

CAA CAP 1616 Options Appraisal Assessment (Phase I Initial)

Title of airspace change proposal	Llanbedr ATZ		
Change sponsor	Snowdonia Aerospace LLP		
Project no.	ACP-2020-02		
Case study commencement date	08/06/2020	Case study report as at	26/06/2020

Account Manager: [REDACTED]	[GREY]	Airspace Regulator (Engagement & Consultation): [REDACTED]	[YELLOW]	IFP: N/A	[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 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 a single design option that is said to conform with the standard definition of ATZ which is compared versus the do nothing option. The change sponsor emphasised this airspace change proposal has been prompted by a need to support forecasted increased military air training at the aerodrome.
1.1.2	Does the list of options include a description of the change proposal?	Yes, the list of options include the description of both do nothing option and the proposed ATZ.
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 ATZ option and the do nothing against the high-level objectives and assessment criteria laid out in CAP 1616, Appendix E, Table 2.
1.1.4	Where options have been discounted, does the change sponsor clearly set out why?	There is only one ATZ option proposed and the do nothing option which would be to not implement an ATZ at Llanbedr. From a safety perspective, the sponsor stated all platforms can operate in a safe and tolerable manner. However, the sponsor anticipates do nothing option would have a number of detrimental implications for the RAF/MOD fast jet approach training programme. So, actually there isn't any discounted option but the preferred option is an ATZ implementation.
1.1.5	Has the change sponsor indicated their preferred option in the Options Appraisal (Phase I - Initial)? [E8]	The preferred option is Option 1 – implement ATZ at Llanbedr.

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 only stated RAF/MOD did not provide quantitative environmental data for their aircraft and hence the sponsor used this as the reason for not being able to conduct WebTAG analysis but the sponsor hasn't stated its plan to collect such data or how it will plan to develop quantitative/monetised analysis for the next phase.	<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 analysis for noise impact or greenhouse gas impact or both.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

2. Direct impact on air traffic control		Status			
2.1 <input type="checkbox"/> <input checked="" type="checkbox"/>	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)				
2.1.7	Comments In terms of the infrastructure costs, the sponsor anticipates a need for further investment into the Aerodrome facilities to enable it to become licensed to support military training. The sponsor explained the investment cost will be borne by Snowdonia Aerospace LLP and investment works will include new runway markings and a new weather station.				

	<p>The sponsor also mentioned there will be a need for increased Flight Information Service (FIS) and Rescue & Fire-Fighting Services (RFFS) which will again be borne by Snowdonia Aerospace. These services will form operational and training costs to the sponsor. Such costs are unknown for Option 2 (do nothing) for any additional infrastructure costs at Valley, Mona, Hawarden, Warton or Ronaldsway.</p>				
2.2	<p>Are there direct beneficial impacts on air traffic control / management systems?</p> <p>If so, please provide details and how they have been addressed:</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	N/A	N/A
2.2.4	Other (provide details)		X	N/A	N/A
2.2.5	<p>Comments</p> <p>The sponsor stated in the IOA that there would be an economic impact from increased effective capacity for Airport and ANSPs due to a multiuse 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. The economic impact for do nothing option is unknown.</p> <p>The sponsor also stated operational risks of continuing with do nothing option because they anticipate Option 2 would have a number of detrimental implications for the RAF/MOD fast jet training programme.</p>				
2.3	<p>Where monetised, what is the net monetised impact on air traffic control (in net present value) over the project period?</p> <p>N/A</p>				
2.4	<p>Are the direct impacts on air traffic management analysed accurately and proportionately?</p> <p>The sponsor provided a qualitative analysis of two options (including do nothing) against the criteria identified in CAP 1616 Appendix E Table E2. As the sponsor meets with the minimum requirement criteria for this phase, it can be concluded that the IOA sets out an accurate and proportionate analysis method.</p>				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3. Changes in air traffic movements / projections					Status
3.1	<p>What is the impact of the ACP on the following and has it been addressed in the ACP proposal?</p>				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		Not applicable	Qualitative	Quantified	Monetised
3.1.1	Number of aircraft movements			X	N/A
3.1.2	Type of aircraft movement	X			
3.1.3	Distance travelled		X	N/A	N/A
3.1.4	Area flown over / affected		X	N/A	N/A
3.1.5	Other impacts	X			
3.1.6	<p>Comments</p> <p>The Sponsor provided the information on the current level of GA traffic as 789 movements in 2019 and stated it is unlikely to be impacted by an ATZ. In terms of the expected RAF training movements, the maximum number of movements per day is estimated at 40 to 50. The sponsor also stated that Option 1 allows a shorter distance because from Valley to Llanbedr is approximately half of the distance to alternative airfields.</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>The sponsor has not provided any traffic forecast at this phase. For the sponsor's ease of reference, the CAA's expectation for the next phase would be to see two sets of traffic forecasts because the proposed ATZ implementation is expected to increase the number of aircraft utilising the airspace (CAP 1616 Appendix B32).</p>			<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
3.3	<p>What is the impact of the above changes (3.1) on the following factors below?</p> <p>At the present time it is not reasonable for the sponsor to supply detailed traffic information, as the ACP concerns future predicted Military traffic resulting from a contract, the details of which remain confidential. This reduces or removes the opportunity for detailed quantification of impacts to the usual expected level, however the sponsor has sought to quantify effects based on experience and data related to the same traffic fleet operating both historically and at other nearby airfields. The sponsor has sought to provide a degree of quantification based on the expected extent of a 63dB(A) Leq contour. Qualitative noise data for example has been provided for the expected noise impact on Llanbedr village.</p>				
		Not applicable	Qualitative	Quantified	Monetised
3.3.1	Noise		X	N/A	N/A
3.3.2	Fuel Burn		X	X	N/A
3.3.3	CO2 Emissions		X	X	

3.3.4	Operational complexities for users of airspace		X	N/A	N/A
3.3.5	Number of air passengers / cargo	X			
3.3.6	Flight time savings / Delays	X			
3.3.7	Air Quality	X			
3.3.8	Tranquillity				
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 associated impacts are analysed qualitatively in this phase in line with CAP 1616 guideline. In terms of the fuel burn, the sponsor estimates 100 kg of fuel per flying event will be saved and a total of 650,000 litres per annum. In addition to this, the sponsor informed that airspace usage at Valley and Mona is exceptionally taut and there is little or no room for accommodating an increasing training load. Hence, the sponsor aims to offset the cost and risk of further expansion with the proposed option of an alternative aerodrome as a relief landing ground (RLG). The sponsor also goes some way to further justify the merits of their application through demonstrating the disbenefits of the flight training in question being completed at alternative airfield locations. Local air quality is not a consideration in this case as no AQMA has been declared that the activities might affect.</p>			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3.5	<p>What is the total monetised impact of 3.3? (Provide comments)</p> <p>N/A</p>				

4. Benefits of ACP		Status			
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			
4.1.4	Airlines	X			

4.1.5	Airports	X			
4.1.6	Local communities		X		
4.1.7	Wider Public / Economy		X	X	X
4.1.8	<p>Comments</p> <p>According to the statement in the IOA economic impact from increased effective capacity assessment, it is said a multiuse aerospace site at Llanbedr (with aerodrome licencing and ATZ implementation as fundamental building blocks) 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.</p> <p>The sponsor refers to the impact of the ACP on local communities in terms of noise, through the offering of a qualitative statement suggested as being a quote from a member of the community, and a qualitative view on the expected extent of the 63dB(A) noise effect, while seeking to qualify their noise approximations on the basis of previous operations and noise at the site (prior to 2004) and at alternative sites (RAF Mona and Valley) currently in use.</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	ATZ 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 10 years.			
4.2.5	Other impacts				
4.2.6	Comments				
4.3	What is the overall monetised impacts associated with 4.1 and 4.2 the above? N/A				
4.4	<p>What are the non-monetised but quantified impacts of the above? (Insert details of description)</p> <p>Noise impact – According to the sponsor’s IOA, general noise impact is estimated to be substantially lower (42% to 63%) than the 2004 baseline based on the predicted number of annual movements. The sponsor claimed qualitative extrapolation of data from Valley and Mona suggested the 63dB LAeq level threshold will not be breached in Llanbedr village.</p>				

	Fuel burn - According to the sponsor's IOA, the distance from Valley to Llanbedr is approximately half the distance to alternative airfields and it is estimated that this will save 100 kg of fuel per flying event and a total of 650,000 litres per annum.	
4.5	What are the qualitative / strategic impacts described above? The airspace change proposal aims to implement an ATZ design to support forecasted increased military air training at the aerodrome. The sponsor said the main reason to put forward this airspace notification is number of detrimental implications anticipated from Option 2. It is emphasised that there is little or no room for accommodating an increasing training load and hence the sponsor suggests use of an alternative aerodrome as a relief landing ground will offset the cost and risk of further expansion.	
4.6	What is the overall monetised benefits-costs ratio (BCR) of the policy? Is it more than 1? N/A	
4.7	Have the sponsors provided reasonable justification for the proportionality of analysis above? The sponsor stated in the IOA that a qualitative options appraisal was carried out for this phase as CAP 1616 process requires sponsors to carry out a qualitative appraisal as a minimum for Step 2B.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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	

5. Other aspects	
5.1	N/A

6. Summary of Assessment of Economic Impacts & Conclusions	
6.1	<p>The sponsor conducted the minimum requirement of Initial Options Appraisal which is the qualitative assessment of criteria for each option against the do nothing option. There is only one viable option which is not in line with this phase as the expectation for Step 2A is a long-list of options and a design evaluation that sets out how the design options have responded to the design principles. However, the sponsor justified the reason of proposing only one option at this stage is due to a standard ATZ; the sponsor stated following the previous Stage 1A discussion with CAA reapplication of the ATZ Policy Statement versus CAP 1616 there is an implicit assumption that the resulting design will be a standard Aerodrome Traffic Zone (ATZ).</p> <p>The sponsor carried out the Initial Options Appraisal (IOA) in line with CAP 1616 Stage 2B and provided the minimum requirement which is the qualitative criteria assessment for the proposed option against the do nothing option. WebTAG analysis has not been conducted due to the lack of traffic forecast data that the sponsor needs from RAF for the increased number of training aircraft.</p>

The economic impact from increased effective capacity was monetised with GVA figures; the sponsor stated the ATZ 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. However, GVA was a measure specified under CAP 725 process but best practice in appraisal guidance referred in the CAP 1616 Appendix E such as TAG should be considered to carry out employment impact assessment in the next phase. In case the sponsor anticipates employment impact is one of the significant impacts of an ATZ design, then it is recommended that the sponsor should carry out the monetised assessment as it is explained under TAG Unit A2.3 Employment document.

In terms of the Initial Options Appraisal, it is concluded that the sponsor carried out the minimum requirement of the process which is the qualitative criteria assessment for the proposed option. The analysis is missing 10 years forecast and a narrative of what 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 and highlighted to show areas that need improvement in the next phase.

Outstanding issues?

Serial	Issue	Action required
1	Traffic forecast has not been conducted in line with CAP 1616 process.	The sponsor should provide two sets of traffic forecasts in line with CAP 1616 Appendix B32.

CAA Initial Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator (Economist)	[REDACTED]	[REDACTED]	15/06/2020
Airspace Regulator (Environmental)	[REDACTED]	[REDACTED]	25/06/2020