

CAA CAP 1616 Options Appraisal Assessment (Phase II Full)

Title of Airspace Change Proposal:	Fast Jet Areas (FJA) (Permanent)		
Change Sponsor:	Ministry of Defence (MoD)		
ACP Project Ref Number:	ACP-2020-092		
Case study commencement date:	14/11/2022	Case study report as at:	25/11/2022

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
1.1	Are the outcomes of DN/DM and DS 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 II - Full) which sets out how Initial appraisal is developed into a more detailed quantitative assessment, moving from qualitatively defined shortlist options to the selected preferred option? [E23]</p> <p>Sections 1 and 2 of the Options Appraisal sets out how the Initial Appraisal is development into a more detailed quantitative assessment.</p> <p>Besides what the Sponsor has termed Option 0, the Do Nothing option, the Options Appraisal only assesses one Option, Option 1. No other options have been considered.</p> <p>The Options Appraisal discusses the work undertaken in order to develop the Options.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.2	<p>Does each shortlist option include the impacts in comparison to the 'do nothing / do minimum' option, in particular:</p> <ul style="list-style-type: none"> -all reasonable costs and benefits quantified -all other costs and benefits described qualitatively -reasons why costs and benefits have not been quantified 	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.3	<p>Where options have been discounted, does the change sponsor clearly set out why?</p> <p>The Sponsor has provided no information as to which, if any, other options besides Options 0 and 1 were considered, and therefore does not discuss why such options were discounted. If no such options were considered, an explicit statement to this effect would be helpful. If they were considered, then clearly more discussion of the reasons for discounting each option would be useful.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
2. Impacts of the proposed airspace change		Status
2.1	Are there direct impacts on the following:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

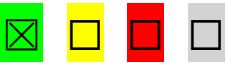
2.1.1	<i>Examples of costs considered (please add costs that have been discussed, and any reasonable costs that the Airspace Regulator (Technical) feels have NOT been addressed)</i>				
2.1.2	Airport/ANSPs	Not applicable	Qualitative	Quantified	Monetised
	- Infrastructure	X			
	- Operation	X			
	- Deployment	X			
2.1.3	- Other(s)	X			
	Commercial Airlines/General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Training	X			
	- Economic impact from increased effective capacity	X			
2.1.4	- Fuel burn			X	X
	- Other(s)	X			
2.1.5	General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Access		X		
2.1.6	Military	Not applicable	Qualitative	Quantified	Monetised
		X			
2.1.7	Wider Society, i.e., wider economic benefits, capacity resilience	Not applicable	Qualitative	Quantified	Monetised
	- Greenhouse Gas Impact			X	X
2.1.7	- Capacity/Resilience		X		
	Other (provide details)	Not applicable	Qualitative	Quantified	Monetised
	Communities: Noise	X			
	Communities: Air quality	X			

2.2  	<p>Are there direct beneficial impacts on air traffic control / management systems? Provide details.</p> <p>Paragraphs 1.9-1.10 of the Options Appraisal states that that option has been developed to minimise the impact on ATC: “The proposed dimensions of the FJA have] created a familiarity of the airspace for both the air users, Airspace Battle Managers, Air Traffic Controllers, NATS and the wider airspace community. Because of this familiarity, it will increase pilot capacity using the airspace due to having a greater awareness of the dimensions, reducing their likeliness of accidently leaving the airspace and reducing the chance of MAC ... The FJAs were deliberately constructed to be uncomplex and this proposal has the same attribute. Both airspaces are of a linear shape necessary for efficient air-to-air sorties, with the same planned base height of FL 245. The reduced complexity increases the capacity of the pilots operating in the airspace and the Fighter Controller / ATC providing a service. The uncomplexity reduces the likelihood of both a military aircraft accidently leaving the segregated airspace or of GAT entering the airspace, thereby reducing the chance of MAC. “</p> <p>There is no quantification or monetisation of this impact, if any, in the options appraisal.</p>	   
2.3	<p>Where impacts have been monetised, what is the overall value (expressed in net present value (NPV)) of the project?</p> <p>The Options Appraisal monetises the greenhouse gas impact of the proposal at £701k (central case) using WebTag. The calculations are set out in Annex B, which gives an upper limit of £1m and a lower limit of £350k. These calculations are derived from the quantification of the fuel burn estimates contained in paragraphs 3.13-3.17.</p> <p>No other quantification is included in the Options Appraisal.</p>	
2.4	<p>Has the sponsor provided an accurate and proportionate assessment of the proposed airspace change impacts?</p> <p>The assessment seems proportionate to the change proposed. The calculations seem to be accurate from the evidence set out in the Options Appraisal.</p>	   

3. Changes in air traffic movements / projections			Status
3.1	If the proposed airspace change has an impact on the following factors, have they been addressed in the proposal?		   
		Not applicable	Qualitative
3.1.1	Number of aircraft movements	X	
3.1.2	Number of air passengers / cargo	X	

3.1.3	Type of aircraft movements (i.e., fleet mix)	X			
3.1.4	Distance travelled			X	
3.1.5	Operational complexities for users of airspace		X		
3.1.6	Flight time savings / Delays	X			
3.1.7	Other impacts	X			
	Comments: The Environmental Impact Assessment in Annex A includes a quantification of some of the elements above. The distance travelled under the proposed option is modelled. However, the flight time delays are not quantified, though this would be a disadvantage from the proposed change.				
3.2	<ul style="list-style-type: none"> Has the sponsor used the most up-to-date, credible and clearly referenced source of data to develop the 10 years traffic forecast and considered the available guidelines (i.e., the Green Book and TAG models) in a proportionate and accurate manner? [B11 and E11] 			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	<ul style="list-style-type: none"> The sponsor does not appear to anticipate any change in traffic numbers from its proposed change. Has the sponsor explained the methodology adopted to reach its input and analysis results? [B11 and E11] 			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3.3	Has the sponsor developed an assessment of the following environmental aspects?				
		Not applicable	Qualitative	Quantified	Monetised
3.3.1	Noise	x			
3.3.2	Operational diagrams	x			
3.3.3	Overflight	x			
3.3.4	CO2 emissions			x	x
3.3.5	Local air quality	x			
3.3.6	Tranquillity	x			
3.3.7	Biodiversity	x			

3.4	What is the monetised impact (i.e., Net Present Value (NPV)) of 3.3? (Provide comments) Annex B of the Options Appraisal gives the central case of the monetised impact for CO2 emissions as £701k. No other impacts are monetised. It should be clarified that this is an increase in carbon emissions, not a decrease, since the signs are ambiguous.
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4. Economic Indicators of the ACP		Status
4.1	What are the qualitative / strategic impacts described in the ACP? The Sponsor has identified qualitative impacts as follows: - Noise: none - Air quality: none - Capacity and GA Access: MoD currently minimises and will minimise impact	
4.2	What is the overall monetised and non-monetised (quantified) impact of the proposed airspace change? Annex B of the Options Appraisal gives the central case of the monetised impact for CO2 emissions as £701k. No other impacts are monetised. The impact on travel time is not quantified.	
4.3	What is the Net Present Value of the proposed options? Has the sponsor used this information to progress/discount options? Has the sponsor provided the benefits-costs ratio (BCR) of the proposed options and used it to support the choice of the preferred options? [E44] Annex B of the Options Appraisal gives the central case NPV of the monetised impact for CO2 emissions as £701k. It has not used this as a case to progress or discount options, as only one option is considered besides the do nothing case. The Sponsor has not provided a BCR of the preferred Option to support its choice, but as it only considers one option, requiring it to do so would be disproportionate.	
4.3.1	If the preferred option does not have the highest NPV or BCR, then has the sponsor justified the reasons to progress this option? [B50 and E23] Section 2 of the consultation document provides operational reasons for choosing this option, evaluating it against 11 criteria and concluding that it meets 11, while the do nothing option only meets 6.	
4.4	Have the sponsors provided reasonable justification for the proportionality of analysis above? In paragraph 3.3 of the Options Appraisal, the Sponsor proposes that since the impact on other airspace users and the environment is considered to be low, further attempts to provide quantified or monetised analysis would be disproportionate and provide little if any additional clarity for stakeholders.	

5. Other aspects

5.1	N/A
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6. Summary of the Full Options Appraisal & Conclusions

6.1	<p>In summary, the FOA considers the proposed change against the Do Nothing option. It generally provides a reasonable and proportionate description of the costs and benefits of the option and its quantifies and monetises the environmental costs. However, more detail in some areas could be helpful in assisting consultees to come to a balanced assessment of the proposed approach. In particular:</p> <ul style="list-style-type: none"> - Sponsor should provide more information on whether other options were discounted, and if so why they were discounted; - There should be some quantification of the extra time costs to other air traffic of the proposed change; - The presentation of the carbon costs of the change could be clarified; and - A reference to the reasons for choosing Option 1 rather than Option 0 should be provided.
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Outstanding issues

Serial	Issue	Action required
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CAA Full Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator (Economist)	[Redacted]	[Redacted]	05/12/2022
Airspace Regulator (Environmental)	[Redacted]	[Redacted]	05/12/2022