

Airspace Change Process

Post Implementation Review Data Request



ACP Project Reference:	ACP-2017-70		
Title of Airspace Change:	LAMP2 Deployment 1.1		
Change Sponsor:	NATS		
CAA Decision Document:	https://airspacechange.caa.co.uk/documents/download/5219		
CAA Decision Date:	26 October 2022	AIRAC Date:	AIRAC 03/2023 23 March 2023
PIR Data Submission Requested:	23 March 2023	PIR Data Submission Required by¹:	22 April 2024 (1 yr + 28 Days)

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¹ A 28-day period to collate the data is usually requested, however an extension to the 28-day response period may be granted if sufficiently justified.

Introduction

1. The CAA's airspace change process is a seven-stage mechanism that is set out in detail in CAP 1616. Stage 7 of this process is a Post Implementation Review (PIR) that normally begins one year after implementation of the change. The PIR is an assessment of whether the anticipated impacts and benefits in the approved change and published decision are as expected and where there are differences, what steps (if any) the CAA requires to be taken.
2. Irrespective of whether the CAA decision to approve the change was made under the previous process (set out in CAP 725), all PIRs should normally be in accordance with the process requirements of CAP1616. However, when assessing the expected impacts against the actual impacts, the methodology adopted at the time of the original CAA decision should be used.
3. Once the change sponsor's PIR data submission is published on the portal, there will be a 28-day window during which any stakeholder may provide any feedback when carrying out this review about whether the impacts of the change are those expected, 12 months on.

What does this activity entail?

4. Before the CAA can commence the PIR of an airspace change, the change sponsor must provide the CAA with a PIR submission that includes data pre-requested by the CAA. This data would normally be stipulated within the decision document at Stage 5 although this is not the case for changes pre-2018 (CAP 725). This PIR data request form sets out that list of data required in order for the CAA to complete the PIR assessment. If required, the CAA may request data additionally to the data that was requested within the regulatory decision.
5. This list is not exhaustive, and some requirements will not apply in every case. Where a data request is required, it will be clearly marked with a cross in the relevant 'Yes' field.

Data requests

6. Where the data illustrates impacts other than those anticipated, the change sponsor is to provide (and evidence) their analysis of why this is the case.
7. If certain data is unavailable or is disproportionately burdensome to provide, the CAA will consider any justifications explaining the reasons for not providing the data and the CAA may adjust the requirements on this basis. Additionally, the CAA reserves the right to follow up with additional requests for data throughout the review period.
8. Any other data that would provide evidence of other benefits or impacts should also be included in an appropriate format.

Format of data

9. The format of each data request required will be stipulated below in the associated column.
10. Where data is provided to the CAA as part of the change sponsor's PIR submission, it must be in a format that is consistent with, and comparable to, data provided as part of the original consultation and formal ACP, if possible. Scaling of the data should be consistent throughout to enable a like- for-like comparison.
11. The PIR submission must be in a suitable format for publishing onto the CAA's Airspace Portal.

Instructions for the Change Sponsors

12. The change sponsor is required to commence monitoring and gathering of data on the impacts of the change as soon as the change has been implemented². On receipt of this data request form, the change sponsor should begin to collate the data required, analyse each data request (summarising the conclusions of the analysis), and submit it via email to the assigned AR Project Officer
13. in a Post Implementation Review Submission. The date on which the CAA requires the data to be submitted is stipulated at the top of this document.
14. If for any reason, the change sponsor is unable to support this data request at the time requested by the CAA, justification as to why must be submitted to the AR Project Officer. Such requests for a delay in submitting the data must be agreed with the CAA, including an agreement of an appropriate time that this activity can take place.

Methodological Note

This airspace change was implemented in conjunction with ACP-2019-012 (FRA D2) as the West Airspace Change.

Both changes are for the same lateral airspace, with the LD1.1 ACP being from 7,000ft – FL245 and the FRA D2 ACP from FL245+.

The interdependencies between these two ACPs are such that this PIR has assessed impacts across the entire airspace, for both ACPs, as providing separate data would be too complex and could arise in duplicate counting. Cumulative benefit assessments were included within the ACP submission.

15. The following general observations are to enable an overview of the effectiveness of the airspace change.
16. The change sponsor is required to submit a qualitative statement against each data request which supports the conclusion reached in each case.
17. The CAA will review the analysis of the data submitted to ensure the anticipated impacts and benefits in the approved change were as expected.

		Information of relevance in support of the request.
a)	An overview statement on whether, in the change sponsor's view, the original proposal met the intended objectives as described on the CAA's decision to approve the change.	In our view, the implementation of the proposal met the intended objectives. A systemised lower airspace route structure has been implemented. This has introduced a systemised ATS route structure using PBN routes, optimising alignment and connectivity of the ATS network with airport airspace structures and with FRA airspace above.
b)	On overview statement on whether, in the change sponsor's view, the original proposal met any conditions described on the CAA's decision to approve the change (if applicable).	There were 4 conditions in the decision document. LD1.1 - NATS published a response on the CAA portal detailing how these were met on 7 December 2022. Link here.
c)	Confirm that implementation occurred on the dates identified in the Decision Letter. If no implementation date was specified in the Decision, please state so.	The targeted implementation date was 23 March 2023. This was met.
d)	If there was a significant delay between the planned and actual implementation date, please provide an explanation.	No delay. Not applicable
e)	Identify whether any other issues of significance have occurred during the period 12 months after date of implementation ³ .	French Industrial action displaced traffic through and around West airspace to avoid French regulations. This paper details the impact on UK airspace in March-April 2023, during which there were 34 days where industrial action impacted air traffic in Europe Impact of strikes on European Aviation EUROCONTROL A NATS systems incident on Bank Holiday weekend in August 2023 created 3 days of disruption to flights. Due to this, the year-on-year comparison data has been adjusted for both pre and post implementation to remove this date period from the datasets so they are comparable.
f)	Other than normal promulgation activity (e.g. NOTAM, AIC etc.), identify what steps were undertaken to notify local aviation stakeholders that the airspace change was about to be implemented.	Normal promulgation activity was undertaken.

18. The following safety data is required to enable an assessment that the new airspace design is at least as safe as the original design, if not safer.
19. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
20. The CAA will review the statistics submitted concerning these events and assess whether the revised airspace design is a contributory factor in any incidents which have occurred. If there have been no reported events, the sponsor should articulate this in their PIR submission.

		Required for the review?	Format of the data required.	Information of relevance in support of the request.
a)	Data concerning any recurring instances of Instrument Flight Procedures (IAPs, SIDs, STARs, Holds) not being flown correctly. ⁴			There are no records of any recurring instances of the IFPs not being flown correctly.
b)	Report concerning any known Mandatory Occurrence Reports (MORs).			98 MORs recorded in the PIR period within the relevant airspace. A review of these shows no direct issue with the airspace implementation per se. In 2 incidents, a contributing factor is no CHK RTE (Field 11) by flight planners so the revised routes from the airspace change were not correctly planned. 2 incidents refer to the change in airspace as a potential factor, however these are non-recurring and are assessed as likely crew error rather than the airspace impact.
c)	Report concerning any known AIRPROX reports.			0 AIRPROX reports recorded during PIR period within the relevant airspace.
d)	Report concerning any known Air Safety Reports (ASR) ⁵ .			2 ASRs recorded during PIR period within the relevant airspace. These are both independent of the airspace changes.

Service provision/ resource issues

21. The change sponsor will need to demonstrate that adequate resources are in place to facilitate the operation of the new airspace design, and that air traffic services are being provided as forecast in the approved change without unanticipated negative impact on other airspace users.
22. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
23. The CAA will assess whether there is adequate resource in place to support the operation comparing the change sponsor's data with the approved change.

		Information of relevance in support of the request.																																																																																																																													
a)	Data on refusals of service.	No data which indicates any refusals of services within the relevant airspace.																																																																																																																													
b)	Data regarding air traffic delays.	The count of regulations and delays increased during the post period. However, the increase in delay was during the implementation period (March - June), when due to the scale of the change, additional regulations were put in place to manage the transition within the operation following the airspace change. Since the implementation period, despite a slight increase in regulations applied, the amount of minutes of delay has decreased compared to the previous period. The increase is therefore attributed to the implementation of the change rather than an impact of the change, and the change itself, once embedded, could be assessed to have realised a decrease in air traffic delays. <table><tr><th colspan="3">Number of Regulations</th><th colspan="3">Total Delay (Minutes)</th></tr><tr><th>Month</th><th>Pre</th><th>Post</th><th>Delta</th><th>Pre</th><th>Post</th><th>Delta</th></tr><tr><td>March (23rd - 31st)</td><td></td><td>1</td><td>1</td><td></td><td>73</td><td>73</td></tr><tr><td>April</td><td></td><td>13</td><td>+13</td><td></td><td>2,786</td><td>2,786</td></tr><tr><td>May</td><td>1</td><td>7</td><td>+6</td><td>676</td><td>1,701</td><td>1,025</td></tr><tr><td>June</td><td>4</td><td>9</td><td>+5</td><td>996</td><td>2,011</td><td>1,015</td></tr><tr><td>IMPLEMENTATION PERIOD TOTAL</td><td>5</td><td>30</td><td>+25</td><td>1,672</td><td>6,571</td><td>4,899</td></tr><tr><td>July</td><td>4</td><td>6</td><td>+2</td><td>1,356</td><td>1,371</td><td>15</td></tr><tr><td>August</td><td>2</td><td>3</td><td>+1</td><td>1,004</td><td>294</td><td>-710</td></tr><tr><td>September</td><td>1</td><td>5</td><td>+4</td><td>990</td><td>1,443</td><td>453</td></tr><tr><td>October</td><td>2</td><td>3</td><td>+1</td><td>997</td><td>653</td><td>-344</td></tr><tr><td>November</td><td>2</td><td></td><td>-2</td><td>350</td><td></td><td>-350</td></tr><tr><td>December</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>January</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>February</td><td>1</td><td></td><td>-1</td><td>192</td><td></td><td>-192</td></tr><tr><td>March (1st - 22nd)</td><td></td><td>2</td><td>+2</td><td></td><td>391</td><td>391</td></tr><tr><td>REMAINING PRE/ PIR PERIOD</td><td>12</td><td>19</td><td>+7</td><td>4,889</td><td>4,152</td><td>-737</td></tr><tr><td>Total</td><td>17</td><td>49</td><td>+32</td><td>6,561</td><td>10,723</td><td>4,162</td></tr></table>	Number of Regulations			Total Delay (Minutes)			Month	Pre	Post	Delta	Pre	Post	Delta	March (23 rd - 31 st)		1	1		73	73	April		13	+13		2,786	2,786	May	1	7	+6	676	1,701	1,025	June	4	9	+5	996	2,011	1,015	IMPLEMENTATION PERIOD TOTAL	5	30	+25	1,672	6,571	4,899	July	4	6	+2	1,356	1,371	15	August	2	3	+1	1,004	294	-710	September	1	5	+4	990	1,443	453	October	2	3	+1	997	653	-344	November	2		-2	350		-350	December							January							February	1		-1	192		-192	March (1 st - 22 nd)		2	+2		391	391	REMAINING PRE/ PIR PERIOD	12	19	+7	4,889	4,152	-737	Total	17	49	+32	6,561	10,723	4,162
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c)	Details of additional resource allocated, considering daily and seasonal traffic patterns.	No additional resource was allocated as a result of the airspace change.																																																																																																																													

Utilisation of Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO)

		Information of relevance in support of the request.
a)	The % of traffic achieving CCO and/or CDO, compared monthly before and after the change (e.g. comparing the month of July before and after the change).	Not required for this PIR

Infringement statistics

1. Where the revised airspace design changes the dimensions of controlled airspace, the change sponsor will need to provide an analysis of airspace infringements.
2. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
3. The CAA will assess whether the airspace design was a contributory factor in any increase in infringements⁶. Was an infringement risk identified in the approved change and has it been mitigated?

		Information of relevance in support of the request.			
a)	Data on the % change in infringements, compared on a monthly basis before and after the change.	Infringements			Monthly breakdown of infringement pre and post is shown in the table. 8 infringements recorded within the airspace during both periods. There were no infringement risks identified in the approved change, nor has there shown to be any increase as a result of the change.
		Month	Pre	Post	
		April	0	0	
		May		1	
		June		1	
		July	1	1	
		August		1	
		September	1		
		October	1		
		November	1	2	
		December			
		January	1		
		February	1		
		March	2	2	
		Total	8	8	

Traffic figures (air transport movements)

4. Traffic figures over the period will give a general overview of the nature of the operation following the implementation of the change. In addition, where the change was predicated on a forecast increase in traffic numbers, the change sponsor will need to confirm whether or not the increase forecast in the approved change has been realised.
5. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
6. The CAA will consider the extent of any difference between the predicted and actual traffic figures and the extent to which the impacts of the change can be explained by those differences.

		Information of relevance in support of the request.			
a)	Data on the actual vs predicted figures.	Predicted movements: 476,048 Actual movements: 446,735 *excl. 29/08/22-01/09/22 **excl. 28/08/23-31/08/23, 29/2/24			
b)	Data on the % change compared monthly before and after the change. Due to the impact of certain events (see General Observations 5), some dates are excluded for fair comparison between both periods.	Month	Pre-Implementation*	Post-Implementation**	% Change
		March (23 rd – 31 st)	9,783	9,466	-3.24%
		April	37,024	34,346	-7.23%
		May	42,245	40,370	-4.44%
		June	43,280	42,811	-1.08%
		July	45,574	43,485	-4.58%
		August	39,072	37,861	-3.10%
		September	40,565	43,194	6.48%
		October	40,439	42,334	4.69%
		November	30,299	31,387	3.59%
		December	32,110	32,511	1.25%
		January	30,289	30,020	-0.89%
		February	29,788	28,337	-4.87%
		March (1 st – 22 nd)	24,616	24,231	-1.56%
		Total	445,084	440,353	-1.06%
		There was slightly less traffic within the relevant airspace in the year post-deployment. Contributing factors to this reduction of traffic in the initial months after the change was implemented are identified as. 1) Flight planning issues experienced with certain flight plan service providers in coding the RAD restrictions introduced by the non-planning zones (NPZ) in the FRA portion of WEST airspace. A simplified version of the Standard Route Document (SRD) was created to mitigate this. 2) French industrial action 3) Heavily south about oceanic tracks initially			
		Reconfirmation that there have been no factors that would cause a material change to the traffic forecasts provided in support of the original proposal, i.e. that the original forecasts are still reasonable ¹⁷	No factors identified.		

¹ Includes the impacts of the Covid pandemic
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Traffic dispersion comparisons

1. It is necessary to establish whether aircraft are flying routes and/or utilising airspace forecast in the CAA's decision to approve the change. A key part of the CAA's post-implementation review will be to analyse the 'before and after' dispersal of aircraft to understand whether the new airspace design is being operated as anticipated.
2. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
3. The CAA will assess whether there have been any unforeseen or unintended operational impacts of the approved change.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Density plots that show concentration.	Not required for this PIR		
b)	Lateral and vertical analysis.	Not required for this PIR		
c)	Weather/MET impacts.	Not required for this PIR		
	Any changes to operating fleet mix.	Not required for this PIR		

4. The change sponsor will have to present any feedback directly received by aviation stakeholders operating in, or affected by, the revised airspace design.
5. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
6. The CAA will assess whether there have been any unforeseen or unintended operational impacts of the approved change.

		Any information of relevance in support of the request.
a)	Any direct feedback from airlines/ air traffic controllers.	There were a few issues in the first month after implementation with some airlines, which resulted in some airlines not flight planning as expected. This was resolved with targeted engagement with airlines to discuss route planning options. A simplified version of the Standard Route Document (SRD) was created to mitigate this. Other than this initial issue, feedback from airlines has been positive. The West implementation was discussed with airlines at the Operational Partnership Agreement (OPA) on 8 November 23, with continued support from airlines for the change. Air Traffic Controllers (ATC) operating the new airspace were overall in a positive position with the changes introduced. Both early and continued Situational Awareness and Workload Surveys have been in line with expectations with the general narrative from controllers that the sectors are feeling quieter, this against a backdrop of increased flights through the West Sector since the deployment (data up to March 2025). Lesson Learned Activities have taken place and these have been taken on board for future changes to the NERL operation. Upon deployment a dedicated working group of ATC SMEs was introduced to capture and address operational feedback received, including the identification of enhancement to ATC procedures where required.
b)	Any additional feedback from relevant flight operation sub-committee (sub-group of airport consultative committee).	No feedback received

Denied Access

7. This links to service provision/resources mentioned above. The change sponsor should provide data on refusals of access to the revised airspace design and any underlying factors.
8. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
9. The CAA will assess whether other airspace users are being impacted other than as anticipated as a result of the change⁸.

		Any information of relevance in support of the request.
	Data concerning the refusals of access (month on month/ before and after the change).	No data which indicates any refusals of access within the relevant airspace.
	Reasons for individual refusals of access.	N/A

⁸ A review of any relevant data from the CAA's safety intelligence database will also be conducted.

Utilisation of SIDs/STARs/IAPs

10. Information concerning the utilisation of the various procedures implemented as part of the change.
The information may highlight areas of unforeseen consequence, for example where a particular procedure is being used more than anticipated with a subsequent impact.
11. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
12. The CAA will assess whether the utilisation data is other than expected.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Data on the % of flights that actually flew the procedure(s) vs the total number of flights (departing or arriving), compared for the relevant time periods before and after the change.	Not required for this PIR		

Letters of Agreement (LoAs)

13. Where a Letter of Agreement detailing specific procedures was a specific condition of the CAA approval, the change sponsor will need to evidence the level of use of that agreement.
14. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
15. The CAA will assess whether the LoA is being utilised and that it is working as expected.

		Any information of relevance in support of the request.		
a)	Evidence of usage of operational agreements between ANSPs and airspace users.	The table below shows the LoAs within the relevant airspace which were amended as part of this change, and their frequency of use. There have been no further revisions due to this change and the extant procedures have held with no issues.		
b)	Data concerning the activation/ utilisation of LoA procedures.	LoA	Frequency of Use	Issues with activation/utilisation
		LoA Aberporth STU RCA-PTA	Daily	No
		LoA Brest	Daily	No
		LoA Cornwall Airport Newquay	Daily	No
		LoA Exeter	Daily	No
		LoA Jersey	Daily	No
		LoA NATS HQ AIR, HQ Navy BAE Warton Co-ordination	Daily	No
		LoA RAF Brize Norton ATSU	Daily	No
		LoA RAF Valley MOD Aberporth	Daily	No
		LoA Salisbury Plain	Daily	No
		LoA Severn Group	Daily	No
		LoA Shannon	Daily	No
		LoA Dublin	Daily	No
		LoA Oxford Airport	Daily	No
		LOA FOST	Daily	No
		LOA Cotswold	Daily	No
		LoA Lulworth Range	Weekly	No
		LoA MOD Pendine	Weekly	No
		LoA British Gliding Association (OSSEP)	Weekly	No
		LoA Castlemartin & Manorbier	Weekly	No
		LoA NATS BAE Warton RAF (U) Swanwick (AR)	Weekly	No
		LoA RAF (U) HQAir SWMDA	Weekly	No
		LoA RNAS Yeovilton	Weekly	No
		LoA Hereford Garrison	Occasional	No
		LoA Hinton Skydiving Centre	Occasional	No
		LoA Skydive Buzz Dunkeswell	Occasional	No
		LoA NATS BMFHQ ARU Status	Occasional	No
		LoA NATS, 78 Sqn(MIL) BGA Warton TRA(G)	Occasional	No

Impact on environmental factors (including noise)

16. Typically, change sponsors will undertake an updated assessment of the environmental impacts that informed the approved change proposal. This updated assessment will be informed by actual flight behaviours following implementation and presented in a comparable format to that used for the change proposal. All updated assessments must be consistent with those presented in the consultation and the submission to the CAA. When using data samples to represent periods of operation, sample periods after implementation must be comparable with any sample periods used before the change.

Depending on the scaling level of the change, updated assessments may include:

- Local air quality
- Noise
- Fuel and CO2 emissions
- Tranquillity
- Biodiversity

The change sponsor will have to either;

- a) Provide supporting evidence to confirm that the impacts presented in the approved airspace change proposal are as anticipated and the conclusions remain unchanged; or
- b) Undertake an updated assessment of the impacts presented in the airspace change proposal using actual data collected post-implementation.

17. Should the change sponsor be required to undertake an updated assessment and depending on the scaling level, the change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.

18. The CAA will review and assess the change sponsor's assessment and determine the extent to which the CAA agrees.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
Local Air Quality – required where:				
- there is a change in aviation emissions (by volume or location) below 1,000 feet; and - the location of the emissions is within or adjacent to an identified AQMA.				
a)	Ambient air quality limit concentrations (in µg.m-3).	Not required for this PIR		
b)	TAG Local Air Quality workbook outputs.	Not required for this PIR		
c)	TAG Air Quality Valuation Workbook outputs.	Not required for this PIR		
d)	Description of prediction model and version number.	Not required for this PIR		
e)	Supporting input data (for example movement logs).	Not required for this PIR		
Noise – required where:				
There is a change which alters lateral aircraft tracks or dispersion, or changes aircraft height, below 7,000 feet (above mean sea level) over an inhabited area (Level 1).				
f)	N60 (night-time) / N65 (daytime) contours.	Not required for this PIR		
g)	Leq contours (down to 51 dB LAeq,16h / 45 dB LAeq,8h).	Not required for this PIR		
h)	Leq contour population counts (in thousands), area counts (in km2) and noise sensitive area counts.	Not required for this PIR		
i)	TAG Noise Workbook – Aviation outputs.	Not required for this PIR		
j)	Operational diagrams (for example, radar track diagrams and track density diagrams).	Not required for this PIR		
k)	Confirmation of CAA CAP 2091 noise modelling category.	Not required for this PIR		
l)	Description of prediction model and version number.	Not required for this PIR		
m)	Description of modelling assumptions, for example modal split, route utilisation and respite.	Not required for this PIR		
n)	Supporting input data (for example movement logs).	Not required for this PIR		

Fuel and CO2 emissions:				
o)	Annual fuel and CO2 usage (tCO2).	Total fuel burn (T)	Fuel burn change (T)	Total CO2e (T)
		565,325	-1,189.0	1,796,816
		CO2e change (T)		-3,778.9
		Annual fuel burn and CO2e benefit is shown above, calculated by multiplying the average values by total actual traffic observed in the 361-day post-implementation period (allowing for the change in flights between the pre and post period).		
		The change has resulted in an overall decrease of fuel burn / CO2e.		
p)	Per flight fuel and Co2 usage (tCO2).	PER FLIGHT USAGE	Fuel burn (kg)	CO2e (kg)
		Pre-implementation	1,286.5	4,089.0
		Post-implementation	1,283.8	4,080.4
		Delta	-2.7	-8.6
		Flight distance (NM)		142.3
		The table shows that per flight, there was a slight reduction in fuel (2.7kg) and CO2e (8.6kg). Flight track miles have reduced by an average of 3.3NM per flight.		
		Fast time simulations prior to the change based on 2018 traffic behaviours had predicted a small fuel benefit (8kg per flight). The margin of error for per flight fuel burn is +/- 5kg for this type of analysis. Given this, and the difficulty in particular in predicting Free Route flight behaviours, it is assessed that the actual fuel /CO2e benefits realised are in line with those predicted prior to the change.		
q)	TAG Greenhouse Gases Workbook outputs.	N/A - Only required if impacts are negative (i.e. an increase in fuel/CO2).		
r)	Supporting input data	N/A – WebTAG only required if impacts are negative (i.e. an increase in fuel/CO2).		
s)	Description of prediction model and version number.	AirTop version v2.3.28B80 and BADA version 3.13/4.2 were used to simulate fuel burn per flight.		
Tranquillity:				
t)	Operational diagrams clearly identifying AONBs, National Parks, designated quiet areas and noise sensitive areas identified during Stage 1 (1B Design Principles).	Not required for this PIR		
Biodiversity:				
u)	Assessment of biodiversity factors including those identified during Stage 1 (Step 1B Design Principles).	Not required for this PIR		

Impact on International obligations

19. The change sponsor will need to demonstrate that any international obligations identified at the time of the change have been discharged.
20. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
21. The CAA assesses whether the obligations have been met.

Any information of relevance in support of the request.

a)	Details on any feedback from operators or neighbouring States.	There were no international obligations identified at the time of the change.
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Impact on Ministry of Defence operations

22. The change sponsor will need to demonstrate that there has been no unforeseen impact on Ministry of Defence operations.
23. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
24. The CAA assesses whether there has been any unforeseen impact on the Ministry of Defence that would need rectifying.

		Any information of relevance in support of the request.
a)	Details on any feedback from Ministry of Defence.	The MoD have confirmed the change resulted in no unforeseen impacts on their operations.

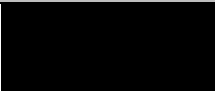
Stakeholder feedback

25. Feedback is needed to identify any issues from a community perspective that were not anticipated a part of the approved change; monthly data over the course of a year is needed so that seasonal traffic changes are taken into account.
26. The change sponsor must collate the data requests below, analyse and submit a qualitative statement against each data request which supports the conclusion reached in each case.
27. A review is made by the CAA of the change sponsors conclusions in identifying any unforeseen or unintended impacts of the change.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Feedback/complaints received by the change sponsor and CAA in the period between implementation and post-implementation review.	No complaints received.		
b)	Details of location of complaints.	No complaints received.		
c)	Feedback/complaints received via an FCS 1522 Form (UK Airspace Access or Refusal of ATS Report).	No complaints received.		

Other information of relevance (if appropriate)

		Any information of relevance in support of the request.			
a)	Measure the total CO ₂ and fuel burn for the current situation so that the impact of the change can be known.	ANNUAL USAGE			
			Flights	Fuel burn(T)	CO₂e (T)
		Pre-implementation	445,084	572,601	1,819,948
		Post-implementation	440,353	565,325	1,796,816
		Delta	-4,731	-7,276	-23,132
		The table shows the total annual fuel burn and CO₂e emissions for pre and post implementation, based on actual flight trajectories. The data uses a 361 data sample for both years, as explained on pg 5 (section e). The data shows an overall reduction in the total fuel burn and CO₂e. This is partly attributable to the reduced number of flights. The per flight data on page 15 provides detail to better assess the impact of the change.			
b)	Measure the impact for the top two operators along each ATS route for the current situation and their equivalent following implementation so that there is clarity on the benefits.	Yes ☒ No ☐	Advised by CAA this is not required		

Airspace Regulation Project Officer	
Signed:	
Name:	
Date:	17/03/2023

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