

CAA CAP 1616 Options Appraisal Assessment (Phase I Initial)

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| Title of Airspace Change Proposal: | Future Combat Airspace (Permanent) | | |
| Change Sponsor: | MoD | | |
| ACP Project Ref Number: | ACP-2020-026 | | |
| Case study commencement date: | 25/02/2022 | Case study report as at: | 11/03/2022 |

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|---|---------|---|----------|---|--------------|--|-------------|
| Account Manager: [Redacted] | [Grey] | Airspace Regulator (Engagement & Consultation): [Redacted] | [Yellow] | IFP: [Redacted] | [Orange] | OGC: [Redacted] | [Dark Blue] |
| Airspace Regulator (Technical): [Redacted] | [Green] | Airspace Regulator (Environmental): [Redacted] | [Purple] | Airspace Regulator (Economist): [Redacted] | [Light Blue] | ATM (Inspector ATS Ops): [Redacted] | [Red] |

Instructions

To aid the SARG project leader’s efficient project management, please highlight the “status” cell for each question using one of the four colours to illustrate if it is:

Resolved - GREEN
 Not Resolved – AMBER
 Not Compliant – RED
 Not Applicable - GREY

Guidance

The broad principle of economic impact analysis is **proportionality**; is the level of analysis involved proportionate to the likely impact from that ACP? There are three broad levels of economic analysis; qualitative discussion, quantified through metrics, and monetised in £ terms. The more significant the impact, the greater should be the effort by sponsors to quantify and monetise the impact.


| 1. Background – Identifying the impact of the shortlist of options (including Do Nothing (DN) / Do Minimum (DM)) | | Status |
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| 1.1 | Are the outcomes of the options' scenarios clearly outlined in the proposal? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.1 | <p>Has the change sponsor produced an Options Appraisal (Phase I - Initial) which sets out how they have moved from the Statement of Need to the airspace change design options? [E12]</p> <p>Yes, the sponsor has provided an Initial Options Appraisal (IOA) that explains how Option 1 addressed the SoN and aligns with the DPs.</p> <p><i>Note, in the Step 2A document, the sponsor presents and discusses 5 options that will not be taken forward to Step 2B because not doable and instead of explaining why they are not considered viable already at design stage, uses the DPs to eliminate them. It would have been easier if the sponsor had explained why these options were considered but soon discarded without referencing to the DPs.</i></p> | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.2 | <p>Does the list of options include a description of the change proposal?</p> <p>Yes, the sponsor provides a description of the change proposal with each option.</p> | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.3 | <p>Has the sponsor stated on what criteria the longlist of options has been assessed?</p> <p>The sponsor presents only one option – Option 1 to be considered for the proposed airspace change, hence there is no discounting criteria.</p> <p><i>Note: other options were considered but the sponsor did not make clear that they were just serving the purpose to explain their options development approach and therefore were considered as “radical options and /or alternatives not fitting the SoN.</i></p> | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.4 | <p>Where options have been discounted, does the change sponsor clearly set out why?</p> <p>Yes, in the Step 2 document the sponsor explains why options have been discounted and why they thought there was no need to progress them to the DPE assessment but because their justification refers to the DPs, it is misleading and should be addressed in a better manner.</p> | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |


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| 1.1.5 | Has the change sponsor indicated their preferred option in the Options Appraisal (Phase I - Initial)? [E8] | Yes, the preferred and only option is Option 1: Create a portion of airspace over the North Sea with overland portions in NE England and SE Scotland. | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.6 | Does the Initial Options Appraisal (Phase I - Initial) detail what evidence the change sponsor will collect, and how, to fill in any evidence gaps and how this will be used to develop the Options Appraisal (Phase II - Full)? | The sponsor does not clearly state what data is going to collect for Stage 3 but clearly identifies the areas that will require further investigation and data collection, i.e., involving NATS and / or Eurocontrol. The sponsor also mentions that to develop the TAG table will get specialised support to meet the requirements. | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1.1.7 | Does the plan for evidence gathering cover all reasonable impacts of the change? [E12] | Yes, given that most of the proposed analysis is going to be conducted at the Stage 3, the plan provided sounds reasonable at this stage. | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

| 2. Direct impact on air traffic control | | Status | | | |
|---|--|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 2.1 | Are there direct cost impacts on air traffic control / management systems? If so, please provide below details of the factors considered and the level in which this has been analysed. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.1 | <i>Examples of costs considered (please add costs that have been discussed, and any reasonable costs that the Airspace Regulator (Technical) feels have NOT been addressed)</i> | | | | |
| | | Not applicable | Qualitative | Quantified | Monetised |
| 2.1.2 | Infrastructure changes | | x | N/A | N/A |
| 2.1.3 | Deployment | | x | N/A | N/A |
| 2.1.4 | Training | | x | N/A | N/A |
| 2.1.5 | Day-to-day operational costs / workload / risks | | | | |
| 2.1.6 | Other (provide details) | | | | |
| 2.1.7 | Comments: | | | | |

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| 2.2 | Are there direct beneficial impacts on air traffic control / management systems? | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | If so, please provide details and how they have been addressed: | | | | | | | |
| 2.2.1 | <i>Examples of benefits considered</i> | Not applicable | Qualitative | Quantified | Monetised | | | |
| 2.2.2 | Reduced work-load | x | | | | | | |
| 2.2.3 | Reduced complexity / risk | x | | | | | | |
| 2.2.4 | Other (provide details) | x | | | | | | |
| 2.2.5 | Comments: N/A | | | | | | | |
| 2.3 | Where monetised, what is the net monetised impact on air traffic control (in net present value) over the project period? N/A | | | | | | | |
| 2.4 | Are the direct impacts on air traffic management analysed accurately and proportionately? Yes, the sponsor has provided a qualitative assessment of the impacts that the proposed ACP is going to have on ATM. | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| 3. Changes in air traffic movements / projections | | | | | Status | | | |
|---|--|----------------|--------------|------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 3.1 | What is the impact of the ACP on the following and has it been addressed in the ACP proposal? | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable | Qualitative | Quantified | Monetised | | | |
| 3.1.1 | Number of aircraft movements | | Not provided | | | | | |
| 3.1.2 | Type of aircraft movement | | x | | | | | |
| 3.1.3 | Distance travelled | | Not provided | | | | | |
| 3.1.4 | Area flown over / affected | | x | | | | | |

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| 3.1.5 | Other impacts | | | | |
| 3.1.6 | <p>Comments: The sponsor mentions that GA will be mainly affected by the proposed airspace change but does not identify the potential number of aircrafts that will be affected, nor how much longer the aircrafts will need to re-route. The qualitative statements provided at this stage are proportionate because the sponsor anticipates a more detailed assessment at Stage 3.</p> | | | | |
| 3.2 | <p>Has the forecasting of traffic done reasonably using best available guidance (e.g. DfT WebTAG, the Green Book, Academic sources...etc?)</p> <p>No, the sponsor has not provided a traffic forecast of the consequential impact on civil aviation operations at this stage but anticipates that this information and the assessment of the impact on GA traffic will be provided at Stage 3.</p> | | | |  |
| 3.3 | <p>What is the impact of the above changes (3.1) on the following factors below? The sponsor states the following impacts for Option 1:</p> <p><u>Noise</u>: “no or negligible change to the noise effects on the ground” as the distance between the proposed SUA and affected airports is “great enough” that standard arrival and departure profiles can still be flown. In addition, the sponsor states that there were no responses from affected airports indicating that there would be any change to traffic patterns below 7,000ft. No further evidence is provided to corroborate the sponsor’s conclusion of no impact below 7,000ft.</p> <p><u>Air Quality</u>: the sponsor states that the assessment is not required because the proposal will “not affect emissions below 1,000ft”.</p> <p><u>CO₂ emissions</u>: it is acknowledged by the sponsor that the proposal would create a portion of segregated airspace which would need to be avoided, resulting in additional track miles flown for some routes. The sponsor continues to state that a protocol prohibiting the concurrent activation of other MDAs would make “more direct” routes between England and Europe. The routes which would be impacted/benefit from this proposal is not detailed within the IOA however it is stated that further analysis will be conducted at Stage 3.</p> <p>An assessment of the impacts upon biodiversity and tranquillity is not provided by the sponsor (CAP1616 Para B12).</p> | | | | |
| | | Not applicable | Qualitative | Quantified | Monetised |
| 3.3.1 | Noise | | x | N/A | N/A |
| 3.3.2 | Fuel Burn | | x | N/A | N/A |
| 3.3.3 | CO2 Emissions | | x | N/A | N/A |

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| 3.3.4 | Operational complexities for users of airspace | x | | | |
| 3.3.5 | Number of air passengers / cargo | x | | | |
| 3.3.6 | Flight time savings / Delays | x | | | |
| 3.3.7 | Air Quality | | x | N/A | N/A |
| 3.3.8 | Tranquillity | | Not Provided | | |
| 3.4 | <p>Are the traffic forecast and the associated impacts analysed proportionately and accurately according to available guidelines (e.g. WebTAG or the Green Book?)</p> <p>The sponsor has not provided traffic forecast, but the impacts are qualitatively assessed, and this is a proportionate approach for this stage.</p> <p>The sponsor has not provided a traffic forecast. The sponsor proposes that this ACP be scaled as Level M2 as the "ACP will affect civil aviation traffic patterns at 7,000' or above". As this ACP is provisionally scaled as Level M1 an assessment against each of the environmental requirements must be provided. At this stage, the sponsor has not provided sufficient detail to scope out these assessments as per CAP1616 Para B26.</p> | | | |  |
| 3.5 | <p>What is the total monetised impact of 3.3? (Provide comments)</p> <p>N/A</p> | | | | |

| 4. Benefits of ACP | | | | | Status |
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| 4.1 | Does the ACP impact refer to the following groups and how they are impacted by the ACP? | | | | |
| | | Not applicable | Qualitative | Quantified | Monetised |
| 4.1.1 | Air Passengers | x | | | |
| 4.1.2 | Air Cargo Users | x | | | |
| 4.1.3 | General aviation users | | x | N/A | N/A |
| 4.1.4 | Airlines | x | | | |
| 4.1.5 | Airports | x | | | |
| 4.1.6 | Local communities | | x | | |

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| 4.1.7 | Wider Public / Economy | | x | | |
| 4.1.8 | <p>Comments: The sponsor argues that the proposed airspace change will not have an impact below 7,000ft providing stakeholders evidence, hence should be considered as a Level M2 ACP.</p> <p>■ The sponsor states there will be “no or negligible change” to the noise effects on the ground; however, supporting evidence to corroborate this conclusion is not provided.</p> | | | | |
| 4.2 | How are the above groups impacted by the ACP, especially (but not exclusively) looking at the following factors below: | | | | |
| 4.2.1 | Improved journey time for customers of air travel | N/A | | | |
| 4.2.2 | Increase choice of frequency and destinations from airport | N/A | | | |
| 4.2.3 | Reduced price due to additional competition because of new capacity | N/A | | | |
| 4.2.4 | Wider economic benefits | The sponsor states that the creation of segregated airspace, by adding a protocol prohibiting the activation of other MDAs, would generate more direct routes that translates into an overall greenhouse gas emission reduction. | | | |
| 4.2.5 | Other impacts | | | | |
| 4.2.6 | Comments: N/A | | | | |
| 4.3 | What is the overall monetised impacts associated with 4.1 and 4.2 the above? N/A | | | | |
| 4.4 | What are the non-monetised but quantified impacts of the above? See 4.2.4. | | | | |
| 4.5 | <p>What are the qualitative / strategic impacts described above? This ACP aims to create a permanent safe segregated portion of airspace, on the East of the UK and activated for large force exercise, with a dimension that is 90nm x 160nm and from FL85-FL660, predominantly based over the sea but with an overland portion on the shortest edge. This will be used to support UK and other air forces training.</p> | | | | |
| 4.6 | What is the overall monetised benefits-costs ratio (BCR) of the policy? Is it more than 1? N/A | | | | |
| 4.7 | <p>Have the sponsors provided reasonable justification for the proportionality of analysis above? The sponsor provides references to the ANG (2017), feedback received from the stakeholders and the geographical location of the proposed change as supporting evidence for this ACP to be considered as a Level M2.</p> | | | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |

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| 4.8 | If the BCR is less than 1, are the quantitative and qualitative strategic impacts proportional to the costs of the ACP? N/A |
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| 5. Other aspects | |
| 5.1 | Nil |

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| 6. Summary of Assessment of Economic Impacts & Conclusions | | |
| 6.1 | <p>The aim of the proposed airspace change (ACP) is to create a permanent safe segregated portion of airspace, on the East of the UK and activated for large force exercise, with a dimension that is 90nm x 160nm and from FL85-FL660, predominantly based over the sea but with an overland portion on the shortest edge. Since this is a Level M1 ACP with potential impacts on civil aviation patterns below 7,000ft the sponsor provides a qualitative description of how the proposed airspace change might have a potential impact on the civil aviation.</p> <p>In the Step 2A document, the sponsor describes the proposed change and explains the reason for a permanent segregate area, proposing only one option (i.e., Option 1: Create Special Use Airspace over the North Sea with overland portions in NE England and SE Scotland) and providing a justification for the other options five presented but eliminated options. Despite these options were presented only for the purpose of showing that sponsor had considered all the possible alternatives in the options development and why they are not considered any further in the process, i.e. not been taken forward to the DPE and Step 2B, the sponsor uses the DPs to discount them. The sponsor should have used a better narrative rather than referencing to the DPE because it is misleading and creates expectations to the reader that would want to see these options fully assessed against the DPs, when mentioning geographical/regulation and SoN constraints would have helped.</p> <p>In Step 2B the sponsor fully describes the baseline (do-nothing) showing how the preferred option performs against it. The impacts are all qualitatively described, and the sponsor postpones the full assessment of the environmental impacts to Stage 3</p> | |
| Outstanding issues? | | |
| Serial | Issue | Action required |
| 1 | Improve narrative around eliminated options | Rather than referring to the DPs, provide a narrative based on the geographical/legal constraints and SoN because these options have been included just to show that during the options development process, all alternatives have been considered but those that are not doable should be discounted before the DPE. |

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| | | Hence using the DPs as rationale for discounting these options before taking them to the DPE exercise is misleading. |
| 2 | High-level criteria | Better use of the wording that define the criteria, use objective criteria, avoid using synonymous to define two different criteria. |
| 3 | Baseline in the IOA | Suggestion to remove the paragraph that references to the current ACP when describing the impact on communities – see page 6 <i>“The use of non-segregated airspace in the area proposed by this ACP again, would be mainly over the sea with some transits to the weapons ranges in sparsely populated areas of Northumberland. These transits would be using the current Class G and LFA and would not present any additional traffic.”</i> |

| CAA Initial Options Appraisal Completed by | Name | Signature | Date |
|--|------------|------------|------------|
| Airspace Regulator (Economist) | [REDACTED] | [REDACTED] | 09/03/2022 |
| Airspace Regulator (Environment) | [REDACTED] | [REDACTED] | 09/03/2022 |