



GLASGOW
AIRPORT

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Annual Noise Monitoring Report 2021

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Air Traffic Statistics

2021 supported 2.29 million passengers at Glasgow Airport. There was a total of 39,662 total air traffic movements¹(ATM's) in 2021 including both departing and arriving aircraft from both commercial, private and chartered flights. Due to the impact of continuing COVID-19 travel restrictions early 2021, there is still a significant reduction on the 8.85 million passengers and 91,849 ATM's seen in 2019.

2020/21 were anomalous years for Glasgow Airport and aviation in general. It is therefore not appropriate, in some cases, to identify trends in the data. Please consider this context throughout this report.

Glasgow Airport supports over 20 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 airport operator in 2021. As travel restrictions continued through much of Q1 2021, Loganair made up 22.7% of all ATM's ensuring a robust connectivity between mainland Scotland and the Highlands and Islands.

Figure 1

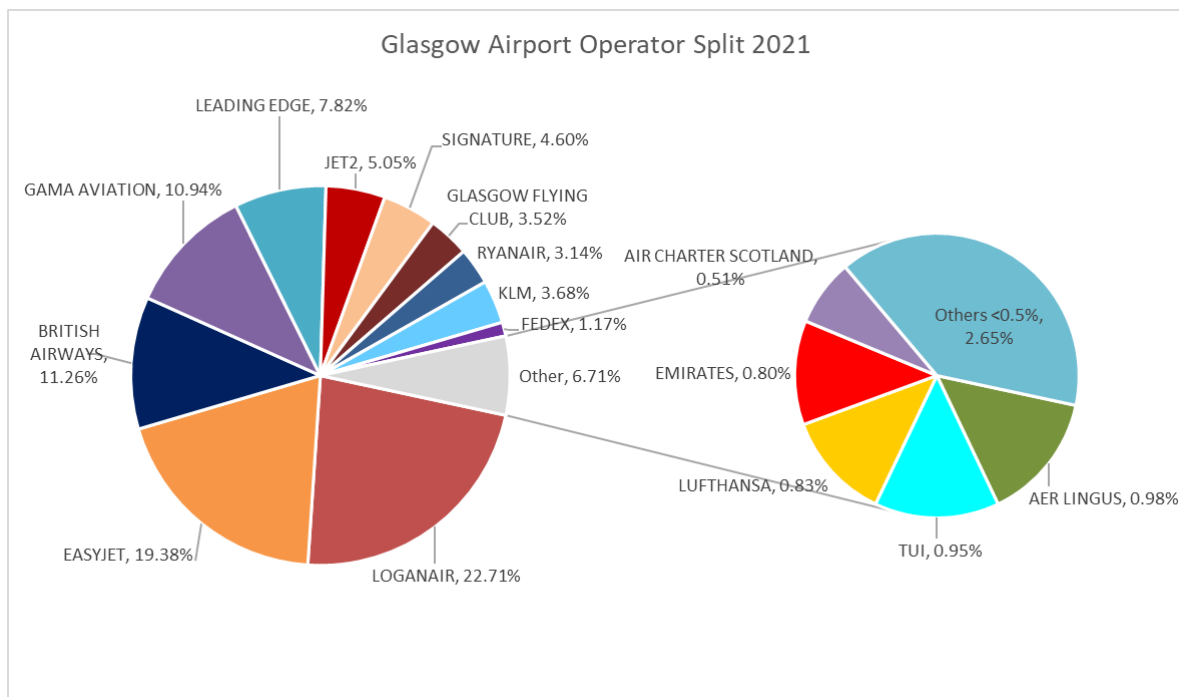


Figure 2 summarises the number of movements per specific aircraft type in 2021. In addition to passenger flights, Glasgow Airport facilitates, cargo, general aviation, air ambulance, military and training flights. Glasgow airport are also pleased to now support the Airbus A320Neo which is powered by Pratt & Whitney GTF™ engines that contribute to the A220's 25% lower fuel burn per seat²when compared to previous-generation aircraft, as well as half the noise footprint and decreased emissions. The Airbus A320 is gradually being phased out and replaced with the more sustainable

¹ An air traffic movement is defined as either an arriving or departing aircraft

² <https://www.airbus.com/en/products-services/commercial-aircraft/passenger-aircraft/a220-family>

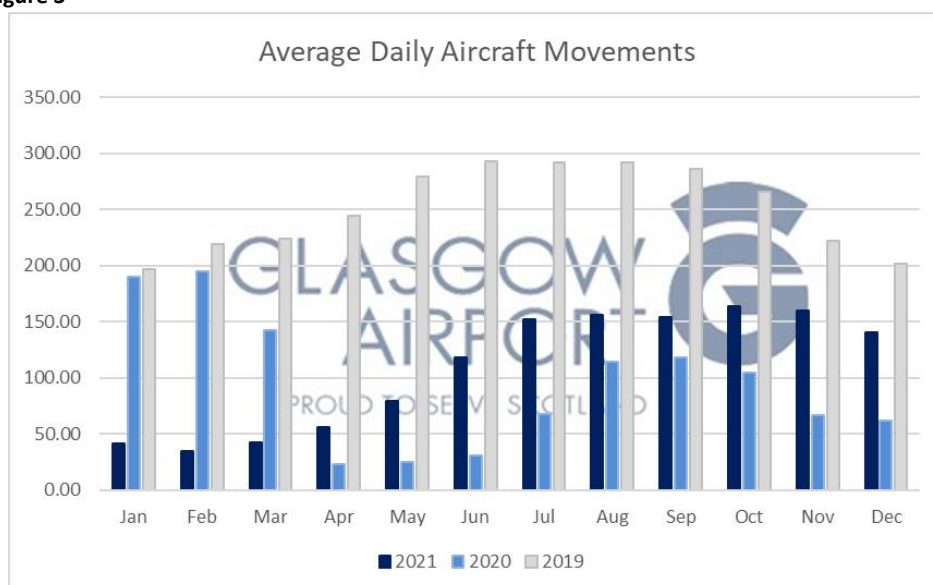
model. In 2019, the A320 Neo made up 2.46% of all aircraft movements. In 2020 this increased to 6.32% and in 2021 this increased further to 7.03%. It is important to note that the primary operator of the A320 Neo, EasyJet, had their flight schedule cut by 63% due to the impact of COVID-19 and we would expect this aircraft to feature much more strongly in movement numbers as the airport recovers.

Figure 2



Figure 3 shows our average daily aircraft movements per month. Pre-pandemic, Glasgow Airports busiest times were recorded during the summer months. As would be expected, 2020 saw a significant drop in aircraft movements from mid-March onwards due to the COVID-19 pandemic. 2021 saw average daily aircraft movements increase slowly as the business began to recover from the pandemic. Our busiest time peaked in October with an average of 164 flights per day. Our busiest day fell on 02 November with 244 movements. Our quietest period fell in February, during the middle of the 2nd lockdown, with an average of 35 aircraft movements per day. Our quietest day fell on 12 February with only 8 daily aircraft movements.

Figure 3



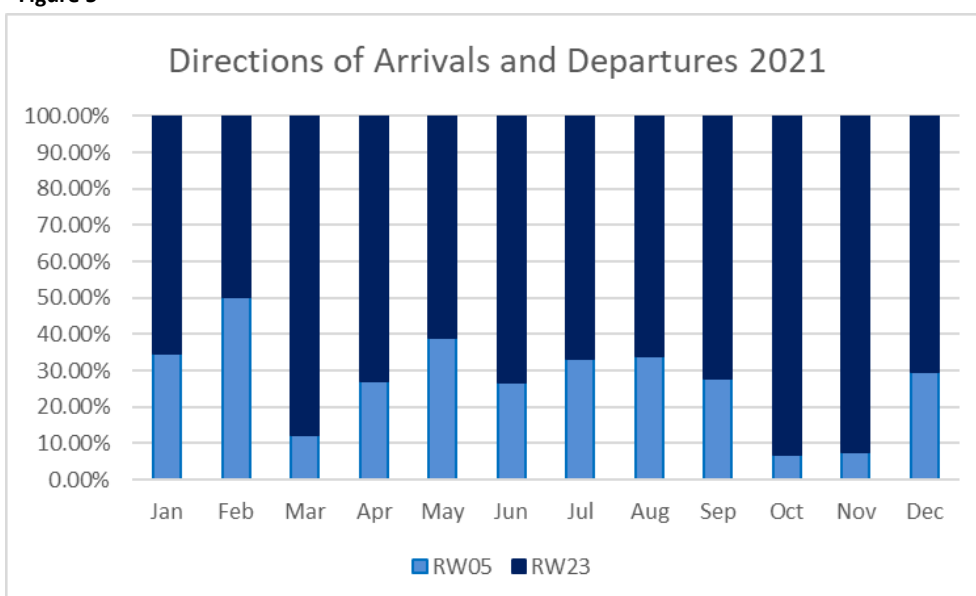
On average, the busiest period for departing aircraft in 2021 was between the hours of 1000-1100 with a total of 1824 flights departing during this timeslot. The average peak time for aircraft arriving was between 1400-1500 with a total of 1592 aircraft landing during this timeslot. The average busiest timeslot for total aircraft movements fell between 1000-1100 with a total of 3135 movements during this period. Figure 4 also highlights that flight arrivals and departures between the hours of 23:00–07:00 make up 5.7% percentage of all aircraft movements totalling 1291 movements.

Figure 4



In 2021 75% of flights have utilised Runway 23; arriving from the east over the Bearsden and Clydebank areas and Departing towards the west over the Linwood, Johnstone and Howwood areas. 25% of flights have utilised Runway 05; arriving from the west and departing towards the east. This 75/25 split can vary within the months and is wholly dependent on the prevailing wind direction. Figure 5 shows the monthly split of runway use over the course of 2021.

Figure 5



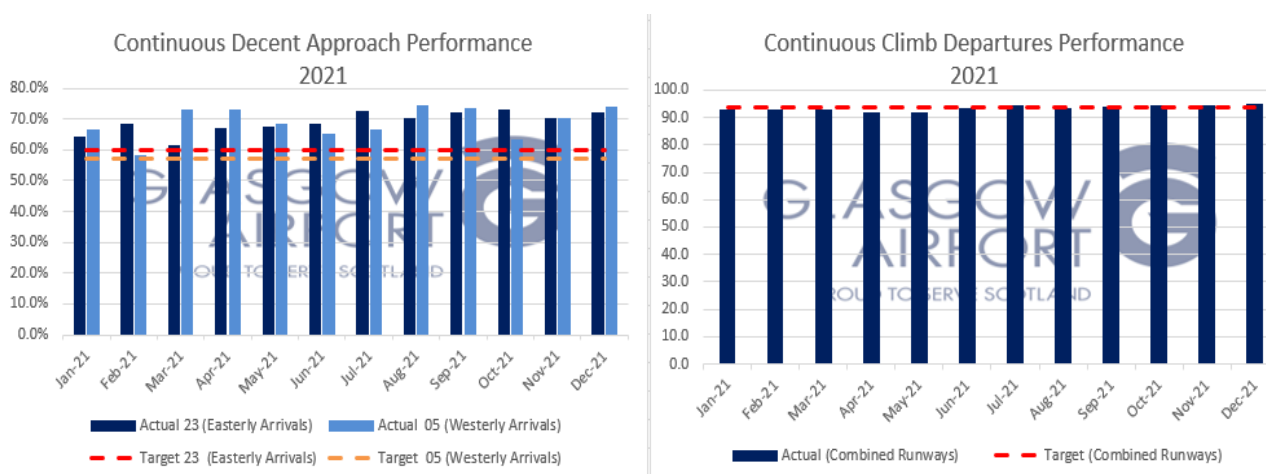
Operational Noise Abatement Measures

Continuous Decent and Continuous Climb

As part of our continuing effort to mitigate noise disturbance to residents our aircraft are measured against a noise mitigation procedure called Continuous Decent Approach (CDA) for our arriving aircraft and Continuous Climb Departures (CCD) for our departing aircraft. Both of these methods have been recognised to reduce the noise levels experienced during take-off and landing. This process is monitored by NATS and Glasgow Airport have set targets for the airlines to achieve.

The overall CDA compliance on aircraft arriving on Runway 23 was 68.8% against a target of 60%. This is a 1.6% improvement on the CDA performance in 2020. The overall CDA compliance on aircraft arriving on Runway 05 was 68.7% against a target of 57%. This was a 2.4% improvement on 2020 performance. The overall CCD compliance for both runways combined was 93.3 against a Target of 93%. The performance dipped marginally below target in March-May. This was predominantly due to fleet mix during this time.

Figure 6



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. Engine runs carried out within these times must only occur for a maximum of 5 minutes and must be on low power/idle mode. Below shows the number of engine runs that have taken place during each time period in 2021.

Table 1

Glasgow Airport Engine Test Runs 2021			
Time Period	05:00-07:00	07:00-23:00	23:00-0500
Q1 – Jan-Mar	0	353	0
Q2 – Apr-Jun	2	420	1
Q3 – Jul-Sep	6	318	2
Q4 – Oct-Dec	4	218	4

Correspondence & Complaints

As part of our noise action plan commitment, we have a dedicated noise action telephone line (0800 013 2429) 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.

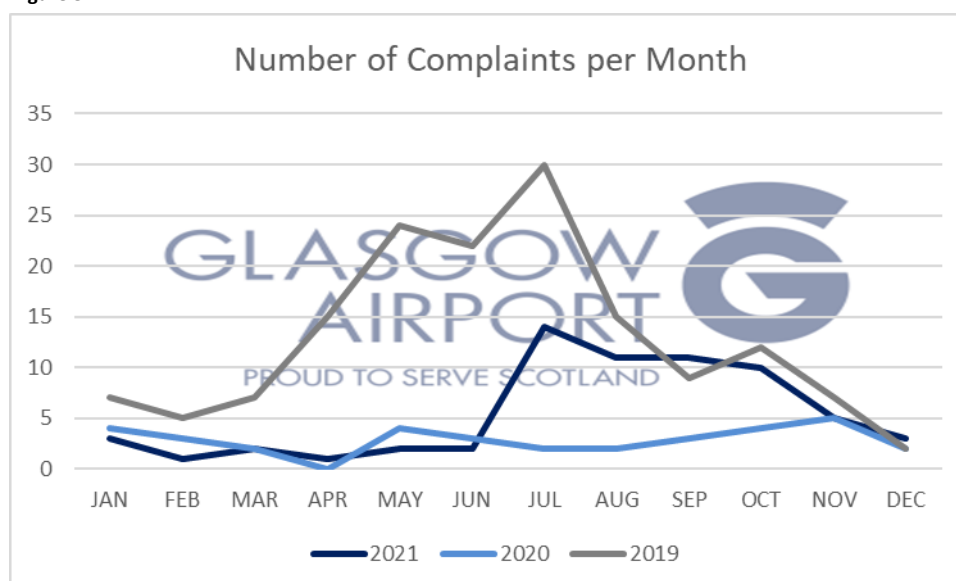
There were 66 recorded complaints in 2021. This is an increase of 94% compared with 2020. This is not unexpected due to the increase in aircraft movements in 2021 compared with 2020 as COVID-19 travel restrictions were lifted. Complaints were split between the 7 categories noted in Figure 7. There were a higher number of complaints/comments relating to flightpath and night flying compared to the other categories. Out of the 66 complaints there were a total of 52 complainants.

Figure 7



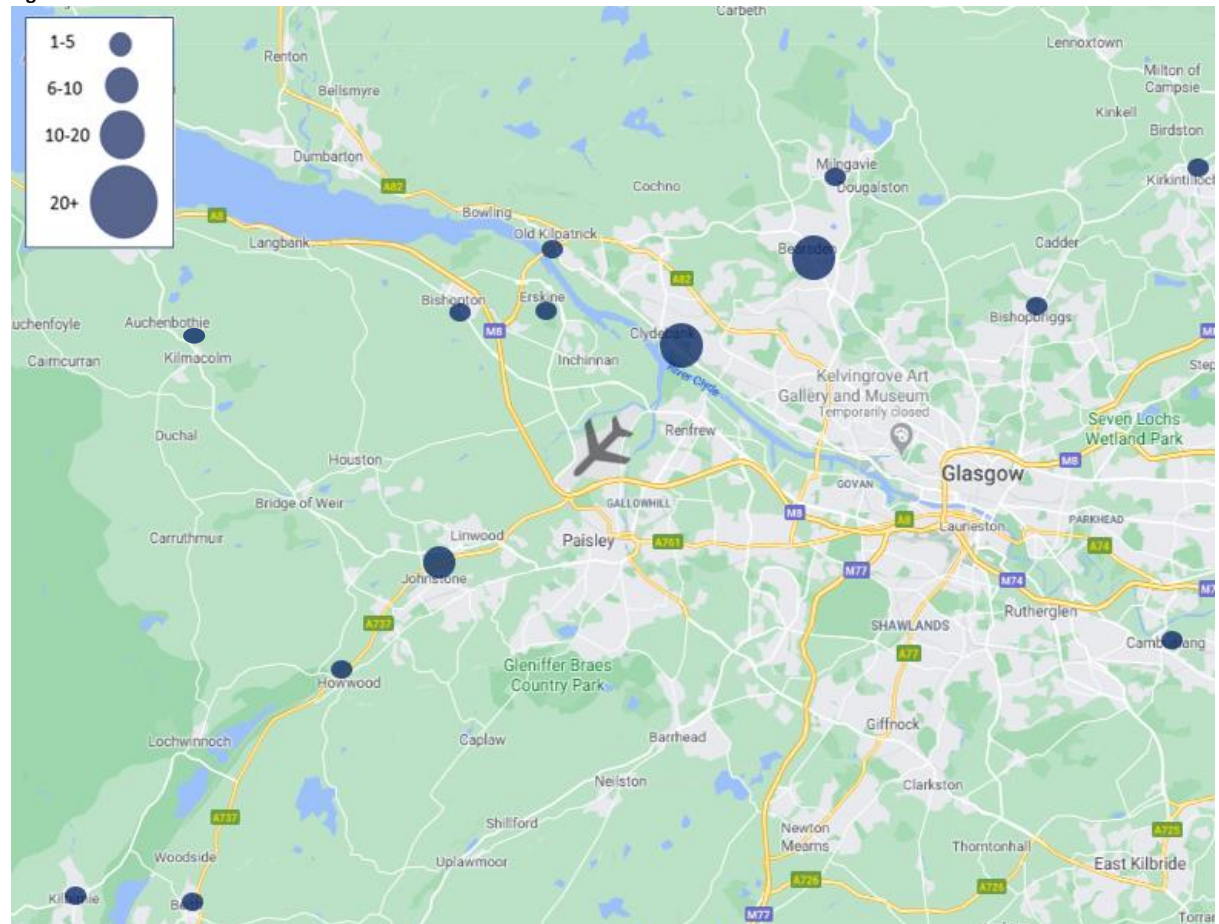
The highest number of complaints were, as expected, voiced during the school summer holidays, where aircraft movements were at their peak. However, it is evident that the volume of complaints is still significantly lower than in 2019 (153).

Figure 8



The geographical location of noise related correspondence and complaints covers a widespread area. 44% of complaints in 2021 came from the Bearsden and Clydebank area at the northeast of the runway. 18% did not provide their location and the remaining 38% of complaints were widely scattered around the flightpath as shown on Figure 9. Please note, this diagram is for illustrative purposes only and will not precisely show specific locations.

Figure 9



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 97 dB LA_{MAX} during the day or 87 dB LA_{MAX} at night. If any breaches are recorded, airlines will be fined accordingly. In 2021 there were no recorded infringements of these noise levels.

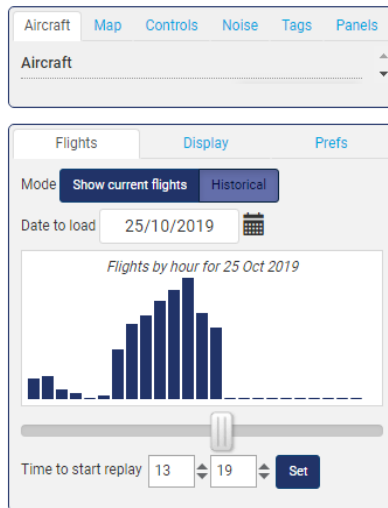
Residents within the surrounding communities can also keep track of the noise levels on the publicly available Webtrak which can be accessed via the Glasgow Airport noise page. This allows residents to plot their postcode and view arriving and departing aircraft. The website can be accessed through the Webtrak link located within the noise section of our webpage www.glasgowairport.com/noise.

Figure 10 below shows the information provided by Webtrak, including the location of our noise monitors and information on the specific aircraft movements. Webtrak is also used by Glasgow Airport to investigate complaints.

Figure 10

Quick Start Guide

Using WebTrak you can track the flight activity in to and out of Airport Name, along with information about each aircraft.



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 Policy

We are developing an updated Noise Insulation Policy to mitigate noise for communities most affected by aircraft noise in line with current aviation noise policy. The policy will provide financial contribution towards noise insulation for residential properties and noise sensitive buildings within the 92-day summer average 63dBLAeq,16h contour. We hope to roll this out in the forthcoming year.

Noise Action Plan

Table 2

Glasgow Airport 2018-2022 Noise Action Plan	
Action	Progress
We will develop, publish and implement a policy prioritising airlines operating Chapter 4 and Chapter 14 aircraft when introducing new business to Glasgow	Currently under review
We will work with the airlines through our airline consultation process to review the landing fee differential to incentivise the use of quieter aircraft	Landing fees reviewed on an annual basis.
We will continue to work with our partners in the aerospace sector through sustainable aviation to achieve the visionary noise goals of FlightPath 2050 which seek to achieve a 65% reduction in perceived noise, or 15 dB, from aircraft by 2050 compared to 2000.	AGS Airports remain a member of Sustainable Aviation and are aligned with the Flightpath 2050 goals
We will engage directly with local planning authorities to ensure awareness of aircraft operations is considered in the development of sensitive land uses. We will continue to contribute to local development plans and monitor planning applications within the vicinity of Glasgow Airport	Excellent links with local planning authorities continuing.
We will develop and implement a Noise Insulation Policy to mitigate noise for residents exposed to aircraft noise within the 63dB _{LAeq} , 16h in line with UK Airspace Policy. We will continue to offer our existing home relocation schemes.	Launching in Q4 2022
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	Continuous contribution to ICCAN as part of their research into new best practise guidance.
We will promote adherence to the Arrivals Code of Practice (ACoP) and in particular the achievement of Continuous Decent Approaches (CDA) where possible	Promoted through the Flight Operations Committee
We are currently undertaking an airspace change proposal (ACP) and we will review and report on aircraft performance and adherence to departure routes in the first 12 months of its implementation	This will be reviewed in line with the UK CAA Airspace Modernisation Masterplan publication.
We will 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.	Policy in place and operational.
We will continue to encourage aircraft operators to plan maintenance schedules to avoid the need for ground running of engines at night. We will continue to enforce our policy that runs should not last longer than 20 minutes. We will investigate any complaints received from ground running activity and revisit our policies if appropriate. We will report on the frequency and times of engine running to the local community through the website	Engine Runs are logged and monitored regularly and are used through the noise complaints investigation process.

<p>Our Noise Action Plan is consistent with the ICAO Balanced Approach and EU regulation 598, 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 considered in a consistent way with a view to addressing noise impacts in the most cost effective way.</p>	<p>In place and continuously monitored.</p>
<p>We will discuss noise issues and report on our progress against the Noise Action Plan under a standing agenda item of the Consultative Committee</p>	<p>Reviewed at each ACC meeting</p>
<p>We will discuss noise issues and report on our progress against the Noise Action Plan under a standing agenda item of the Consultative Committee</p>	<p>Reviewed at ACC meeting</p>
<p>We will continue to operate a few noise action line and a dedicated email inbox. We will log all complaints, seek to respond to 100% of complaints and enquiries within 3 working days and publish our performance at the airport consultative committee and in the FlightPath newsletter.</p>	<p>Noise Action Line and email inbox is live and regularly monitored.</p>
<p>We will continue to operate the Noise and Track Keeping System to enable monitoring and investigation of noise issues</p>	<p>Operational. Webtrak also in use to assist with investigating complaints.</p>