was any new evidence on potential environmental impacts of the airspace change proposal presented by stakeholders? (CAP 1616f paragraph 6.27)	N/A

¹ LAeq 16h noise exposure.

	This is a Level 3 airspace change with no requirement for the CAA to consider holding a public evidence session.	
14.2	If so, was the new evidence reviewed and taken into account by the CAA's assessment of the environmental impacts of the airspace change proposal? (CAP 1616f paragraph 6.29)	N/A

15. Conclusion	
<ul style="list-style-type: none"> • <i>Is the airspace change proposal in accordance with the Airspace Modernisation Strategy's strategic objective on environmental sustainability?</i> • <i>Does the airspace change proposal take into account the Secretary of State's guidance on spaceflight activities and environmental objectives as given in the Transport Act 2000 section 70(2)(ca) and section 70(2)(d) respectively?</i> <p>This airspace change proposal is sponsored by the Ministry of Defence to provide Operating Areas for the E-7 Wedgetail aircraft within the London and Scottish Upper Information Regions. The airspace change is proposed at FL270 – FL330 in non-segregated airspace. The E-7 is replacing the E-3D which is due to be phased out but requires a change to the Operating Areas to optimise the radar performance of the newer aircraft. Where possible the proposed E-7 Operating Areas have been geographically located in the vicinity of the existing E-3 operating areas, but new areas are proposed where the location or orientation of the existing area is not suitable.</p> <p>The ACP has been assigned as a Level 3 which is defined as having a low impact on aviation and non-aviation stakeholders. As the airspace change is above 7,000ft there is no anticipated impact in terms of noise, local air quality, tranquillity or biodiversity. In line with the Government's altitude-based priorities the change sponsor is required to prioritise greenhouse gas emissions for airspace changes above 7,000ft. The change sponsor has provided a qualitative assessment and supporting evidence to demonstrate that the anticipated impacts on greenhouse gas emissions will be nil/negligible.</p> <p>The airspace change proposal is in accordance with the <i>Airspace Modernisation Strategy's strategic objective on environmental sustainability</i> as it meets the environmental objectives of the Air Navigation Guidance 2017. The airspace change takes account of the environmental objectives given in the Transport Act 2000 section 70(2)(d) to take account of any guidance on environmental objectives given to the CAA by the Secretary of State.</p>	

16. Recommendations/Conditions/Post Implementation Review Data Requirements		Yes/No
16.1	<p>Are there any recommendations which the change sponsor should try to address either before or after implementation (if approved)? (CAP 1616f paragraph 6.12)</p> <p><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.</i></p>	No
16.2	<p>Are there any condition(s) which the change sponsor must fulfil either before or after implementation (if approved)? (CAP 1616f paragraph 6.12)</p> <p><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.</i></p>	No
16.3	<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)? (CAP 1616f paragraph 8.9)</p> <p><i>PIR data requirements concern any specific data which the change sponsor should be instructed to collate post-implementation, if indeed the airspace change proposal is approved.</i></p>	No

Environmental Statement Sign-off	Name	Signature	Date
Environmental assessment completed by Airspace Regulator (Environment)			17/02/2025

Environmental assessment approved by Principal Airspace Regulator (Environment)	[REDACTED]	[REDACTED]	24/02/2025
Environmental assessment approved by Chief Technical Noise Advisor			
Environmental assessment approved by Manager Airspace Regulation (or alternative delegation of authority)			
Environmental assessment approved by Head Airspace, ATM & Aerodromes (or alternative delegation of authority)			
Environmental assessment approved by GD Safety and Airspace Regulation Group (or alternative delegation of authority)			