GLASGOW AIRPORT

Annual Noise Report 2024

Contents

GLASGOW AIRPORT

Air Traffic Statistics

2024 saw 8.08 million passengers travel through Glasgow Airport (GLA) This includes passengers both arriving and departing from commercial, chartered, private and general aviation flights and represents an increase of 9.6%. There was a total of 77,922 aircraft movements[1](ATM's) in 2024 and this is a 4.4% uplift. Whilst the aviation industry is recovering, flights still remain lower than pre-pandemic levels.

Total ATMs					
GLA	**Year**	**Movements**	**Arrivals**	**Deps**	**Pax**
	2024	77,922	39,065	38,857	8,084,659
	2023	74,617	37,420	37,197	7,371,741
	2022	70,786	35,495	35,291	6,528,401

Glasgow Airport supports over 15 airlines flying to over 100 destinations worldwide. More information can be found at www.glasgowairport.com/destinations with information on new routes and an interactive destination map. Figure 1 below shows the percentage split between each airline / aviation operator in 2024.

[1] An aircraft movement is defined as either an arriving or departing aircraft

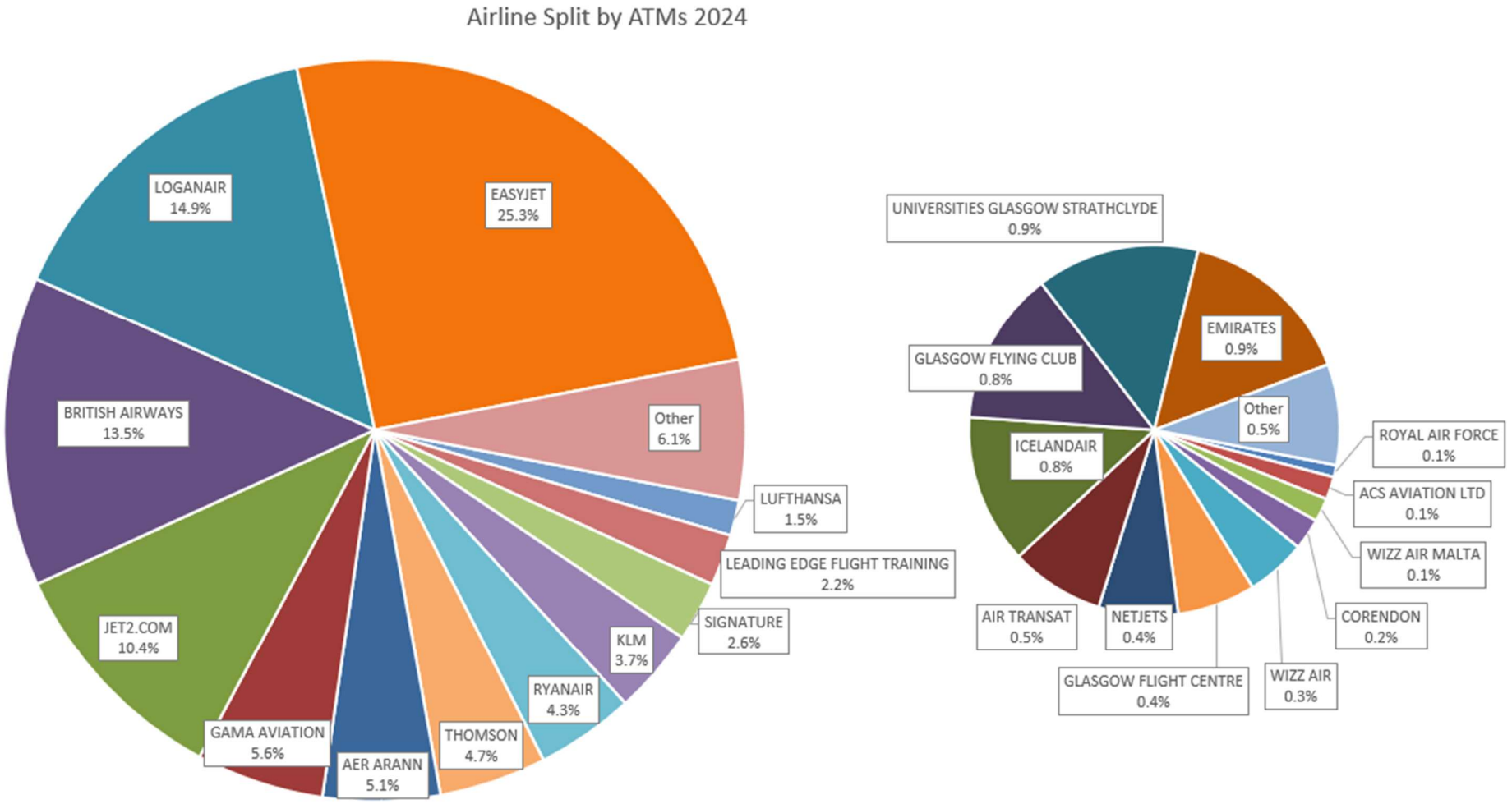


Figure 1 Airline/Aviation Operator split of ATMs across 2023.

Figure 2 summarises the number of movements per specific aircraft type in 2024. In addition to passenger flights, Glasgow Airport facilitates, cargo, general aviation, air ambulance, military and training flights. Glasgow airport works with airline partners to encourage the use of the next generation of aircraft including the A320NEO, A321NEO and 737 MAX8 which see a large reduction in their respective noise footprints. 2024 saw a 55% increase in the use of the A321NEO and subsequent 11.2% decrease in the use of the A321CEO. The airport also observed a 24% increase in 737MAX8 movements.

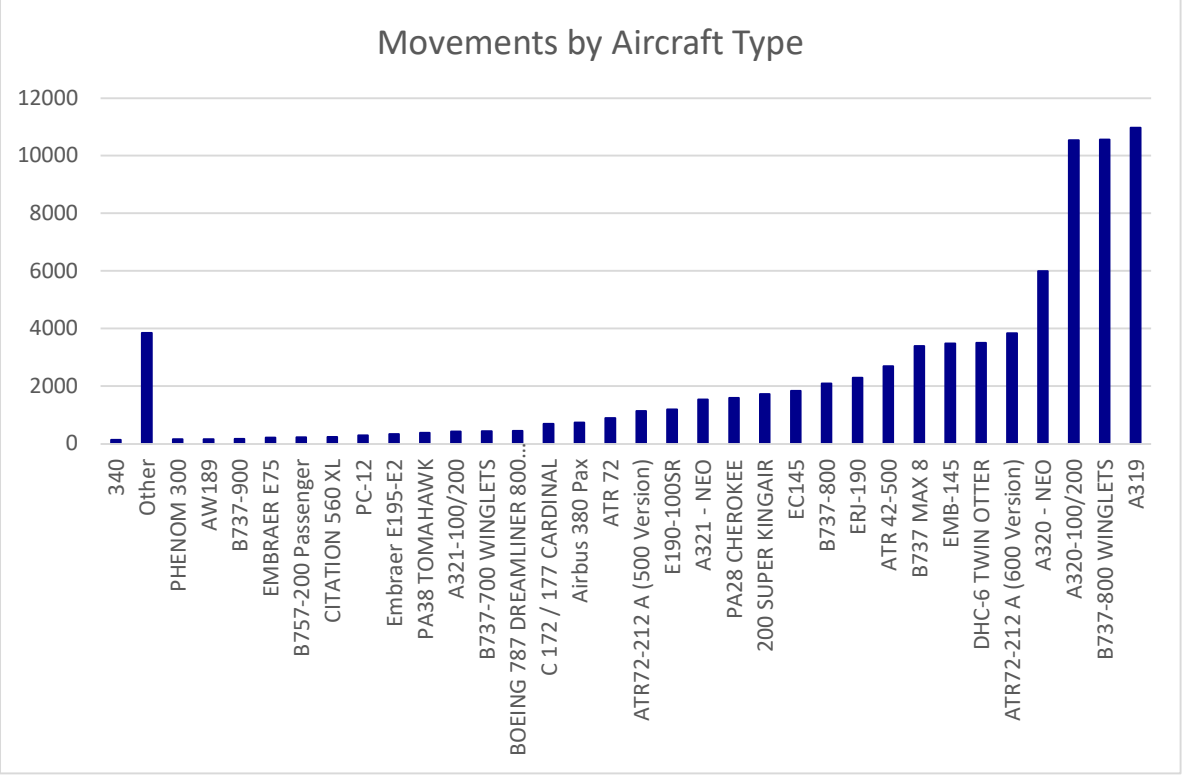


Figure 2 - Total movements by aircraft type. 'Other' includes all aircraft with <150 movements.

Figure 3 shows our average daily aircraft movements per month. 2024 saw the average daily movements grow slightly compared to 2023. The pattern of average daily movements in 2024 followed a very similar pattern to previous years, with most flights during the summer months, and fewest movements in the winter months.

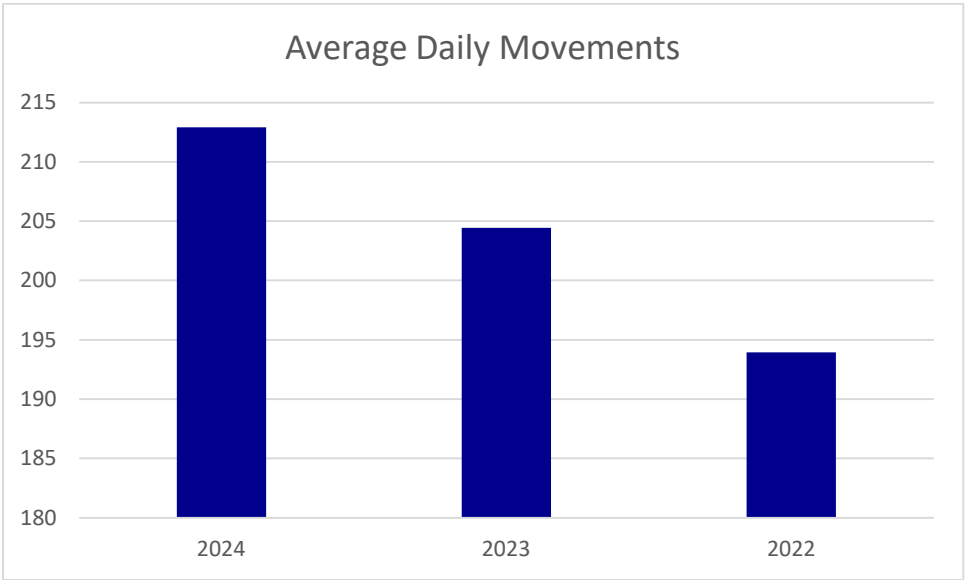


Figure 3 - Average daily movements across each month from 2022-2024.

On average, the busiest period for arriving aircraft in 2024 was between the hours of 1200-1400 as shown in figure 4. The graph shows a number of peaks across the day and 2024 follows a consistent pattern to 2023, although slightly busier. The hours of 1700, 1800 and 2100 saw less movements in 2024 in comparison to 2023.

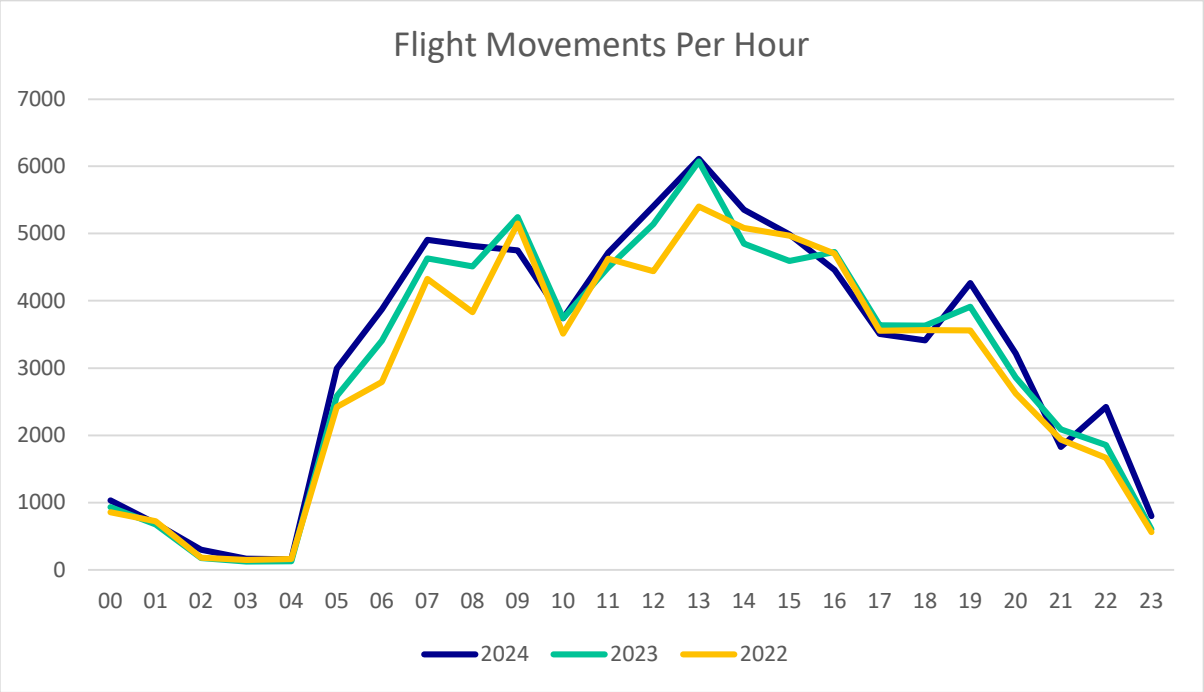


Figure 4 - Number of movements per hour, split into arriving and departing movements.

In 2024 69% of flights have utilised Runway 23; arriving from the east over the Bearsden and Clydebank areas and Departing towards the west over the Linwood and Johnstone areas. 31% of flights have utilised Runway 05; arriving from the west and departing towards the east. This split can vary within the months and is wholly dependent on the prevailing wind direction. Figure 5 shows the annual split of runway use over the course of the past 3 years.

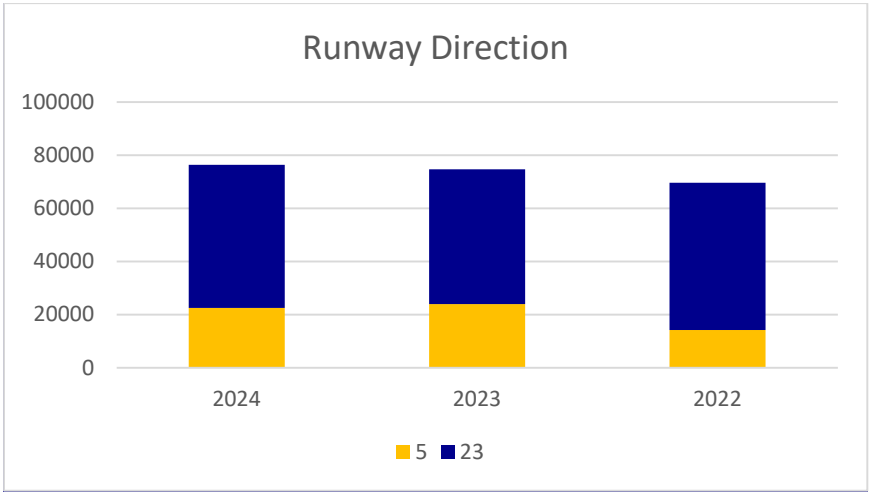


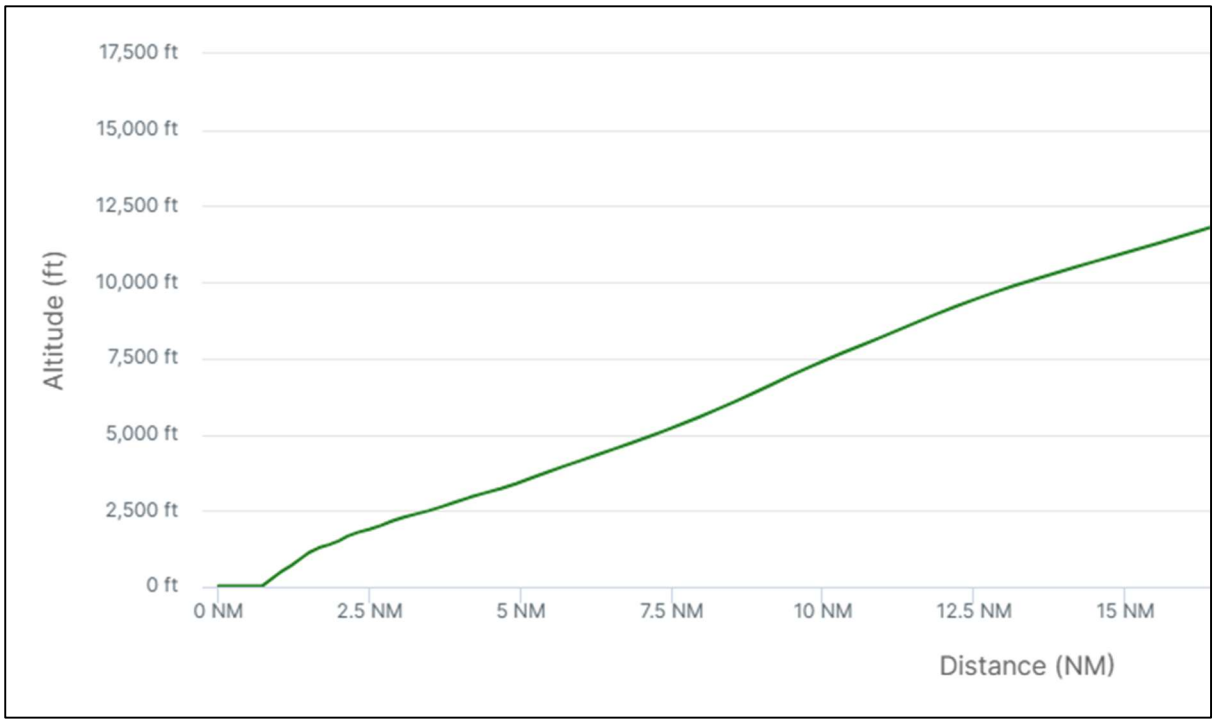
Figure 5 – Yearly Runway Direction Split.

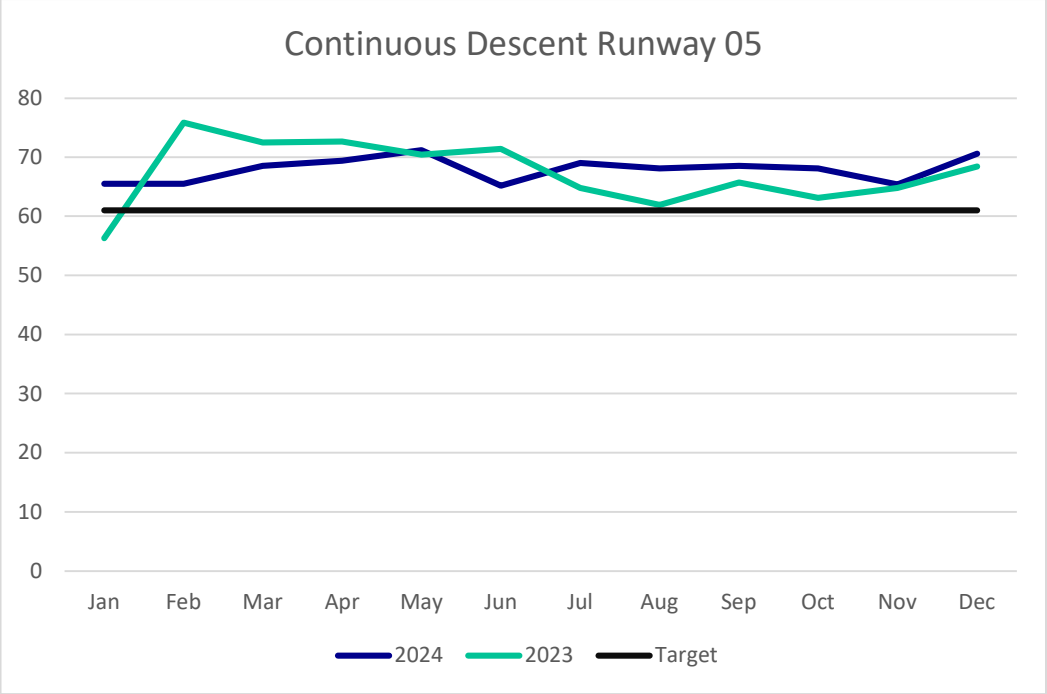
Operational Noise Abatement Measures

Continuous Decent and Continuous Climb

Glasgow Airport is continually looking to minimise potential noise disturbance to local communities. As such aircraft will operate under Continuous Descent Operations (CDO) for arriving aircraft and Continuous Climb Operations (CCO) for departing aircraft. CCDs and CCOs are operating techniques used in fixed wing aircraft that deliver environmental and economic benefits – including noise reduction, reduced fuel burn and reduced fuel costs. Air Traffic Control (ATC) facilitate CDO/CCO, and aim to maximise these as much as possible. CDO/CCO operations are affected by various factors (e.g. wind, air pressure, weight of aircraft), so may not always be possible. Targets are set for these movements to continually improve these operations

Figure 6 shows the monthly CDO performance totals and targets. The overall CDO compliance on aircraft arriving on Runway23 was 72.2% against a target of 68%. The overall CDO compliance an aircraft arriving on Runway 05 was 67.9% against a target of 61%. Figure 7 shows the monthly CCO performance totals and targets going back to 2023. The overall CCO compliance for both runways combined was 94.2% in 2023 and 94.3% in 2024 against a target of 94%. Both runways have differing targets due to the terrain under the runway 23 approach. This sometimes leads to extended level segments to ensure separation is safely maintained with areas of high ground. An example of a CDO is shown below.





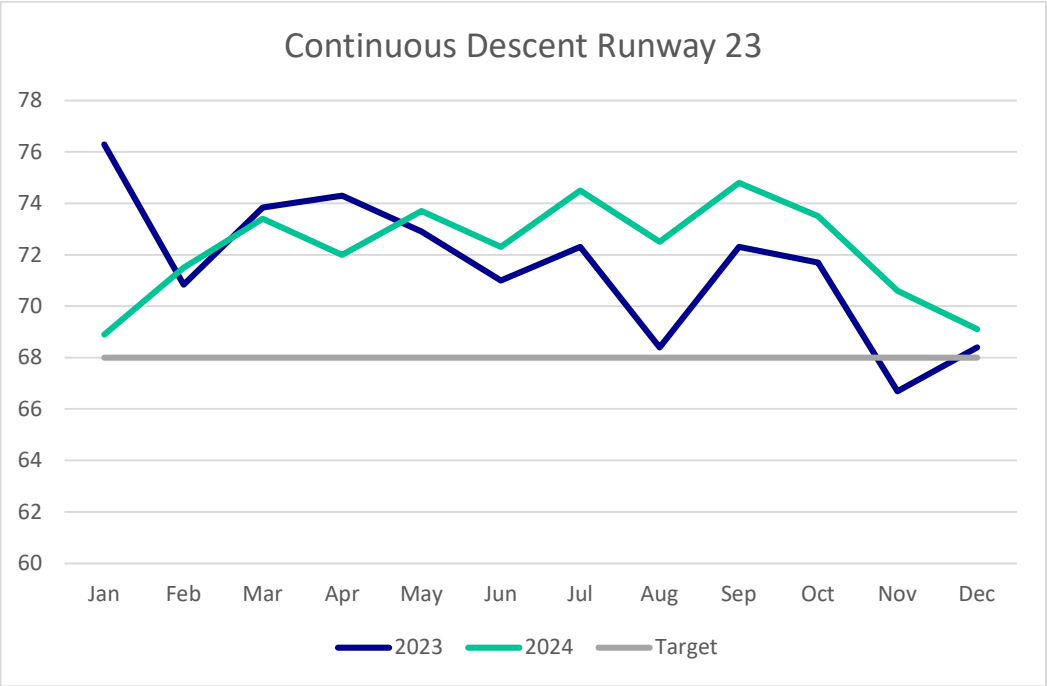


Figure 6 Monthly CDO performance and targets for both Runway 23 and 05.

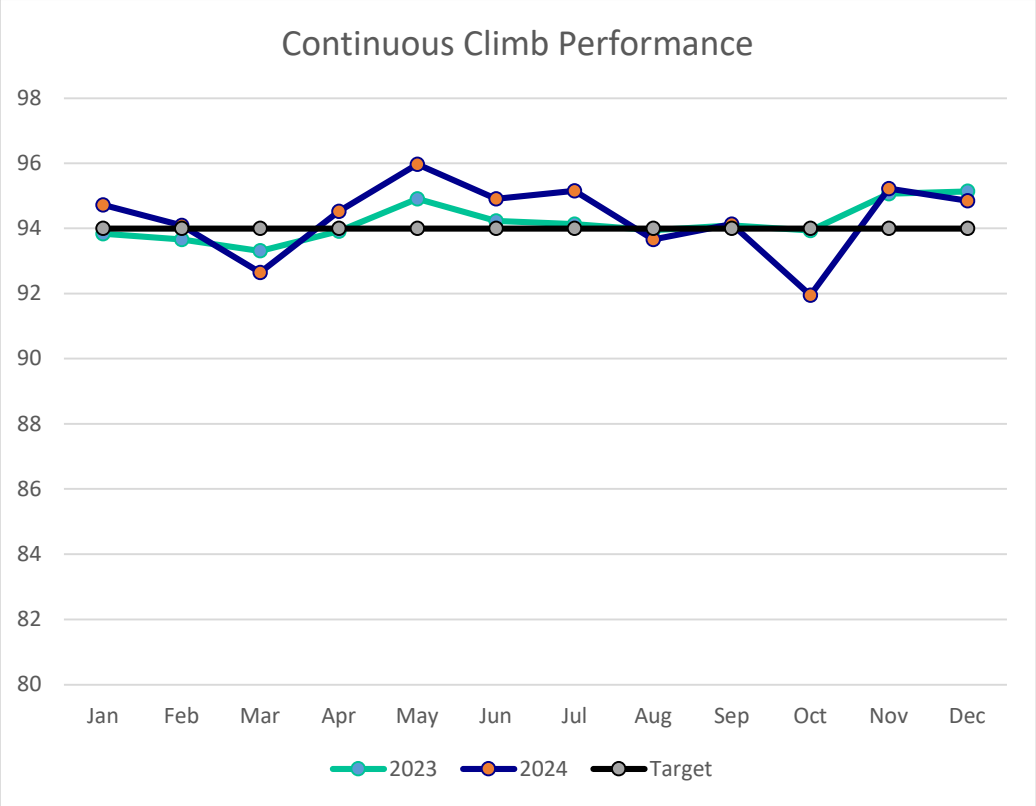


Figure 7 - Monthly CCO performance and target for all departures.

Aircraft Engine Testing

Aircraft will routinely test their engines to ensure they are operating correctly. The times and locations of these engine runs are restricted to ensure noise disturbance as a result, is minimised. Engine test runs are not permitted between the hours of 23:00 and 07:00, except in exceptional circumstances such as when delaying a test could cause severe schedule delays or in the event of an emergency. Engine runs carried out within these times must only occur for a maximum of 5 minutes and must be on low power/idle mode. During 2024, 888 ground runs were recorded with 977 recorded in 2023. Table 1 shows the number of engine runs that have taken place during each time frame in 2024.

Time Period	0500-0700	0700-2300	2300-0500	Total
Q1 - Jan-Mar	7	190	0	197
Q2 - Apr-Jun	5	213	11	229
Q3 - Jul-Sep	4	246	7	257
Q4 - Oct-Dec	1	198	6	205

Table 1- Engine runs for 2024 spit into timeframes.

Correspondence & Complaints

As part of our noise action plan commitment, we have a dedicated form on our website at Glasgowairport.com/noise and email inbox (GLAnoise@glasgowairport.com). We endeavour that all complaints will be responded to within 3 working days. All complaints are tracked, logged and trends are reviewed.

There were 40 recorded complaints in 2024. This is a decrease of 29% compared with 2023 where 56 complaints were recorded. Complaints were split between the 8 categories noted in Figure 8. General Noise was the main cause of complaints, with complaints related to night flights and flight paths being the next largest categories. Out of the 40 complaints there were a total of 32 complainants.

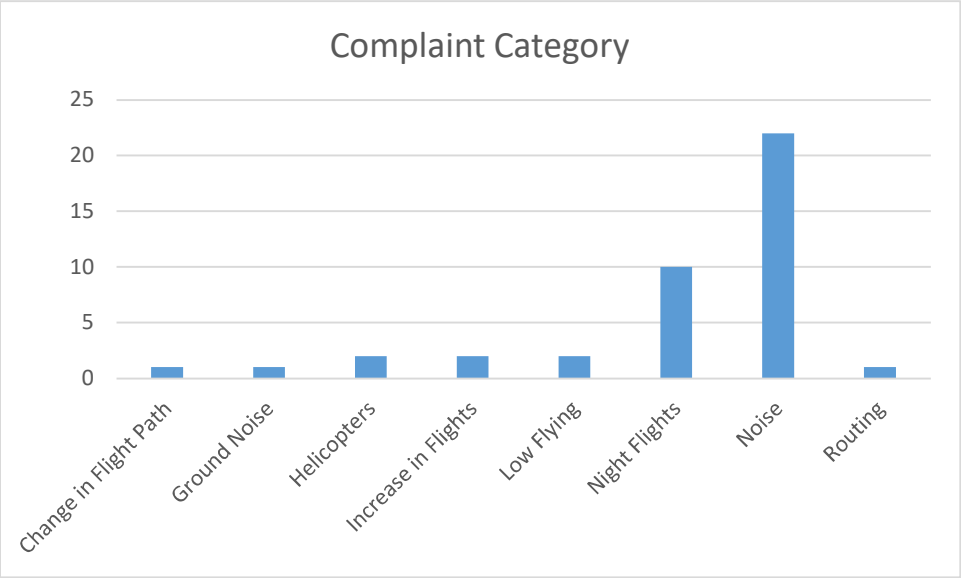


Figure 8 - Noise complaint categories for Glasgow Airport

Figure 9 below shows that the highest number of complaints were, as expected, voiced during the summer period of June - September, where aircraft movements were at their peak. This is on trend with previous years.

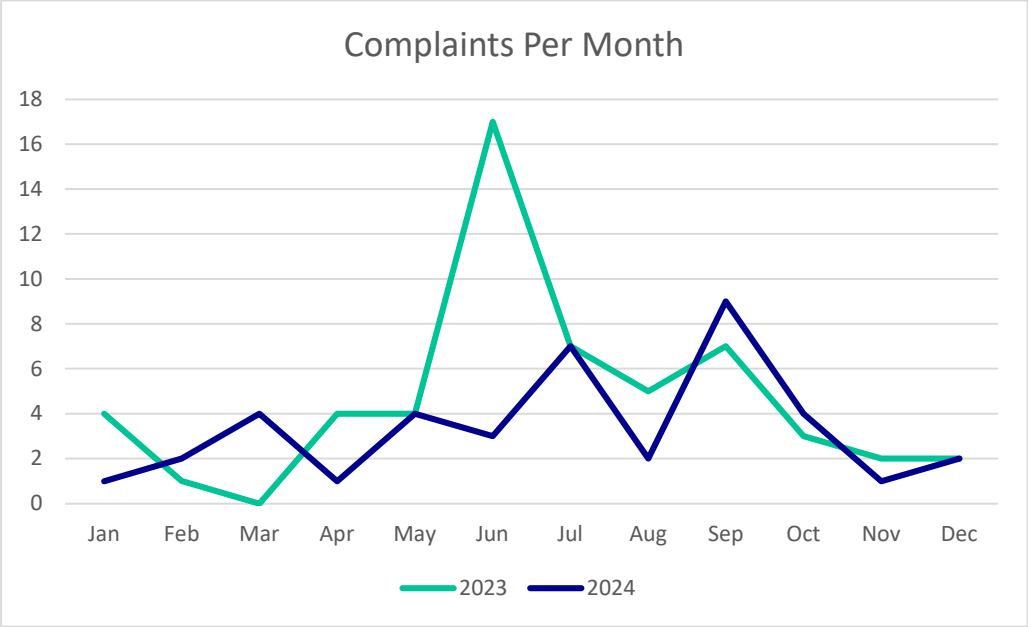


Figure 9 - Number of complaints per month 2023-2024

The geographical location of noise related correspondence and complaints covers a widespread area. 14% of complaints came from Renfrew which is close in to the airport and then Clydebank which is underneath the runway 23 arrivals. Figure 9 shows all areas where complaints were logged from.

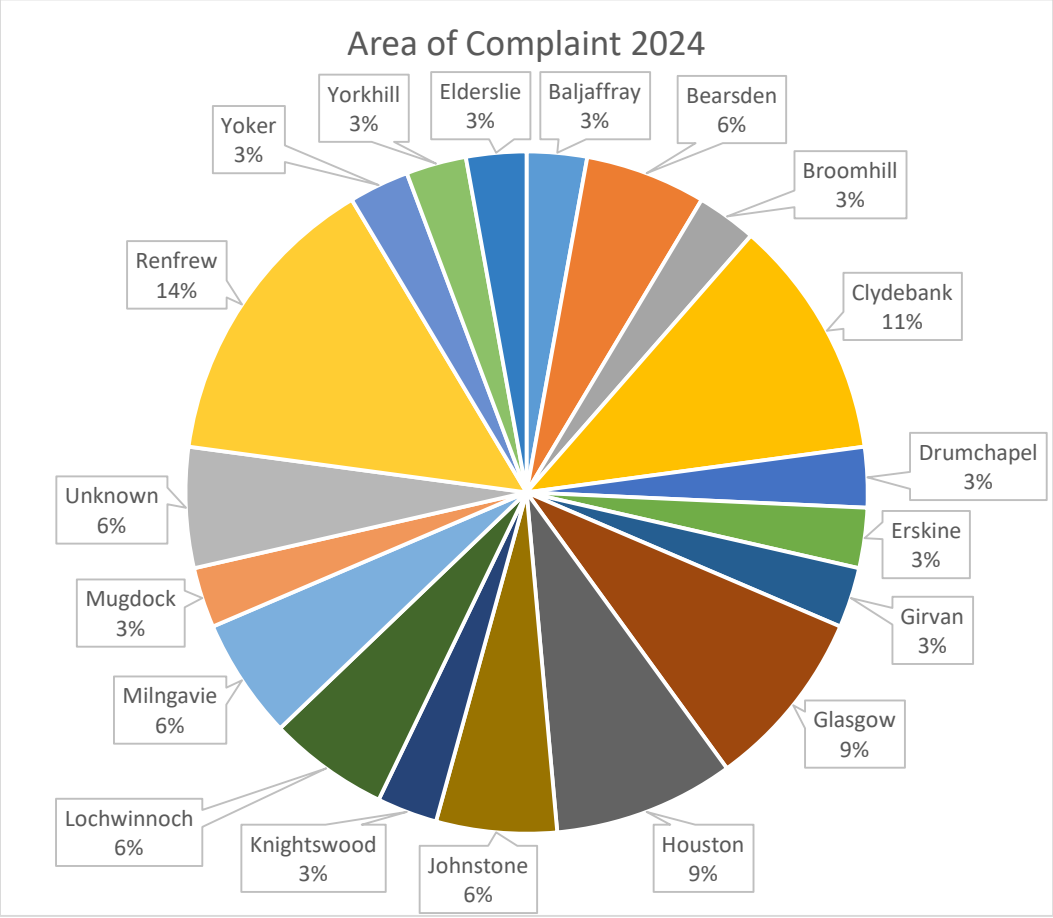


Figure 10 - Areas of noise complaints –

Noise Monitoring

Glasgow Airport actively monitor the noise levels of both our arriving and departing aircraft with two permanent noise monitoring terminals located towards the end of each runway. Noise levels must not exceed 94 dB LA_{Max} during the day or 87 dB LA_{Max} at night. If any breaches are recorded, airlines will be fined accordingly. In 2024 there were no recorded infringements of these noise levels.

Flight Tracking Portal

As part of our Noise Action Plan, Glasgow Airport has introduced an enhanced flight tracking system which will help local communities monitor aircraft movements.

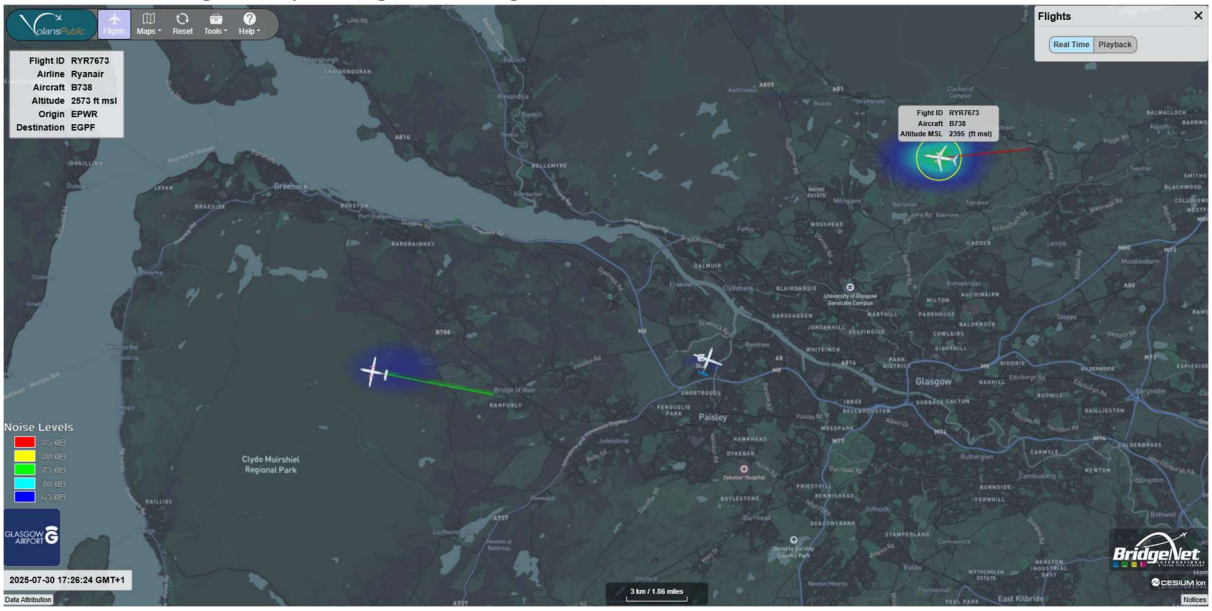
The Flight Tracking Portal delivers a near live 3D visualisation of every flight and aircraft type operating to and from the airport.

Residents who may wish to know more about the aircraft operating in the skies above their homes are now able to use the portal to track each flight and its modelled noise footprint throughout its journey.

The portal also includes enhanced features such as a play-back function to allow users to track a flight from a specific date and time. There are also three separate 3D viewing positions, including one which presents a representation from within the cockpit of the aircraft being tracked.
As well as being utilised by a number of other UK airports, Volans is also licensed by air traffic control providers NATS for use by the Airspace Change Organising Group (ACOG).

Globally, Volans is also used by the US Federal Aviation Administration (FAA) as the key visualisation tool for all Airspace Change, Outreach and Consultation projects, and by major US Airports such as San Francisco, Los Angeles, Chicago O'Hare/Midway Airports and by air traffic organisations worldwide such as NavCanada and Air Services Australia.

To view the Glasgow Airport Flight Tracking Portal click here.



Community Liaison

Glasgow Airport Consultative Committee

Glasgow Airport runs a Consultative Committee on a quarterly basis in which noise is a standing agenda item. The consultative committee provides a regular forum for the management of Glasgow Airport to discuss matters relating to its operation. More information on this can be found at our website https://www.glasgowairport.com/glasgow-airport-consultative-committee/.

Noise Insulation Scheme

The Noise Insulation Grant Scheme (NIS) has been established by Glasgow Airport Limited ("Glasgow Airport") to provide an opportunity for eligible properties to apply for a noise insulation grant. The NIS reflects our aim to be respectful of the local community and our impact on people who live and learn in close proximity to Glasgow Airport. The NIS was launched end of the year 2023.

Following our consultation on our amended Noise Action Plan 2024-2028, Glasgow Airport have lowered the eligibility contour meaning that all properties within the 60dB contour will be eligible to apply for a grant for acoustic insulation. The 60dB contour is based on movements within a defined 92 day period in the Summer and it considers average noise over a 16 hour operational day. The next scheme will launch in 2025 based on contours from summer 2024. More information will be provided on our website here . The contours can also be found in Appendix A.

The management of the NIS is overseen by an independent management committee made up of airport managers and representatives of the local communities, known as the Airport Consultative Committee (ACC). For further information on the scheme see our dedicated web page here.

Noise Action Plan

The noise action plan for Glasgow runs from 2024 to 2028. Following a full public consultation on our plans in 2024, the plan was formally adopted by Scottish Ministers in 2025.

Glasgow Airport 2024-2028 Noise Action Plan	
Action	Progress
Community Engagement	
We will present key noise initiatives and report on our progress against this Noise Action Plan to the Glasgow Airport Consultative Committee	The Consultative Committee meets 3 times per year and updates are included as part of our noise update
We will continue to publish an Annual Noise Report which will be available on our website and contain: - Statistics on the number, type and time of day of aircraft and helicopter movements; - Adherence to Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) targets; - Number and timing of engine test runs; - Statistics on noise complaints; - Information on the Consultative Committee and Noise Working Group; and - Progress against actions in this Noise Action Plan.	This report is published on an annual basis and includes all information prescribed
We will undertake a review of the contents of our Annual Noise Reports, in consultation with local stakeholders, to ensure that the report provides clear and useful information that is valuable to our local communities.	Once this report is published, feedback will be sought from the Airport Consultative Committee
Following consultation feedback, we will add the following to our Annual Noise Reports: 92-day summer average daytime and night-time noise contours from the previous summer; 92-day single mode noise contours from the previous summer; data on off-track occurrences; and summary of data and trends from our fixed noise monitoring terminals.	For implementation in 2025 report due for publication in 2026
We will update our noise webpage with information on key noise initiatives and strategies.	Our webpage is updated on a regular basis to include new and updated information when required.

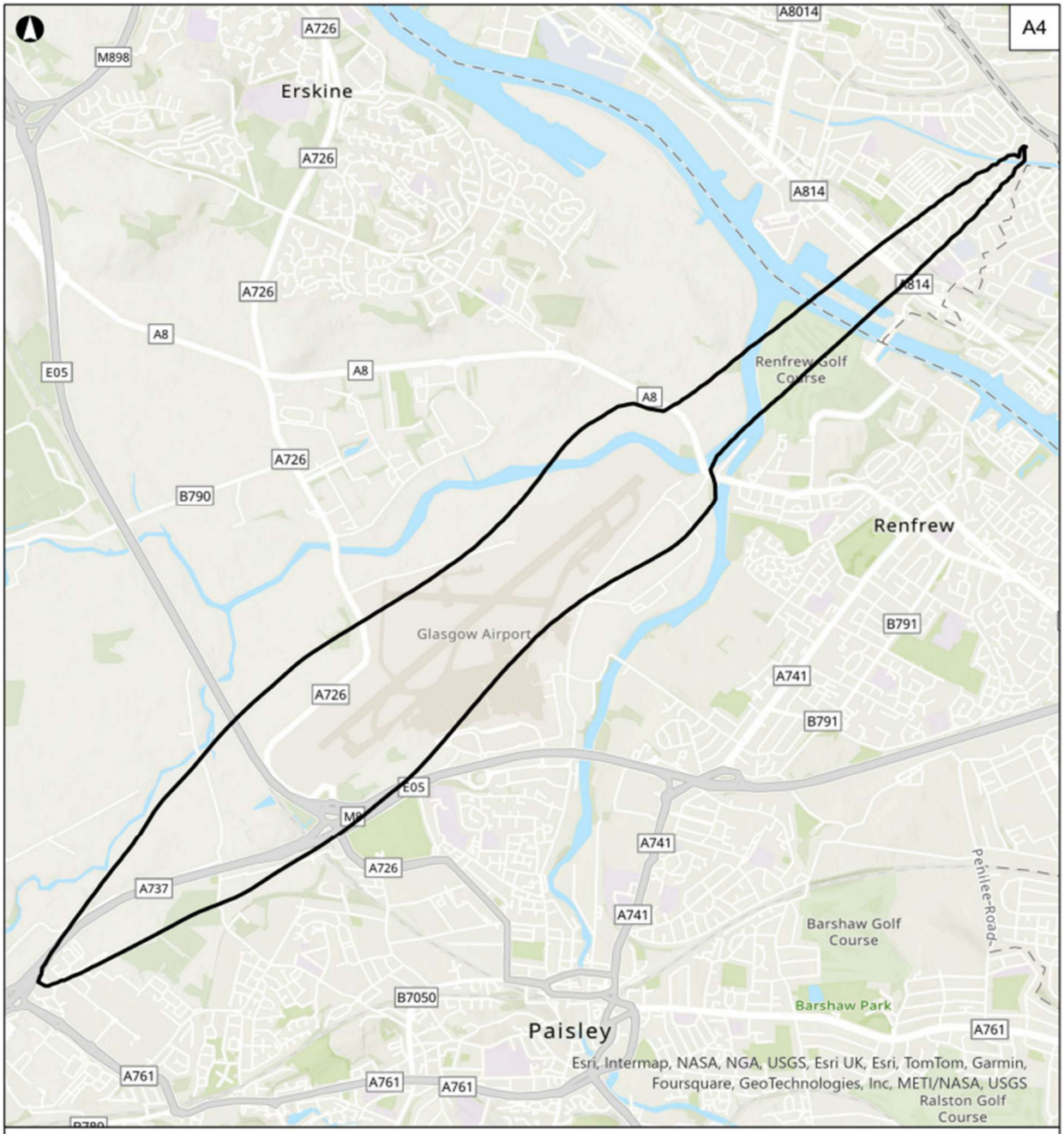
We will upgrade our complaints and enquiries process with a new system that will allow improved analysis of trends. This will be used in combination with our noise and track-keeping system to investigate any complaints related to off-track infringements. We will continue to operate a free noise action line, dedicated email inbox and online noise complaints and enquiries form. We will log all complaints, seek to respond to 100% of complaints and enquiries within five working days and report our performance to the Glasgow Airport Consultative Committee.	Complaints are collated and analysed to identify any trends. Complaints may fill out a webform on glasgowairport.com/noise and this links in with our noise and track keeping system. We continually review our processes to ensure they allow a 5 day response time.
We will monitor how communities feel about our aircraft track visualisation modelling software and strive to increase the number of users	Feedback sought via our established Airport Consultative Committee
We will review how best to use the data from our existing noise monitors to supplement the track keeping systems and noise modelling.	Noise monitor data is used to monitor any noise breaches and data is checked multiple times per week. Our new tracking system, Volans, shows indicative noise footprints which is publicly available. We will continue to review how best to use data on an ongoing basis.
We will continue to use our Flightpath fund to provide financial support to community groups and charities that are committed to improving the opportunities, facilities and services available to local people most affected by the airport.	Flightpath fund is available and applications are handled via our website here - https://www.glasgowairport.com/about-us/flightpath-fund/
Reduction of Noise At Source	
We will undertake reviews of our differential landing charges and other methods of incentivisation to encourage the industry adoption of quieter aircraft.	This will take place during 2025
As part of AGS group we will work with our partners in Sustainable Aviation to achieve the visionary noise goals of FlightPath 2050 which seek to achieve a 65% reduction in perceived noise, or 15dB, from aircraft by 2050 compared to 2000.	AGS is an active member of Sustainable Aviation and we have representation on all 3 pillars - Communications, Quieter and Cleaner.
We will support the development of Sustainable Aviation's updated Noise Roadmap and will encourage the development of electric and hybrid electric aircraft and consider the noise implications of future aircraft technology.	The Noise Roadmap was published in Q1 2025

We will continue to enforce our policy on aircraft ground runs. We will investigate any complaints received from ground running activity and revisit our policies if appropriate. We will report quarterly on the frequency and times of engine running to the local community through the website and in our Annual Noise Report.	All ground runs are monitored and numbers are reported in this report.
We will undertake noise monitoring of engine ground running to better understand its potential impact on our closest neighbours. We will use the information for this monitoring to review our ground running policies and investigate potential further control measures.	A strategy will be confirmed in 2025.
We will continue to replace diesel powered ground power units (GPUs) with Fixed Electrical Ground Power (FEGP) at the international stands to allow aircraft to take electricity directly from the local grid, helping to reduce noise by limiting the amount of time that aircraft will need to run their engines at stands.	This is an ongoing project due to the infrastructure requirements and forms part of our masterplan to fit more stands with FEGP. We continue to monitor usage and will form a part of our wider energy strategy.
We will review our current practice and work with our airlines to encourage and assist them to undertake reduced engine use for taxiing and towing to reduce noise emissions from aircraft on the airfield.	A benchmarking study was carried out in 2024 and we will work with our airlines to understand and monitor progress.
Noise Abatement Operational Procedures	
We will use our aircraft track keeping systems to proactively monitor fixed wing aircraft routing and any off-track occurrences. We will use this data in discussion with airlines to identify any issues with off-track occurrences that can be resolved. We will implement a process for fining airlines for off-track occurrences and distribute fines to the FlightPath Fund.	This work is ongoing and our track keeping system allows full analysis of aircraft tracks. A fining process will be implemented into our Conditions of Use following the next review.
We will continue to implement best practice on aircraft noise management according to guidance that was published by the Independent Commission on Civil Aviation Noise whilst the commission was still active. We will review and implement any future best practice guidance issued by the Civil Aviation Authority where appropriate.	AGS is part of multiple forums including Sustainable Aviation and Airport Council International Noise Task Force so we will continue to understand best practice from other airports and industry. We have already enhanced our Noise Insulation Scheme to go above and beyond what legislation requires.

We will continue with our Airspace Change Proposal to modernise our airspace and seek to develop a design that minimises, and where possible reduces, the total adverse effects on health and quality of life from aircraft noise, in line with the CAA's Airspace Change Process and our agreed airspace design principles.	This work is ongoing and updates will be provided in due course. Consultation will likely begin in October 2025
We will promote adherence to the Arrivals Code of Practice (ACOP) and in particular the achievement of Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) targets where possible. We will monitor and report compliance with these targets in the Annual Noise Report.	Discussions take place at airport and airline engagement sessions to promote both practices. Data is presented in this report which slows an improvement in adherence.
We will continue to fine aircraft in breach of our departure noise limits (94dB(A) during the day and 87dB(A) during the night) and direct the money raised through these fines to the FlightPath Fund.	This is ongoing and monitored regularly.
We will review our departure noise limits to determine whether it would be appropriate to reduce the limits to further encourage the adoption of newer and quieter aircraft.	This review is ongoing but we will learn form other UK airports who are doing similar.
Land Use Planning and Management	
We will actively contribute to improving aircraft noise information in local planning policy and seek to influence policy where appropriate. We will encourage the use of good acoustic design to avoid and minimise adverse impacts arising from the development of new noise sensitive buildings and encourage the adoption of the principles advocated by the Professional Practice Guidance: Planning & Noise – New Residential Development.	We are working with local councils to advise on noise insulation levels and also engaging with them on our Noise Insulation Scheme roll out. We inform master plans and advise on noise sensitive areas and also work with SEPA.
We will continue to implement our current Noise Insulation Scheme to mitigate noise for residents and noise sensitive buildings most affected by aircraft noise in line with current aviation noise policy.	Scheme to be next launched in 2025
We will extend our residential Noise Insulation Scheme to mitigate noise for a greater number of residents most affected by aircraft noise, going beyond current aviation noise policy.	Scheme to be launched in 2025 and will consider the 60dB contour in place of the 63dB contour which policy dictates.
Operating Restrictions	
Our Noise Action Plan is consistent with the ICAO Balanced Approach and The Airports (Noise-related Operating Restrictions) (Scotland) Regulations 2019, which requires operating restrictions to be considered only after other measures of the Balanced Approach have been exhausted and only where it is cost effective to do so. We will continually review the effectiveness of our mitigation measures in the context of the balanced approach to ensure that mitigation is	This is continually under review.

considered in a consistent way with a view to addressing noise impacts in the most cost-effective way.	

Appendix A: 2024 Average Summer Day Noise Contours



$L_{Aeq,16h}$ 60 dB contour

Rev	Date	By	Chkd	Appd	Authd
P01	13/02/2025	JW	CS	DH	DH

Kilometers
0 0.5 1 2

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Client
AGS Airports Limited

Project Name
Glasgow Airport Summer 2024 Noise Contours

Drawing Title
2024 92-day average summer day $L_{Aeq,16h}$ 60 dB contour

Actual runway modal split 85% West / 15% East

Scale at A4
1:37,500

Suitability
Issue

Project Number
268771-00

Rev
P01

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