

# CAA CAP 1616 Options Appraisal Assessment (Phase I Initial)

<b>Title of airspace change proposal</b>	Llanbedr Danger Area		
<b>Change sponsor</b>	Snowdonia Aerospace LLP		
<b>Project no.</b>	ACP-2019-58		
<b>Case study commencement date</b>	27/07/2020	<b>Case study report as at</b>	30/07/2020

<b>Account Manager:</b> [REDACTED]	[GREY]	<b>Airspace Regulator (Engagement &amp; Consultation):</b> [REDACTED]	[YELLOW]	<b>IFP:</b> N/A	[YELLOW]	<b>OGC:</b> [REDACTED]	[DARK BLUE]
<b>Airspace Regulator (Technical):</b> [REDACTED]	[GREEN]	<b>Airspace Regulator (Environmental):</b> [REDACTED]	[PURPLE]	<b>Airspace Regulator (Economist):</b> [REDACTED]	[LIGHT BLUE]	<b>ATM (Inspector ATS Ops):</b> [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 the options' scenarios 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 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]	Yes, the change sponsor produced an Initial Options Appraisal for two proposed design options that are against the do-nothing option. The sponsor carried out a qualitative appraisal by using the template provided in CAP 1616 Appendix E Table E2.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.2	Does the list of options include a description of the change proposal?	The change sponsor indicated that the do-nothing option would be to try and persist with a series of Temporary Danger Area requests with the consequent impact on schedule limitation and business uncertainty. The primary difference between the do-nothing option and proposed options was explained with a permanent DA which will take away the schedule limitation on RDT&E operations at Llanbedr and provide UK aerospace businesses with a surety of being able to conduct developmental testing in the UK on a reactive basis.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.3	Has the sponsor stated on what criteria the longlist of options has been assessed?	Yes, the sponsor has included a table which details the assessment of the proposed permanent DA Option 1, Option 2 and the do-nothing option against the high-level objectives and assessment criteria laid out in CAP 1616, Appendix E, Table 2.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.4	Where options have been discounted, does the change sponsor clearly set out why?	The sponsor has not discounted any of the proposed options at this stage. However, it is mentioned in the IOA that according to the feedback from stakeholders, Option 1 was considered to be easier to interpret and to provide greater flexibility for operators using the DA,	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		whereas Option 2 was considered to be more complex but offered more advantages in terms of flexible use of airspace.	
1.1.5	Has the change sponsor indicated their preferred option in the Options Appraisal (Phase I - Initial)? [E8]	The sponsor has not indicated any preferred option at this stage. However, the sponsor pointed out in the Design Options document that Option 1 was considered to be easier to interpret and to provide greater flexibility for operators using the DA, whereas Option 2 was considered to be more complex but offered more advantages in terms of use of flexible use of airspace.	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" 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 has not touched on the plan for the next phase of the options appraisal.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
1.1.7	Does the plan for evidence gathering cover all reasonable impacts of the change? [E12]	The sponsor did not mention whether it is their plan to develop WebTAG or a detailed quantified/monetised analysis for environmental impact in particular for the next stages.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" 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 checked="" 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			
2.1.5	Day-to-day operational costs / workload / risks		X	N/A	N/A
2.1.6	Other (provide details)	X			
2.1.7	<p>Comments</p> <p>The sponsor indicated for all proposed options plus the do-nothing option, there would be a need for further investment into the Aerodrome facilities to implement a UTM system. The related costs will be borne by the sponsor.</p> <p>In terms of the deployment/operational costs, the sponsor expects a need for additional Flight Information Service and Rescue &amp; Fire-Fighting Services training which will be again borne by the sponsor.</p>				
2.2	<p><b>Are there direct beneficial impacts on air traffic control / management systems?</b></p> <p><b>If so, please provide details and how they have been addressed:</b></p>			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
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	X	X
2.2.5	<p>Comments</p> <p>The sponsor referred in the Initial Options Appraisal document to a recent economic impact assessment that suggested a multi-use aerospace site at Llanbedr (with aerodrome licencing, ATZ and DA implementation as fundamental building blocks) could contribute 515 jobs and £19.5m/annum of GVA at the local level and 756 jobs and £34m/annum of additional GVA in Wales over the next ten years.</p>				
2.3	<p><b>Where monetised, what is the net monetised impact on air traffic control (in net present value) over the project period?</b></p> <p>The potential costs identified for air traffic control have not yet been monetised but the benefits have been provided in terms of the Gross Value Added as mentioned in the previous answer to Q2.2.5.</p>				
2.4	<p><b>Are the direct impacts on air traffic management analysed accurately and proportionately?</b></p> <p>Yes, the impact assessment on air traffic management is in line with the outlined CAP 1616 process for the first</p>			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

	phase of the options appraisal. The sponsor has chosen to deliver a simple qualitative assessment for now which is found reasonable and proportionate.	
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3. Changes in air traffic movements / projections				Status
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<b>3.1</b>	<b>What is the impact of the ACP on the following and has it been addressed in the ACP proposal?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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		Not applicable	Qualitative	Quantified	Monetised
3.1.1	Number of aircraft movements		X	X	X
3.1.2	Type of aircraft movement	X			
3.1.3	Distance travelled	X			
3.1.4	Area flown over / affected		X	N/A	N/A
3.1.5	Other impacts	X			

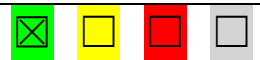
3.1.6	Comments The sponsor explained in the IOA document that a permanent DA will significantly enhance the UK RDT&E capability in environmentally friendly aircraft and electric technologies.
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<b>3.2</b>	<b>Has the forecasting of traffic done reasonably using best available guidance (e.g. DfT WebTAG, the Green Book, Academic sources...etc?)</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The sponsor has provided the below estimate of future permanent DA annual daily usage per year.

	Design Option #1	Design Option #2
Area A (over the aerodrome)	107	107
Area B* (inshore+)	47	35
Area C/D (offshore corridor to D201)	24	24
Area E (coastal lowland/Harlech)		6
Area F (toward Rhinog mountains)		6
Max. altitude <2000ft	71	71
Max. altitude <6000ft	36	36



<b>3.3</b>	<p>What is the impact of the above changes (3.1) on the following factors below?</p> <p>Noise, Fuel burn (&amp; CO2 emissions)</p> <p>All assessments undertaken have been completed qualitatively, which is acceptable for this stage in the process. All assessments have been completed on the basis of the traffic operating within the proposed Danger areas, no attempt has been made to quantify or assess qualitatively the effect of the proposals on the existing (GA) traffic in the area. No assessment of air quality is provided or required as the proposal does not impact on an Air quality Management Area.</p>																																													
	<table border="1"> <thead> <tr> <th></th> <th>Not applicable</th> <th>Qualitative</th> <th>Quantified</th> <th>Monetised</th> </tr> </thead> <tbody> <tr> <td>3.3.1</td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>3.3.2</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.3.3</td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>3.3.4</td> <td></td> <td>X</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>3.3.5</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.3.6</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.3.7</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>3.3.8</td> <td>X</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Not applicable	Qualitative	Quantified	Monetised	3.3.1		X			3.3.2	X				3.3.3		X			3.3.4		X	N/A	N/A	3.3.5	X				3.3.6	X				3.3.7	X	X			3.3.8	X			
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3.3.7	X	X																																												
3.3.8	X																																													
<b>3.4</b>	<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><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>																																													
<b>3.5</b>	<p>What is the total monetised impact of 3.3? (Provide comments)</p> <p>N/A</p>																																													

4. Benefits of ACP				Status	
<b>4.1</b>	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	X	X
4.1.6	Local communities		X		
4.1.7	Wider Public / Economy		X	X	X
4.1.8	<p><b>Comments</b></p> <p>The sponsor explained in the IOA that 789 movements in 2019 is unlikely to be impacted by the DA. The estimation is that DA will be active 2 days / week on average and with the potential for increased flexible use of airspace via greater DA segmentation and with mechanisms in place for safe transit.</p> <p>KC It is accepted both that the activation times of the DA will be minimised, and that a DAIS will be provided to help facilitate crossing traffic, also that the majority of any impact is likely to occur over the sea and therefore is unlikely to affect stakeholders directly, however at the times of operation of either option there is likely to be a detrimental impact on the Fuel Burn, Noise and emissions associated with general aviation traffic that is likely to divert around the Danger area Airspace. The sponsor has not sought to quantify or address these impacts in any way beyond seeking to minimise them through application of Flexible use of airspace principles, and the use of a DAIS.</p> <p>As a result of the location of the proposed Options, any direct impact on the local population is likely to be minimal, as it will mainly occur over the sea, however that the sponsor has not acknowledged that there will be an effect is a concern.</p> <p>For the impact on airports and wider public/economy, please review the answer to Q2.1.7 and Q2.2.5.</p>				
<b>4.2</b>	<b>How are the above groups impacted by the ACP, especially (but not exclusively) looking at the following factors below:</b>				
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	A multi-use aerospace site at Llanbedr could contribute 515 jobs and £19.5m/annum of GVA at the local level and 765 jobs and £34m/annum of additional GVA in Wales over the next 10 years			

4.2.5	Other impacts	A permanent DA enhancement in the UK RDT&E capability and in the AMS by creating a test zone in which to explore the airspace integration issues associated with new airspace users like drones
4.2.6	Comments	
4.3	<b>What is the overall monetised impacts associated with 4.1 and 4.2 the above?</b> N/A	
4.4	<b>What are the non-monetised but quantified impacts of the above? (Insert details of description)</b> N/A	
4.5	<b>What are the qualitative / strategic impacts described above?</b>	
4.6	<b>What is the overall monetised benefits-costs ratio (BCR) of the policy? Is it more than 1?</b> N/A	
4.7	<p><b>Have the sponsors provided reasonable justification for the proportionality of analysis above?</b></p> <p>The sponsor has chosen to conduct qualitative options appraisal which is the minimum requirement for the first phase of options appraisal. Therefore, the sponsor has not touched on the justification for proportionality of a more detailed impact analysis.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4.8	<b>If the BCR is less than 1, are the quantitative and qualitative strategic impacts proportional to the costs of the ACP?</b> N/A	

5. Other aspects	
5.1	Nil

6. Summary of Assessment of Economic Impacts & Conclusions	
6.1	The sponsor conducted the minimum requirement of Initial Options Appraisal which is the qualitative assessment of criteria for each proposed option. There are couple of options proposed that have been assessed against the do-nothing option. The sponsor has not indicated any preferred option at this stage but stated that Option 2 is a further refinement based on feedback received as part of the two-way engagement process on the Design Principles and underlined that even though it was considered to be more complex it offered more advantages in terms of flexible use of airspace.



The economic impact from increased effective capacity, in relation to aerodrome licencing, ATZ and DA implementation as fundamental blocks, was monetised with GVA figures. It was reported that the DA implementation could contribute 515 jobs and £19.5m/annum of GVA at the local level and 765 jobs and £34m/annum of additional GVA in Wales over the next year 10 years.

In conclusion, the approach adopted by the sponsor in the first phase of initial options appraisal is found proportionate and in line with the CAP 1616 process. The analysis is missing the evidence the sponsor will collect, and how, to fill in its evidence gaps and to develop the Full appraisal which are not seen as show stoppers for this stage. In terms of the future enhancement of options appraisal activity, CAA has highlighted in this assessment report the areas that need improvement in the next stage.

**Outstanding issues?**

Serial	Issue	Action required
1	-	-
2		

CAA Initial Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator (Economist)	██████████	██████████	30/07/2020