

Airspace Change Process Post Implementation Review Data Request

ACP Project Reference:	2018-65	2018-65			
Title of Airspace Change:	Swanwick Airspac	Swanwick Airspace Improvement Programme – Airspace Deployment 6			
Change Sponsor:	NATS En-Route L	td and London Luton Airport (LLA)			
CAA Decision Document:	CAP2288		- S		
CAA Decision Date:	24 Nov 2021	AIRAC Date(s):	24 Feb 2022		
PIR Data Submission Requested:	27 Mar 2022	PIR Data Submission Required by ¹ :	24 Apr 2023		

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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 likefor-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 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.
- 13. 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.

General Observations

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

-		Required for the review?	Format of the data required.	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	Yes⊠	Narrative.	

² Subject to the impacts of COVID-19 pandemic: <u>Airspace Change Proposals Post-Implementation Reviews (PIRs)</u> impacted by COVID 19 - Update February 2022

	CAA's decision to approve the change.			
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).	Yes⊠	Narrative.	
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.	Yes⊠	Narrative.	
d)	If there was a significant delay between the planned and actual implementation date, please provide an explanation.	NO	Narrative.	
e)	Identify whether any other issues of significance have occurred during the period 12 months after date of implementation ³ .	Yes⊠	Narrative.	
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.	Yes⊠	Narrative.	There were 2 recommendations stated in the Op Assessment.

Safety Data

- 17. 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.
- 18. 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.
- 19. 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	Yes⊠ No□	Narrative evidenced by data (flight data).	See specific requirement 5 in the Op Assessment.

³ CAP 1616 Part 1 The Airspace Change Process: Paragraph 270.

⁴ Any instances of IFPs not being flown correctly must be notified to the CAA.

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b)	Report concerning any known Mandatory Occurrence Reports (MORs).	Yes⊠ No□	Narrative supported by copies of the original MOR Report(s).	
c)	Report concerning any known AIRPROX reports.	Yes⊠ No□	Narrative supported by copies of the original AIRPROX Report(s).	
(p	Report concerning any known Air Safety Reports (ASR) ⁵ .	Yes⊠ No□	Narrative supported by copies of the original ASR Report(s).	

Service provision/ resource issues

- 20. 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.
- 21. 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.
- 22. 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.

82		Required for the review?	Format of the data required.	Information of relevance in support of the request.
a)	Data on refusals of service.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	See specific requirements 2 and 7 in the Op Assessment.
b)	Data regarding air traffic delays. Dates/times that flow restriction measures are applied.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
c)	Details of additional resource allocated, considering daily and seasonal traffic patterns.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	

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

- 23. Where the original change cited improvements in CCO/CDO utilisation, the change sponsor will need to provide data to demonstrate any subsequent improvement.
- 24. 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.

⁵ This may include relevant reports submitted through CHIRP.

25. The CAA will assess whether the anticipated benefit has been delivered by comparing the change sponsor's data against the approved change.

		Required for the review?	Format of the data required.	Information of relevance in support of the request.
a)	The % of traffic achieving CCO and/or CDA, compared monthly before and after the change (e.g. comparing the month of July before and after the change).	Yes⊠ No□	Narrative evidenced by supporting data (flight data).	CDA/CCO should be analysed using the standard definition set out by Sustainable Aviation in their Arrivals and Departures Code of Practice.

Infringement statistics

- 26. Where the revised airspace design changes the dimensions of controlled airspace, the change sponsor will need to provide an analysis of airspace infringements.
- 27. 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.
- 28. 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?

		Required for the review?	Format of the data required.	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.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	New and amended CTAs (DTY 21, 25 and CLN 10, 11, 12) and airspace south east of EGSS (what was EGSS CTA3)

Traffic figures (air transport movements)

- 29. 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.
- 30. 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.
- 31. 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.

⁶ A review of any relevant data from the CAA's safety intelligence database will also be conducted.

52 - 10		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Data on the actual traffic volumes Vs. forecast.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
b)	Data on the % change compared monthly before and after the change.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
c)	Confirmation that there are no factors over the 10-year forecast period 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. ⁷	Yes⊠ No□	Narrative.	

Traffic dispersion comparisons

- 32. It is necessary to establish whether aircraft (major aircraft types as defined by CAP2091) 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.
- 33. 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.
- 34. 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. Colour coded for segments of the STARs to show when an aircraft left the STAR to be vectored. (example - From JUMZI, ZAGZO and COCCU to 7000ft and 7000ft to touchdown for each RWY. ZAGZO Hold density plot showing aircraft at FL80 to FL140.)	Yes□ No□	Narrative supported by heat/density plots showing where aircraft have concentrated within the acceptable tolerances of the procedure design.	The density plots should be overlaid on the same maps/charts as the lateral vertical plot analysis. The maps/charts should be suitable such that they can be understood by non-aviation stakeholders. The individual lateral plots will be governed by the data. The vertical
b)	Lateral and vertical analysis. From 7000ft to touchdown.	Yes⊠ No□	Narrative supported by traffic density plots per 1000ft climbed, that shows aircraft dispersion along	plots can be colour coded and broken down into 1000, 2000 or 3000ft swathes depending on the procedure being considered and can be combined with the individual track plots.

⁷ Includes the impacts of COVID-19 pandemic.

			with height gained or lost for each plot.	
c)	Weather/MET impacts.	Yes⊠ No⊡	Should be considered if there was a significant weather event that can explain an anomaly in the plots.	
d)	Any changes to operating fleet mix. That have occurred since implementation for comparison with pre-implementation.	Yes⊠ No□	Narrative evidenced by supporting data (table format). Explain why, if required, that the main aircraft types used in the analysis might have changed (ie airline no longer operating).	

Operational Feedback

- 35. The change sponsor will have to present any feedback directly received by aviation stakeholders operating in, or affected by, the revised airspace design.
- 36. 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.
- 37. 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)	Any direct feedback from airlines/ air traffic controllers.	Yes⊠ No□	Narrative supported by a table showing the feed-back in relation to the change and explaining what the change sponsor has done to address the feed-back.	This is not just negative feedback. The presented format must make it clear that the change sponsor has dealt with the feedback within the context of the implemented change. See specific requirement 7 in the Op Assessment.
b)	Any additional feedback from relevant flight operation subcommittee (e.g. sub-group of airport consultative committee). For both Luton and Stansted.	Yes⊠ No□	Narrative supported by evidence of minutes or notes of actions from meetings.	

Denied Access

- 38. 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.
- 39. 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.
- 40. The CAA will assess whether other airspace users are being impacted other than as anticipated as a result of the change⁸.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Data concerning the refusals of access (month on month/ before and after the change).	Yes⊠ No□	Narrative evidenced by logged refusals. (table format).	
b)	Reasons for individual refusals of access.	Yes⊠ No□	Narrative evidenced by logged refusals. (table format).	

Utilisation of SIDs/STARs/IAPs

- 41. 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.
- 42. 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.
- 43. 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.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	The utilisation figures must match the figures in the density, lateral and vertical plots in order to see only the aircraft that flew the new procedures; the data would be skewed by VFR departures for example.

Letters of Agreement (LoAs)

- 44. 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.
- 45. 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.

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

46. The CAA will assess whether the LoA is being utilised and that it is working as expected.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Evidence of usage of operational agreements between ANSPs and airspace users.	Yes⊠ No□	Narrative.	Information relating to the application of the LoAs listed in
b)	Data concerning the activation/ utilisation of LoA procedures.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	the ACP.

Impact on environmental factors

47. Typically, change sponsors will undertake an updated assessment of the environmental impacts that were presented within the airspace 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 assessments must be consistent with those presented in the consultation and the final 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.
- 48. 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.
- 49. The CAA will review and assess the Change Sponsors' 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.
Loca	al Air Quality – required where:			
	there is a change in aviation emiss the location of the emissions is with			feet; and
a)	Ambient air quality limit concentrations (in μg.m-3).	Yes□ No⊠	Narrative describing impact on AQMA with supporting concentration data (table format).	
b)	TAG Local Air Quality workbook outputs.	Yes□ No⊠	Workbook outputs (table format).	
c)	TAG Air Quality Valuation Workbook outputs.	Yes□ No⊠	Workbook outputs (table format).	
d)	Description of prediction model and version number.	Yes□ No⊠	Narrative.	
e)	Supporting input data (for example movement logs).	Yes□ No⊠	Narrative evidenced by supporting data (table format).	
f)	Aircraft track data to confirm there are no changes below 1,000ft	Yes⊠ No□	Narrative.	
Nois	e – required where:			
	There is a change which alters late above mean sea level) over an inh			es aircraft height, below 7,000 feet
g)	N60 (night-time) / N65 (daytime) contours.	Yes⊠ No□	Noise contour figures overlaid on Ordnance Survey maps (or similar).	As noted within the CAA's Annex E Environmental Assessment the TAG assessment reported impacts below the defined LOAEL used for
h)	Leq contours (down to 51 dB LAeq,16h / 45 dB LAeq,8h).	Yes⊠ No□	Noise contour figures overlaid on Ordnance Survey Maps (or similar).	Air Navigation purposes. The PIR assessment should use corrected workbooks for pre and post implementation.
i)	Leq contour population counts (in thousands), area counts (in km2) and noise sensitive area counts.	Yes⊠ No□	Table format.	Assessments need to consider impacts at both Luton Airport (quantitative) and Stansted Airport
j)	TAG Noise Workbook – Aviation outputs.	Yes⊠ No□	Workbook outputs (table format).	(qualitative).
k)	Operational diagrams (for example, radar track diagrams and track density diagrams).	Yes⊠ No□	Operational diagrams overlaid on Ordnance Survey maps (or similar).	
I)	Confirmation of CAA CAP 2091 noise modelling category.	Yes⊠ No□	Narrative.	
m)	Description of prediction model and version number.	Yes⊠ No□	Narrative.	

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n)	Description of modelling assumptions, for example modal split, route utilisation and respite.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
0)	Supporting input data (for example movement logs).	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
Fuel	and CO2 emissions:			
p)	Annual fuel and CO ₂ usage (tCO ₂).	Yes⊠ No□	Table format.	Impacts for both Luton Airport and Stansted Airport should be reported.
q)	Per flight fuel and CO ₂ usage (tCO ₂).	Yes⊠ No□	Table format.	
r)	TAG Greenhouse Gases Workbook outputs.	Yes⊠ No□	Workbook outputs (table format).	
s)	Supporting input data	Yes⊠ No□	Narrative evidenced by supporting data (table format).	
t)	Description of prediction model and version number.	Yes⊠ No□	Narrative.	
	quillity:			
u)	Operational diagrams clearly identifying AONBs, National Parks, designated quiet areas and any noise sensitive areas identified during Stage 1 (1B Design Principles).	Yes⊠ No□	Narrative and Operational diagrams overlaid on Ordnance Survey maps (or similar).	
Biod	liversity:			
v)	Assessment of biodiversity factors including any identified during Stage 1 (Step 1B Design Principles).	Yes⊠ No□	Narrative.	

Impact on International obligations

- 50. The change sponsor will need to demonstrate that any international obligations identified at the time of the change have been discharged.
- 51. 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.
- 52. The CAA assesses whether the obligations have been met.

	Required for the review?		Any information of relevance in support of the request.	
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a)	Details on any feedback from operators or neighbouring States.	Yes□ No⊠	Narrative.	
	Oldico.		ly .	

Impact on Ministry of Defence operations

- 53. The change sponsor will need to demonstrate that there has been no unforeseen impact on Ministry of Defence operations.
- 54. 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.
- 55. The CAA assesses whether there has been any unforeseen impact on the Ministry of Defence that would need rectifying.

		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
a)	Details on any feedback from Ministry of Defence.	Yes⊠ No□	Narrative.	Should be provided under the LoA feedback from 78 Sqn Swanwick Mil and USAFE

Stakeholder feedback

- 56. 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.
- 57. 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.
- 58. 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.
а)	Feedback/complaints received by the change sponsor and CAA in the period between implementation and post- implementation review from all relevant stakeholders.	Yes⊠ No□	Narrative evidenced by supporting data (table format).	(Anonymised as required).
b)	Details of location of complaints(Under the ZAGZO Hold and between 7000-5000ft in clusters of >10 respondents).	Yes⊠ No□	Ordinance Survey map identifying pinned locations.	

Other information of relevance (if appropriate)

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		Required for the review?	Format of the data required.	Any information of relevance in support of the request.
а)	The same 121-day period as used in the supplement data set, to show how many aircraft utilising the 8 impacted EGSS SIDs are making the new vertical restrictions at the Gates, plus relevant dispersion plots to show now unexpected lateral deviations	Yes⊠ No□	Same format as the supplement (v1.4) provided, so that a direct comparison can be made.	
b)	How often have the new holds been used; ZAGZO, WOBUN and MUCTI.	Yes⊠ No□	Time periods that the holds have been used and the total number of EGGW arrivals that completed at least 1 hold.	
c)	Evidence to show that the claimed increase of c.30% resilience (see Final Options Appraisal) is met.	Yes⊠ No□	Narrative and redacted raw data.	
d)	Feed-back received from other airspace users impacted by the changes.	Yes⊠ No□	Narrative and redacted raw data.	
e)	Human Performance Monitoring information on controller performance.	Yes⊠ No□	Narrative and redacted raw data.	

Airspace Regulation Project Officer	
Signed:	
Name: (Technical Regulator)	
Date: 21/02/2022	

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