

Departures Performance

Track Keeping

Figure 6: Track Keeping Compliance

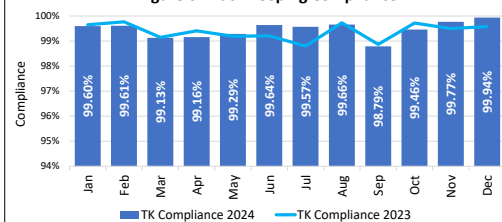


Figure 7: Track Keeping Compliance by Runway

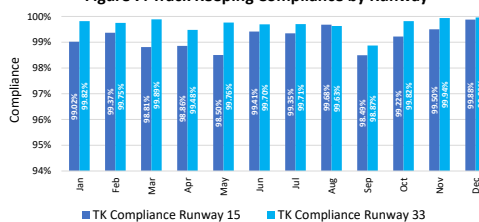


Figure 8: Quarterly Track Keeping Performance

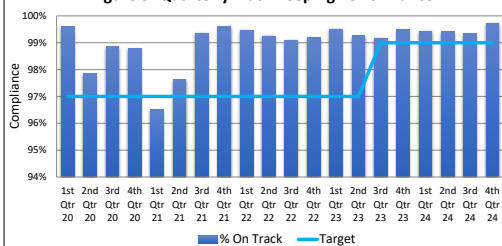


Figure 9: Track Keeping Route Usage

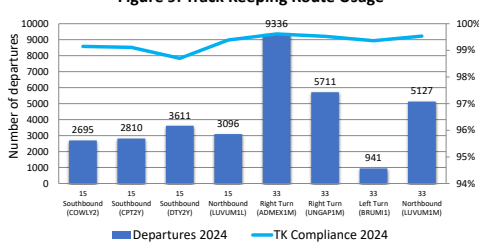


Figure 10 shows a map of the five noise preferential routes (NPRs) for departures in use at Birmingham Airport. The table below lists the altitudes up to which aircraft are required to stay within the noise preferential route, in order to be classed as 'on-track'. Once above the minimum vectoring altitude, air traffic control may provide pilots with vectors to facilitate a more direct path towards their destination.

Figure 6 shows the overall departure track keeping compliance for 2024 vs 2023. Track keeping compliance in Q4 2024 remained in excess of 99% across all months.

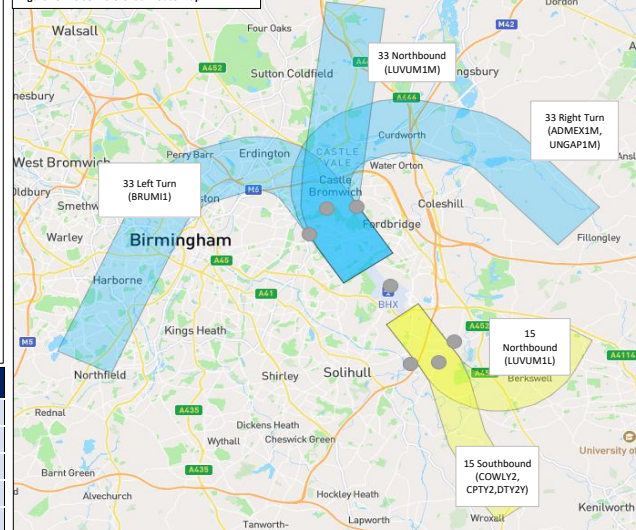
Figure 7 shows rolling track keeping compliance by runway, with a marginal difference between R33 and R15, with track keeping compliance higher for operations departing from Runway 33. This is due to there being more total departures off R33, as seen in the Runway Statistics section of this report.

Figure 8 shows quarterly track keeping performance vs target. Track keeping has exceeded 96% consistently since 2018 and has met target for all quarters except Q1 2021. It should be noted that from Q3 2023 the track keeping target has risen from 97% to 99%.

Figure 9 shows 2024 YTD route usage and the associated track-keeping compliance. Track keeping YTD is above 94% for all routes. The routes most utilised were R33 Right-turn (ADMEX1M/ UNGAP1M), R33 Northbound (LUVUM1M) and R15 Southbound (COWLY2, CPT2Y, DTY2Y) consecutively.

Routes	Minimum Vectoring Altitude
15 Southbound (COWLY2, CPT2Y, DTY2Y)	4000 ft
15 Northbound (LUVUM1M)	3000 ft
33 Right Turn (ADMEX1M/UNGAP1M)	3000 ft
33 Left Turn (BRUM1M)	3000 ft
33 Northbound (LUVUM1M)	3000 ft

Figure 10: Noise Preferential Route Map



Track Keeping Violations

Figure 11: Day Track Keeping Violations YTD



Figure 12: Night Track Keeping Violations YTD

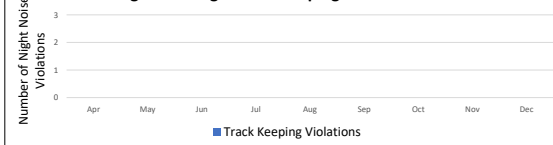
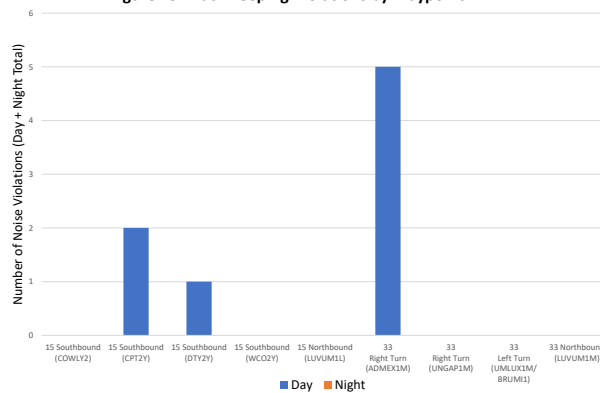


Figure 13: Track Keeping Violations by Waypoint



Birmingham Airport operates a fining regime for departing aircraft who violate the parameters of our Noise Preferential Routes (NPRs). Aircraft who have not had permission granted to them by our Air Traffic Control team to leave their designated NPR early are issued a surcharge. There are two track-keeping violation surcharges: a daytime charge, levied to offending aircraft operating between 0600-2329 hours, and a night-time charge for those operating between 2330-0559 hours.

Aircraft will only be granted permission to deviate from their NPR prior to reaching minimum vectoring altitude according to weather, traffic, medical emergencies, or other safety related concerns.

Figure 11 shows monthly daytime track keeping violations since this mechanism came into effect on 1st April 2024. There have been 5 track keepings violations for the year to date. The details of which can be found in the table below.

Figure 12 shows monthly night time track keeping violations since this mechanism came into effect on 1st April 2024. There have been no night time track keeping violations for the year to date.

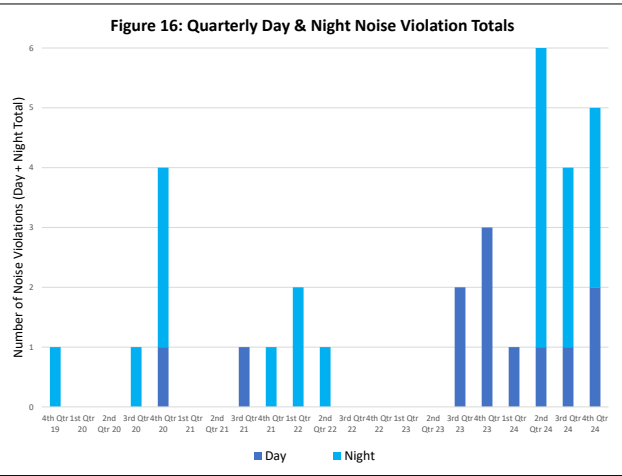
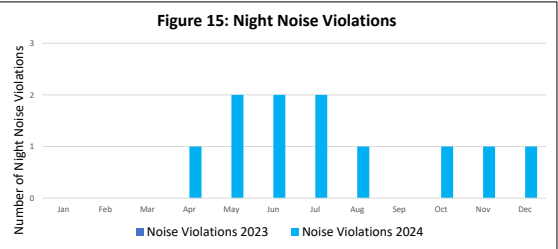
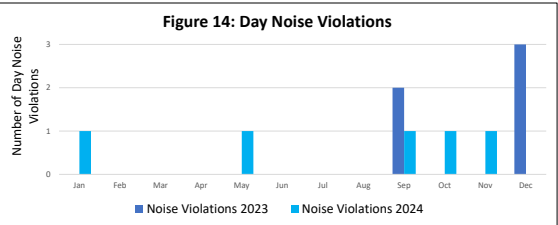
Figure 13 shows quarterly day and night track keeping violations by waypoint for the year to date 2024. ADMEX1M, Runway 33's right hand turn has seen the largest number of violations with 4, primarily due to this being the most utilised route.

Full details of our track keeping violation surcharging mechanism can be found within our Fees and Charges document, publicly available on our website [here](#).

Date & Time (GMT)	Waypoint	Flight No.	Airline	Aircraft	Runway	Amount	Paid (Yes/No)	Type
19/04/2024	ADMEX1	BCI96D	BCI	AT75	33	£800	Yes	Day
02/06/2024	ADMEX1	AZG394	AZG	B744	33	£800	Yes	Day
21/06/2024	ADMEX1	OOMED	OOM	LJ45	33	£800	Yes	Day
01/07/2024	ADMEX1	BID12B	BID	SW4	33	£800	No	Day
03/07/2024	CPT2Y	AUR709	AUR	AT76	15	£800	Yes	Day
13/08/2024	DTY2Y	SXS3VJ	SXS	A320	15	£800	No	Day
02/10/2024	12:00	VKA112	VKA	AN26	33	£800	No	Day
25/10/2024	15:04	AUR707	AUR	AT76	15	£800	No	Day

Departures Performance Continued

Noise Violations



Birmingham Airport operates a fining regime for noisy aircraft departing from the airfield. There are two violation level limits: a daytime limit of 90dB(A), operational between 0600-2329 hours and a more stringent night-time limit of 81dB(A) (reduced from 83dB from 1st April 2024), operational between 2330-0559 hours. If a departing aircraft registers a noise level above this at our centreline noise monitors (Noise Monitors 1 and 2), the airline is surcharged an amount equivalent to a full runway charge, thus deterring noisier aircraft from operating. All funds from night noise violations are placed into the Community Trust Fund, a registered charity that benefits projects in the local community.

Figure 14 shows monthly daytime noise violations, comparing 2023 to 2024. There were five daytime noise violations in 2023. There were two daytime noise violations in the 4th Quarter of 2024. The details of which can be found in the table below.

Figure 15 shows monthly night noise violations, comparing 2023 to 2024. There were no night noise violations in 2023. There were three night noise violations in the 4th Quarter of 2024. The details of which can be found in the table below.

Figure 16 shows quarterly day and night noise violations from Quarter 3 2019 to Quarter 3 2024. Quarter 2 2024 saw the first night noise violation since since Quarter 2 2022 and the peak number of night noise violations (five). Peak day noise violations occurred in Quarter 4 2023, with three.

Full details of our runway charging mechanisms can be found within our Fees and Charges document, publicly available on our website [here](#). For daytime noise violations a surcharge of £750 is levied, with provisions for an extra £170 per full decibel over the 90 dB(A) limit. For night noise violations a full runway charge of £16.34 per tonne is levied, with provisions for an extra £170 per full decibel over the 81 dB(A) limit.

Date & Time (GMT)	NMT	Max. Level dB(A)	Flight No.	Airline	Aircraft	Runway	Amount	Paid (Yes/No)	Type
03/10/2024 at 05:54	1	81.5	LS1229	EXS	A321	33	£1,543.26	Yes	Night
22/10/2024 at 10:20	2	90.7	HFD105	EAU	B747	15	£750.00	Yes	Day
09/11/2024 at 23:44	1	85.4	N756CA	NCR	B747	33	£7,128.17	No	Night
24/11/2024 at 14:56	2	90.1	EK1	UAE	A388	15	£750.00	Yes	Day
15/12/2024 at 04:22	2	85.7	N702CA	NCR	B747	33	£7,128.17	Yes	Night

Ground Noise - Engine Ground Running

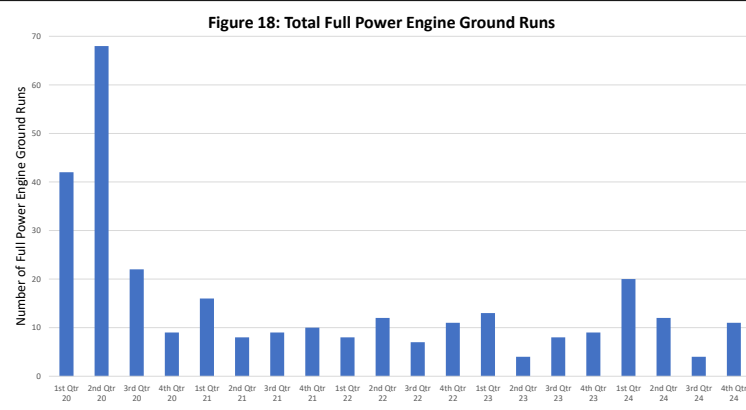
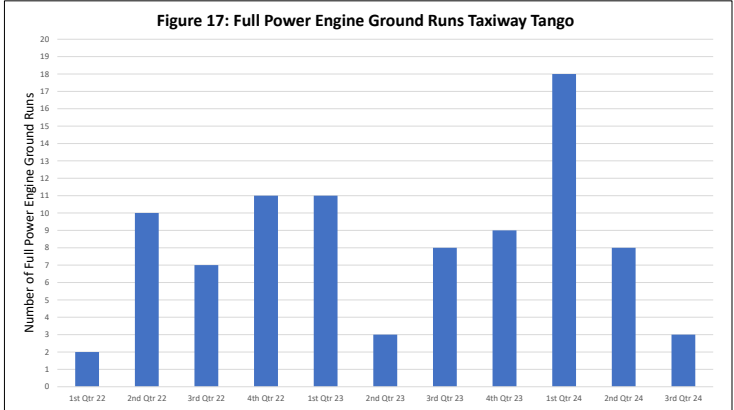
Engine Ground Running is required by airlines following essential aircraft maintenance and only takes place when absolutely necessary for safety reasons, in line with our Engine Ground Running Policy.

No Engine Ground Running may take place without the prior written permission of the Airfield Duty Manager (ADM), with the exception of check starts and ground idle. Full power engine ground running is not permissible between the hours of 2300 and 0600 (0800 on Sundays). In addition, no full power Engine Ground Running is permitted between 1030 and 1230 hours on Sundays and Good Fridays.

Any full-power Engine Ground Running conducted within the Morning Shoulder Period (MSP) which is between 0600 and 0700 hours (0600 to 0800 hours on a Sunday) has an associated Morning Shoulder Period noise level assessment carried out. There have been no full power Engine Ground Runs carried out in the Morning Shoulder Period since the 2nd quarter of 2019.

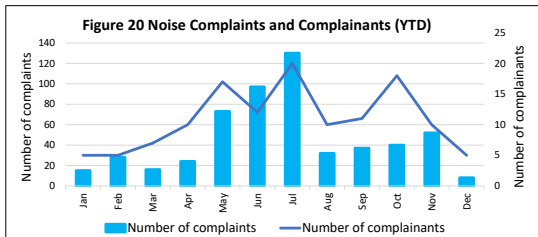
Figure 17 shows a quarterly profile of the number of full power Engine Ground Runs conducted on Taxiway Tango. Tango is located to the East of the airfield and Engine Ground Runs will only take place here between the hours of 07:00 and 20:00.

Figure 18 shows the quarterly profile of full power Engine Ground Runs since the 4th Quarter of 2019. The second quarter of 2020 saw the highest number of full power engine ground runs with 68, each quarter following this has seen the number remain below 22.



Aircraft Activity Complaints

Complaints - 2024



In Quarter 4 2024, 100 aircraft complaints were received from 28 individual correspondents (complainants), who collectively contacted the airport on 55 separate occasions.

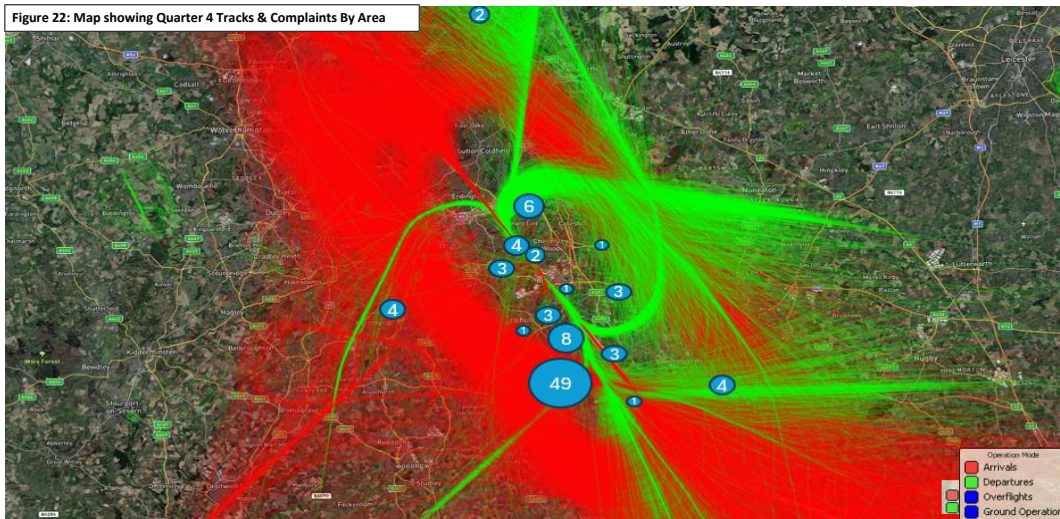
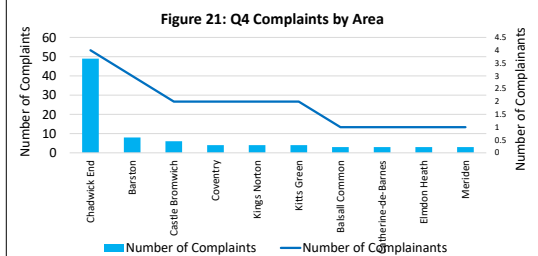
When compared to Quarter 4 2023 there has been a 49.3% increase in the number of aircraft complaints received and a 40% increase in the number of complainants.

Figure 20 (left) illustrates the number of noise complaints received by month for 2024 YTD. In Q4, November saw the highest number of complaints (52) and October saw the highest number of complainants (18).

Figure 21 (below left) provides a breakdown of complaints and complainants by area of origin for Q4 2024, for the top ten areas of complaint. Chadwick End is the area from which we received the most complaints in Q4 2024 with 49 complaints from 4 complainants.

Figure 22 (right) is a map showing the distribution of individual complainants, as well as the tracks of all movements in Q4 2024.

It should also be noted that during Q4 2024, five persistent complainants have been excluded from the statistics in the figures shown, as per the Birmingham Airport Complaints Policy and as reported to the Airport Consultative Committee. These complainants raised a further 1389 complaints in Q4 2024.



Complaints - Trend Analysis

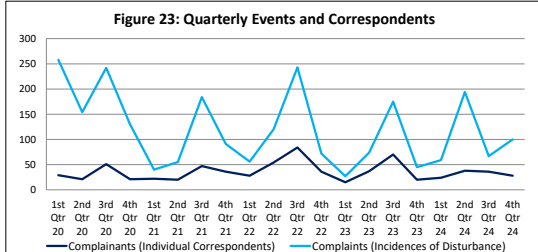
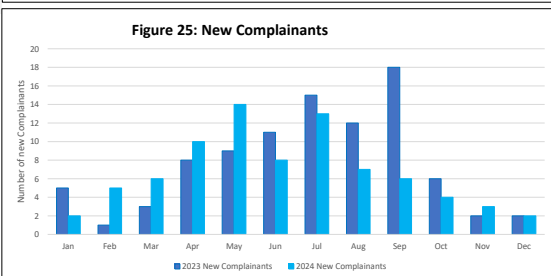
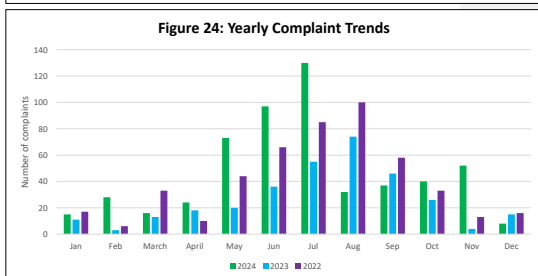


Figure 23 (left) shows quarterly complaints and complainant numbers and trends over a five year period, showing a peak in complaints and complainants at Q3 2019.

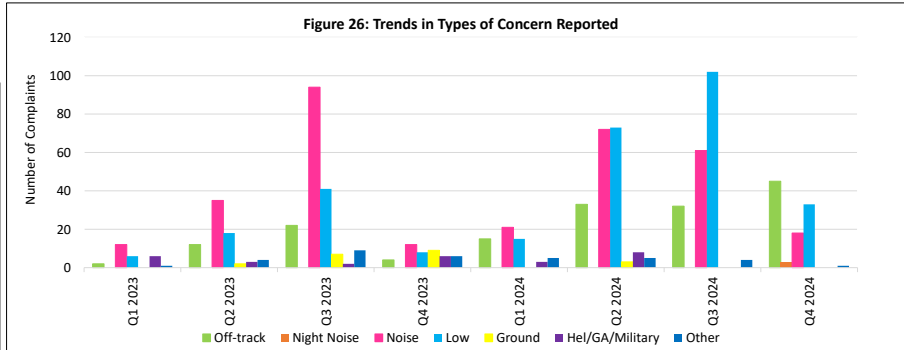
Figure 24 (below left) shows a comparison between the number of complaints per month for 2024, 2023 and 2022. October and November 2024 show an increase when compared with the same months in 2022 and 2023, while December 2024 shows a decrease on 2022 and 2023.

Figure 25 (below) shows the number of new complainants for 2023 and 2024, with the largest number of new complainants seen in September 2023 (18).

Figure 26 (below right) shows noise complaints broken down by concern category (Noise, Off-Track, Low Flying Aircraft, Ground Noise, Helicopter/General Aviation/ Military, Other) by quarter. In Q4 2024 the category with the most complaints was Off Track aircraft with 45 complaints, the category with the fewest complaints was Ground (ground based noise) and Helicopter/General Aviation/ Military with 0. The table (right) shows noise complaints by concern category reported, this year vs last year rolling. In December 2024 a new concern type category was added: "Night Noise".



Concern Type	1st Qtr 2024	1st Qtr 2023	2nd Qtr 2024	2nd Qtr 2023	3rd Qtr 2024	3rd Qtr 2023	4th Qtr 2024	4th Qtr 2023	Last 12 months	Previous 12 Months
Off Track	15	2	33	12	32	22	45	4	125	40
Noise	21	12	72	35	61	94	18	12	172	153
Night Noise							3		3	0
Low	15	6	73	18	102	41	33	8	223	73
Ground Noise	0	0	3	2	0	7	0	9	3	18
Hel/GA/Military	3	6	8	3	0	2	0	6	11	17
Other	5	1	5	4	4	9	1	6	15	20
TOTAL	59	27	194	74	199	175	100	45	552	321



Airlines & Air Traffic

Airline Noise Performance

Rank by ATM	Airline Name	Total Movements	CDA Performance	Rank (CDA)	Track Keeping Performance	Rank (TK)
1	Ryanair	2088	97.29%	2	99.71%	5
2	Jet2.com	1637	94.22%	4	99.88%	3
3	EasyJet	1335	93.70%	6	99.93%	2
4	TUI	910	93.12%	8	99.56%	6
5	KLM Royal Dutch Airlines	442	87.95%	17	99.32%	7
6	Emerald Airlines (UK)	422	90.02%	10	100.00%	1
7	Lufthansa	372	89.25%	13	99.73%	4
8	Air France	308	75.32%	20	100.00%	1
9	Loganair	281	93.24%	7	100.00%	1
10	Emerald Airlines	243	83.54%	19	99.17%	9
11	EasyJet Europe	230	89.57%	12	100.00%	1
12	Emirates	187	88.24%	16	98.40%	13
13	Turkish Airlines	180	95.56%	3	98.89%	12
14	Aer Lingus	172	88.95%	15	100.00%	1
15	Eurowings	147	85.71%	18	99.32%	8
16	SunExpress	129	92.25%	9	100.00%	1
17	Ryanair UK	102	98.04%	1	100.00%	1
18	Lufthansa City	100	90.00%	11	100.00%	1
19	Qatar Airways	97	93.88%	5	98.97%	10
20	Aurigny Air Services	93	89.13%	14	98.92%	11

The table to the left shows airline noise performance for the top 20 airlines by total ATM's. Airlines are ranked by the number of movements for Q2 2024. The ranking within each metric is also presented.

The methodology used to calculate the two metrics that form the airline noise performance table are described below. In order to drive continuous improvement and to help showcase airline performance in relation to noise, this table has been developed and is presented to airlines on a quarterly basis through the Operation Pathfinder programme. In collaboration with airlines, we have identified operational metrics which are being monitored and reported against. These metric will develop over time in collaboration with the airlines. Please note, from Q3 2023 our track keeping target has been increased from 97% to 99%.

Continuous Descent Approaches (CDA) and Track Keeping (TK) are operational metrics. Airlines with more than ten movements per week during Q3 2023 are included in the ranking. Airlines with CDA or Track Keeping performance in green have met our CDA (96%) and Track Keeping (99%) targets. Airlines with CDA or Track Keeping performance in the red or amber range will be considered as a priority for engagement and we will work with them to improve their operational performance.

Continuous Descent Approaches (CDA) Performance is the first operational metric in the airline noise performance table and relates to the vertical profiles flown during arrival. CDA performance is equal to the proportion of arrivals that meet the criteria for CDA, i.e., no level segment longer than 2.5 nautical miles below the altitude of 7,000ft. Continuous descent approaches reduce the noise impact because they require significantly less engine thrust, which leads to reduced emissions of air pollutants and noise, with the aircraft staying higher for longer. Airport-wide CDA performance will also be presented separately in this report.

RAG definition: **Green** ≥ 96% **96% < Amber** ≤ 85% **Red** < 85%

Track Keeping (TK) Performance Track keeping performance is the second operational metric in the airline noise performance table and applies to the lateral departure track. All departures are required to stay within the Noise Preferential Routes (NPRs) designed to take departing aircraft over the least populated areas. Track keeping performance is equal to the proportion of departures that stay within the NPRs until they reach the required altitude of 3,000ft or 4,000ft depending on the route. Airport-wide Track Keeping performance is also presented separately in this report.

RAG definition: **Green** ≥ 99% **99% < Amber** ≤ 95% **Red** < 95%

Runway Statistics

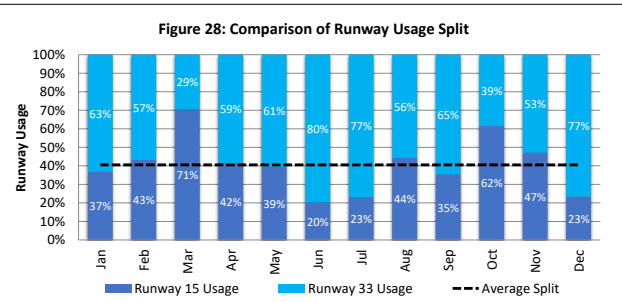
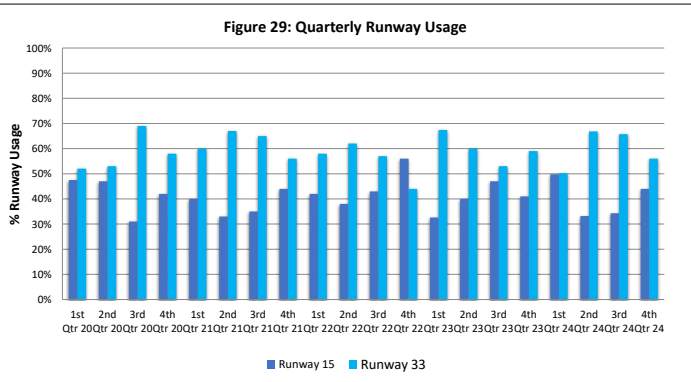
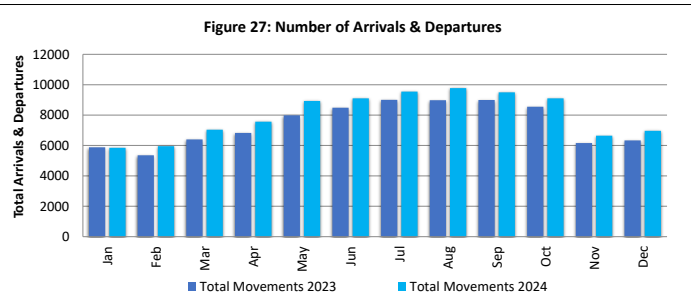


Figure 30 (right) Birmingham Airport has one runway which operates in two directions, known as Runway 15 and Runway 33; the direction of operation is primarily dependent upon meteorological conditions.

Where winds are below five knots, we operate our 'Preferential Runway' Policy, this is when Air Traffic Control will generally direct arrivals onto Runway 33 to minimise the risk of wake vortex strikes. Wake vortices are rotating columns of air generated by arriving aircraft as they pass through the air. Infrequently and in certain still, calm conditions they can cause damage to roofs. Although vortex strikes are rare, the Preferential Runway Policy minimises the risk to the large number of properties located to the north of the airport underneath the R15 centreline by directing arrivals onto R33, where there are very few properties at risk. Taken together, wind direction and the Preferential Runway policy explain why Runway 33 is utilised more than Runway 15.

Figure 27 (top left) shows the total number of air transport movements (ATMs) (both arrivals and departures) for 2023 and 2024. October, November and December saw an increase in movements in Q4 of 2024 vs 2023.

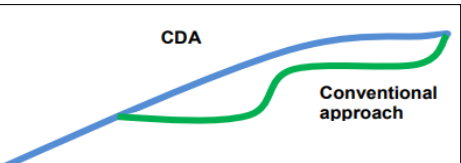
Figure 28 (top middle) shows monthly runway usage % for 2024. The average split (dotted line) is also shown. For 2024 YTD the average split is 40% R15 and 60% R33.

Figure 29 (bottom left) shows quarterly runway usage over a 5-year period. Over Q4 of 2024 the average runway split is 44% R15 and 56% R33. The number of Air Traffic Movements (ATMs) by runway for the 4th Qtr 2024 was 10,351 ATMs on Runway 15 and 12,359 ATMs on Runway 33.



Arrivals Performance + Helicopters

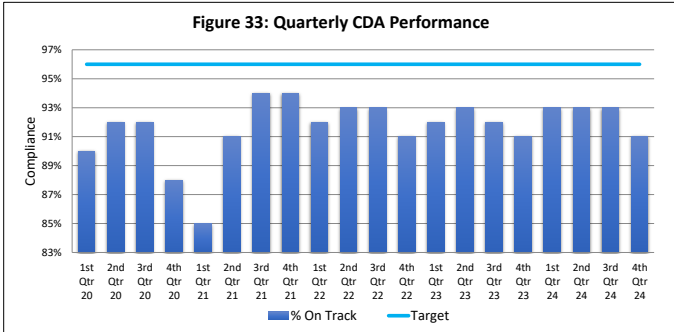
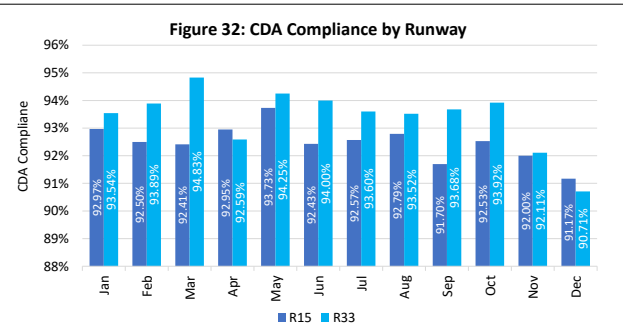
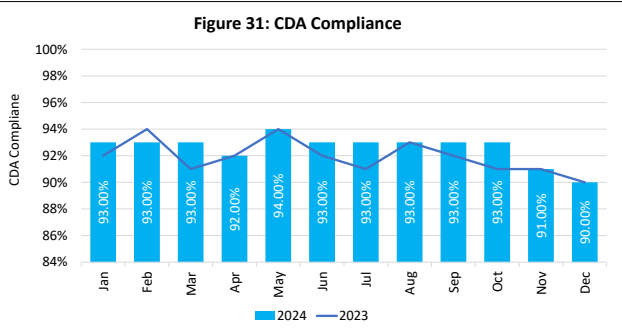
Continuous Descent Approaches (CDA)



Aircraft operate a Continuous Descent Approach (CDA) staying higher for longer, by descending at a continuous rate. CDAs require less engine thrust, reducing air pollutant and noise emissions. CDA compliance in Q4 2024 saw a decrease from 93% in October to 91% in November to 90% in December 2024 **Figure 31 (Left)**. The Sustainability Team continues engage with airlines through the Operation Pathfinder Forum to drive improvement in both arrivals and departure performance.

Figure 32 (bottom-centre) provides a breakdown of CDA performance by Runway for 2024. Runway 33 arrivals had a higher degree of compliance than that of Runway 15 arrivals in October and November 2024, in December 2024 Runway 15 had a higher degree of compliance than Runway 33.

Figure 33 (bottom-right) shows CDA performance by quarter dating back to the fourth quarter of 2019. Compliance in the 4th Quarter of 2024 was lower than in the 1st, 2nd and 3rd Quarter of 2024.



Helicopter Movements

Although helicopters have no set routes that they are required to follow, in recognition of the community sensitivity around helicopter noise BAL has implemented a noise abatement policy for helicopter operations. This policy states that 'Helicopters should, except in the case of an emergency, avoid overflying the noise sensitive area at less than 500 feet AAL (Above Aerodrome Level). This area extends between 230° and 290° from the Western end of stand 506, to a distance of 0.5 NM' and covers the area of Elmdon and parts of Sheldon. Helicopters are also required to abide by the low flying rules, which require the helicopter to operate at a minimum height of 500 feet for rural areas and 1500 feet for built up areas. Exceptions to low flying rules do apply, including upon landing or take-off, utility network surveys and police helicopter movements.

Figure 34 shows quarterly helicopter movements since the fourth quarter of 2021, with a breakdown of the split between those within the night period (23:30-06:00) and those within the daytime (06:00-23:30). The second quarter of 2023 saw the highest number of helicopter operations with 304 in the day and 118 at night.

Figure 35 shows a breakdown of quarter 4 2024 helicopter movements by category. Police helicopters accounted for the largest proportion of movements with 73% of all helicopter operations.

The below table shows a summary of total helicopter ATM's by category and calendar year, from 2019 to 2024 YTD. Data shows that from 2019 to 2022 the most notable increase (98%) is in police helicopter operations. The Birmingham National Police Air Service (NPAS) have commented that 'Each flight conducted is due to an operational policing need to support and assist the public to combat crime or assist with saving life in finding vulnerable people. Members of the Police Helicopter Unit are indeed mindful that their operations can have an impact on local communities.' Police helicopter movements have

Operation Category	Year					
	2019	2020	2021	2022	2023	2024 YTD
Air Ambulance	4	2	2	1	5	22
Military	6	1	2	12	2	2
Training & Engineering	4	4	6	8	5	0
Search & Rescue	0	0	0	6	22	6
Displays and Events	0	0	1	3	4	4
Pipeline Surveying	30	11	5	12	24	14
Police	574	685	774	1158	863	400
Private Charter	18	2	15	18	28	55
Private Owner	229	151	259	254	286	209
Total	865	856	1064	1472	1239	712

