

CAA CAP 1616 Options Appraisal Assessment (Full)

Title of airspace change proposal		St Athan ILS	
Change sponsor		Welsh Government	
Project no.		ACP-2018-35	
<i>Case study commencement date</i>	11/09/2019	<i>Case study report as at</i>	27/09/2019

Account Manager: [Redacted]	[Grey]	Engage & Consult: [Redacted]	[Yellow]	IFP: [Redacted]	[Yellow]	OGC: [Redacted]	[Dark Blue]
Tech Regulator: [Redacted]	[Green]	Environmental: [Redacted]	[Purple]	Economist: [Redacted]	[Light Blue]	ATM: [Redacted]	[Red]

Instructions: In providing a response for each question, please ensure that the ‘status’ column is completed using one of the following options:

- yes
- no
- partially
- n/a

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.*

Please refer to the Initial Options Appraisal Assessment associated with this ACP, and published on the Airspace Change portal, for input to date.

1. Background – Identifying the Do Nothing (DN) /Do Minimum (DM) and Do Something (DS) scenarios			
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	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]	Yes, the Sponsor produced the Full Options Appraisal document. For this stage, the Sponsor is not required to provide a more detailed quantified analysis due to CAP1616 Level 2C requirements. For Level 2C changes, CAP1616 requires as assessment of fuel and CO2 impacts of the proposed change using WebTAG if the anticipated impact is negative such as an increase in fuel and emissions. If the anticipated impact is positive, a qualitative assessment and explanation is adequate. In terms of St Athan ACP, there is only one viable option which is to publish St Athan ILS procedures in UK AIP. The Sponsor provided the qualitative detailed information for the proposed option (Option 2) in comparison with the baseline which permanently withdraws St Athan ILS procedures (Option 1). It is concluded by the CAA that it is in line with CAP1616 as the Sponsor claimed this appraisal demonstrates the minor nature of the proposal and it is negligible impact on all stakeholders.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.2	Does each shortlist option include the impacts in comparison to the 'do nothing/minimum' option, in particular: -all reasonable costs and benefits quantified -all other costs and benefits described qualitatively -reasons why costs and benefits have not been quantified	The Sponsor carried out the qualitative analysis on the proposed option in comparison to the 'do nothing' option by describing all reasonable and other costs and benefits in line with CAP 1616 Table E2. The Sponsor quantified MRO aircraft arrivals movements for 6 years period from 2014 and 2019 in order to show the volume and time period of MRO operations arriving at St Athan. According to this information, the average number of MRO	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		movements is 32 per annum and the Sponsor then argued some airlines have sent their aircraft to different destinations after the suspension of the ILS procedures which resulted in significant loss of revenue.	
1.1.3	Where options have been discounted, does the change sponsor clearly set out why?	The sponsor considered five options in total and has discounted all including the baseline option except the proposed option because that the rest do not meet the SoN and is considered disproportionate.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.4	Has the change sponsor indicated their preferred option in the Options Appraisal (Phase 2 - Full)? [E23]	Yes, there is only one option proposed which is the preferred option of the Sponsor (Option 2 – Publish St Athan ILS Procedures in UK AIP)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.5	Does the Full Options Appraisal (Phase 2 - Full) 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 III - Final)? Does the plan for evidence gathering cover all reasonable impacts of the change?	The CAA concluded that the Sponsor provided sufficient information required for Level 2C appraisal and hence the CAA would not ask for more evidence or detail as there isn't any evidence gap considered in the Full Options Appraisal.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

2. Direct impact on air traffic control					Status
2.1	Are there direct cost impacts on air traffic control / management systems?				
<input type="checkbox"/> <input checked="" type="checkbox"/>	If so, please provide below details of the factors considered and the level in which this has been analysed.				
2.1.1	<i>Examples of costs considered (please add costs that have been discussed, and any reasonable costs that the tech reg feels have NOT been addressed)</i>	Not applicable	Qualitative	Quantified	Monetised
2.1.2	Infrastructure changes	X			
2.1.3	Deployment	X			
2.1.4	Day-to-day operational costs / workload / risks	N/A	X	N/A	N/A

2.1.5	Other (provide details)	X			
2.1.6	<p>Comments The Full Options Appraisal submitted by the change sponsor indicates that there might be additional marginal costs associated with the increased workload and reduced capacity of NATS Cardiff ATCOs providing radar-vectors to aircraft inbound to St Athan but this is not considered to be significant.</p> <p>According to the change sponsor's appraisal, fuel burn is predicted to be marginally greater and less predictable for Option 1 due to the increased unpredictability of aircraft tracks when flown VFR and the increased risk of aircraft being forced to divert if unable to complete a VFR approach. It is also added that conversely, although fuel burn may be lower at St Athan if airlines decide not to use its facilities, their aircraft would still need to be delivered to another MRO unit for maintenance, and with the limited data available the sponsor is unable to calculate this impact. The sponsor pointed out in case ILS procedures are published, there would be no change in fuel burn for either GA or commercial airlines.</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> <p>The change sponsor illustrated the negative impact of the current baseline option which is the permanent withdrawal of ILS from St Athan as the SoN identifies that no change is being proposed to the track, heights or slope of the ILS procedures previously published in the Mil AIP, nor to airspace structures or classification, nor to operational procedures. The sole aim of the sponsor with this airspace change is to enable the publication of the extant CAA-approved St Athan ILS procedures in the UK AIP and plus ILS equipment would remain serviceable and would be available to all operators including MRO customers.</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	N/A	N/A	N/A	N/A
2.2.3	Reduced complexity / risk	N/A	N/A	N/A	N/A
2.2.4	Other (provide details)	N/A	N/A	N/A	N/A
2.2.5	Details N/A				
2.3	Where monetised, what is the net monetised impact on air traffic control (in net present value) over the project period? N/A				

2.4	<p>Are the direct impacts on air traffic management analysed accurately and proportionately?</p> <p>The sponsor stated that no additional infrastructure costs were expected with the proposed change. However, they also underlined ATCO workload at NATS Cardiff may increase marginally but is unlikely to result in additional ATCO costs if ILS procedures are withdrawn permanently. The sponsor's approach is found proportionate and accurate from ATM related impacts as it is anticipated as a negligible overall impact.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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3. Changes in air traffic movements / projections					Status
3.1	What is the impact of the ACP on the following and has it been addressed in the ACP proposal?				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Not impacted / Not applicable	Qualitative	Quantified	Monetised
3.1.1	Number of aircraft movements		X	X	N/A
3.1.2	Type of aircraft movement	X	N/A	N/A	N/A
3.1.3	Distance travelled	X	N/A	N/A	N/A
3.1.4	Area flown over / affected	X	N/A	N/A	N/A
3.1.5	Other impacts	X	N/A	N/A	N/A
3.1.6	Details N/A				
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>There isn't any traffic forecast done reasonably but the sponsor only provided the traffic movements in the past (2014-2018) at St Athan as available below.</p>				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

Year	UWAS	MRO	GA	Military	Heli	TOTAL
2014	5,106	93	1,573	1,025	3,280	11,077
	46.1%	0.8%	14.2%	9.3%	29.6%	100%
2015	4,852	118	1,815	791	571	8,147
	59.6%	1.4%	22.3%	9.7%	7.0%	100%
2016	7,302	110	4,621	750	2,532	15,315
	47.7%	0.7%	30.2%	4.9%	16.5%	100%
2017	7,464	41	4,670	659	2,200	15,034
	49.6%	0.3%	31.1%	4.4%	14.6%	100%
2018	7,385	117	3,651	201	1,830	13,184
	56.0%	0.9%	27.7%	1.5%	13.9%	100%
Average	6,422	96	3,266	685	2,083	12,551
Average %	51.8%	0.8%	25.1%	6.0%	16.3%	100%

Table 1 Aircraft Movement Statistics at St Athan

According to this data, the sponsor stated although MRO aircraft arrivals only comprise around 1% of St Athan's annual movements, MRO operations are essential because the suspension of MRO operations resulted in a significant loss of revenue for the MRO companies and therefore sponsor stated the importance of MRO which is disproportionately high.

3.3 What is the impact of the above changes on the following factors?

This change will not impact on traffic forecasts or behaviours, it will return the traffic levels to 100% of those experienced previously in the same location it was at previously, at the volumes it was at previously. This change is only a change to the published location of the IFP's. Therefore there is not expected to be any difference to the expected impact on Noise, CO2 /Fuel burn, there is not expected to be any change to the actual flight numbers or behaviour. There is no AQMA in the vicinity of St Athan, and the and this change is purely to the publication location of the procedures, there is no associated change to the flight behaviours of the aircraft therefore assessment of Local Air Quality assessment is not required for this change as the change will not impact on any AQMAs.

		Not impacted / Not applicable	Qualitative	Quantified	Monetised
3.3.1	Noise	x			

3.3.2	Fuel Burn	X	N/A	N/A	N/A
3.3.3	CO2 Emissions	x			
3.3.4	Operational complexities for users of airspace	X	N/A	N/A	N/A
3.3.5	Number of air passengers / cargo	X	N/A	N/A	N/A
3.3.6	Flight time savings / Delays	X	N/A	N/A	N/A
3.3.7	Air Quality	X			
3.3.8	Tranquillity	X			
3.4	Are the traffic forecast and the associate impact analysed proportionately and accurately according to available guidelines (e.g. WebTAG or the Green Book?)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>			
3.5	What is the total monetised impact of 3.3? (Provide details)	N/A			



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 impacted / Not applicable	Qualitative	Quantified	Monetised
4.1.1	Air Passengers	X	X	N/A	N/A
4.1.2	Air Cargo Users	X	X	N/A	N/A
4.1.3	General aviation users	X	X	N/A	N/A
4.1.4	Airlines	X	X	N/A	N/A
4.1.5	Airports	X	X	N/A	N/A
4.1.6	Local communities	X	X	N/A	N/A
4.1.7	Wider Public / Economy		X	N/A	N/A

4.1.8	Details Please see the answers to Question 2.2. and 4.5.				
4.2	How are the above groups impacted by the ACP, especially (but not exclusively) looking at the following factors:				
		Not applicable	Qualitative	Quantified	Monetised
4.2.1	Improved journey time for customers of air travel	X			
4.2.2	Increase choice of frequency and destinations from airport	X			
4.2.3	Reduced price due to additional competition because of new capacity	X			
4.2.4	Wider economic benefits		X	N/A	N/A
4.2.5	Other impacts	X			
4.2.6	Details Please see the answers to Question 2.2. and 4.5.				
4.3	What is the overall monetised impacts associated with 4.1 and 4.2 the above? N/A				
4.4	What are the non-monetised but quantified impacts of the above? (Insert details of description) The sponsor provided the total annual movement numbers from 2014 to 2018 plus seasonal MRO movements for Apr-Aug in 2014-2019 to show the proportion of the total MRO aircraft movements which comprises only 1% of the total movements.				
4.5	What are the qualitative / strategic impacts described above? The sole aim of the proposal was explained in the Full Options Appraisal as to enable the publication of the existing CAA-approved St Athan ILS procedures in the UK AIP which was previously published in the Mil AIP. It is stated that the primary users of ILS procedures are commercial aircraft arriving to use St Athan's Maintenance Repair and Overhaul (MRO) facilities and added that although they comprise only around 1% of St Athan's annual movements, aircraft for MRO have a disproportionately positive economic impact on the airport and surrounding area of South Wales.				
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? Yes, the sponsor mentioned with the proposed option the aircraft tracks flown for an ILS procedure and a visual approach would be near identical without any impact on overall UK airspace plus no environmental impacts have been identified in relation to noise, CO2 emissions or local air quality. The sponsor claimed there is insufficient empirical				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	data to support an economic impact assessment or to monetise the potential impact of either implementing the proposal or 'do nothing'. This is concluded to be in line with CAP 1616 as for Level 2C airspace changes, in case the sponsor anticipates a positive impact, the qualitative assessment is the minimum requirement and this has been duly provided by the sponsor.	
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	Please see the answer to Question 4.7.	
Outstanding issues?		
Serial	Issue	Action required
1	-	-
2		

CAA Full Options Appraisal Assessment Completed by	Name	Signature	Date
Airspace Regulator (Technical)			26/09/2019

Airspace Regulator (Economist)	[REDACTED]	[REDACTED]	17/09/2019
Airspace Regulator (Environmentalist)	[REDACTED]	[REDACTED]	17/09/2019