

[REDACTED]

24 August 2016
EIR Reference: E0002870

Dear [REDACTED]

I am writing in respect of your recent request, of 2 August 2016, for the release of information held by the Civil Aviation Authority (CAA).

Your request:

- 1. The noise data used to generate and/or validate the noise contours maps produced by the CAA/ERCD for Edinburgh airport for 2011.*
- 2. The noise data used to generate and/or validate the noise contours maps produced by the CAA/ERCD for Edinburgh airport for the TUTUR trial of 2015.*
- 3. The noise data used to generate and/or validate the noise contours maps produced by the CAA/ERCD for Edinburgh airport for 2014.*

It is fair to expect that the noise data will include the following information:

- noise monitor ID*
- monitor trigger threshold*
- date*
- time*
- SEL*
- Duration*
- Lmax*
- Lmax time*
- Correlated flight no*

Having considered your request in line with the provisions of the Environmental Information Regulations 2004, we are able to provide the information below.

Although the CAA produced the noise contours maps for Edinburgh airport, using the CAA's Civil Aircraft Noise CONtour model, ANCON, we do not hold measured aircraft noise data for Edinburgh airport.

Civil Aviation Authority

Aviation House Gatwick Airport South Gatwick RH6 0YR www.caa.co.uk

Telephone 01293 768512 foi.requests@caa.co.uk

In producing noise contours for Edinburgh airport and other UK regional airports we rely on noise measurements obtained from arrival and departure operations to/from Gatwick airport. We feel that the mix of operations, predominantly by charter and low cost carriers, are well represented by the measurement data from Gatwick airport.

While we do not hold noise measurement data for Edinburgh airport, since your request related to noise contours that were produced by the CAA using data for Gatwick airport we have provided summary measurement data for Gatwick airport.

In disaggregating and analysing noise measurements, we separate data by mode of operation (arrival/departure), by aircraft type and in important cases we also separate measurements by specific airframe/engine types. For example, we separate the Airbus A320 family into the separate A319/320/321 airframe variants and separate each airframe into the two distinct engine variants available, making a total of six aircraft noise categories for the A320 family.

The core noise indicator in the UK is the Equivalent Sound Exposure Level, Leq. This can be measured continuously using a Sound Level Meter (SLM), however calculated Leq levels are based on the Sound Exposure Level (SEL), rather than the maximum noise level, Lmax. Thus we do not hold measurements of Lmax. SEL differs from Lmax because it takes into account the duration of a noise event. A noise event with the same Lmax, but lasting twice as long, would have an SEL 3dB higher than the shorter event. A typical aircraft event SEL is around 10dB higher numerically than the Lmax for the same event. Because Lmax is a component input to the prediction of SEL we are, however, satisfied we can estimate Lmax and indeed one of the contours you made reference to was an Lmax noise footprint.

Noise measurement data is collected and analysed on an annual basis, the data being used to update the ANCON model database.

Your request referred to three sets of noise contours

- (i) 2011 noise contours – calculated using the 2011 ANCON Gatwick database
- (ii) 2015 TUTUR trial noise footprints - calculated using the 2014 ANCON Gatwick database
- (iii) 2014 noise contours - calculated using the 2014 ANCON Gatwick database

Tables 1 and 2 present departure SELs for 2011 and 2014 respectively. We have included data for the top five aircraft types contributing the most energy, i.e. the five aircraft types that contribute the most to the size of the noise contours.

Table 1: Departure noise SELs for 2011

Airframe/engine type (-)	Distance from start of take-off roll (m)	Number of measurements (-)	Log average SEL (dBA)	SD (dB)	95% confidence interval (dB)
A319/CFM engines	5700	5483	87.4	1.1	0.03
A319/CFM engines	6200	5308	86.0	1.4	0.04
A319/CFM engines	6300	2361	85.3	1.5	0.06
A319/CFM engines	6600	1005	85.1	1.9	0.12
A319/CFM engines	6700	982	85.1	1.1	0.07
A319/CFM engines	13600	263	76.9	1.7	0.22
A319/CFM engines	15000	3391	75.7	2.3	0.08
A319/CFM engines	19300	479	72.7	2.6	0.23
A319/CFM engines	21400	402	71.8	2.2	0.22
A320/CFM engines	5700	3375	88.1	1.4	0.05
A320/CFM engines	6200	2982	86.8	1.6	0.06
A320/CFM engines	6300	1582	86.1	1.8	0.09
A320/CFM engines	6600	632	86.2	2.1	0.17
A320/CFM engines	6700	635	86.0	1.1	0.09
A320/CFM engines	13600	235	79.0	2.0	0.26
A320/CFM engines	15000	1782	77.1	2.5	0.12
A320/CFM engines	19800	391	74.7	3.1	0.31
A320/CFM engines	21500	206	73.3	2.5	0.35
A330	5700	522	92.8	1.9	0.17
A330	6200	376	91.2	3.5	0.36
A330	6300	405	90.9	2.6	0.26
A330	6600	104	91.2	1.8	0.36
A330	6700	111	91.3	1.7	0.33
A330	12100	19	86.8	1.4	0.64
A330	13700	21	84.6	2.0	0.88
A330	15100	226	83.4	2.4	0.32
A330	18500	89	80.1	4.2	0.88
B737-300	5700	3110	89.8	1.4	0.05
B737-300	6200	1714	88.3	2.0	0.10
B737-300	6300	2096	87.8	1.9	0.08
B737-300	6600	567	88.1	2.7	0.23
B737-300	6700	590	88.3	1.1	0.09
B737-300	13600	194	80.0	2.0	0.28
B737-300	15000	1611	79.0	2.3	0.12
B737-300	18900	735	75.5	2.9	0.21
B737-300	21500	145	76.4	2.5	0.41
B737-800	5700	2071	88.6	1.5	0.07
B737-800	6200	1265	87.2	2.2	0.13
B737-800	6300	1147	86.3	1.9	0.11
B737-800	6600	304	86.8	2.7	0.31
B737-800	6700	353	86.9	1.6	0.17
B737-800	13600	211	78.6	2.2	0.30
B737-800	15100	604	77.8	2.4	0.19
B737-800	19200	219	75.1	2.8	0.38
B737-800	21600	16	75.1	3.3	1.63

Table 2: Departure noise SELs for 2014

Airframe/engine type (-)	Distance from start of take-off roll (m)	Number of measurements (-)	Log average SEL (dBA)	SD (dB)	95% confidence interval (dB)
A319/CFM engines	5700	6397	87.1	1.1	0.03
A319/CFM engines	6300	4479	86.1	1.5	0.05
A319/CFM engines	6400	4260	85.6	1.2	0.04
A319/CFM engines	6700	3521	85.5	1.1	0.04
A319/CFM engines	8000	1696	84.1	1.4	0.07
A319/CFM engines	13600	375	76.5	1.9	0.20
A319/CFM engines	14600	24	76.3	2.4	0.98
A319/CFM engines	15100	2355	76.6	2.1	0.09
A319/CFM engines	19300	399	72.1	2.2	0.22
A319/CFM engines	23200	257	70.6	2.4	0.30
A320/CFM engines	5800	3457	87.6	1.1	0.04
A320/CFM engines	6300	2299	86.8	1.8	0.07
A320/CFM engines	6400	2388	86.1	1.3	0.05
A320/CFM engines	6700	1857	86.3	1.1	0.05
A320/CFM engines	8000	751	84.8	1.6	0.12
A320/CFM engines	13600	119	77.6	1.9	0.34
A320/CFM engines	14800	10	77.8	2.9	1.81
A320/CFM engines	15100	1358	77.5	2.2	0.12
A320/CFM engines	19300	330	74.1	2.3	0.25
A320/CFM engines	23200	124	71.2	2.3	0.41
A330	5800	417	92.3	2.4	0.24
A330	6300	309	91.2	2.2	0.25
A330	6400	210	90.4	2.6	0.36
A330	6700	230	91.2	2.4	0.31
A330	13700	29	83.7	3.0	1.11
A330	15200	227	84.2	3.4	0.46
A330	19300	34	78.9	2.2	0.76
A330	23200	20	77.8	3.3	1.49
B737-300	5700	1714	89.9	1.5	0.07
B737-300	6300	1077	88.8	1.9	0.12
B737-300	6400	891	88.2	2.3	0.15
B737-300	6700	929	88.8	1.6	0.11
B737-300	8000	394	86.2	1.1	0.11
B737-300	13600	70	79.9	1.8	0.44
B737-300	14600	15	79.1	2.1	1.11
B737-300	15100	617	79.5	2.3	0.19
B737-300	19300	115	76.5	2.3	0.44
B737-300	23300	83	74.6	2.3	0.50
B737-800	5700	2862	88.5	1.3	0.05
B737-800	6300	1241	87.6	2.1	0.12
B737-800	6400	1637	86.8	1.7	0.08
B737-800	6700	1613	87.3	1.4	0.07
B737-800	8000	258	84.6	2.1	0.27
B737-800	13700	132	78.8	1.9	0.32
B737-800	15100	824	77.9	2.3	0.16
B737-800	19200	438	75.1	2.4	0.23
B737-800	23300	189	73.4	2.7	0.39

If you are not satisfied with how we have dealt with your request in the first instance you should approach the CAA in writing at:-

Caroline Chalk
Head of External Information Services
Civil Aviation Authority
Aviation House
Gatwick Airport South
Gatwick
RH6 0YR

caroline.chalk@caa.co.uk

The CAA has a formal internal review process for dealing with appeals or complaints in connection with requests under the Environmental Information Regulations. The key steps in this process are set in the attachment.

Should you remain dissatisfied with the outcome you have a right to appeal against the decision by contacting the Information Commissioner at:-

Information Commissioner's Office
FOI/EIR Complaints Resolution
Wycliffe House
Water Lane
Wilmslow
SK9 5AF

<https://ico.org.uk/concerns/>

If you wish to request further information from the CAA, please use the form on the CAA website at <http://publicapps.caa.co.uk/modalapplication.aspx?appid=24>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M Stevens'.

Mark Stevens
External Response Manager

CAA INTERNAL REVIEW & COMPLAINTS PROCEDURE

- The original case to which the appeal or complaint relates is identified and the case file is made available;
- The appeal or complaint is allocated to an Appeal Manager, the appeal is acknowledged and the details of the Appeal Manager are provided to the applicant;
- The Appeal Manager reviews the case to understand the nature of the appeal or complaint, reviews the actions and decisions taken in connection with the original case and takes account of any new information that may have been received. This will typically require contact with those persons involved in the original case and consultation with the CAA Legal Department;
- The Appeal Manager concludes the review and, after consultation with those involved with the case, and with the CAA Legal Department, agrees on the course of action to be taken;
- The Appeal Manager prepares the necessary response and collates any information to be provided to the applicant;
- The response and any necessary information is sent to the applicant, together with information about further rights of appeal to the Information Commissioners Office, including full contact details.