

Aircraft noise

January 2019

The London Assembly Environment Committee is a cross-party group of politicians elected by Londoners, representing their interests to the Mayor and other critical stakeholders. The committee has recently heard from residents and community groups about aircraft noise across widespread areas of London, particularly in south-east, north-east and south-west London. We have investigated the issues raised and taken evidence from London airports.

What we have learnt is deeply worrying. Disturbance to daily activities, including working, learning and relaxation, and to sleep, can have severe effects on people's health and wellbeing. Aircraft noise remains a serious issue and will inevitably be a greater problem if airports increase their traffic. We have identified the following key actions that London and its airports need to undertake to reduce the far too high levels of disturbance to daily lives:

We welcome your thoughts and comments on how aircraft noise over London and its impact on Londoners' wellbeing can be minimised.

You can get in touch with us at
EnvironmentCommittee@london.gov.uk

Calls for action:

- **The Independent Commission on Civil Aviation Noise should regulate noise disturbance more stringently, using lower thresholds for disturbance (taking into account WHO guidelines and the need for residents to keep windows open) and mapping the combined effect of all London's airports, especially Heathrow and City. The Mayor should support this work.**
- **Air traffic using Heathrow and City airports should not increase, and the proposed third runway at Heathrow should not go ahead.**
- **Flight paths should be rotated to give respite for those living under concentrated flight paths. Flight paths should be designed to minimise noise impacts: stacking, low-level overflying, and overlapping flight paths should be minimised.**
- **There should be no night flights, and limits on early morning flights should be retained, and preferably strengthened.**
- **The severe levels of noise disruption now being experienced by some of London's residents are not acceptable, and urgent, decisive action is needed across the board to alleviate it.**



Aircraft noise

January 2019

Concentrated flight paths

The air traffic control service, NATS, is continuing to review London's airspace management, and must urgently address a number of issues.

The recent adoption of more precise air traffic control (performance based navigation) has had the effect of concentrating flights arriving at City Airport into narrower corridors, by reducing the amount of variability from the flight path centre. **This has considerably reduced direct overflying for a number of people who were on the margins of the less precise flight paths, but it has greatly increased it for those who are under the current, narrower paths.**ⁱ

According to figures from the Civil Aviation Authority, there are still 331,000 people overflown by flights arriving at City, and 416,300 overflown by departures, all under the altitude of 4,000 feet (about 1,200m).¹ Unlike with Heathrow flight paths, there is no mechanism for predictable respite for the communities affected. City operates six monitors at fixed sites, mainly close to the airport, plus a further mobile monitor that can be moved in response to noise complaints. It therefore gets a clear picture of noise only across a small fraction of the people affected.

ⁱ The City Hall Greens find that the concentration of flight paths is clearly unfair.

London City Airport, and all airports, should provide predictable periods of respite for residents living under concentrated flight paths. City should also increase the number of noise monitors to cover its whole noise footprint.

Residents who spoke to the committee reported that the frequency of flights was much greater and the intervals between them much shorter. Residents from several areas across London, particularly in the north-east, south and west, have told committee members that they are woken up by one flight a minute, starting early in the morning.

Residents do not feel they have been consulted on these changes to flight path management. We are aware that there was a consultation exercise, but it did not succeed in involving these residents who now are affected by the change, and it does not seem to have succeeded in improving the changes to mitigate the impact on them. There was a sharp increase in noise complaints when the change was implemented.

The Mayor, among others, is concerned about the severe noise impacts of this concentration on residents affected, and has called for a fairer distribution of flight paths.

Another issue that particularly concerns residents is stacking. Aircraft arriving in London's airspace before they can be cleared to land circle around in designated paths. Where there are several aircraft flying the same circle, they do so at different altitudes to keep a safe distance

Aircraft noise

January 2019

apart, forming a stack of waiting aircraft. This circling near the destination airport can greatly increase the amount of overflying from a flight. The air traffic control service NATS told us that performance-based navigation should allow stacking to be reduced by better airspace management.

The review of flight paths should minimise stacking. It should also share the burden of overflying by establishing a range of flight paths which can be rotated between, including for City arrivals and departures. Better management of flights paths should not be taken to enable more flights.ⁱⁱ



ⁱⁱ The Brexit Alliance Group dissents from the last sentence of this recommendation, recommending instead that any increase in flights should not adversely affect Londoners.

Reducing noise emissions

Aircraft generate noise from their engines, from friction with the air and from mechanical sources such as lowering landing gear. There is some hope that as aircraft technology and efficiency improves, and noise regulation becomes more demanding, individual aircraft will become quieter. This should be encouraged, particularly through regulatory demand for ever-reducing noise impacts. However, airlines are unlikely ever to be noiseless.

The World Health Organisation (WHO) has issued guidance showing that aircraft noise above 45 decibels on average is associated with adverse health effects.² Government guidance is much less stringent, using a disturbance threshold of 54 decibels (and it is disappointing that the recent Green Paper on aviation strategy does not remedy this).³ Compensation measures such as sound insulation are offered by the airports at higher thresholds again (57dB for City and 63dB for Heathrow).⁴

The noise level thresholds used to map the area over which aircraft noise causes disturbance to residents should be reduced, taking into account the WHO guidance.

Aircraft noise

January 2019

As we have previously recommended,⁵ Heathrow should lower its compensation threshold to match that of City, and both airports should work towards lower thresholds over time.

People need to have windows open at times and to enjoy the outdoors. Open windows are especially important on summer nights, to let the day's heat escape from homes. This is assumed in the design of building regulations to avoid overheating, which can itself disturb sleep and directly threaten health, especially for vulnerable residents. It will only become more important as London's summers are expected to get warmer in coming decades. Opening windows is also required for ventilation.

Open windows should therefore be assumed in setting reduced noise thresholds.

Even with the current thresholds, the number of people disturbed by noise would increase with any new runways or flight paths, and the amount of disturbance would increase with any increase in the frequency of flights on existing paths. Aiming to expand in the leisure market, City Airport already expects to increase its number of flights per year from around 80,000 to over 100,000 by 2021, towards its authorised limit of 110,000. The focus of these extra flights at peak

hours means that flights on existing paths would rise to 45 an hour: a 45 per cent increase.

Heathrow Airport proposes to construct a new runway which would enable it to grow from around 475,000 to around 740,000 flights a year. As well as adding to the overall level of air traffic, this would create new flight paths and affect around 200,000 more people with noise than a two-runway equivalent. Heathrow has also recently published plans to increase its flights to around 500,000 per year and change flight paths, including overflying new areas, even before any third runway.

Increases in the quantity of air traffic using Heathrow and London City airports, and inevitably overflying London's populated areas, should be opposed. Most urgently, we oppose the creation of a third runway at Heathrow.ⁱⁱⁱ



ⁱⁱⁱ The Brexit Alliance Group does not consider that this recommendation should apply to City airport, recommending instead that any increase in flights should not adversely affect Londoners.

Aircraft noise

January 2019

Flight altitude

One critical aim of the flight path review should be to increase altitudes over London. Noise experienced on the ground is greater the lower the aircraft are overhead. We heard face to face testimony from residents, and have received documentary evidence, of how low aircraft fly on approach to London City Airport—which is far lower than necessary.

Flights approaching over south London routinely descend to around 610m (around 2,000 feet) altitude at least 22km (14 miles) from London City Airport, and keep that altitude until beginning final descent around 6km from the airport. The aircraft therefore overfly densely-populated areas of London (including, in the case presented to us, Catford, Forest Hill, Herne Hill, Stockwell, Kennington and Southwark, in the boroughs of Lewisham, Southwark and Lambeth, along a track of around 16km—other City flight paths go over north-east London and Heathrow flight paths especially affect west and south London) at that altitude. Noise meter readings of up to 70–75 decibels from individual flights have been reported from outside homes in these areas. A continuous descent approach could greatly relieve the low altitude over the majority of this approach.

Flight path management must also take account of ground elevation. There are areas under current low-altitude flight paths 50 to 100m above sea level, with correspondingly reduced overflight heights. Low-level flight paths should avoid high ground.

Minimum flight path altitudes should be set and rigorously observed: we heard of flights tracked at up to 120m (400ft) lower than the normal altitude, including before 7am.

The review of flight paths should therefore maximise the use of continuous descent and ascent, aim to keep the remaining low-level approaches away from high ground, and ensure that minimum altitudes are observed.



Aircraft noise

January 2019

Overlapping flight paths

Because of the way the airports select flight paths according to weather conditions, parts of London are overflowed by aircraft from at least one of Heathrow and City airports on nearly every day of the year—up to 300 flights per day.⁶ Combined with concentrated flight paths, this can leave affected residents without respite and generates some of the worst impacts.

We have long argued that noise from London's airports must be mapped, monitored, managed and regulated together.

The Independent Commission on Civil Aviation Noise (ICCAN) should take a comprehensive view of noise across London, and lead to changes in noise management. It should also act as a single point of contact for Londoners with issues about aircraft noise, to make it easier to register views and make complaints. The Mayor should work with ICCAN to encourage and facilitate this work, and relevant boroughs should engage, perhaps via London councils, to ensure a strategic view across London.

This London-wide view of noise impacts should also inform London-wide airspace management and flight routing. London City Airport has said that the reason for its extended low-altitude approach route is that Heathrow flight paths cross above it, and so it cannot be raised without a comprehensive review of flight paths from at least these two airports.

The review of flight paths should minimise and seek to eliminate the overlap between City and Heathrow flight paths, especially where either is at a low altitude, and where the flight path from one airport is used in westerly operations and that from the other airport is used in easterly operations.

London City Airport and Heathrow are jointly mapping and monitoring overlapping flight paths and their noise effects in Dulwich, with a view to doing so in further areas later. However, they were unable to provide a specific time frame even for this initial study.

Heathrow and City should provide a timetable for their joint work to map overlapping flight paths and their noise impacts. The Mayor should encourage and facilitate this work.



Aircraft noise

January 2019

Night flights

Flights at night create the greatest health and wellbeing impacts, because they come at a time when other noise is less and disturb sleep. We have long opposed night flights.⁷

There are currently restrictions on scheduled arrivals during designated night hours, with none at City and a limited number at Heathrow. However, scheduled arrivals begin early in the morning (6.30am for City and 6.00am for Heathrow, plus a limited number, on average around 16 a day, between 4.30 and 6.00am), and flights for these landing slots start reaching London airspace earlier. Some arrive so early they have to circle awaiting their permitted landing time.

There should be no night flights, and limits on early morning flights should be retained, and preferably strengthened, for example by extending the time of no or very limited flights to 7.00am.



Aircraft noise

January 2019

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For further information about the work of the Environment Committee, and to see our current investigations, visit [our website](#).

About the Environment Committee



The Environment Committee examines all aspects of the capital's environment by reviewing the Mayor's strategies on air quality, water, waste, climate change and energy.

Aircraft noise

January 2019

Endnotes

¹ 331,000 people are overflown by arriving flights under 4000 feet, and 416,300 by departing flights under 4000 feet. Some people are affected by both; the CAA has not said how many this is, and therefore we can say only that the total number overflown is between 416,300 and 747,300. Source: *Report of the CAA's Post Implementation Review of the London Airspace Management Programme (LAMP) Phase 1A Module C: Airspace Change Proposal – London City Network Changes*. Available online at [http://publicapps.caa.co.uk/docs/33/CAP1692C_ModuleC_FinalV3\(P_LINKS\).pdf](http://publicapps.caa.co.uk/docs/33/CAP1692C_ModuleC_FinalV3(P_LINKS).pdf) accessed 19 December 2018

² *Environmental noise guidelines for the European region*. World Health Organisation 2018. Available online at http://www.euro.who.int/_data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf?ua=1 accessed 21 December 2018. The measure of average noise used is the Lden measure, which averages noise across the Day, Evening and Night.

³ *Aviation 2050: the future of UK aviation*, UK Government Green Paper, December 2018. Available online at <https://www.gov.uk/government/consultations/aviation-2050-the-future-of-uk-aviation> accessed 21 December 2018.

⁴ Heathrow and City airports at the Environment Committee meeting of 8 November 2018. Transcript (see pages 8-10) available online at <https://www.london.gov.uk/moderngov/mgChooseMDocPack.aspx?ID=6432&SID=17630> accessed 21 December 2018

⁵ See 2013 response to Airports Commission consultation, available online at <https://www.london.gov.uk/about-us/london-assembly/london-assembly-publications/london-assembly-night-flights-consultation> accessed 21 December 2018

⁶ *South East London: no respite from aircraft noise*, Tim Walker, 2018. Available online at <http://hacan.org.uk/wp-content/uploads/2018/08/No-aircraft-noise-respite-for-London-SE23-August-2018.pdf> accessed 21 December 2018

⁷ See 2013 response to Airports Commission consultation, available online at <https://www.london.gov.uk/about-us/london-assembly/london-assembly-publications/london-assembly-night-flights-consultation> accessed 21 December 2018