

CAP 1886 ANNEX E

CAA Analysis of SurveyMonkey feedback from stakeholders and members of the public

Introduction

1. For the Post Implementation Review (PIR) the change sponsor was required to demonstrate how the actual impacts of the airspace change compare with what was set out in the airspace change proposal and the preferred option on which stakeholders were consulted. The PIR has been undertaken in line with the CAP 725 process with an element of CAP 1616 '[Guidance on the regulatory process for changing airspace design including community engagement requirements](#)' PIR process applied. This specifically included the publication of data received from the change sponsor and the opening of a 28-day feedback window via SurveyMonkey, in which any stakeholder could provide any feedback on the data received and the impact of the change.
2. There was a slightly longer PIR data collection period from July 2016 through to September 2017 because of an issue with some Boeing aircraft not flying the procedure correctly; this was subsequently addressed by a minor modification to the RNAV-1 SID design which was introduced in February 2017. London Luton Airport Operations Limited (LLAOL) hence provided data to the CAA for the two periods of operations at London Luton Airport, firstly between July 2016 and November 2016, then from 2 February 2017 to 30 September 2017.
3. The change sponsor provided data covering the period from July 2016 to November 2016 as follows:
 - Gate analysis
 - Vertical profiles of departures
 - Complaints data submitted to LLAOL
 - Track dispersion plots and track density plots
4. The change sponsor provided data covering the period from February 2017 to September 2017 as follows:
 - Daily track plots
 - Gate analysis
 - Monthly track dispersion plots and track density plots
 - Monthly track dispersion plots by aircraft type
 - Monthly track dispersion plots by airline
 - Monthly vertical profiles of departures
 - Complaints data submitted to LLAOL
 - Meteorological data
 - Community noise reports
5. The Change Sponsor's data analysis and documentation was published on the [CAA website](#) on 30 May 2018 and stakeholders were invited to submit their

own observations through the online SurveyMonkey platform. The feedback survey closed on Monday 2 July 2018.

6. A total of 175 SurveyMonkey responses were received answering 16 questions. Three responses were discounted due to test submissions and duplicate responses.
7. We have reviewed the feedback received, detailed our findings and provided appropriate comment to the feedback cross-referring to the main PIR report where appropriate. Our comments to the relevant feedback are in blue.

Main themes of SurveyMonkey Stakeholder Feedback

8. The following main themes were identified from respondents' feedback:

- (1) Technical nature of data provided by change sponsor. Feedback was received that the change sponsor's data was too technical to understand and provide meaningful responses and did not address increased aircraft traffic levels since implementation of the airspace change. The data provision was referred to as insufficient, for example; monitoring conducted in an off-peak period for only 3 months, a lack of comparable noise data pre and post change, a lack of comparable vertical profiles data pre and post the airspace change, insufficient monitoring of noise levels in the Marshalswick and Sandridge areas and no Heathrow flight data provided.

CAA Comments:

The PIR data was provided for the CAA rather than stakeholder review to enable the CAA to conduct the PIR. The data met the CAA requirements as shown on Annex A; the CAA was thus able to conduct the PIR review from this data. The change concerned replication of the conventional SID, and was not an enabler for any increase in traffic levels. Data was collected over two summer periods. Noise monitoring was conducted at Sandridge. There was no CAA requirement for the sponsor to monitor noise levels in the Marshalswick area of St Albans given its close proximity to Sandridge. There was no requirement to provide Heathrow flight data as Heathrow flight paths are not associated with, or connected to this change, and additionally, the Heathrow interactions are unchanged and have no implications for the RNAV-1 SID design.

- (2) RNAV concentration and increase in aircraft activity. A common theme was the impact of RNAV concentration of flights down a narrow corridor over more densely populated areas than before and that this had not been

anticipated from the airspace change. This concentration, when coupled with an increased frequency in aircraft activity, had resulted in noise and visual intrusion over areas little affected previously. The frequency of flights on the RNAV Runway 26 BPK route was referred to as being every 3 minutes.

CAA Comments:

The impacts of concentration were anticipated by the CAA in the CAA decision making process as described in the Environmental Assessment report and our 2015 decision. The ACP was not an enabler for an increase in flights. The CAA track analysis (Annex C) and the PIR report determines whether the traffic patterns and impacts are as expected.

- (3) Interaction of London Luton operations with other airports' traffic. Respondents stated that the combined impact of the interaction of Luton departures with Heathrow traffic resulting in Luton departures being unable to reach their optimal altitude quickly enough should have been addressed.

CAA comments:

The impacts of other traffic patterns such as Heathrow flight paths are not a consideration for this change proposal and the PIR review, and in respect of Heathrow traffic patterns, the Heathrow interactions are unchanged. The vertical climb profile of the RNAV-1 SID is unchanged from that of the conventional SID. Climb above the designed vertical profile is normally at the discretion of the air traffic controller and depends on the proximity of other traffic; this issue was not in the scope of the change proposal and is not a matter for the PIR.

- (4) Increased noise impact early in the morning and late at night. A common theme was increased noise impact from flights both early in the morning and at night with respondents being woken by the noise of aircraft from just before 6am and flights continuing until midnight and occasionally during the night.

CAA comments:

The impacts for noise in the early morning and late evening/night time is not a matter for the change proposal, nor was this proposal an enabler for increased flights during these periods; this is the responsibility of the appropriate planning authority responsible for the use of London Luton Airport, and does not form part of the airspace change process.

- (5) Impact of increased noise on mental and physical health and wellbeing, including sleep deprivation and impact on family life. Many respondents stated that the increase in aircraft noise had resulted in sleep deprivation with their physical and mental health and wellbeing suffering as a result. Illnesses experienced or exacerbated included anxiety and stress, blood pressure, exhaustion, diabetes and headaches. Some residents stated that they had not been able to get to sleep or had been woken from sleep and expressed concern for potential short or longer-term impacts of sleep deprivation including falling asleep while driving, obesity and dementia. The impact on home life included being unable to hold a conversation with windows open, being disturbed while working from home and an inability to enjoy homes and gardens. Some respondents referred to the effect on their children including disruption to sleep and some residents wished to move home due to the increased noise impact.

CAA Comments:

Aircraft noise impacts are covered in the Environmental Assessment section within the main PIR document. The intention of the change proposal was to replicate the existing conventional SID using RNAV-1 technology. The ACP was not an enabler for any increase in traffic levels. The impacts for noise in the early morning and late evening/night time is not a matter for the change proposal nor was this proposal an enabler for increase flights during this period and does not form part of the airspace change process. Any increase in traffic levels is a result of airport planning approvals and is not a matter for the CAA. This is also addressed in the main PIR document.

- (6) Aircraft vectoring. Impact of continual tactical vectoring of low flying flights to the south and east of the Harpenden Road/Railway Line was a common theme with resulting noise disturbance for areas including Sandridge, Marshalswick and Jersey Farm.

CAA Comments:

The intention of the change proposal was to impose a radar vectoring restriction until departures had crossed the St Albans to Harpenden railway line unless necessary for operational safety reasons (such as weather avoidance or to avoid other traffic). The resultant traffic patterns evident following the change indicates vectoring is occurring more frequently than was expected by the CAA, but the resultant traffic pattern is no worse than before the change in terms of the lateral dispersion and therefore the impact of this is no worse than it was before the change. This is covered in the CAA PIR report and Annex C.

(7) Areas affected. Stakeholders referred to the following areas being affected by a significant increase in noise: Harpenden, St Albans (including Batchwood, New Greens and Marshalswick), Sandridge including Heartwood Forest and Jersey Farm, Southdown, Redbourn, Childwickbury, Hatfield, Hemel Hempstead, Caddington, Wheathampstead and West Essex. Google Earth landscape images are included within this Annex at page 34. Participants' postcodes were plotted on Google Earth with overlays including google maps (Figure 2) and the RNAV-1 Runway 26 Brookmans Park SID overlay (Figure 1).

CAA comments:

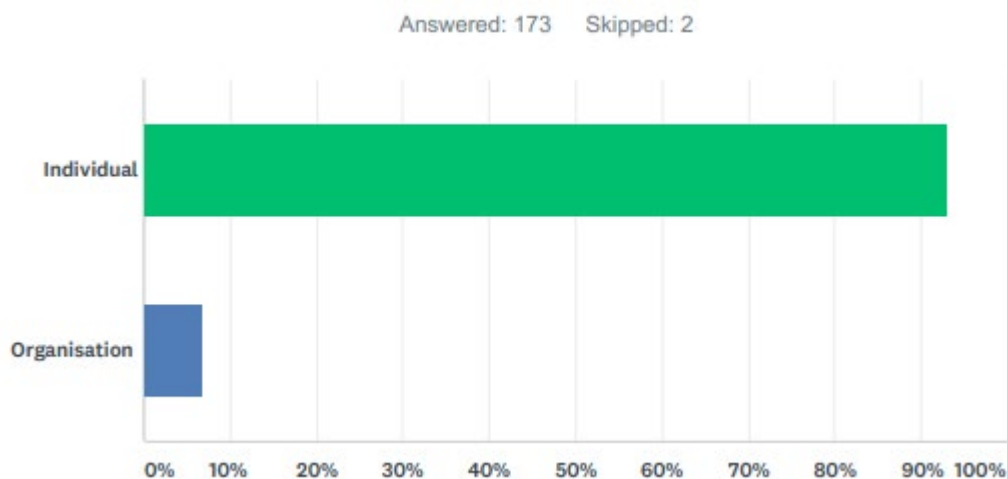
Following a review of the data LLAOL submitted for the purpose of this PIR, the anticipated noise impacts from the introduction of the RNAV-1 SIDs are as the CAA expected. For further details, please refer to the main PIR document.

An analysis of enquiries/complaints received from stakeholders by both LLAOL and the CAA relating to the implementation of this airspace change can be found at pages 46 to 49 of this Post Implementation Review report.

Summary of SurveyMonkey questions and responses

The online survey invited respondents to answer 16 questions. Questions 1 and 2 asked respondents to submit their name, postcode and email address and question 3 asked whether responses were being submitted by individuals or on behalf of organisations. Questions 4 and 13 invited "yes" or "no" answers only. The raw data from questions 5 to 12 and questions 14 to 16 was analysed and the results are presented in this section using graphs and commentary.

Question 3 asked: "Are you completing this feedback survey on behalf of an organisation or as an individual response?"

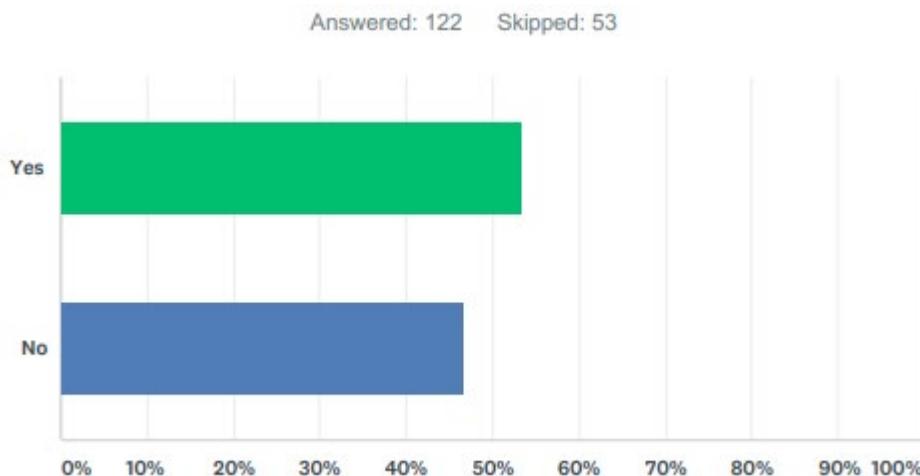


- 173 responders answered this question, with 161 completing the survey as an individual and 12 completing the survey on behalf of an organisation
- 2 skipped this question

3(1) The organisations who responded to the online survey included:

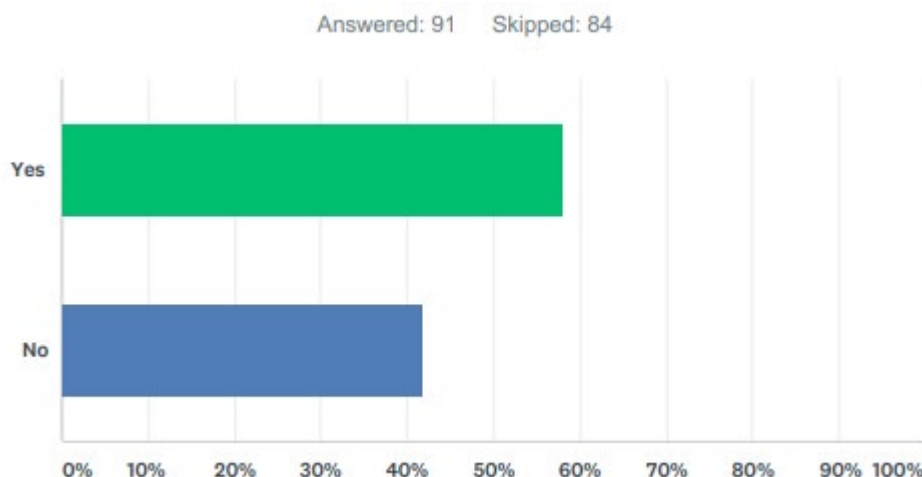
- Luton and District Association for the Control of Aircraft Noise (LADACAN)
- Hertfordshire County Council
- St Albans City and District Council
- Easters and Rodings Action Group
- St Albans Quieter Skies (STAQS)
- People Against Intrusive Noise
- Stop Low Flights from Luton
- Flamstead Parish Council Airport Working Group
- HarpendenSky
- Childwickbury Stud

Question 4 asked “Do you have feedback on the sponsor’s published data?”



- Respondents were invited to answer ‘yes’ or ‘no’ to question 4
- 122 responders answered this question, with 65 answering ‘yes’, going on to provide feedback and 57 answering ‘no’
- 53 skipped this question

Question 5 asked “The data provided meets the requirements outlined in Stage 7 of CAP 725. In your opinion is there missing or incomplete data?”



- 91 responders answered this question
- Of the 91 who responded, 53 answered 'yes' while 38 answered 'no'
- 84 skipped this question
- Those who answered 'yes' were asked to provide 'detail of what is missing'.

The key themes from question 5 are set out below:

5(1) Complaints

- Questions around complaints received by LLOAL by postcode and why the first section of the postcode is only available.

CAA Comment:

For GDPR purposes the change sponsor does not publish full postcodes.

- General distrust in complaints data (in terms of numbers of complaints being inaccurate)

CAA Comments:

The CAA takes into account the number of complaints submitted to LLAOL and the CAA. Our analysis of complaints is covered in the main CAA PIR report and Annex D.

5(2) Noise analysis

- General distrust in the noise data
- Insufficient monitoring of noise levels in the Marshalswick area of St Albans
- Criticisms of Community Noise Report Sandridge. This includes the criticism is aimed at the lack of consideration from the increased traffic levels since implementation. There are also observations that the noise monitoring was

undertaken in an 'off peak' period and was limited to three months of monitoring. There were also comments around the report does not reflect local weather characteristics

- Inadequate noise monitoring in the Sandridge area
- Lack of noise data pre and post change
- Lack of consideration of the impacts of increased noise and pollution
- Detail lacking on weather related impacts on noise

CAA Comments:

The CAA requested a range of noise data, details of which are listed in Annex A. The data submitted by LLAOL was sufficient for the purpose of this PIR.

Noise monitoring was conducted at South Luton and Sandridge as requested by the CAA in the Environmental Assessment document associated with the original ACP submission.

Furthermore, noise monitoring was also carried out by LLAOL at Slip End, Flamstead, Redbourn, Hemel Hempstead and St Albans, with pre and post-implementation data being compared in **table 7** in the main PIR document. Single aircraft event noise measurements in the form of average noise level L_{Amax} (maximum sound level) noise monitoring data was provided to the CAA. Average noise level L_{Amax} data is not influenced by changes to movements or noise generated from other departure routes. Further explanation of the noise monitoring conducted by LLAOL for the purpose of this PIR is in the main PIR document.

The intention of the change proposal was to replicate the existing conventional SID using RNAV-1 technology. The ACP did not enable any increase in traffic levels, nor did it enable any increases in traffic operating in the early morning or late evening/night periods. Any increase in traffic levels is a result of airport planning approvals and does not form part of the airspace change process, hence this is not a matter for the CAA. This is also addressed in the main PIR document.

There was no requirement for the monitoring of noise levels in Marshalswick for the purpose of this PIR.

With reference to the feedback concerning pollution, in addition to the assessment of noise, local air quality is covered in the main PIR document.

The use of noise monitoring over a set period of time accounts for the inherent variability of conditions, such as the weather. This variability is subsequently represented in the data recorded by the noise monitors.

Noise data was collected by LLAOL over two summer periods, as requested by the CAA in Annex A.

5(3) Gate analysis

- Lack of direction key for North, South, East and West
- Do not show percentage distribution across altitude bands
- Incomplete and misleading

CAA Comment:

The gate analysis provided by LLAOL meets the CAA requirements as listed in Annex A. A review of the gate analysis is covered in the main PIR report.

5(4) General comments on data set data feedback

- Lack of enough detail on flight altitudes
- Too detailed for general householders
- Lack of detail around population source data
- Not clear about the impacts of RNAV
- No indication around the number of people who are overflowed because of the change
- Comments on impacts of tactical vectoring
- Aircraft not always contained within the SID
- No given definition of what is meant by 'overflowed' communities (lacking in the environmental impact assessment too)
- Data taken from areas which exclude Harpenden
- Does not consider the growth of the airport (traffic)
- Stage 7 of CAP 725 contains very little guidance as to what data is required to be provided as part of the PIR

CAA Comments:

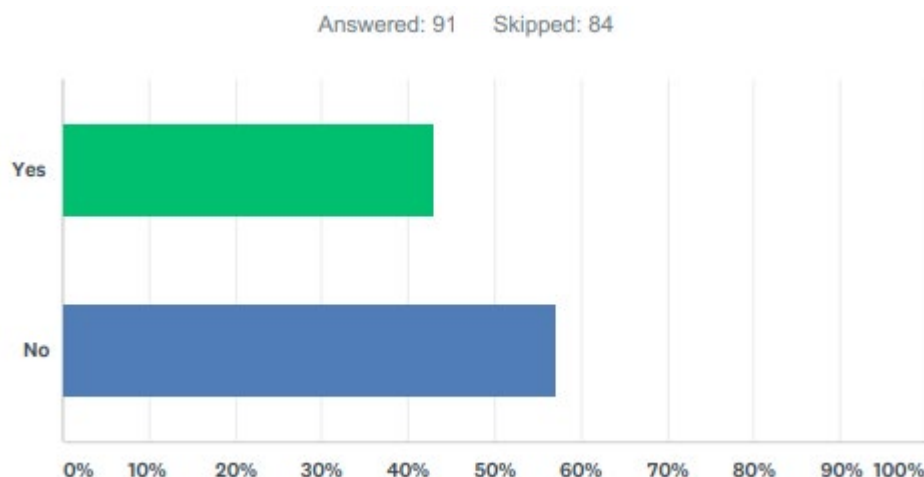
We are content that the data provided was what the CAA requested in order for the CAA to conduct the PIR and determine whether the impacts of the change proposal are what was expected when we made our 2015 airspace change decision. Our PIR report covers these aspects.

The CAA specifically looks at data 12 months after implementation, in this case 15 months following a modification to design. Respondents have been questioning why there are not data sets up to 2018. The last date required by the Sponsor to provide information on the performance of the ACP was September 2017 (following the minor modification referred to in Annex E, paragraph 1). A sizable percentage of the comments are being submitted from today's perspective, which is in relation to traffic growth levels up to 2018.

The PIR data set was intended for the CAA (as a CAP 725 submission there is no requirement on the Sponsor to adapt the way the data is presented for public consumption). The publishing of the data aids transparency because the public have visibility of the exact data sets that the CAA will be conducting

the review on. The purpose of the feedback window is to give the public with the opportunity to provide the CAA with any feedback they wanted the CAA to consider when carrying out this review.

Question 6 asked “Is the data understandable?”



- 91 responders answered this question
- Of the 91 who responded, 39 answered ‘yes’ while 52 answered ‘no’
- 84 skipped this question
- Those who answered ‘no’ were asked to ‘outline what is not understandable’.

The Key themes from question 6 are set out below:

6(1) General comments on data

- Too technical for non-experts and not designed in a way that makes it readily understandable for most people
- Lacks accompanying numerical tables showing increase in air traffic – unable to see the ‘bigger picture’
- Fails to show the change in total noise impact for those communities beneath the centreline
- Insufficient data and analysis limits ability to contribute in an informed way
- Various terms are undefined and references to technical requirements are not explained

CAA Comments:

The data in the PIR was intended for the CAA (as a CAP 725 submission there is no requirement on the Sponsor to adapt the way the data is presented

for public consumption). The publishing of the data aids transparency because the public have visibility of the exact data sets that the CAA will be conducting the review on.

A general theme concerning the increase in traffic is provided by the CAA in the main CAA PIR report.

The impacts of noise are covered in the main CAA PIR report.

In our PIR report, we have attempted to use as much non-technical language as is possible in order to assist understanding of our completed review and analysis.

For future PIR submissions, the guidance in CAP 1616 advises sponsors with detailed requirements for PIR data submission.

6(2) Gate analysis

- Lack of direction key for North, South, East and West
- Depiction of the gate is misleading
- No precise location for centre of gate

CAA Comment:

The gate analysis provided by LLAOL meets the CAA requirements as listed in Annex A. A review of the gate analysis is covered in the main PIR report.

Feedback was received that the change sponsor's data was too technical to understand. The data was provided in the format required by the CAA and published following the decision to apply CAP 1616 principles to this Review. In future change sponsors will be required to present their material in a manner that can be understood by all stakeholders in accordance with CAP 1616 requirements.