

CAA CAP 1616 Options Appraisal Assessment (Phase I Initial)

Title of Airspace Change Proposal:	Liverpool John Lennon Airport (MTMA Cluster)		
Change Sponsor:	Liverpool John Lennon Airport		
ACP Project Ref Number:	ACP-2015-09		
Case study commencement date:	01/09/2023	Case study report as at:	05/10/2023

Account Manager: [Redacted]	[Grey]	Airspace Regulator (Engagement & Consultation): [Redacted]	[Yellow]	IFP: [Redacted]	[Yellow]	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 options (including Do Nothing (DN) / Do Minimum (DM))		Status
1.1	Are the outcomes of the Initial Options Appraisal (IOA) (Phase I) clearly outlined in the proposal?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.1	Has the change sponsor completed an Initial Options Appraisal? [E12]	Yes, the Sponsor has produced an IOA which assesses one baseline/do nothing option, two transition options and seven long term options.
1.1.2	Does the Initial Options Appraisal include: - a comprehensive list of viable options; - a clear description of the baseline scenario; - an indication of the environmental impacts; - a high-level assessment of costs and benefit involved	<p>There is no explicit comprehensive list of viable options in the IOA. However, the IOA does include a table of contents which lists the options, and as this is an addendum rather than a full proposal, it could be disproportionate to insist on a full list of viable options.</p> <p>There is no explicit description of the baseline scenario in the IOA, other than its description as a “Do Nothing” option. There is however a description in the DPE, and as this is an addendum, it</p> <p>Section 4 of the IOA contains an assessment of the costs and benefits of each option.</p> <p>LH- Environment</p> <p><u>Baseline</u> has been updated to 2022 for the Addendum. Some additional clarification required in respect of the following:</p> <ul style="list-style-type: none"> • Source of Radar Density plots and selection of data for dep. and arr. tracks. • Local circumstances including planned development and identification of EU Protected sites. • Updates to 2019 baseline data e.g. local air quality. <p><u>Environmental impacts</u> – IOA has omissions as follows:</p> <ul style="list-style-type: none"> • Biodiversity not addressed, requires HRA. • Tranquillity not adequately addressed.

		<ul style="list-style-type: none"> Impacts assessed at high level and qualitatively only for noise and CO₂, no assessment of combined options provided at this stage. No assessment of biodiversity and inadequate assessment of tranquillity. 	
1.1.3	Has the sponsor stated on what criteria the comprehensive list of viable options has been assessed?	Section 3 of the IOA lists the criteria on which the options were assessed.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.4	Where options have been discounted as part of the IOA exercise, does the change sponsor clearly set out why?	According to the Conclusion: "The Initial Options Appraisal (Step 2B) does not discount any of the new design options progressed at Step 2Aii Design Principle Evaluation." However, in the DPE, the baseline is discounted.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
1.1.5	Has the change sponsor indicated their preferred option(s) as a result of the IOA (Phase I - Initial)? [E12]	No. According to the Conclusion: "There is not yet enough detailed quantified data for LJLA to make a statement on preferred option(s). Appropriate quantitative assessments will be carried out as part of Stage 3, and these will be monetised where possible."	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
1.1.6	Does the IOA (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)?	<p>Yes. Section 5 lists the information to be collected for Stage 3, including:</p> <p>"Appropriate quantitative assessments will be carried out as part of Stage 3, and these will be monetised where possible. These will include:</p> <ul style="list-style-type: none"> Noise modelling analysis ... Fuel/CO₂ modelling analysis <p>A cost-benefit analysis will be performed, and a preferred option (or combination of options) will be stated. Compromises and trade-offs may be necessary between airports taking part in the FASIN regional airspace change".</p>	<input checked="" type="checkbox"/> <input 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, all reasonable impacts are covered.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input 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			
	- Other(s)	X			
2.1.3	Commercial Airlines/General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Training		X		
	- Economic impact from increased effective capacity		X		
	- Fuel burn		X		
	- Other(s)	X			
2.1.4	General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Access		X		
2.1.5	Military	Not applicable	Qualitative	Quantified	Monetised
		X			
2.1.6	Wider society, i.e., wider economic benefits, capacity resilience	Not applicable	Qualitative	Quantified	Monetised
	- Communities: Noise		X		
	- Communities: Air quality		X		
	- Wider society: Greenhouse gas emissions		X		
	- Wider society: Capacity/resilience		X		

2.1.7	Other (provide details)		
	Their ANS impact assessment tables seem to be mistitled. This is probably a simple drafting error.		
2.2	Are there direct beneficial impacts on air traffic control / management systems? Provide details.  	Are there direct beneficial impacts on air traffic control / management systems? Provide details. No, though the ANSP costs are often not estimated in the proposal, for reasons of proportionality.    	
2.3	Where impacts have been monetised, what is the overall value (expressed in net present value (NPV)) of the project? The Sponsor has not monetised any impacts at this stage.		
2.4	Has the sponsor provided an accurate and proportionate assessment of the proposed airspace change impacts? Yes, the assessment of the proposed changes seem to meet the minimum standards required at Stage 2. The Sponsor promises more detailed assessments for Stage 3.	   	

3. Changes in air traffic movements and 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	Quantified/ Monetised
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:			

<p>3.2</p> <p></p>	<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] <p>The IOA contains no quantitative assessments. Traffic forecasts are contained in the DPE (p.14)</p> <ul style="list-style-type: none"> Has the sponsor explained the methodology adopted to reach its input and analysis results? [B11 and E11] <p>The quantitative analysis is promised for Stage 3.</p> <p>LH – Environment</p> <ul style="list-style-type: none"> Query raised regarding traffic forecast. Sponsor has not justified minimum noise modelling category proposed. 	   			
<p>3.3</p>	<p>Has the sponsor developed an assessment of the following environmental aspects?</p>				   
		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		
3.3.5	Local air quality		x		
3.3.6	Tranquillity		x		
3.3.7	Biodiversity		x		
3.4	<p>What is the monetised impact (i.e., Net Present Value (NPV)) of 3.3? (Provide comments)</p> <p>There is no quantitative analysis in the IOA, which is promised for Stage 3.</p>				

<p>4. Economic Indicators of the ACP</p>	
4.1	<p>What are the qualitative / strategic impacts described in the ACP?</p> <p>Impacts on communities, airlines and general aviation and ANSPs are described in section 4 of the IOA.</p>

4.2	What is the overall monetised and non-monetised (quantified) impact of the proposed airspace change? The Sponsor has not undertaken any quantitative assessment or identified a single option, so has estimated no impact of the proposed airspace change.
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] The Sponsor has not undertaken any quantitative assessment or identified a single option, so has estimated no NPV impact of the proposed airspace change.
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] N/A
4.4	Have the sponsors provided reasonable justification for the proportionality of analysis above? The sponsors' argument is that it is disproportionate to undertake quantitative analysis as the options are not yet part of a fully thought through proposal. On the whole, this seems reasonable, and it promises further analysis for Stage 3. While it would be optimal to have such analysis for Stage 2, other similar ACPs have passed Stage 3 with no quantitative analysis.



5. Other aspects	
5.1	N/A

CAA Initial Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator (Economist)	██████████	██████████	06/10/2023
Airspace Regulator (Environmental)	██████████	██████████	06/10/2023