

# CAA CAP 1616 Options Appraisal Assessment (Initial)

<b>Title of airspace change proposal</b>		Bournemouth Airport RNAV Approaches	
<b>Change sponsor</b>		[REDACTED]	
<b>Project no.</b>		ACP 2018-40	
<b>Case study commencement date</b>	17/06/2019	<b>Case study report as at</b>	28/06/2019

<b>Account Manager:</b> [REDACTED]	[REDACTED]	<b>Engage &amp; Consult:</b> [REDACTED]	[REDACTED]	<b>IFP:</b> [REDACTED]	[REDACTED]	<b>OGCGC:</b> [REDACTED]	[REDACTED]
<b>Tech Regulator:</b> [REDACTED]	[REDACTED]	<b>Environmental:</b> [REDACTED]	[REDACTED]	<b>Economist:</b> [REDACTED]	[REDACTED]	<b>ATM:</b> [REDACTED]	[REDACTED]

**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 three 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 Do Nothing (DN) /Do Minimum (DM) and Do Something (DS) scenarios		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	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, clearly stated in the introduction.	<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	Yes, this is covered in a “Context of Change” which states that Bournemouth currently has an ILS on both runways. Runway 08 ILS is obsolete and the legal requirement to implement RNP approaches by 2024, which could provide 3D capability to both runways, and improve resilience to runway 26 ops.	<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, all options cover in detail (slides 7-9)	<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 discounted options have been discounted with relation to the design principles. Options 1 & 2 were discounted as they were not in alignment with the design principles. This was agreed by all engaged stakeholders; however, Solent Radar didn’t comment specifically on discounting options 1 & 2, they just confirmed they would want to remain engaged and would become more involved in Phase 3.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.1.5	Has the change sponsor indicated their preferred option in the Options Appraisal (Phase I - Initial)? [E8]	Yes, there is one option which is the implement RNP IAP. This is broken down into 3 sub options, which are as follows: 3a. Full T-Bar comprising Initial, Intermediate and Final Approach Fixes 3b. Limited T-Bar with 1 Initial, Intermediate and Final Approach Fixes. 3c. Straight-in with combined Initial/Intermediate	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		<p>and final approach Fixes.</p> <p>A further sub option was identified during Stage 2a after testing with stakeholders. Option 3d contains both northern and southern IAFs. It was assessed that Option 3d may mitigate against the safety impact of the limited T-bar (option 3b).</p>	
1.1.6	<p>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)? Does the plan for evidence gathering cover all reasonable impacts of the change? [E12]</p>	<p>During Stage 3, the Indicative waypoints will be provided to the Approved Procedure Designer as information for the formal IAP design process. It is not expected that there will be significant changes to the Initial or Intermediate Fix locations as the segment lengths are greater than the minimum permitted.</p> <p>When the formal IAP design is available, it will be overlaid on the 2017 track data and the Final Appraisal will be a review of the initial Appraisal incorporating any changes arising from the design process.</p> <p>The Evidence that will be presented in the Final Appraisal at Stage 3 is therefore a validation that the formal IAP design will allow an acceptable replication of the 2017 track data.</p>	

2. Direct impact on air traffic control		Status			
2.1	<p>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.</p>				
2.1.1	<p><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></p>	Not applicable	Qualitative Assessment	Quantified	Monetised
2.1.2	Infrastructure changes	X			

2.1.3	Deployment	X			
2.1.4	Day-to-day operational costs / workload / risks	X			
2.1.5	Other (provide details)	X			
2.1.6	<b>Comments</b>				
<b>2.2</b>	<b>Are there direct beneficial impacts on air traffic control / management systems?</b>				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	If so, please provide details and how they have been addressed:				
2.2.1	<i>Examples of benefits considered</i>	Not applicable	Qualitative Assessment	Quantified	Monetised
2.2.2	Reduced work-load	X			
2.2.3	Reduced complexity / risk		X	X	
2.2.4	Other (provide details)	X			
2.2.5	<b>Details</b> The change sponsor claimed the proposed implementation of Option 3 (including all sub-options) would not change the operational concept for air traffic operations or control at the airport by explaining in detail that the vast majority of operations would be vectored by ATC for in accordance with existing practice, and at similar altitudes.				
<b>2.3</b>	<b>Where monetised, what is the net monetised impact on air traffic control (in net present value) over the project period?</b>				
	N/A				
<b>2.4</b>	<b>Are the direct impacts on air traffic management analysed accurately and proportionately?</b>				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<b>3. Changes in air traffic movements / projections</b>	<b>Status</b>
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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 Assessment	Quantified	Monetised
3.1.1	Number of aircraft movements			X	
3.1.2	Type of aircraft movement		X		
3.1.3	Distance travelled		X		
3.1.4	Area flown over / affected	X			
3.1.5	Other impacts	X			
3.1.6	<p>Details</p> <p>The sponsor carried out an analysis on the traffic arriving at BIA, and according to the analysis, the sponsor claimed the traffic arriving at BIA in 2017 showed approximately 3% of instrument flight operations flew the published instrument approach procedure. The sponsor also claimed the utilisation of Option 3 approach would facilitate a more direct approach for aircraft flying the procedure with reduced track miles compared to the existing procedures.</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 stated 2017 Traffic Data arriving at BIA was filtered for only commercial air transport and high end general aviation operations. For later stages, the sponsor should be encouraged to use the most recent available data and provide the relevant data sources as an evidence of the analysis to be submitted with other documents.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3	<p>What is the impact of the above changes on the following factors?</p> <p>The sponsor claimed the inclusion of Initial Approach Fixes and an RNP Missed Approach would increase the range of GA training and test exercises that could be provided at Bournemouth leading to fuel burn and operating cost savings from reduced transit flights.</p> <p>The sponsor also claimed the availability of RNP approaches at Bournemouth would result in fuel savings and reduced engine run times for GA training operators through reduced travel times to airports with RNP approaches and the capacity to accept training aircraft.</p>				
		Not impacted / not applicable	Qualitative Assessment	Quantified	Monetised

3.3.1	Noise		X				
3.3.2	Fuel Burn		X				
3.3.3	CO2 Emissions		X				
3.3.4	Operational complexities for users of air space	X					
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	X					
3.4	Are the traffic forecast and the associated impacts 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 type="checkbox"/>
3.5	What is the total monetised impact of 3.2? (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 Assessment	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		
4.1.8	<p>Details</p> <p>The Sponsor stated that the provision of RNP approaches at Bournemouth is of particular interest to General Aviation operators and claimed the inclusion of an Initial Approach Segment and an RNP Missed Approach would increase the range of training scenarios that could be provided at Bournemouth.</p> <p>Please refer to answers to Question 3.3 for the anticipated ACP impact on airlines and wider public / economy.</p>				
4.2.	<b>How are the above groups impacted by the ACP, especially (but not exclusively) looking at the following factors:</b>				
		Not impacted / not applicable	Qualitative Assessment	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		
4.2.5	Other impacts		X		
4.2.6	<p>Details</p> <p>Please refer to answers to Question 3.1.6, 3.3 and 4.1.8 to see the details for the factors listed above.</p>				
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)				
	<p>The only non-monetised but quantified analysis is achieved for the change in air traffic arriving to BIA in 2017. The sponsor claimed that the analysis showed approximately 3% of instrument flight operations (including training) flew the published instrument approach procedure. The sponsor then concluded that the utilisation of the Option 3 approach would facilitate a more direct approach for aircraft flying the procedure from either the north or south with reduced track miles compared to existing procedures if optimised for southerly approaches.</p>				

4.5	<b>What are the qualitative / strategic impacts described above?</b> Please see the answers to Questions 3.1.6, 3.3, 4.1.8, and 4.2.6.	
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?	<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	

6. Summary of Assessment of Economic Impacts & Conclusions		
6.1	In 2017 approximately 3% of the traffic arriving at BIA was IFR. The utilisation of Option 3 approach would facilitate a more direct approach with reduced track miles compared to the existing procedures. (3.1.6) There would also be benefits to Bournemouth based GA training and test exercises, and with the potential to increase the range of training exercises with reduced transit times, and the ability to accept training aircraft from other organisations. (3.3, 4.1.8)	
Outstanding issues?		
Serial	Issue	Action required
1	N/A	N/A
2		



CAA Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator	[REDACTED]		26/06/2019
Economist	[REDACTED]		21/06/2019
Environmentalist	[REDACTED]		26/06/2019
ATM			Click or tap to enter a date.