

# Draft Noise Action Plan 2024-2028



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# Contents

1. Foreword	3	11. Departing aircraft	45
2. Public consultation	4	12. Night noise	49
3. The airport	9	13. Training flights	56
4. Noise mapping	13	14. Mitigation schemes	59
5. Noise mapping results	16	15. Monitoring and reporting	66
6. Laws and policies	20	16. Effective communication	69
7. Future Airspace Programme	31	17. Consultation responses	75
8. Noise controls	34	18. Glossary of terms	76
9. Arriving aircraft	39	19. Appendix	79
10. On the ground	42		





# 1. Foreword

## This Noise Action Plan sets out East Midlands Airport's strategy to mitigate the impact of aircraft noise between 2024 and 2028.

Since Manchester Airports Group (MAG) acquired East Midlands Airport in 2001, it has continued to go from strength to strength, both as a popular airport for holidaymakers and as a home to the UK's largest dedicated air cargo operation. The airport's economic contribution to the regional economy is significant, and we forecast it will continue to grow.

The airport generates some £723 million of GVA for the regional economy, and is the largest single employment site in Leicestershire, with over 9,000 workers in 100 companies across the site. Our cargo operation handles more than 400,000 tonnes of goods a year, with the majority of this volume made up of high value goods from advanced manufacturing and aerospace industries within the East Midlands.

East Midlands Airport is a 24-hour operation, and this is key to the airport's success. However, we understand that alongside providing important economic benefits, we must ensure our operation is managed in a responsible and sustainable way.

We have published our Draft Noise Action Plan for consultation with stakeholders including local residents, airlines, local councils and Government to help form our strategy to minimise these impacts. After our consultation has concluded we will review comments and feedback to finalise our Noise Action Plan 2024-2028, updating it to reflect the feedback we receive. Our Noise Action Plan will then be submitted to Government, where it will be reviewed and adopted by the Secretary of State for Environment, Food and Rural Affairs. The final Noise Action Plan 2024-2028 will be published on our website after it has been adopted.

Working with our airline partners, we remain committed to minimising the impact of airport operations on local communities. This includes reducing the number of noisier aircraft operating at the airport, particularly at night. It also includes improving compliance with noise abatement procedures designed to reduce noise impacts.

Through this Noise Action Plan I am pleased to introduce a number of new actions, these include:

- Placing a ban on the operation of the noisiest, QC4, QC8 and QC16-rated aircraft at night.
- Updating our Sound Insulation Grant Scheme to reflect recent inflationary pressures, with a 10% increase to the level of grant funding available from April 2024 and inflation-linked annual increases thereafter. We will also reopen the Scheme to homeowners who have previously benefited from grants, enabling reapplication after a period of 20 years.
- Increasing the contribution we make to the East Midlands Airport Community Fund to £55,000 from April 2024 and introducing inflation-linked increases annually thereafter.
- Ensuring our noise charges incentivise the use of quieter aircraft, and reviewing our noisy-aircraft penalty scheme so that it applies to aircraft departing during the day as well as at night.

This Noise Action Plan will run for the next five years. During that time we will continue to develop our policies, targets and operational procedures to minimise the number of people affected by aircraft noise whilst supporting the growth and prosperity of the East Midlands region.



**Steve Griffiths**  
**Managing Director**



# 2. Public consultation





The objective of our consultation is to give people an early and effective opportunity to participate in the preparation and review of the Noise Action Plan (NAP). To ensure our Noise Action Plan is accessible for public consultation, we have been careful to explain technical concepts and to provide a glossary of terms.

We have designed this consultation to comply with regulatory requirements which specify that in preparing and reviewing our Noise Action Plan, we must ensure that:

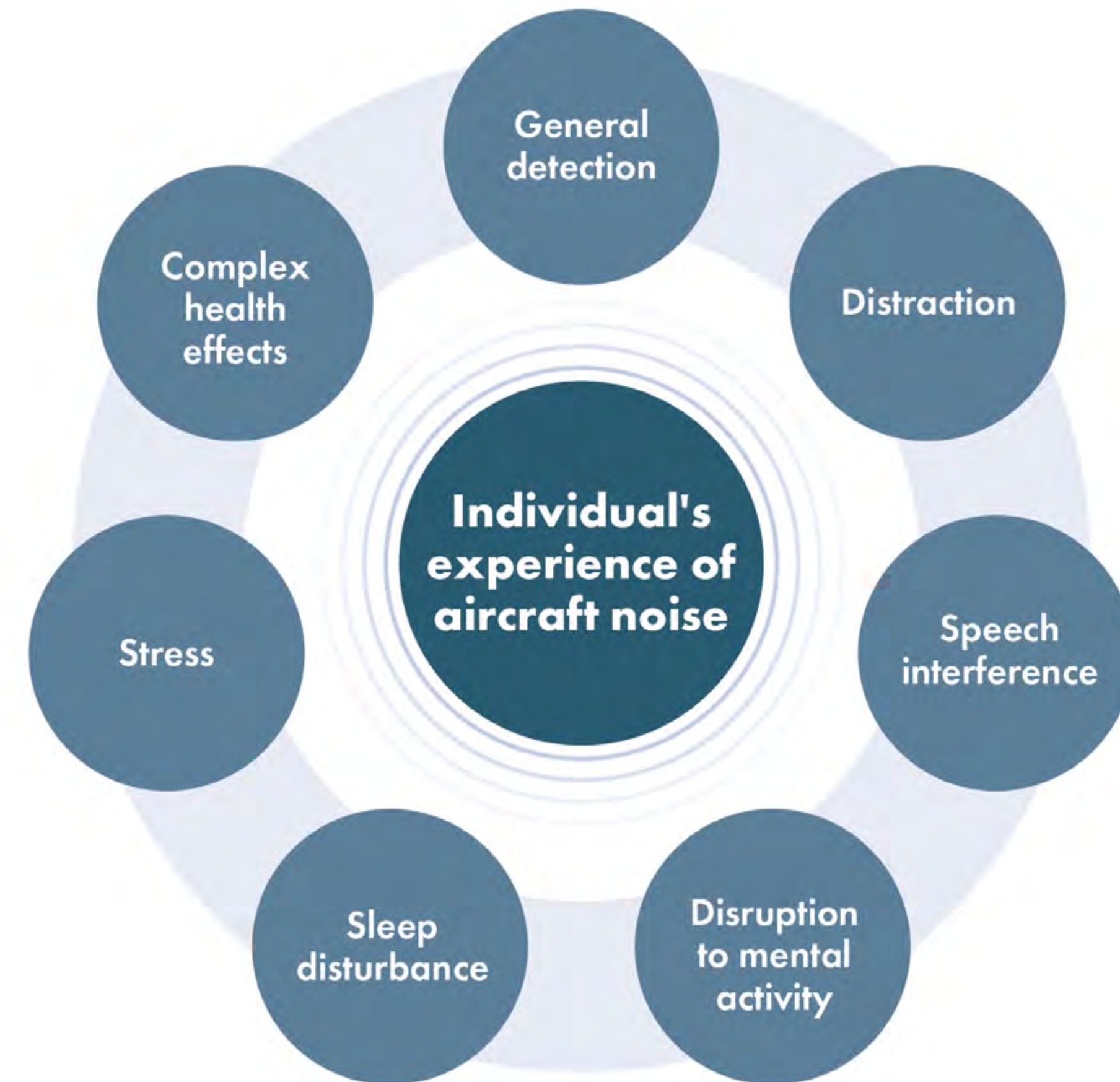
- The public are consulted about proposals in the Noise Action Plan.
- The public are given early and effective opportunities to participate in the preparation and review of the Noise Action Plan.
- The results of public participation are taken into account.
- The public are informed of the decisions that have been taken.
- Reasonable time-frames are provided allowing sufficient time for public participation.

There are many different stakeholders, including airlines and their customers, regional and national businesses that rely on the services that they provide and local communities. People living around the airport experience noise in different ways and to different degrees. Current Government guidance has summarised these effects as shown in Figure 1.

East Midlands Airport has a well-established community engagement and outreach programme, and strong relationships with external stakeholders. The airport is familiar with undertaking public consultation on its strategic plans, including previous Noise Action Plans and our Sustainable Development Plan (SDP). Public consultation will play an important part of the noise action planning process and stakeholder comments are welcomed, encouraged and will be taken into account.

We regularly discuss noise matters through the East Midlands Airport Independent Consultative Committee (ICC). The ICC is the formal liaison body between East Midlands Airport and our neighbouring communities and is independently chaired. Representatives from the airport and operators, local authorities, amenity and user groups meet three times a year. The ICC is further supported by two sub-committees which the airport and operators take part in; MENT (Monitoring, Environment, Noise and Track) and TEP (Transport, Economic Development and Passenger Service). These forums enable ongoing opportunities to review noise performance at the airport and explore ways to address any concerns.

Figure 1. Responses to an individual's experience to aircraft noise





Our consultation on this Noise Action Plan will include:

- Engagement and discussions with key stakeholders including airlines, regulators, and the ICC during the drafting of the Plan.
- Communication with stakeholders when the draft Noise Action Plan is published for consultation. This communication will be shared with all stakeholders by email notifying consultees that the consultation is now open and will close on 31st July 2023.
- A prolonged period of public consultation to enable stakeholder comments to be made, which will start in May and close on 31 July 2023.
- An offer of meetings and briefings with key local stakeholders including City Councils, County Councils, District Councils, Airlines, Members of Parliament and the ICC.
- Briefings with Parish Councils in the form of a special meeting of the East Midlands Airport Parish Council Engagement Forum.
- Existing community communication channels will be used to promote the consultation on the Noise Action Plan. This will include publication of information on our website as well as a special issue of the East Midlands Airport Community Flyer e-newsletter.
- Provision of information about our Noise Action Plan consultation will be included at any planned outreach events that take place during the consultation period.
- Parish Councils that form part of the East Midlands Airport Parish Forum will be asked for support by promoting the consultation process on their websites and social media pages and displaying posters promoting the NAP consultation process on village notice boards.
- Hard copies of the Noise Action Plan and consultation documents will be available on request.
- A special meeting of the airport's Pilot Liaison Group or an alternative consultation workshop for airline partners will be arranged.
- Pre-consultation with the MENT sub-group of the Independent Consultative Committee has already taken place. Additional consultation will take place with the ICC MENT on 16 June 2023 and with the ICC General on 21 July 2023.





## Consultees

As part of our consultation we welcome feedback from all stakeholders.

We have identified the following stakeholders who will receive formal notification that our consultation has launched:

### Committees and Groups

- The East Midlands Airport Independent Consultative Committee (ICC), and the Monitoring, Environment, Noise and Track Sub-Committee of the ICC.
- East Midlands Airport's Pilot Liaison Group.
- Airport Operators Committee (AOC)
- East Midlands Airport Parish Engagement Forum

### City Councils

- Nottingham City Council
- Derby City Council
- Leicester City Council

### County Councils

- Leicestershire County Council
- Nottinghamshire County Council
- Derbyshire County Council

### District Councils

- Rushcliffe Borough Council
- North West Leicestershire District Council
- South Derbyshire District Council
- Erewash Borough Council
- Charnwood Borough Council
- Broxtowe Borough Council
- South Staffordshire Borough Council
- East Midlands Councils

### Parish Councils (Through the East Midlands Airport Parish Engagement Forum)

- Aston on Trent (South Derbyshire District Council, Derbyshire)
- Barrow on Trent Parish (South Derbyshire District Council, Derbyshire)
- Barton in Fabis Parish through the 5P multi-parish group (Rushcliffe Borough Council, Nottinghamshire)
- Breaston Parish Council (Erewash Borough Council, Derbyshire)
- Breedon on the Hill (North West Leicestershire District Council, Leicestershire)
- Castle Donington (North West Leicestershire District Council, Leicestershire)

- Diseworth and Long Whatton (North West Leicestershire District Council, Leicestershire)
- Draycott and Church Wilne Parish Council (Erewash Borough Council, Derbyshire)
- Elvaston Parish Council (South Derbyshire District Council, Derbyshire)
- Gotham Parish Council through the 5P multi-parish group (Rushcliffe Borough Council, Nottinghamshire)
- Hathern Parish Council (North West Leicestershire District Council, Leicestershire)
- Hemington and Lockington (North West Leicestershire District Council, Leicestershire)
- Isley Walton (North West Leicestershire District Council, Leicestershire)
- Kegworth (North West Leicestershire District Council, Leicestershire)
- Kingtson on Soar Parish through the 5P multi-parish group (Rushcliffe Borough Council, Nottinghamshire)
- Melbourne (South Derbyshire District Council, Derbyshire)
- Ratcliffe on Soar Parish through the 5P multi-parish group (Rushcliffe Borough Council, Nottinghamshire)

- Shardlow and Great Wilne Parish Council (South Derbyshire District Council, Derbyshire)
- Stenson Fields Parish Council (South Derbyshire District Council, Derbyshire)
- Sutton Bonington (Rushcliffe Borough Council, Nottinghamshire)
- Thrumpton Parish through the 5P multi-parish group (Rushcliffe Borough Council, Nottinghamshire)
- Weston upon Trent (South Derbyshire District Council, Derbyshire)

### Local Members of Parliament

- Andrew Bridgen (North West Leicestershire)
- Heather Wheeler (South Derbyshire)
- Ruth Edwards (Rushcliffe)
- Maggie Throup (Erewash)
- Ed Argar (Charnwood)
- Darren Henry (Broxtowe)
- Jane Hunt (Loughborough)
- Lillian Greenwood (Nottingham South)
- Kate Kniveton (Burton on Trent)
- Amanda Solloway (Derby North)
- Margaret Becket (Derby South)





## Consultation process

The UK Government provided guidance information and a data pack for East Midlands Airport in September 2022. This information was used to support the preparation of the draft Noise Action Plan. Additionally, the airport discussed the development of the plan and sought views on aircraft noise from the MENT sub-committee of the Independent Consultative Committee in September 2022 and February 2023. Finally, information on best practice and emerging noise reduction work was gathered by East Midlands Airport through its involvement in Sustainable Aviation, a coalition of UK aviation companies.

This Noise Action Plan 2024-2028 is published on the East Midlands Airport website with details of how to respond to our consultation, together with a video providing information to people who want an overview of the plan.

We have developed an online feedback form which is available on our website. We encourage people to use the on-line feedback form where possible, however responses are welcomed in any format. A hard copy of the feedback form is available on request, and an email address and a postal address for submissions has been provided on our website and below. Printed versions of the draft Noise Action Plan are available on request by any interested party.

All feedback must be submitted before midnight on the 31 July 2023.

You can provide your feedback in the following ways:

- Complete our [NAP feedback form here](#)
- Email us at: [community@eastmidlandsairport.com](mailto:community@eastmidlandsairport.com)  
Please mark your correspondence as 'Noise Action Plan Consultation'.
- Write to:  
Noise Action Plan Consultation  
Pathfinder House  
East Midlands Airport  
Castle Donington  
Derby  
DE74 2SA





# 3. The airport





## In the case of this Noise Action Plan, East Midlands Airport is the competent authority.

East Midlands Airport is in a strategic location in the centre of the UK, and it is roughly equidistant from the cities of Derby, Leicester, and Nottingham. It is in the district of North West Leicestershire, but close to both Derbyshire and Nottinghamshire.

The area around the airport is largely rural in character, with villages such as Kegworth, Castle Donington, and Melbourne close by. Because of the airport's location and the nature of its air traffic activity, noise is an important issue for local people, especially at night.

### About East Midlands Airport

East Midlands Airport is a significant UK passenger airport serving the travel needs of the East Midlands region. It is also a nationally important cargo airport, and as the UK's largest express air cargo airport, it is a significant base for three of the major global integrated freight operators, DHL, UPS, and FedEx. East Midlands Airport is also the Royal Mail's largest UK air hub. Both DHL and UPS have made recent major investments in their facilities at East Midlands Airport. The cargo operators are important to the East Midlands economy and major regional businesses.

They offer a global one-stop cargo network from East Midlands Airport to 185 destinations across the world. The on-site cargo businesses in 2019 employed some 4,500 people at the airport, which is around half of the on-site working population.

In 2019, prior to the COVID-19 pandemic, East Midlands Airport connected passengers with more than 90 leisure and business destinations across Europe and North America. The airport is now recovering strongly from the impacts of the pandemic, and East Midlands Airport supports a growing range of charter and scheduled passenger services. It is an important part of the European low-cost airline network, and a major base for operators such as Ryanair, Jet2.com and TUI.

Cargo throughput at East Midlands Airport grew significantly during the pandemic. The increase in demand for air cargo services was driven by two factors: the airport's national role in shipping international medical supplies and the suspension of cargo-carrying long-haul passenger flights, particularly at London Heathrow. The increased use of online shopping services also contributed to East Midlands Airport's air cargo growth. East Midlands Airport's cargo network has strengthened and is important in supporting key economic sectors in the East Midlands, including advanced manufacturing, aerospace, and high-tech logistics.

### History

Flying operations at what is now known as East Midlands Airport began in 1916. A more significant aerodrome, RAF Castle Donington, was developed during the Second World War, with the first paved runway laid in 1942. After the war, commercial flying operations in the East Midlands took place at a grass airfield at Burnaston near Derby, however due to its size and location, Burnaston was becoming increasingly unsuitable, and the County Councils of Derbyshire, Nottinghamshire, and Leicestershire along with the City Councils of Derby and Nottingham came together to finance and develop the former RAF Castle Donington site into a new airport. East Midlands Airport opened on 2 April 1965, and in its first year, handled over 118,000 passengers. The airport has continued to grow and develop ever since.

Over the years, there have been a range of upgrades and extensions to the airport's facilities. These included upgrades to the passenger terminal, extensions to the runway, and the development of facilities to support the airport's growing air cargo operation.

East Midlands Airport is now an important UK regional passenger airport, but it is also the UK's largest express freight airport, and one of the busiest cargo airports in Europe.

### East Midlands Airport today

East Midlands Airport is now:

- A significant UK regional passenger airport that in 2019, before the COVID-19 pandemic, handled 4.7 million passengers.
- The UK's largest pure cargo airport, handling 400,155 tonnes of freight and mail in 2022.
- A major Royal Mail hub.
- One of the largest single employment sites in the East Midlands, with over 9,000 people working at the airport in 2019.
- An important part of the regional economy generating some £723 million of annual direct, indirect, and induced GVA in the East Midlands region.
- The principal port in the East Midlands Freeport, at the heart of the major Freeport development sites.



Access to the strategic road network is a major benefit to the development of the airport's passenger and cargo business. The airport's connectivity is one of its strengths. Its location at the centre of the East Midlands puts 90% of England and Wales within a 4-hour drive. It is estimated that over 11 million people live within a 90-minute drive from the airport. The airport and its transport links support the continuing activity of globally significant manufacturers in the region such as Rolls-Royce, JCB and Toyota, and provide the potential to attract or develop more. Freight activity at East Midlands Airport is significant at a national, European, and inter-continental level and the airport is a major base for DHL, UPS, FedEx, and Royal Mail.

Aviation and the transport of goods by air, as well as passengers, are of national significance and economic importance. The value of non-EU trade annually passing through East Midlands Airport equates to some £10bn that is split 50% import and 50% export. Easy access to global air freight connectivity is critical to ensure the Midlands benefits from the Government's objectives of re-balancing the economy and promoting export-led growth.

The activities at East Midlands Airport make a significant contribution to the regional economy, particularly to the three cities of Nottingham, Leicester and Derby and to the district of North West Leicestershire. These economic benefits are in the form of passenger and cargo connectivity, economic activity and direct and indirect employment. East Midlands Airport is estimated to generate some £723 million of direct, indirect, and induced regional GVA each year. The airport is the largest single employment site in Leicestershire and the most recent employment survey in 2019 showed that there were 9,448 employed on the site in 101 companies. Most airport employees live in the local area with 46% living in Derbyshire, 27% in Leicestershire and 20% in Nottinghamshire.

### **Location and access**

East Midlands Airport is located between Derby, Leicester, and Nottingham in the East Midlands. These three cities and the three counties of Derbyshire, Leicestershire, and Nottinghamshire provide the core passenger catchment for the airport. The area has good connections to the strategic road network which gives the airport good regional and national accessibility.

The airport's public transport connections are provided by the local bus services that include the Skylink network which operates high-quality and largely 24-hour, 7-day a week services to the key centres in the East Midlands including Nottingham, Derby, Leicester, Loughborough, Long Eaton, Coalville, and Ilkeston. The airport has access to the national railway network at Derby and Long Eaton, and the opportunity for improved rail connectivity at East Midlands Parkway.

Connectivity and accessibility are important for East Midlands Airport's future success. Its location at the heart of the UK and its connectivity to national transport networks makes the area around the airport attractive for investment and economic growth, with the added benefit of global air connectivity. East Midlands Airport is also the principal port for the East Midlands Freeport, which is one of eight designated freeports in England, and the only inland location.

### **East Midlands Airport developments**

Since the publication of our last Noise Action Plan there have been several developments on the airport site which provide updated and improved facilities for both the passenger and the cargo operation. These have included works on the airfield to upgrade and improve airport systems as well as improvements to the passenger facilities and car parks. These included an extension to the immigration hall in the passenger terminal that opened in 2021.

The airport's cargo operators have also made significant investments in their facilities. DHL have spent some £90 million on a major extension to their freight hub, making it one of their larger global operations. UPS have invested £114 million in the development of a new cargo hub that opened in 2022.

In the future East Midlands Airport has significant capacity, capability, and the flexibility to grow. The airport prepares forecasts of future passenger, cargo, and aircraft activity. The airport has the capability to grow its capacity to handle a passenger throughput of up to 10 million passengers and a long-term cargo throughput of up to 1 million tonnes a year.

Aircraft movements at East Midlands Airport are also forecast to grow. Passenger aircraft movements are expected to increase in line with passenger throughput. Air cargo movements are also expected to grow and a cargo throughput of 700,000 tonnes a year could generate around 42,600 cargo aircraft movements. It is anticipated that the average cargo payload per aircraft will increase, that means that the growth in cargo movements will be at a slower rate than the growth in annual cargo tonnage. The airport's long-term development plans are included in the 2015 East Midlands Airport Sustainable Development Plan<sup>1</sup>. This plan is being updated and it is expected that a draft will be published for public consultation later in 2023.

<sup>1</sup> [www.eastmidlandsairport.com/developmentplan](http://www.eastmidlandsairport.com/developmentplan)



## Airport operations

The airport operates 24-hours a day, 365 days a year using a single runway aligned in an east-west direction. Aircraft movements comprise commercial passenger flights (scheduled and charter), air freight and mail flights, and training and general aviation flights. In 2022, 55% of aircraft movements took place during the day (07:00 to 23:00). Night-time aircraft movements (between 23:00 to 07:00) were a mixture of passenger, freight, and mail flights, and represented 45% of operations.

For safety reasons, departing aircraft normally take-off into the wind. Given prevailing winds are usually westerly, this means that the usual mode of operation is for departures to the west and arrivals from the east. All departing aircraft following instrument flight rules must follow noise preferential routes (NPRs) shown in Appendix F. How the departures are split at the airport, and the wider areas overflowed by aircraft, are shown in Appendix E, which also shows the areas overflowed by arriving aircraft.

## Sources of noise

Noise is primarily generated by aircraft as they arrive, depart, and move around the airport. Other sources of noise at the airport come from activities involved in getting passengers and cargo to and from the aircraft, from aircraft maintenance and engine tests, from construction activities at the airport, and from vehicles coming to and from the airport.

## Approach to managing noise

Information on historic, current, and future noise levels at the airport are presented in this Plan, along with existing, modified, and new actions the airport proposes to implement. Managing these current noise effects and those arising from future growth is a key focus for the airport. Our long-term aim is to ‘...limit and reduce where possible, the number of people affected by noise as a result of the airport’s operation and development’. We are committed to minimising the number of people affected by aircraft noise by routinely reviewing our noise-related targets and policies. We will also continue to support local communities, with a particular focus on those most affected by aircraft operations.

This will include continuing our community-engagement programme, noise mitigation schemes and Community Fund. The East Midlands Airport Community Fund was established in April 2002. Since then, £1,972,574 has been awarded to 1,685 projects to bring lasting benefit to the communities around the airport.

We will continue to measure our performance against other airports and to contribute to the sustainable development of the air transport industry at a national, regional, and local level. We will also support and contribute to the noise-related commitments contained within the UK’s Aviation Policy.

Our Flight Evaluation Unit (FEU) is a group of technical experts who review the aircraft noise and operational performance across all three MAG airports (Manchester, East Midlands, and London Stansted). The FEU monitor, analyse, and report the noise monitored at our local community monitoring stations, the track-keeping performance of our operating airlines, and if procedures have been completed using continuous decent approaches or continuous climb operations. As well as the monitoring and reporting of the above information, the team also investigates and responds to all community complaints regarding noise associated with the airport. This monitoring and reporting is used to allow us to be the best neighbour we can to our local communities, and we use it to communicate to our airline operators, local communities and members of the East Midlands Airport Independent Consultative Committee (ICC).





# 4. Noise mapping





## What are noise maps?

In the same way that geographical maps use contours to distinguish between high ground and low ground, noise maps use lines (also known as contours) to identify those areas that are louder or quieter depending on their proximity to the airport's operation.

Noise maps are often referred to as noise contour maps.

Although noise contour maps can be used to provide information on noise levels in terms of average noise and the number of people affected, their main purpose in this context is to help authorities produce noise action plans to manage noise and reduce noise levels where appropriate. With noise contour maps going back over many years, it is possible to compare the results to understand how the impacts of aircraft noise change over time.

Noise contour maps and their delineated boundaries can form part of a planning agreement between an airport and the local authority. They act as a managed containment area for noise in terms of an area usually measured in square kilometres (km<sup>2</sup>). At East Midlands Airport we have an agreed limit that the area of the summer 55dB L<sub>Aeq</sub> 8-hour noise contour shall not exceed 16 km<sup>2</sup>. This limit is a condition of a planning consent for the extension to the airport's main runway that was granted in 2011.

There are many different types of noise contour map, and they can vary greatly. Variations relate to the calendar period covered (such as annual contours covering a calendar year or 92-day summer contours running from 15 June to 16 September) or period of the day (for example, day or night). More recently we have seen noise contour maps produced that indicate the number of noise events above a certain threshold value. These are more commonly known as 'number above' contours.

As required by the Environmental Noise (England) Regulations 2006 (as amended) which place the responsibility of preparing the Noise Action Plan and the associated mapping onto the airport operator, East Midlands Airport commissioned specialist acoustic consultants to produce noise contour maps based on activity in 2021. Noise contours were produced using the AEDT modelling system. AEDT is a computer noise modelling system that estimates the noise impact of aircraft operations based on the number and types of aircraft departing and landing, the routes flown and the time of the flight to estimate the noise impact on the ground around an airport.

Our noise contour maps were issued to the Department for Environment Food and Rural Affairs (Defra) who have applied population estimates from the Office of National Statistics (ONS), June 2015 to create the Round 4 mapping data provided to East Midlands Airport under the terms of the regulations. This Noise Action Plan includes details of the 2021 data pack and noise contour maps.

Each year we produce noise contour maps using aircraft movements for an average summer's day (mid-June to mid-September). Maps are produced for the 16-hour day (07:00 to 23:00) and 8-hour night (23:00 to 07:00). These contours are based on 92 days' data and presented in terms of the 'A-weighted equivalent continuous noise level' (L<sub>Aeq</sub>). The A-weighting is designed to represent the human ear's response to sound. When comparing the summer noise contour maps with the noise contour maps previously produced for East Midlands Airport by Defra, which are annual noise contours, there can be some significant differences.



Under the Environmental Noise (England) Regulations 2006 (as amended), noise contour maps are produced every five years. The noise contour maps in this Noise Action Plan show the 'L<sub>den</sub>' noise contour for an annual average day between January and December 2021 for each of the following periods:

- L<sub>day</sub> – the level in the day, 07:00 to 19:00.
- L<sub>evening</sub> – the level in the evening, 19:00 to 23:00.
- L<sub>night</sub> – the level at night, 23:00 to 07:00.
- L<sub>den</sub> – the level over 24 hours.

L<sub>den</sub> figures are produced by combining results for each of the three periods L<sub>day</sub>, L<sub>evening</sub> and L<sub>night</sub>. To take account of the fact that noise is more disturbing at night, a weighting of 5dB is added to the evening values and 10dB is added to the night values before the L<sub>day</sub>, L<sub>evening</sub> and L<sub>night</sub> values are combined to produce the L<sub>den</sub> level.

The noise contour maps produced for this Noise Action Plan are based on activity in 2021 when activity at the airport was impacted by the COVID-19 pandemic. During the pandemic passenger traffic significantly reduced, whilst cargo activity at East Midlands Airport increased. As such, noise contour maps based on activity in 2021 are not typical of operations at the airport. In accordance with guidance issued by Defra, we have introduced supplementary performance measures intended to provide readers with a broader view of the noise environment at East Midlands Airport in 2021 and other years.

These supplementary measures have been identified following discussion with the Monitoring, Environment, Noise and Track (MENT) Sub-Committee of the East Midlands Airport Independent Consultative Committee (ICC). The following supplementary noise performance measures are also included in Appendix C:

- Annual L<sub>den</sub> contour data from 2019, the last year of normal operations prior to the COVID-19 pandemic.
- Annual 8hr L<sub>Aeq</sub> night-time contour data from 2019, the last year of normal operations prior to the COVID-19 pandemic.

We recognise that people respond differently to noise, and this makes it difficult to quantify the relationship between noise and annoyance. However, for the purposes of this Noise Action Plan, aircraft noise is considered to be affecting places near the airport if the noise mapping has indicated an L<sub>den</sub> value of 55dB or more or an L<sub>night</sub> value of 50dB or more. As a priority, the Aviation Policy Framework 2013 requires that we should consider any further measures which we could take in areas where our noise contour maps show homes exposed to more than 69dB L<sub>Aeq</sub> between 07:00 and 23:00. Noise contour maps from 2021 show no properties within this contour.





# 5. Noise mapping results



The shape and size of noise contours are influenced by a number of factors. In addition to the number and types of aircraft operating, weather conditions also have an effect. This is because aircraft take-off and land into wind for reasons of operational safety.

The Environmental Noise Regulations require us to provide noise contours for the calendar year 2021. During this period, 75% of flights operated in a westerly direction (when the runway is known as Runway 27) and 25% in an easterly direction (when it is known as Runway 09). In 2016, which was the base year for our last Noise Action Plan, 76% of flights operated on Runway 27 and 24% on Runway 09. During the COVID-19 pandemic, operations at the airport were significantly impacted. Increased demand for air freight, combined with a decrease in capacity to carry cargo on passenger aircraft, led to a rapid increase in freight traffic at the airport in 2020 and 2021. Due to the nature of express freight, much of this activity took place during the night. Daytime passenger movements decreased by 75% during 2021 compared to 2016, whereas the impacts of COVID-19 led to freight movements increasing by 10%.

Noise contour maps for the airport have been used by Defra to estimate the number of homes and the size of the population exposed to different levels of noise. To make these estimates, Defra used the 2015 Ordnance Survey Address Base and Topography layer together with information from the Office for National Statistics mid-year (June 2015) population estimates, taking account of buildings that contain more than one home, such as apartment blocks. The same methodology and information from the Ordnance Survey and Office for National Statistics were used by Defra when making dwelling and population estimates for 2016.

The supplementary measures described in Chapter 4, Noise Mapping, use the airport's annual  $L_{den}$  and  $L_{Aeq}$  noise contour data from 2019. Estimates for the number of dwellings and people within the contours have been produced using a postcode database provided by CACI Ltd. This database is based on census data and updated to 2019. During 2019, 77% of flights operated in a westerly direction (using Runway 27) and 23% in an easterly direction (using Runway 09).

We have provided noise contours maps in full in Appendix C, along with information about the number of dwellings and populations they contain. We have also provided information about 2019, which was the last complete calendar year before the COVID-19 pandemic.

## Summary results: description of the noise contours

When looking at the shape of the 2021  $L_{den}$  contour, there are several characteristics to be highlighted. The prominence of westerly operations means that the 55 decibel (dB) noise contour shows an arrival lobe to the east of the airport, extending to the north of East Leake. Departure lobes follow the profiles of our noise preferential routes (NPRs) to the west of the airport, extending north of Kings Newton and south-west of Wilson for the Trent and Daventry departure routes respectively. The contour also shows the influence of easterly arrivals over the Melbourne area. The 60dB contour shows a similar pattern, but is less influenced by departures, with the arrival lobe extending to include West Leake. The 65dB contour extends to the southern edge of Kegworth to the east, and to Donington Park to the west. The 75dB contour is contained entirely within the airport boundary.

The  $L_{night}$  contours for 2021 show a similar profile to that of  $L_{den}$ , with the 51 dB contour having very similar characteristics to the 55dB  $L_{den}$  contour. The 54db contour shows an arrival lobe extending to West Leake, similar to the 60dB  $L_{den}$  contour, but the influence of departures to the west are much reduced, with the contour not extending as far as Kings Newton. The 60dB  $L_{night}$  contour extends to the southern edge of Kegworth to the east, and as far as Donington Park to the west. The 66dB contour is contained entirely within the airport boundary.

With similar percentages of movements by runway direction, the contours are broadly the same shape as the 2016 noise contour maps.

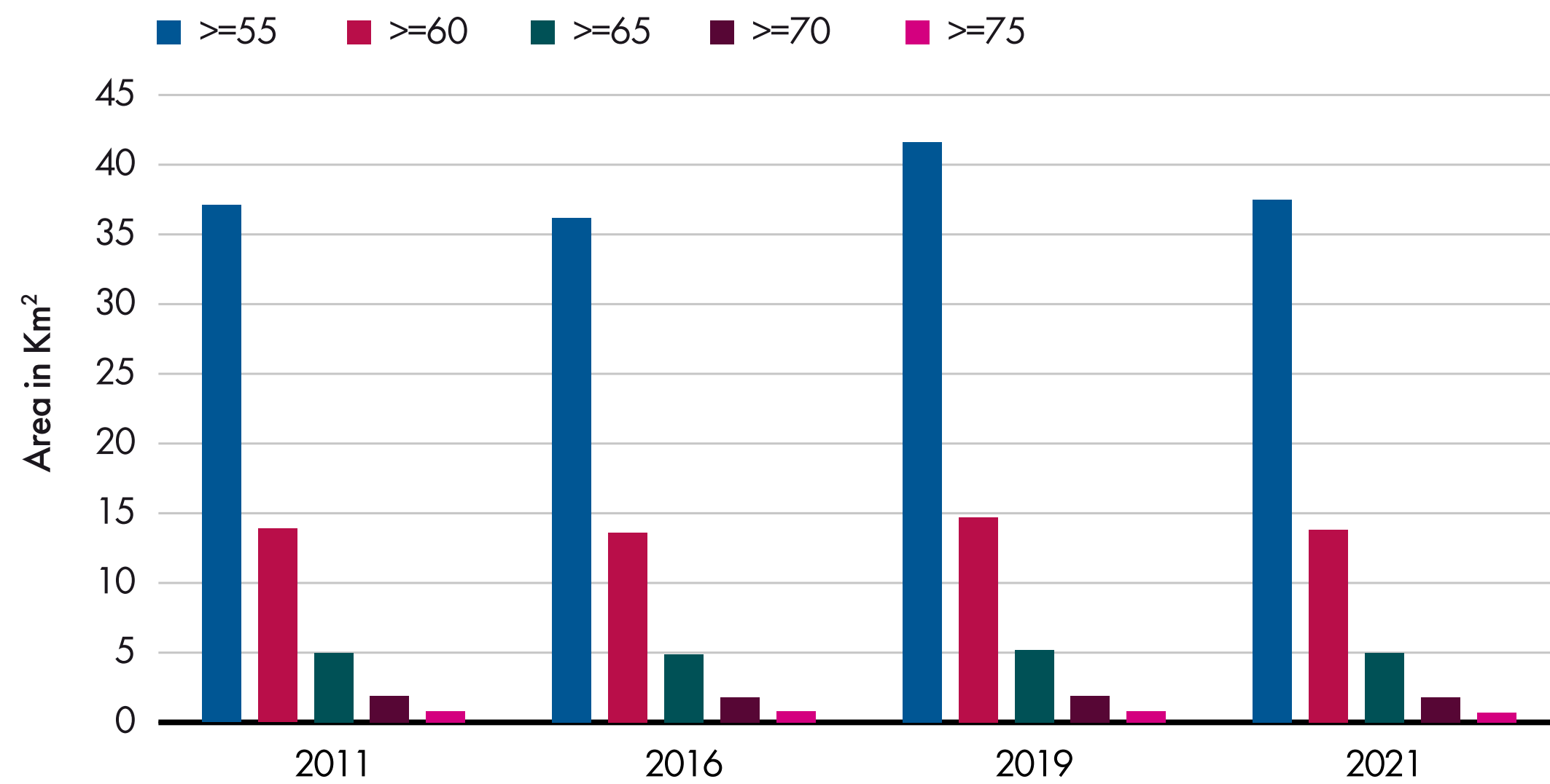




### Summary results: noise contour areas

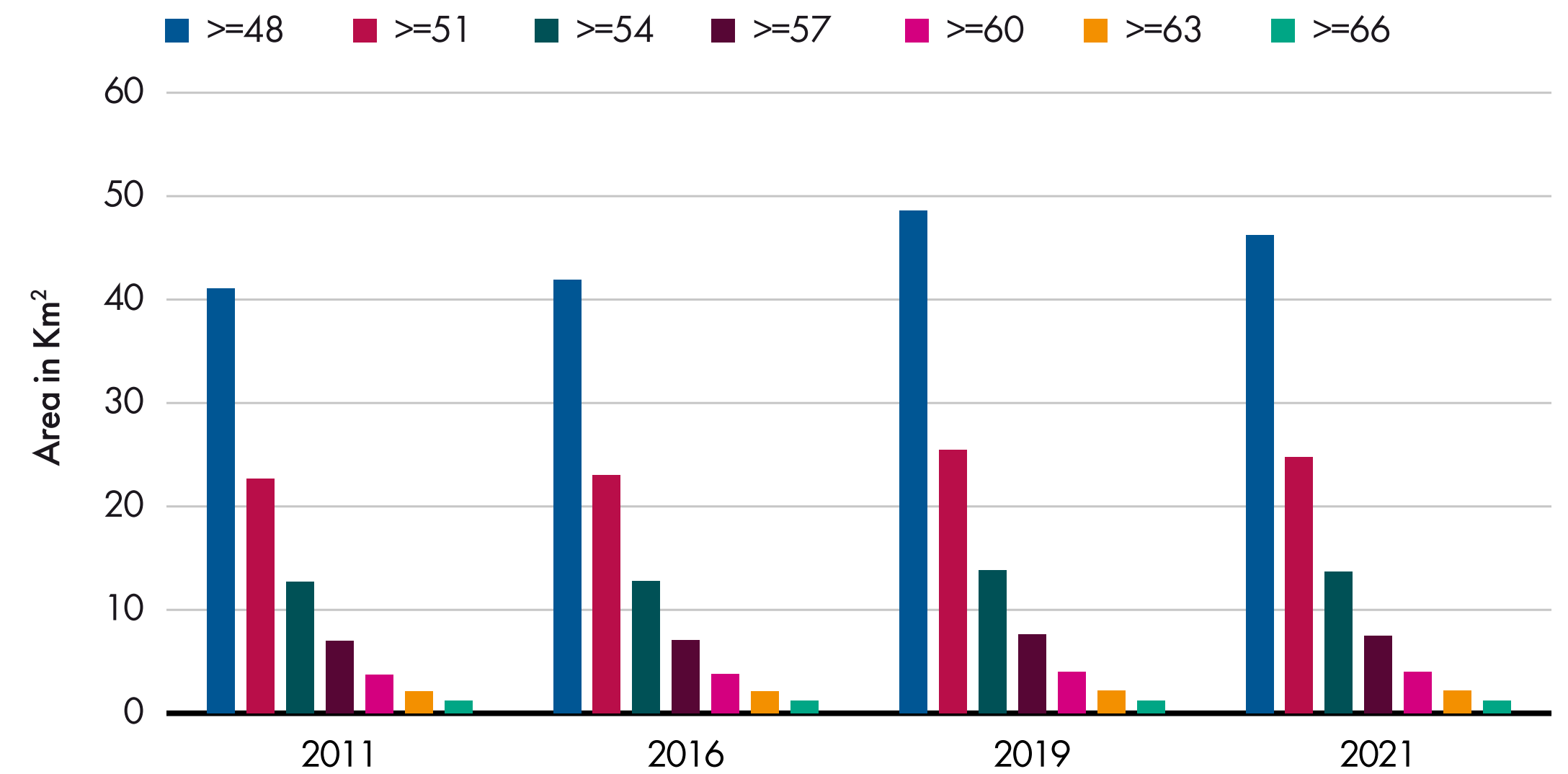
The area of  $L_{den}$  and  $L_{night}$  contours in 2021 and 2019, and during the previous noise-mapping years of 2016 and 2011, are shown in figures 2 and 3. Despite an increased number of freight flights and fleet changes associated with the COVID-19 pandemic, the number of night-time aircraft movements in 2021 was broadly consistent with 2019. However, the area within both the annual  $L_{den}$  and  $L_{night}$  noise contours reduced. The 55 $L_{den}$  contour increased by 1.3 km<sup>2</sup> between 2016 (36.2km<sup>2</sup>) and 2021 (37.5km<sup>2</sup>), but is reduced by 3.1km<sup>2</sup> compared to 2019 (36.2km<sup>2</sup>).

Figure 2. Annual  $L_{den}$  contour areas, including 2019 data



The  $L_{night}$  contour shows a similar trend to  $L_{den}$ , with an increase in contour area of 1.3 km<sup>2</sup> between 2016 (41.9km<sup>2</sup>) and 2021 (46.2km<sup>2</sup>), and a reduction of 2.4km<sup>2</sup> compared to 2019 (48.6km<sup>2</sup>).

Figure 3. Annual  $L_{night}$  contour areas, including 2019 data





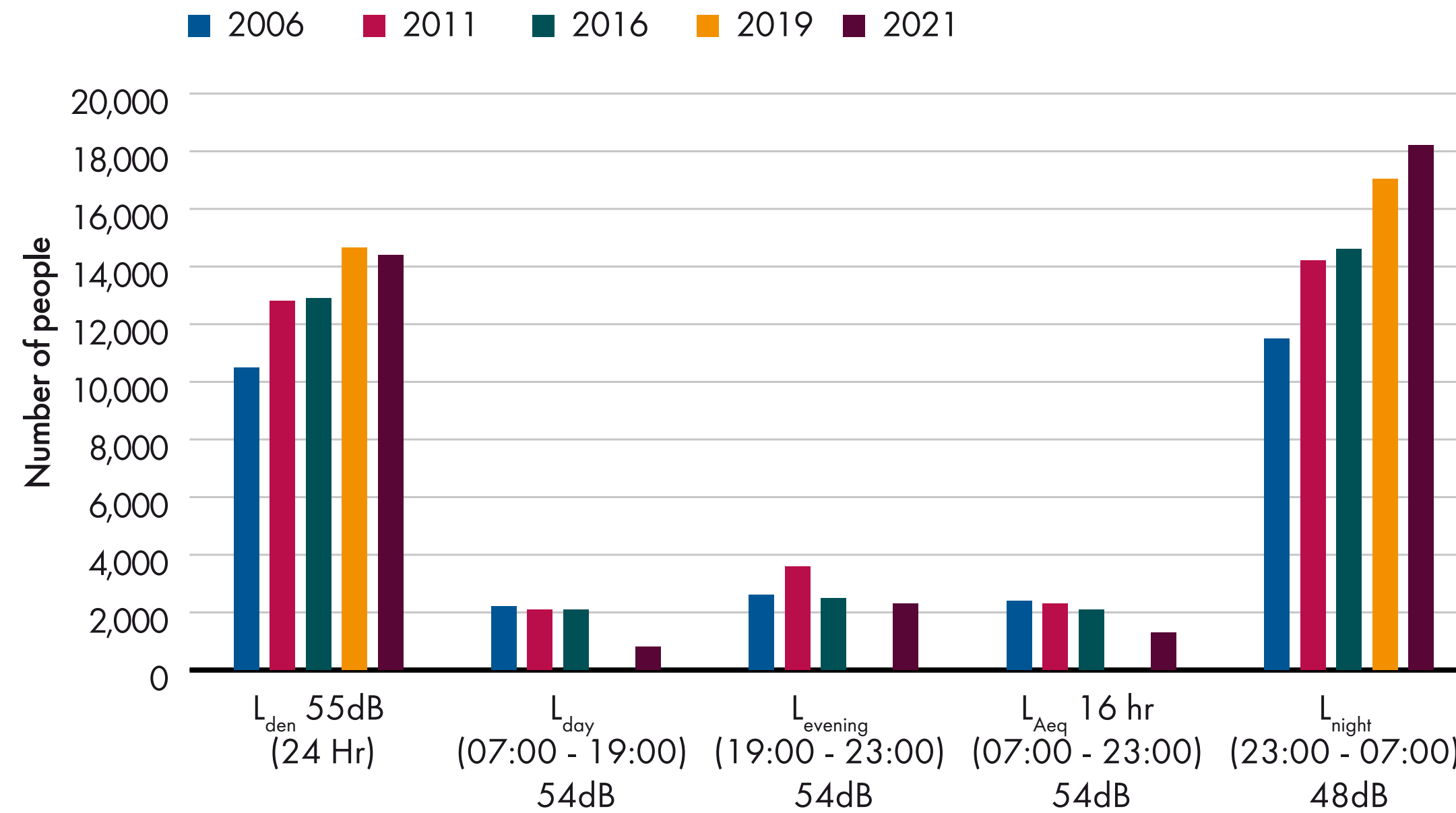
### Summary results: population

Changes to the number of people estimated to be affected by noise, based on the Defra noise mapping results, are presented in Figure 4. The figure shows the results of modelled noise levels for each noise metric in 2021, compared to previous noise mapping years of 2006, 2011 and 2016, with the population counts for  $L_{den}$  and  $L_{night}$  included for 2019.

The population count within the 55dB  $L_{den}$  contour shows an increase from 2016 (12,900 people) when compared to 2021 (14,400 people). The 2019 population count was 14,650, down by 250 since 2019.

The population count within the 48dB  $L_{night}$  contour shows a different trend: an increase from 2016 (14,600 people) compared to 2021 (18,200 people). The 2019 population count was 17,050 which was 1,150 lower than in 2021.

Figure 4. Annual noise mapping results for number of people within contour levels



The results show that the number of people within the  $L_{day}$ ,  $L_{evening}$  and  $L_{Aeq}$  noise contours reduced between 2016 and 2021 when airport activity during these years was significantly reduced. However, the number of people within the  $L_{night}$  and  $L_{den}$  noise contours, which include night-time activity, increased. Taking account of these results, this Noise Action Plan proposes new measures to minimise night noise which are included in the Night Noise chapter.



# 6. Laws and policies





## The laws and policies that have been set up to manage aircraft noise are complex and have many layers.

Aircraft noise law and policies in the UK have evolved over many years, and are based on experience gained both here in the UK and beyond. The charts on the following pages summarise the tiers of aircraft noise laws and policies affecting operations at airports. These are discussed in more detail in this chapter.

Difference between a law and a policy:

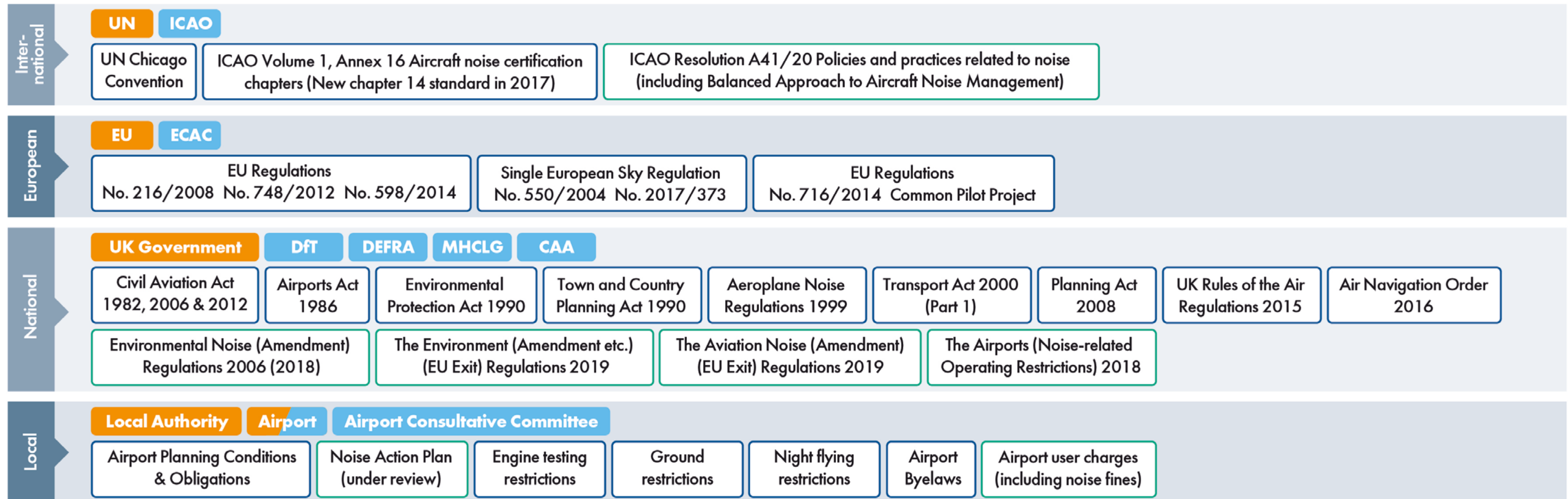
**Laws** Legal documents that must be complied with. In the UK these include Acts, Regulations and Orders.

**Policies** Supporting documents to laws that provide further information and assistance in managing the issue. These include Strategies, Plans, Guidelines, Frameworks, Standards, Information, Projects, and Best Practice guides. These can come from any geographic location.





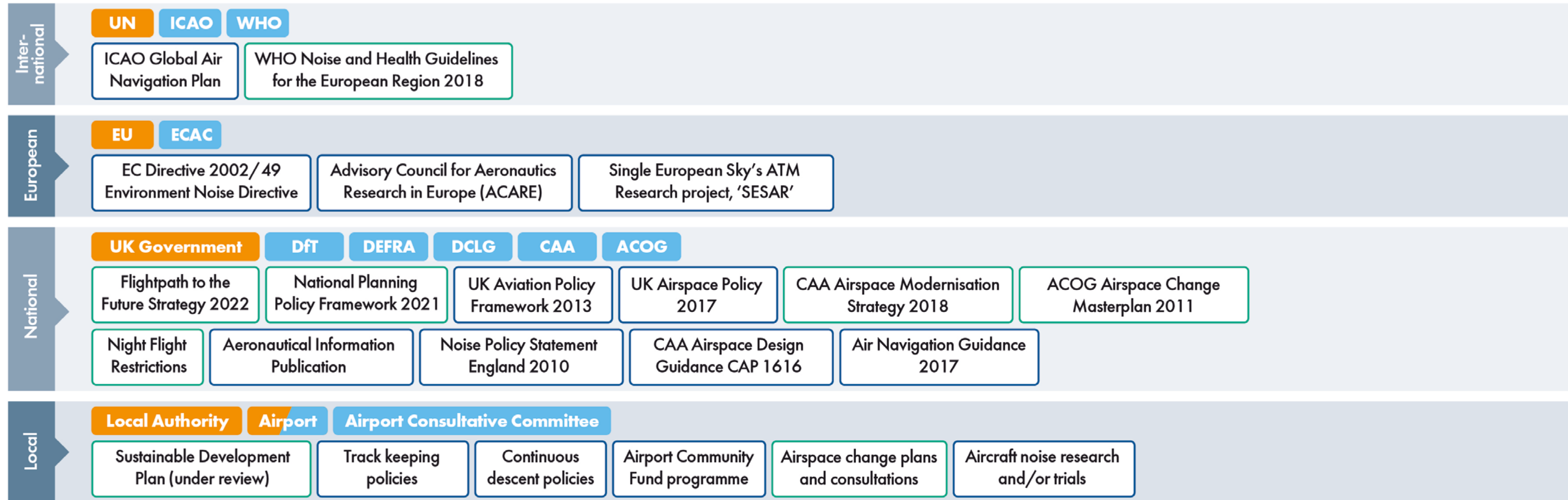
Figure 5. Structure of aircraft noise management laws



- Key**
- Governing body
  - Implementation body
  - Revised or new since 2018



Figure 6. Structure of aircraft noise management policies



- Key**
- Governing body
  - Implementation body
  - Revised or new since 2018



## International aircraft noise policy

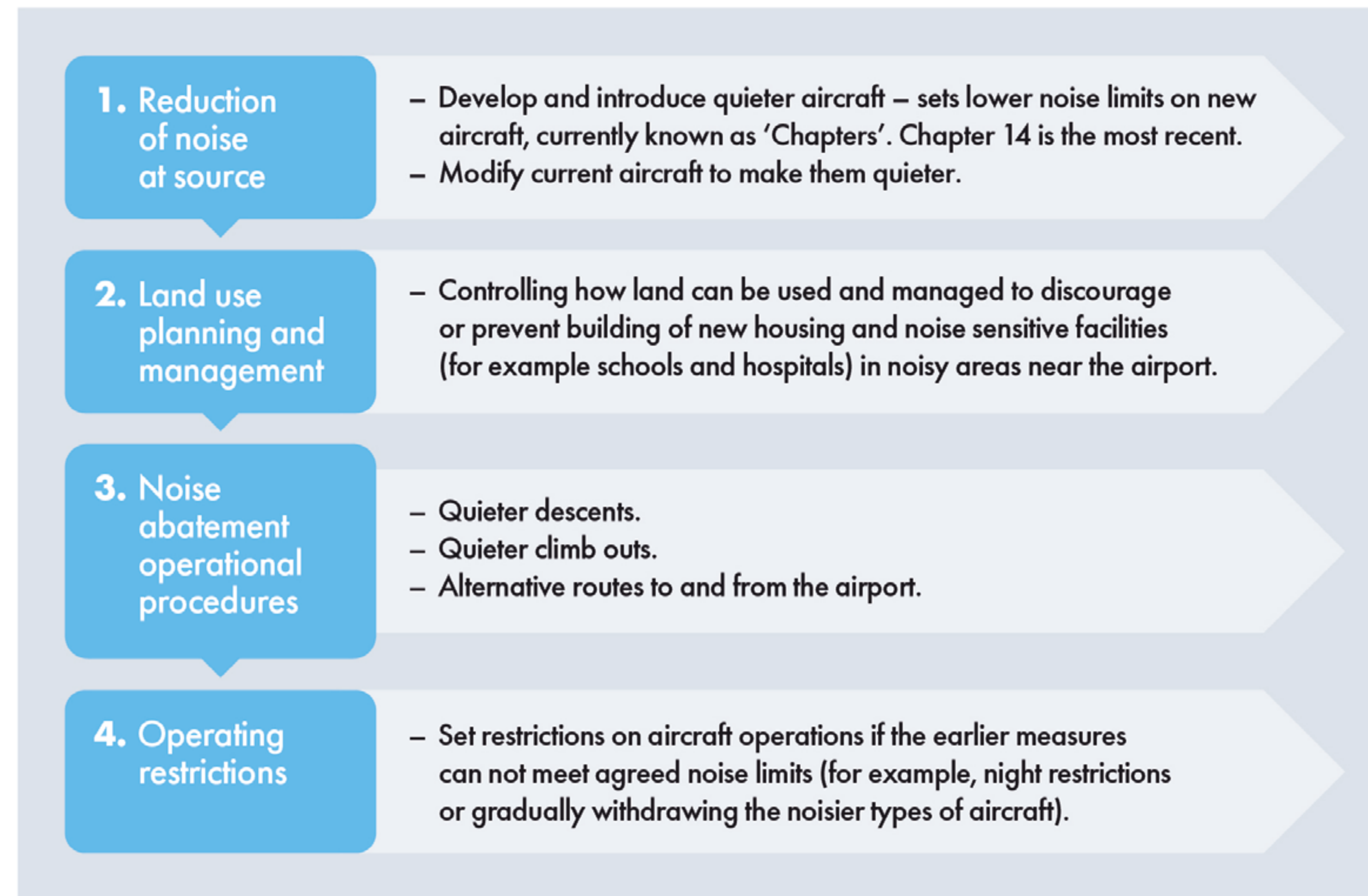
As aviation activities occur across the globe, many policies to address the effect of aircraft noise have been developed at an international level.

### International Civil Aviation Organisation (ICAO) aircraft noise policy

The International Civil Aviation Organisation, (ICAO), is a specialised agency of the United Nations. It aims to develop the principles and techniques of international civil air navigation and foster the planning and development of international air transport. ICAO established a Balanced Approach for managing aircraft noise with four priorities presented in Figure 7.

One of ICAO’s main activities is the establishment of international standards, recommended practices, and procedures regarding the technical fields of aviation, including aircraft noise. After a standard is adopted, it is put into effect by each ICAO member state in its country.

Figure 7. International Civil Aviation Organisation (ICAO) Balanced Approach to aircraft noise management



To reduce noise at source ICAO has set progressively tighter certification standards for noise emissions from civil aircraft, known as Chapters. The Chapters set maximum acceptable noise levels for landing and take-off by all new models of each aircraft type. The first Chapter, known as Chapter 2, was set in 1973. This was followed by Chapter 3 in 1977, Chapter 4 in 2001 and Chapter 14 in 2017. As these new aircraft are brought into service by airlines, and older ones phased out, the ICAO standards have consistently reduced the noise each new aircraft type makes.

Under Chapter 14, all new aircraft manufactured from 31 December 2017 onwards must now meet the standard set at a 7dB cumulative margin below that of Chapter 4 found on the ICAO website<sup>2</sup>.

Additionally, airlines regularly also make modifications to original aircraft to make them quieter. This makes the aircraft meet the noise requirements of later ICAO noise standards. This is the case with some of the commercial passenger and cargo operators at our airport, whose aircraft comply with the Chapter 14 standard, despite the aircraft originally being certified as Chapter 4 aircraft.

<sup>2</sup> <https://www.icao.int/environmental-protection/Pages/Reduction-of-Noise-at-Source.aspx>



**What does a 'cumulative margin' mean?**

When certifying the noise level of an aircraft, noise is measured at three points: on approach; at the point of take-off; 6.5km from the start of the take-off roll. Each of these noise levels is added up and compared to the internationally agreed 'noise certification standard'. The difference between the measured noise level and the certification standard is known as the 'cumulative margin'. More information is available on the ICAO website<sup>3</sup>.

Figure 8. Downward trend in the noise certification of aircraft (Source: ICAO noise database<sup>4</sup>)



<sup>3</sup> <https://www.icao.int/environmental-protection/pages/reduction-of-noise-at-source.aspx>

<sup>4</sup> <http://noisedb.stac.aviation-civile.gouv.fr/>



### Global Air Navigation Plan

The [ICAO Global Air Navigation Plan \(GANP\)](#) is an overarching framework that includes key civil aviation policy principles to help ICAO regions, sub regions and states increase the capacity and improve the efficiency of the global air-traffic management system.

### World Health Organisation Noise and Health Guidelines

The [World Health Organisation published day and night noise guidelines for Europe in 2018](#). These guidelines collated research into the health effects of noise disturbance, including from aircraft noise, and made recommendations to governments on managing noise levels.

### European aircraft noise policy

The European Union (EU), through the European Civil Aviation Conference (ECAC), has issued various directives and regulations relating to the management and control of aircraft noise. Member states apply the requirements of the directives by incorporating them into national legislation.

Whilst the UK is no longer a member of the EU, many of the directives have been retained or are in the process of being incorporated into existing or new UK laws. The relevant directive and regulations for aircraft noise management are:

#### Environmental Noise Directive (2002/49/EC)

The Environmental Noise Directive has two main aims.

- To define a common approach to avoiding, preventing, or reducing the harmful effects, including annoyance, of being exposed to environmental noise.
- To provide a basis for developing community measures to reduce noise from major sources, particularly road and rail vehicles and networks, aircraft, outdoor equipment, industry, and mobile machinery.

This is the overarching Directive that created the specifications for how to produce this Noise Action Plan. This European document has been brought into UK legislation as Retained EU Reference Directive 2002/49 on the assessment and management of environmental noise.

### EU Regulation No. 598/2014

This has replaced EC Directive 2002/30 and EU Directive 2006/93/EC. The regulation covers the establishment of rules and procedures relating to the introduction of noise-related operating restrictions at airports within a Balanced Approach. [This regulation has been retained by the UK following the exit from the EU.](#)

### Single European Sky Regulation

Currently the average flight in Europe is 49 km longer than necessary. Since the 1990s the EU has been working to improve the efficiency of air traffic management systems across Europe through the [Single European Sky programme](#). This is now aligned with the ICAO GANP approach. [The UK has retained several EU regulations relating to modernising airspace.](#)

### National aircraft noise laws and policy

Legal control of aircraft noise in the UK is set out across a wide range of Acts and Regulations, as shown in the structure of aircraft noise management laws. The broader principles these laws are seeking to manage are set out in UK Government frameworks, strategy, and guidance documents, and are summarised in the structure of aircraft noise policies.

### UK Aviation Noise Objective

The Government's overall noise objective, set in the 2013 Aviation Policy Framework, is "...to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, as part of a policy of sharing benefits of noise reduction with industry." Further guidance on how this objective should be assessed in regards to airspace change was published by the Government in the '[Air Navigation Guidance 2017](#)'.

Since 2017, the UK noise objectives and wider policies have been reviewed through an Aviation Strategy consultation which completed in 2022 with publication of the '[Flightpath to the future: a strategic framework for the aviation sector](#)'. This new strategy states the intention in 2022/23 to set out its next steps on a "clearer noise policy framework alongside measures to incentivise best operational practice to reduce noise and measures to improve airport noise insulation schemes". In March 2023, the UK Government published its revised overarching aviation noise policy statement: "The government's overall policy on aviation noise is to balance the economic and consumer benefits of aviation against their social and health implications in line with the International Civil Aviation Organisation's Balanced Approach to Aircraft Noise Management. This should take into account the local and national context of both passenger and freight operations, and recognise the additional health impacts of night flights.



This Noise Action Plan has been developed in line with the current noise objective and in consideration of the ongoing discussions about a clearer noise policy framework.

Further relevant UK legislation for aircraft noise is detailed below:

#### **[The Environment \(Amendment\) \(EU Exit\) Regulations 2019](#)**

This adopts EU Directive 2002/49/EC into UK law.

#### **[The Environment Protection Act 1990](#)**

Section 79(6) of the Environmental Protection Act 1990 (as amended) specifically exempts aircraft noise from the general noise nuisance controls which exist under that legislation.

#### **The Civil Aviation Acts 1982 and 2006**

[The 1982 Act](#) gave the UK Government powers to introduce noise controls to limit or mitigate the effect of noise and vibration from aircraft landing or taking off at designated airports, currently London Heathrow, Gatwick, and Stansted airports. These powers were widened by [the 2006 Act](#), which permits any airport authority to establish a 'noise control scheme' which may limit the numbers or types of aircraft that can be used in any given period. It also gives airport authorities the power to introduce charges and penalties that are designed to encourage the use of quieter or less-polluting aircraft.

#### **[Airports Act 1986](#)**

This Act gives the Secretary of State powers to limit the number of occasions on which aircraft may land or take-off at an airport, and to develop schemes to allocate airport capacity.

#### **[The Environmental Noise \(England\) Regulations 2006 \(as amended\)](#)**

These regulations turn the EU's Environment Noise Directive (2002/49) into UK law. The regulations state that for the purpose of producing noise maps at 'non-designated airports' the airport operator is considered to be the competent authority. The plans must:

- be drawn up for places near the airport that fall within the 55dB(A)  $L_{den}$  contour or the 50dB(A)  $L_{night}$  contour on noise maps;
- be designed to manage noise levels and effects, including reducing noise if necessary; and
- aim to protect quiet areas in agglomerations against an increase in noise.

Once prepared and adopted, the Noise Action Plans must be reviewed and, if necessary, revised at least every five years, and whenever a major development takes place that affects the noise footprint around the airport.

#### **[The Air Navigation Order 2016](#)**

This overarching law defines requirements for certifying aircraft, regulations for how pilots must operate aircraft in the UK and rules for how air traffic control must be arranged and managed. It was last reviewed and updated in 2022 to reflect changes following the UK's withdrawal from the EU.

#### **The Aviation Noise (Amendment) (EU Exit) Regulations 2019**

This transposes Directive 2002/30/EC in UK law.

#### **[The Airports \(Noise-related Operating Restrictions\) \(England and Wales\) Regulations 2018](#)**

These regulations turn EU Directive 598/2014 (ICAO Balanced Approach) into UK law. They apply to major airport operators with over 50,000 civil jet aircraft movements a year and reflect the adoption of the ICAO Balanced Approach to managing aircraft noise. Additionally, the regulations define procedures which airports should follow when considering operating restrictions based on aircraft noise.

#### **[Aeroplane Noise Regulations 1999](#)**

These regulations define the noise certificate requirements for both propeller and jet aeroplanes registered in the UK. It ensures that no aircraft can land or take-off in the UK without a valid noise certificate. The regulations are based on the noise certification standards and limits issued by ICAO, (e.g. Chapter 3 and 4 aircraft).

They also provide a list of aircraft that are exempt from the ICAO noise certification. They were last amended in January 2021.

#### **[Aircraft Night Noise Regulations](#)**

These regulations set maximum night noise and aircraft movement limits for the three London airports (Heathrow, Gatwick, and Stansted). The present regime of night flying restrictions was reviewed in 2020/21 and set until October 2025.

The main actions to arise from the consultation are that:

- the existing night noise objective and night flight restrictions will be rolled over for a period of 3 years.
- the next night flight regime will run from October 2022 to October 2025.
- a ban on QC4 rated aircraft movements at the designated airports during the night quota period was implemented from October 2022.
- the Government aim to publish during 2023 a further consultation on night flight restrictions post-October 2025.

The outcome was released on 19 July 2021.



In March 2023, the UK Government published its revised overarching aviation noise policy statement: “The government’s overall policy on aviation noise is to balance the economic and consumer benefits of aviation against their social and health implications in line with the International Civil Aviation Organisation’s Balanced Approach to Aircraft Noise Management. This should take into account the local and national context of both passenger and freight operations, and recognise the additional health impacts of night flights.”

The Government will measure the performance against this objective by:

- The area of and number of people in the 48dB L<sub>Aeq</sub> 6.5-hour night contour.
- Sleep disturbance impacts associated with night flights, assessed using the Government’s TAG methodology.
- The average noise of an aircraft (as measured by the average noise quota count per aircraft movement over the course of a season).

The Government also stated that, in the future, they will produce number above metrics and look at how they can be used. For this regime, however, they will not be used to measure achievement against the objective. In spring 2023, the Government consulted on night-time noise abatement objectives for the designated airports beyond October 2025.

### **Airspace Policy**

In 2017, the Secretary of State tasked the Civil Aviation Authority (CAA) with preparing and maintaining a coordinated strategy and plan for the use of UK airspace up to 2040, including modernisation. A framework has been established for how UK airspace can be improved to accommodate predicted future growth in aviation while addressing noise, emissions, and flight delay issues.

To support this the Government implemented a range of proposals including:

- A new Secretary of [State Call In power](#) on airspace modernisations that are of national importance, providing high level direction and a democratic backstop on the most significant airspace modernisation decisions.
- Important changes to aviation noise compensation policy to improve fairness and transparency. This includes bringing compensation policy for airspace modernisations in line with policy on changes to aviation infrastructure, and considering locally agreed compensation for increased overflight due to an airspace modernisation.
- The creation of an Independent Commission on Civil Aviation Noise (ICCAN) – The body would help ensure that the noise impacts of airspace modernisations are properly considered and give communities a greater stake in noise management. ICCAN was set up as a new non-departmental public body of the Department for Transport (DfT). This body ran from 2019 until July 2021 when the Government decided to wind it down and redistribute its work between the DfT and the Civil Aviation Authority (CAA). The CAA have subsequently published an Environmental Strategy and set up an Environmental Sustainability Panel in April 2022.
- A new requirement for options analysis in airspace modernisation, to enable communities to engage with a transparent airspace modernisation process and ensure options such as multiple routes are considered.
- New metrics and appraisal guidance to assess noise impacts and their effects on health and quality of life. This will ensure noise impacts are considered much further away from airports than at present.



To support the delivery of this policy, the CAA issued guidance for changing UK airspace – [CAP1616](#). This is designed to ensure that it meets modern standards for regulatory decision-making, and is fair, transparent, consistent, and proportionate. The process must be impartial, evidence-based, and must take account of the needs and interests of all affected stakeholders. Seven stages are defined for carrying out an airspace change with a focus on early engagement with communities to explore a range of possible options. The [CAA plan to review and update this guidance](#) by summer 2023.

Following [CAP1616](#), the CAA also published an [airspace modernisation strategy](#) in December 2018 to outline recommended industry initiatives and a governance structure for the modernisation programme.

The DfT and CAA co-sponsor [airspace modernisation](#). The Airspace Change Organisation Group (ACOG) was established and is responsible for producing the [UK airspace change masterplan](#). This masterplan is currently moving from the second to third iteration.

**[Transport Act 2000 \(Part I\)](#)**

This establishes the framework for how the CAA operates and air traffic services are provided.

**[Town and Country Planning Act 1990](#)**

This establishes the legal framework for how planning applications (including for airports) are developed and decisions on the applications are managed and made.

**[Planning Act 2008](#)**

This establishes the Infrastructure Planning Commission and the authorisation of projects for the development of nationally significant infrastructure, including airports.

**[National Planning Policy Framework](#)**

The National Planning Policy Framework (NPPF) sets out the Government’s planning policies for England, and how it expects those policies to be applied by local authorities. It was reviewed and updated in 2021. The NPPF sets out the approach to implementing policy. It requires that planning policies and decisions should contribute to, and enhance, the natural and local environment by preventing new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water, or noise pollution.

It goes on to state that planning policies and decisions should also ensure that new development is appropriate for its location taking account of the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment. In doing so they should:

- Mitigate and reduce to a minimum, potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life.
- Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

**[Noise Policy Statement England](#)**

The Noise Policy Statement for England (NPSE) (2010) sets out the long-term vision of Government noise policy. A policy vision was set in this document to:

*“Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”*

A number of objectives and principles were set to achieve this vision which are taken into account in this Noise Action Plan. The NPSE also introduces two key concepts:

- The Lowest Observed Adverse Effect Level (LOAEL). This is the level above which adverse effects on health and quality of life can be detected.
- The Significant Observed Adverse Effect Level (SOAEL). This is the level above which significant adverse effects on health and quality of life occur.

The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided while also taking account of the guiding principles of sustainable development.

The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking account of the guiding principles of sustainable development. This does not mean that such adverse effects cannot occur.



## Local aircraft noise policy

### Sustainable Development Plan 2015

The 2013 Aviation Policy Framework continues to recommend that airport operators prepare masterplans that provide a clear statement of intent to enable future airport development to be given due consideration in local planning processes. Airport master plans do not have a statutory status, but local planning authorities and other bodies take these plans into account when preparing regional and local policies and making planning decisions. The most recent master plan for East Midlands Airport, our Sustainable Development Plan<sup>5</sup>, was published in 2015. It is supported by four detailed plans covering community, surface access and the economy, land use and environment. Work is currently underway to review and update the East Midlands Airport Sustainable Development Plan, and it is expected that local engagement and public consultation will be undertaken in 2023.

The 2015 Environment Plan (part of the Sustainable Development Plan) sets an aim to make the best use of natural resources and minimise the environmental impact of the airport's operation. We will also continue to integrate environmental management into our business processes to ensure that the best environmental practice is carried out. This builds on our long-term environmental programme within which East Midlands Airport became the first airport in the UK to obtain certification to the ISO14001 environment standard.

<sup>5</sup> See <http://www.eastmidlandsairport.com/about-us/development-plan/>

The chapter on noise in the Environment Plan is consistent with our Noise Action Plan 2013-2018. The objectives for managing aircraft noise are included in the Environment Plan, and the long-term aim is "to limit and reduce where possible, the number of people affected by noise as a result of the airport's operation and development". A summary of the actions in this Noise Action Plan will be incorporated into the noise section of the Environment Plan that will be part of the updated East Midlands Airport Sustainable Development Plan.

### Planning policy

We work closely with local planning authorities when they are preparing their local development plans. This supports the Balanced Approach and helps to make sure that local planning policies are in line with guidance set out in the National Planning Policy Framework. Such policies can be found in the North West Leicestershire, South Derbyshire, and Rushcliffe Borough Council Local Plans. In 2017 North West Leicestershire District Council adopted their latest Local Plan which included a statement (quoted to the right) about noise in the context of permitted growth of East Midlands Airport.

Several local planning authorities in the area around East Midlands Airport now are in the process of updating their Local Plans. They include North West Leicestershire and South Derbyshire. We will engage positively in the plan-making process to set out the airport's plans and the approach to be taken in managing aircraft noise in local areas.

"The growth of East Midlands Airport will be supported provided development that gives rise to a material increase in airport capacity or capability... incorporates measures that will reduce the number of local residents affected by noise as a result of the airport's operation, as well as the impact of noise on the wider landscape;"

[North West Leicestershire Local Plan](#)

### Airport planning conditions

Planning permission was granted by North West Leicestershire District Council in 2011 for the construction of a 190 metre extension to our runway. The extension works have been formally commenced and this triggered a number of environmental and community obligations. These included legally formalising the Sound Insulation Grant Scheme. The runway extension consent also included a planning condition relating to night noise that requires that the area enclosed by the 55dB L<sub>Aeq</sub> (8-hour) summer night noise contour shall not exceed 16km<sup>2</sup>. This legal night noise limit is a key part of the airport's noise controls. An annual monitoring report is submitted to the District Council and the night noise contour remains well within the noise envelope limit.

### East Midlands Airport Independent Consultative Committee

The East Midlands Airport Independent Consultative Committee (ICC) is made up of 32 members representing local authorities, community groups and user groups. It meets three times a year to consider the airport's performance and to discuss any matters of concern. The Committee has two sub-committees with the Monitoring, Environment, Noise and Track (MENT) considering the airport's noise performance and informing future noise strategy.



# 7. Future Airspace Programme

The background of the slide features a dark blue gradient. On the right side, there is a stylized, light blue graphic of a wind turbine. A white contrail from a jet aircraft is shown streaking across the scene, passing behind the turbine. The background is also decorated with a pattern of thin, concentric white circles that create a ripple effect.



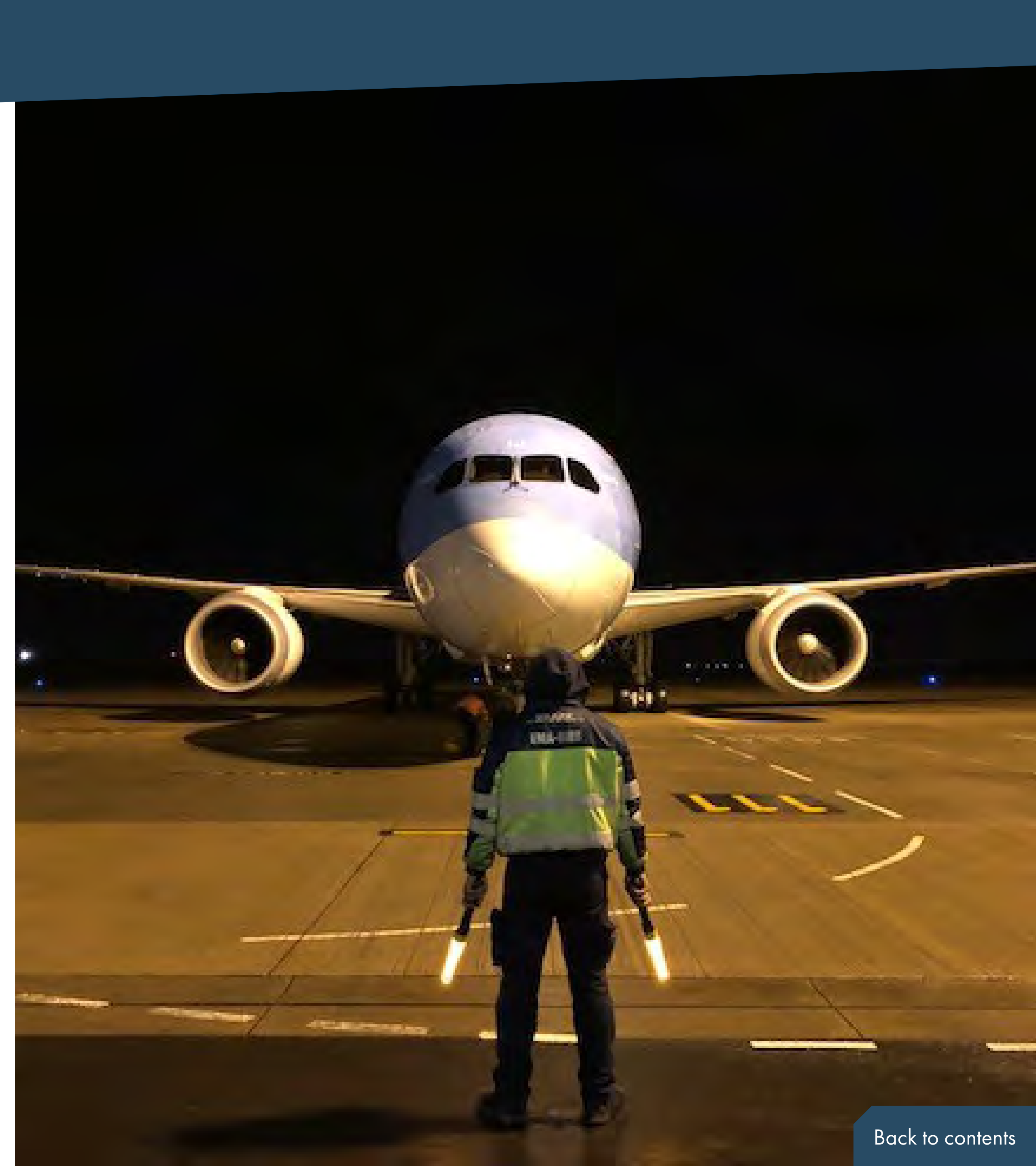
Airspace is a critical part of the national infrastructure. Like the road and rail network, it plays a vital role in facilitating the movement of people and products quickly, safely and efficiently, enabling connectivity and driving economic growth. Although the UK has some of the most congested and complex airspace in the world, the way it is managed has changed little since the 1950s.

### **Civil Aviation Authority Airspace Modernisation Strategy**

The Future Airspace Programme at East Midlands Airport forms part of the Civil Aviation Authority's (CAA's) wider Airspace Modernisation Strategy (AMS). Modernising UK airspace has the potential to bring several benefits, including reduced delays, greater reliability, more efficient operations, and the chance to build on the UK's already world-class aviation safety record. In addition, it presents an opportunity to address some of the wider impacts of aviation such as noise and emissions.

As the national regulator, the CAA has responsibility for approving all changes to airspace. In December 2017, the CAA published its change process called [CAP1616](#): Guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic. [CAP1616](#) was most recently updated in March 2021. It sets out the seven stages that the CAA requires airports to complete to carry out modernisation of their airspace. It also provides detailed guidance on the involvement of stakeholders, together with local communities, when developing change proposals.

[CAP1616](#) includes four 'gateways' where the CAA will assess the work undertaken by the change sponsor before allowing them to progress to the next stage of the process.





## East Midlands Airport Airspace Modernisation Programme

In May 2019, East Midlands Airport completed Step 1A of the [CAP1616](#) process by submitting a [Statement of Need](#) to the CAA, setting out why an airspace change was necessary. Step 1B of the process required the identification of design principles to provide a framework for the subsequent design and evaluation of design options that address the issues and opportunities identified in the [Statement of Need](#) to the CAA. The process followed at East Midlands Airport to develop the design principles through engagement with affected stakeholders is set out in full in the report '[Step 1B Design Principles Report](#)' and its appendices. The eleven design principles agreed with our stakeholders include four related to noise:

- N1: Flight paths should, where practical, be spread out to avoid concentration of aircraft activity to share any noise impacts.
- N2: Where flight paths have to overfly communities, we will consider existing noise in the local area, and will select flight paths to mitigate effects on areas with relatively low levels of ambient noise.
- N3: Flight paths should seek to limit and, where possible, reduce noise disturbance to communities – especially at night.
- N4: Flight paths should, where practical, avoid locations that are especially sensitive to noise.

Full details of all the work completed as part of Stage 2 ('Develop and Assess') of the East Midlands Airport ACP will be submitted to the CAA for assessment in June 2023. Once the CAA are satisfied with our submission, the airport will progress to Stage 3, which includes full public consultation. Upon completion, full details of our Stage 2 submission will be available on the CAA's [airspace change portal](#).

## Airspace Change Organising Group

Airspace Change Organising Group (ACOG) was set up by the CAA and the DfT in 2019 to coordinate the national programme of change and create a strategic national Masterplan for airspace modernisation in the United Kingdom (UK). Iteration two of the Airspace Masterplan was published in January 2022. This set out the four geographical clusters of change, determined by the location of airports' airspace structures, known as Terminal Manoeuvring Areas (TMAs). Airports within each cluster currently have routes which interact to varying degrees, creating inefficiency. The Masterplan identifies and sets out the approach to addressing these regional interdependencies.

East Midlands Airport forms part of the Manchester Terminal Manoeuvring Area (MTMA). There are only three other airports within the MTMA that are also following a [CAP1616](#) airspace change process.

Liverpool John Lennon Airport (LPL) and Leeds Bradford Airport (LBA) are also preparing Stage 2 submissions and Manchester Airport (MAN) are now at Stage 3 of the CAA's CAP1616 process. During Stage 3 we will continue to work with other sponsors, including NATS, who oversee the airspace used by aircraft before they enter and after they leave East Midlands Airport's airspace, to ensure that collectively we optimise operations with the MTMA. This will include providing information to NATS to inform their visualisation and development simulations, which will test the emerging concepts. To optimise the MTMA it is likely that trade-off decisions will need to be made between incompatible airport design options. Where this is the case, we will undertake the necessary cumulative assessment of options in accordance with emerging guidance from ACOG. The completion of the work required at Stage 2 'Develop and Assess' will develop and refine the design options available at East Midlands Airport, as well as expand the understanding of stakeholders' views on those options. Working with ACOG and the other airports within the MTMA we will then establish a plan for full public consultation where we will consult on our shortlist of options.

## Finding more information about airspace modernisation

Updates on our progress continue to be made widely available in the community and through councils. Please visit our [website](#) or the [CAA website](#) to see updates as we move through the seven-stage process outlined in [CAP1616](#).



# 8. Noise controls





At East Midlands Airport we have a long track record of developing policies and taking action to minimise our effect on the environment. In relation to aircraft noise, we will continue to work closely with our airline customers and our air traffic controllers so that together we can develop this work to provide real and lasting benefit.

The national policy for aircraft noise is summarised in Chapter 6. This policy has continued to evolve since the last Noise Action Plan.

Noise is regulated to varying extents at all UK airports. The approaches used include controls on the noise aircraft can emit on departure, limits on the area within noise contours and restrictions on the types of aircraft that can operate or the times at which they can operate. The specific restrictions differ from airport to airport, reflecting the types of aircraft that operate there, how busy the airport is and where flight paths are.

Although maximum noise limits are set for occupational noise exposure, there is no limit defined for environmental noise, including aviation noise. However, in order to assess the adverse impact of aircraft noise in the UK, Government policy has established that the Lowest Observed Adverse Effect Level (LOAEL) is 51 dB  $L_{Aeq}$  16h for an average summer's day and 45 dB  $L_{Aeq}$  8hr for an average summer's night. This does not mean that noise above these levels will not be allowed, but it does mean that noise will be an important factor in considering planning applications within that area.

Currently our long-term noise aim is to 'limit and reduce where possible the number of people affected by noise as a result of the airport's operation and development'. We have reviewed this approach, including considering the policy changes summarised earlier in our Noise Action Plan, and we believe our aim is still appropriate and in line with existing and emerging Government policy.

Managing and where possible, reducing noise is a long-standing priority commitment as part of East Midlands Airport's corporate social responsibility work. We report our progress annually, providing performance information against key noise indicators.

Our approach is further supported by certification in 2001 to the international standard ISO 14001 for environmental management. Certification to this standard demonstrates that our environmental management system, which includes the management of noise, fulfills the requirements of ISO 14001 and has been audited by independent auditors.

In developing our long-term environmental strategy, we have adopted a Balanced Approach, as required by UK and international policy. We recognise the importance of working collaboratively with our stakeholders to explore options available to minimise the impact of noise from aircraft operations.

Our long-term environmental objectives in relation to aircraft noise, remain as follows:

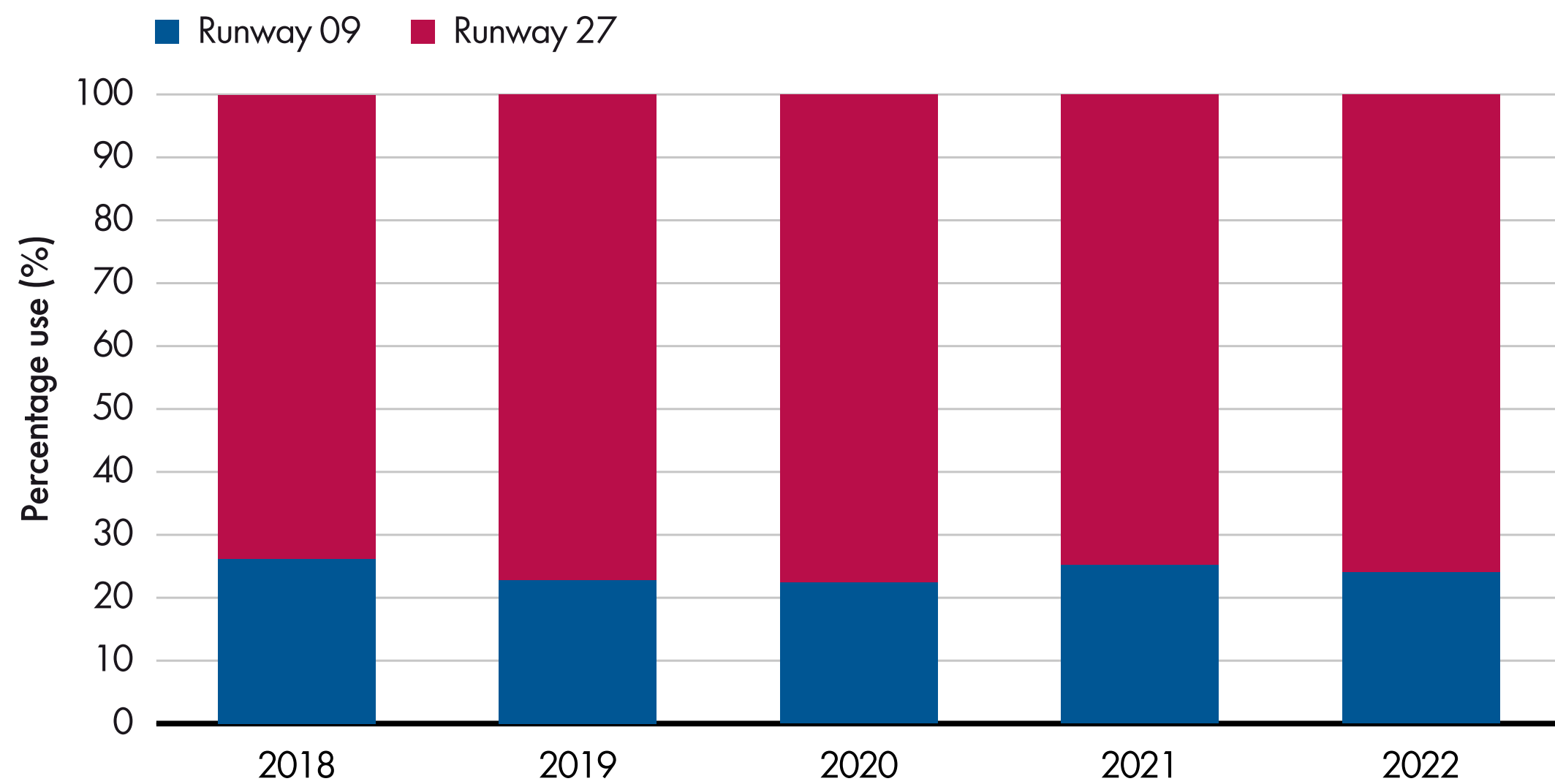
- Ensure that the area of the 55dB ( $L_{Aeq}$  8-hour) summer noise contour does not exceed 16km<sup>2</sup>.
- Encourage and incentivise the use of quieter aircraft.
- Optimise aircraft operating procedures at the airport to minimise noise.
- Work with local planning authorities to discourage new noise sensitive development in areas affected by aircraft noise.
- Continually improve how we work in collaboration with communities, regulators and industry partners to explore options to reduce noise.



### Preferential runway policy

At East Midlands Airport we have a well-established preference for westerly operations using Runway 27. This mode of operation has a lower noise impact on our local communities. When Runway 27 is in use, arriving aircraft approach the airport from the east and departing aircraft take-off towards the west. We maintain westerly operations using Runway 27 until wind conditions are such that aircraft would experience tail wind conditions greater than 5 knots. At this point it is necessary to switch to easterly operations using Runway 09. The proportion of westerly operations is dictated by wind conditions. Over the last five years, 76.34% of flights operated in a westerly direction. Performance for each year is shown in Figure 9.

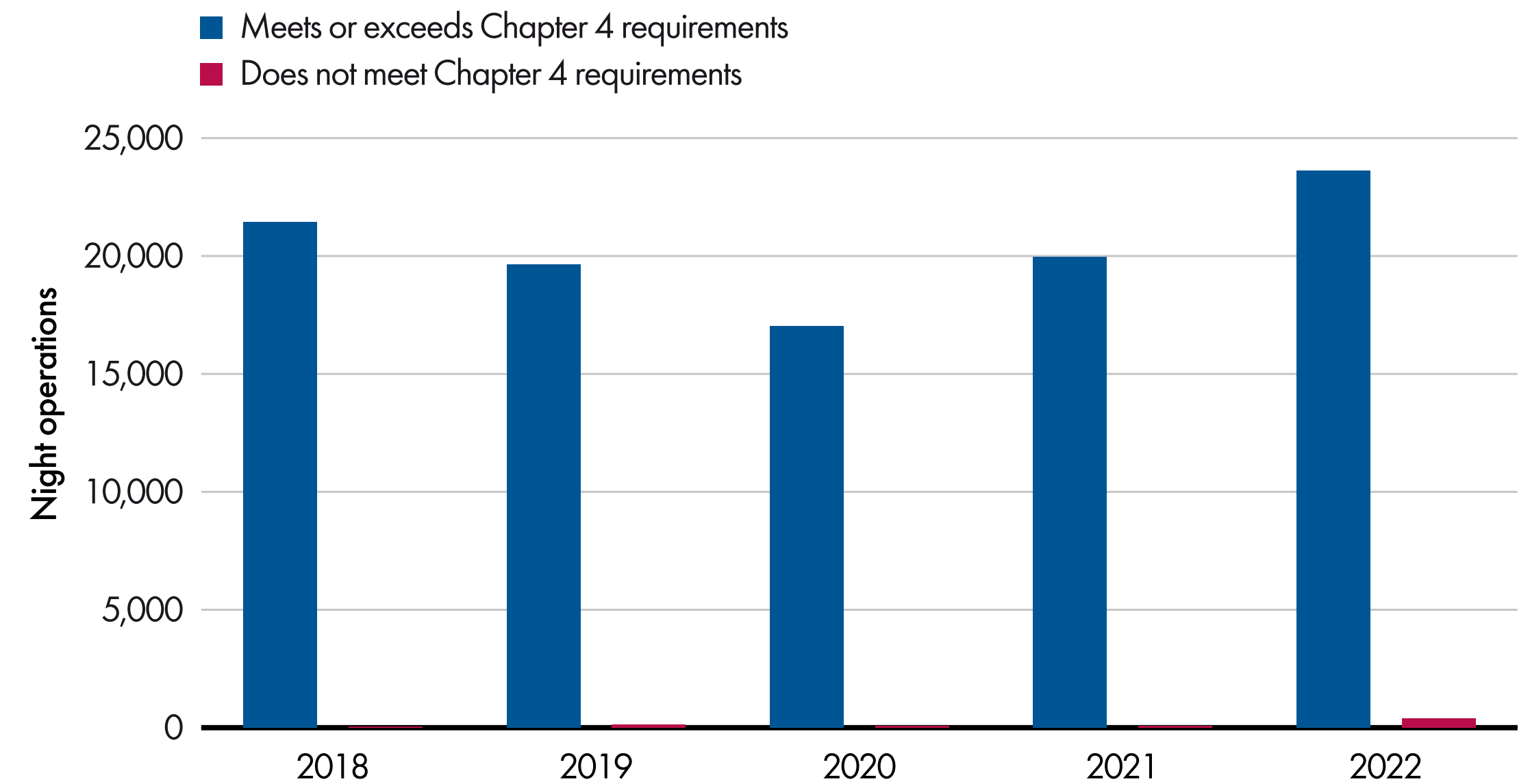
Figure 9. Modal split between Runways 09 and 27 (2018 to 2022)



Our aim is for 100% of night flights to be operated by aircraft complying with the requirements of ICAO Chapter 4. The percentage of aircraft operations at night that meet the requirements of Chapter 4 has maintained above 98% throughout this Noise Action Plan, as can be seen from the chart below.

Since our last Noise Action Plan, we have introduced a detailed noise certification database, which enables us to account for the certified noise levels of aircraft that have operated from the airport by using the certificates provided by the airlines. Since 2021, we have added information about more than 1,800 aircraft into our database. This is particularly important to enable accurate reporting of the proportion of aircraft meeting the requirements of ICAO Chapters 4 and 14.

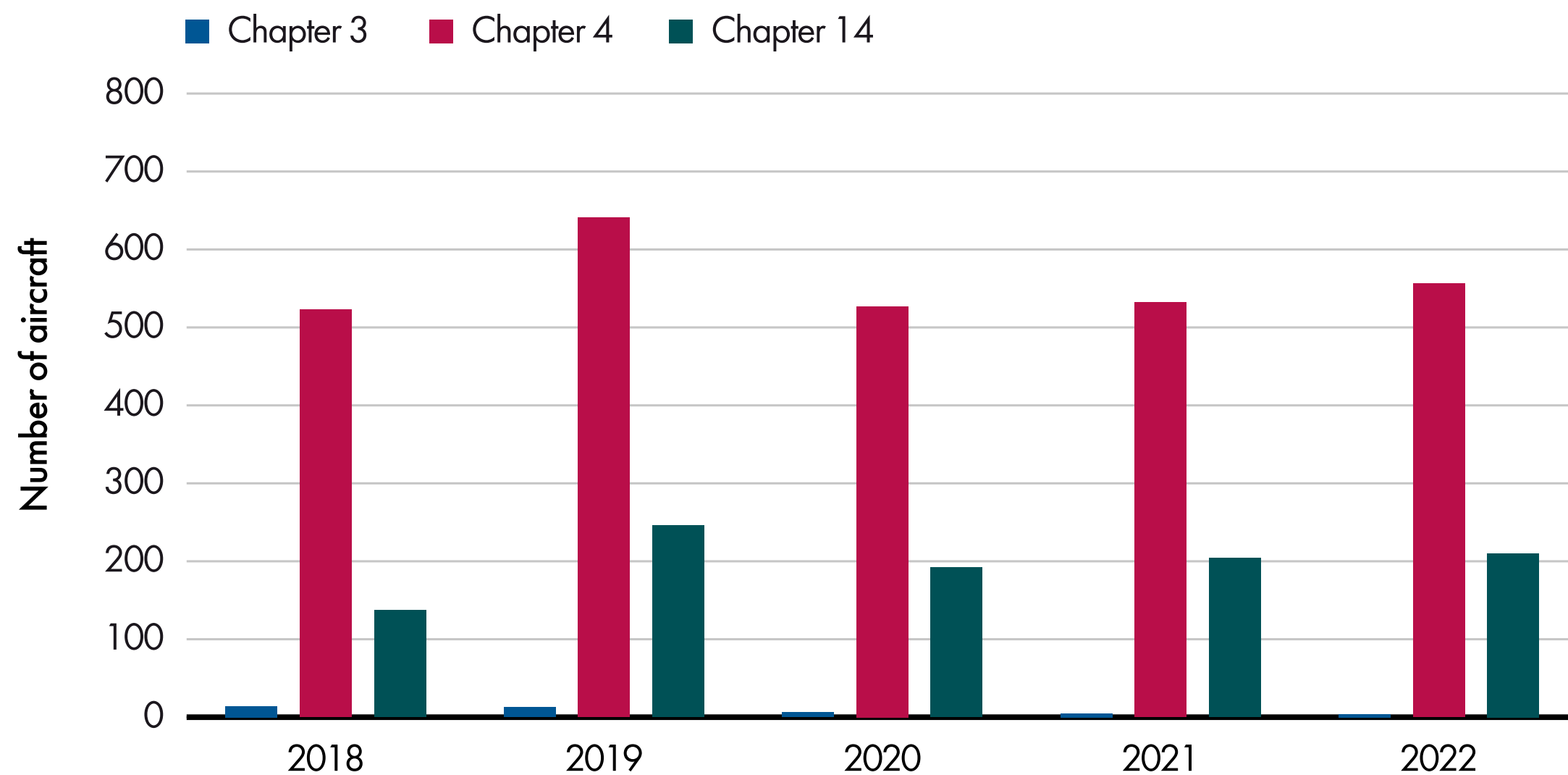
Figure 10. Number of night operations each year by ICAO Chapter





In 2022, 98.4% of flights at night were operated by aircraft which meet the requirements of ICAO Chapter 4. Flights operated by Chapter 3 aircraft were undertaken by two individual aircraft which, following engagement with our airline partners, are being removed from operations at East Midlands Airport in 2023. Our Noise Action Plan 2019-2023 introduced the further ambition that by 2040 all aircraft operating at night will comply with the new ICAO Chapter 14 noise regulations. In 2022, over 21% of aircraft operating night flights at the airport met the Chapter 14 noise certification. We will continue to work with our airlines to increase the proportion of night flights operated by aircraft that meet the requirements of Chapter 14, reporting progress to the East Midlands Airport Independent Consultative Committee.

Figure 11. Number of aircraft operated in each ICAO Chapter at East Midlands Airports



**Noise-related fees and charges**

To incentivise the use of quieter aircraft at night, during our current Noise Action Plan, we have introduced changes to our fees and charges. These place more emphasis on noise and include:

- The addition of a rebate to operators who use Chapter 14 compliant aircraft at night.
- Expanding the QC4 night noise surcharge to cover flights operated by Chapter 3 certified aircraft.
- Creating an additional charging band for <QC0.5.
- Aligning fees and charges between passenger and freight operations.

A detailed explanation of QC, and the night noise scheme at East Midlands Airport is outlined in the Night Noise chapter of this report. We anticipate that these measures will continue to encourage the use of quieter aircraft at East Midlands Airport.

**Airport Planning conditions**

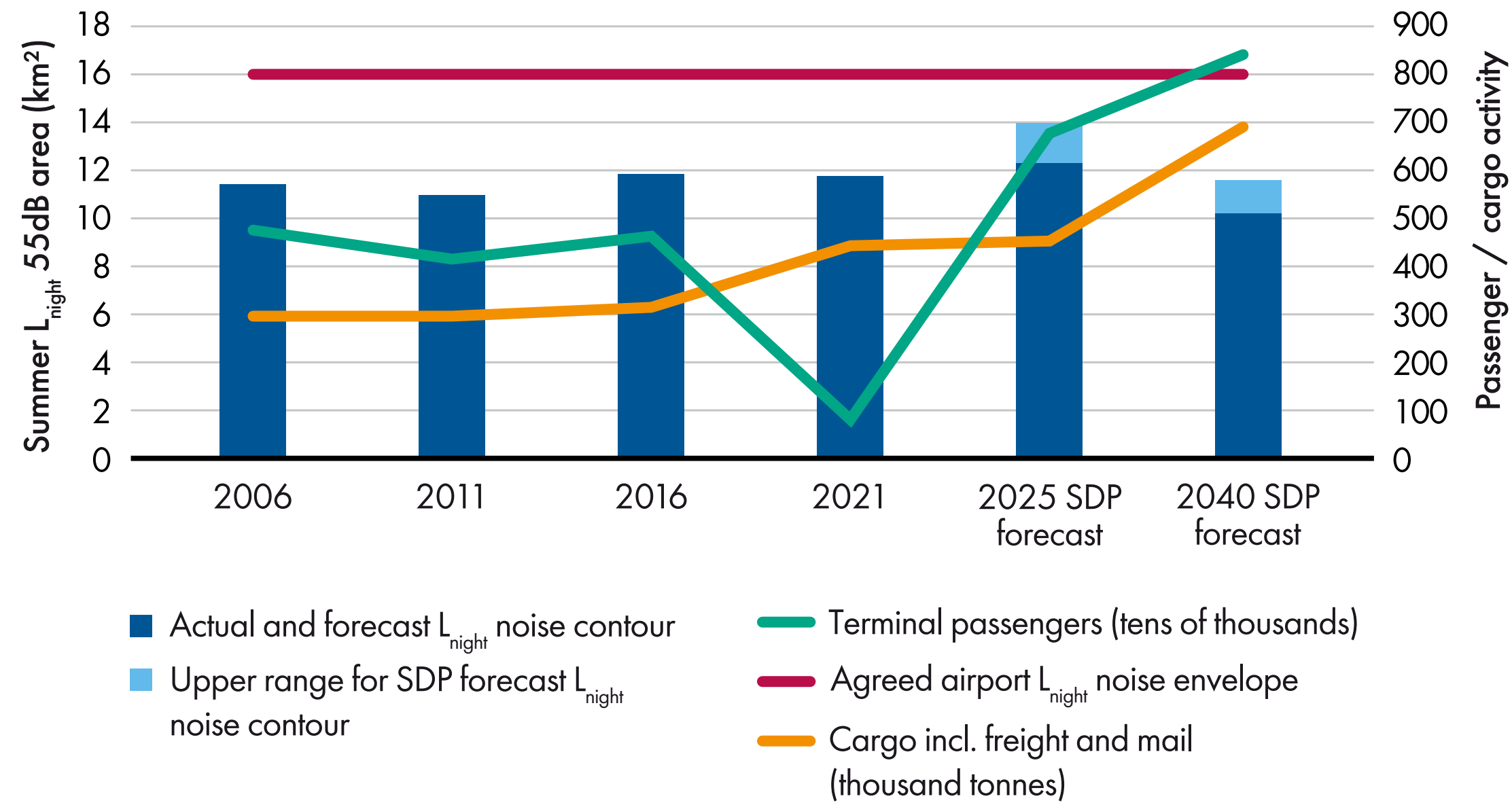
Our night-noise commitment, which is formalised in a planning condition on an extension to the airport’s runway set by North West Leicestershire District Council, is that our ‘night noise envelope’ (based on the 55dB L<sub>Aeq</sub> 8-hour) will not exceed an area of 16km<sup>2</sup>. The airport is operating well within this limit. Annual reports on compliance with this planning condition are submitted to the local planning authority, and the contour areas are reported to the airport’s Independent Consultative Committee.

Airport growth has been delivered sustainably, with only a slight increase in the noise contour area of 0.5km<sup>2</sup> during the last 10 years. We also have entered into a legal agreement with North West Leicestershire District Council (under Section 106 of the Town and Country Planning Act) to formalise the requirement for, and the operation of, the airport’s Sound Insulation Grant Scheme.

The future growth of aircraft activity will remain within the agreed noise envelope. Our 2015 Sustainable Development Plan indicated that there would be some growth in the contour area in the short term. In the longer term, however, the transition to quieter ICAO Chapter 14 aircraft would halt the contour area increase, and then reduce its size below today’s level. We will prioritise actions that create the right incentives for airlines to switch to quieter aircraft. We expect these measures will make sure this transition is as fast as can be practically achieved and that any increase in the noise contour is kept to a minimum. We will update our assessment of the future noise contour as part of our review of the Sustainable Development Plan.



Figure 12. Performance (actual and forecast) against agreed night noise envelope



This new Noise Action Plan sets out 39 measures.

In combination, we believe that these measures will ensure we continue to deliver against our environmental objectives.

Action table 1. Noise Action Plan 2024-2028: Noise controls

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 1</b>	Preferred runway direction	We will continue to maintain our preferential runway policy and monitor runway usage.





# 9. Arriving aircraft





Noise from arriving aircraft is mainly generated by air flowing over the structure of the aeroplane. This is because the engines are normally operating at low thrust settings in this stage of flight.

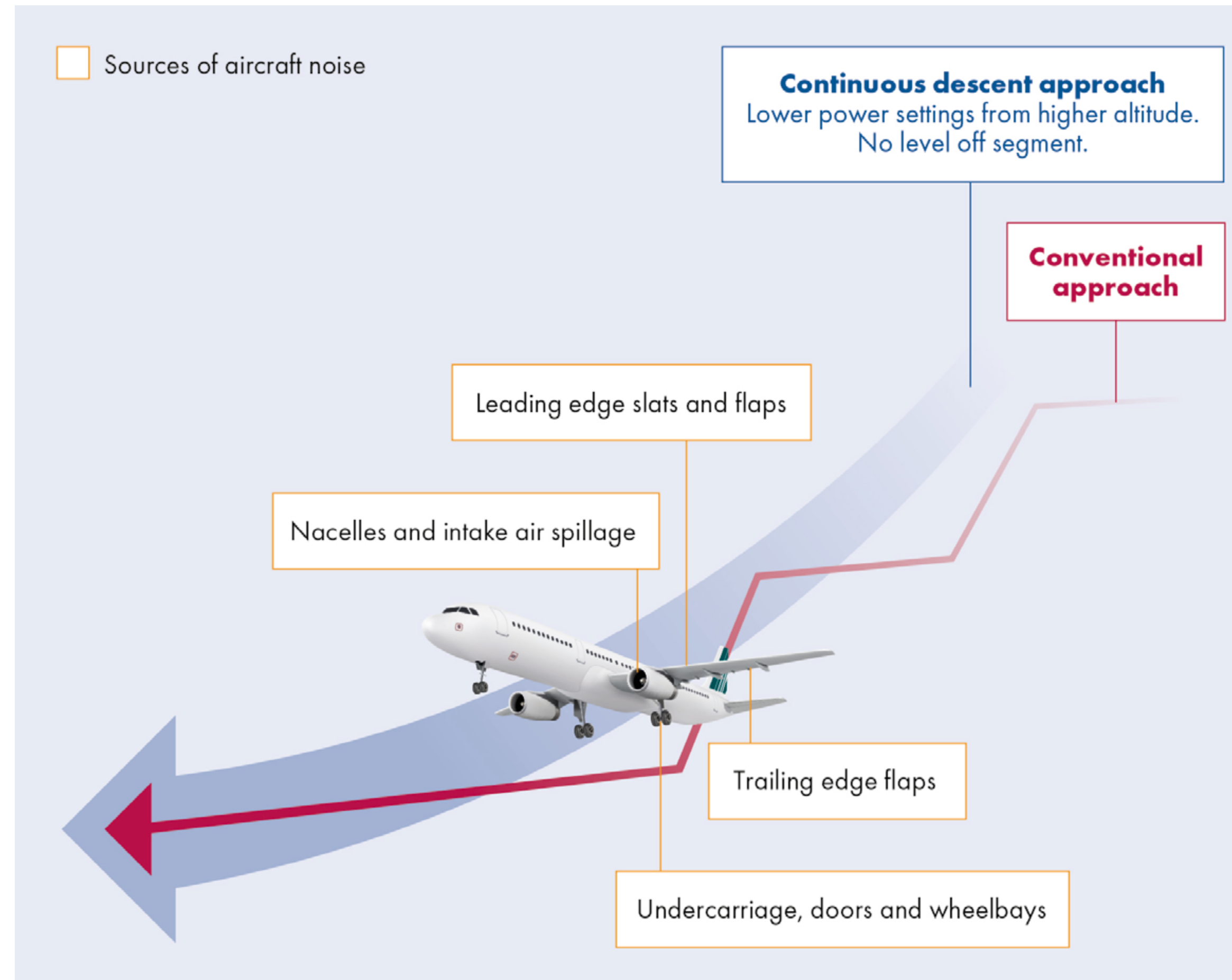
The noise is more audible the lower the aeroplane is and the closer it gets to the airport. It also increases as the pilot lowers the landing gear and flaps in readiness for landing.

Our actions seek to minimise noise from arriving aircraft whilst meeting all flight safety requirements.

**Continuous descent approach**

The primary method of doing this is with a continuous descent approach, which has been shown to reduce arrival noise by up to 5dB.

Figure 13. Sources of aircraft noise on arrival and benefits of a continuous descent approach



Through our Pilot Liaison Group, we have worked with our airline partners to identify opportunities to minimise noise on arrival. This includes looking at low-power, low-drag techniques, use of reverse thrust and reduced engine taxi. A key opportunity the airport monitors is the use of a continuous descent approach (CDA) by operators, with an annual compliance target of 98% for arriving aircraft.

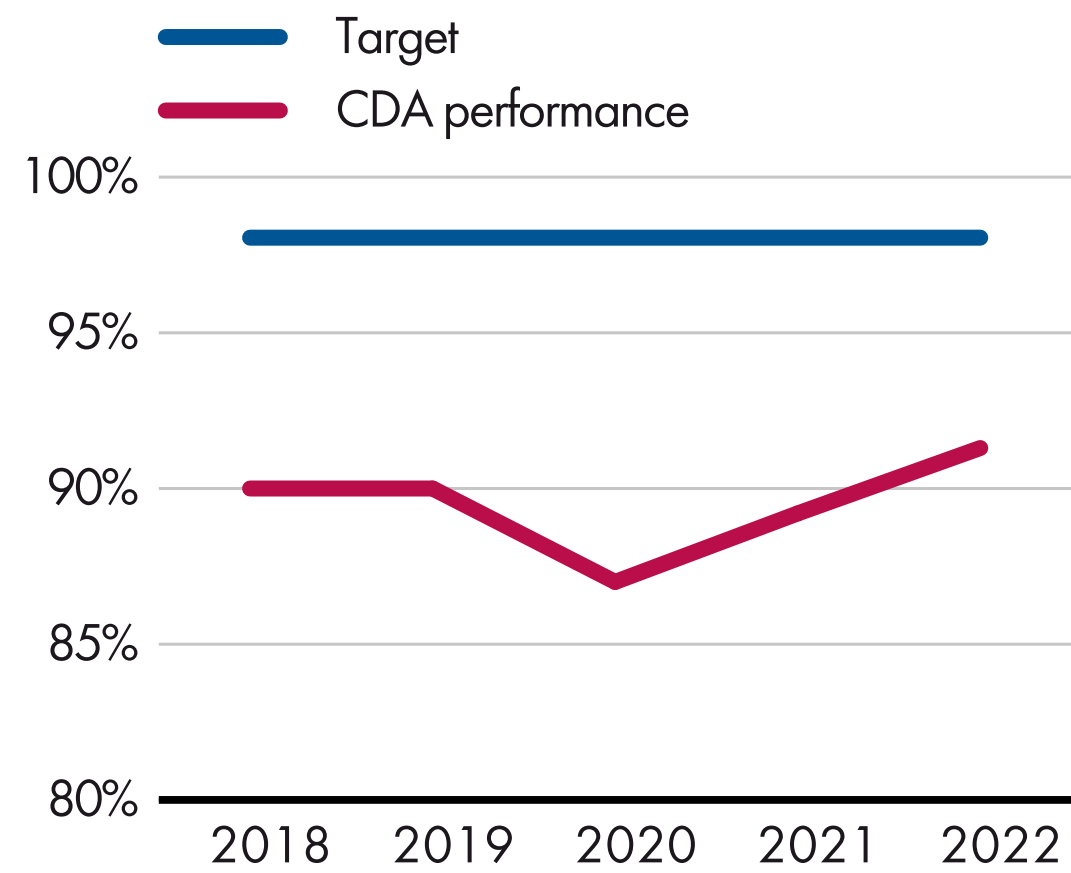
In December 2022 we sent a questionnaire out to all members of the Pilot Liaison Group regarding the use of operational procedures to reduce noise, including low-power, low-drag approaches and single engine taxi. The survey identified that more than 80% of operators at East Midlands Airport use low-power, low-drag approaches, and more than 50% of operators who use single engine taxi do so only on arrival.



### Current performance

This chapter summarises the airport’s arrival noise performance in recent years.

Figure 14. Annual continuous descent approach (CDA) compliance



CDA performance has increased by 1% since 2019, although there was a reduction in CDA performance during 2020 and 2021. The ability to perform a CDA can be influenced by a number of factors, including the familiarity of operating crew with the airport and its airspace. Crews and airlines which operate less regularly at East Midlands Airport generally achieve a lower proportion of CDAs. Severe weather can also be another important factor, with changes to inbound flight paths to avoid areas of severe weather impacting on the ability to perform a CDA. During the COVID-19 pandemic we saw a change in the mix of airlines operating at the airport. Low-cost passenger carriers have extremely high levels of CDA compliance, and their reduction in operations during the pandemic had a significant impact on the CDA performance. Since the removal of travel restrictions, we have seen an improvement in CDA performance to above 2018 levels.

Despite the performance improvements implemented during our last Noise Action Plan, as a result of delays to the implementation of the UK’s Future Airspace Strategy, it has not been possible to achieve our target that 98% of arriving aircraft achieve a CDA. To provide clarity to stakeholders, this NAP includes a target that 95% aircraft arriving at East Midlands Airport achieve a CDA. We will increase the target to 98% upon implementation of a modernised airspace which enables air traffic controllers and airlines to further optimise the descent profile of arriving aircraft.



NAP 3, as part of our Future Airspace Programme, a full environmental assessment will be undertaken for any proposed route options as part of the CAP1616 process.

Action table 2. Noise Action Plan 2024-2028: Arriving aircraft

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 2</b>	Continuous descent approach	Improve our continuous descent approach (CDA) performance to achieve a target of 95% CDA by 2028, rising to an increased target of 98% CDA following implementation of modernised airspace through our Future Airspace Programme.
<b>Noise Action Plan 3</b>	Specified arrival routes	Through our Future Airspace Programme we will continue to explore the options with stakeholders for specified arrival routes to the airport using new satellite-based navigation technology, seeking to reduce noise impacts. This will be reviewed and implemented through our Future Airspace Programme.
<b>Noise Action Plan 4</b>	Low-power, low-drag approaches	Work with operators to improve compliance with the published low-power, low-drag procedure.



# 10. On the ground





This chapter refers to aircraft ground movements. Ground movements relate to the operations which take place between the runway and the passenger and cargo terminals and whilst aircraft are being serviced between flights.

At East Midlands Airport we already have a range of controls in place to reduce ground noise at the airport. These are published in the Aeronautical Information Publication (AIP) and cover the use of reverse thrust when aircraft land, engine testing and the use of the aircraft auxiliary power units (APUs). Emerging opportunities to reduce noise from aircraft ground operations are also being explored.

### Reduced engine taxiing

Aircraft engines can produce large amounts of thrust. Thrust is used to fly the aircraft in the air and to taxi the aircraft when it is on the ground. With all aircraft engines running, even at very low power settings, the thrust produced is often more than is needed to move the aircraft along the ground. There are times when the conditions allow an aircraft to turn off an engine to further reduce the thrust used while taxiing to and from the runway. This is called reduced engine taxiing (RET) and is already a commonly used procedure at East Midlands Airport, reducing noise and emissions.

In 2022, we conducted a survey of operators in which we asked questions to better understand the use of RET and how it is embedded in their operations. With fuel savings acting as an incentive, feedback suggested that airlines already use RET on arrival at East Midlands Airport. RET is also sometimes performed by departing aircraft. However, this is dependent upon a number of factors including the weather, the weight of an aircraft and the expected taxi time – as airlines must ensure the engines are running for a warm-up period defined by manufacturers. At East Midlands Airport, the efficient airfield design means that the time taken to taxi from an aircraft's parking stand to the runway is often too short for airlines to perform a RET. Although aircraft engines are getting quieter, newer engine types have a longer cool-down time on arrival.

Information about these initiatives is provided in this chapter. We will continue to monitor best practice and developments at other airports, working with our partners to identify opportunities to implement these best practices to promote improvement in ground operations at East Midlands Airport.

### Ground power

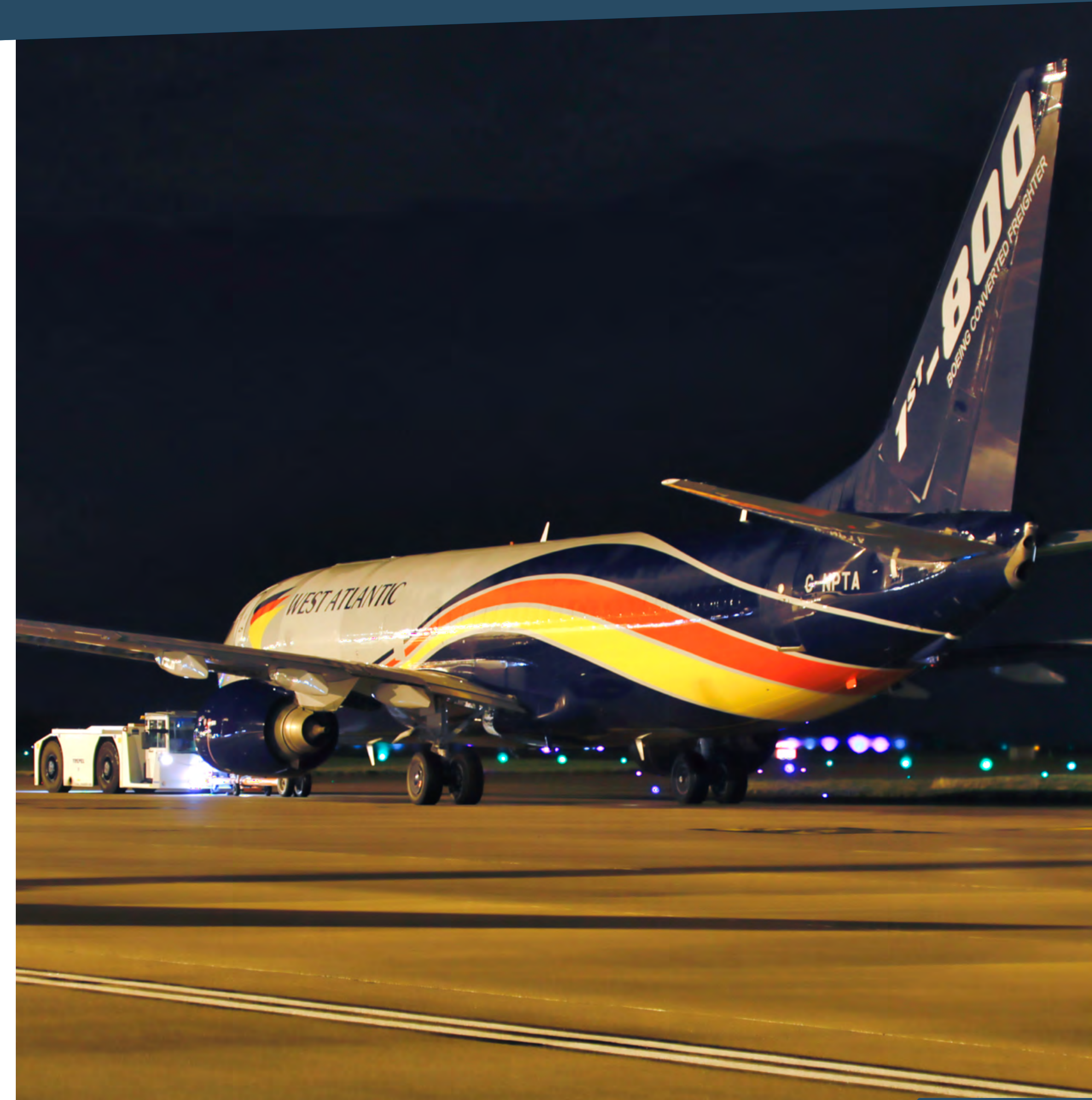
For a period of time immediately before take-off and shortly after landing, an aircraft still needs electrical power to maintain on-board systems and provide ventilation to the cabin. To maintain that power while the main engines are turned off, most jet aircraft are fitted with an auxiliary power unit (APU). The APU is a small engine, usually located in the tail of an aircraft. Like all engines, an APU generates noise and emissions. An alternative to using the APU is to use ground power units (GPUs). GPUs are provided by the ground handling companies contracted by airlines. They provide electrical power to aircraft systems enabling aircraft to shut down their main engines and APU. Handling agents at East Midlands Airport provide both electric and diesel-powered GPUs. We are working with these partners to promote a transition to electric-powered GPUs. Sometimes when a GPU is unavailable, APUs must be used to maintain power to the aircraft's systems.





Action table 3. Noise Action Plan 2024-2028: On the ground

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 5</b>	Reduced-engine taxi	Continue to promote the use of reduced engine taxi at the airport where it is practical and beneficial to do so.
<b>Noise Action Plan 6</b>	Review effectiveness of ground noise procedures	We will carry out a review into the effectiveness of our ground noise procedures and explore options for how these can be improved.
<b>Noise Action Plan 7</b>	Engine testing	We will carry out a review of our engine testing procedures and explore options for how these can be improved to reduce noise impacts on local communities.
<b>Noise Action Plan 8</b>	Use of aircraft ground power	Work with our industry partners to identify and encourage quieter ways to service aircraft, for example through the use of alternatively fuelled vehicles and equipment.
<b>Noise Action Plan 9</b>	Use of intersection departures	We will continue to promote and encourage the use of intersection departures (see explanation on page 47), from Runway 27 at night to reduce ground noise for local communities. Other sources of ground noise can include vehicles and equipment used to service aircraft. This can be intrusive for people who live very close to the airport. This noise source can include the reversing beepers. We have worked with our stakeholders to reduce this noise, and vehicles now have an audible reversing system that still emits a tone that meets required safety standards, but doesn't transmit the noise over such a wide area.
<b>Noise Action Plan 10</b>	Night time vehicle noise	We will continue to work with our business partners to identify and implement measures to minimise noise from vehicle movements on the airport at night.





# 11. Departing aircraft





Noise from departing aircraft is generally the most intrusive for people living near the airport. The largest source of departure noise is from the aircraft engines which are operating closer to their maximum power on take-off and during their initial climb out of the airport.

We use a range of technological, practical, and financial techniques to minimise the level of departure noise heard by people living and working near the airport. Our two main methods are noise preferential routes and continuous climb departures.

### Noise preferential routes

A noise preferential route (NPR) is one that directs an aircraft along an agreed route to avoid areas of population. Each NPR is a corridor with a centre line and an area of tolerance to either side. The maximum width of the NPR is known as a 'swathe'. All flights operating within the swathe are determined to be on-track. The percentage of flights following our NPRs has become a very important performance indicator for us. A map of our NPRs is shown in Appendix F.

We routinely report performance against this indicator to airlines, air traffic control and our Independent Consultative Committee, and publish these reports on our website.

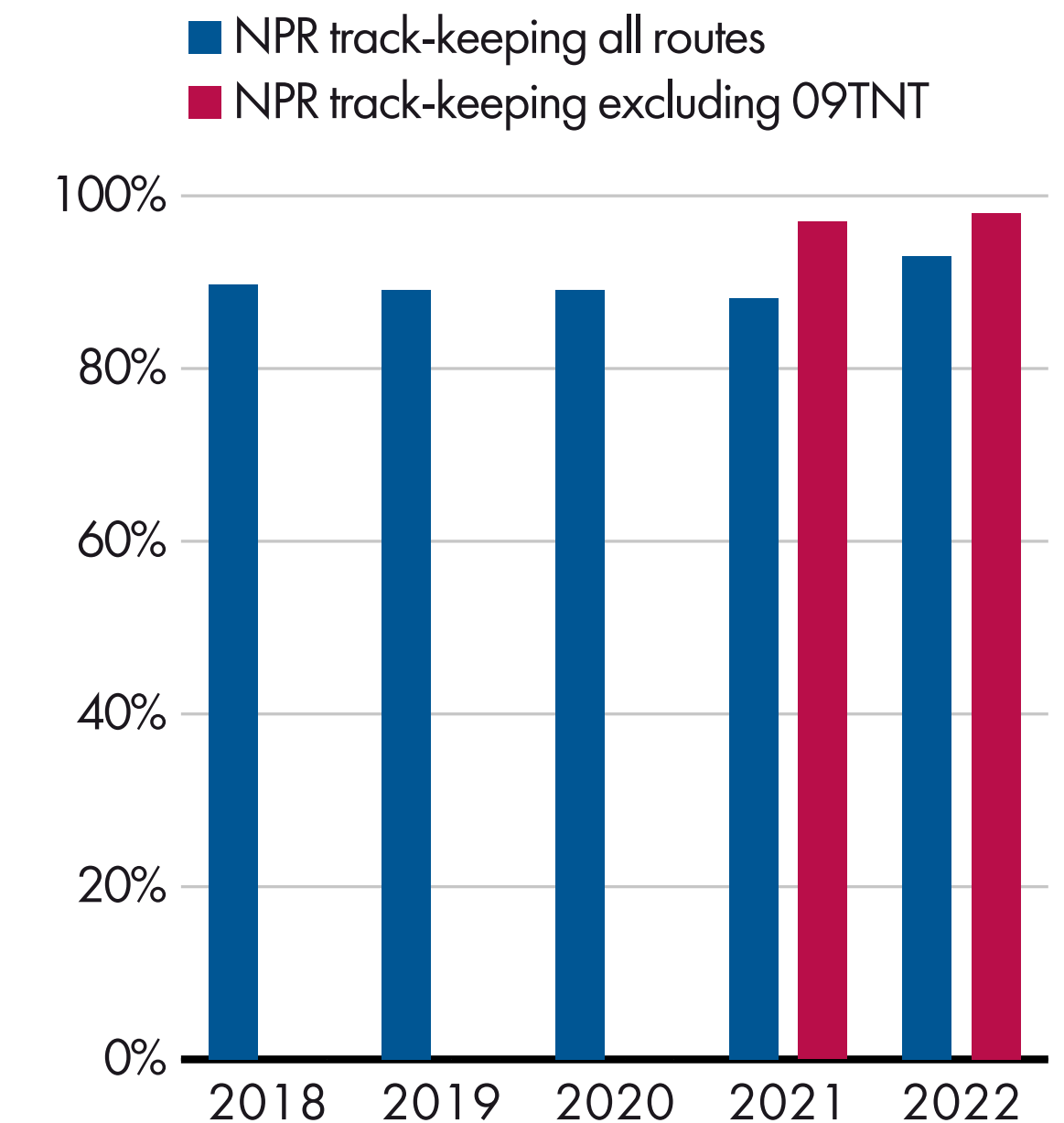
During our last Noise Action Plan we strengthened our engagement with airlines to help improve track-keeping. This has been achieved through the introduction of detailed monthly reporting to our airlines, and bi-annual meetings of the Pilot Liaison Group. Our work has been extremely successful, and we have seen a notable improvement in departure track-keeping performance.

Also, we have identified an issue with departures following the Trent departure route from Runway 09 (known as 09TRENT). In 2022, the proportion of flights using this route was 7% of all departures. This route has been deflected over a number of years by magnetic variation. This means the published heading the aircraft are instructed to follow has drifted to the west. Flight patterns no longer replicate the corridor as shown in Appendix F.

As a result, despite aircraft correctly following the published departure procedure, their flight paths have moved to the west of the NPR. This is a recognised issue and we have continued to monitor and report track-keeping with and without this route included. We have discussed this issue with our Pilot Liaison Group and Independent Consultative Committee (ICC) who have agreed that the issue will be resolved through our Future Airspace Programme.

Overall, as shown in Figure 15, track-keeping performance has improved to 93% in 2022. This figure increases to 98% when excluding 09TRENT.

Figure 15. Track-keeping compliance with and without the 09TRENT departure route



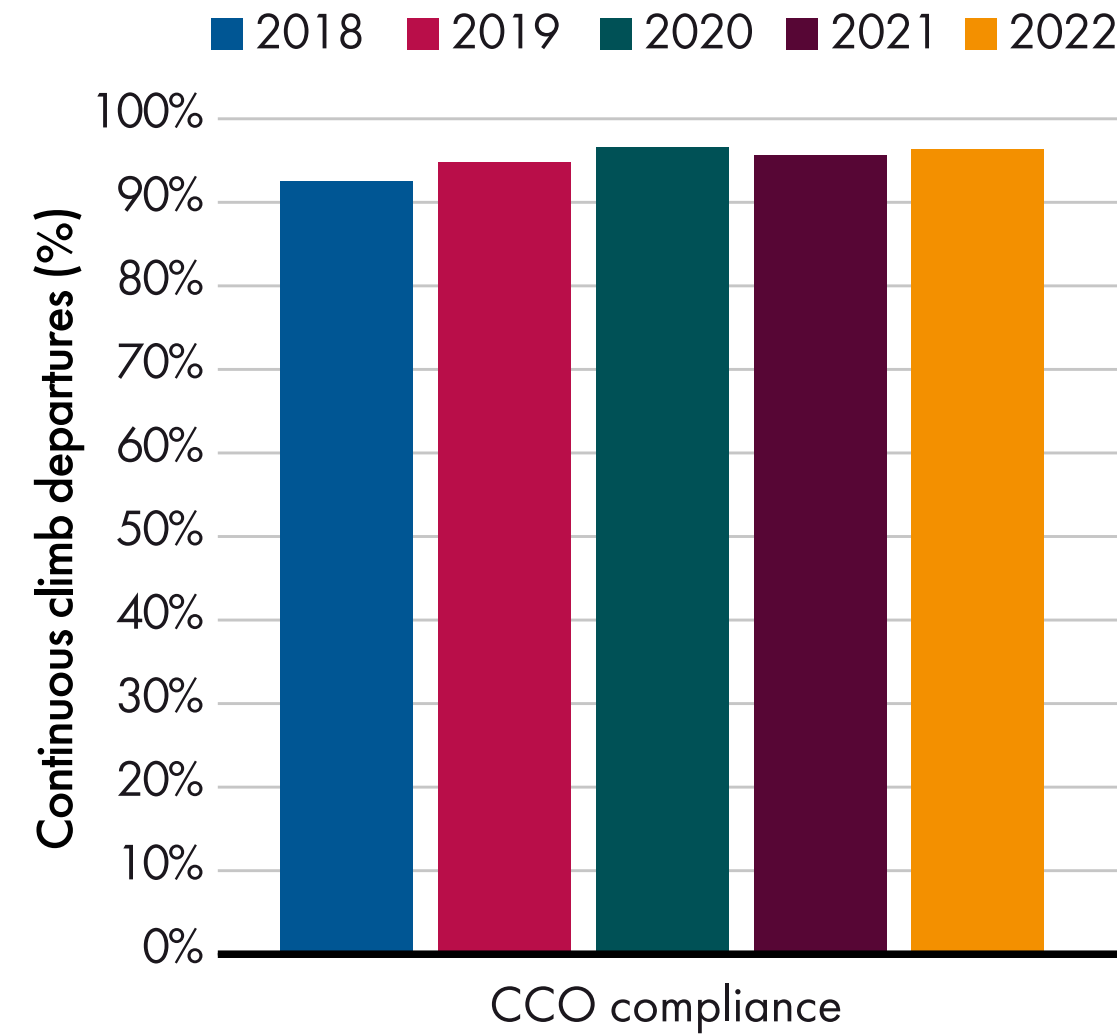


## Continuous climb departures

Continuous climb departures (CCDs) enable aircraft to keep climbing after take-off until they reach their cruise altitude. By eliminating periods of level flight (a similar principle to continuous descent approaches), a CCD reduces the tonal changes in the aircraft engine noise and enables the aircraft to make a smoother climb. Continuous climbs can increase the height of the aircraft closer to the airport and make noise levels less audible. The extent to which this can be achieved is affected by the numbers and types of other aircraft operating in the area.

The airport is also achieving good levels of continuous climb performance by departing aircraft. We continue to report on this to the airlines and within ICC subcommittee MENT. Since reporting started in our previous Noise Action Plan 2019-2023, continuous climb performance increased to over 96% compliance in 2022, as shown in Figure 16. We will continue to monitor and report this information to airlines and the ICC.

Figure 16. Continuous climb departure (CCD) compliance 2018-2022



## Intersection departures

Another noise-reducing procedure relates to night-time departures. The departing aircraft begin their take-off roll part way down the runway. This procedure, called intersection departures, is used by aircraft departing Runway 27. It reduces noise in Kegworth by moving aircraft further away from the village. Intersection departures from Runway 27 at night are a standard procedure in all but exceptional circumstances: when the very heaviest aircraft require use of the full runway length or when greater separation is needed between two operations.

## Modern navigation

In recent years, aircraft flight and navigation systems have become increasingly sophisticated. Much like modern cars, aircraft now make increased use of satellite navigation. Modern aircraft have computers constantly monitoring and optimising the engines and flight controls, as well as automating navigation. Alongside the development in aircraft technology, air traffic control systems have also become increasingly sophisticated with automated communication with the aircraft.

Other technological developments have created more opportunities to improve aircraft departure routes and rates of climb.

These include:

**Performance based navigation (PBN)** routes have precise satellite navigation points along the route for aircraft navigation systems to follow. PBN significantly improves the consistency and accuracy with which aircraft fly the published route.

**Noise optimised aircraft departures.** Some modern aircraft systems can now be designed to minimise the noise the aircraft makes at specific points along its departure route. These points can be areas of population or other noise sensitive areas for local communities.

We are considering these initiatives as part of our Future Airspace Programme.

## Departure noise penalty scheme

We currently operate a noisy aircraft penalty scheme which penalises aircraft which exceed published noise limits at night (between 23:00 and 07:00). Information about this scheme is included in the night noise chapter. During this Noise Action Plan we will review our noisy aircraft penalty scheme, developing limits which apply during the daytime.



Action table 4. Noise Action Plan 2024-2028: Departing aircraft

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 11</b>	Departure track-keeping	Maintain our departure 'on-track' keeping performance target of 98% on departure routes (excluding the Trent departure route from Runway 09). Continue to monitor and report performance with and without the Runway 09 Trent route.
<b>Noise Action Plan 12</b>	Explore options to improve the effectiveness of NPR's	We will explore options for performance-based navigation procedures which will be implemented through our Future Airspace Programme.
<b>Noise Action Plan 13</b>	Continuous climb departures (CCD)	Explore with airlines and air traffic control, the opportunities to increase the use of continuous climb departures through airspace modernisation.
<b>Noise Action Plan 14</b>	Off-track departure fines	We will continue to monitor off-track departures, working with operators to improve performance and, where applicable, raising off-track departure fines to penalise airlines who are not working to improve their track-keeping and meet our published target (see Noise Action Plan 11).
<b>Noise Action Plan 15</b>	Noisy aircraft penalty scheme review	We will review our noisy aircraft penalty scheme, introducing a scheme which also applies during the day.



# 12. Night noise





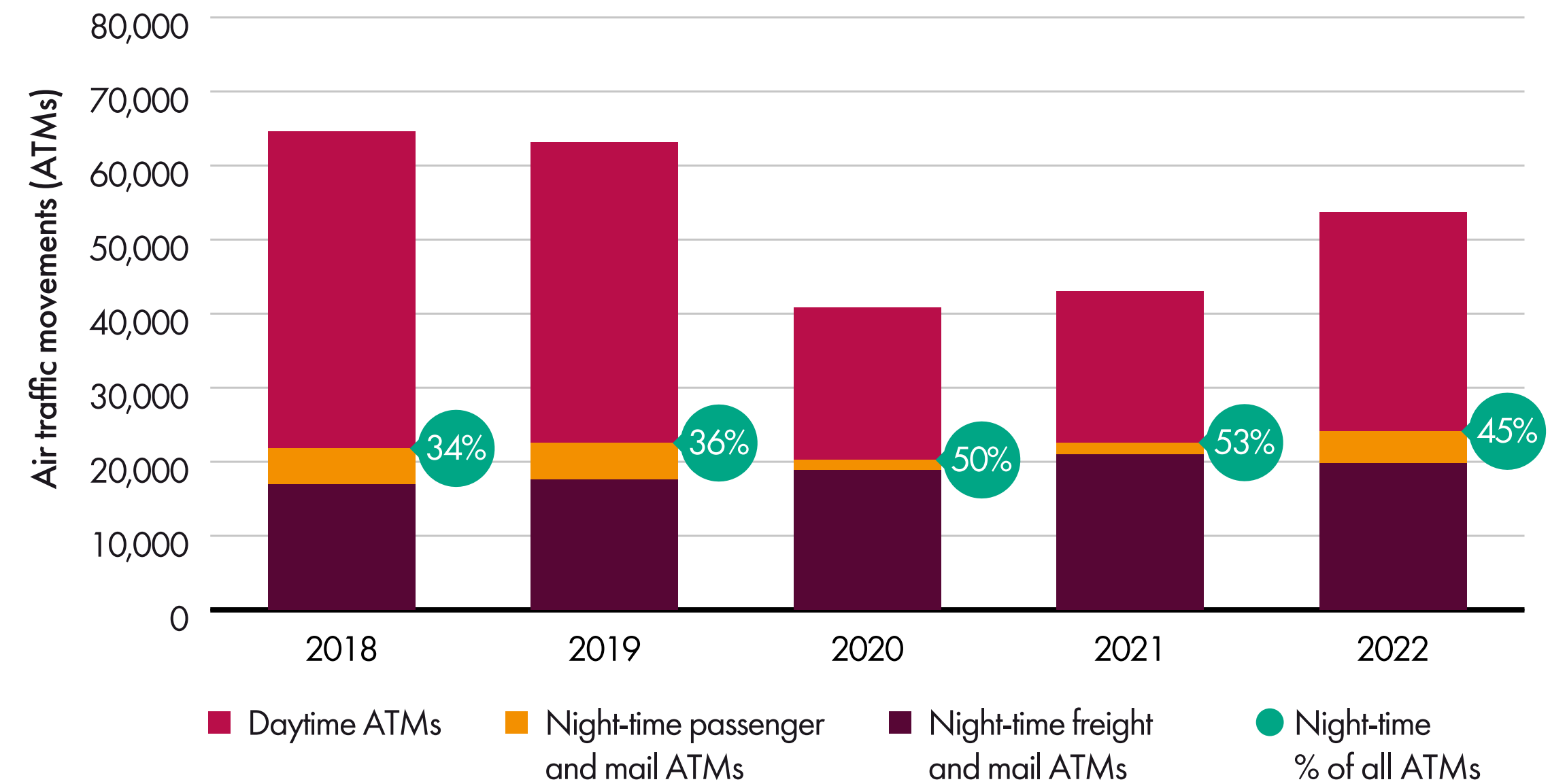
The airport’s night operations bring both economic and social benefits to the East Midlands region and the wider UK. However, we recognise that night-time noise from aircraft operations is often the most intrusive. Our night noise controls are intended to strike a fine balance between the economic and social benefits a thriving airport provides and the disturbance which can be caused by night flights.

Throughout this chapter, wherever we talk about ‘night’ we mean an eight-hour night period from 23:00 to 07:00.

Figure 17 shows the breakdown of activity at the airport over the last five years. In 2018, 34% of all flights were at night, just under 17,000 of these were cargo flights. During the COVID-19 pandemic, operations at the airport were significantly impacted. Increased demand for air freight, combined with a decrease in capacity to carry cargo on passenger aircraft, led to a rapid increase in freight traffic at the airport in 2020 and 2021. Due to the nature of express freight, much of this traffic was carried during the night. To meet demand, and with a limited availability of aircraft, airlines needed to use older, larger aircraft, including Boeing 747-400s which are QC4 rated on departure. During the same period, we have seen increased use of quieter large aircraft, such as the Boeing 777-200F which is QC2 rated on departure, by cargo operators at East Midlands Airport.

This chapter summarises the airport’s current night noise controls and reviews relevant performance in recent years.

Figure 17. Summary of day and night flights (measured as air traffic movements, ATMs)



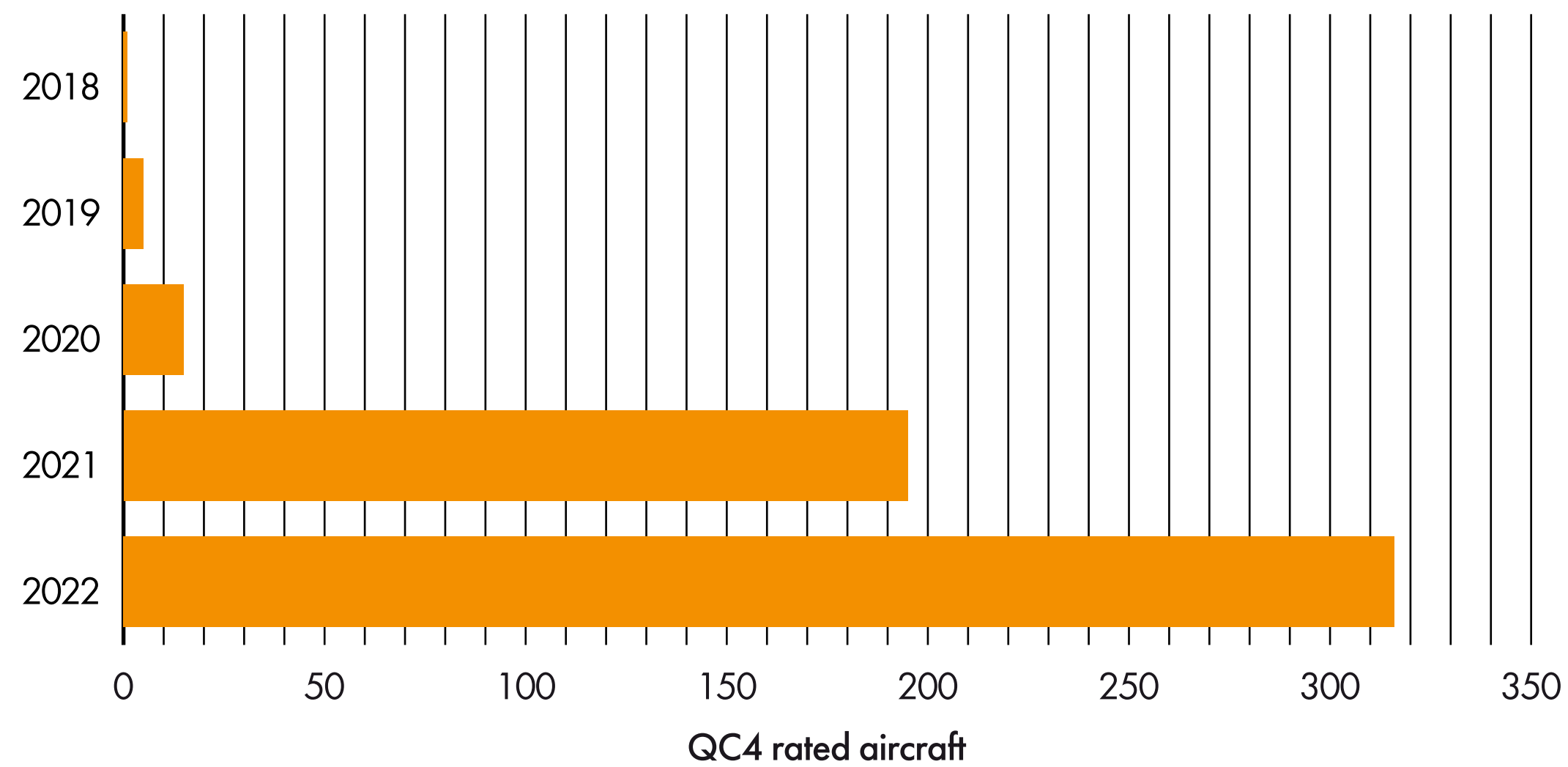


### Restricting the noisiest aircraft from operating at night

We recognise that noise from aircraft operating at night can be more disturbing to communities than during the day. For this reason, for many years, we have prevented airlines from scheduling the noisiest aircraft from operating between 23:00 and 07:00. Our scheduling ban prohibits planned night flights operated by QC8 or QC16 rated aircraft. These are the two noisiest quota count categories defined by the Government. Where QC8 or QC16 rated aircraft operate unscheduled night flights, for example because of delays to flights which were scheduled to take place during the daytime, we apply QC8 and QC16 noise surcharges of £5,500 and £11,000 respectively. Proceeds from these surcharges are donated to the East Midlands Airport Community Fund. Between 2018 and 2022, no QC8 or QC16 rated aircraft operated at East Midlands Airport during the night.

In 2021, we introduced a surcharge levied against airlines that operate night flights with aircraft which fall into the next noisiest quota count category, QC4. The level of this surcharge is currently set at £3,028. Proceeds from our QC4 noise surcharge are contributed to the East Midlands Airport Community Fund.

Figure 18. Number of night flights operated by QC4 rated aircraft



### The Quota Count (QC) System

Table 5. Certified noise level

CERTIFIED NOISE LEVEL (DECIBELS, EPNDB)	QUOTA COUNT
More than 101.9	QC16
99 to 101.9	QC8
96 to 98.9	QC4
93 to 95.9	QC2
90 to 92.9	QC1
87 to 89.9	QC0.5
84 to 86.9	QC0.25
81 to 83.9	QC0.125
Below 81	QC0

The Quota Count (QC) system is a way of classifying aircraft according to the noise they generate. The classification system is published by the Government. It gives each aircraft a 'quota count' depending on the noise it generates on take-off and when landing. The system is based on the noise levels measured at the time that aircraft was first introduced. There are seven categories of QC. The categories double with each increase of three decibels as shown in chart above.



To meet demand during the COVID-19 pandemic when aircraft availability was limited, airlines had to use older, larger aircraft. These included Boeing 747-400s which are QC4 rated on departure. Operations of these noisier QC4 rated aircraft, particularly Boeing 747-400 aircraft generated significantly more community interest than those of other aircraft types. Following intensive engagement with our airline partners, we have been pleased to see a reduction in the number of Boeing 747-400 aircraft operating at night. Additionally, we welcome the decision by operators of other QC4 rated aircraft to withdraw these aircraft from service at East Midlands Airport.

To consolidate this improvement, and to prevent these aircraft operating at night in future, we are proposing an operational ban from 1 January 2024 on the noisiest QC16, QC8 and QC4 rated aircraft movements during the night. An operational ban means these aircraft movements would not be able to land or take-off from East Midlands Airport during the night period, even if delayed. We believe the impacts to airlines of this ban will be minimal, but it will have a benefit to communities that are overflowed by ensuring these noisiest movements cannot take place at night. A Balanced Approach assessment for this development is provided in Appendix B.



“Through this Noise Action Plan we are proposing an operational ban on the noisiest QC16, QC8 and QC4 rated aircraft movements during the night”

## Incentivising the use of aircraft which meet the most recent noise standards

We have a long-standing target that all aircraft operating at night will at least meet the Chapter 4 certification requirements established by the International Civil Aviation Organisation (ICAO). Our Noise Action Plan 2019-2023 introduced the further ambition that by 2040 all aircraft operating at night will comply with the new ICAO Chapter 14 noise regulations.

In April 2021, as part of our last Noise Action Plan, we introduced a QC4 surcharge for night operations. In April 2023, to further incentivise operators to use the quietest possible fleet, we also introduced a surcharge which applies to all ICAO Chapter 3 aircraft operations. This means all Chapter 3 aircraft operations during the night period, either arriving or departing, will also be subject to a minimum £3,028 surcharge.



## Noisy aircraft penalty

To encourage airlines to fly as quietly as possible at night, we operate a noisy aircraft penalty. Using our noise monitoring system, we measure the level of noise generated by each departing aircraft. Noise is measured by monitors positioned at fixed points beneath the departure flight paths. The location of these monitors is shown in Figure 19.

Noisy aircraft penalties are levied against the operators of aircraft which exceed our published noise limits which are shown in Table 6. These limits were reduced as part of our last Noise Action Plan. ICAO noise certification standards require the monitoring of departure noise 6.5km from the start of an aircraft's take-off roll. Because it is not always possible to place noise monitors at this exact location, when we monitor noise levels against our limits we apply a correction to the noise levels recorded by our monitors.

Noisy aircraft penalties are levied at £825 for an infringement of up to 1 decibel (dB(A)) followed by an additional £165 for each decibel (dB(A)) thereafter. Money raised from noisy aircraft penalties is donated to the East Midlands Airport Community Fund.

The maximum level of noise a departing aircraft is permitted to produce depends on the maximum take-off weight of the aircraft. Limits for smaller aircraft are lower.

Figure 19. Location of noise monitors used to measure departure noise levels for noisy aircraft penalty

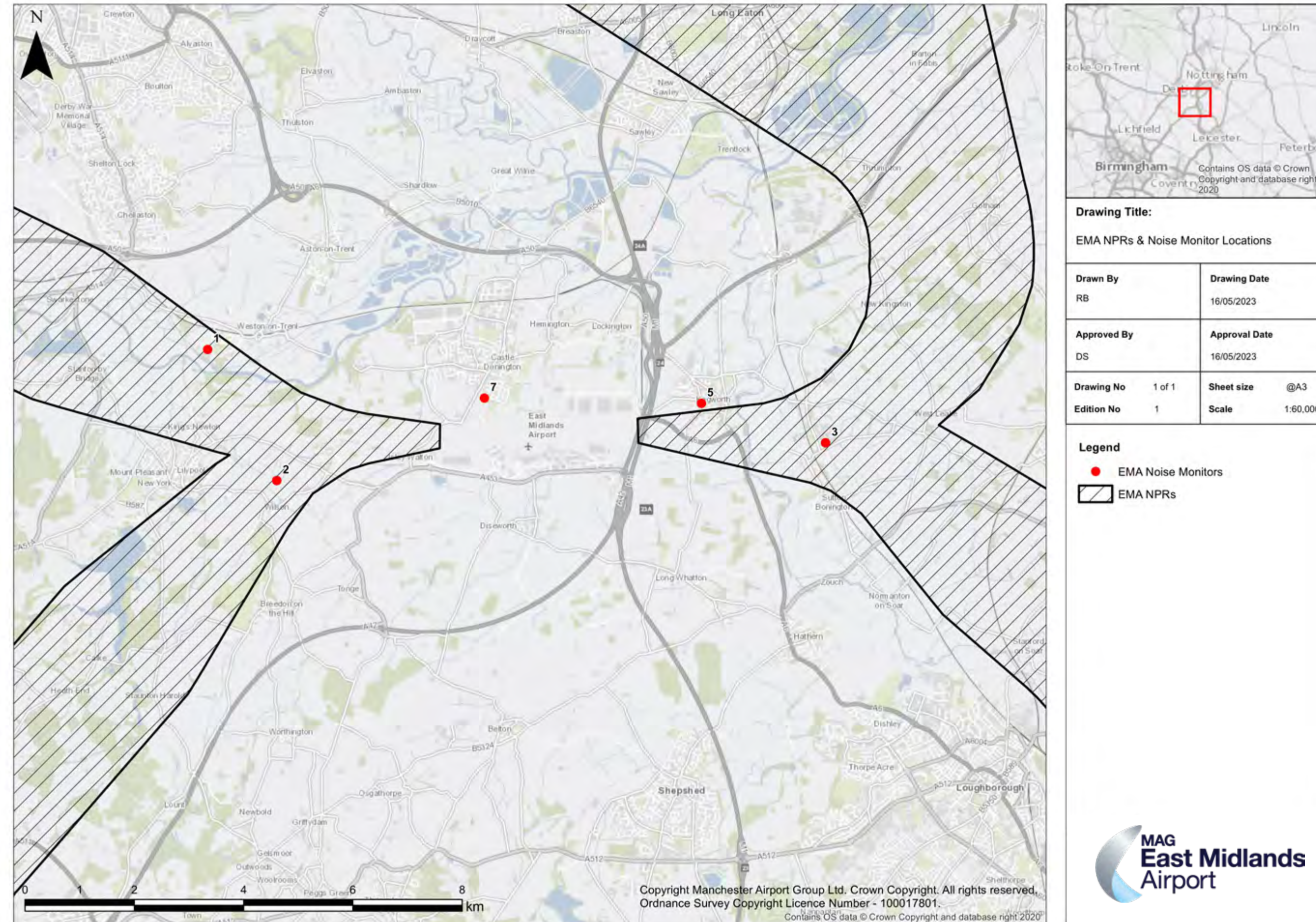




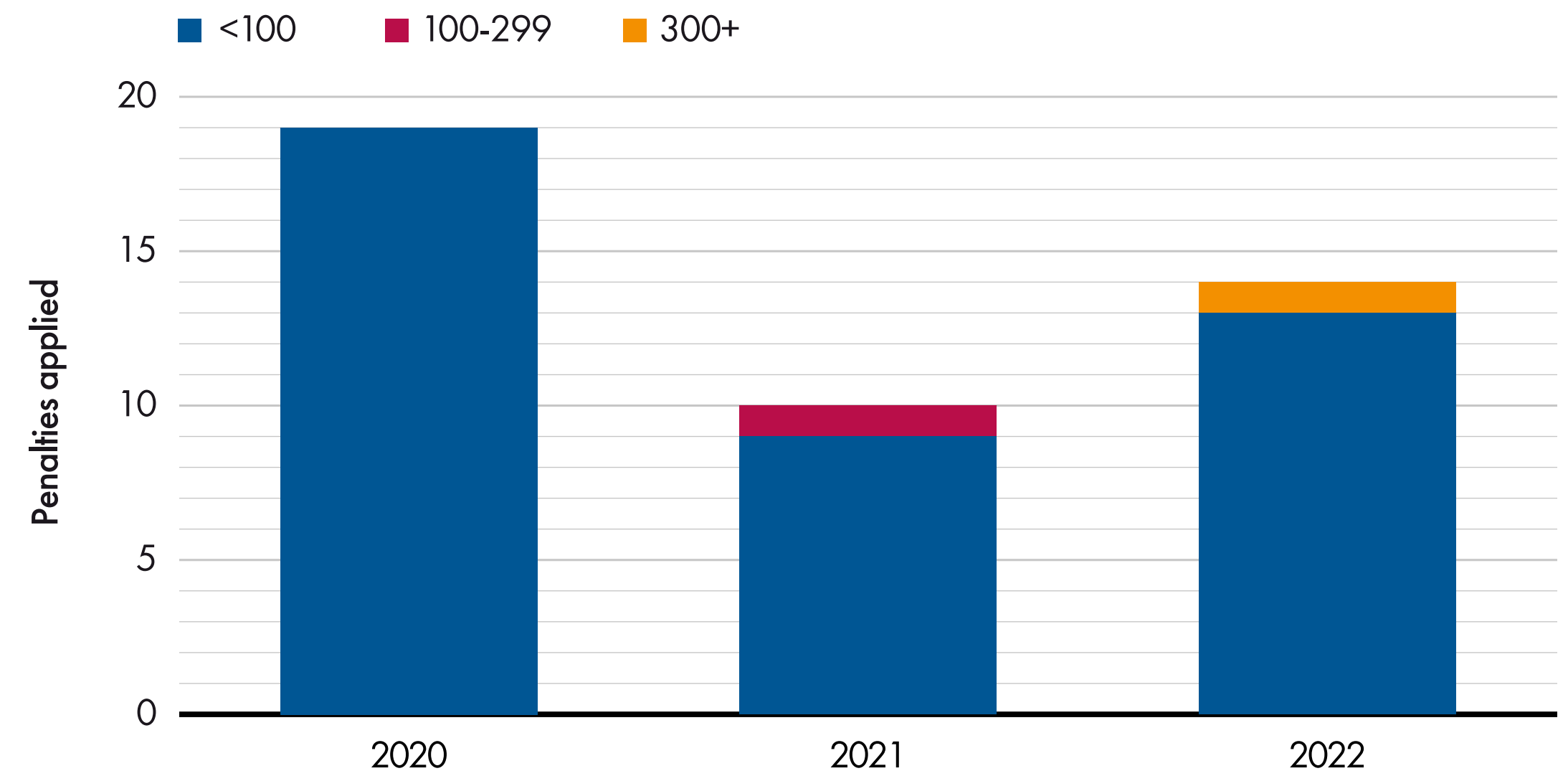
Table 6. Noisy aircraft penalty limits

	<b>NOISE LIMIT (DECIBELS, dB(A))</b>
Aircraft with a maximum take-off weight of 300 tonnes or greater	92
Aircraft with a maximum take-off weight of greater than 100 tonnes but less than 300 tonnes	87
Aircraft with a maximum take-off weight of 100 tonnes or less	81

The number of noisy aircraft penalties applied between 2018 and 2022 is shown in Figure 20.

Since we reviewed the scheme in 2019, 43 violations of the noise limits have been recorded by departing aircraft. We propose to review the scheme as part of this Noise Action Plan 2024-2028, including a review of the weight bands currently in place or moving to a single limit for all departing aircraft. This departure noise limit review will also be used to define and implement a daytime departure noise limit.

Figure 20. Noisy aircraft penalties applied between 2020-2022 broken down by aircraft take-off weight category





Action table 7. Noise Action Plan 2024-2028: Night noise

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 16</b>	Noisy aircraft penalty	We will continue to operate a noisy aircraft penalty scheme that penalises the operators of aircraft which exceed our published night noise limits. We will review our scheme in accordance with Noise Action Plan 15.
<b>Noise Action Plan 17</b>	Review effectiveness of noise related charges to incentivise the use of ICAO Chapter 14 compliant aircraft at night	We will carry out a review of our existing noise charges, changing them where required to incentivise the operation of aircraft in the daytime wherever possible and to promote the use of quieter aircraft on flights that necessarily take place at night.
<b>Noise Action Plan 18</b>	Operational ban on QC4, QC8 and QC16 rated aircraft at night	From 1 January 2024, we will introduce an operational ban on aircraft with a QC4, QC8 or QC16 noise rating operating at night.
<b>Noise Action Plan 19</b>	Night noise envelope	Monitor, manage and annually report on performance against the airport's 55dB L <sub>Aeq</sub> (8-hour) summer night-time noise contour, ensuring it does not exceed 16km <sup>2</sup> .
<b>Noise Action Plan 20</b>	Chapter 4 operations	Continue to monitor and report progress towards our target of 100% of night flights being by aircraft which meet the requirements of ICAO Chapter 4, maintaining surcharges to disincentivise the use of aircraft at night which do not meet Chapter 4 requirements.





# 13. Training flights



The training of aircrew is an essential requirement for any airline, and whilst much training is now undertaken using flight simulators, some flying is mandatory to meet Civil Aviation Authority (CAA) standards. The final part of a pilot's training is to complete a number of 'training circuits' which repeat the take-off and landing procedures. This type of operation is sometimes completed at East Midlands Airport.

Training circuits are completed under visual flight rules, which mean flight crew are required to maintain visual contact with the runway at all times. Training flights do not follow the noise preferential routes (NPRs) usually followed by departing aircraft and, due to the fact the aircraft is returning immediately to the same airport, do not climb as high as departing aircraft would. We recognise that training flights, while enabling the training of air crew, can be particularly disturbing to local communities. So we are committed to minimising the impact of training flights.

### **Minimising the noise impact of training flights on local communities**

In response to community feedback, we have previously introduced wide-ranging restrictions on training flights. These restrictions include:

- Only permitting training by locally based operators, regular users of the airport or non-jet aircraft below 5,700kg maximum take-off weight (MTOW).
- Granting permission for such operations only between 08:00 and 21:00.
- Not permitting training on Saturdays, Sundays and UK public holidays except by non-jet aircraft below 5,700kg MTOW.

During our last Noise Action Plan 2019-2023, our Flight Evaluation Unit and air traffic controllers worked together with airline partners to establish preferential training circuits which avoid overflying local villages wherever possible. Although it is not possible to prevent all training flight overflights (for example because air traffic controllers must maintain safe separation between aircraft), specific areas are noted within our Aeronautical Information Publication (AIP) as avoidance areas. These include the villages of Aston-on-Trent, Castle Donington, Diseworth, Kegworth and Weston-on-Trent.

We have discussed training flights extensively with the East Midlands Airport Independent Consultative Committee (ICC) and local parish councils. Regular performance reports are provided to the ICC and, as a result of discussion with stakeholders, we have worked with our airlines so that the initial climb phase of training circuits follows the NPRs followed by departing aircraft. This intervention has reduced overflights of Melbourne, Kings Newton and Kegworth.

Despite our work to minimise the impact of training flights on local communities, we recognise that this activity is a key concern for local communities. We also recognise that the COVID-19 pandemic has led to changes to the circumstances of many people in our local communities, including increasing the number of people who work from home.

In 2022, training flights were the cause of 6% of the complaints we received from local communities. In 2018 we received no complaints about training flights. In response, we are proposing further restrictions on training flights. From 1 January 2024, we will only schedule training flights between 08:00 and 12:00 and between 14:00 and 16:00 on weekdays. We will continue to apply all other existing training flight restrictions, including prohibiting training by airlines not based locally. We will also continue to work with our airline partners, air traffic controllers and local communities as we undertake a review of training flight procedures to identify opportunities to further minimise the impact of training flights on local communities.



Action table 8. Noise Action Plan 2024-2028: Training flights

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 21</b>	Training flights report	We will continue to monitor and report performance with our training flight exclusion areas, identifying trends and compliance issues. We will address issues as necessary.
<b>Noise Action Plan 22</b>	Management of training flights	From 1 January 2024, we will reduce the number of hours available for training activities by commercial jet aircraft. Training activity will only be permitted from 08:00 to 12:00 and from 14:00 to 16:00 daily, excluding weekends and bank holidays.
<b>Noise Action Plan 23</b>	Review of training flight procedures	We will carry out a review of training flight procedures, identifying and where possible implementing opportunities to minimise the impact on local communities. This will include investigating the possibility of balancing the number of training flights taking place to the north and south of the airport.



# 14. Mitigation schemes





At East Midlands Airport, noise mitigation is provided through grants for installing noise insulation in the buildings most affected by aircraft noise. We also provide grant support to properties impacted by wake vortexes from aircraft. Additional support is provided through grant funding for local community projects.

### Sound Insulation Grant Scheme

East Midlands Airport has offered a Sound Insulation Grant Scheme (SIGS) since 2002. We continue to offer those living close to the airport a contribution towards the cost of insulating their home against aircraft noise.

Our SIGS programme was introduced in 2002 to offer financial support for the sound insulation of the properties most affected by aircraft noise. It was expanded in 2007 following a consultation as part of our 2006 Master Plan. The current SIGS (as expanded in 2007) is based on noise contours for night-time aircraft movements in the summer period of 2001. The scheme includes dwellings that were exposed to average night-time noise levels (LEQ) of at least 55 decibels (dB(A)) and/or are regularly exposed to single aircraft noise events (SEL) of at least 90dB(A) at night.

The SIGS is designed to help the people who are affected most by noise from aircraft operating at the airport. The households that the scheme applies to are within a boundary surrounding the airport. The scheme is designed to offer greatest support to those who experience the greatest noise impact. Within the boundary, any building (or part of a building) which is being used as a domestic dwelling (a home) may be eligible for a grant, as long as it was built before January 2002.

Information about our SIGS scheme can be found on our website which includes a 'Living Near the Airport' factsheet and the [SIGS brochure](#). The SIGS brochure includes eligibility criteria for the scheme, a map which shows the boundaries for the scheme and the different zones within it, as well as the contact details of our managing agent who can provide support with SIGS applications.

Due to the efforts of the airport and our airlines, including ongoing investment in newer and quieter aircraft, the airport's noise contours are now considerably smaller than the noise contours in 2001 which have been used to define our SIGS boundaries. To illustrate this, the area affected by average night-time noise greater than 57dB in summer 2001 was 12.2km<sup>2</sup> – in 2015 this area had reduced to 8.6km<sup>2</sup>. Despite this reduction in our noise footprint, we have maintained the size of the area which benefits from the scheme.



The scheme is split into four zones. Information about how these are defined, and the current maximum grant awards available to these is provided in Table 9.

Table 9. Definition of Sound Insulation Grant Scheme (SIGS) boundaries and grant values

	<b>NOISE EXPOSURE LEVELS IN THE SUMMER PERIOD OF 2001</b>	<b>MAXIMUM GRANT AWARD</b>
<b>Zone A</b>	Dwellings exposed to average night noise levels of between 55dB and 60dB	£3,000
<b>Zone B</b>	Dwellings exposed to average night-time noise levels of between 60dB and 66dB	£5,000
<b>Zone C</b>	Dwellings exposed to average night-time noise levels of between 66dB and 69dB	£10,000
<b>Zone D</b>	Dwellings exposed to average night-time noise levels exceeding 69dB	Offer to purchase property

“Through this Noise Action Plan we will increase the value of the maximum grant award available by 10%, with further inflationary increases applied each year thereafter (these increases will be based on the Consumer Price Index measure reported by the Office for National Statistics). We will also update the rules of the scheme to allow re-applications from properties which have already utilised their full grant award.”

The Scheme offers grants towards the cost of installing secondary glazing, high performance double glazing, loft insulation and replacement doors. Applications are handled in the order that they are received, with the exception of those in Zones C and D, which will be afforded a greater priority.

Not all dwellings are suitable for the installation of acoustic insulation. Dwellings that may be unsuitable include houses which are not of standard brick construction, and individual rooms built into roof space which do not have standard brick walls.

Whilst the Scheme only makes grants available to dwellings within the eligible area, we accept that some noise sensitive buildings, such as local schools, may also benefit from noise insulation. The airport may make discretionary awards available, and cases will be considered individually.

Since our SIGS was introduced in 2002, we have invested £3,182,325 (to the end of 2022), helping to improve the sound insulation of 890 homes. These figures include activity in the last five years, during which we provided SIGS grants worth £134,997 to 50 properties. Although safety measures prevented some installation work from taking place during the COVID-19 pandemic, we have now completed installations on all eligible applications submitted before or during this period.

Further information about our SIGS can be found in Appendix I.



As part of our Noise Action Plan 2024-2028, we are proposing enhancements to our SIGS. In response to the impact of recent inflationary pressures, from 1 April 2024 we will increase the value of the maximum grant award available through our SIGS by 10%, with further inflationary increases applied each year thereafter (these increases will be based on the Consumer Price Index measure reported by the Office for National Statistics). We will also update the rules of the scheme to allow re-applications from properties which have already utilised their full grant award. Re-application will be possible 20 years after the completion of a previous application.



## Vortex scheme

There are some properties very near our runway that can be affected by aircraft vortices.

When an aircraft travels through the air it causes air turbulence behind it. This turbulence can lead to circulating currents of air known as vortices which can continue for some time, and reach the ground, especially if there is little wind to break them up. If they reach rooftops, the force of the vortex can sometimes cause damage to the roofs of houses under the flightpath very close to the airport. We have identified areas where damage is most likely to occur. There is only a very small area of Kegworth that is potentially affected by vortices.

The airline whose aircraft caused the vortex would be liable for the damage. However, as it is not always possible to identify the aircraft responsible, we offer a goodwill policy of inspecting and repairing all vortex damage.

It is also possible to treat roofs so that the risk of vortex damage is extremely low, and we have a policy of completely re-roofing properties that have suffered vortex damage with new vortex resilient roofs. The airport runs a voluntary vortex-protection scheme to re-roof affected properties as part of our commitment to the local community.

Since our voluntary vortex protection scheme was introduced in 2007 we have invested over £689,000, re-roofing 65 properties affected by vortex strikes. Despite needing to pause work for safety reasons during the COVID-19 pandemic, the majority of this investment has been in the past five years, with 41 properties receiving new vortex resilient roofs to a value of £529,020. A planned 5-year capital investment programme is now in place, running from 2022 to 2027, which will see re-roofing completed at properties which remain on the waiting list.

For more information about our Vortex scheme you can visit our [website](#), as well as viewing our [Living Near the Airport factsheet](#).

## East Midlands Airport Community Fund

At East Midlands Airport our Community Fund is designed to support projects across a wide 'area of benefit' around the airport as shown in Figure 21. This area was defined in 2002 and continues to cover most locations the airport currently receives noise complaints from, as shown in Appendix I.

Figure 21. East Midlands Airport Community Fund Area of Benefit



The East Midlands Airport Community Fund was established in April 2002 and since then has awarded over £1.9 million to 1,685 projects, to bring lasting benefit to the communities around the airport. The Community Fund is managed independently by a Community Fund Committee that meets six times a year and is open to community groups within a defined 'area of benefit' that meet certain criteria. The Fund is currently supported by an annual donation of £50,000 from the airport and through the donation of noise surcharges and noisy aircraft penalties imposed when aircraft exceed our noise limits.

The Community Fund awards grants to support eligible projects that have a lasting community, social, educational or environmental benefit and can award a maximum of £2,000 per application.

We publish Community Fund annual reports on our [website](#).

In our financial year ending 31 March 2019, the Community Fund supported 65 local community projects with £56,215 in grant funding. The following year, the Community Fund supported 63 local community projects with £59,864 in grant funding.





In 2020/21, due to the COVID-19 pandemic, normal Community Fund committee meetings were suspended. In April 2020, as an immediate response to the global COVID-19 pandemic, we set up our COVID-19 Community Relief Fund, temporarily freezing our East Midlands Airport Community Fund and Community Sponsorship programmes and redirecting this money to community groups supporting vulnerable people during the pandemic. The first round of funding awarded £23,180 to 36 local community groups including many local food banks, which saw demand increase significantly during the pandemic. The second round of funding provided a further £40,546 to 21 local community groups to combat food poverty and social isolation being experienced by those who were hardest hit by the impact of the pandemic. The total support provided by the East Midlands Airport COVID-19 Community Relief Fund was £63,726 in grants to 57 local community groups and charities.

Normal Community Fund committee meetings resumed in November 2020, and in total in 2020/21 the Community Fund supported 84 local community projects with £93,366 in grant funding.

### **QC4 surcharges and the East Midlands Airport Community Fund**

In 2021, we introduced a surcharge levied against airlines that operate night flights with aircraft such as the Boeing 747-400 which fall into the noise quota count category 'QC4'. Information about this surcharge, intended to disincentivise the use of noisier aircraft at night, is provided in the Night Noise Chapter. During the COVID-19 pandemic airlines needed to use older, larger aircraft, including Boeing 747-400s which are QC4 rated on departure. Since its introduction in April 2021, the QC4 surcharge has generated more than £1.1 million for the East Midlands Airport Community Fund.

To maximise the impact of additional funds generated from QC4 surcharges, the East Midlands Airport Community Fund Committee agreed two new special funding projects:

- A local 'Schools' Eco-Garden competition', with funding to turn winning designs into a reality. This project supports local schools and aligns with the 'Opportunity for all' strategic priority identified in our Corporate Social Responsibility (CSR) Strategy<sup>6</sup> 'Working together for a brighter future'.
- A 'Low Carbon Energy Fund' for local community and public buildings such as schools and village halls, to pay for solar panels or similar low carbon energy projects. This project aligns with the 'Zero Carbon Airports' strategic priority of our CSR Strategy.

<sup>6</sup> <https://www.eastmidlandsairport.com/community/supporting-the-local-community/engaging-communities/#>



In total, in 2021/22 the Community Fund supported 76 local community projects with £156,625 in grant funding, including £59,774 for initial pilots of our Low Carbon Energy Fund.

In 2022/23, in total the East Midlands Airport Community Fund awarded £625,704 to 143 community projects. This includes £309,667 in Schools' Eco-Garden Competition and Fund grants awards to 27 schools and £164,563 in Low Carbon Energy Fund grants to support 19 community projects.

As part of our Noise Action Plan 2024-2028, we are proposing enhancements to our Community Fund. In response to the impact of recent inflationary pressures, from 1 April 2024 we will increase the annual contribution East Midlands Airport makes to the Fund by 10%, with further inflationary increases applied each year thereafter (these increases will be based on the Consumer Price Index measure reported by the Office for National Statistics).

### **Low Carbon Energy Fund**

East Midlands Airport's Community Fund launched a Low Carbon Energy Fund to help to support our most local communities to make the transition to more sustainable energy sources.

In the first round of funding three local hospices – Rainbows Children's Hospice in Loughborough, Treetops Hospice in Derbyshire and Loros in Leicestershire – were awarded grants of around £20,000 each for a range of low carbon energy initiatives including solar panels, electric vehicle charging points and energy efficient LED lighting. A further round of funding has been made available for local community buildings such as schools and village halls to invest in proven low carbon technologies.

In 2022/23, the East Midlands Airport Low Carbon Energy Fund provided £164,563 of grant funding to support a total of 19 projects ranging from solar panels, ground source heating, air source heating, electric vehicle purchase and energy efficient LED lighting projects.

### **Eco-Garden Competition and Fund**

East Midlands Airport ran a Schools' Eco-Garden Competition in 2022 and invited schools within the East Midlands Airport Community Fund's area of benefit to take part. Judges were looking for designs that were environmentally friendly and provide lasting benefit to school communities. The EMA Eco-Garden Competition awarded a total of £300,515 to 26 schools to help turn their garden designs into a reality.

Following the successful Eco-Garden Competition, the Community Fund committee ring-fenced funding to continue to offer a School Eco-Garden Fund. Schools can bid for up to £10,000.

Since the Eco-Garden Fund was opened a further five schools have benefited from an additional £33,968, bringing the total invested in Eco-Gardens to £334,483.





Action table 10. Noise Action Plan 2024-2028: Mitigation schemes

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 24</b>	Sound Insulation Grant Scheme	We will continue to operate a Sound Insulation Grant Scheme (SIGS) to provide support to those people that are most exposed to aircraft noise at night.
<b>Noise Action Plan 25</b>	Improved SIGS eligibility and grant values	We will improve our SIGS programme, updating the Scheme rules to reset the value of grant funding offered to properties 20 years after any previous grant was awarded. Additionally, we will increase the contribution available through grant awards by 10% on 1 April 2024, and apply CPI inflationary adjustments annually thereafter. The value of the grant will be rounded up to the nearest £100 after inflation is applied each year.
<b>Noise Action Plan 26</b>	Sound Insulation Grant Scheme technologies	We will carry out a review of the sound insulation options available through our SIGS, with a view to improving the range of options for buildings eligible under the scheme.
<b>Noise Action Plan 27</b>	Community Fund	We will increase the airport's contribution to the East Midlands Airport Community Fund from £50,000 to £55,000 from 1 April 2024, applying CPI inflationary increases annually thereafter. The value of our contribution will be rounded up to the nearest £1,000 after inflation is applied each year. Additionally, we will continue to contribute all the money raised from noise surcharges and noisy aircraft penalties to the Fund. The airport will continue to carry out regular reviews of the Community Fund to ensure it remains effective.





# 15. Monitoring and reporting





We understand the important role monitoring noise-related performance plays in the development and implementation of approaches to noise management. Through state of the art noise monitoring systems and regular performance reports, we aim to provide information to stakeholders and stimulate the collaboration necessary to drive performance improvements.

### Our monitoring system

Our systems monitor and report on noise from aircraft and check and record the path of every aircraft arriving at or taking off from the airport. As well as recording individual events, our systems help us understand trends, compare performance and provide robust data for noise modelling. We invest in the system to ensure it is continually improved to meet best practice.

In 2006, East Midlands Airport was the first European airport to publish WebTrak, an online tool which enables local residents to see air traffic near to the airport. We will continue to develop the ability to monitor and report on aircraft noise and are committed to improving the ways in which that information is shared with others.

We upgraded our noise monitoring system in 2016, implementing the latest systems available on the market. As part of this upgrade, we replaced all of our noise monitors. Whilst our previous system would process most information overnight, one of the upgrades of the new system enables us to benefit from the availability of information in near real-time.

### Community noise monitoring

As part of our noise monitoring system, we operate six fixed noise monitors. These monitors are located at fixed locations in local communities and provide information about the noise environment and noise from aircraft operating nearby.

We have recently installed a new fixed noise monitor at a site in Melbourne. This monitor will provide additional information about noise in the local community and will be particularly helpful in understanding the noise generated by aircraft arriving at the airport when wind conditions require easterly operations using Runway 09.

In 2022, following the removal of safety measures related to the COVID-19 pandemic, we re-introduced community noise monitoring using a mobile noise monitor which we can deploy temporarily. Working with the Monitoring, Environment, Noise and Track (MENT) sub-committee of the East Midlands Airport Independent Consultative Committee (ICC), we developed an approach to community noise monitoring using our mobile noise monitor. We welcome requests from local Parish Councils for mobile noise monitoring in their area. By following the approach agreed with our ICC, community noise monitoring is undertaken during the summer months when the airport is busiest.

This coincides with the period for which 'Summer 92 Day' noise contour maps are produced. As such, we aim for our mobile monitor to be deployed for three months between 16 June and 15 September, or a period close to these dates. Positioning our mobile noise monitor for a prolonged period allows our monitoring to take into consideration changes to the runway in use (which is driven by wind direction), ensures sufficient data is collected for analysis and reporting and supports the validation of noise modelling by the airport. The mobile noise monitor was deployed in Breaston in the summer of 2022, we are currently planning to deploy two mobile noise monitors in summer 2023.

Following the deployment of the mobile noise monitor, we commission independent noise experts to review the findings of the monitoring period. They are asked to produce a report which we present to the ICC and publish on our website. In response to the positive feedback we have received about this report from our ICC and local communities, as part of our Noise Action Plan 2024-2028, we propose a programme of similar independent noise assessments and reports for our fixed noise monitor locations.



## Noise-related reporting

We believe it is important to share performance reports with stakeholders to inform discussion, including at our ICC, with our airline partners and with local communities.

During the last Noise Action Plan we worked with the ICC and our airline partners to develop and introduce a number of new and updated performance reports. Many of the reports we produce are also now shared on the airport website, including noise monitoring reports for all of our fixed noise monitors and annual noise contour maps, as well as noise preferential route (NPR) and continuous descent approach (CDA) compliance.

In 2021, we began work with our ICC to develop our Quiet Flight Performance Report. This report, which delivers an action from our last Noise Action Plan 2019-2023, ranks the performance of airlines based on key noise-related performance measures. Airline ranking in the report is impacted by the noise characteristics of the aircraft they operate at East Midlands Airport and compliance with noise abatement procedures. A number of measures in the report are specific to night noise. The report, first published in 2022 (reporting performance during 2021), provides information to community stakeholders and promotes more detailed dialogue with airline partners.

Following the publication of our first Report, our collaboration with an airline led to an 8% increase in compliance with our noise preferential departure routes. We will continue to publish our Quiet Flight Performance Report every six months.

All reports discussed above are provided on a quarterly basis to the MENT Sub-Committee of the ICC. During the Noise Action Plan 2019-2023, we also developed a suite of additional reports which cover topics of discussion at meetings of the MENT sub-committee. Over the last five years we have introduced additional reports covering peak noise events, community noise monitoring and training flights. We will continue to work with the sub-committee to maintain a suite of reports which provide members with the information necessary to enable the sub-committee’s important work.

Action table 11. Noise Action Plan 2024-28: Monitoring and reporting

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 28</b>	Community monitoring	Continue to implement a programme of community noise monitoring in consultation with the ICC.
<b>Noise Action Plan 29</b>	Independent assessment of community noise environment	We will develop an approach to, and introduce independent analysis of, the noise environment at our fixed noise monitoring sites.
<b>Noise Action Plan 30</b>	‘Quiet flight performance’ reporting	Continue to publish annual updates of the Quiet Flight Performance Report, reviewing the metrics it contains, and updating the Report as necessary to inform stakeholders and support airlines in minimising noise impacts.
<b>Noise Action Plan 31</b>	Identify smarter ways to work with industry partners in reducing noise	We will collaborate with industry partners through our Pilot Liaison Group and monthly performance reporting, identifying, and implementing opportunities to minimise the noise impact of operations at the airport.



# 16. Effective communication





Working with our neighbours, local communities, colleagues, customers and on-site businesses is an important part of our approach to noise management. We fully recognise the importance of carefully listening to and discussing any noise concerns with our stakeholders.

At East Midlands Airport we have a long-term commitment to make a positive difference to the quality of life in our local community. As part of this commitment, we are dedicated to building and sustaining a positive dialogue with our neighbours: informing, involving, consulting and reporting back to them.

## Independent Consultative Committee

The East Midlands Airport Independent Consultative Committee (ICC) is the formal body in charge of liaison between East Midlands Airport and our neighbouring communities.

According to the Liaison Group of UK Airport Consultative Committees (UKACCs), Airport Consultative Committees such as the ICC are a well-established way in which airports can engage with key stakeholders in the local area and beyond. The ICC seeks to hold the precarious balance between the interests of civil aviation, of passengers and other users of the airport, of people living in the area, and of the local environment.

The ICC operates according to Government guidelines and has as members, representatives from local authorities, airport user groups and local interest groups. To enable frequent dialogue between the ICC and the airport, the Committee meets three times a year, with the final meeting of the year being a General ICC meeting. There are two sub-committees known as Monitoring, Environment, Noise and Track (MENT) and Transport, Economic Development and Passenger Service (TEP). Each of these sub-committees meets three times each year.

Information about the ICC, including contact details for the independent Secretariat, a list of members, and past minutes are published on our [website](#).

## East Midlands Airport Parish Engagement Forum

The East Midlands Airport Parish Forum is held twice a year. The Forum provides an opportunity for us to engage with Parish Councils from the local area. In addition to welcoming Parish Councils at the Parish Engagement Forum, we also regularly attend Parish Council Meetings. We proactively visit our closest Parish Councils and will, upon request, also visit other Parish Councils to provide updates on airport activity and discuss specific issues.

## East Midlands Airport Youth Forum

Our Corporate Social Responsibility (CSR) Strategy 'Working together for a brighter future' builds on our strong track record of improving the way we operate as a business for the benefit of the communities, regions and environment around our airports.

Our Strategy is delivered through three strategic priorities: 'Zero Carbon Airports', 'Opportunity for All' and 'Local Voices'. Whilst we value the important role the ICC and our Parish Engagement Forum plays in enabling us to understand the issues which matter most to our local communities, we recognise that the membership of these groups is not always as representative of our communities as we might like. So that we can hear directly from a broader group of local voices, our CSR Strategy included a commitment that we would establish a new Airport Youth Forum.

In 2022, we held our first Youth Forum meeting. The Forum has been developed following a review of how other successful Youth Forums are run around the UK and feedback obtained through focus groups we held with young people from local Sixth Forms, Colleges and Universities. Our Youth Forum meets four times each year, with members discussing a wide range of airport-related issues framed through the three pillars of our CSR Strategy.

Membership of the Youth Forum is open to young people aged between 17 and 25 who are either completing an apprenticeship or attending a local Sixth Form, College or University. More information about our Youth Forum is available on our [website](#).

## Community impact survey

Our community impact survey gives us the opportunity to gather feedback from a wide variety of local stakeholders, including people we have recently worked with, as well as those with whom we have not. The results of the survey help us to gain an understanding of the issues that are important to people in the local area. They also help us identify potential gaps in our programme of work and parts of the community which could benefit from the airport's support.



## Community outreach

We regularly arrange and attend community outreach sessions where members of the public can come and talk to us about any issues or concerns they may have. These face-to-face outreach sessions take place each year in villages near to the airport. The events we will be attending are promoted on our website and social media channels. Our attendance at events is also shared by stakeholders in the community.

We also regularly attend the Parish Council meetings of our nearest parishes to make sure that we keep an open dialogue with communities nearest to us.

Local residents can also come and visit us at the airport during Aerozone Community Family Fun Days which we hold in the school summer holidays. Our Aerozone Community Family Fun Days are occasions when people who live in our local area can attend the airport to enjoy a range of activities including crafts, a treasure hunt that takes families around the airport as well as providing an opportunity to meet members of the airport fire service and airport police.

## Community Flyer

In response to community feedback and following a review of how we share information with people in our local community, we relaunched the East Midlands Airport Community Flyer in September 2022 after a short break during the COVID-19 pandemic. The Community Flyer is a newsletter which we publish every three months.

Historically, the Community Flyer was printed and posted to over 40,000 local homes. When we relaunched the Community Flyer in 2022, we took the decision to move to an electronic format. It is now available to read on our website and is also emailed to people who have asked to be added to our stakeholder database. At the time we made this change we wrote to all the homes which previously received a postal version, directing residents to our website to view the new e-newsletter online. We included information about how they could sign up to receive a copy by email. We also promote the Community Flyer using our social media channels.

## Providing information to local residents

In addition to the engagement activities outlined above, we also provide a wide range of information to local residents through our [website](#). On our website they can find:

- A suite of fact sheets which provide information about airport operations, including the ways in which we minimise noise impacts. We are proud that our fact sheets have been recognised for clarity and hold the Plain English Campaign Crystal Mark.
- A wide-range of noise-related performance reports, which present the results of our monitoring of noise in local communities and airlines' noise abatement procedure compliance.
- Our Quiet Flight Performance Report, which provides a transparent view of how airlines operating at East Midlands Airport perform against a range of noise-related indicators. The Report includes metrics which cover both the types of aircraft in use and the way in which our airlines operate those aircraft at our airport.

- WebTrak, a website where local people can replay the tracks taken by aircraft operating at East Midlands Airport and see information about flights including the noise levels recorded at our noise monitors. WebTrak can also be used to report flights which have caused disturbance by registering a complaint which is investigated by our Flight Evaluation Unit.

During this Noise Action Plan, we will continue to build on the information local people can access about noise management and noise-related performance on our website. We propose to develop and introduce an online portal which provides location-specific information about noise management and performance to local communities.



## Noise complaints

We welcome feedback from individuals who are impacted by noise from airport operations. Members of the community can contact us in a range of different ways, including by telephone, post, email, through a form on our website or directly from WebTrak.

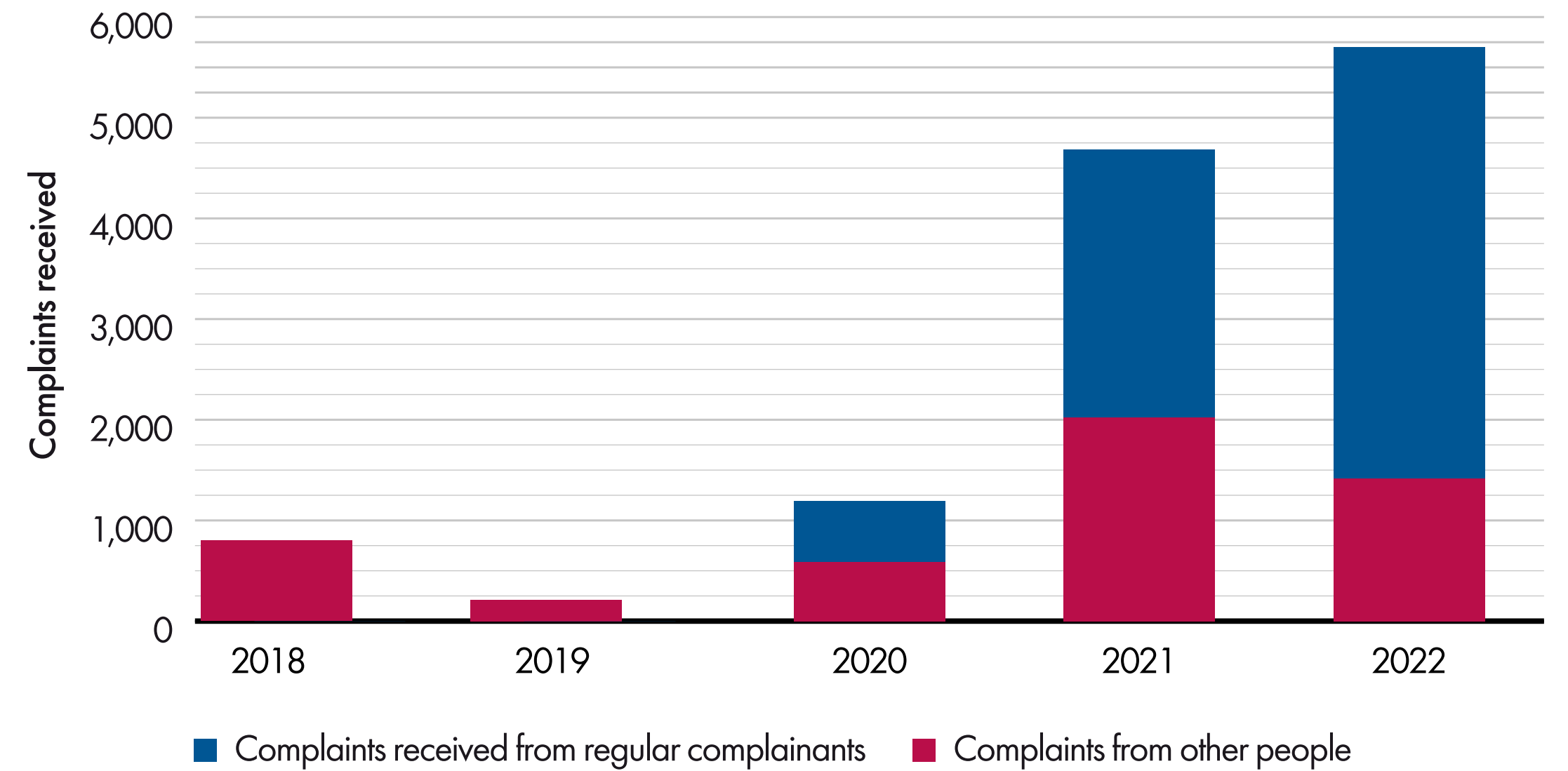
Our Flight Evaluation Unit record and investigate complaints using our noise and track-keeping system. Responses are provided within 10 working days.

Information about complaints is shared regularly with community representatives through the MENT sub-committee of the ICC. This provides a valuable forum to explore noise concerns and discuss potential solutions.

As a result of the COVID-19 pandemic there have been significant changes to operations at the airport during the last five years. During the pandemic passenger flights and activity during the daytime reduced significantly, whereas the amount of freight carried at night increased. Passenger traffic is now recovering, but not yet back to pre-pandemic levels. We understand that the pandemic also led to changes to the way people live their lives, for example working from home is now more common than it was before the COVID-19 pandemic and some people moved house at a time which may not have been representative of the normal environment.

The changes described above have had a significant impact on the number of noise complaints we receive. During the pandemic, when people were spending more time at home and there were fewer flights during the day, we saw an increase in the number of complaints from local communities. Similarly, complaints increased when COVID-19 restrictions eased and flights during the daytime began to resume. In 2022, two individual complainants recorded 75% of the complaints we received. Figure 22 shows the number of complaints received over the last five years, with regular complaints from these individuals displayed separately.

Figure 22. Complaints received between 2018 and 2022





Our analysis of the noise complaints received since 2020 identified two key issues. These are the use of Boeing 747-400 aircraft at night, which increased during the COVID-19 pandemic, and training flights using commercial jet aircraft. In 2021, flights operated by Boeing 747-400 aircraft generated 522 complaints – more than 53 times the number of complaints per movement than flights operated by Boeing 777 aircraft, another large aircraft used on long-haul cargo routes. In 2022, training flights generated 322 complaints. Although training flights made up 3.5% of flights from the airport, they generated 6% of the complaints we received. The Night Noise and Training Flight chapters of this Noise Action Plan propose actions which respond to these issues.

During this Noise Action Plan we will develop and publish a Noise Complaints Policy. The Policy will outline the way in which local communities can register complaints with the airport, how we process them and the timeframes within which we work. We will develop our Noise Complaints Policy in consultation with the ICC, identifying and implementing opportunities to improve the way we handle and respond to noise complaints.

## More information about our community engagement work

For further information about our Community Engagement work please contact our Community Engagement Manager:

Community Engagement  
East Midlands Airport  
Pathfinder House  
East Midlands Airport  
Castle Donington  
Derby  
DE74 2SA

Telephone: 01332 818414

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Website: [www.eastmidlandsairport.com/community](http://www.eastmidlandsairport.com/community)



Action table 12. Noise Action Plan 2024-2028: Effective communication

ACTION NUMBER	CONTROL	ACTION
<b>Noise Action Plan 32</b>	Provide and regularly review effective engagement with communities	Continue to provide regular opportunities to engage with local people to understand their concerns and respond effectively to them, including attending community outreach events and producing a community newsletter. Develop and review the effectiveness of our engagement programme regularly in response to community impact surveys.
<b>Noise Action Plan 33</b>	Carry out regular community survey	Carry out a regular community survey to collect views on how effectively the airport is managing aircraft noise issues as well as other issues. Results from the survey will be shared with the East Midlands Airport Independent Consultative Committee, airlines, air traffic control and community groups and used to inform any future noise actions.
<b>Noise Action Plan 34</b>	Noise-related community investment	Provide specific information on aircraft noise-related community investment as an appendix to the annual airport Community Investment Report. This will clearly show how money raised from noise surcharges and penalties is used to support the communities affected.
<b>Noise Action Plan 35</b>	Provide educational material on aircraft noise	We will continue to include educational material on aircraft noise management as part of our programme of educational visits to the airport.
<b>Noise Action Plan 36</b>	Noise Action Plan Progress Report	We will produce an annual report, presented to the East Midlands Airport Independent Consultative Committee, summarising progress made by the airport against this Noise Action Plan.
<b>Noise Action Plan 37</b>	Online noise portal for local communities	We will develop and introduce an online portal providing location-specific information about noise management and performance to local communities.
<b>Noise Action Plan 38</b>	Continually improve noise complaint and enquiry process	Regularly review our process for handling noise complaints and enquiries to improve the transparency and effectiveness of the system. This will include consultation with the East Midlands Airport Independent Consultative Committee. Our first review will be complete by mid-2024 with agreed actions implemented by the end of 2025.
<b>Noise Action Plan 39</b>	Develop and publish noise complaints policy	We will develop and publish a policy which explains the way in which we investigate and respond to noise-related enquiries from local communities.



# 17. Consultation responses

This chapter of our Noise Action Plan will be drafted when we have reviewed responses to the consultation. We will provide information about the feedback we receive and how we have responded to this.



# 18. Glossary of terms



TERM	MEANING
<b>AIP</b>	The UK Aeronautical Information Publication
<b>ANOMS</b>	Airport Noise Operations Monitoring System
<b>APU</b>	Auxiliary Power Unit
<b>ATC</b>	Air Traffic Control
<b>ATM</b>	Air Transport Movement
<b>CAA</b>	UK Civil Aviation Authority
<b>CDA</b>	Continuous Descent Approach
<b>CCD/CCO</b>	Continuous Climb Departure/Continuous Climb Operations – The same technique to climb aircraft continuously to reduce noise
<b>dB(A)</b>	A unit of sound pressure level, adjusted in accordance with the A weighting scale, which takes into account the increased sensitivity of the human ear at some frequencies
<b>Decibel (dB)</b>	The decibel (dB) is a logarithmic unit of measurement that expresses the magnitude of a physical quantity relative to a specified or implied reference level. Its logarithmic nature allows very large or very small ratios to be represented by a convenient number. Being a ratio, it is a dimensionless unit. Decibels are used for a wide variety of measurements including acoustics, and for audible sound A-weighted decibels [dB(A)] are commonly used
<b>Defra</b>	Department for Environment Food and Rural Affairs (UK Government)
<b>DfT</b>	Department for Transport (UK Government)
<b>EMA</b>	East Midlands Airport
<b>EPNdB</b>	Effective Perceived Noise measured in Decibels. Its measurement involves analyses of the frequency spectra of noise events as well as the maximum level
<b>EU</b>	European Union
<b>GPU</b>	Ground Power Unit
<b>GVA</b>	Gross value added is the measure of the value of goods and services produced in an area, industry or sector of an economy

TERM	MEANING
<b>ICAO</b>	International Civil Aviation Organization
<b>ICC</b>	East Midlands Airport Independent Consultative Committee – the formal body in charge of liaison between East Midlands Airport and our neighbouring communities
<b>ICCAN</b>	Independent Commission on Civil Aviation Noise
<b>ILS</b>	Instrument Landing System
<b>L<sub>Aeq</sub> 16-hour</b>	The A-weighted average sound level over the 16-hour period of 07:00 to 23:00
<b>L<sub>day</sub></b>	The A-weighted average sound level over the 12-hour day period of 07:00 to 19:00
<b>L<sub>den</sub></b>	The day-evening-night level, L <sub>den</sub> is a logarithmic composite of the L <sub>day</sub> , L <sub>evening</sub> and L <sub>night</sub> levels but with 5dB(A) being added to the L <sub>evening</sub> value and 10dB(A) being added to the L <sub>night</sub> value
<b>L<sub>Aeq</sub></b>	Equivalent sound level of aircraft noise in dB(A), often called equivalent continuous sound level. For conventional historical contours this is based on the daily average movements that take place in the 16-hour period (07:00 to 23:00 LT) during the 92-day period 16 June to 15 September inclusive
<b>L<sub>evening</sub></b>	The A-weighted average sound level over the 4-hour evening period of 19:00 to 23:00
<b>L<sub>max</sub></b>	Maximum A-weighted sound level
<b>L<sub>night</sub></b>	The A-weighted average sound level over the 8-hour night period of 23:00 to 07:00
<b>LOAEL</b>	The lowest observed adverse effect level (in this Plan, this relates to aircraft noise). This is the level above which adverse effects on health and quality of life can be detected
<b>MAG</b>	Manchester Airports Group – owner of East Midlands Airport
<b>MENT</b>	The Monitoring, Environment, Noise and Track sub-committee of the East Midlands Airport Independent Consultative Committee
<b>NAP</b>	Noise Action Plan
<b>NATS</b>	Formerly known as National Air Traffic Services Ltd. NATS is licensed to provide en-route air traffic control for the UK and the Eastern part of the North Atlantic, and also provides air traffic control services at several major UK airports, including Heathrow, Gatwick and Stansted



TERM	MEANING
<b>Noise envelope</b>	This is the legal night noise limit agreed through planning permission for the airport. It states the airport $L_{Aeq}$ 8-hour summer night noise contour will not exceed 16km <sup>2</sup>
<b>NPR</b>	Noise preferential route
<b>PBN</b>	Performance based navigation – a technique using satellite navigation information to improve the accuracy of aircraft flight paths
<b>PLG</b>	The Pilot Liaison Group – an East Midlands Airport forum for the airport, pilots and air traffic to discuss performance issues and opportunities
<b>QC</b>	Quota Count – in 1993 a new quota count system was introduced based on aircraft noise certification data. Each aircraft type is classified and awarded a QC value depending on the amount of noise it generates under controlled certification conditions. The quieter the aircraft, the smaller the QC value
<b>RNAV/PRNAV</b>	Area Navigation/Precision Area Navigation using GPS coordinates
<b>SDP</b>	East Midlands Airport Sustainable Development Plan
<b>SID</b>	Standard instrument departure route
<b>SIG(S)</b>	Sound Insulation Grant (Scheme)
<b>SOAEL</b>	The significant observed adverse effect level (in this Plan, this relates to aircraft noise). This is the level above which significant adverse effects on health and quality of life occur
<b>SoS</b>	UK Secretary of State
<b>Sustainable Aviation</b>	A UK aviation industry initiative aiming to set out a long-term strategy for the industry to address its sustainability issues



# 19. Appendix



## Appendix A – Noise Action Plan 2024-2028: Summary of actions

Table below outlines the actions we are including in this NAP. These provide a range of benefits which are discussed earlier in this document. Our new actions will deliver:

CHAPTER	ACTION NUMBER AND NAME	PROPOSED ACTION FOR NOISE ACTION PLAN 2024-28	PROPOSED ACTION DEADLINE	EXPECTED OUTCOME / BENEFIT
<b>Noise controls</b>	Noise Action Plan 1: Preferred runway direction	We will continue to maintain our preferential runway policy and monitor runway usage.	Ongoing	To minimise noise in the 55dB L <sub>den</sub> contour areas.
<b>Arrivals</b>	Noise Action Plan 2: Continuous descent approach	Improve our CDA performance to achieve a target of 95% CDA by 2028, rising to an increased target of 98% CDA following implementation of modernised airspace through our Future Airspace Programme.	2028	To minimise noise from arriving aircraft for those within and beyond the contour area of 55L <sub>den</sub> .
<b>Arrivals</b>	Noise Action Plan 3: Specified arrival routes	Through our Future Airspace Programme we will continue to explore with stakeholders the options for specified arrival routes to the airport using new satellite based navigation technology, seeking to reduce noise impacts. This will be reviewed and implemented through our Future Airspace Programme.	TBC, subject to current airspace timeline	Environmental assessment will be included as part of the Future Airspace Programme.
<b>Arrivals</b>	Noise Action Plan 4: Low power, low drag approaches	Work with operators to improve compliance with the published low power, low drag procedure.	Ongoing	To minimise noise from arriving aircraft for those living within and beyond the contour area of 55dB L <sub>den</sub> .
<b>On the ground</b>	Noise Action Plan 5: Reduced-engine taxi	Continue to promote the use of reduced engine taxi at the airport where it is practical and beneficial to do so.	Ongoing	To minimise noise from ground operations.
<b>On the ground</b>	Noise Action Plan 6: Review effectiveness of ground noise procedures	We will carry out a review into the effectiveness of our ground noise procedures and explore options for how these can be improved.	2026	To minimise noise from ground operations.
<b>On the ground</b>	Noise Action Plan 7: Engine testing	We will carry out a review of our engine testing procedures and explore options for how these can be improved to reduce noise impacts on local communities.	2024	To minimise noise from ground operations.
<b>On the ground</b>	Noise Action Plan 8: Use of aircraft ground power	Work with our industry partners to identify and encourage quieter ways to service aircraft, for example through the use of alternatively fuelled vehicles and equipment.	Ongoing	To minimise noise from ground operations.



CHAPTER	ACTION NUMBER AND NAME	PROPOSED ACTION FOR NOISE ACTION PLAN 2024-28	PROPOSED ACTION DEADLINE	EXPECTED OUTCOME / BENEFIT
<b>On the ground</b>	Noise Action Plan 9: Use of intersection departures	We will continue to promote and encourage the use of intersection departures (see explanation on page 47), from Runway 27 at night to reduce ground noise for local communities. Other sources of ground noise can include vehicles and equipment used to service aircraft. This can be intrusive for people who live very close to the airport. This noise source can include the reversing beepers. We have worked with our stakeholders to reduce this noise, and vehicles now have an audible reversing system that still emits a tone that meets required safety standards, but doesn't transmit the noise over such a wide area.	Ongoing	To minimise noise in the 66 and 63dB L <sub>night</sub> contour areas.
<b>On the ground</b>	Noise Action Plan 10: Night time vehicle noise	We will continue to work with our business partners to identify and implement measures to minimise noise from vehicle movements on the airport at night.	Ongoing	To minimise noise from ground operations.
<b>Departing aircraft</b>	Noise Action Plan 11: Departure track-keeping	Maintain our departure 'on-track' keeping performance target of 98% on departure routes (excluding the Trent departure route from Runway 09). Continue to monitor and report performance with and without the Runway 09 Trent route.	Ongoing	To minimise the overflight of local communities in the L <sub>den</sub> contours for departing aircraft.
<b>Departing aircraft</b>	Noise Action Plan 12: Explore options to improve the effectiveness of NPRs	We will explore options for performance-based navigation procedures which will be implemented through our Future Airspace Programme.	TBC, subject to current airspace timeline	Environmental assessment to be Included as part of the Future Airspace Programme.
<b>Departing aircraft</b>	Noise Action Plan 13: Continuous climb departures (CCD)	Explore with airlines and air traffic control, the opportunities to increase the use of continuous climb departures through airspace modernisation.	TBC, subject to current airspace timeline	Environmental assessment to be Included as part of the Future Airspace Programme.
<b>Departing aircraft</b>	Noise Action Plan 14: Off-track departure fines	We will continue to monitor off-track departures, working with operators to improve performance and, where applicable, raising off-track departure fines to penalise airlines who are not working to improve their track-keeping and meet our published target (see action NAP11).	Ongoing	To improve the track-keeping performance of operators, as shown in the Quiet Flight Performance Report.
<b>Departing aircraft</b>	Noise Action Plan 15: Noisy aircraft penalty scheme review	We will review our noisy aircraft penalty scheme, introducing a scheme which also applies during the day.	2025	To incentivise the operation of the quietest fleet / no of surcharges applied.
<b>Night noise</b>	Noise Action Plan 16: Noisy aircraft penalty	We will continue to operate a noisy aircraft penalty scheme that penalises the operators of aircraft which exceed our published night noise limits. We will review our scheme in accordance with Noise Action Plan 15.	Ongoing	To incentivise the operation of the quietest fleet / no of surcharges applied.
<b>Night noise</b>	Noise Action Plan 17: Review effectiveness of noise related charges to incentivise the use of ICAO Chapter 14 compliant aircraft at night	We will carry out a review of our existing noise charges, changing them where required to incentivise the operation of aircraft in the daytime wherever possible and to promote the use of quieter aircraft on flights that necessarily take place at night.	2026	To incentivise the operation of the quietest fleet through airport charges.



CHAPTER	ACTION NUMBER AND NAME	PROPOSED ACTION FOR NOISE ACTION PLAN 2024-28	PROPOSED ACTION DEADLINE	EXPECTED OUTCOME / BENEFIT
<b>Night noise</b>	Noise Action Plan 18: Operational ban on QC4, QC8 and QC16 rated aircraft at night	From 1 January 2024, we will introduce an operational ban on aircraft with a QC4, QC8 or QC16 noise rating operating at night.	2024	To reduce the numbers of the noisiest aircraft that can operate currently at night / no of operations.
<b>Night noise</b>	Noise Action Plan 19: Night noise envelope	Monitor, manage and annually report on performance against the airport's 55dB L <sub>Aeq</sub> (8-hour) summer night-time noise contour, aiming to progressively reduce it and ensuring it does not exceed 16km <sup>2</sup> .	Ongoing	To manage night noise to ensure the contour remains within the planning condition limit.
<b>Night noise</b>	Noise Action Plan 20: Chapter 4 operations	Continue to monitor and report progress towards our target of 100% of night flights (2300-0659) being by aircraft which meet the requirements of ICAO Chapter 4, maintaining surcharges to disincentivise the use of aircraft at night which do not meet Chapter 4 requirements.	Ongoing	To incentivise the operation of the quietest fleet through airport charges and remain within the agreed S106 limit.
<b>Training flights</b>	Noise Action Plan 21: Training Flights Report	We will continue to monitor and report performance with our training flight exclusion areas, identifying trends and compliance issues. We will address issues as necessary.	Ongoing	To manage noise impacts for local communities within and outside of the 54dB L <sub>Aeq</sub> contour.
<b>Training flights</b>	Noise Action Plan 22: Management of training flights	From 1 January 2024, we will reduce the number of hours available for training activities by commercial jet aircraft. Training activity will only be permitted from 08:00 to 12:00 and from 14:00 to 16:00 daily, excluding weekends and bank holidays.	2024	To minimise the hours of the day where jet training flights can operate.
<b>Training flights</b>	Noise Action Plan 23: Review of training flight procedures	We will carry out a review of training flight procedures, identifying and where possible implementing opportunities to minimise the impact on local communities. This will include investigating the possibility of balancing the number of training flights taking place to the north and south of the airport.	2024	To manage noise impacts for local communities within and outside of the 54dB L <sub>Aeq</sub> contour.
<b>Mitigation schemes</b>	Noise Action Plan 24: Sound Insulation Grant Scheme	We will continue to operate a Sound Insulation Grant Scheme (SIGS) to provide support to those people that are most exposed to aircraft noise at night.	Ongoing	To mitigate noise impacts for properties that qualify for Sound Insulation Grant Scheme funding.
<b>Mitigation schemes</b>	Noise Action Plan 25: Improved Sound Insulation Grant Scheme eligibility and grant values	We will improve our SIGS programme, updating the Scheme rules to reset the value of grant funding offered to properties 20 years after any previous grant was awarded. Additionally, we will increase the contribution available through grant awards by 10% on 1 April 2024, and apply CPI inflationary adjustments annually thereafter. The value of the grant will be rounded up to the nearest £100 after inflation is applied each year	2024	To mitigate noise impacts for properties that qualify for Sound Insulation Grant Scheme funding.



CHAPTER	ACTION NUMBER AND NAME	PROPOSED ACTION FOR NOISE ACTION PLAN 2024-28	PROPOSED ACTION DEADLINE	EXPECTED OUTCOME / BENEFIT
<b>Mitigation schemes</b>	Noise Action Plan 26: Sound Insulation Grant Scheme technologies	We will carry out a review of the sound insulation options available through our SIGS, with a view to improving the range of options for buildings eligible under the scheme.	2025	To mitigate noise impacts for properties that qualify for Sound Insulation Grant Scheme funding.
<b>Mitigation schemes</b>	Noise Action Plan 27: Community Fund	We will increase the airport’s contribution to the East Midlands Airport Community Fund from £50,000 to £55,000 from 1 April 2024, applying CPI inflationary increases annually thereafter. The value of our contribution will be rounded up to the nearest £1,000 after inflation is applied each year. Additionally, we will continue to contribute all the money raised from noise surcharges and noisy aircraft penalties to the Fund. The airport will continue to carry out regular reviews of the Community Fund to ensure it remains effective.	Ongoing	To ensure the East Midlands Airport Community Fund remains effective.
<b>Monitoring and reporting</b>	Noise Action Plan 28: Community monitoring	Continue to implement a programme of community noise monitoring in consultation with the ICC.	Ongoing	To better understand the noise impacts where community noise monitoring has been undertaken to determine if any improvement can be made.
<b>Monitoring and reporting</b>	Noise Action Plan 29: Independent assessment of community noise environment	We will develop an approach to, an independent analysis of, the noise environment at our fixed noise monitoring sites.	2025	To complement the community noise monitoring programme and determine the local noise environment where our fixed noise monitors are located.
<b>Monitoring and Reporting</b>	Noise Action Plan 30: ‘Quiet flight performance’ reporting	Continue to publish annual updates of the Quiet Flight Performance Report, reviewing the metrics it contains, and updating the Report as necessary to inform stakeholders and support airlines in minimising noise impacts.	Ongoing	To drive improvements in environmental performance of aircraft operators and identify areas of improvement.
<b>Monitoring and reporting</b>	Noise Action Plan 31: Identify smarter ways to work with industry partners in reducing noise	We will collaborate with industry partners through our Pilot Liaison Group and monthly performance reporting, identifying, and implementing opportunities to minimise the noise impact of operations at the airport.	Ongoing	To identify issues and areas of improvement.
<b>Communication</b>	Noise Action Plan 32: Provide and regularly review effective engagement with communities	Continue to provide regular opportunities to engage with local people to understand their concerns and respond effectively to them, to include community outreach events and a community newsletter. Develop and review the effectiveness of our engagement programme regularly in response to Community Impact surveys.	Ongoing	To ensure our community engagement is appropriate and effective and issues are understood and addressed where possible.



CHAPTER	ACTION NUMBER AND NAME	PROPOSED ACTION FOR NOISE ACTION PLAN 2024-28	PROPOSED ACTION DEADLINE	EXPECTED OUTCOME / BENEFIT
<b>Communication</b>	Noise Action Plan 33: Carry out regular community survey	Carry out a regular community survey to collect views on how effectively the airport is managing aircraft noise issues as well as other issues. Results from the survey will be shared with the East Midlands Airport Independent Consultative Committee, airlines, air traffic control and community groups and used to inform any future noise actions.	Ongoing	To ensure feedback from community engagement is shared to highlight any concerns that can, where possible, be addressed.
<b>Communication</b>	Noise Action Plan 34: Noise related community investment	Provide specific information on aircraft noise-related community investment as an appendix to the annual airport Community Investment Report. This will clearly show how money raised from noise surcharges and penalties is used to support the communities affected.	Ongoing	To show how monies raised for the East Midlands Airport Community Fund are being used to support local communities.
<b>Communication</b>	Noise Action Plan 35: Provide educational and skill development material on aircraft noise	We will continue to include educational material on aircraft noise management as part of our programme of educational visits to the airport.	Ongoing	To promote and share our work in understanding and reducing noise impacts of operations.
<b>Communication</b>	Noise Action Plan 36: Noise Action Plan Progress Report	We will produce an annual report, presented to the East Midlands Airport Independent Consultative Committee, summarising progress made by the airport against this Noise Action Plan.	Ongoing	To ensure transparency that this Noise Action Plan is being delivered.
<b>Communication</b>	Noise Action Plan 37: Online noise portal for local communities	We will develop and introduce an online portal providing location-specific information about noise management and performance to local communities.	2024	To help local residents — and people considering moving to any specific location — understand the impacts of aircraft operations in any given area.
<b>Complaints</b>	Noise Action Plan 38: Continually improve noise complaint and enquiry process	Regularly review our process for handling noise complaints and enquiries to improve the transparency and effectiveness of the system. This will include consultation with the East Midlands Airport Independent Consultative Committee. Our first review will be complete by mid-2024 with agreed actions implemented by the end of 2025.	2025	To ensure we maintain an effective communication and complaint-handling system.
<b>Complaints</b>	Noise Action Plan 39: Develop and publish noise complaints policy	We will develop and publish a policy which explains the way in which we investigate and respond to noise-related enquiries from local communities.	2025	To ensure we maintain an effective complaint-handling system and provide people with relevant information.



## Appendix B – Proposed operational ban of QC4, QC8 and QC16 rated aircraft at night

When we prepared our last NAP, stakeholders told us they were concerned about noise from the loudest QC4 rated aircraft (for example, Boeing 747-400 aircraft on departure) at night (23:00 to 07:00). In response, in addition to continuing to prohibit the scheduling of the noisiest QC8 and QC16 rated aircraft at night, we included an action (NAP4 – see page 93) to introduce a new noise surcharge of £2,500 per QC4 aircraft departure between 23:00 and 07:00. Proceeds from the surcharge, which has now risen to £3,028 per QC4 rated aircraft movement, are donated to the East Midlands Airport Community Fund.

During the COVID-19 pandemic, operations at the airport were significantly impacted. Increased demand for air freight, combined with a decrease in capacity to carry cargo on passenger aircraft, led to a rapid increase in freight traffic at the airport in 2020 and 2021. Due to the nature of express freight, much of this traffic was carried during the night. To meet demand, and with a limited availability of aircraft, airlines needed to use older, larger aircraft, including Boeing 747-400s which are QC4 rated on departure. During the current Noise Action Plan there have been no night flights operated from East Midlands Airport by QC8 or QC16 rated aircraft. During the same period, we have seen increased use of quieter large aircraft, such as the Boeing 777-200F which is QC2 rated on departure, by cargo operators at East Midlands Airport.

Through regular engagement with the East Midlands Airport Independent Consultative Committee and directly with local communities, we understand that communities are concerned about the use of noisier aircraft at night, particularly the Boeing 747-400. Flights using these aircraft impact on a larger area and greater number of people than quieter, QC2 rated 777-200F aircraft do. They also generate a greater number of complaints from local communities. In 2021, we received 4,210 complaints which could be linked to a specific aircraft operation. Of these, 611 were attributed to Boeing 747-400 aircraft which operated 676 times during the year. By comparison, the Boeing 777-200F was linked to 30 complaints, whilst operating 1,765 flights during the same time period. Flights by Boeing 777-200F aircraft generated 0.017 complaints per operation, whilst the Boeing 747-400 generated 0.904 complaints per operation – over 53 times more complaints per operation.

The tables on page 89 illustrate the 60dB  $L_{max}$  and 90 SEL noise footprints from departures by both a QC4 rated Boeing 747-400 aircraft and a QC2 rated Boeing 777-200F aircraft.

Following intensive engagement with our airline partners, we have been pleased to see a reduction in the number of Boeing 747-400 aircraft operating at night. Additionally, we welcome the decision by operators of other QC4 rated aircraft to withdraw these aircraft from service at East Midlands Airport.

To consolidate this improvement and to prevent these aircraft operating at night in future, we are proposing an operational ban on the noisiest QC16, QC8 and QC4 rated aircraft movements during the night (23:00 – 07:00), from 1 January 2024. An operational ban means these aircraft would not be able to land or take-off from East Midlands Airport during the night period (23:00 – 07:00), even if delayed. We believe the impacts to airlines of this ban will be minimal, but it will have a benefit to communities that are overflowed by ensuring these noisiest movements cannot take place between 23:00 and 07:00.

Statistics on flights operated by QC4 rated aircraft and larger QC2 rated aircraft are provided in the tables on page 89.



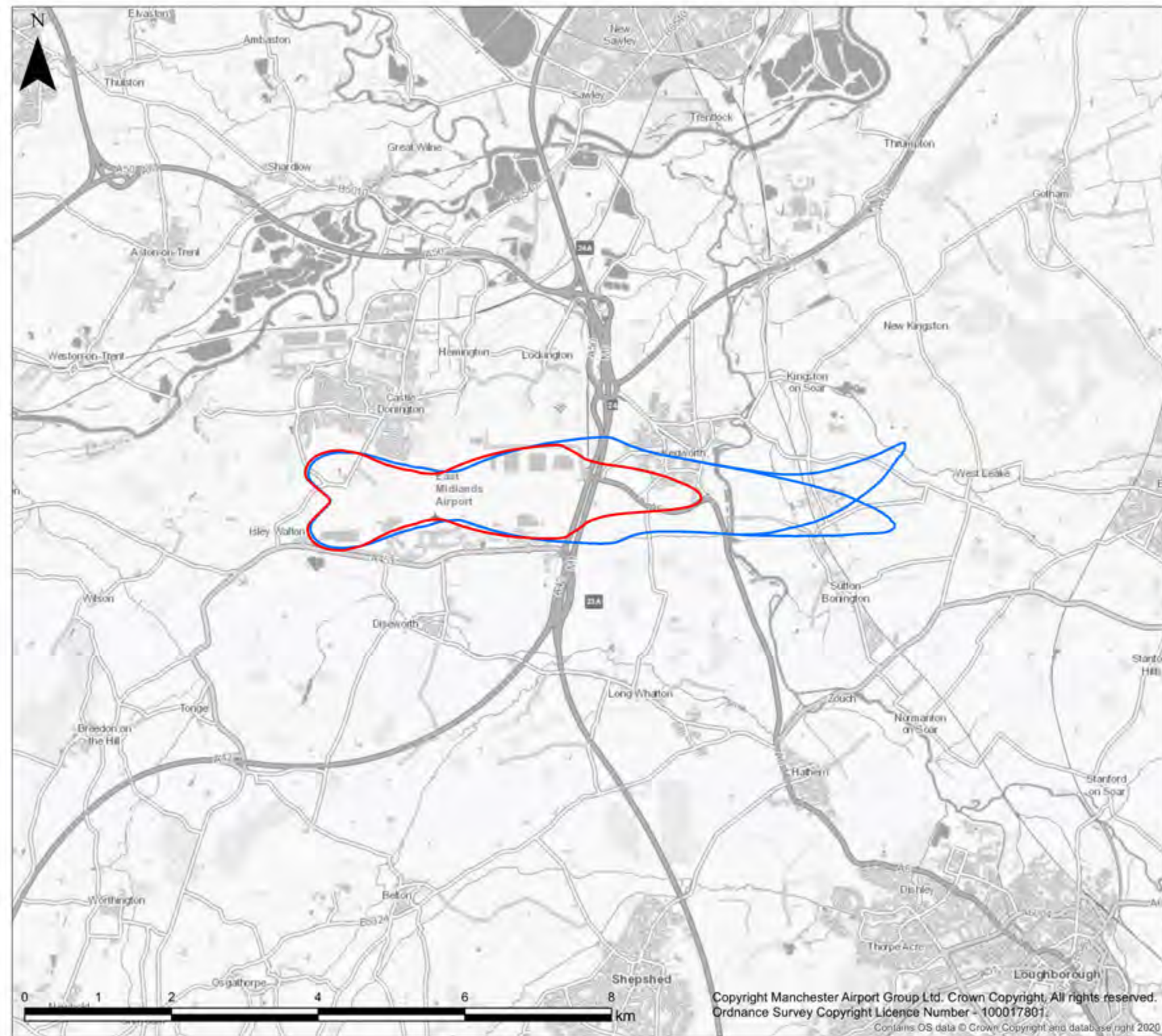
Number of flights operated at East Midlands Airport by QC16, QC8 and QC4 rated aircraft

QC4, QC8 AND QC16 AIRCRAFT OPERATIONS			
YEAR	MONTH	TOTAL	QC2 RATED B777 DEPARTURES
2019	January	0	28
	February	1	24
	March	0	27
	April	1	22
	May	0	26
	June	0	22
	July	2	25
	August	0	26
	September	1	27
	October	0	31
	November	0	31
	December	0	27
2020	January	1	27
	February	0	25
	March	2	26
	April	0	18
	May	0	18
	June	0	23
	July	1	27
	August	1	27
	September	1	29
	October	2	29
	November	3	30
	December	4	30

QC4, QC8 AND QC16 AIRCRAFT OPERATIONS			
YEAR	MONTH	TOTAL	QC2 RATED B777 DEPARTURES
2021	January	11	24
	February	10	27
	March	2	26
	April	18	30
	May	16	27
	June	15	28
	July	11	27
	August	5	34
	September	19	34
	October	49	27
	November	21	30
	December	18	27
2022	January	21	25
	February	33	39
	March	26	47
	April	37	38
	May	22	42
	June	38	41
	July	35	50
	August	30	43
	September	18	43
	October	11	45
	November	24	46
	December	21	39
2023	January	32	40
	February	33	29
	March	29	27

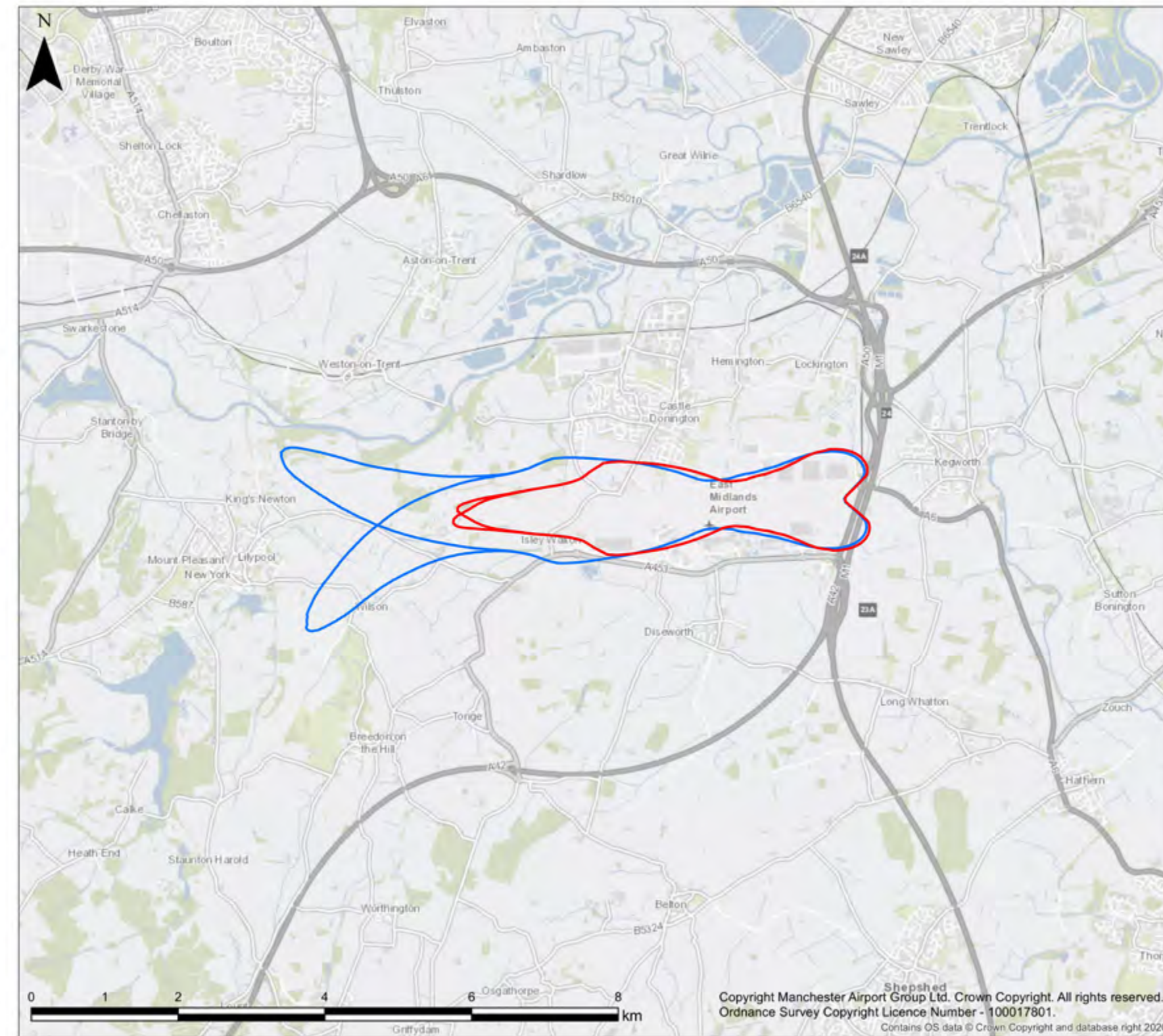


Illustrative 90dB(A) SEL noise contours for departures from Runway 09



<b>Drawing Title:</b> 90 dB(A) SEL Noise Contours Departures Runway 09	
<b>Drawn By</b> RB	<b>Drawing Date</b> 12/04/2023
<b>Approved By</b> AF	<b>Approval Date</b> 12/04/2023
<b>Drawing No</b> 1 of 1	<b>Sheet size</b> @A3
<b>Edition No</b> 1	<b>Scale</b> 1:50,000
<b>Legend</b> — Boeing 777-200 — Boeing 747-400	

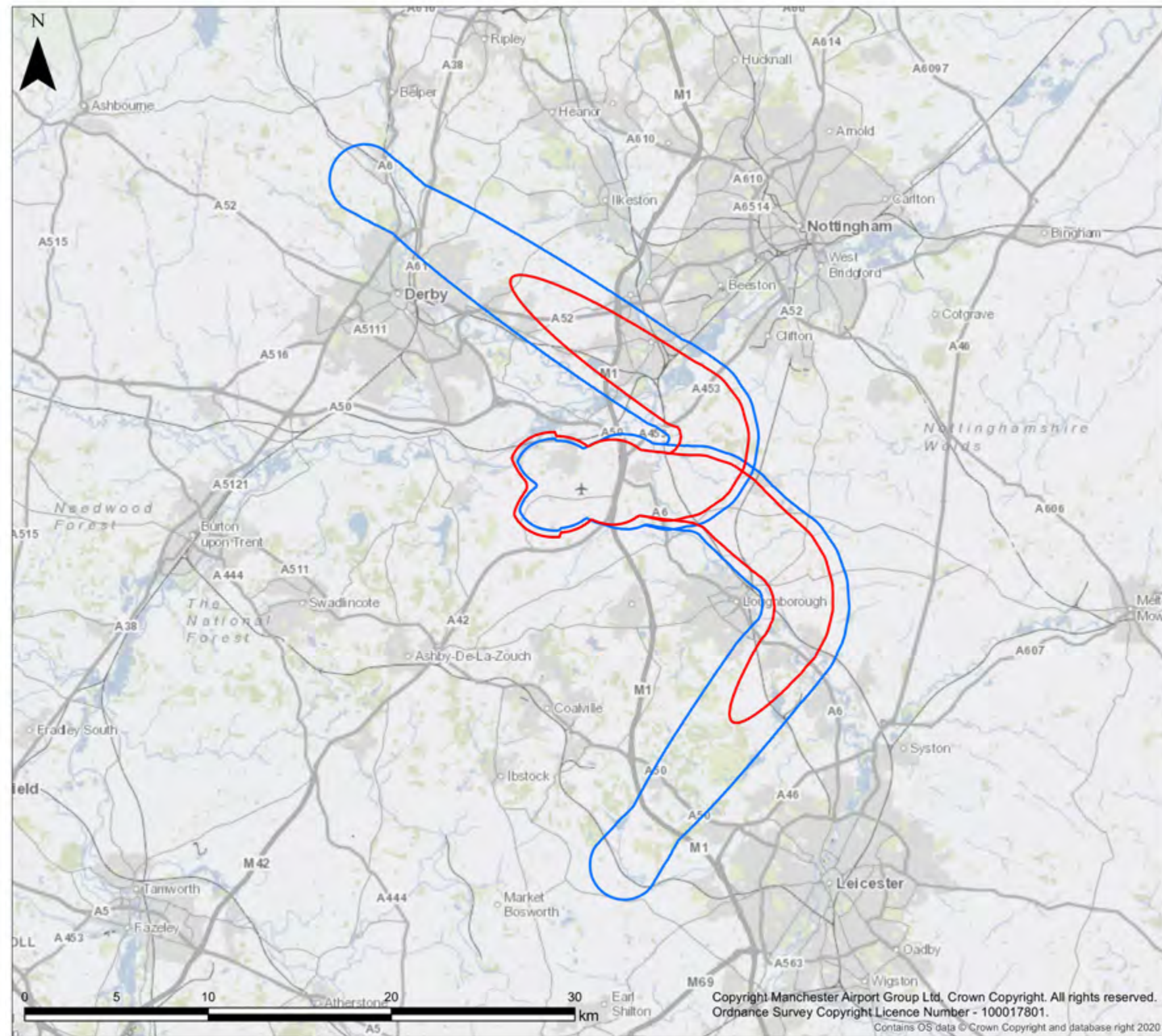
Illustrative 90dB(A) SEL noise contours for departures from Runway 27



<b>Drawing Title:</b> 90 dB(A) SEL Noise Contours Departures Runway 27	
<b>Drawn By</b> RB	<b>Drawing Date</b> 12/04/2023
<b>Approved By</b> AF	<b>Approval Date</b> 12/04/2023
<b>Drawing No</b> 1 of 1	<b>Sheet size</b> @A3
<b>Edition No</b> 1	<b>Scale</b> 1:50,000
<b>Legend</b> — Boeing 777-200 — Boeing 747-400	



Illustrative 60dB L<sub>max</sub> noise contours for departures from Runway 09



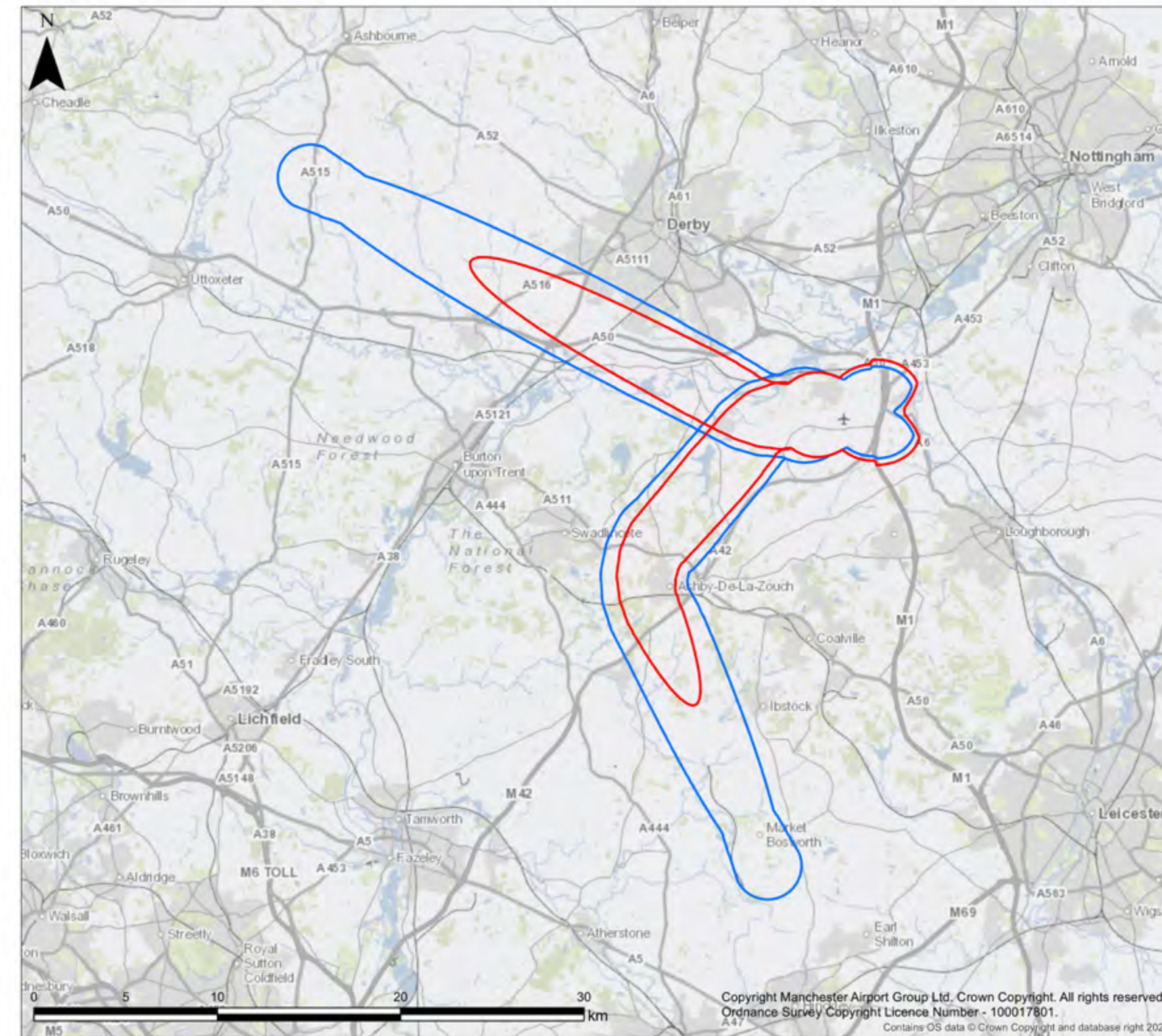
<b>Drawing Title:</b> 60 dB L <sub>max</sub> Noise Contours Departures Runway 09	
<b>Drawn By:</b> RB	<b>Drawing Date:</b> 12/04/2023
<b>Approved By:</b> AF	<b>Approval Date:</b> 12/04/2023
<b>Drawing No:</b> 1 of 1	<b>Sheet size:</b> @A3
<b>Edition No:</b> 1	<b>Scale:</b> 1:200,000

**Legend**

- Boeing 777-200
- Boeing 747-400

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Illustrative 60dB L<sub>max</sub> noise contours for departures from Runway 27



<b>Drawing Title:</b> 60 dB L <sub>max</sub> Noise Contours Departures Runway 27	
<b>Drawn By:</b> RB	<b>Drawing Date:</b> 12/04/2023
<b>Approved By:</b> AF	<b>Approval Date:</b> 12/04/2023
<b>Drawing No:</b> 1 of 1	<b>Sheet size:</b> @A3
<b>Edition No:</b> 1	<b>Scale:</b> 1:200,000

**Legend**

- Boeing 777-200
- Boeing 747-400

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90dB(A) SEL departure footprint areas for QC4 and QC2 aircraft at East Midlands Airport

AIRCRAFT	FOOTPRINT	AREA, km <sup>2</sup>	POPULATION, 1,000s	HOUSEHOLDS, 1,000s
QC4 (Boeing 747-400)	Easterly (09 Trent)	7.7	2,050	740
	Easterly (09 Daventry)	7.6	2,100	760
	Westerly (27 Trent)	7.7	120	60
	Westerly (27 Daventry)	7.7	140	60
QC2 (B777-200F)	Easterly (09 Trent)	4.7	480	210
	Easterly (09 Daventry)	4.7	480	210
	Westerly (27 Trent)	4.8	120	60
	Westerly (27 Daventry)	4.9	120	60
Differences	Easterly (09 Trent)	-39%	-77%	-72%
	Easterly (09 Daventry)	-38%	-77%	-72%
	Westerly (27 Trent)	-38%	0%	0%
	Westerly (27 Daventry)	-36%	-14%	0%

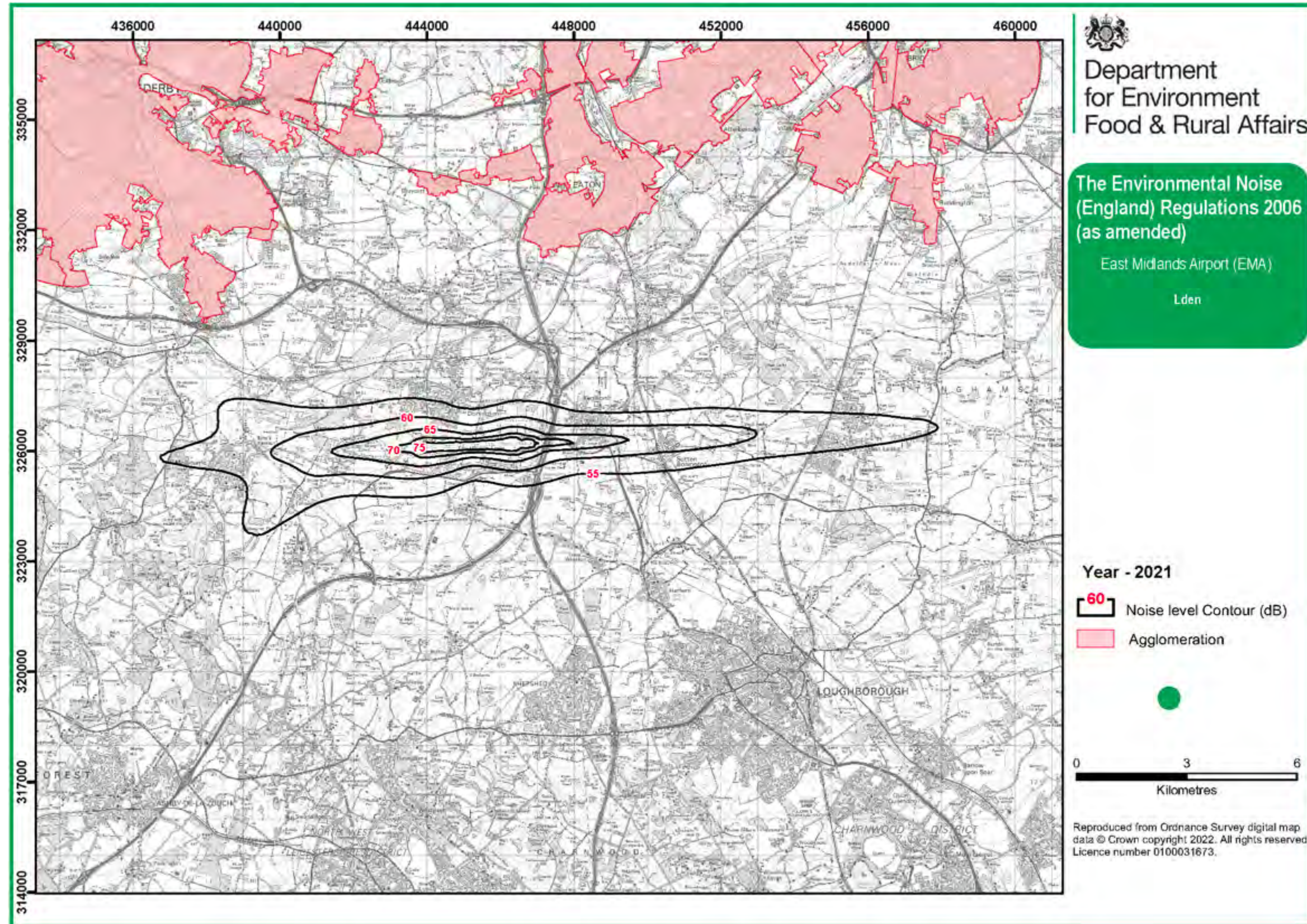
60dB L<sub>max</sub> departure footprint areas for QC4 and QC2 aircraft at East Midlands Airport

AIRCRAFT	FOOTPRINT	AREA, km <sup>2</sup>	POPULATION, 1,000s	HOUSEHOLDS, 1000s
QC4 (Boeing 747-400)	Easterly (09 Trent)	167.7	122,450	52,750
	Easterly (09 Daventry)	165.6	48,000	20,350
	Westerly (27 Trent)	162.9	55,600	22,650
	Westerly (27 Daventry)	164.8	43,000	18,700
QC2 (B777-200F)	Easterly (09 Trent)	95.7	58,950	26,150
	Easterly (09 Daventry)	94.0	30,700	12,900
	Westerly (27 Trent)	93.9	33,650	14,200
	Westerly (27 Daventry)	94.5	31,750	13,950
Differences	Easterly (09 Trent)	-43%	-52%	-50%
	Easterly (09 Daventry)	-43%	-36%	-37%
	Westerly (27 Trent)	-42%	-39%	-37%
	Westerly (27 Daventry)	-43%	-26%	-25%

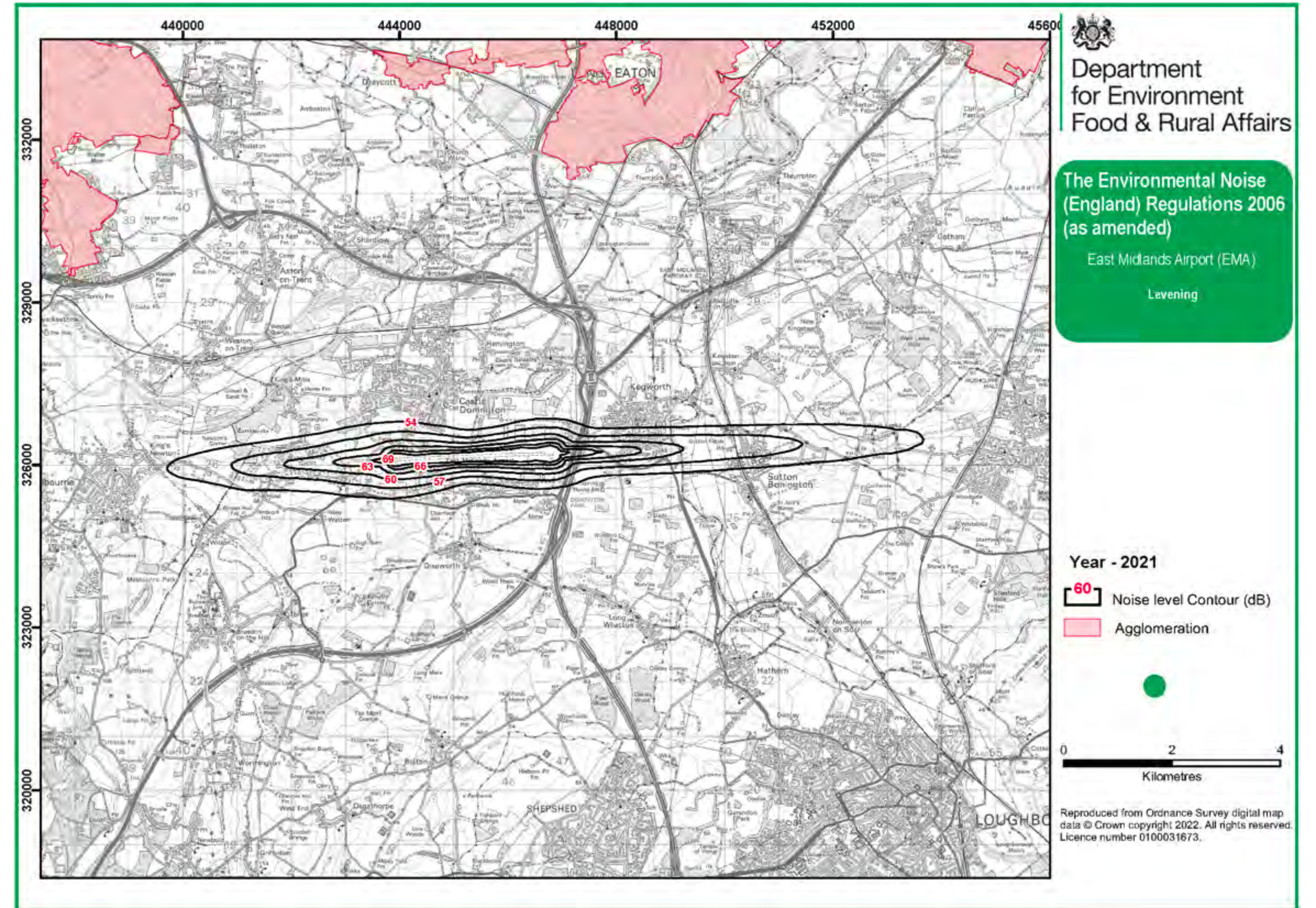


# Appendix C – Noise contour map and data tables

DEFRA East Midlands Airport EMA  $L_{den}$

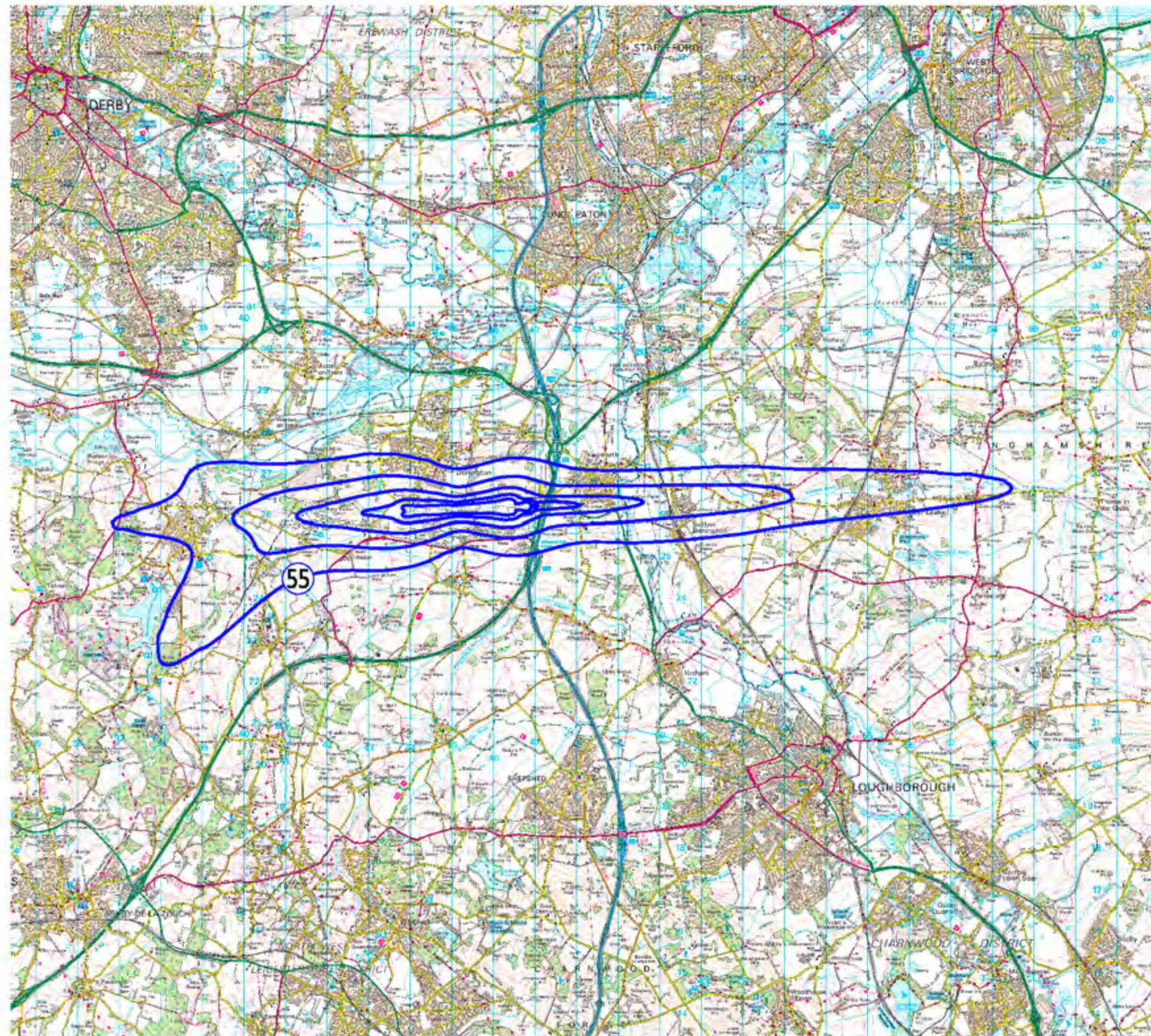


DEFRA East Midlands Airport EMA  $L_{evening}$





2019 Annual  $L_{den}$



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**LEGEND:**  
 2019 Contours,  
 55 to 75 dB  $L_{den}$  in 5 dB steps

NO.	REVISIONS

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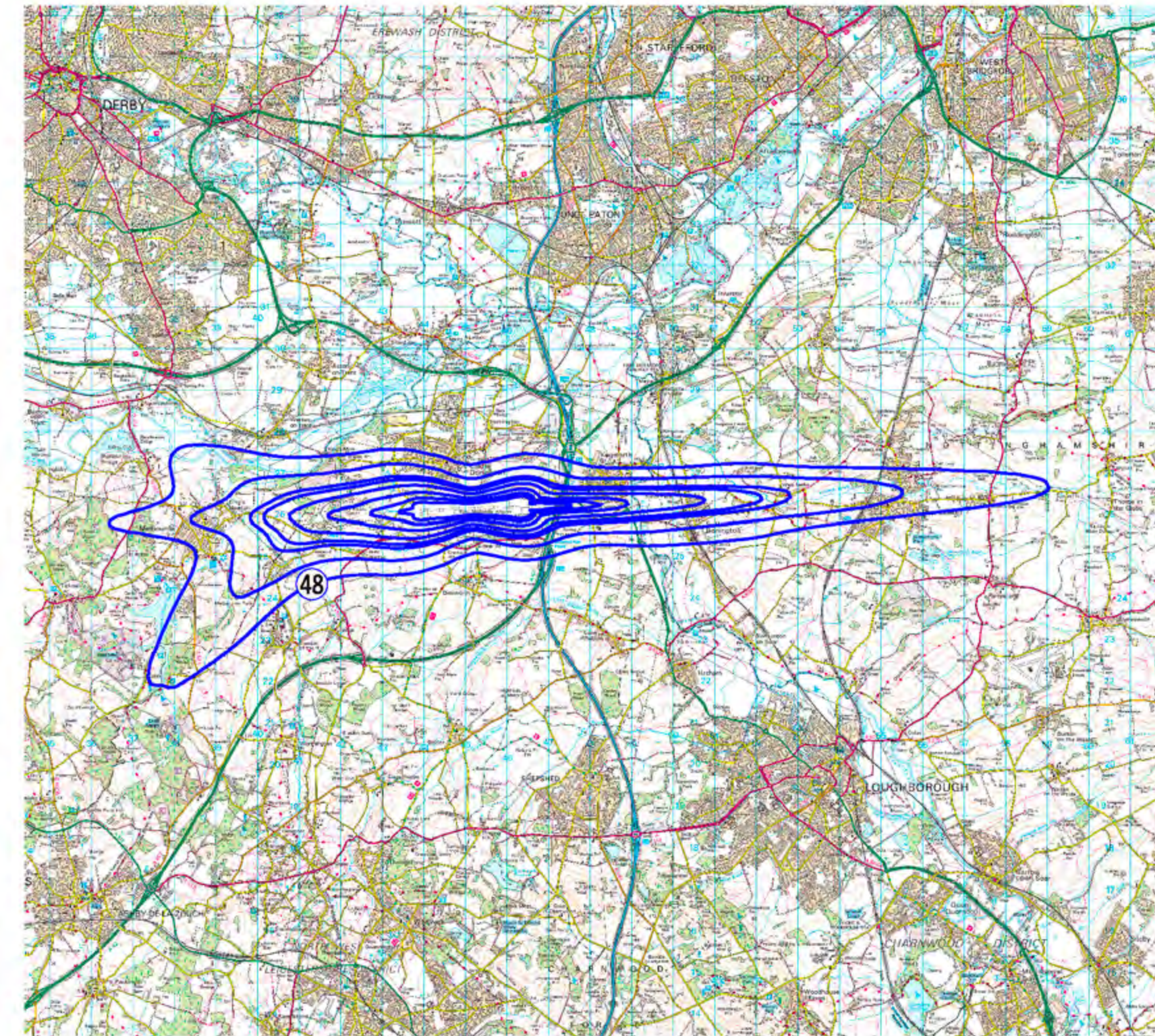
East Midlands Airport  
 Airborne Aircraft Noise Contours 2019

Airborne Aircraft Noise Contours  
 Annual  $L_{den}$  (24h)

DRAWN: DCH CHECKED: DR  
 DATE: March 2020 SCALE: 1:125000@A4

FIGURE No:  
**A11154\_DR045\_1.0**

2019 Annual  $L_{night}$



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**LEGEND:**  
 2019 Contours,  
 48, 51, 54, 55, 57, 60, 63, 66 dB  $L_{night}$

NO.	REVISIONS

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East Midlands Airport  
 Airborne Aircraft Noise Contours 2019

Airborne Aircraft Noise Contours  
 Annual  $L_{night}$

DRAWN: DCH CHECKED: DR  
 DATE: March 2020 SCALE: 1:125000@A4

FIGURE No:  
**A11154\_DR046\_1.0**



Estimated total number of people and dwellings above various noise levels,  $L_{den}$

NOISE LEVEL (DB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 55	6,200	14,400
≥ 60	1,050	2,400
≥ 65	250	600
≥ 70	<50	<100
≥ 75	0	0

Estimated total number of people and dwellings above various noise levels,  $L_{evening}$

NOISE LEVEL (DB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	1,000	2,300
≥ 57	500	1,200
≥ 60	250	500
≥ 63	50	100
≥ 66	0	0
≥ 69	0	0

Estimated total number of people and dwellings above various noise levels,  $L_{night}$

NOISE LEVEL (DB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 48	8,000	18,200
≥ 51	3,100	7,200
≥ 54	1,000	2,300
≥ 57	450	1,100
≥ 60	200	500
≥ 63	<50	<100
≥ 66	0	0

Estimated total number of people and dwellings above various noise levels,  $L_{day}$

NOISE LEVEL (DB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	400	800
≥ 57	150	400
≥ 60	<50	<100
≥ 63	0	0
≥ 66	0	0
≥ 69	0	0

Estimated total number of people and dwellings above various noise levels,  $L_{Aeq, 16h}$

NOISE LEVEL (DB)	NUMBER OF DWELLINGS	NUMBER OF PEOPLE
≥ 54	550	1,300
≥ 57	250	600
≥ 60	50	200
≥ 63	0	0
≥ 66	0	0
≥ 69	0	0



## Appendix D – Performance against our Noise Action Plan 2019-2023

CONTROL	ACTION	PERFORMANCE	CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 1:</b> Night Noise Envelope	Monitor, manage and annually report on performance against the airports 55dB L <sub>Aeq</sub> (8-hour) summer night time noise contour, aiming to progressively reduce it and ensuring it does not exceed 16km <sup>2</sup> .	The noise contours maps we produce annually have demonstrated consistent compliance with the night noise envelope.	<b>Noise Action Plan 4:</b> QC4, QC8 and QC16 surcharges	Maintain the existing ban on scheduled QC8 and QC16 aircraft operating at night. By April 2019, introduce a new noise surcharge of £2,500 per QC4 aircraft departure between 23:00-07:00. This is in addition to the existing noise surcharges for any QC8 and QC16 night departures approved under exceptional circumstances. Recognising the practical challenges faced by airlines which may need to upgrade their fleets, for scheduled services this charge will be phased in over the course of the Noise Action Plan. For ad-hoc operators the charge will be effective in full from April 2019. All proceeds from the charge are to be donated to the Airport Community Fund.	Action complete. Further information is included in the Night Noise chapter.
<b>Noise Action Plan 2:</b> Chapter 4 operations	Introduce new actions to ensure that the cost to airlines to operate older and noisier aircraft increases to accelerate progress towards our target of 100% of night flights to be by aircraft meeting the requirements of Chapter 4. We will publicly report the progress we have made.	Through a combination of engagement with airline partners we have made significant progress. In 2022, 98.4% of night flights were operated by aircraft which meet the requirements of Chapter 4. We now have just two individual aircraft operating regularly at night at the airport which do not meet the requirements of Chapter 4. These aircraft will be removed from operations at East Midlands Airport in 2023.	<b>Noise Action Plan 5:</b> Review effectiveness of noise related charges to incentivise the use of Chapter 14 compliant aircraft at night	Review our existing noise charges and change them where required to incentivise the operation of aircraft in the daytime wherever possible and to ensure that, where night time operations are necessary, they are undertaken by quieter aircraft types. The principles we propose to inform the review are: 1. Night-time operations should incur a premium. 2. Chapter 3 aircraft that continue to operate at night should incur a premium. 3. Chapter 14 aircraft that operate at night should receive an incentive. It is proposed that the review is completed within 12 months and the effectiveness of the revised arrangements is reviewed at the end of the Plan (i.e. 2023). During the review we will continue to apply noise-related supplements to flights that operate during the night, detailed in the Airport Schedule of Charges.	Action complete. Information about our fees and charges is provided in the Night Noise chapter. Our fees and charges are published on our <a href="#">website</a> .
<b>Noise Action Plan 3:</b> Noisy aircraft penalty	Apply correction factors to the monitored noise results to take account of the fixed noise monitors not being at the ideal position of 6.5km from the start of the aircraft take-off run. This is to enable the most accurate recording and the implementation of noise penalties. Reduce the maximum noise limit for departing aircraft less than 100 tonnes from 83dB to 81 dB. By April 2019 Aircraft exceeding this maximum limit will pay £750 for the first dB over the limit and a further £150 for each additional dB over the limit. The noise limits for other aircraft will remain the same.	Action complete. Information about our noisy aircraft penalty is included in the Night Noise chapter.			



CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 6:</b> Continuous descent approach	Improve our CDA performance to achieve a target of 98% for arrivals by 2023. This will include a review of the continuous descent approach criteria once the Sustainable Aviation 'low noise arrival' study is complete (anticipated in 2019).	Through collaboration with our air traffic control and airline partners CDA compliance has improved from 90% in 2018 to 91% in 2022. Progress against this action has been impacted by delays to airspace modernisation across the UK.
<b>Noise Action Plan 7:</b> Steeper approaches	Work with airlines, air traffic control and regulators to evaluate the feasibility and noise benefits of steeper approaches by 2023. Then, if proven, take forward an airspace change proposal with the operators and communities' support.	Work to deliver this action is ongoing as part of the Future Airspace Programme. The programme is detailed in the Future Airspace Programme chapter.
<b>Noise Action Plan 8:</b> Specified arrival routes	Starting in early 2019, explore with the communities the options for specified arrival routes to the airport using new satellite based navigation technology, seeking to reduce noise impacts. Then, if proven, take forward an airspace change proposal with the operators and communities' support and implement by 2023.	Work to deliver this action is ongoing as part of the Future Airspace Programme. The programme is detailed in the Future Airspace Programme chapter.
<b>Noise Action Plan 9:</b> Low power, low drag approaches	Work with operators to improve compliance with the published low power, low drag procedure. This includes reviewing operating instructions following the outcome of the Sustainable Aviation 'Low Noise Arrival' work anticipated in 2019.	We have continued to work with operators to improve compliance with published low power, low drag procedures.
<b>Noise Action Plan 10:</b> Reduced-engine taxi	Continue to promote the use of reduced engine taxi at the airport where it is practical and beneficial to do so.	We have continued to monitor the use of reduced engine taxi at the airport, including through a survey of airlines in 2022. Details of results can be found in the On the Ground chapter.
<b>Noise Action Plan 11:</b> Use of Aircraft Ground Power	Work with our industry partners to identify and encourage quieter ways to service aircraft, for example through the use of alternatively fuelled vehicles and equipment.	Information was provided by operators during the survey in 2022. Details of results can be found in the On the Ground chapter of the Noise Action Plan.

CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 12:</b> Use of intersection departures	We will continue to promote and encourage the increased use of intersection departures, especially from Runway 27 at night to reduce ground noise for local communities.	Action complete.
<b>Noise Action Plan 13:</b> Review effectiveness of ground noise procedures	We will carry out a review into the effectiveness of our ground noise procedures and explore options for how these can be improved by end 2020.	Further action required
<b>Noise Action Plan 14:</b> Night time vehicle noise	We will work with our business partners to identify and implement measures to minimise noise from vehicle movements on the airport at night. This will be informed by consultation with our immediate community representatives and be established by the end of 2019.	Further action required
<b>Noise Action Plan 15:</b> Departure track keeping	Increase our departure 'on-track' keeping performance target to 98% by 2023 at the latest. Continue to monitor and report performance.	Through collaboration with our air traffic control and airline partners, track-keeping performance has improved from 90% in 2018 to 93% in 2022. Excluding the Trent departure route from Runway 09, which is impacted by the effects of magnetic variation, track-keeping performance in 2022 was 98%. We expect overall track-keeping performance to increase following our Future Airspace Programme. More information is provided in the Departing Aircraft chapter.



CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 16:</b> Explore options to improve the effectiveness of NPR's	Work with stakeholders, local authorities and the ICC to identify priorities for changing the route or reducing the width of the airport NPR's to minimise people overflown. This is to create a priority list of noise reduction options based on the community view of the most noise sensitive areas first. This will form the basis of an airspace change options analysis proposal and be implemented as soon as possible in a priority order agreed between the airport and ICC. With the aim for all changes to be complete by early 2022.	Work to deliver this action is ongoing as part of the Future Airspace Programme. The programme is detailed in the Future Airspace Programme chapter.
<b>Noise Action Plan 17:</b> Continuous Climb Departures (CCD)	Explore with airlines and air traffic control, the opportunities to increase use of continuous climb departures through airspace change. Prioritise with communities and seek to implement airspace changes as required as soon as possible and be complete by early 2022. Continue to monitor and report CCD performance.	The proportion of departing aircraft performing a continuous climb has increased from 93% in 2018 to 96% in 2022. Work to deliver this action is ongoing as part of the Future Airspace Programme. The programme is detailed in the Future Airspace Programme chapter.
<b>Noise Action Plan 18:</b> Off track departure fines	We will seek to extend our system of noise fines to penalise airlines that persistently fail to meet the requirements of our departure flight paths. Within the first year of this updated NAP, we will work with stakeholders to ensure that any changes to our penalty systems are fair to all parties and deliver the right incentives.	Action complete. Information about our departure flight path penalty is included in the Departing Aircraft chapter.
<b>Noise Action Plan 19:</b> Noise study into preferential runway use policy	We will undertake a study to understand the noise effects of our policy into the preferential use of runway 27 by 2020.	Action complete. This study was completed and the findings delivered to Independent Consultative Committee. The report confirmed that our preferential use of Runway 27 reduces the impact of airport operations on our local communities.

CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 20:</b> Sound Insulation Grant Scheme	Continue to operate a Sound Insulation Grant Scheme to provide support to those people that are most exposed to aircraft noise at night.	Action complete. Information about our Sound Insulation Grant Scheme is provided in the Mitigation Schemes Chapter.
<b>Noise Action Plan 21:</b> Community Fund	Continue to donate all the money raised as a result of our environmental penalties to the East Midlands Airport Community Fund. The airport will continue to carry out regular reviews of the Community Fund to ensure it remains effective.	Action complete. Information about the East Midlands Airport Community Fund is provided in the Mitigation Schemes chapter.
<b>Noise Action Plan 22:</b> Peak noise events report	Establish and share a new report that identifies the noisiest 10% of aircraft night operations by mid 2019. This report will be used to challenge performance with operators and explore options to reduce noise.	Action complete. The new report has been introduced and is provided to the Independent Consultative Committee, it also informs our engagement with operators.
<b>Noise Action Plan 23:</b> Preferred runway direction	Where conditions allow we prefer aircraft to operate in a westerly direction. Regular reports on runway usage will continue to be produced.	Action complete. Runway usage is reported to the Independent Consultative Committee. Information about our preferential runway policy is provided in the Departing Aircraft chapter.
<b>Noise Action Plan 24:</b> Training Flights Report	Monitor and report performance to identify trends and any compliance issues. Address issues as necessary.	Action complete. Information about our work to minimise the impact of training flights, including monitoring and reporting, is provided in the Training Flights chapter.
<b>Noise Action Plan 25:</b> Low noise arrivals report	We will review the current continuous descent approach (CDA) reporting procedures in light of a Sustainable Aviation 2018 'Low Noise Arrivals' study. Implement changes where agreed and report progress by end of 2019.	In 2022 the Civil Aviation Authority published <a href="#">CAP2302</a> which provides the results of a Low Noise Arrivals study in 2022. The report will be considered by our Future Airspace Programme. The programme is detailed in the Future Airspace Programme chapter.



CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 26:</b> Initiate a 'Quiet flight performance' reporting system	Establish and publish a new airline noise performance report by mid 2019, based on a range of key noise criteria, including complaints received, continuous descent arrivals, continuous climb departures, adherence to noise limits, departure track keeping and percentage of Chapter 4 and 14 aircraft in the operator's fleet. An annual award for the highest performing airline is also proposed. This effectiveness of this report will be reviewed on a regular basis with the ICC and prior to producing the next Noise Action Plan.	Action complete. Following engagement with the East Midlands Airport Independent Consultative Committee, we introduced the Quiet Flight Performance report in 2022. Information about the report is provided in the Monitoring and Reporting chapter.
<b>Noise Action Plan 27:</b> Identify smarter ways to work with industry partners in reducing noise	We will review the effectiveness of the Pilot Liaison Group at East Midlands Airport. Specifically looking at identifying the root causes of common environmental impacts and to evaluate and manage potential solutions. Any revisions to the terms of reference for the group, including how it will work with the ICC, will be agreed by mid 2019.	Action complete. Our Flight Evaluation Unit has implemented a number of new ways of working with the Pilot Liaison Group and airlines operating at the airport. This includes monthly performance reporting, an airline survey and regular meetings of the Pilot Liaison Group.
<b>Noise Action Plan 28:</b> Review community noise monitor programme	Review and agree a programme for community noise monitoring in consultation with the ICC by end 2019. This includes installing an additional noise monitor at Melbourne ahead of any possible changes to airspace.	Action complete. We have introduced a programme of mobile noise monitoring in local communities and have installed an additional fixed noise monitor in Melbourne. Information about community noise monitoring is provided in the Monitoring and Reporting Chapter.
<b>Noise Action Plan 29:</b> Stakeholder reference groups	Establish new stakeholder reference groups as and when necessary to inform any airspace change proposals, as we seek to modernise airspace arrangements. These will include the airport, operators, air traffic and community representatives to develop options and, where relevant, take forward airspace change proposals to reduce noise. Agree the terms of reference for these groups with the ICC by early 2019.	Action complete. We have introduced a stakeholder reference group to support our Future Airspace Programme. Information about the stakeholder reference group is provided in the Effective Communication chapter.

CONTROL	ACTION	PERFORMANCE
<b>Noise Action Plan 30:</b> Continually improve noise complaint and enquiry process	Regularly review the airport process for handling noise complaints and enquiries to improve the transparency and effectiveness of the system. This will include consultation with the ICC. First review to be complete by mid 2019 with agreed actions implemented by end 2019.	Action complete. We continually review and improve our complaints process and the provision of information to communities through other means including our Community Information Sheets. Information about our complaints process and the way we provide information to local residents is provided in the Effective Communication chapter.
<b>Noise Action Plan 31:</b> Provide and regularly review effective engagement with communities	Continue to provide regular opportunities to engage with local people to understand their concerns and respond effectively to them, to include community outreach events and a community newsletter. Develop and review the effectiveness of our engagement programme regularly through benchmarks like the BITC Community Mark and our own annual Community Impact surveys.	Action complete. Information about the way we engage with local communities is provided in the Effective Communication chapter.
<b>Noise Action Plan 32:</b> Carry out regular Community Survey	Carry out an annual community survey to collect views on how effectively the airport is managing aircraft noise issues as well as other issues. Results from the survey will be shared with the ICC, operators, air traffic control and community groups and used to inform any future noise actions.	Action complete. Our last community survey was undertaken in 2022, with results reported to the Independent Consultative Committee and other stakeholders.
<b>Noise Action Plan 33:</b> Noise related community investment	Provide specific information on aircraft noise related community investment as an appendix to the annual airport Community Investment Report. This will aim to clearly show how noise fines are used to support the communities affected.	Action complete. Our annual reports are available on our <a href="#">website</a> .

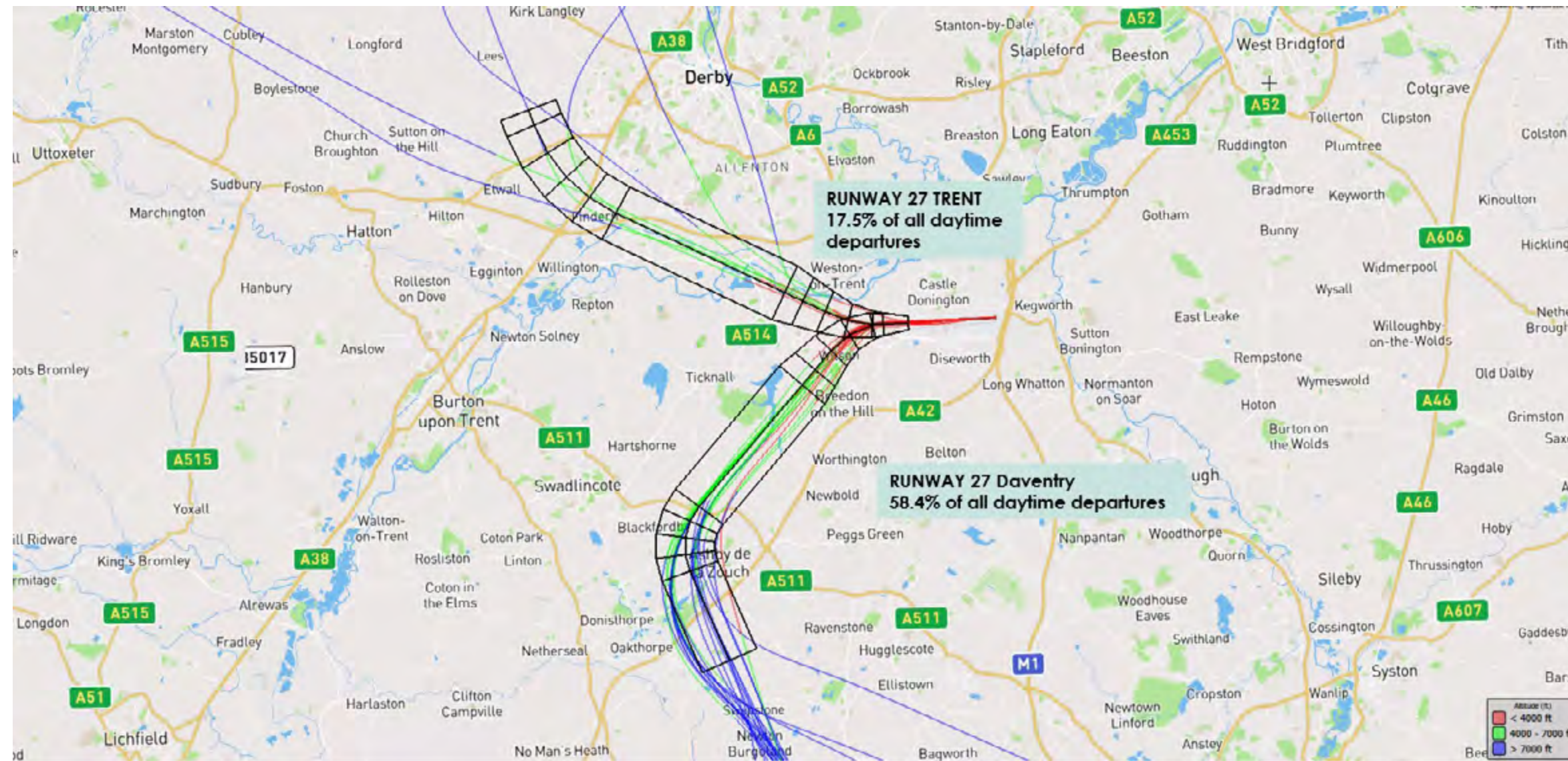


CONTROL	ACTION	PERFORMANCE
<p><b>Noise Action Plan 34:</b> Provide educational and skill development material on aircraft noise</p>	<p>Develop educational material on aircraft noise management. This will include facilitating visits to the airport and information materials and is proposed to support our 'Inspiring Young People' programme.</p>	<p>Action complete. Our 'Aerozone' on-site education facility provides a wide-range of educational programmes to local young people. Aircraft noise management and other sustainability-related issues are covered in the visits we host.</p>
<p><b>Noise Action Plan 35:</b> Noise Action Plan Progress Report</p>	<p>We will produce at least two reports to the ICC summarising progress made by the airport against this Noise Action Plan. First report to be produced by mid 2020.</p>	<p>Action complete. Noise Action Plan progress reports have been provided to the Independent Consultative Committee, with additional discussion and agenda items focussed on specific actions.</p>
<p><b>Noise Action Plan 36:</b> Improve access to noise information on the airport website</p>	<p>Review and implement changes by mid 2019 to improve the accessibility of noise information on the airport website.</p>	<p>Action complete. We have reviewed the information provided on our website and published refreshed community information sheets which achieved the Plain English Campaign Crystal Mark for clarity. Information about the way in which we provide information to stakeholders is provided in the Effective Communication Chapter.</p>

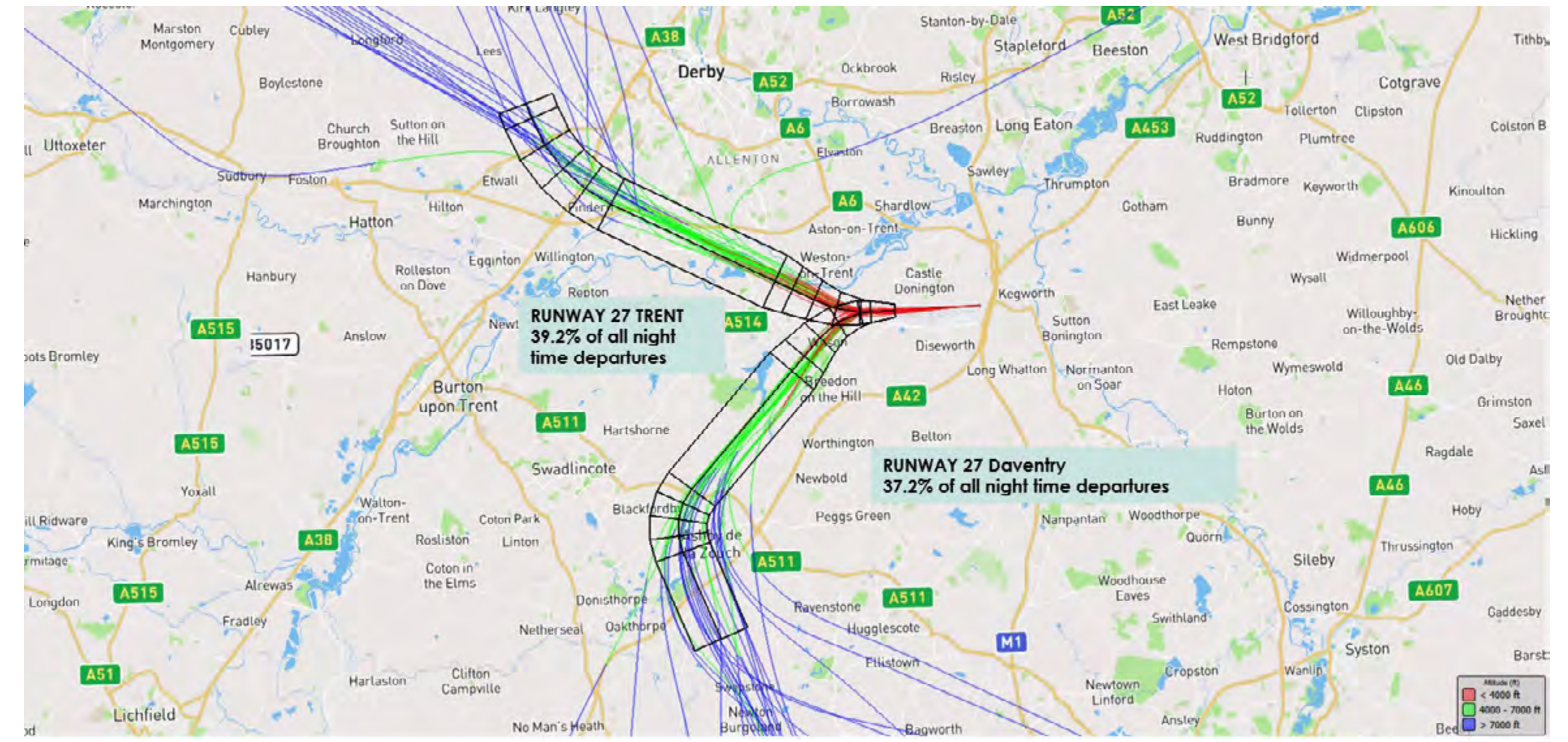


# Appendix E – Arrival and departure maps

Runway 27 representative departure track day (07:00-23:00)

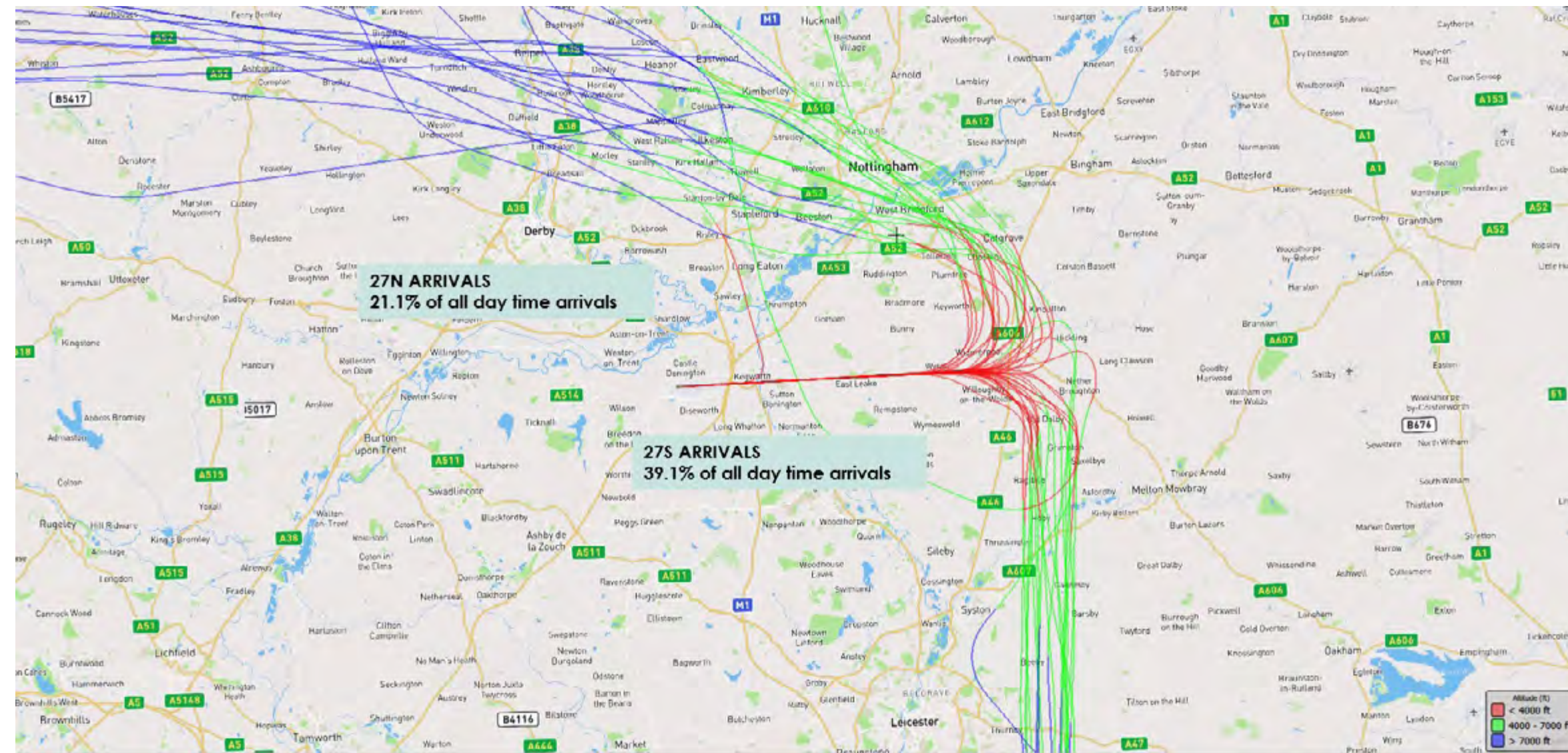


Runway 27 representative departure track night (23:00-07:00)

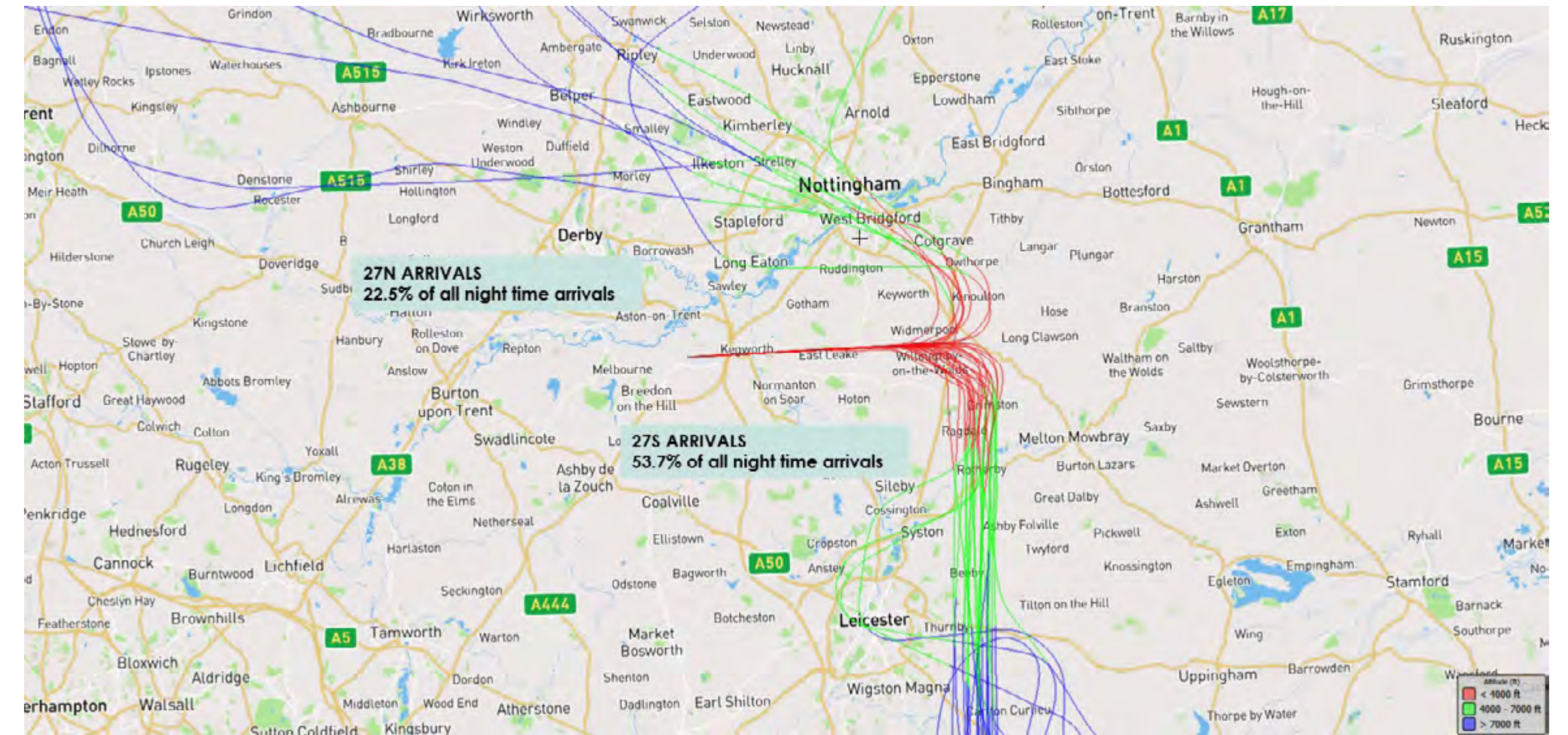




Runway 27 representative arrivals track day (07:00-23:00)

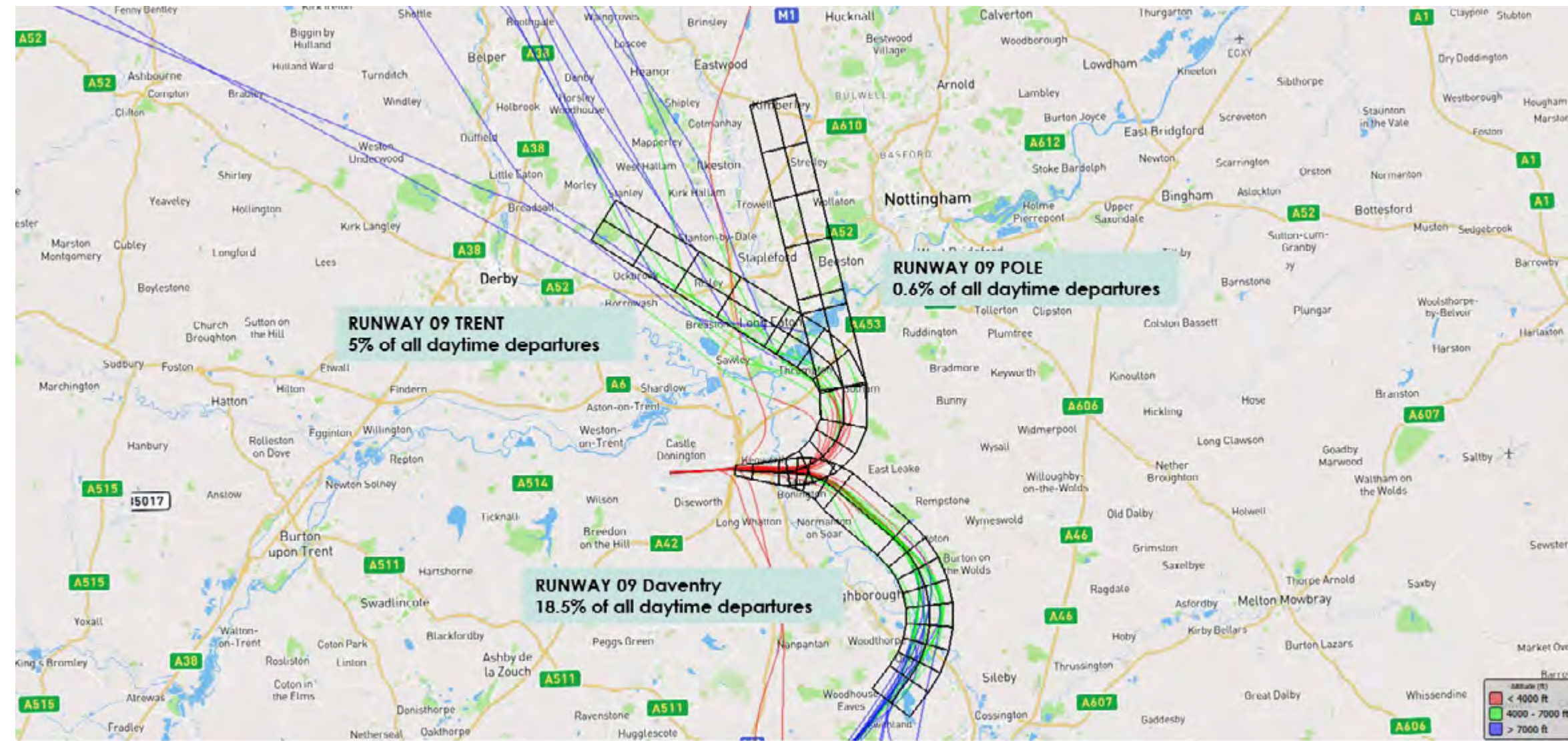


Runway 27 representative arrivals track night (23:00-07:00)

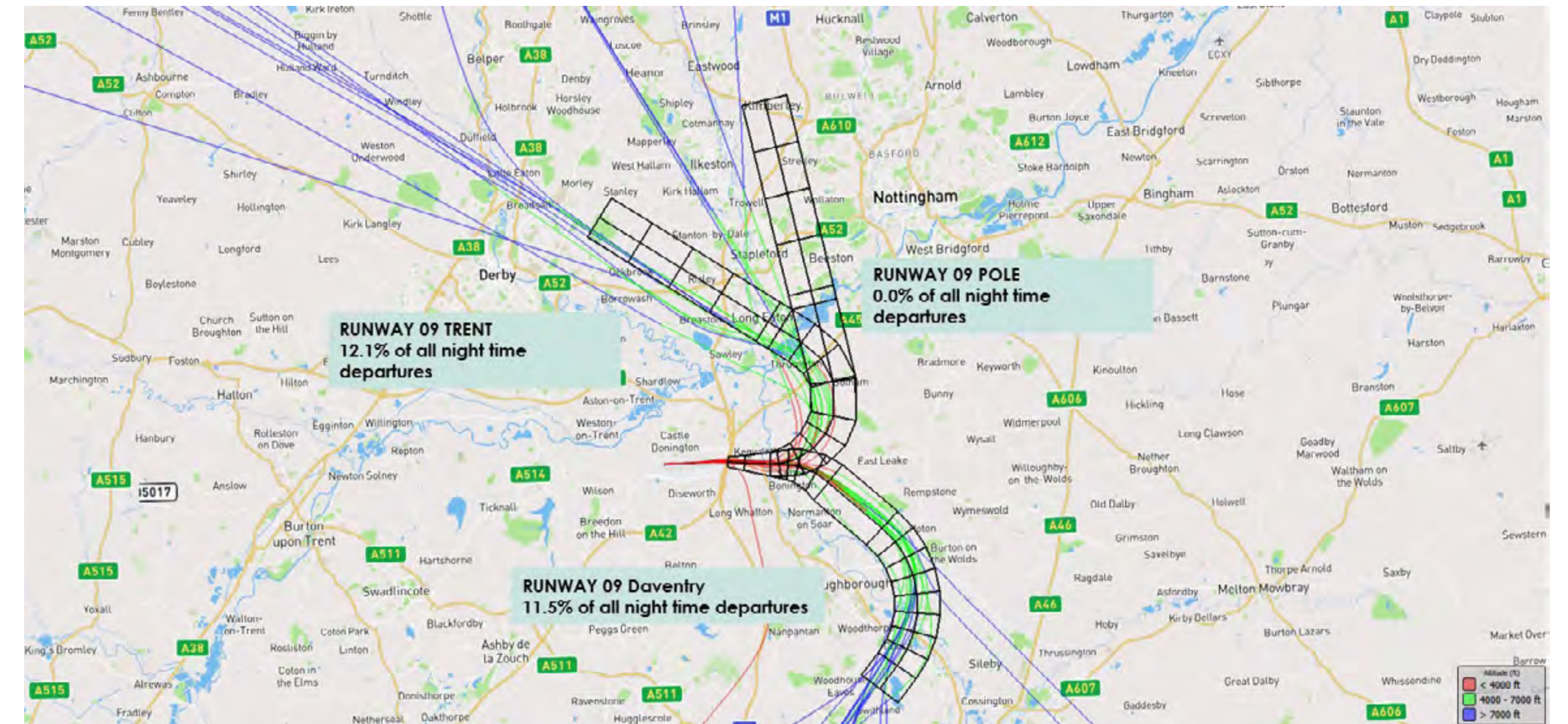




Runway 09 representative departure track day (07:00-23:00)

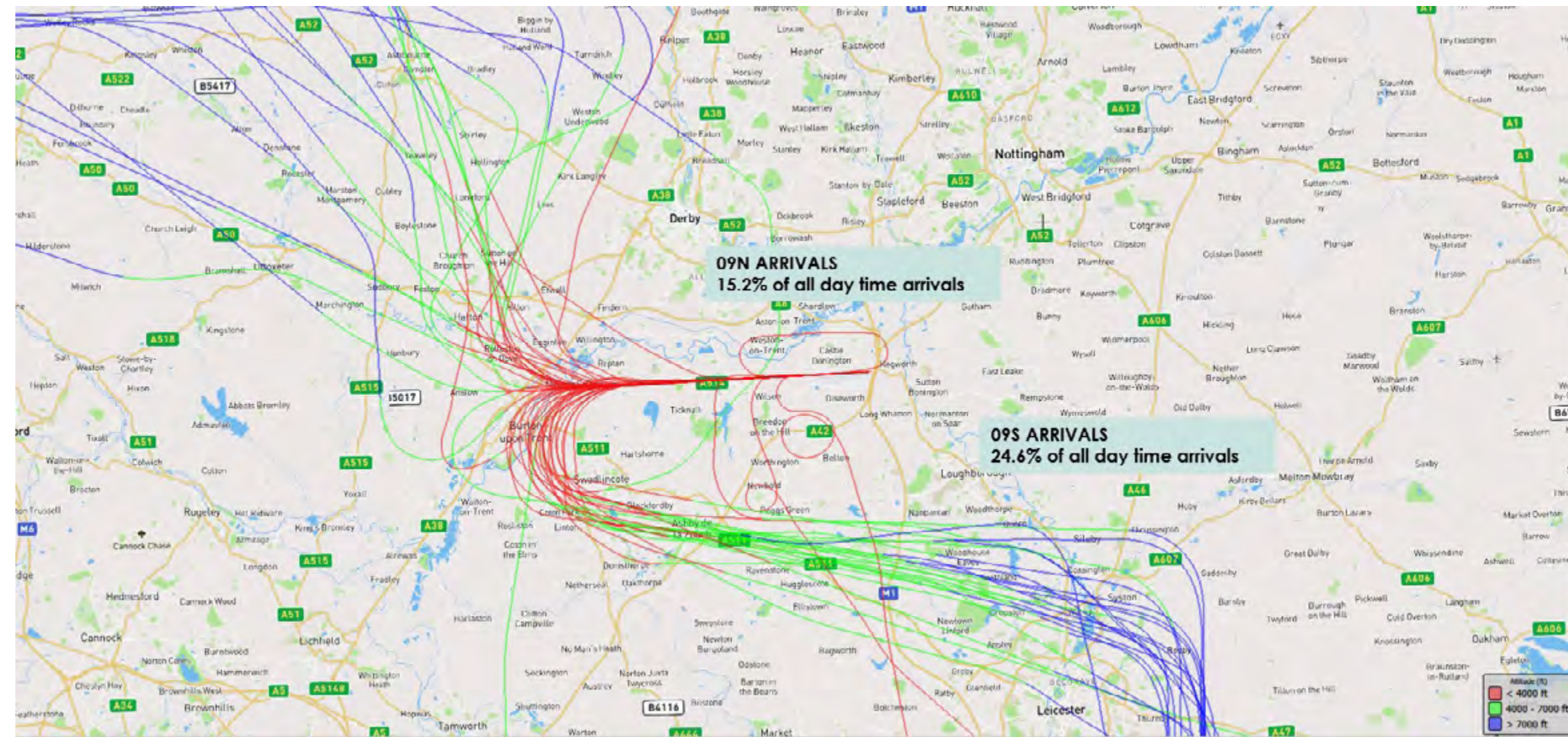


Runway 09 representative departure track night (23:00-07:00)

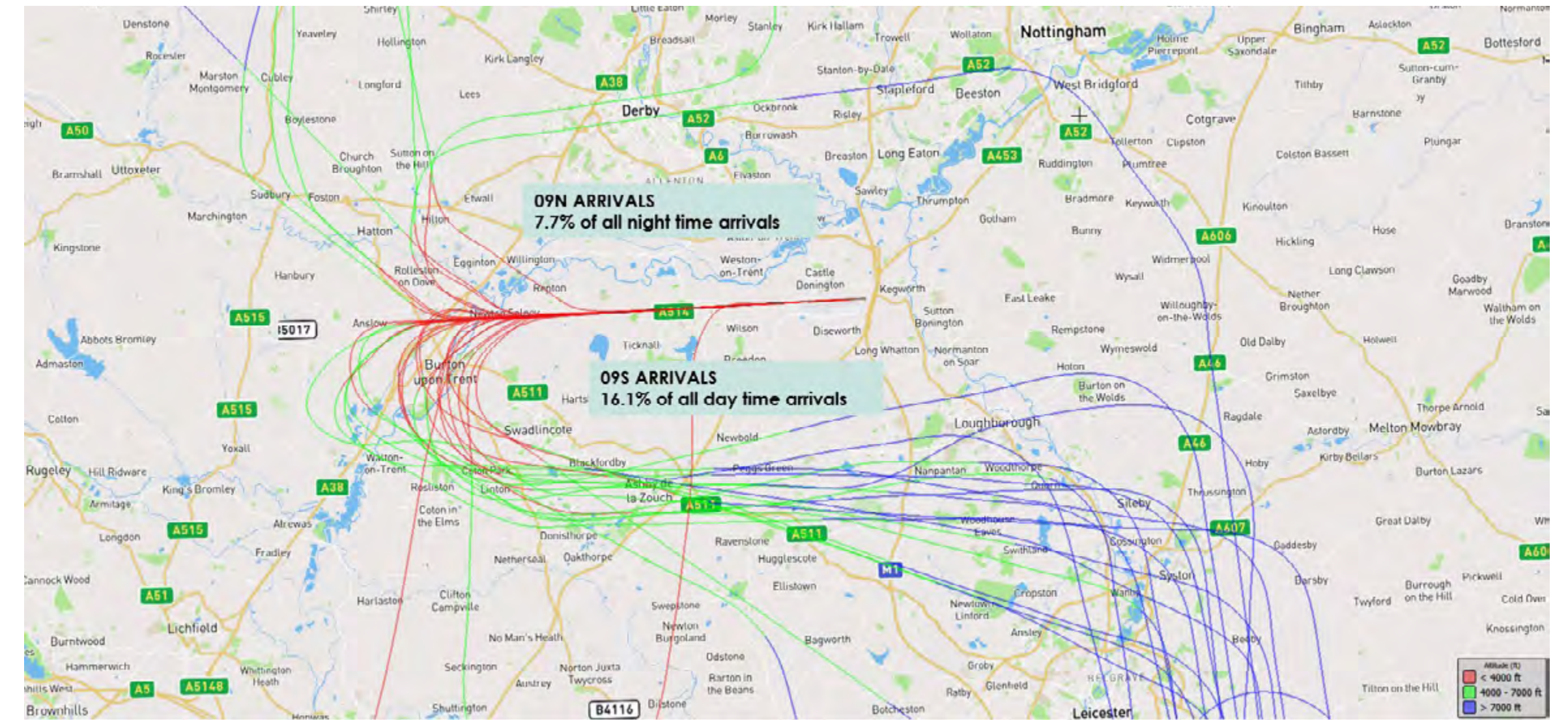




Runway 09 representative arrivals track day (07:00-23:00)



Runway 09 representative arrivals track night (23:00-07:00)





## Appendix F – Preferred noise routes





## Appendix G – Consultation questionnaire

### East Midlands Airport Draft Noise Action Plan - Feedback Form

We appreciate you taking the time to provide us with feedback on our Draft Noise Action Plan for 2024-28. This form will take approximately 6 minutes to complete. For more information on how we will use and store your data please visit [www.eastmidlandsairport.com/privacy-notice](http://www.eastmidlandsairport.com/privacy-notice)

1. What is your name?
2. Are you responding as an individual or on behalf of an organisation?
3. What organisation are you responding on behalf of (if applicable)?
4. What is your postcode?
5. What is your e-mail address? We will only use this to contact you about the Noise Action Plan consultation

#### Chapter 8 - Noise controls

6. Are the actions we have identified in Chapter 8 'Noise controls' adequate?
7. If you have answered no, what actions should we be considering in Chapter 8 on Noise controls?

#### Chapter 9 - Arriving aircraft

8. Are the actions we have identified in Chapter 9 'Arriving aircraft' adequate?
9. If you have answered no, what actions should we be considering in Chapter 9 on Arriving aircraft?

#### Chapter 10 - On the ground

10. Are the actions we have identified in Chapter 10 'On the ground' adequate?
11. If you have answered no, what actions should we be considering in Chapter 10 'On the ground'?

#### Chapter 11 - Departing aircraft

12. Are the actions we have identified in Chapter 11 'Departing aircraft' adequate?
13. If you have answered no, what actions should we be considering in Chapter 11 'Departing aircraft'?

#### Chapter 12 - Night noise

14. Are the actions we have identified in Chapter 12 'Night noise' adequate?
15. If you have answered no, what actions should we be considering in Chapter 12 on 'Night noise'?

#### Chapter 13 - Training flights

16. Are the actions we have identified in Chapter 13 'Training flights' adequate?

17. If you have answered no, what actions should we be considering in Chapter 13 on 'Training flights'?

#### Chapter 14 - Mitigation schemes

18. Are the actions we have identified in Chapter 14 'Mitigation schemes' adequate?
19. If you have answered no, what actions should we be considering in Chapter 14 on Mitigation schemes'?

#### Chapter 15 - Monitoring and recording

20. Are the actions we have identified in Chapter 15 'Monitoring and recording' adequate?
21. If you have answered no, what actions should we be considering in Chapter 15 on 'Monitoring and recording'?

#### Chapter 16 - Effective communication

22. Are the actions we have identified in Chapter 16 'Effective communication' adequate?
23. If you have answered no, what actions should we be considering in Chapter 16 on 'Effective communication'?

#### Further information

24. When we finalize our Noise Action Plan we will be including a list of individuals and organizations who have responded to our consultation. Do you wish to be identified in the schedule of responses?

25. Are you interested in subscribing to the EMA Community Flyer - our quarterly e-Newsletter?

26. Are you happy for us to subscribe the email address you have previously given to our mailing list. You can opt out at any time.

#### Diversity monitoring

The following questions are optional, by responding to these questions you will help us understand more about the accessibility of our consultation and how well it has engaged our stakeholders. Your responses to these questions will be held confidentially and will not be individually disclosed.

27. What is your age?
28. What gender do you identify with?
29. What is your ethnicity?
30. Do you consider yourself to have a disability?



## Appendix H – Expenditure on noise management

Estimated annual investment in noise management, financial year ending 31 March 2023

COST AREA	DETAILS	COST
<b>Staff costs</b>	CSR Team, including Flight Evaluation Unit, noise complaint and community engagement – employee costs and training.	£137,000
<b>Computer and equipment costs</b>	Equipment installation, renewal, calibration, repair, software licences, product support and development.	£200,000
<b>Publications, communications and engagement</b>	Community engagement programme.	£22,000
<b>East Midlands Airport Community Fund</b>	Annual contribution from the airport.	£50,000
<b>Noise insulation and mitigation schemes</b>	Sound Insulation Grants Scheme and vortex scheme.	£268,000
<b>Research and benchmarking, forecasting</b>	Consultancy and research including future noise contours, studies and support of industry collaboration initiatives such as Sustainable Aviation.	£42,000
<b>Total estimated annual investment</b>		<b>£719,000</b>



