

CAA CAP 1616 Options Appraisal Assessment (Phase I Initial)

Title of Airspace Change Proposal:	Network improvements on the UK Dover (DVR) interface		
Change Sponsor:	NATS		
ACP Project Ref Number:	ACP-2025-006		
Case study commencement date:	16/01/2026	Case study report as at:	30/01/2026

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

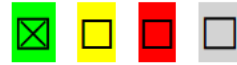
Not Compliant – RED

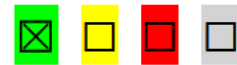
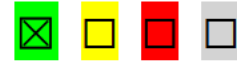
Not Applicable - GREY

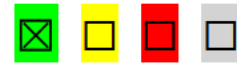
Guidance

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			Status
1.1	Has the change sponsor considered the initial options appraisal against the statutory factors and where applicable, government policy that the CAA is required to consider? [CAP1616f: 3.50-3.53]	Yes, the change sponsor has considered the statutory factors and government policy when developing the initial options appraisal (3.50). The sponsor has assessed the impacts of each option on the following indicators below which are impacts linked to S70 and the ANG 2017. - Greenhouse gas emissions - Capacity and resilience	☒ ☐ ☐ ☐

		- Fuel burn - Economic impacts - Environmental considerations - Safety (qualitative) A high-level safety assessment has been undertaken within Section 6 on the shortlisted option (Op1, 3 COP's). The assessment indicates that this option would reduce controller workload and improves traffic management against the current day which would require demand management if no changes to the airspace were made. As it stands the sponsor only progresses one design option through the IoA. However, the sponsor has noted that "the implementation of this option is, however, primarily dependent on complementary and concurrent changes within the Brussels FIR, Brussels UIR and France UIR, and NATS is continuing to work closely alongside neighbouring ANSPs as part of this coordinated airspace change". From an economic perspective of an IoA and 1616 process requirements there are no issues.	
1.2	Has the change sponsor ensured that the initial options appraisal is objective (unbiased and evidence based), repeatable and consistent? [CAP1616f: 3.54-3.57]	Yes, the change sponsor has used the standard set of qualitative impact assessments that are required for a Stage 2 submission and a well-defined Design Principal Evaluation (DPE) with suitable criteria setting out the met, partially met and not met criterion. The change sponsor has rejected the baseline/current day scenario within the DPE, citing lack of alignment with the AMS goals, increased emissions and delays that would be associated with an increase in background traffic growth over the UK DVR airspace. Option 2 (5 Change over points/COP's) was also rejected as part of the DPE. There were several reasons including limited benefit over option 1 in accordance with stakeholder feedback, but primary issues were that it creates	

		conflicting traffic flow, reduced potential reduction in delay, track mileage and limited continuous climb profiles. The IOA covers the following impact indicators that have been assessed qualitatively, for the remaining, single design option. • Greenhouse gas emissions • Fuel burn • Capacity and resilience • Operational impacts • Economic impacts • General aviation access • Safety (qualitative) • ANSP costs (infrastructure / deployment / operational) The assessment of impacts has been applied fairly and consistently amongst the design options. Therefore, it can be considered that the assessment is fair, unbiased and repeatable.	
1.3	Has the change sponsor identified criteria for the initial options appraisal and applied these to narrow down the design options to a selected shortlist? [CAP 1616f: 3.55]	The criterion outlined in 1.2 has been used within the IoA. Although no discounting of options has been undertaken as part of the IoA, as all options have been continued / discontinued within the DPE.	
1.4	Do the criteria set out clearly why options have been discontinued? [CAP 1616f: 3.55]	As per 1.2 - The change sponsor has rejected the baseline/current day scenario within the DPE, citing lack of alignment with the AMS goals, increased emissions and delays that would be associated with an increase in background traffic growth over the UK DVR airspace. Option 2 (5 Change over points/COP's) was also rejected	

		as part of the DPE. There were several reasons including limited benefit over option 1 in accordance with stakeholder feedback, but primary issues were that it creates conflicting traffic flow, reduced potential reduction in delay, track mileage and limited continuous climb profiles. Option 1 was carried through into the IoA and deemed to be the sole, acceptable option.	
1.5	Has the change sponsor undertaken a qualitative and where possible, a quantitative assessment according to the scale of the design options and the nature of the potential impacts? [CAP1616f: 3.58-3.59]	Yes, the change sponsor has undertaken a qualitative impact appraisal of the proposed airspace change, equally applying the same criterion across the design options. Only one design option was considered within the IoA (Option 1) given that Option 2 and the baseline was discounted during the DPE. Noise and LAQ have not been assessed given the altitude-based priorities and the fact that changes to flight behaviour are not expected to occur under 7,000ft. Reasons for Progression, Option 1 (from DPE): - Meets safety requirements through systemisation. - Increases effective capacity by reducing ATC workload. - Improves environmental performance by supporting continuous climb and reducing vectoring. - Good alignment with AMS strategic objectives. - Widely supported by stakeholders, including major airlines and ANSPs The IOA demonstrates, qualitatively, that Option 1 would: - Reduce GHG and fuel burn (due to straighter routing and fewer level-offs). - Improve capacity and resilience by reducing conflicts and tactical vectoring.	

		- Provide economic benefits (lower delay). - Maintain GA access and have minimal military impact.	
1.6	Is the initial options appraisal included in the change sponsor's subsequent consultation material? [CAP 1616f: 3.59]	Stage 2 IoA – Not at consultation stage (Stage 3) yet.	   
1.7	Has the change sponsor conducted an initial options appraisal of the potential impacts of each design option against the baseline scenarios? [CAP1616f: 3.60-3.62]	Yes – the change sponsor has undertaken the IoA of the design option against the baseline, for all relevant impacts noted previously. The sponsor also makes reference to the year 1 and year 10 traffic forecast at the relevant COP's (2027 vs 2036) within the appraisal and outlines the impact that changes in traffic flow will have. The sponsor has also referred to the baseline scenario where traffic flow remains unchanged, thereby comparing the design option to the baseline for a robust qualitative appraisal.	   
1.8	Does the initial options appraisal for each design options include, as a minimum: - A qualitative assessment of the likely environmental impacts, including all direct and consequential impacts - A high-level assessment of all reasonable costs and benefits involved - A qualitative assessment of the potential impacts on safety [CAP 1616f: 3.61]	The change sponsor's IoA aligns with the requirements of CAP 1616f, 3.61) The IOA is a qualitative assessment of environmental impacts at/above 7,000 ft—including the direct and consequential effects on fuel burn and greenhouse gas emissions arising from reduced vectoring, shorter track mileage, and more continuous climb profiles which are compared against the do-nothing baseline for Year 1 and Year 10 scenarios. A high-level assessment of reasonable costs and benefits, covering airline delay costs, capacity/resilience gains, and ANSP impacts (infrastructure, operational, and deployment/training costs) has also been undertaken. Section 6 presents a qualitative safety appraisal, confirming no foreseeable detriment to the high standard of safety and explaining how systemisation reduces controller workload and tactical interventions.	   

1.9	Has the change sponsor provided an indication of the preferred design option(s)? [CAP1616f: 3.63]	Yes – one preferred option, Option 1, 3 COP's.																															
1.10	Has the change sponsor used the most up-to-date, credible, and clearly referenced sources of data to assess the impacts of the baseline scenarios and design options? [CAP1616f: 3.65]	Yes, the change sponsor has provided an up-to-date traffic forecast at the changeover points in the current airspace. The sponsor has also robustly described current airspace structures and demand from flight plans at each COP. The current day data is from 2025 and as recent as possible. <i>Table 5: Actual traffic figures for 2025 [EUROCONTROL CFMU traffic data] and forecast traffic figures for 2027 and 2036.</i> <table><tr><th>COP / Year</th><th>2025 (current day scenario)</th><th>2027</th><th>2036</th><th>Growth from current day scenario</th></tr><tr><td>KONAN</td><td>215,071</td><td>220,061</td><td>239,778</td><td>11.5%</td></tr><tr><td>VABIK</td><td>16,795</td><td>17,556</td><td>21,122</td><td>25.8%</td></tr><tr><td>RINTI</td><td>2,320</td><td>992</td><td>1,023</td><td>-55.9%</td></tr><tr><td>UTFAV</td><td>1,740</td><td>3,115</td><td>3,215</td><td>84.8%</td></tr><tr><td>Total</td><td>235,926</td><td>241,724</td><td>265,138</td><td>12.4%</td></tr></table>	COP / Year	2025 (current day scenario)	2027	2036	Growth from current day scenario	KONAN	215,071	220,061	239,778	11.5%	VABIK	16,795	17,556	21,122	25.8%	RINTI	2,320	992	1,023	-55.9%	UTFAV	1,740	3,115	3,215	84.8%	Total	235,926	241,724	265,138	12.4%	
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1.11	Has the sponsor explained the methodology it adopted to reach its input and analysis results? [CAP 1616f: 3.65]	The change sponsor has used up-to-date and credible data sources, including 2025 flight-plan data, current COP distributions, and 2027/2036 traffic forecasts, and has clearly referenced these within the baseline and options development. The sponsor has also explained the methodology underpinning its inputs and qualitative impact assessments, including how forecast data, operational assumptions, environmental considerations, and ANSP impacts were derived. The level of analysis and detail (qualitative at this stage) is considered acceptable for Stage 2.																															
1.12	Has the change sponsor identified any evidence gaps in the initial options appraisal and described what evidence will be collected, and how, to fill such gaps and develop the full options appraisal?	The change sponsor has identified the key evidence gaps. Specifically in relation to fuel-burn and CO ₂ quantification, TAG-compliant economic appraisal, operational modelling, safety analysis, and ANSP cost																															

	[CAP1616f: 3.66-67]	assessment. The sponsor has set out what additional evidence will be collected in section 5.6, including the use of BADA for aircraft performance (fuel burn / GHG), TAG monetisation and further engagement with ANSPs. The sponsor explains how these datasets will be obtained and applied to develop a full, quantified options appraisal at Stage 3. A detailed safety strategy will also be developed at Stage 3.	
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2. Potential Impacts					Status
2.1	Has the change sponsor conducted an initial options appraisal of each of the design options using the following metrics and level of analysis? [CAP 1616f: 3.40]				☒ ☐ ☐ ☐
2.1.1	Communities	Not applicable	Qualitative	Quantified	Monetised
	- Noise	X			
	- Local air quality	X			
2.1.2	Airport/ANSPs	Not applicable	Qualitative	Quantified	Monetised
	- Infrastructure		X		
	- Operational		X		
	- Deployment		X		
	- Other(s)		X		
2.1.3	Commercial Airlines/General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Training		X		
	- Increased effective capacity		X		
	- Fuel burn		X		

	- Other(s)		X		
2.1.4	General Aviation	Not applicable	Qualitative	Quantified	Monetised
	- Access		X		
	- Increased effective capacity	X			
	- Fuel burn	X			
2.1.5	Wider society	Not applicable	Qualitative	Quantified	Monetised
	- Greenhouse gas emissions		X		
	- Tranquillity	X			
	- Biodiversity	X			
	- Capacity/resilience		X		
2.1.6	Military	Not applicable	Qualitative	Quantified	Monetised
	-	X			
2.1.7	Other	Not applicable	Qualitative	Quantified	Monetised
	-	X			
2.2	Has the change sponsor set out why it has not undertaken specific quantified and monetised analysis as part of its assessment? [CAP 1616f: 3.41]	Yes – the sponsor has undertaken a qualitative approach given that the early maturity of designs at Stage 2 mean it is not possible to undertake monetised appraisal at this stage. Monetisation of impacts will take place at Stage 3. Once further development of the evidence base takes place (see 1.12) the sponsor will be better able to capture monetised impacts relating to carbon and fuel burn through TAG.			☒ ☐ ☐ ☐
2.3	Has the change sponsor discussed their methodology with the CAA when quantifying and monetising impacts in the groups 'Commercial airlines' and 'Airport/air navigation'	N/A at this stage – no impacts are monetised at Stage 2.			☐ ☐ ☐ ☒

	service provider'?		
	[CAP 1616f: 3.42]		
2.4	Has the change sponsor included an initial indication of safety implications in the initial options appraisal? [CAP 1616f: 3.52]	Yes – Section 6 contains a high-level safety assessment for Option 1 and the baseline scenario. It identifies no negative safety issues for the design option citing systemisation of airspace which would reduce ATC intervention.	   

3. Economic Indicators			Status																														
3.1	Has the change sponsor provided traffic forecasts for year 1 and year 10? [CAP 1616f: 3.22]	Yes. Table 5: Actual traffic figures for 2025 [EUROCONTROL CFMU traffic data] and forecast traffic figures for 2027 and 2036. <table><tr><th>COP / Year</th><th>2025 (current day scenario)</th><th>2027</th><th>2036</th><th>Growth from current day scenario</th></tr><tr><td>KONAN</td><td>215,071</td><td>220,061</td><td>239,778</td><td>11.5%</td></tr><tr><td>VABIK</td><td>16,795</td><td>17,556</td><td>21,122</td><td>25.8%</td></tr><tr><td>RINTI</td><td>2,320</td><td>992</td><td>1,023</td><td>-55.9%</td></tr><tr><td>UTFAV</td><td>1,740</td><td>3,115</td><td>3,215</td><td>84.8%</td></tr><tr><td>Total</td><td>235,926</td><td>241,724</td><td>265,138</td><td>12.4%</td></tr></table>	COP / Year	2025 (current day scenario)	2027	2036	Growth from current day scenario	KONAN	215,071	220,061	239,778	11.5%	VABIK	16,795	17,556	21,122	25.8%	RINTI	2,320	992	1,023	-55.9%	UTFAV	1,740	3,115	3,215	84.8%	Total	235,926	241,724	265,138	12.4%	
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3.2	Has the change sponsor valued all relevant costs and benefits of the design options using: - Net present value (NPV) - Benefit cost ratio (BCR) - Cost benefit analysis (CBA)? [CAP 1616f: 3.43]	Stage 2 – No monetised impacts.																															
3.3	When appraising costs and benefits of a design option, has the change sponsor assessed them incrementally against the baseline scenarios? [CAP 1616f: 3.45]	The change sponsor has assessed all costs and benefits incrementally against the baseline scenarios, in full alignment with CAP1616f requirements. The IoA compares Option 1 against the 'do-nothing' baseline for both year 1 and year 10 traffic forecasts to assess expected impacts of the design option. The assessment																															

		is qualitative, as expected for a stage 2 submission. This comparison is applied consistently across all appraisal categories, including greenhouse gas emissions, capacity/resilience, fuel burn, economic impacts, GA access, and ANSP costs.	
3.4	Has the change sponsor expressed the values derived for the costs and benefits set out above in 'real' rather than 'nominal' terms? [CAP 1616f: 3.46]	Stage 2 – No monetised impacts.	   
3.5	Have values been reported in the base year for the assessment? [CAP 1616f: 3.47]	Stage 2 – No monetised impacts.	   
3.6	As well as taking account of inflation in real prices, has the change sponsor used a social time preference rate? [CAP 1616f: 3.48]	Stage 2 – No monetised impacts.	   

4. Summary of the Initial Options Appraisal			
4.1	What are the qualitative/strategic impacts of the design options?	Option 1 (3 COP's): Safety - Systemised route structure reduces crossing flows and controller vectoring. Lower ATC workload supports safe management of increasing demand Environmental – Reduced vectoring by ATC and systemised airspace leads to straighter routing and facilitate continuous climb procedures. Policy alignment – aligned with AMS by simplifying and creating more efficient airspace leading to better environmental performance and integration. Capacity / resilience – Reduced ATC intervention and	   

		better traffic distribution. Supports increased demand at the COP's.	
4.2	What are the overall non-monetised (quantified) impacts of the design options?	Impacts have not been quantified at this stage, but forecast traffic shows a 12.4% growth over the 5 COP's. The design option will seek to facilitate this increase in traffic safely by systemising the airspace and reducing vectoring by ATC, improving efficiency and allowing flights to fly in accordance with filed flight plans.	   
4.3	Where impacts have been monetised, what are the overall net present values (NPV) of the design options?	Stage 2 – No monetised impacts.	   
4.4	Has the change sponsor used the economic assessment to progress/discontinue design options and/or support the choice of the preferred design option(s)? If the preferred design option(s) does not have the highest NPV or benefit cost ratio (BCR), then has the change sponsor justified the reasons to progress this design option(s)?	The sponsor has undertaken a qualitative appraisal of the single design option, that has progressed from the DPE. The sponsor has assessed the design option against the baseline to test impacts but has not rejected the option as the assessment showed little detrimental impacts to the indicators assessed against the baseline.	   
5. Other Aspects			
5.1	N/A.		

6. Conclusions			
6.1	The change sponsor has undertaken a qualitative initial options appraisal of a single design option, meeting the requirements of CAP1616f satisfactorily. The sponsor has undertaken a qualitative design principle evaluation to shortlist options for assessment within the IoA, assessing the baseline, Option 1 (3 COP's), Option 2 (5 COP's). Option 1 was the only viable option that was taken forward into the appraisal. As the ACP is targeted at air routes above FL75, no impacts on flight behaviour are expected below 7,000ft and the sponsor has not assessed noise, biodiversity or tranquillity in line with 1616f requirements. The sponsor has provided an up-to-date current day traffic levels and future traffic forecast for 2027 and 2036 (Year 1 and Year 10) at all relevant COP's in the area of interest and has compared the design options to the baseline. Due to the immaturity of the design, the change sponsor has noted in the submission that <i>"the implementation of this option is, however, primarily dependent on complementary and concurrent changes within the Brussels FIR, Brussels UIR and France UIR, and NATS is continuing to work</i>		

closely alongside neighbouring ANSPs as part of this coordinated airspace change". From a CAP1616 procedural standpoint this is not an issue given the early nature of the work, but the sponsor should be cognisant of any design refinements and their impacts and notably their impact on any affected stakeholders. Therefore, a recommendation is made below.

Recommendation for stage 3: Sponsor should provide more information on any complementary/concurrent changes that are occurring in the within the Brussels FIR, Brussels UIR and France UIR that could impact any design elements and subsequent impacts on any appraisal indicators / affected stakeholders.

CAA Initial Options Appraisal Completed by	Name	Signature	Date
Airspace Regulator (Economist)	[REDACTED]	[REDACTED]	28/01/2026