

Getting More from Measured Noise

FORUM23, Lisbon



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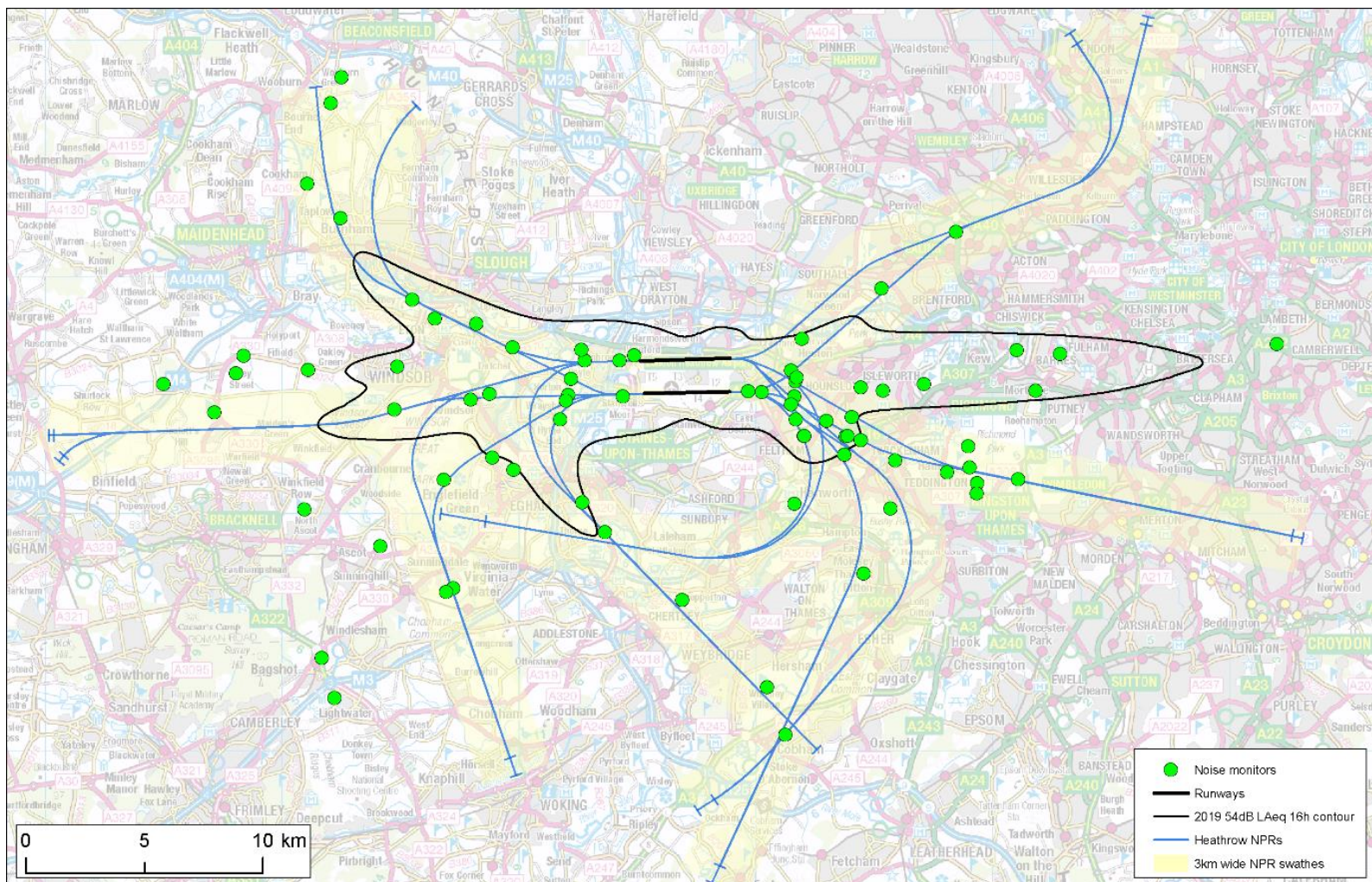
Environmental Research and Consultancy Department (ERCD)

- ERCD operates a consultancy service to customers such as UK government, airport operators and local authorities.
- Develop and maintain the UK civil aircraft noise contour model ANCON on behalf of the DfT.
- Carry out noise modelling and noise monitoring around UK airports. Publish reports on noise impacts.
- Provide technical advice to government to support the development of policy.

Noise management at UK airports

- Heathrow, Gatwick and Stansted 'designated' for noise management by UK government under section 78 of the Civil Aviation Act 1982. DfT responsible for the noise controls at those airports (night restrictions, noise limits, minimum height requirements, etc).
- UK CAA obligation to DfT to maintain specialist noise function. That function is provided by ERCD, which has access to ANOMS data from the three London airports.
- Local planning authorities oversee other UK airports.

Noise measurements underpin everything we do

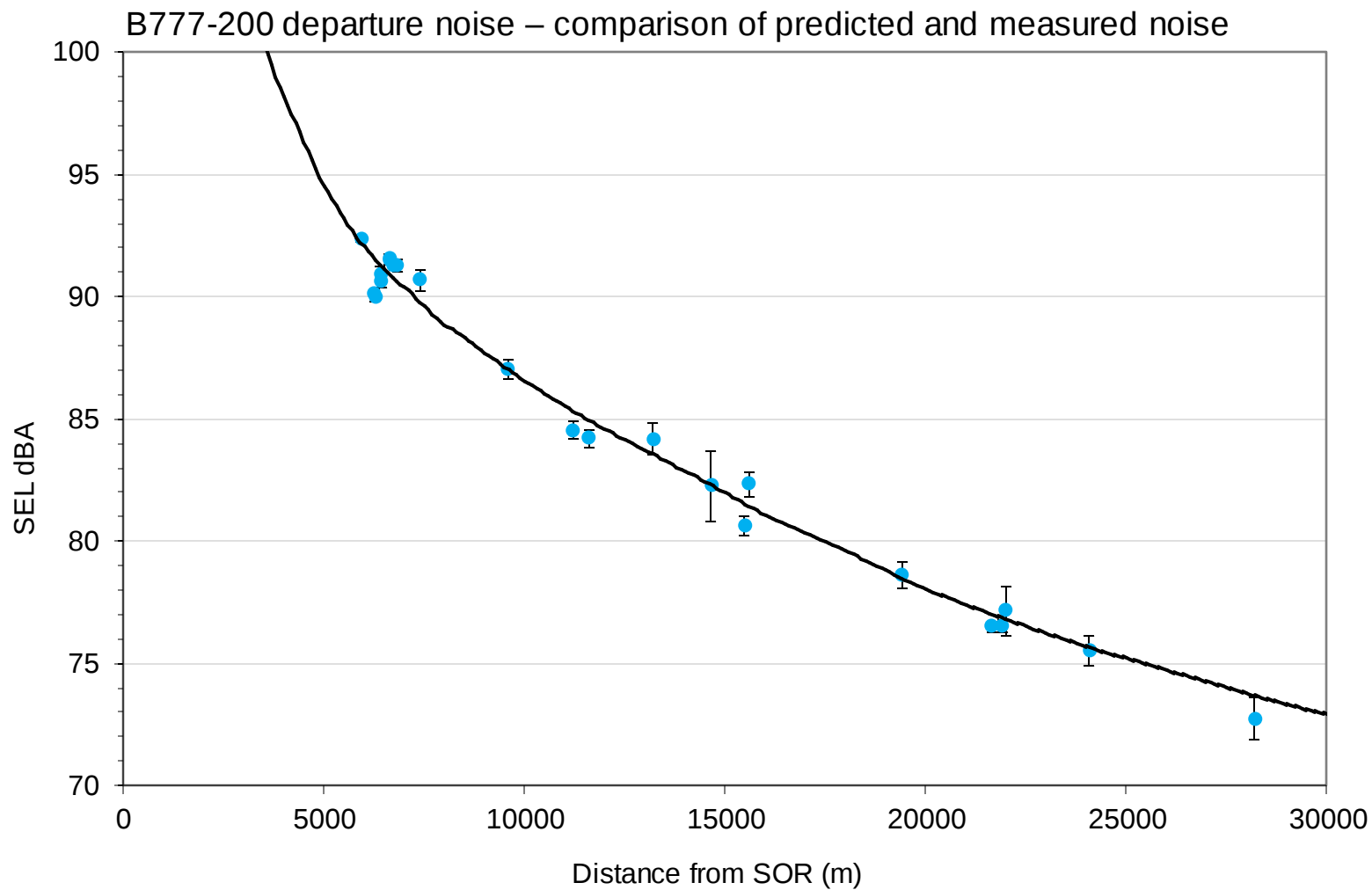


The data has to be accurate and complete

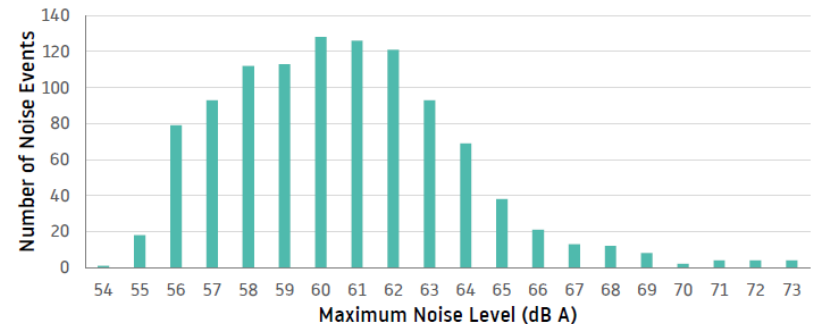
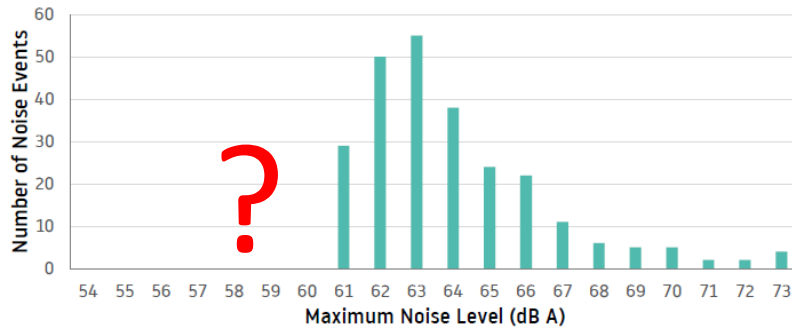
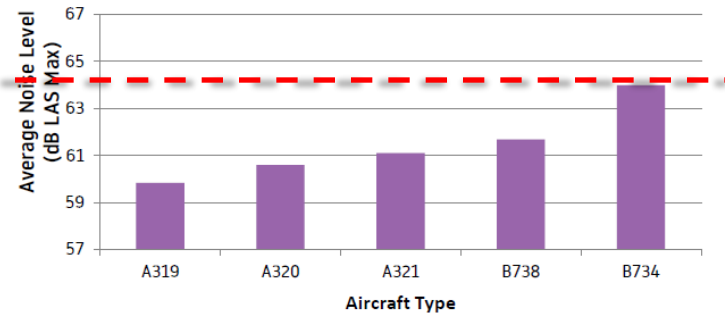
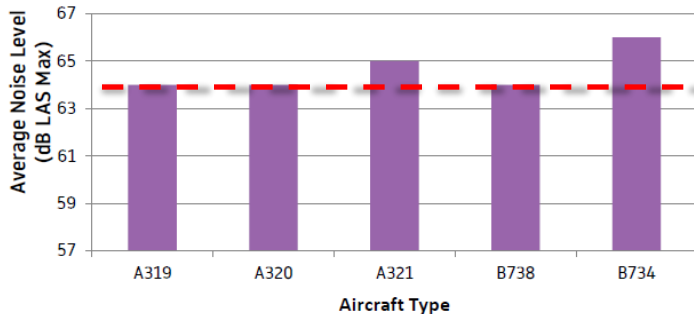
- Outputs from ANOMS are used by the UK CAA for contour production, and for studies for government which are often subject to intense legal scrutiny.
- Airports use data from the systems for noise infringement penalties, monitoring track-keeping and CDO/CCO performance comparisons between airlines, reporting to government.



Validating the model output



Always question the data!



2014

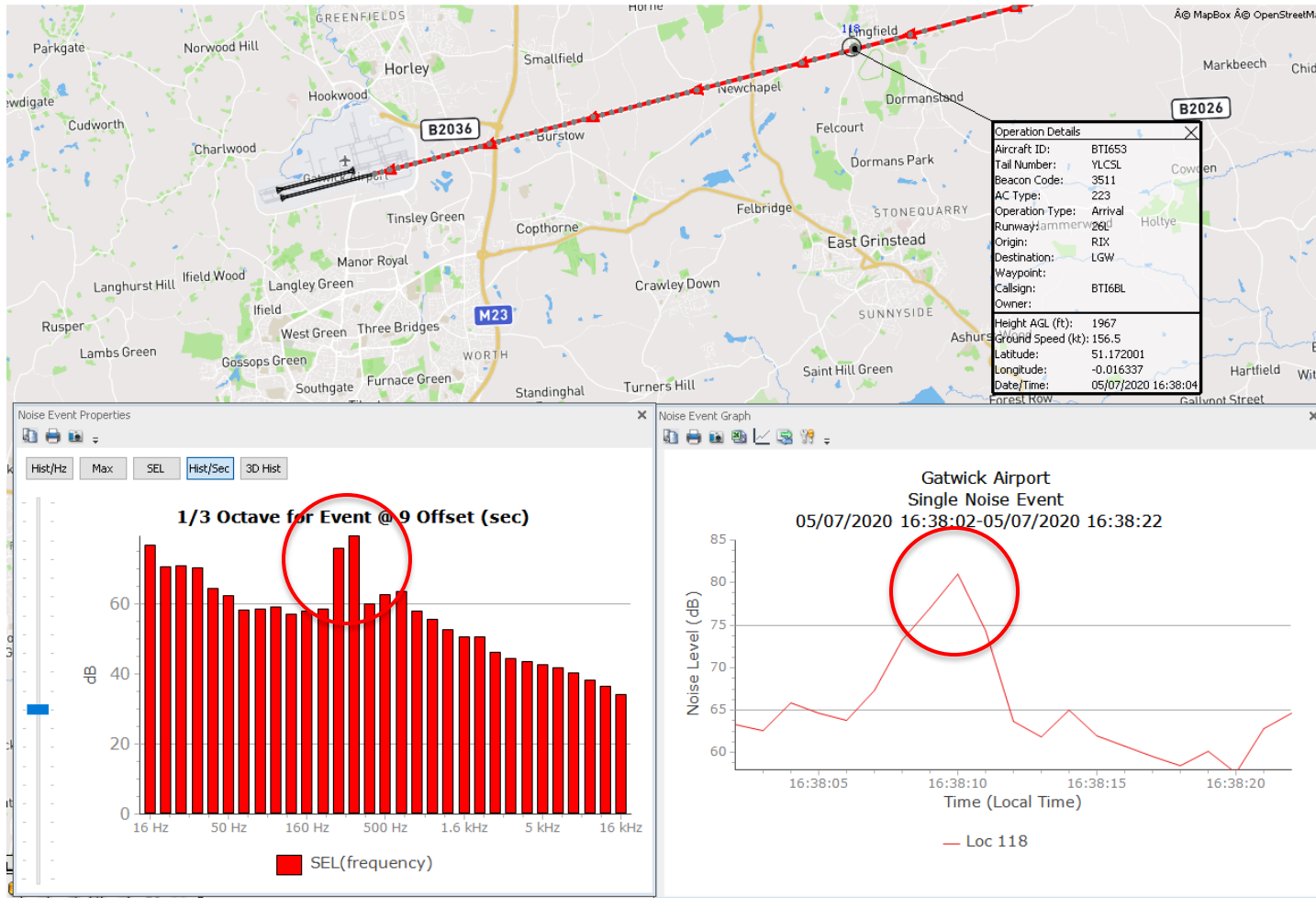
2017

Conclusion: aircraft have got quieter

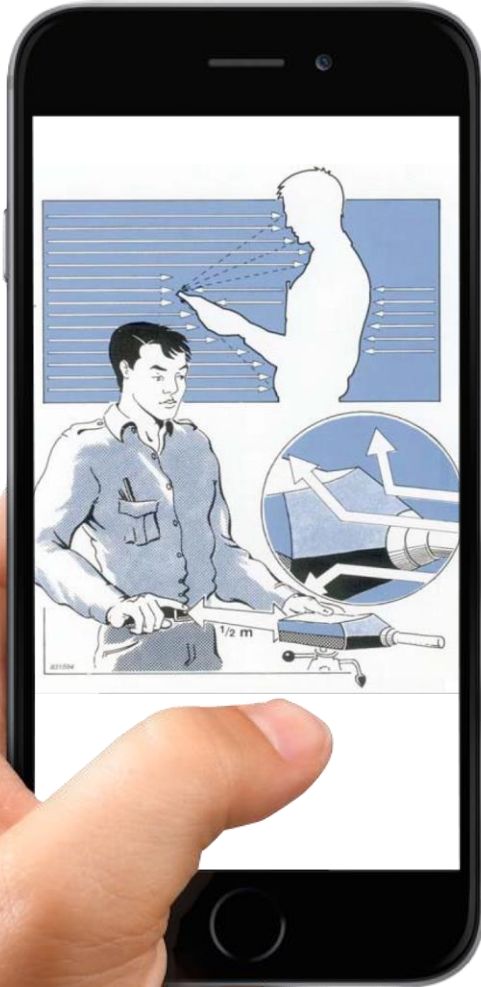


Making use of new features in ANOMS

Airbus A220 arrival noise



Citizen Research: A good or bad idea?



- Smartphone apps can empower citizens to hold authorities to account, but...

generally no quality control whatsoever

Aviation Noise Reports by Explane.org



AUS Aviation Noise Reports by Explane.org

City

Postcode

Month

Date

Day part

Altitude (m)

AllAllAllAllAllAllAll

Noisiest event: A320, measured at 166 dB (!)

Please use the selectors above to zoom in on the data!

The raw data: Click on a registration to see its location. Click on a header to sort the data. Zoom in with the selectors above.

Date	Time	City	Postal Code	Altitude	Noise Level	Distance	Vert. speed	Device	Call Sign	Model/Type	Owner	Part of Day
20200128	16:30:37	Melbourne	3036	572	166	1,805	4.23	IOS	JST572	A320 232/A320	Jetstar Airways	Day
20230114	21:18:55	Brisbane	4171	724	165	1,967	6.83	IOS	UAE431	A380 861/A388	Emirates Airline	Evening
20210302	14:07:33	Brisbane	4005	610	164	1,093	-4.88	IOS	VOZ780	737NG 8FE/W/B738	Virgin Australia	Day
20220314	21:15:23	Brisbane	4005	922	161	1,421	4.55	IOS	UAE431	A380 842/A388	Emirates Airline	Evening
20210113	9:39:55	Brisbane	4005	1,143	160	1,331	11.38	IOS	QFA937	737-838/B738	Qantas	Day
20200128	17:15:44	Melbourne	3036	762	158	1,663	14.31	IOS	QFA448	737NG 838/W/B738	Qantas	Day
20210511	6:42:36	Brisbane	4007	655	155	902	12.35	IOS	QFA750	737NG 838/W/B738	Qantas	Night
20210411	15:51:36	Brisbane	4005	1,181	154	1,625	13.66	IOS	JST674	A320 232/A320	Jetstar Airways	Day
20220525	21:44:06	Brisbane	4005	792	154	1,010	6.18	IOS	UAE12JQ	A380 842/A388	Emirates Airline	Evening
20210115	16:57:02	Brisbane	4171	541	153	726	-4.88	IOS	QFA936	737NG 838/W/B738	Qantas	Day
20210405	9:06:26	Brisbane	4171	1,082	152	1,484	11.38	IOS	VOZ367	737NG 8FE/W/B738	Virgin Australia	Day
20230610	9:11:41	Brisbane	4008	572	152	1,025	8.13	IOS	SOL701	A320-232/A320	Solomon Airlines	Day
20210828	14:08:23	Brisbane	4171	480	151	630	-1.95	IOS	VOZ782	737NG 8FE/W/B738	Virgin Australia	Day
20210114	19:57:51	Brisbane	4005	617	150	1,110	-4.55	IOS	QFA664	737NG 838/W/B738	Qantas	Evening
20210419	9:08:53	Brisbane	4007	610	150	977	7.48	Android	JST930	A320 232SL/A320	Jetstar Airways	Day
20210427	17:08:23	Brisbane	4007	625	150	842	13.00	IOS	VOZ791	737NG 8FE/W/B738	Virgin Australia	Day
20210114	6:44:03	Brisbane	4005	1,364	148	1,443	6.83	IOS	VOZ2901	F70/F70	Alliance Airlines	Night
20211104	18:46:22	Brisbane	4005	533	148	787	-4.55	IOS	JST835	A320 232SL/A320	Jetstar Airways	Day
20210504	9:27:30	Brisbane	4007	869	147	1,127	17.23	IOS	EVY47	737-7DT/W BBJ/B737	Royal Australian Air Force	Day



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Questions?