

Departures Performance

Track Keeping

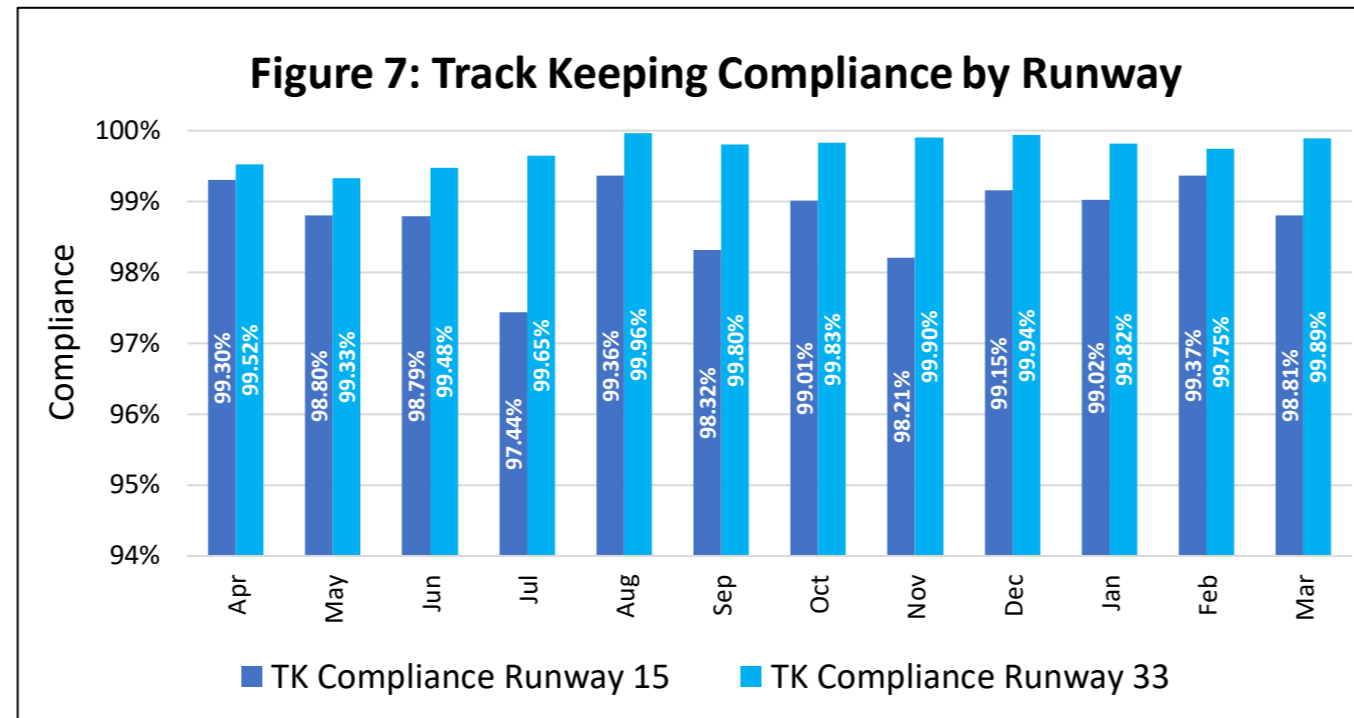
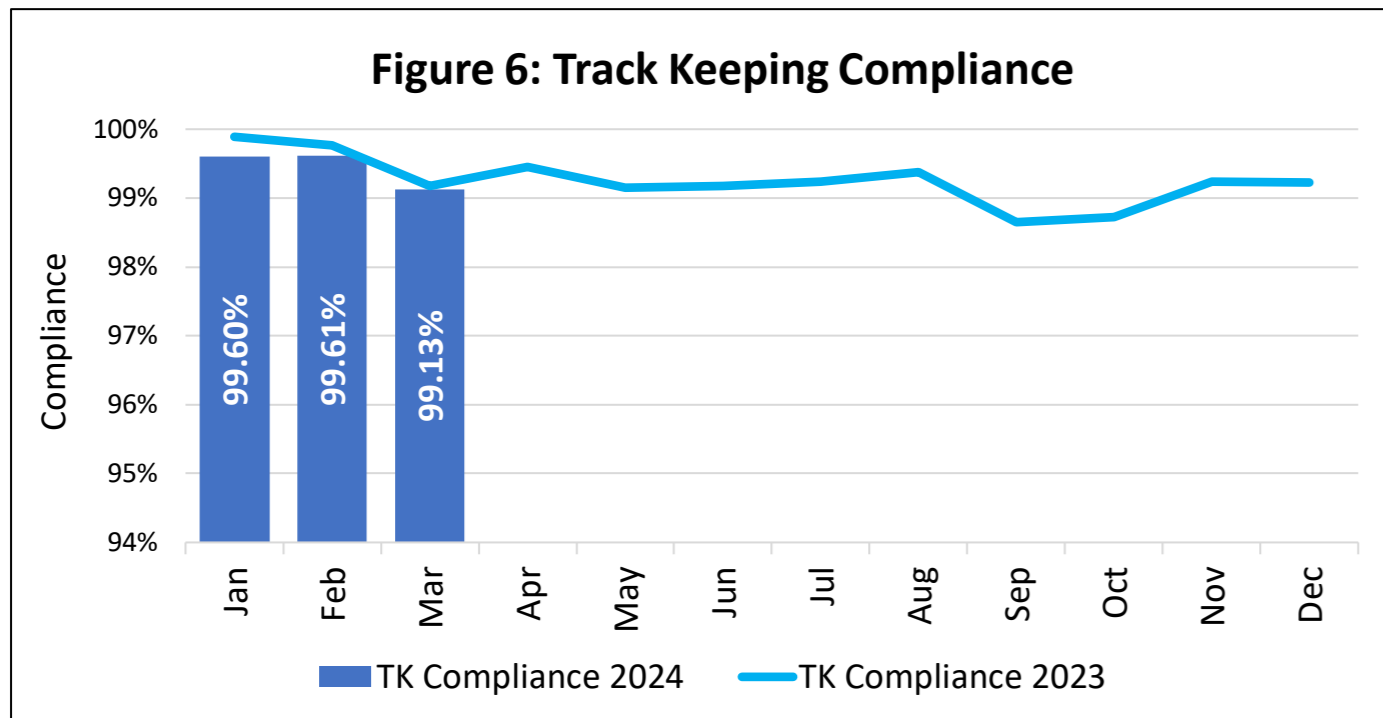


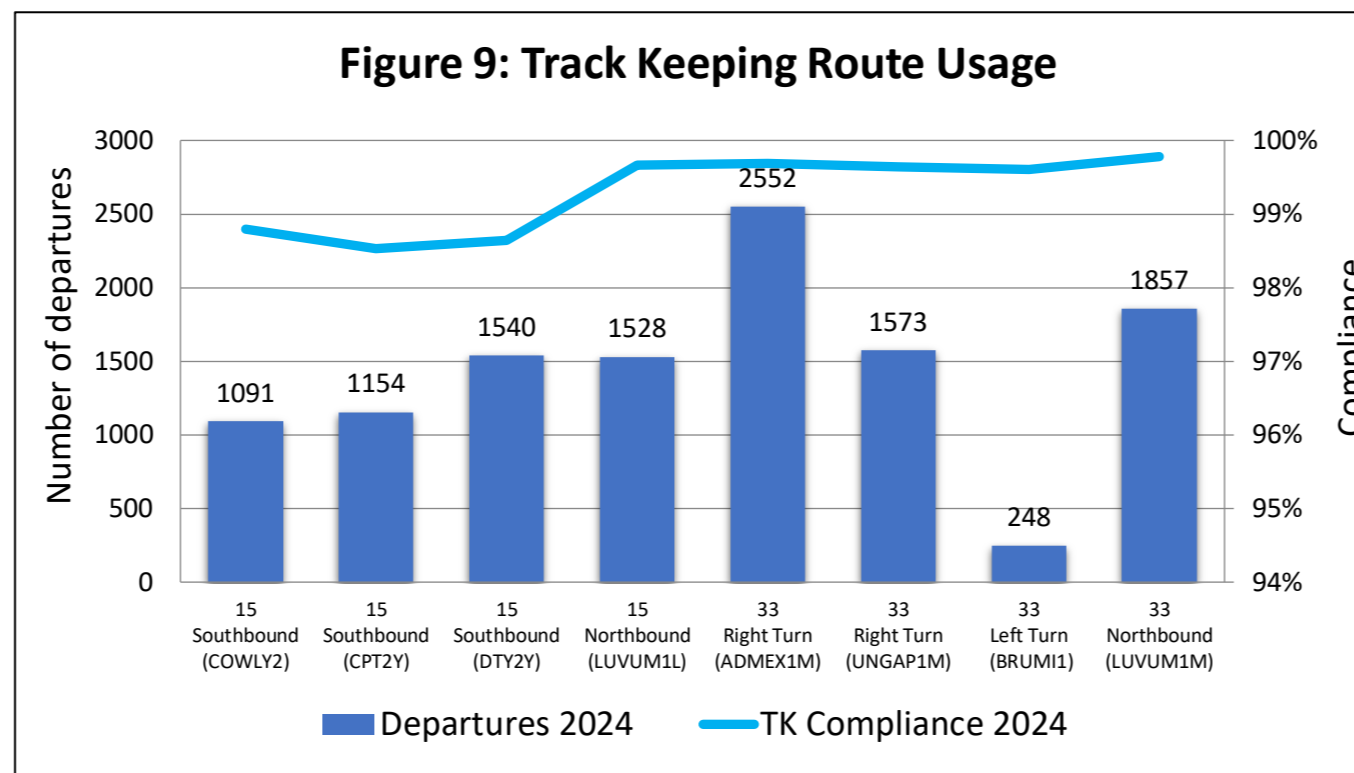
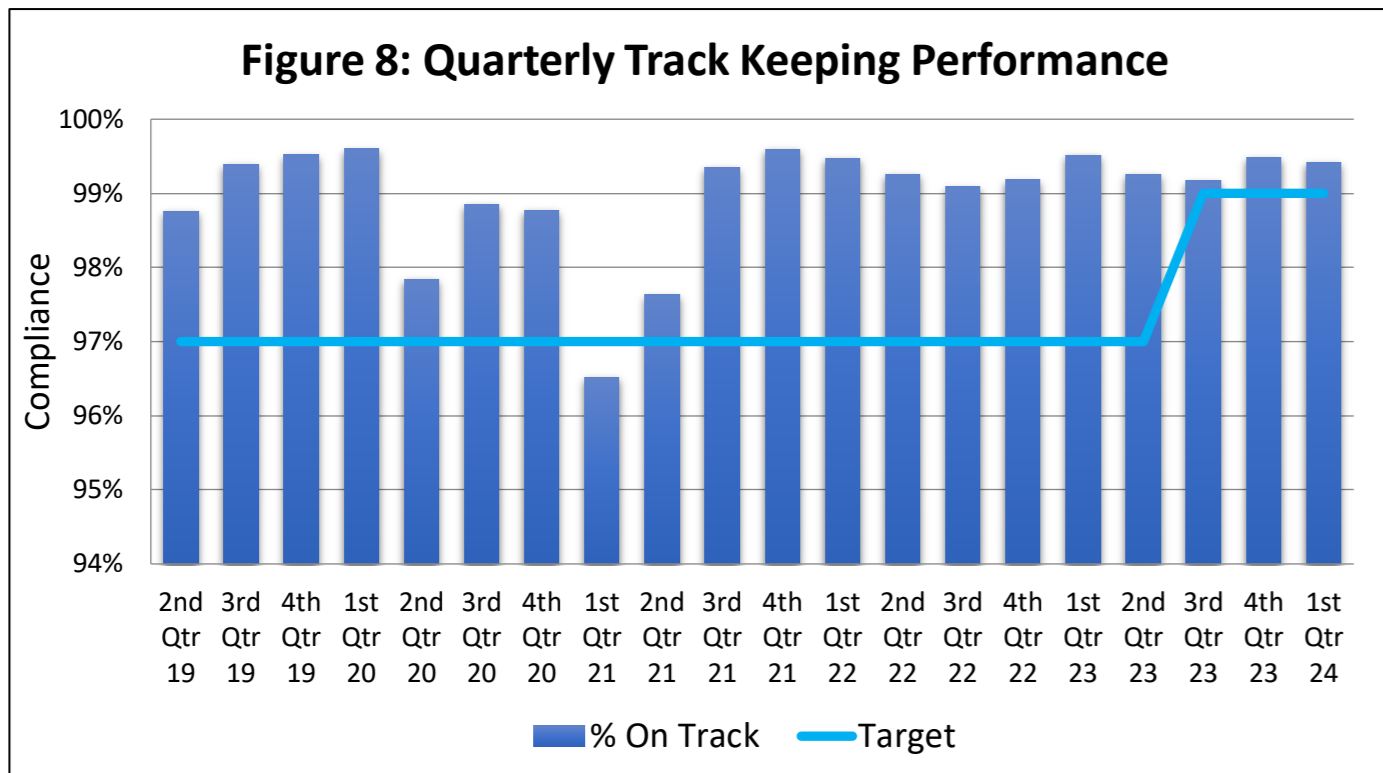
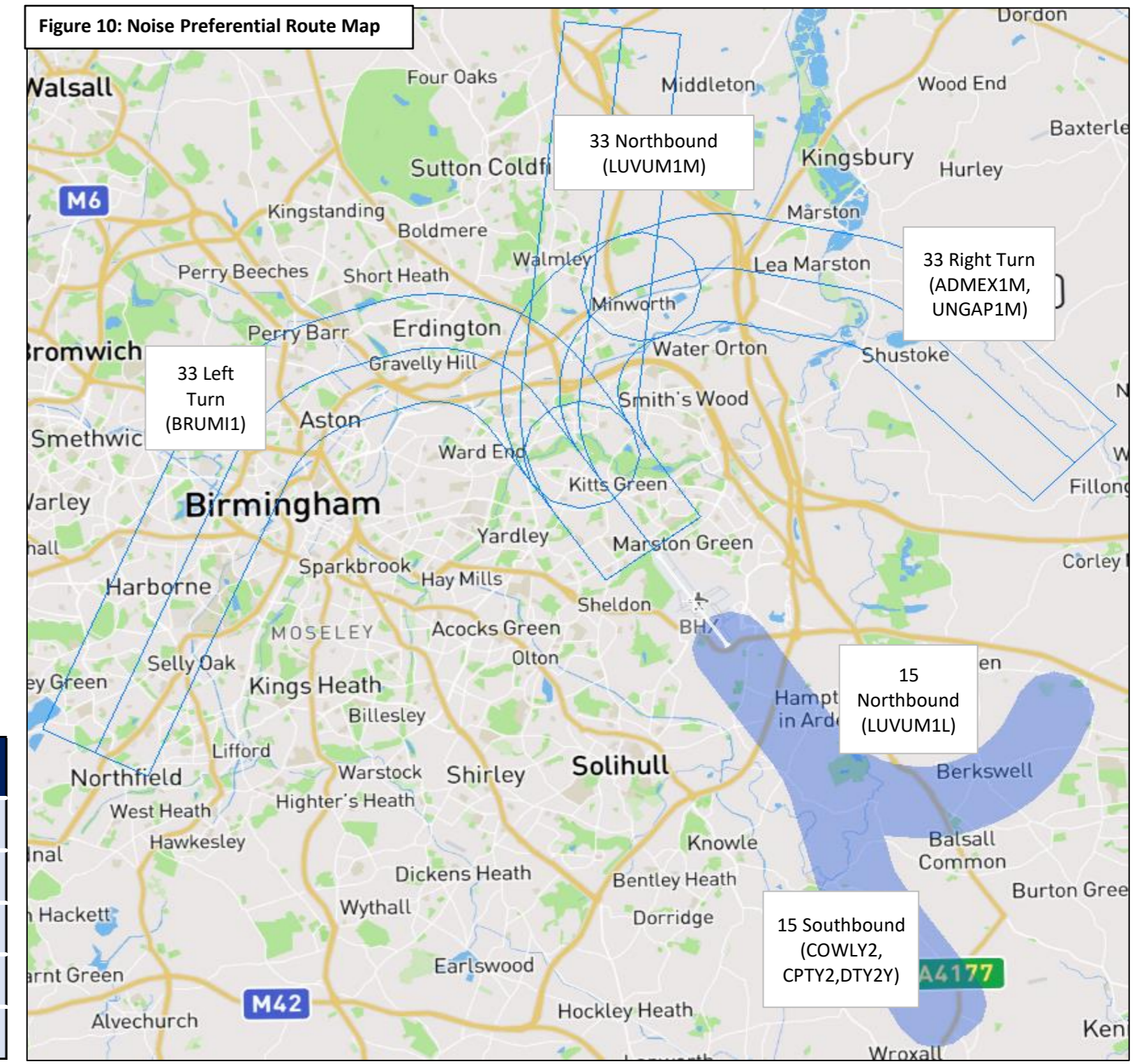
Figure 10 shows a map of the five noise preferential routes (NPR's) for departures in use at Birmingham Airport. The table below lists the altitudes up to which aircraft are required to stay within the noise preferential route, in order to be classed as 'on-track'. Once above the minimum vectoring altitude, 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 Q1 2024 remained in excess of 99% in each month.

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.

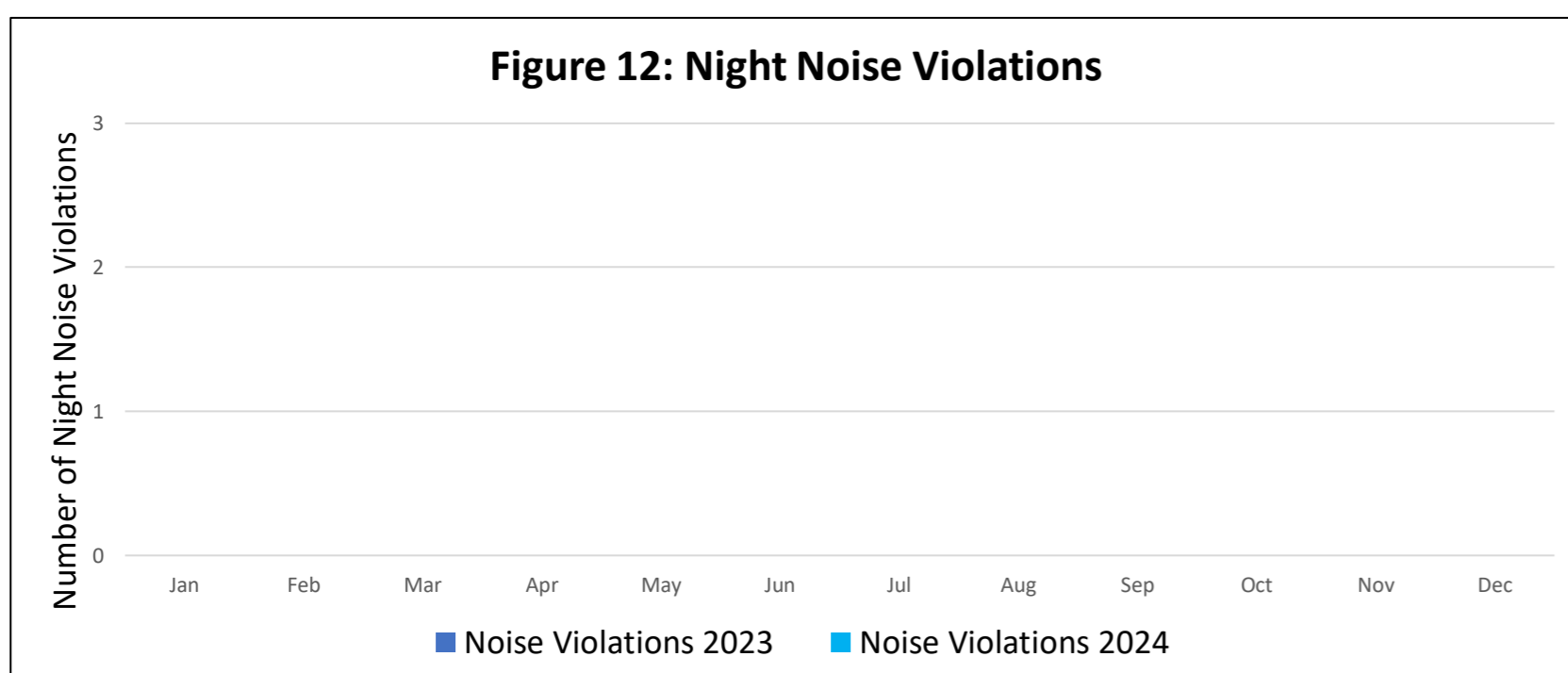
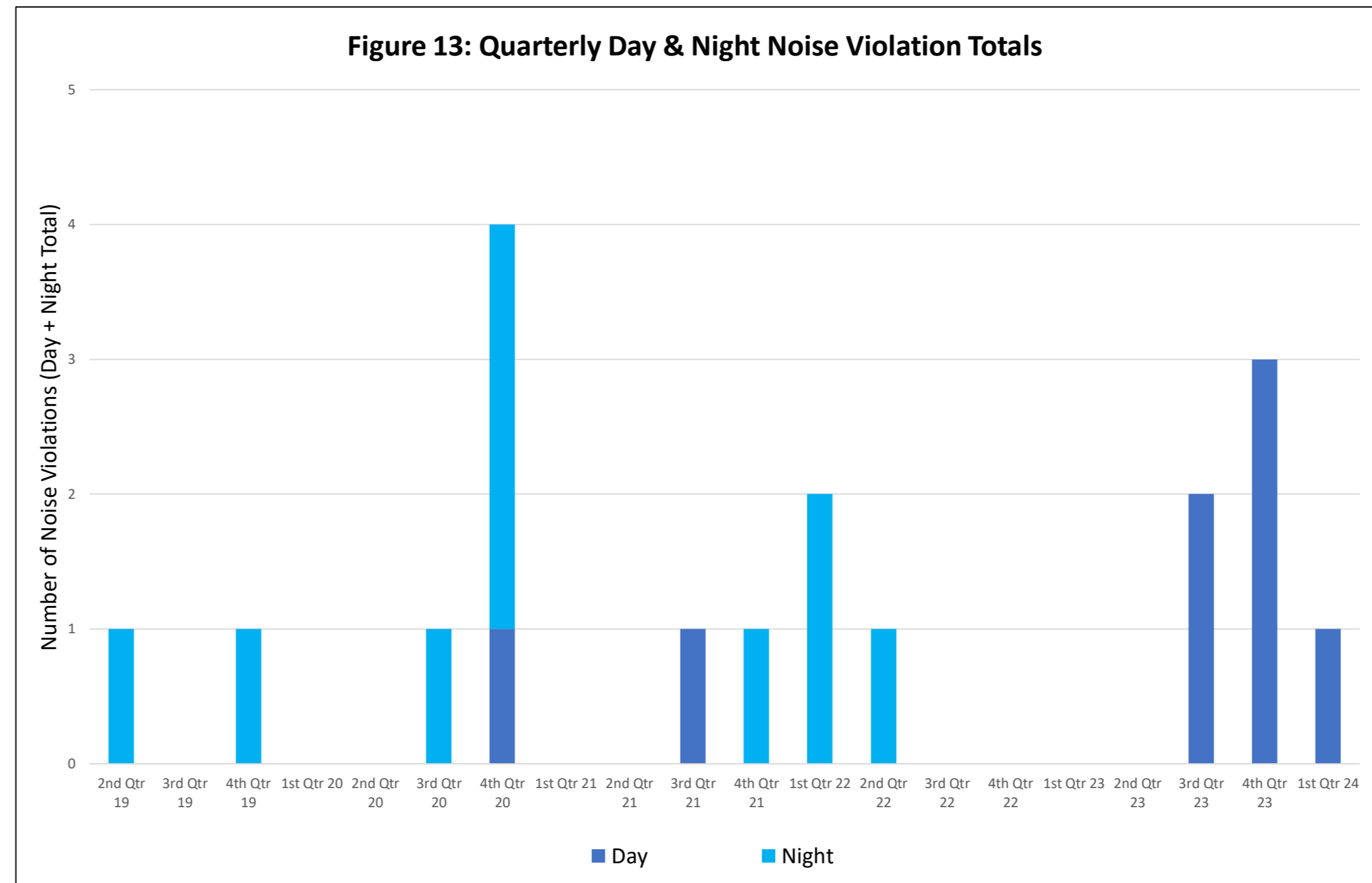
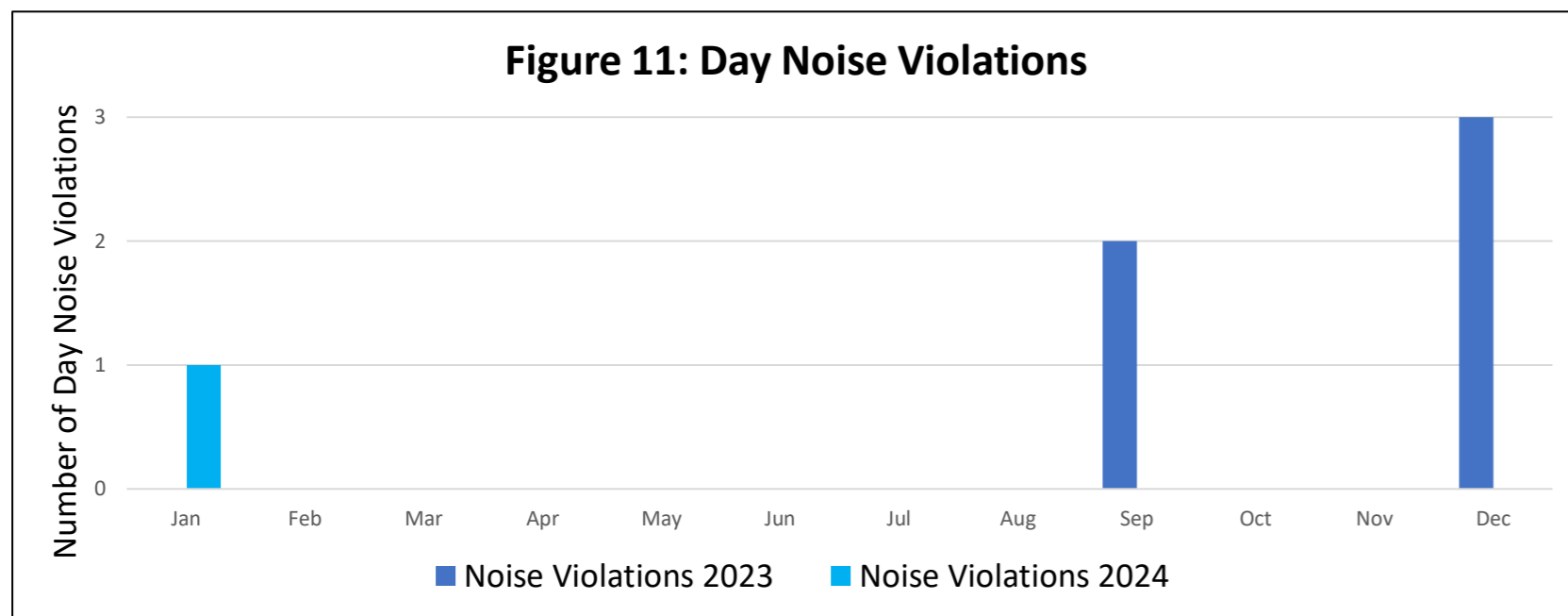
Figure 8 shows quarterly track keeping performance vs target. Track keeping has exceeded 96% consistently since 2018 and has met target for all quarters except Q1 2021. It should be noted that from Q3 2023 the track keeping target has risen from 97% to 99%.

Figure 9 shows 2024 YTD route usage and the associated track-keeping compliance. Track keeping in Q1 was above 94% for all routes. The routes most utilised were R33 Right-turn (ADMEX1M/ UNGAP1M), R33 Northbound (LUVUM1L) and R15 Southbound (COWLY2, CPTY2, DTY2Y, WCO2Y) consecutively.



Route	Minimum Vectoring Altitude
15 Southbound (COWLY2, CPT27, DTY2Y)	4000 ft
15 Northbound (LUVUM1L)	3000 ft
33 Right Turn (ADMEX1M/UNGAP1M)	3000 ft
33 Left Turn (BRUM1)	3000 ft
33 Northbound (LUVUM1M)	3000 ft

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 11 shows monthly daytime noise violations, comparing 2023 to 2024. There were five daytime noise violations in 2023. There was one daytime noise violation in the 1st Quarter of 2024. This was incurred by an Emirates A380 flight, measuring 90.4dB at Noise Monitor 2 on 02/01/2024 at 14:10.

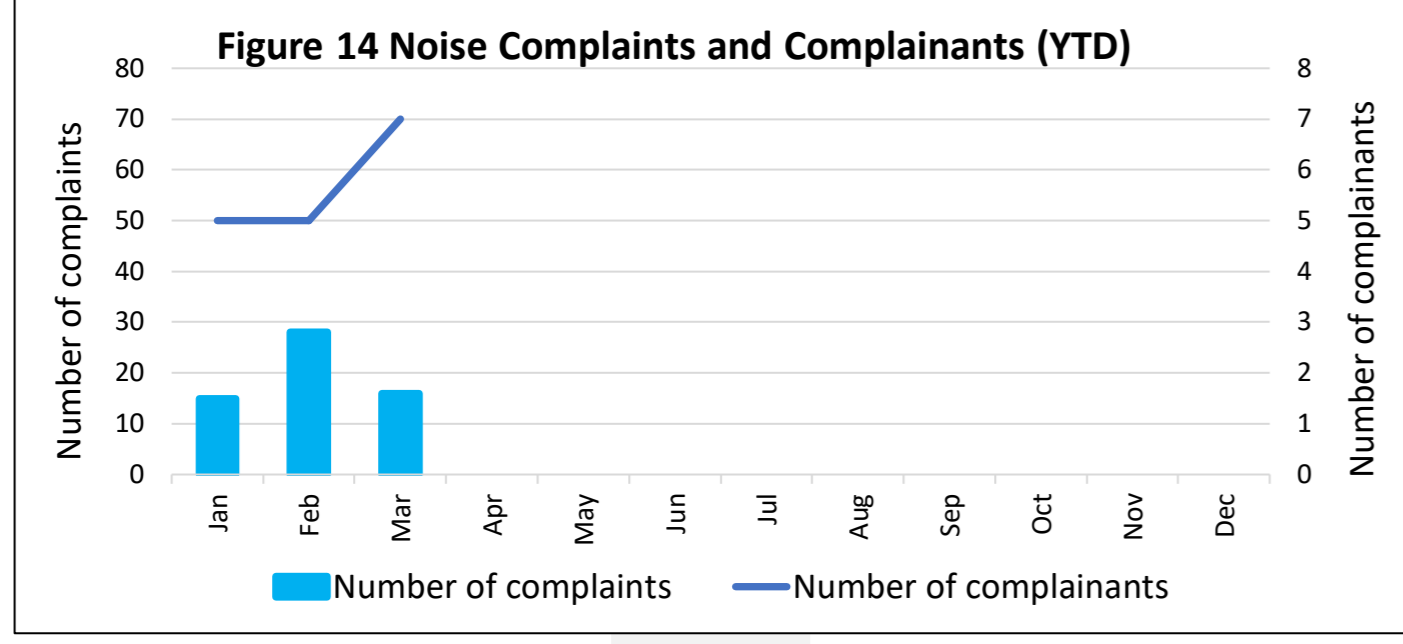
Figure 12 shows monthly night noise violations, comparing 2023 to 2024. There were no night noise violations in 2023. There have been no night noise violations in Q1 2024. From 1st April 2024 the night noise limit will be reduced to 81dB(A).

Figure 13 shows quarterly day and night noise violations from Quarter 2 2019 to Quarter 1 2024. There have been no night noise violations since Quarter 2 2022. Peak night noise violations occurred in Quarter 4 of 2020 with three night noise violations. Peak day noise violations occurred in Quarter 4 2023, with three.

Date & Time (GMT)	NMT	Max. Level dB(A)	Flight No.	Runway	Aircraft	Paid (Yes/No)
02/01/2024 14:10	2	90.4	UAE40	15	A388	Yes

Aircraft Activity Complaints

Complaints - 2023



In Quarter 1 2024, 59 aircraft complaints were received from 17 individual correspondents (complainants), who collectively contacted the airport on 23 separate occasions.

When compared to Quarter 1 2023 there has been an 119% increase in the number of aircraft complaints received and a 60% increase in the number of complainants.

Figure 14 (left) illustrates the number of noise complaints received by month for 2024 YTD. In Q1, February saw the highest number of complaints (28) and March saw the highest number of complainants (7).

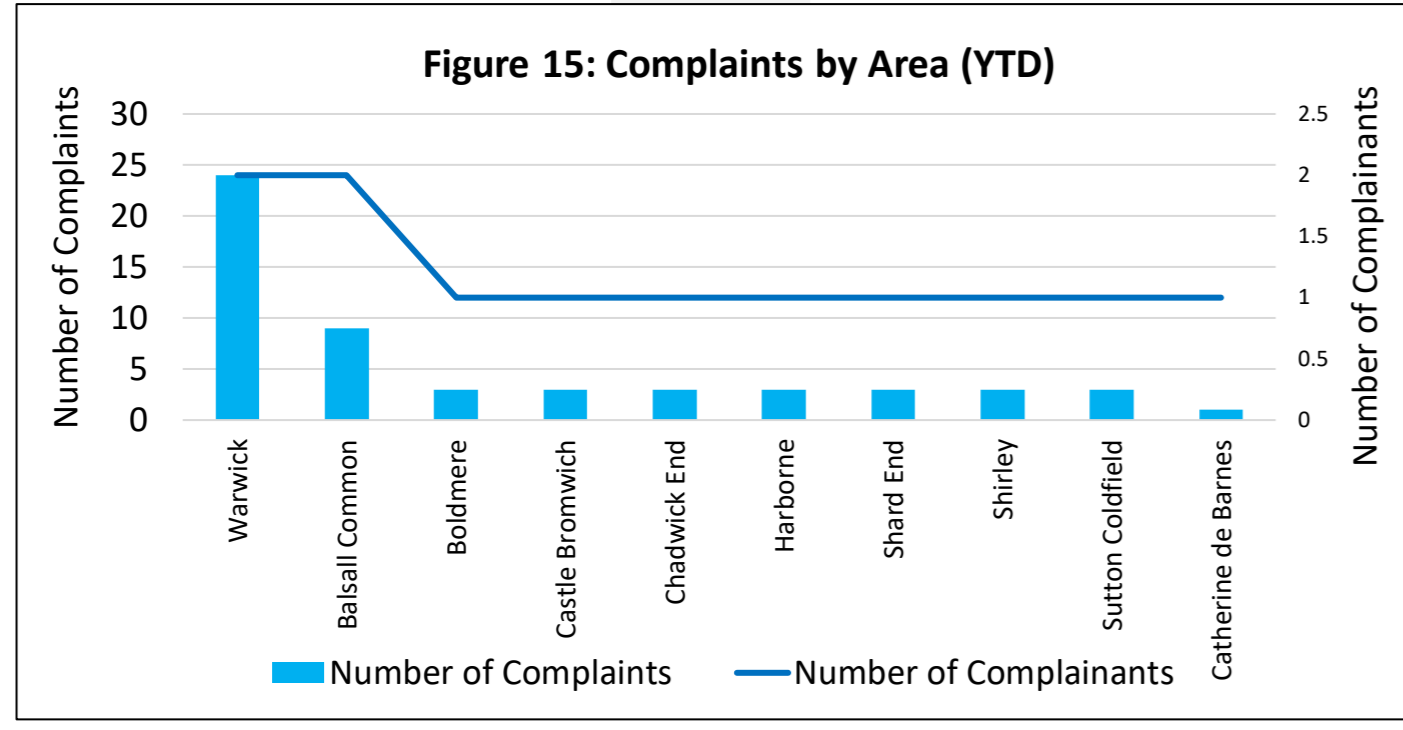


Figure 15 (below left) provides a breakdown of complaints and complainants by area of origin for 2024 Year to Date, for the top ten areas of complaint. Warwick was the area from which we received the most complaints in 2024 with 24 complaints from 1 complainant.

Figure 16 (right) is a map showing the distribution of individual complainants, as well as the tracks of all movements in Q4 2023.

It should also be noted that during Q1 2024, three 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 24 complaints in Q1 2024.

Figure 16: Map showing Quarter 1 Tracks & Complaints By Area



Complaints - Trend Analysis

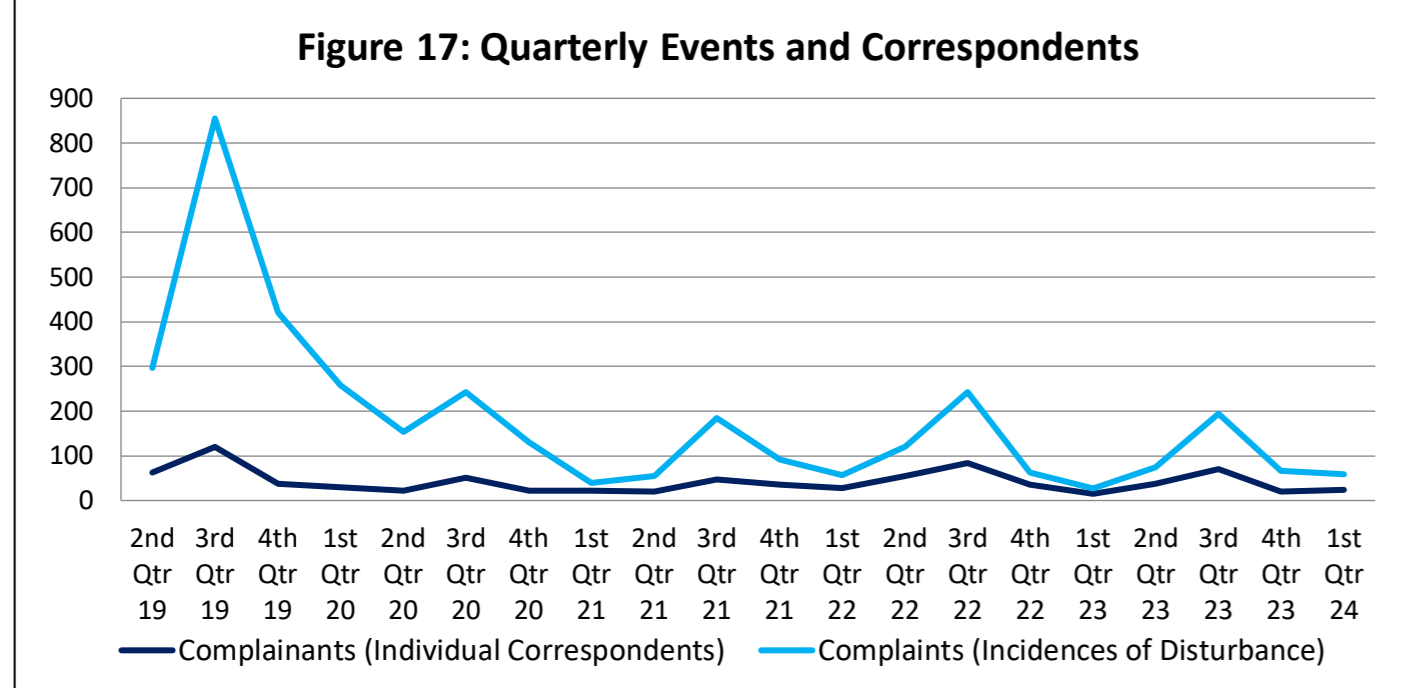
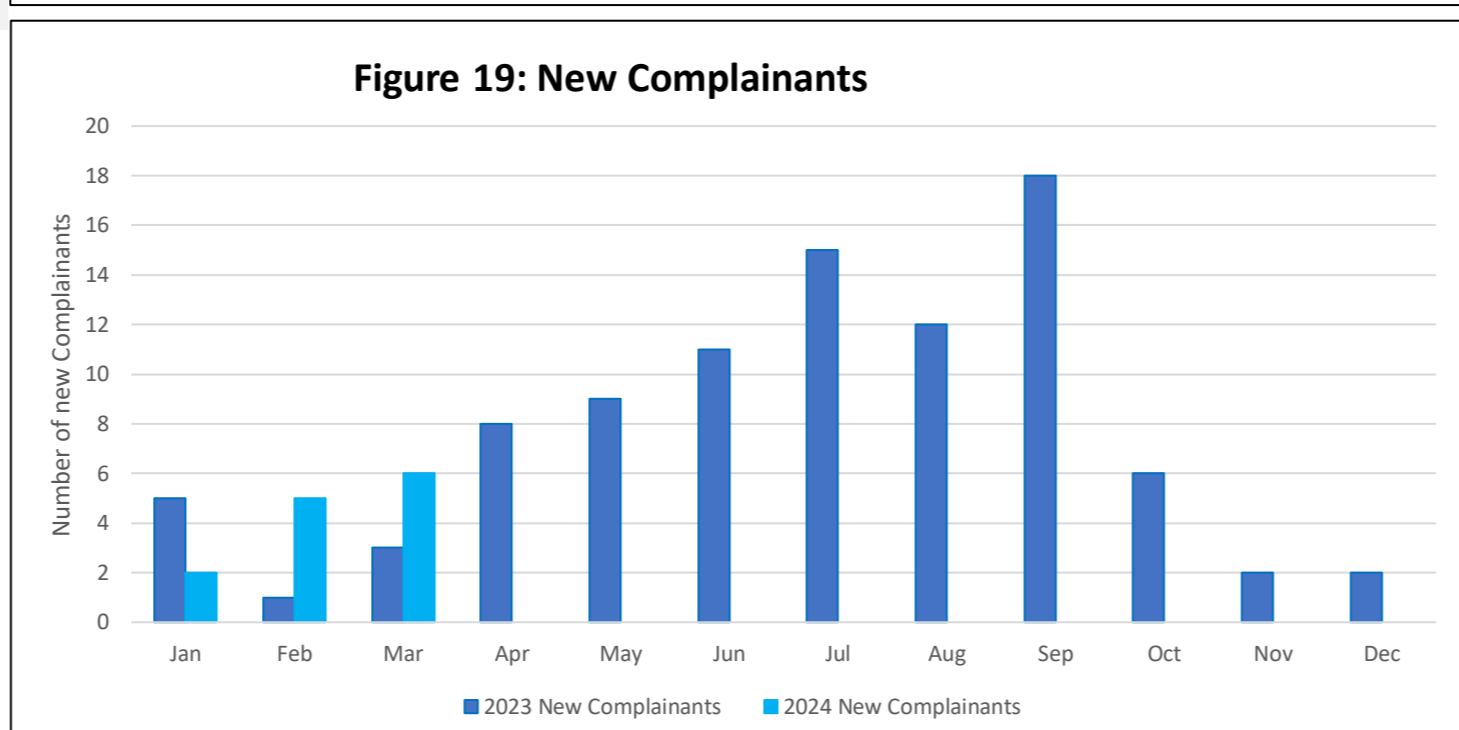
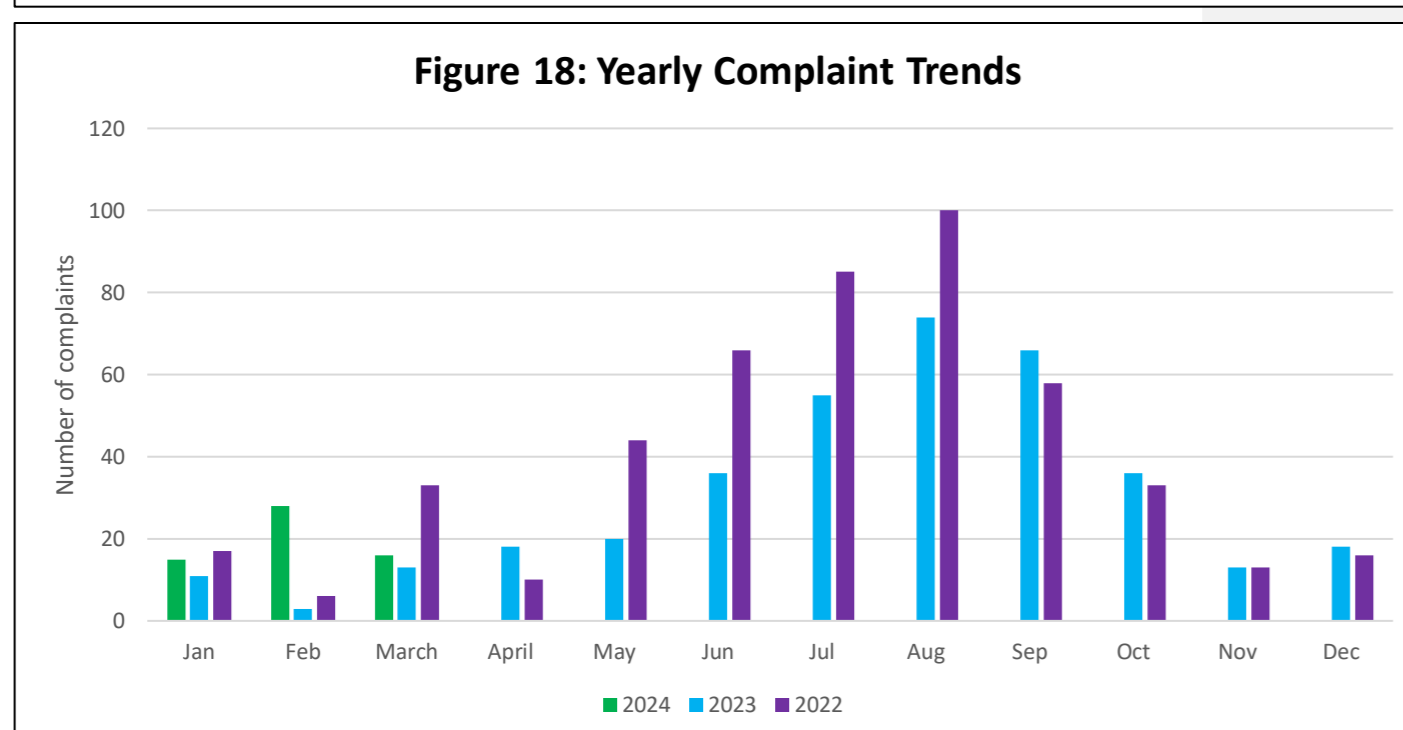


Figure 17 (left) shows quarterly complaints and complainant numbers and trends over a five year period, showing a peak in complaints and complainants at Q3 2019.

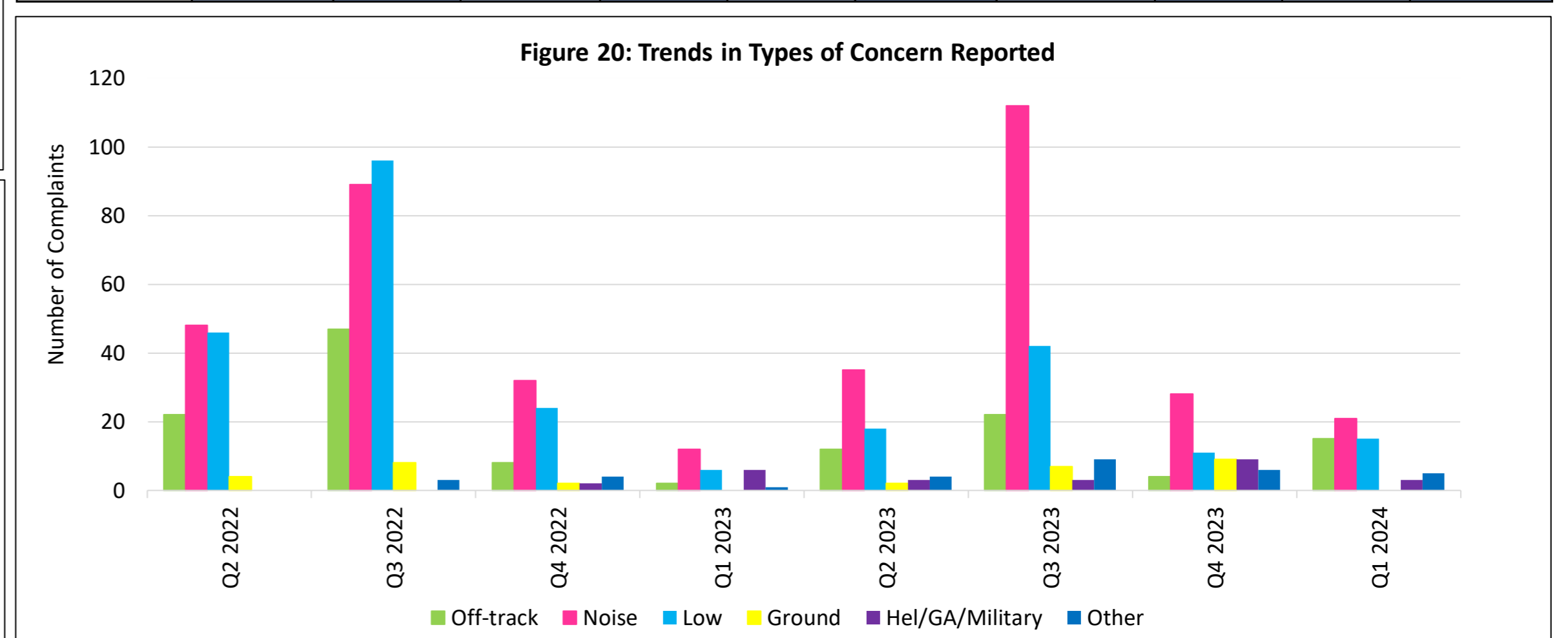
Figure 18 (below left) shows a comparison between the number of complaints per month for 2024, 2023 and 2022. January, February, and March shows an increase complaints compared to 2023.

Figure 19 (below) shows the number of new complainants for 2023 and 2024, with the largest number of new complainants seen in September 2023 (18). New complainants for January decreased in 2024 compared with 2023, whereas February and March saw an increase on 2023's figures.

Figure 20 (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 Q1 2024 the category with the most complaints was Noise (aircraft noise) with 21 complaints, the category with the fewest complaints was Ground (ground based noise) with none. The table (right) shows noise complaints by concern category reported, this year vs last year rolling.



Concern Type	2nd Qtr 2023	2nd Qtr 2022	3rd Qtr 2023	3rd Qtr 2022	4th Qtr 2023	4th Qtr 2022	1st Qtr 2024	1st Qtr 2023	Last 12 months	Previous 12 Months
Off Track	12	22	22	47	4	8	15	2	53	79
Noise	35	48	112	89	28	32	21	12	196	181
Low	18	46	42	96	11	24	15	6	86	172
Ground Noise	2	4	7	8	9	2	0	0	18	14
Hel/GA/Military	3	0	3	0	9	2	3	6	18	8
Other	4	0	9	3	6	4	5	1	24	8
TOTAL	74	120	195	243	67	72	59	27	395	462



Airlines & Air Traffic

Airline Noise Performance

Rank by ATM	Airline Name	Total Movements	CDA Performance	Rank (CDA)	Track Keeping Performance	Rank (TK)
1	Ryanair	3613	98.71%	1	99.44%	8
2	Jet2.com	1966	96.63%	2	99.59%	6
3	TUI	1535	95.41%	5	99.61%	5
4	EasyJet	1423	93.27%	9	100.00%	1
5	KLM Royal Dutch Airlines	755	94.55%	7	99.68%	3
6	Emerald Airlines (UK)	728	88.77%	18	99.72%	2
7	Lufthansa	723	87.05%	19	98.89%	10
8	EasyJet Europe	591	96.61%	3	99.66%	4
9	Loganair	500	91.53%	12	100.00%	1
10	Air France	455	78.51%	20	100.00%	1
11	Emerald Airlines	436	90.37%	14	99.54%	7
12	Aer Lingus	418	89.47%	17	100.00%	1
13	Easyjet Switzerland	381	92.11%	11	100.00%	1
14	Emirates	356	89.89%	16	100.00%	1
15	Turkish Airlines	353	93.22%	10	97.73%	11
16	Wizz Air	277	93.53%	8	100.00%	1
17	Zimex Aviation	247	90.32%	15	100.00%	1
18	Wizz Air Malta	233	94.83%	6	99.15%	9
19	Eurowings	219	90.83%	13	100.00%	1
20	Qatar Airways	177	96.59%	4	100.00%	1

The table to the left shows airline noise performance. Airlines are ranked by the number of movements for Q1 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

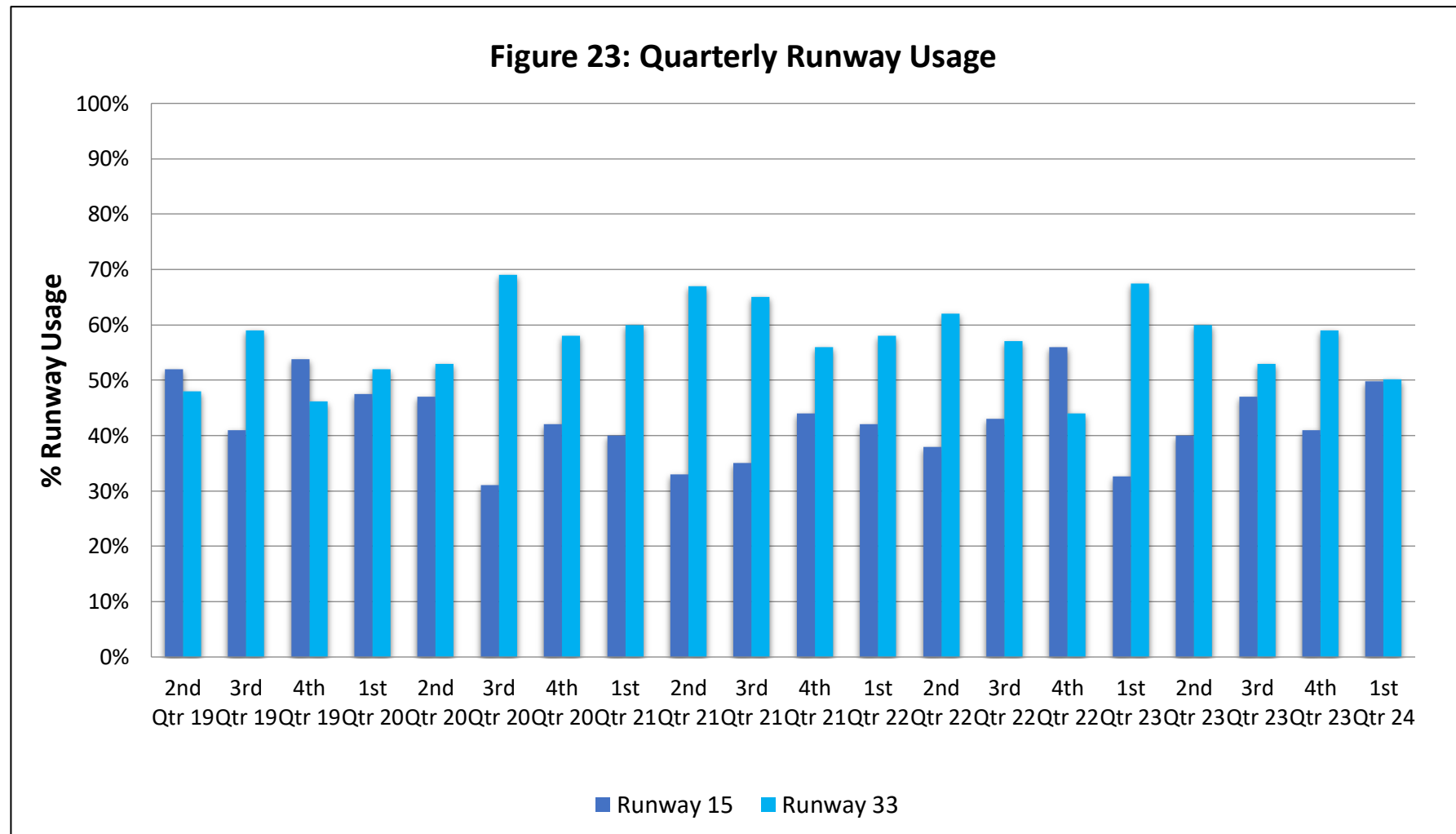
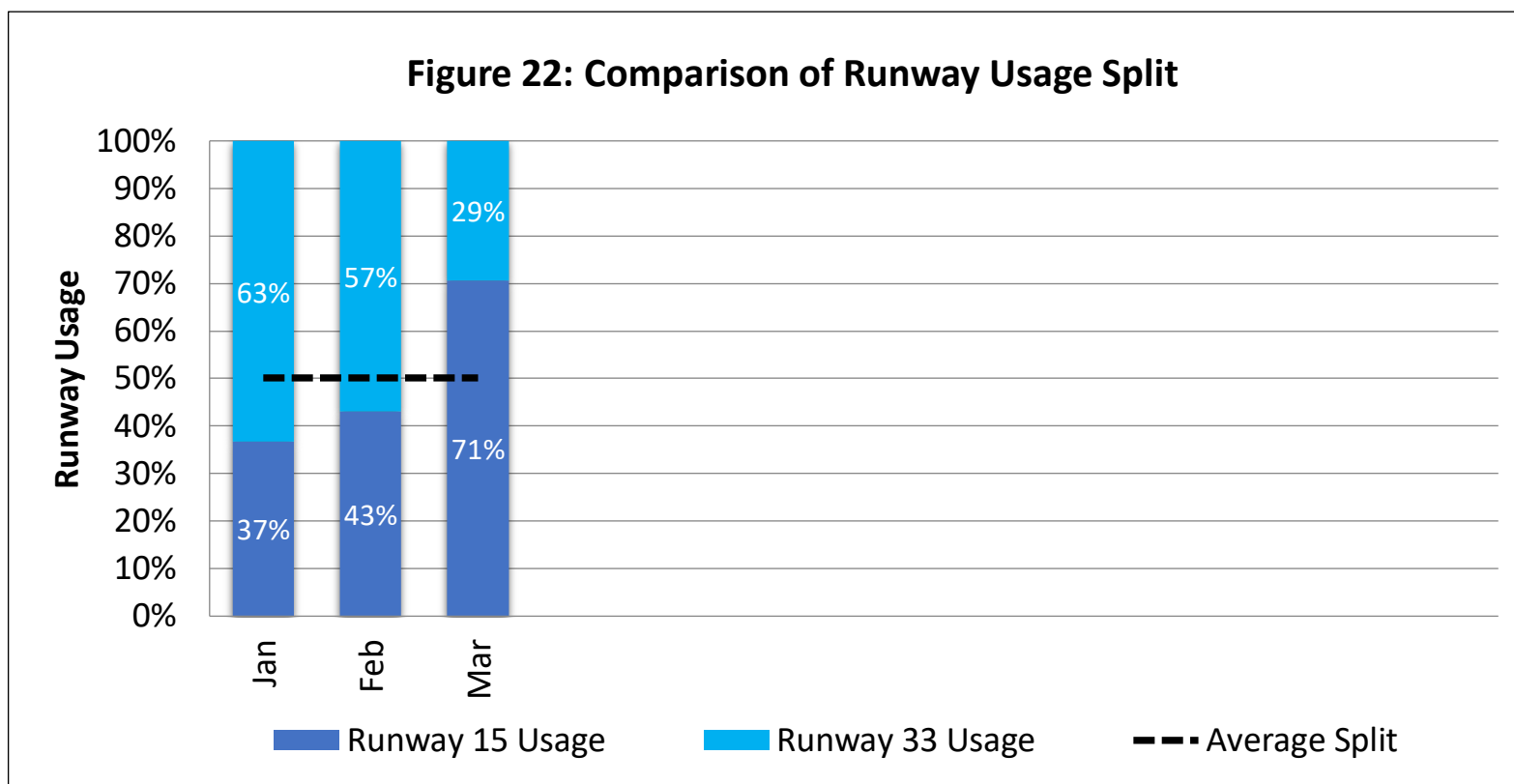
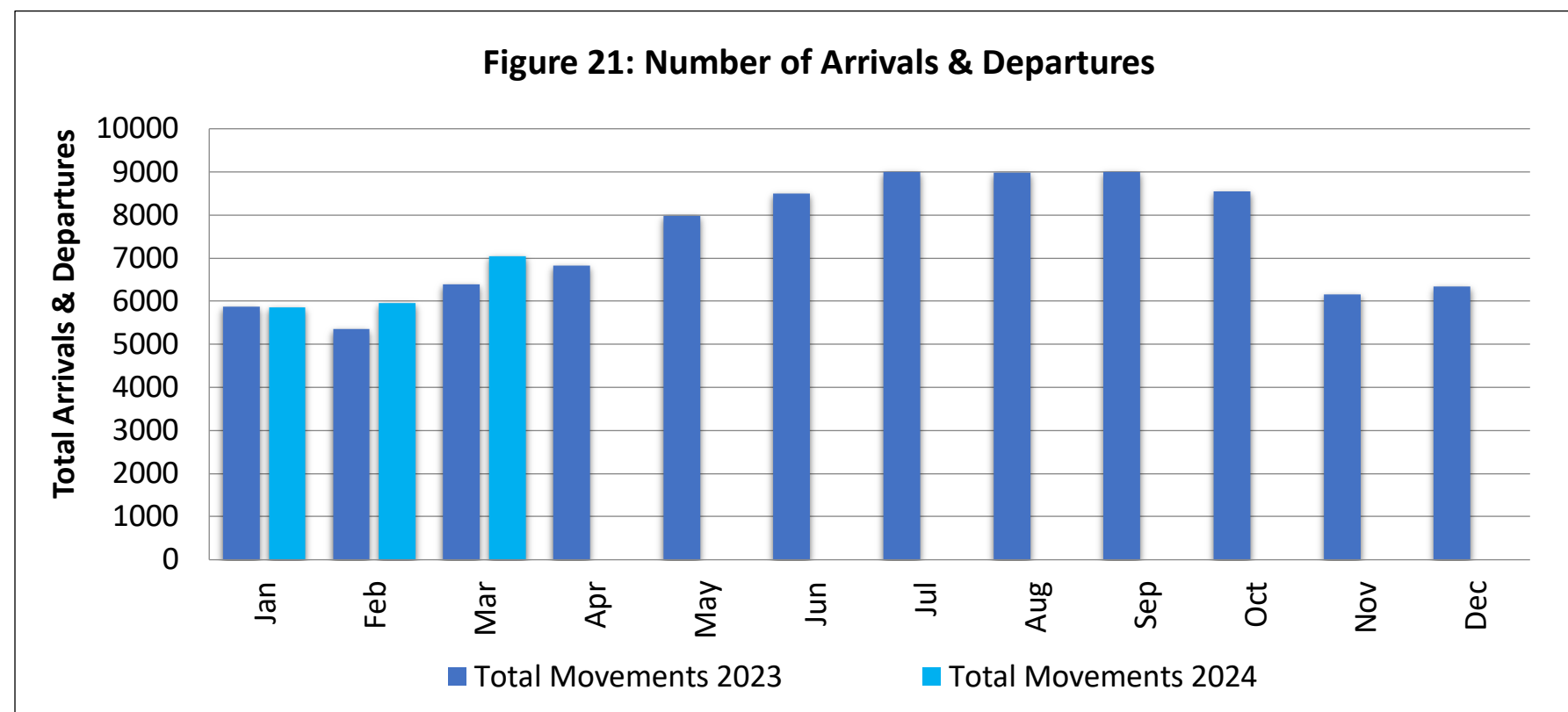


Figure 24 (right) Birmingham Airport has one runway which operates in two directions, known as Runway 15 and Runway 33; the direction of operation is primarily dependent upon meteorological conditions.

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 21 (top left) shows the total number of air transport movements (ATM's) (both arrivals and departures) for 2023 and 2024. February and March saw an increase in movements in Q1 of 2024 vs 2023.

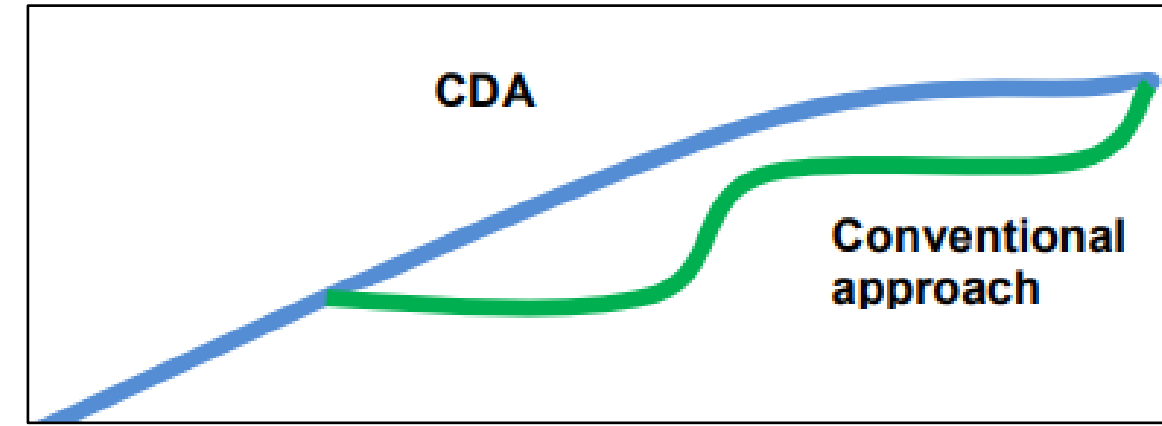
Figure 22 (top middle) shows monthly runway usage % for 2024. The average split (dotted line) is also shown. For 2024 YTD the average split is 50% R15 and 50% R33.

Figure 23 (bottom left) shows quarterly runway usage over a 5-year period. Over Q1 of 2024 the average runway split is 50% R15 and 50% R33. The number of Air Traffic Movements (ATMs) by runway for the 1st Qtr 2024 was 9,684 ATMs on Runway 15 and 9,154 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 Q1 2024 remained at 93% across all three months, as shown in **Figure 25 (Left)**. The months of January and March show an increase in compliance when compared with 2023, February saw a 1% decrease vs 2023. The Sustainability Team continues engage with airlines through the Operation Pathfinder Forum to drive improvement in both arrivals and departures performance.

Figure 26 (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 the first quarter 2024.

Figure 27 (bottom-right) shows CDA performance by quarter dating back to the second quarter of 2019. There was an increase in compliance over the 1st Quarter of 2024 compared with the 4th Quarter of 2023.

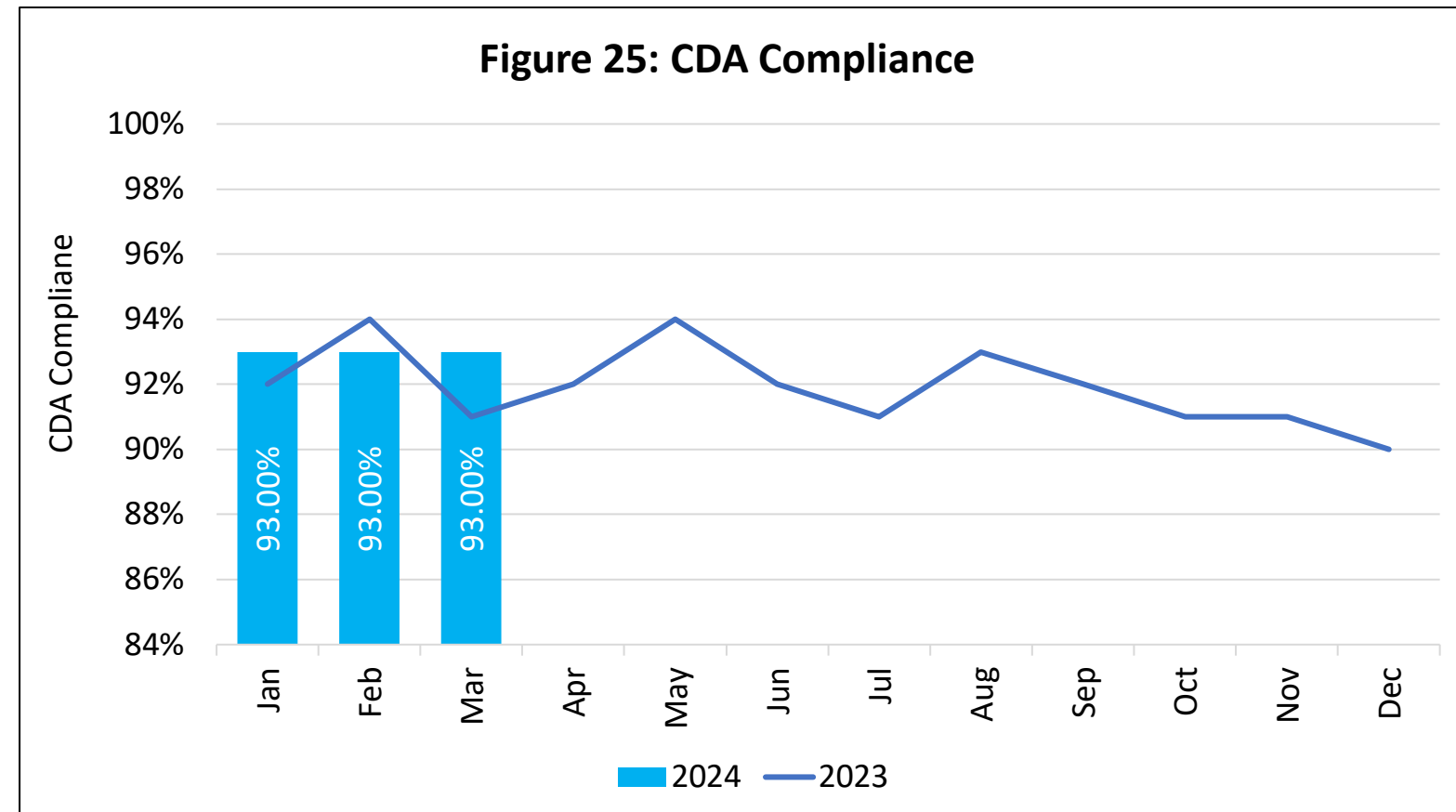


Figure 25: CDA Compliance

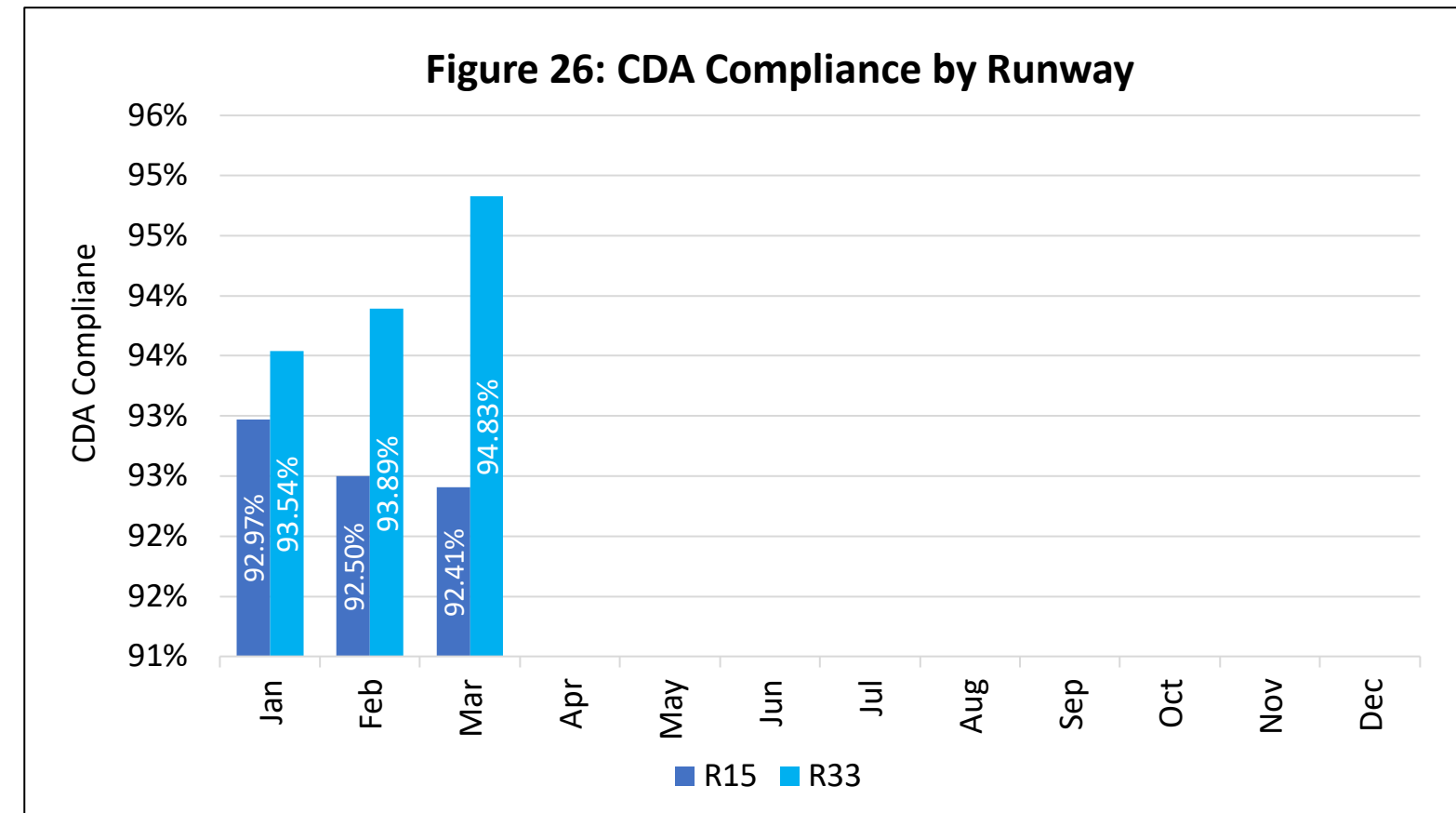


Figure 26: CDA Compliance by Runway

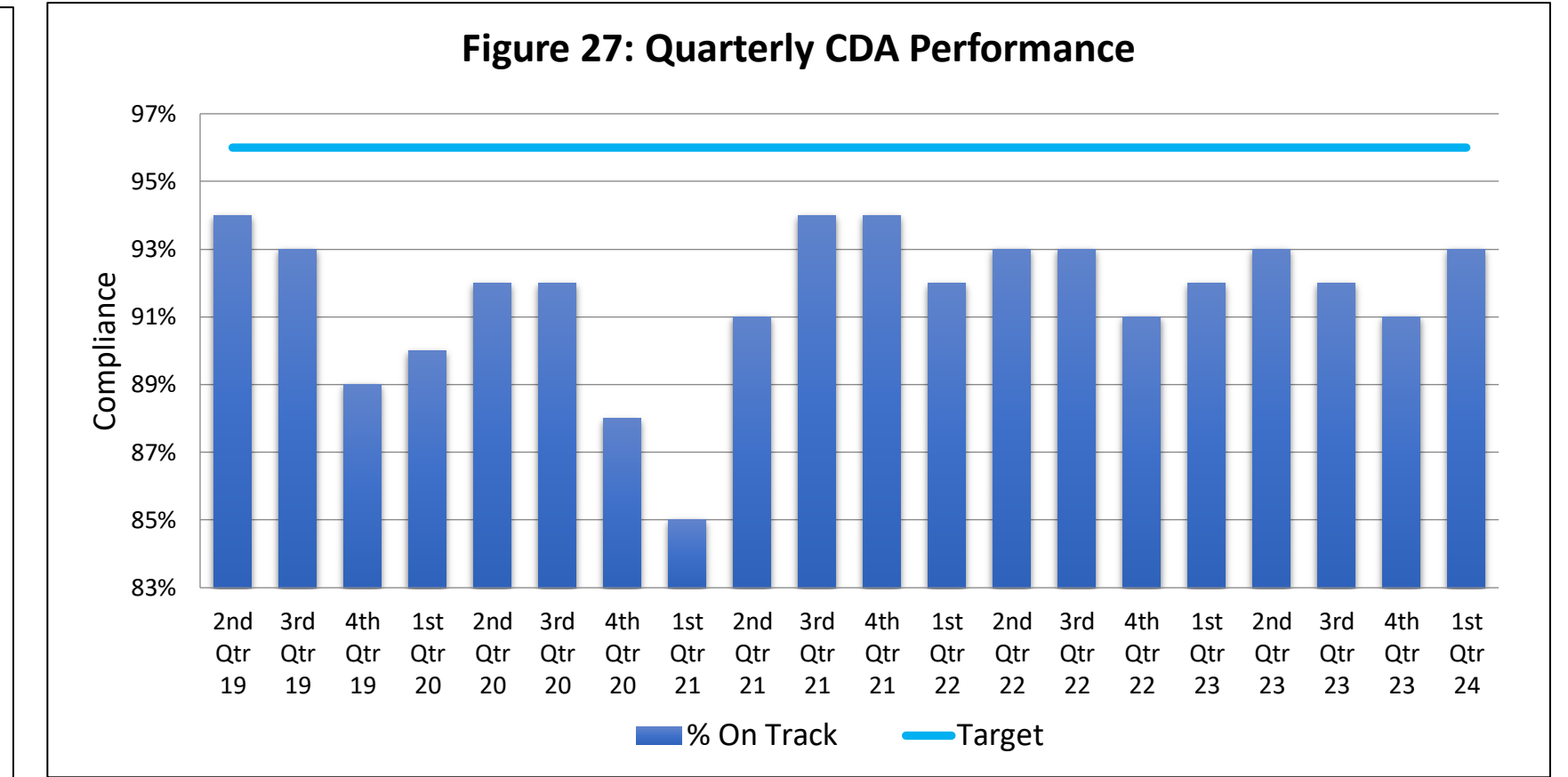


Figure 27: Quarterly CDA Performance

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 29 shows quarterly helicopter movements since the second 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 344 in the day and 111 at night.

Figure 30 shows a breakdown of all 2024 helicopter movements by category. Police helicopters accounted for the largest proportion of movements with 42% of all helicopter operations being police operated in the first quarter of 2024.

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 decreased in 2023.

Operation Category	Year					
	2019	2020	2021	2022	2023	2024 YTD
Air Ambulance	4	2	2	1	5	6
Military	6	1	2	12	2	0
Training & Engineering	4	4	6	8	5	0
Search & Rescue	0	0	0	6	22	6
Diplays and Events	0	0	1	3	4	0
Pipeline Surveying	30	11	5	12	24	3
Police	574	685	774	1158	863	67
Private Charter	18	2	15	18	28	18
Private Owner	229	151	259	254	286	59
Total	865	856	1064	1472	1239	159

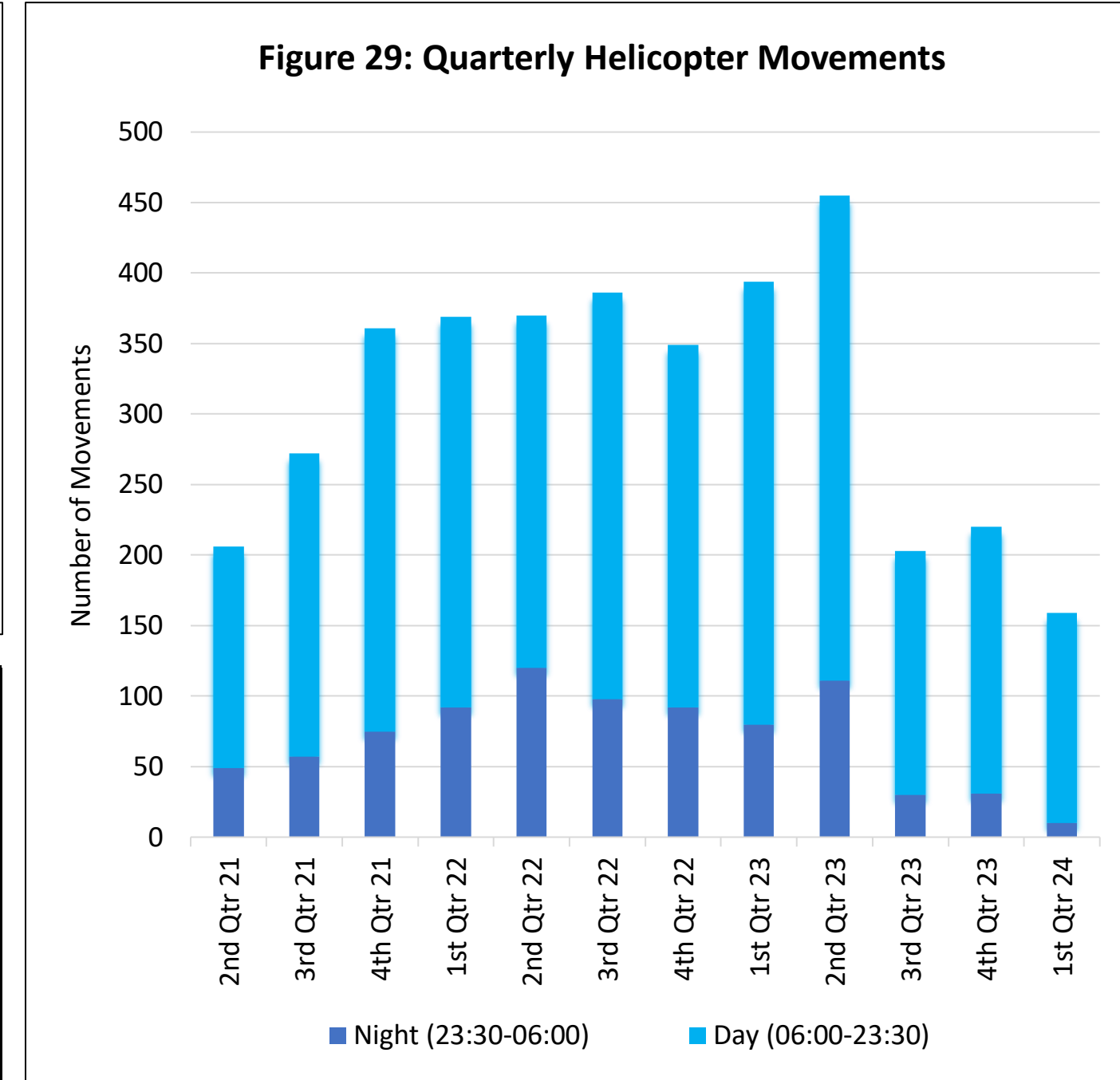


Figure 29: Quarterly Helicopter Movements

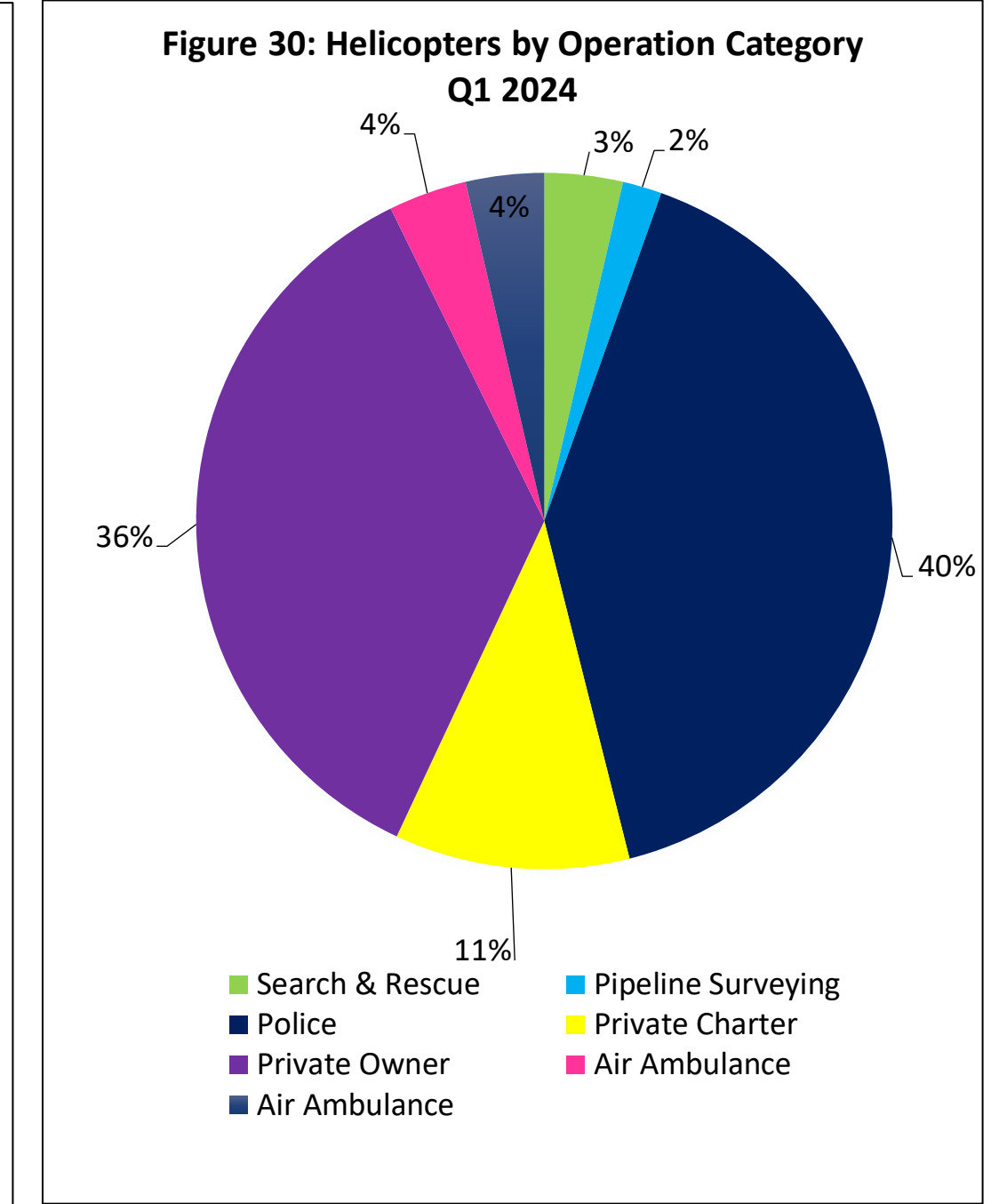


Figure 30: Helicopters by Operation Category Q1 2024