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COMBAT AIR – TRAINING AIRSPACE

CAP1616 STAGE 2b Options Appraisal

This document forms part of the Airspace Change Proposal process as defined in CAP 1616. For ease of reading the Statement of Need, Design Principles and a summary of the Options Development stage are re-iterated. The second part of the document contains the options appraisal with the initial safety assessment.

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1. Statement of Need

In SDSR 2015, the Government committed the UK to increasing the number of combat aircraft that the MOD will operate and confirmed the intention to buy 5th generation fast jets. Additionally, as its NATO ally, the US Government has committed to the continued basing of combat aircraft within the UK. Resultantly, there is a projected growth of more capable combat aircraft planned to operate within the UK. To support this Government-directed expansion in military capability, there is a requirement for a larger area of segregated airspace to accommodate training requirements and thus ensure operational capability.

2. Design Principles

Key Principles/Requirements

1. The training area will be within reach of UK/USAFE Main Operating Bases.
2. The design will provide a suitable training area.
3. The design will provide a sufficient overland portion for siting land based assets (Training Requirement).
4. Safety – apply current airspace design safety parameters e.g. buffer policy. Final solution Tolerable and ALARP (Safety).
5. Management of airspace to utilise FUA principles (Efficiency + Airspace Sharing).
6. Minimise impact upon the network where possible (Efficiency + Airspace Sharing).
7. Simplicity - utilise existing structures where possible (Efficiency, Simplicity + Safety).
8. Conformity – use standard airspace structures where possible (Simplicity + Safety).
9. Minimise impact upon any other airspace users (Given the likelihood that any impact will be over the sea and above FL100, it is assessed that there will be few other stakeholders. These will be engaged through wider consultation in Stages 2 & 3 but will not impact the design principles).

3. Options Developments Summary

A number of geographical options were examined during stage 2a. When tested against the design principles the location with the best fit, indeed the only feasible option, without a major redevelopment of UK airspace, was to expand EG D323 in the North Sea. This option achieved the essential requirements of being within reach of RAF/USAFE operating bases, providing airspace that had an overland portion, and was of sufficient size to permit meaningful training. It utilised existing airspace structures and is comparatively simple when compared against a significant redevelopment. There is an impact to the network and potentially some other airspace users, which will be mitigated by the use of Airspace Management protocols and Flexible Use of Airspace principles. Given the lack of geographical options and once military requirement has been met, other than safety, the need to minimise impact of the network has driven development. Hence rather than a series of options, there has been, through collaboration and negotiations between the MOD and NATS, a series of modifications to the design – thus the process has been highly iterative.

4. Methodology

CAP 1616 encourages the development of multiple options that can be tested against criteria in order to provide an objective rationale for an option choice. This methodology may work well for some ACPs such as airfield approaches/departures. It is less useful for airspace design work where any design is complemented by Flexible Use of Airspace principles. This in essence produces, depending upon complexity, a potentially unlimited number of scenarios and configurations. The approach taken with this ACP has been an iterative one. Building on the initial Feasibility and Options Study, the MOD working together with NATS produced an initial airspace design that has subsequently been finessed as more information became available and Airspace Management protocols agreed. The starting point was to produce a segregated airspace structure that met the Statement of Need and then mitigate the impact upon the network through the addition of new upper air routes, activation protocols and modifications to the design. This is in keeping with UK, EASA and ICAO policy for the flexible use of airspace and civil/military cooperation.

In sum,

- Identify and understand State (MOD) requirement.
- Identify location that meets needs with minimum impact on network and other airspace users.
- Design airspace and agree management protocols to minimise impact.
- Assess impact.
- Confirm that impact is acceptable compared with state requirement. This will have to be a subjective judgement as there is no methodology to make a financial cost/benefit analysis between a State Military requirement and commercial entities.

This design and associated Airspace Management has now reached a level of maturity such that some objective comparative measurement of impact can be made against a baseline. CAP 1616 allows for only one option to be appraised and this is the case in this ACP. Though it is worth reiterating, that the potential airspace configurations mean that within this one option there are several options dependent upon the agreed airspace management protocols. To facilitate the appraisal, a baseline of 'Do Nothing' is used. Whilst this clearly does not meet MOD requirements, it does allow an assessment of change from what happens now to what is likely to happen in the future with the new airspace. For this appraisal an impact of likely increase in track mileage and subsequently CO2 can be made – details will be included at stage 3. In addition, some soft, non-measurable impacts will be captured.