

Departures Performance

Track Keeping

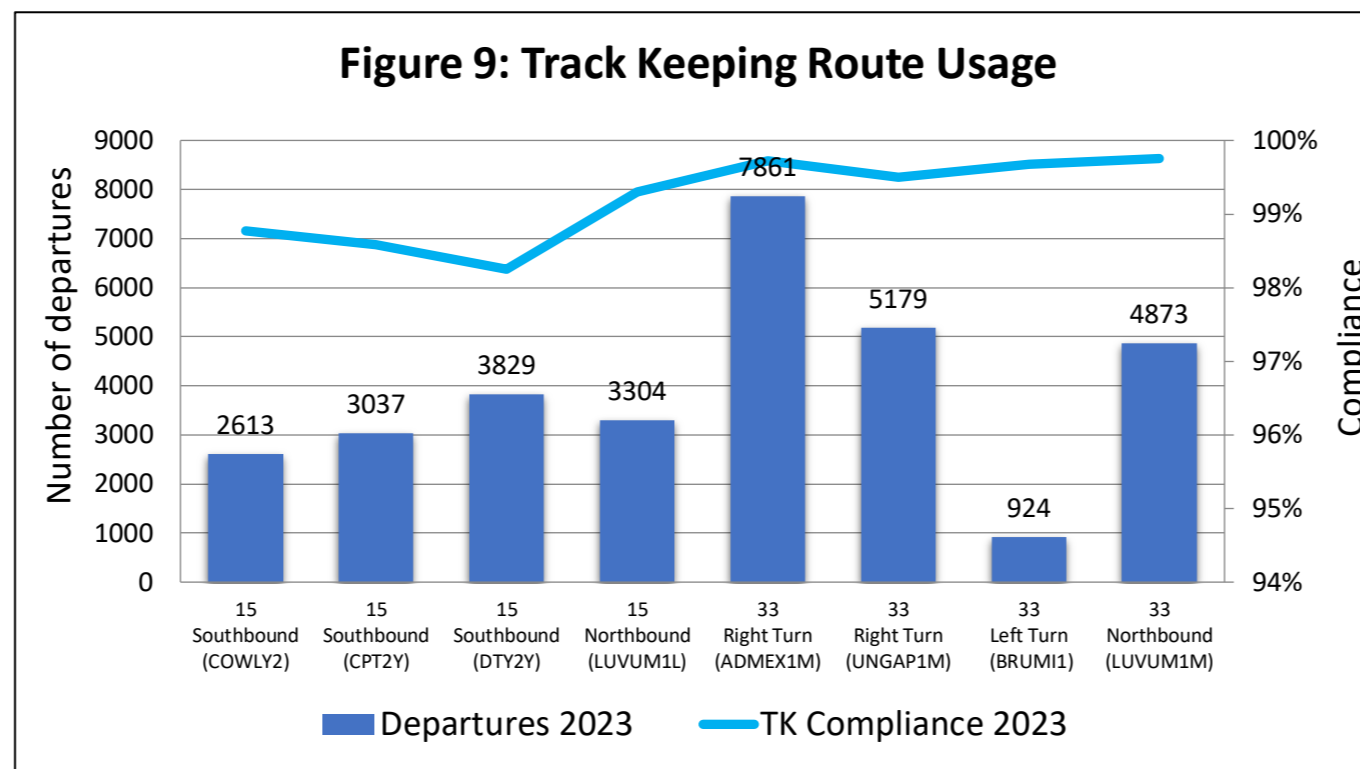
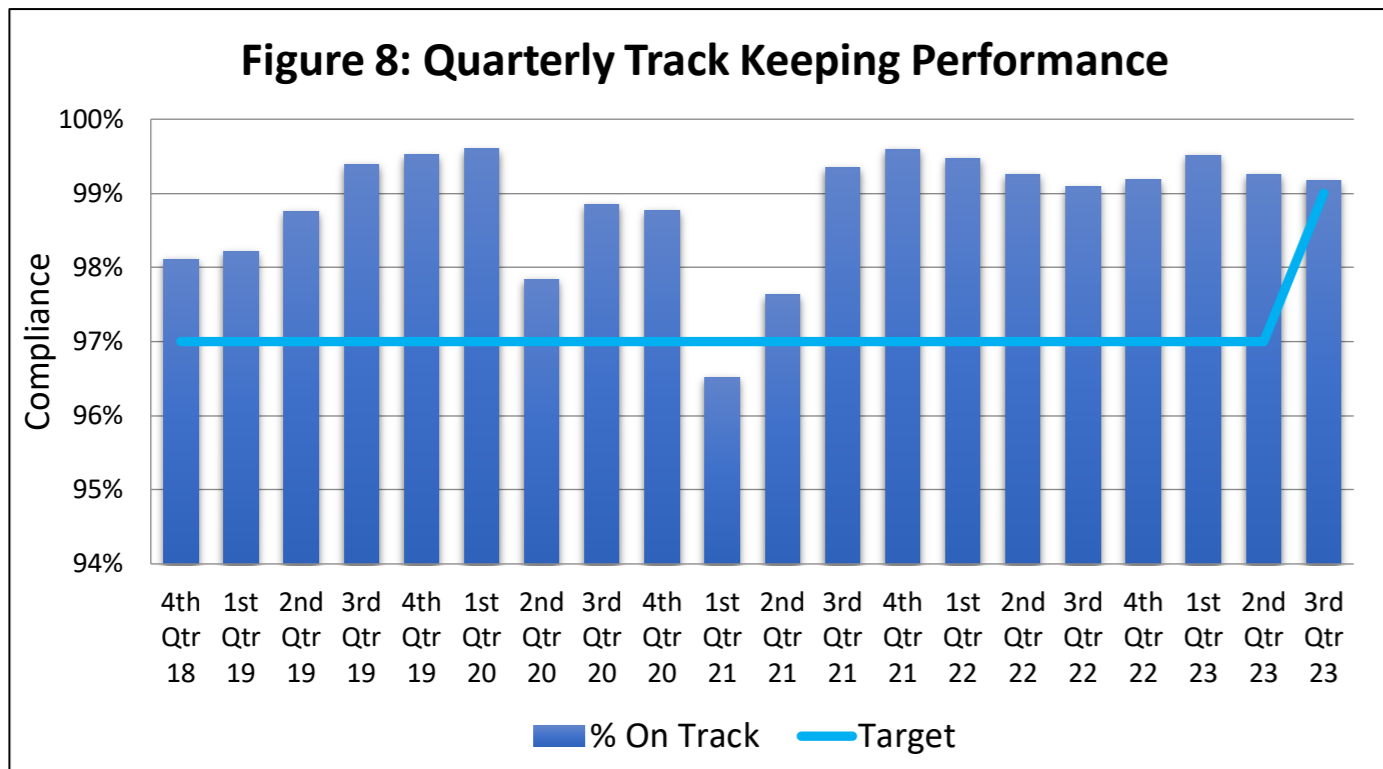
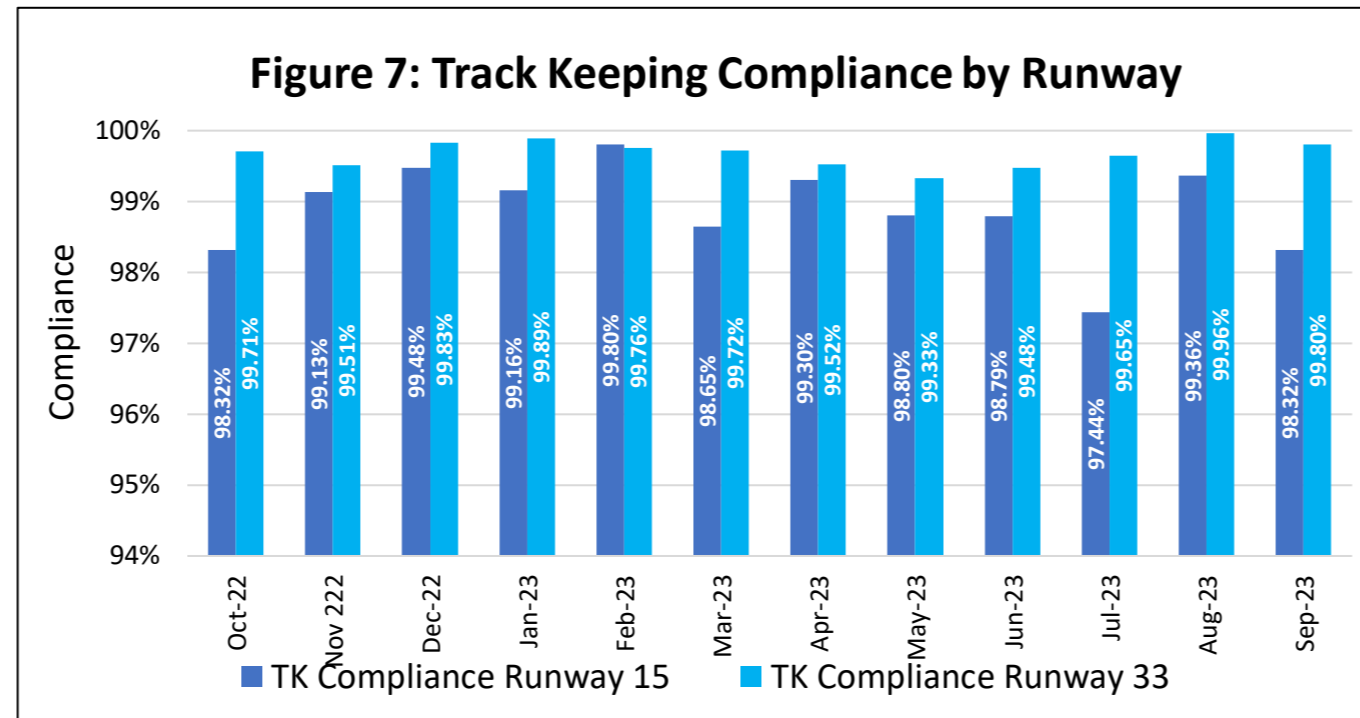
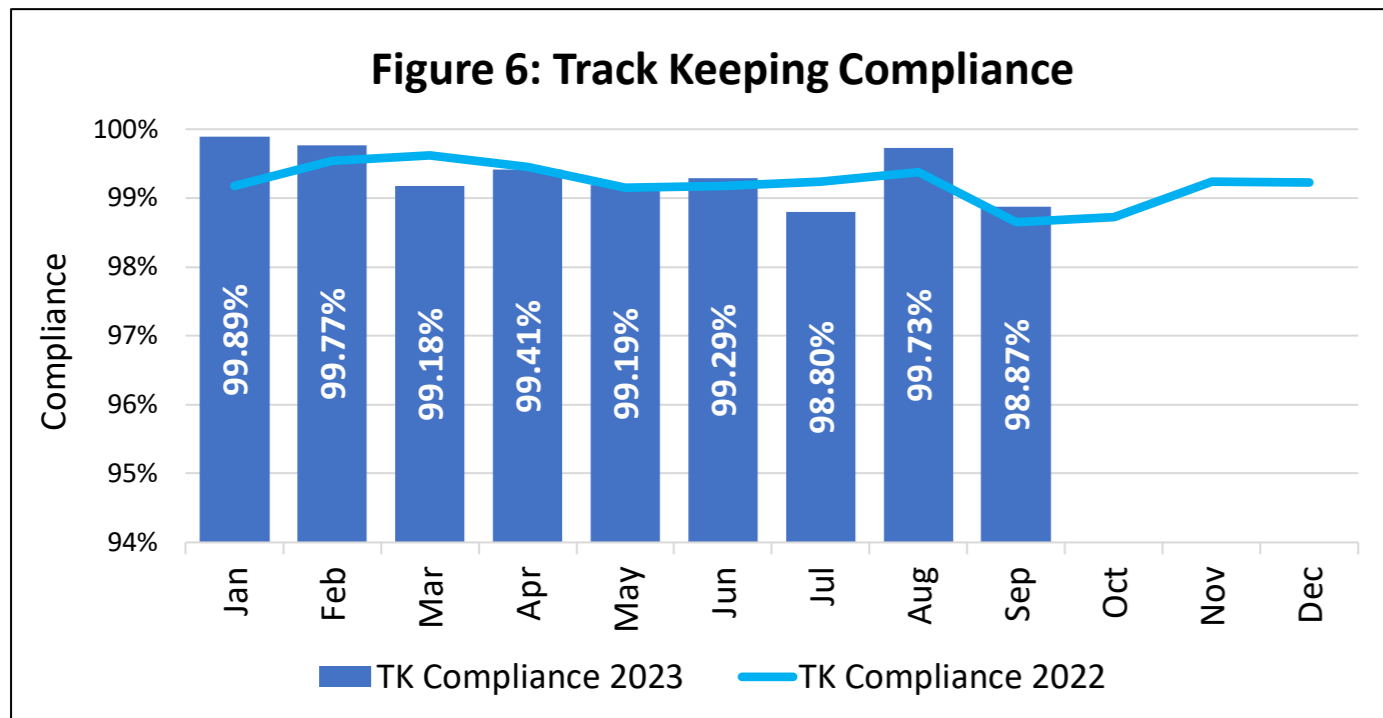


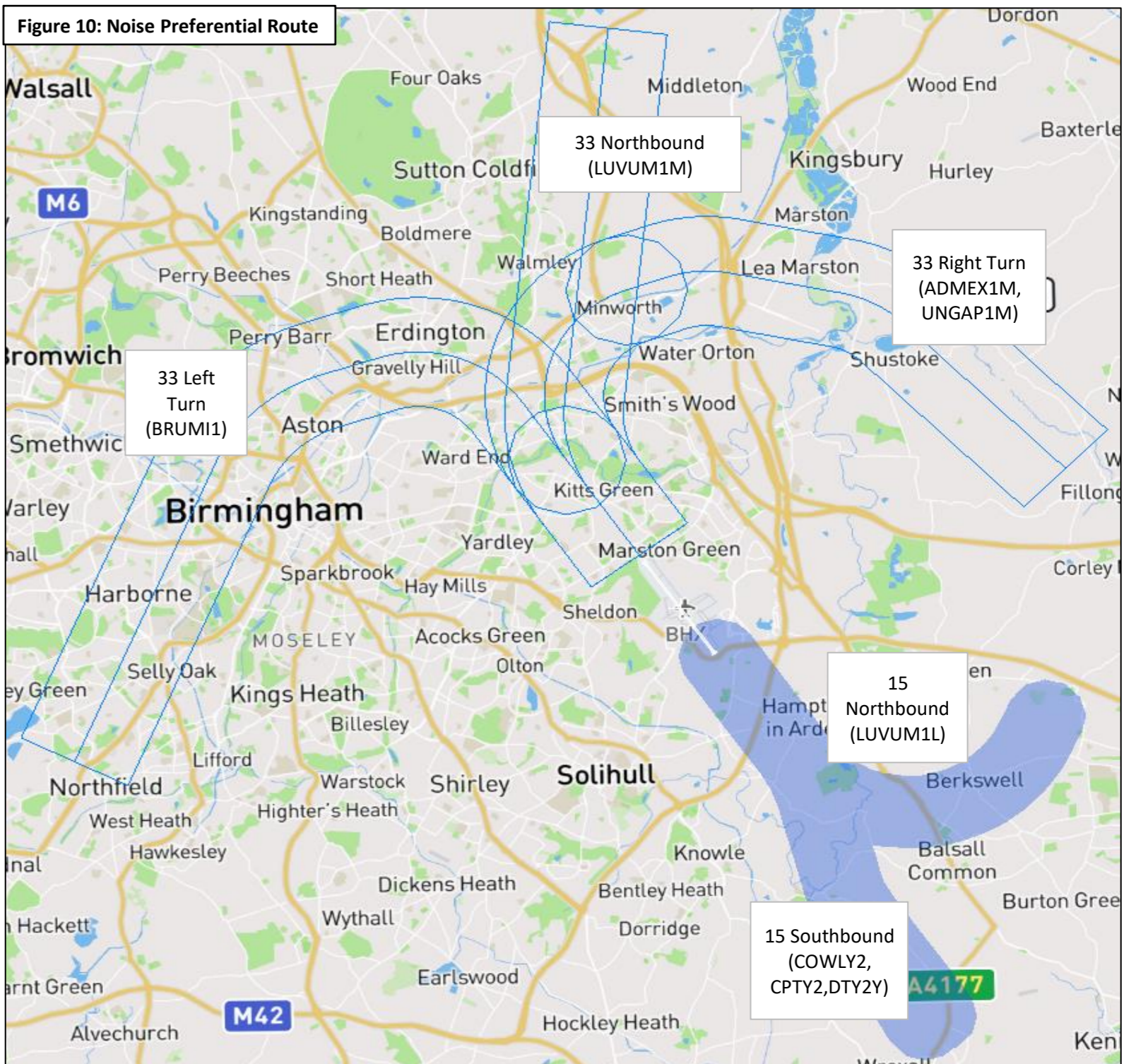
Figure 10 shows a map of the five noise preferential routes (NPR's) for departures in use at Birmingham Airport. The table below lists the altitudes up to which aircraft are required to stay within the noise preferential route, in order to be classed as 'on-track'. Once above the minimum vectoring altitude,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

Figure 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.

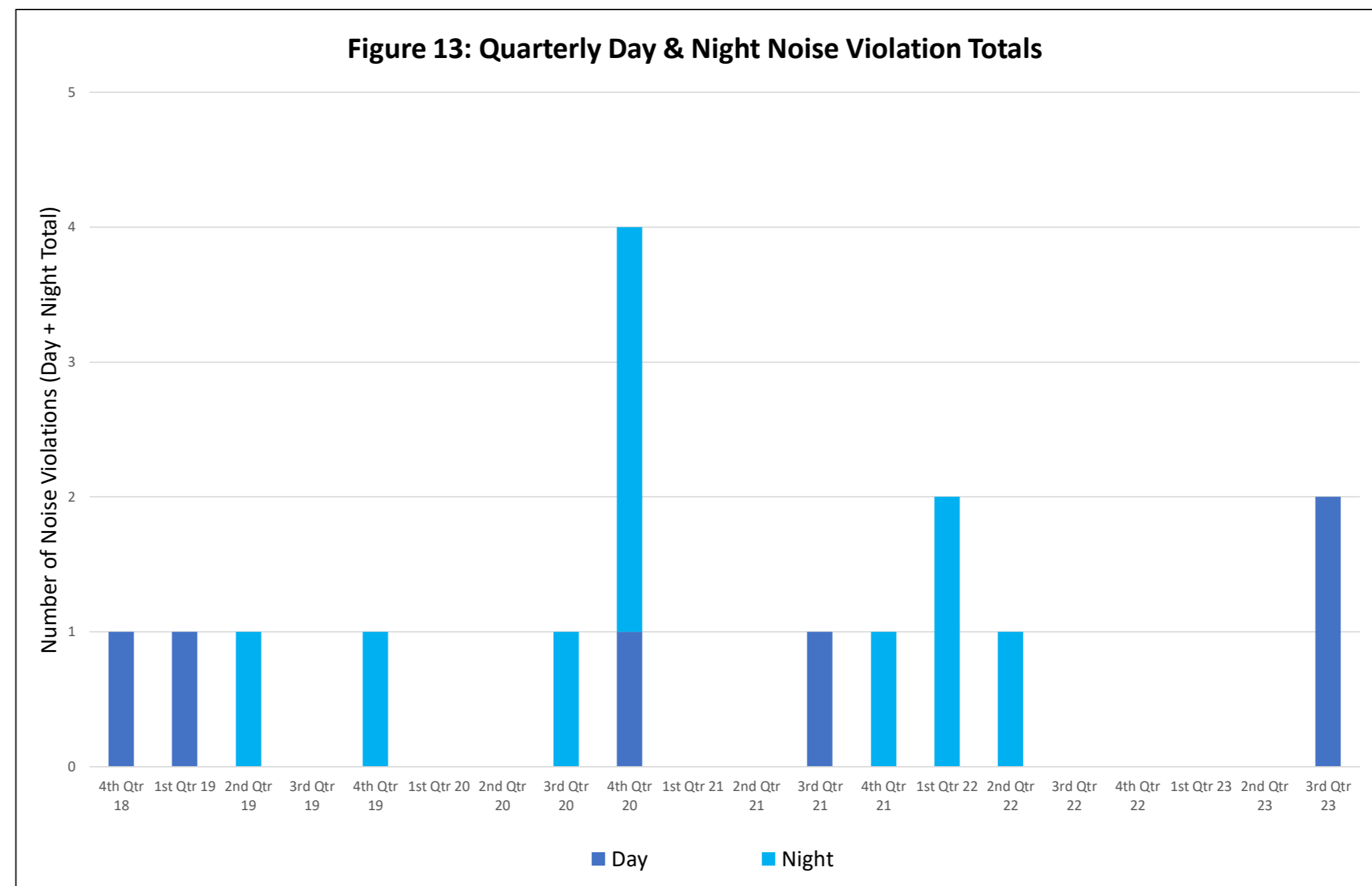
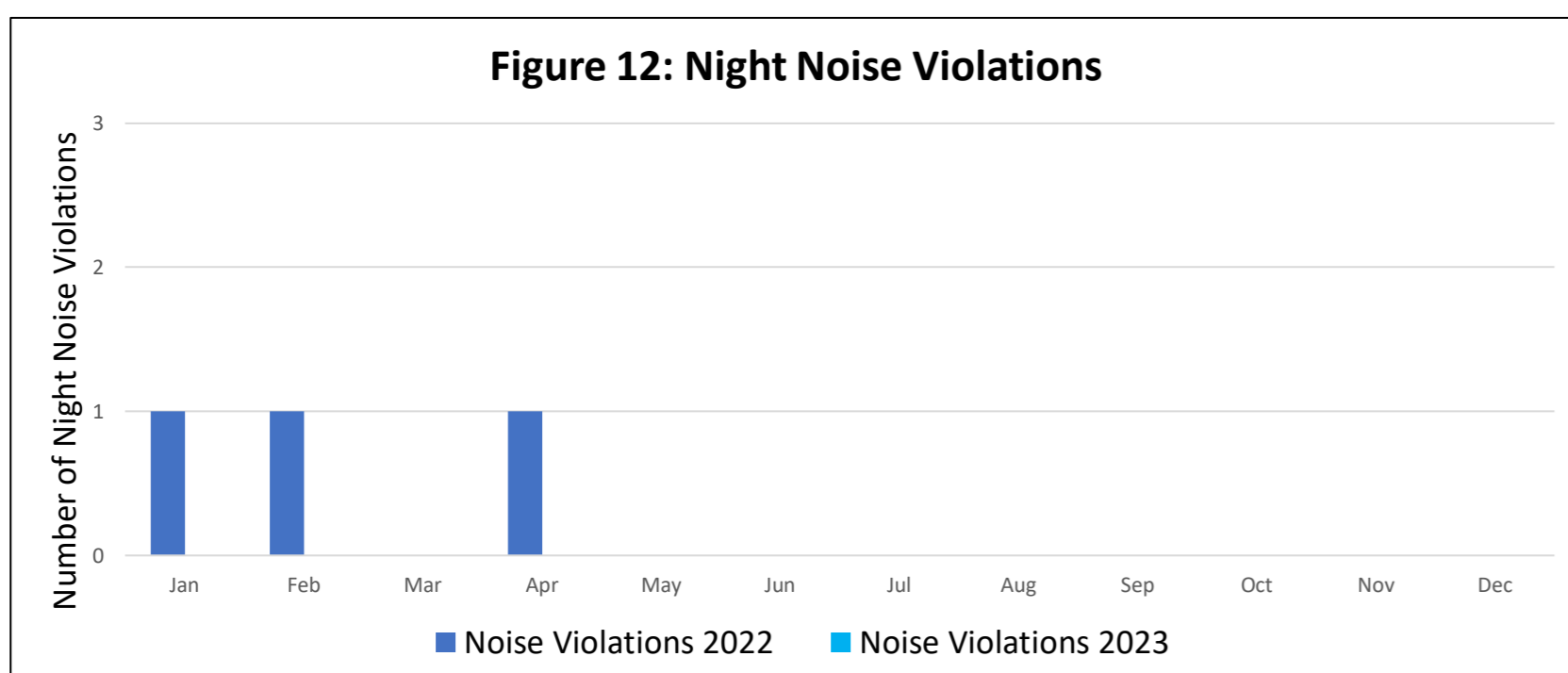
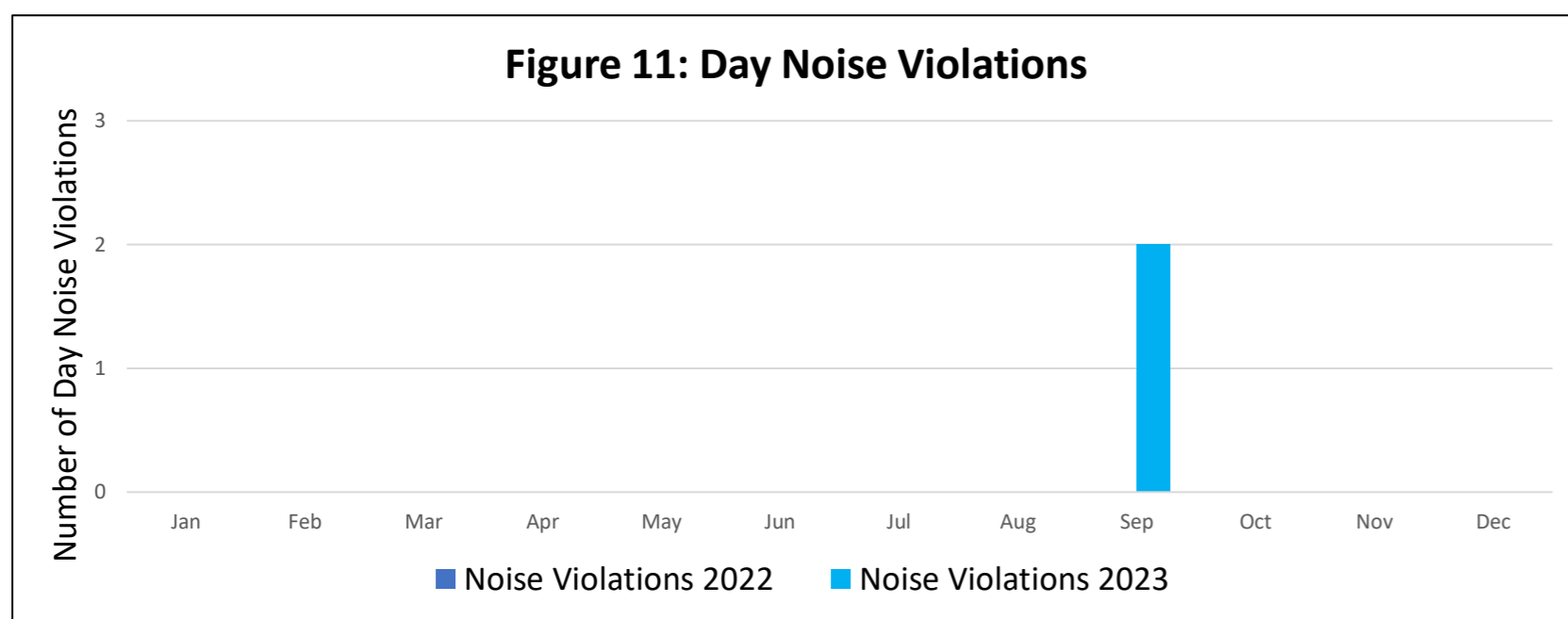
Figure 8 shows quarterly track keeping performance vs target. Track keeping has exceeded 96% consistently since 2018 and has met target for all quarters except Q1 2021. It should be noted that from Q3 2023 the track keeping target has risen from 97% to 99%.

Figure 9 shows 2023 YTD route usage and the associated track-keeping compliance. Track keeping was above 98% for all routes. The routes most utilised were R33 Right-turn (ADMEX1M/ UNGAP1M), R33 Northbound (LUVUM1L) and R15 Southbound (COWLY2, CPT2Y, DTY2Y, WCO2Y) consecutively.

Route	Minimum Vectoring Altitude
15 Southbound (COWLY2, CPT2Y, 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 83dB(A), 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 2022 to 2023. There were no daytime noise violations in 2022. There were two daytime noise violations in the 3rd Quarter of 2023. These were both incurred as a result of AN12 operations by Cavok Airlines, the first measured 93.2dB at Noise Monitor 2 on 04/09/2023 at 13:20, the second 91.8dB at Noise Monitor 2 on 13/09/2023 at 11:21. Both of these fines have been paid in full, as per below table.

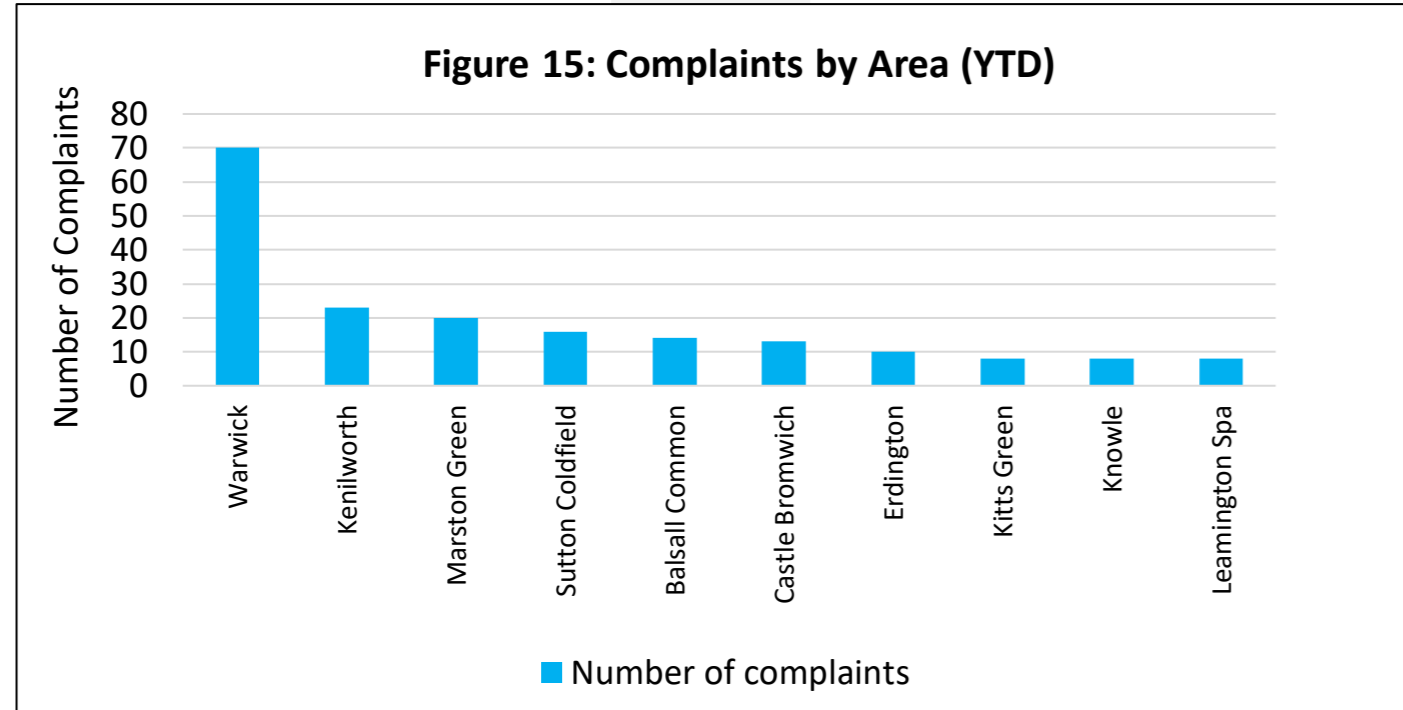
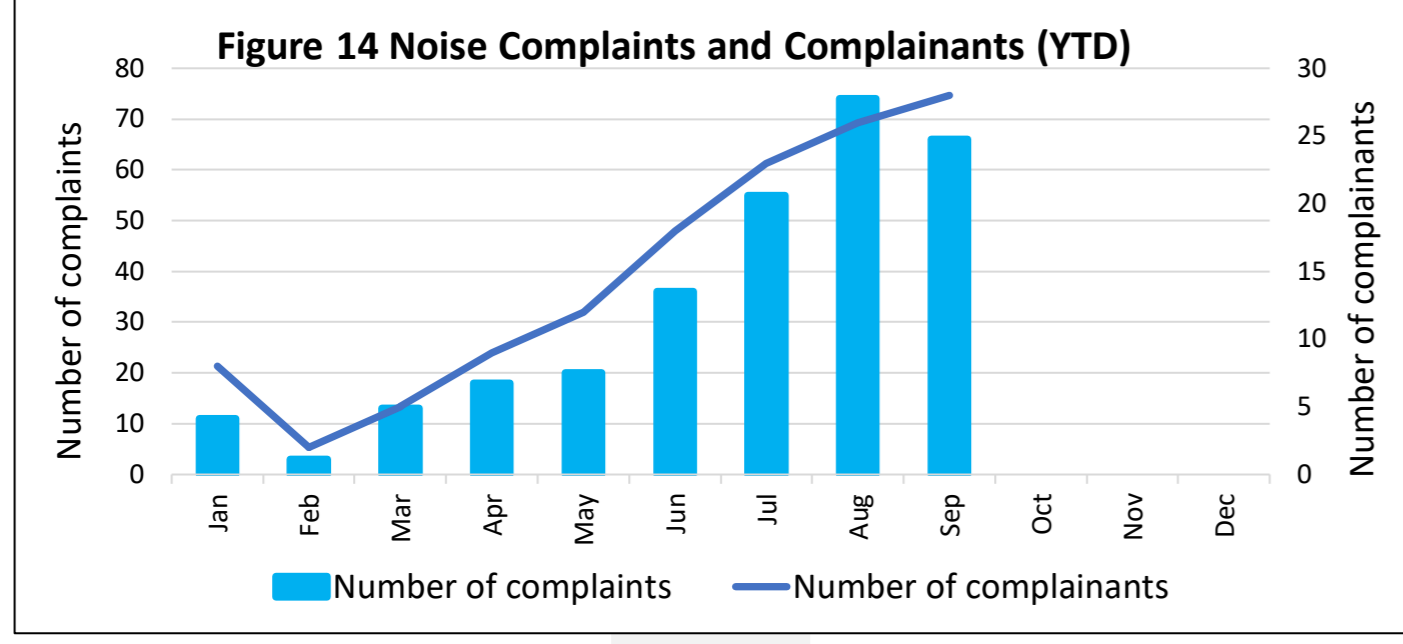
Figure 12 shows monthly night noise violations, comparing 2022 to 2023. There were three night noise violations in 2022, in January, February and April. There were no night noise violations in 2023. The airport has committed within the Noise Action Plan to investigating the feasibility of reducing the night noise limit to 81dB(A). This will be considered alongside the daytime noise limit as part of wider Night Flying Policy review work.

Figure 13 shows quarterly day and night noise violations from Quarter 4 2018 to Quarter 3 2023. 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 3 2023, with two.

Date & Time (GMT)	NMT	Max. Level dB(A)	Flight No.	Runway	Aircraft	Paid (Yes/No)
04/09/2023	2	93.2	CVK7060	15	AN12	Yes
13/09/2023	2	91.8	CVK7020	15	AN12	Yes

Aircraft Activity Complaints

Complaints - 2023



In Quarter 3 2023, 195 aircraft complaints were received from 70 individual correspondents (complainants), who collectively contacted the airport on 119 separate occasions.

When compared to Quarter 3 2022 there has been a 163% increase in the number of aircraft complaints received and a 47% increase in the number of complainants.

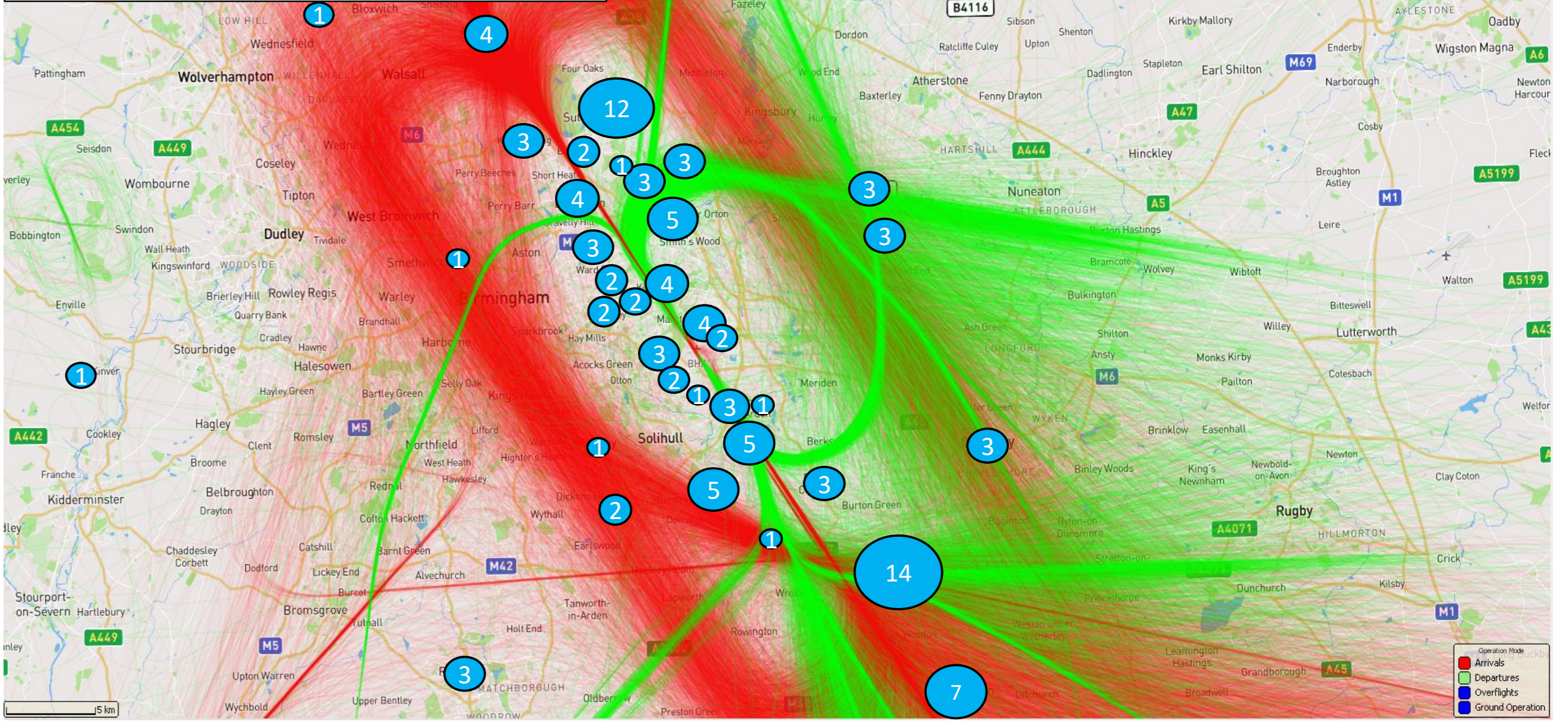
Figure 14 (left) illustrates the number of noise complaints received in each month of 2023, August saw the highest number of complaints (74) and September the highest number of complainants (28), with complaint numbers decreasing again in September.

Figure 15 (below left) provides a breakdown of complaints by area of origin for 2023 Year to Date, for the top ten areas of complaint. Warwick was the area from which we received the most complaints in 2023 YTD with 70 complaints.

Figure 16 (right) is a map showing the distribution of individual complainants, as well as the tracks of all movements in Q3 2023.

It should also be noted that during Q3 2023, five persistent complainants are excluded from the statistics in the figures shown, as per the Birmingham Airport Complaints Policy and as reported to the Airport Consultative Committee. These five complainants registered a further 240 complaints regarding aircraft in Q3 2023.

Figure 16: Map showing Quarter 3 Tracks & Complainants By Area



Complaints - Trend Analysis

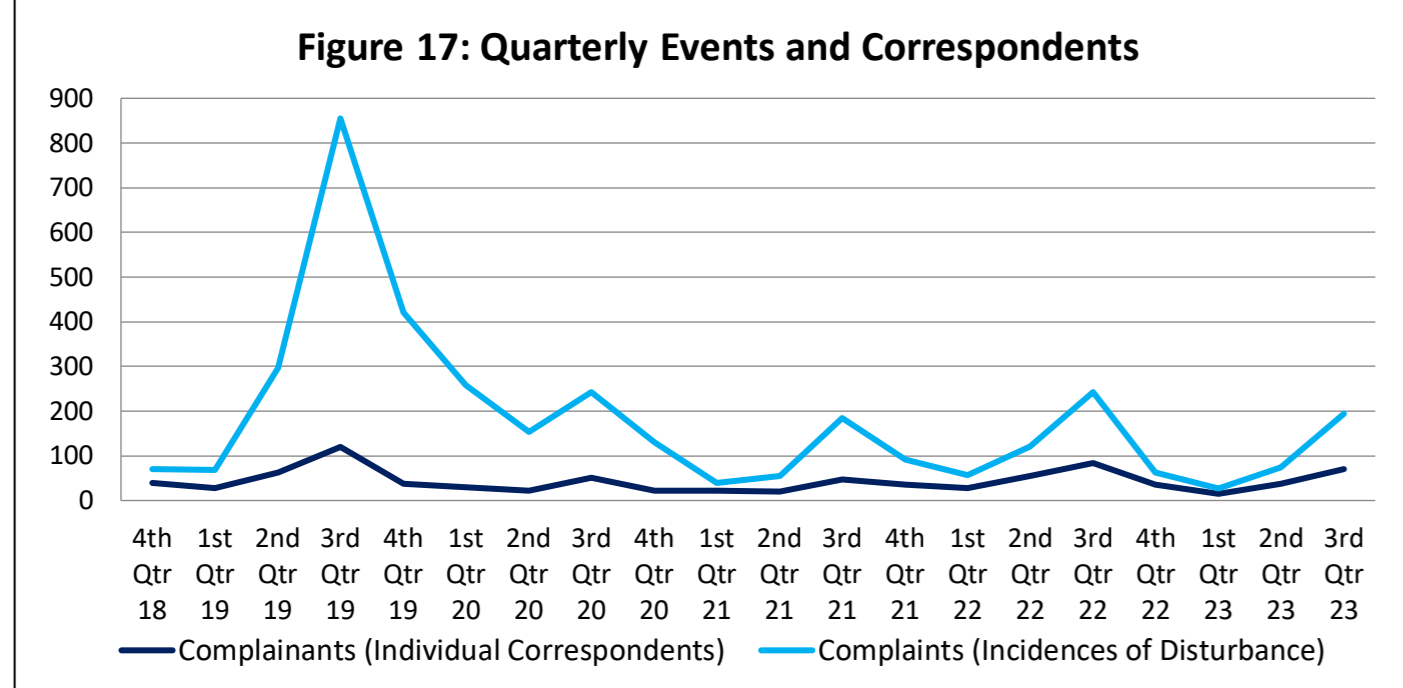
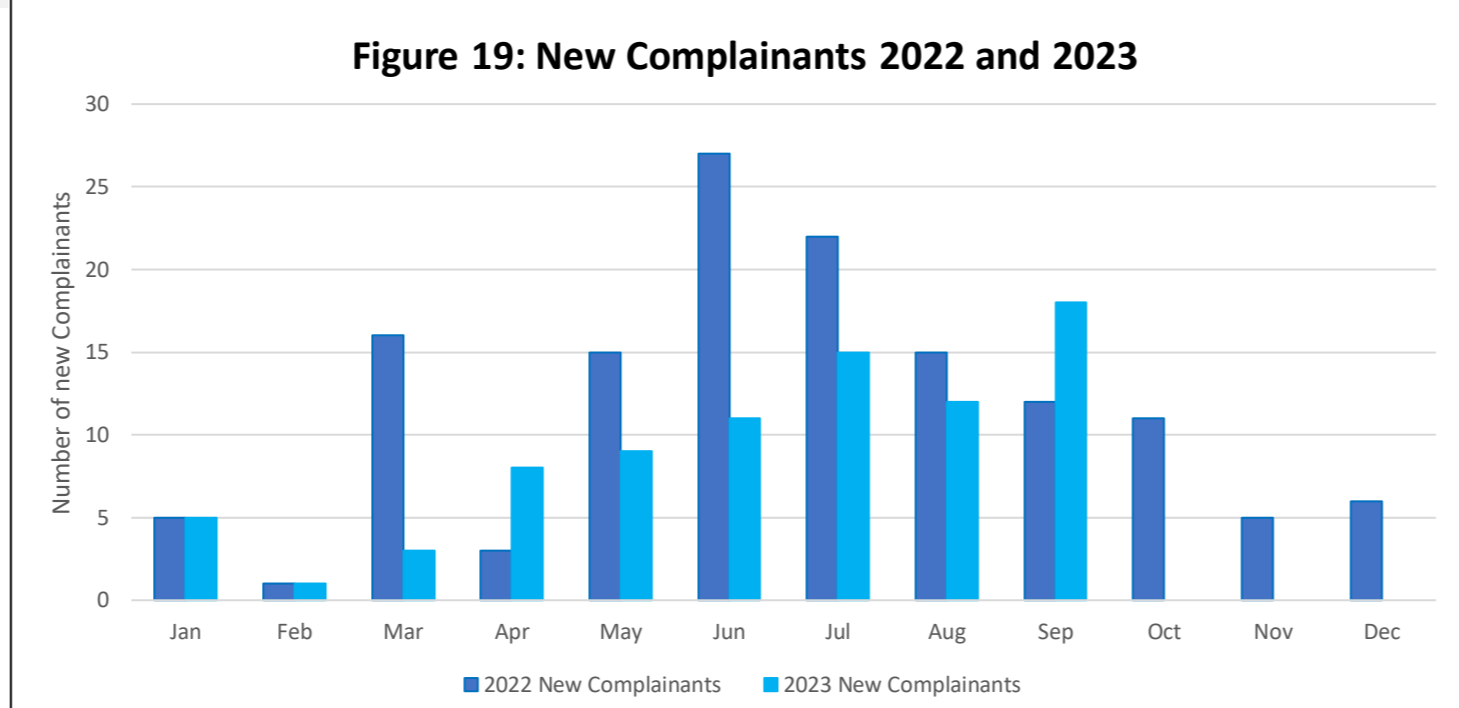
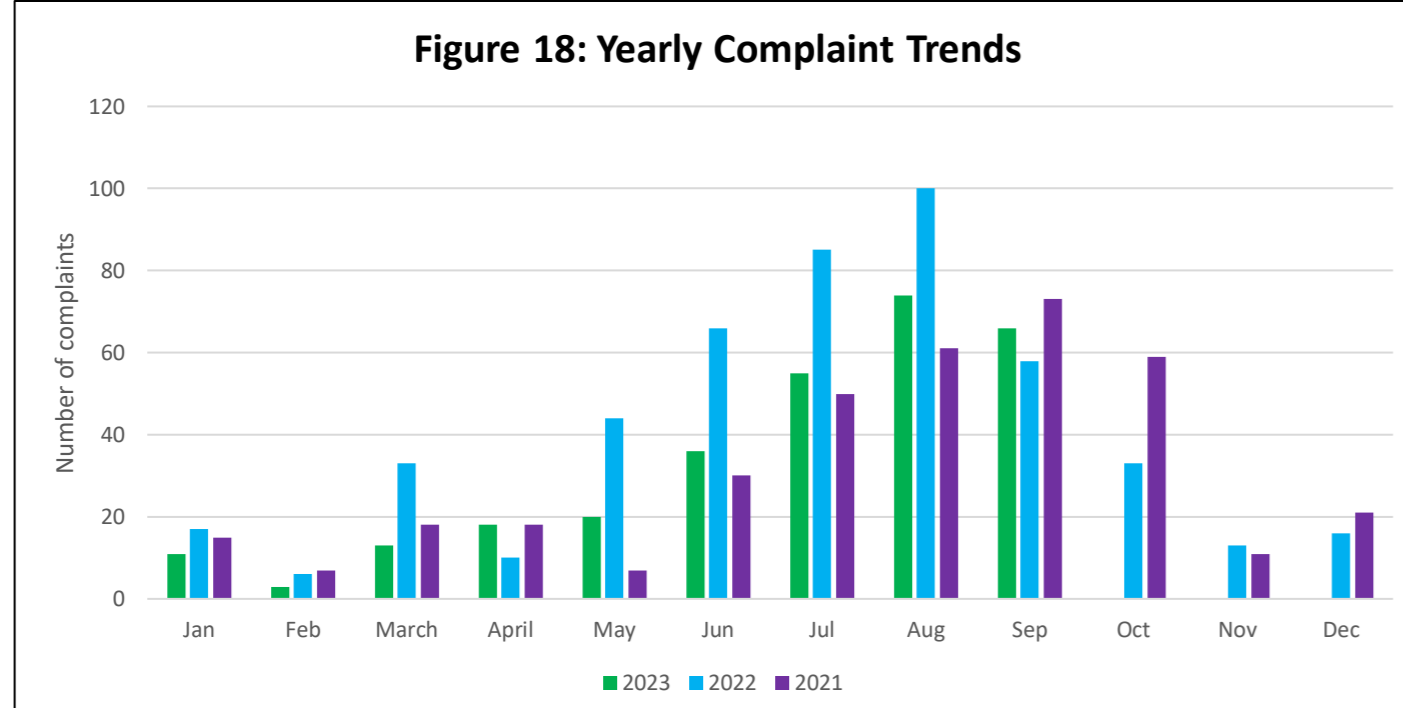


Figure 17 (left) shows quarterly complaints and complainant numbers and trends over a five year period, showing a peak in complaints and complainants at Q3 2019.

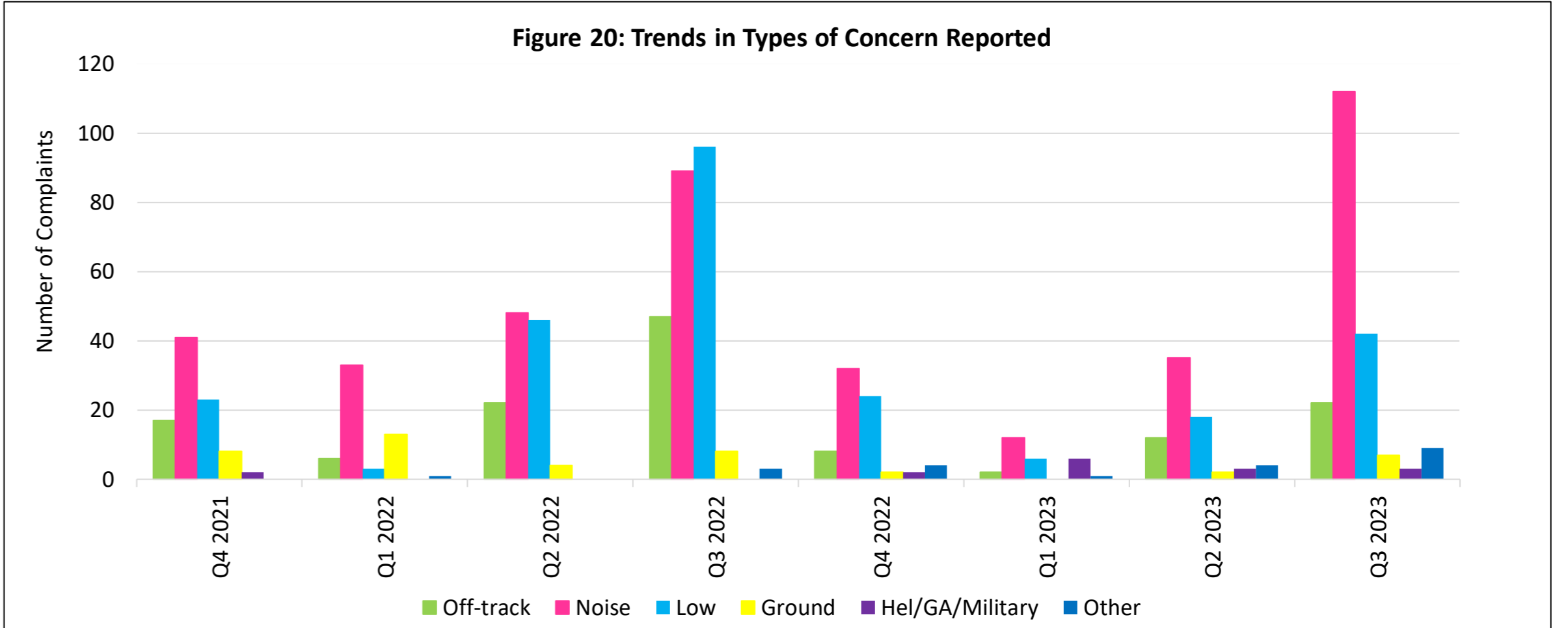
Figure 18 (below left) shows a comparison between the number of complaints per month for 2023, 2022 and 2021. July, August and September in Q3 2023 show a decrease in complaints compared to 2022.

Figure 19 (below) shows the number of new complainants for 2022 and 2023, with the largest number of new complainants seen in June 2022 (27). New complainants for July and August decreased in 2023 compared with 2022. September 2023 showed an increase in new complainants compared to 2022.

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 Q3 2023 the category with the most complaints was Noise (aircraft noise) with 94 complaints, the category with the fewest complaints was Helicopters/General Aviation/Military with 2. The table (right) shows noise complaints by concern category reported, this year vs last year rolling.



Concern Type	4 th Qtr 2022	4 th Qtr 2021	1 st Qtr 2023	1 st Qtr 2022	2 nd Qtr 2023	2 nd Qtr 2022	3 rd Qtr 2023	3 rd Qtr 2022	Last 12 months	Previous 12 Months
Off Track	8	17	2	6	12	22	22	47	44	92
Noise	32	41	12	33	35	48	94	89	173	211
Low	24	23	6	3	18	46	41	96	89	168
Ground Noise	2	8	0	13	2	4	7	8	11	33
Hel/GA/Military	2	2	6	0	3	0	2	0	13	2
Other	4	0	1	1	4	0	9	3	18	4
TOTAL	72	91	27	56	74	120	175	243	348	510



Airlines & Air Traffic

Airline Noise Performance

Rank by ATM	Airline Name	Total Movements	CDA Performance	Rank (CDA)	Track Keeping Performance	Rank (TK)
1	Jet 2	4807	96.21%	2	99.33%	7
2	Ryanair	4563	98.46%	1	99.45%	4
3	TUI	4484	93.96%	6	99.20%	9
4	Easyjet	1519	94.20%	5	99.74%	2
5	Lufthansa	1024	91.41%	13	98.63%	12
6	KLM Royal Dutch	813	94.33%	4	98.95%	11
7	Logan Air	742	91.11%	14	100.00%	1
8	Air France	625	76.85%	20	99.68%	3
9	Emerald Airlines (UK)	600	86.96%	18	99.00%	10
10	Easyjet Europe	573	88.85%	16	100.00%	1
11	Emerald Airlines	403	87.62%	17	98.51%	13
12	Emirates	368	92.39%	9	98.37%	15
13	Turkish Airlines	367	94.54%	3	98.37%	15
14	Eurowings	344	92.40%	8	99.42%	5
15	Aer Lingus	340	90.59%	15	99.41%	6
16	SunExpress	336	93.45%	7	100.00%	1
17	Wizz Air Malta	264	91.67%	12	99.24%	8
18	Vueling Airlines	261	92.31%	10	98.47%	14
19	Blue Islands	241	83.33%	19	98.35%	16
20	Wizz Air	218	91.74%	11	100.00%	1

The table to the left shows airline noise performance. Airlines are ranked by the number of movements for Q3 2023. 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** < 90%

Runway Statistics

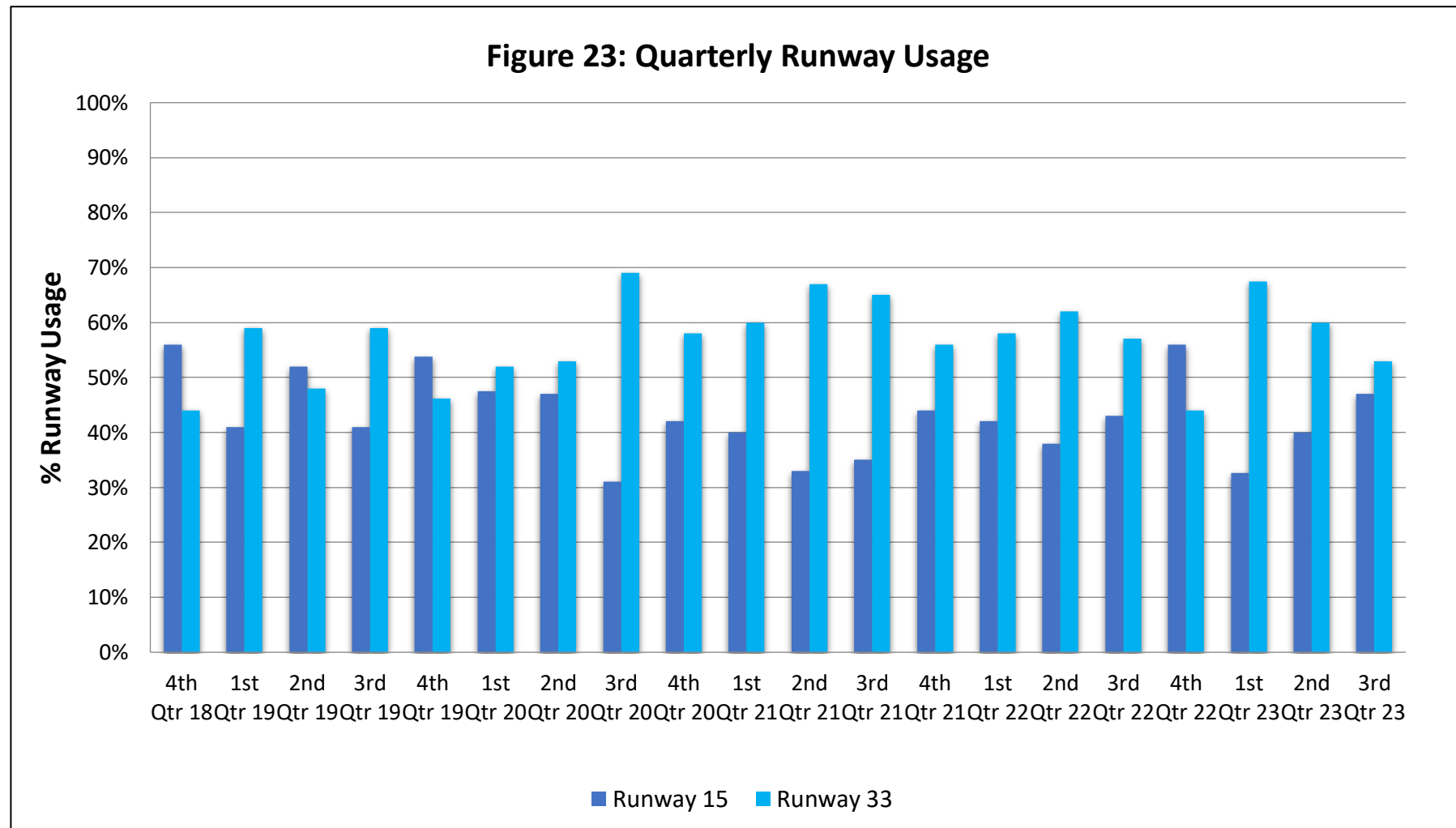
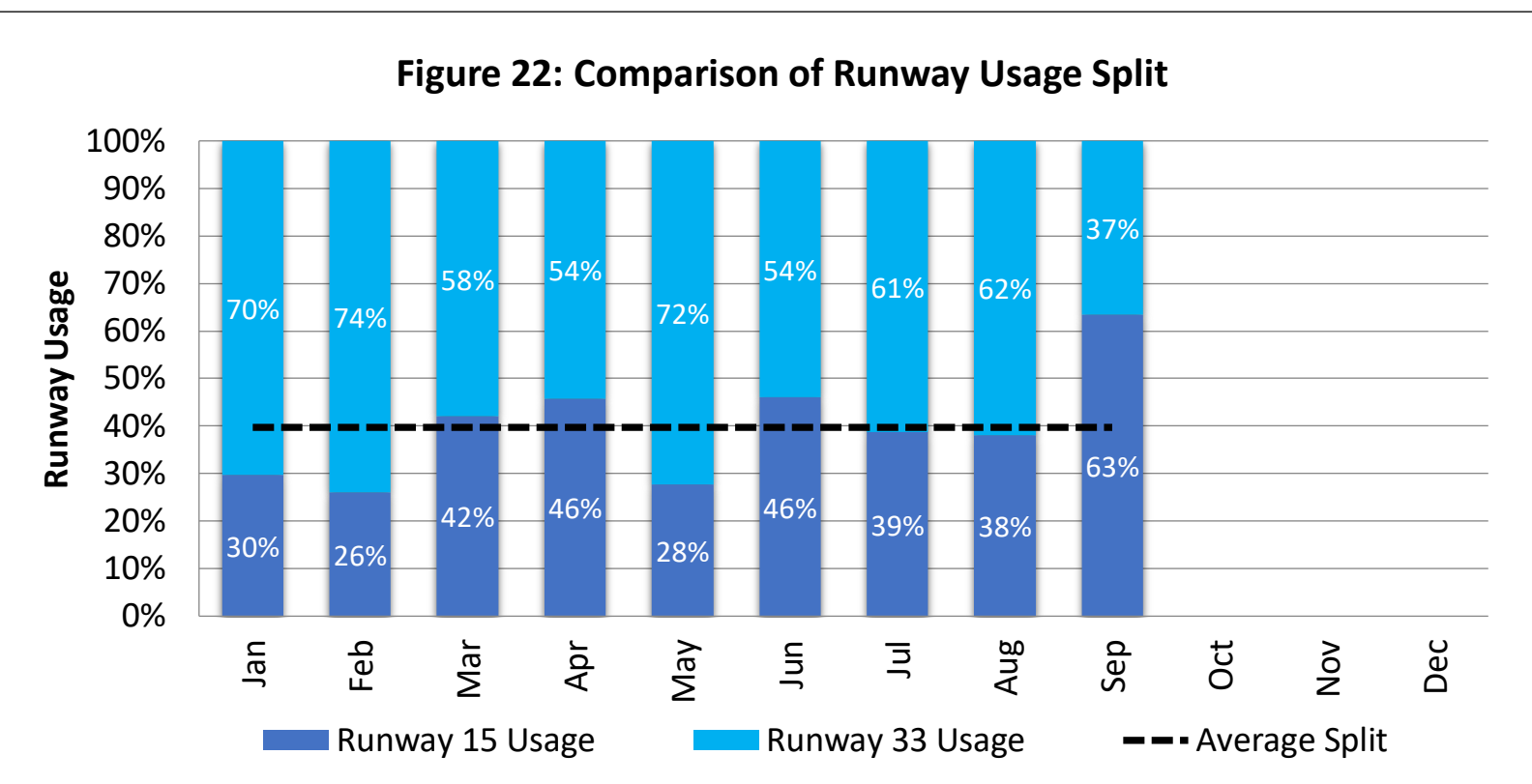
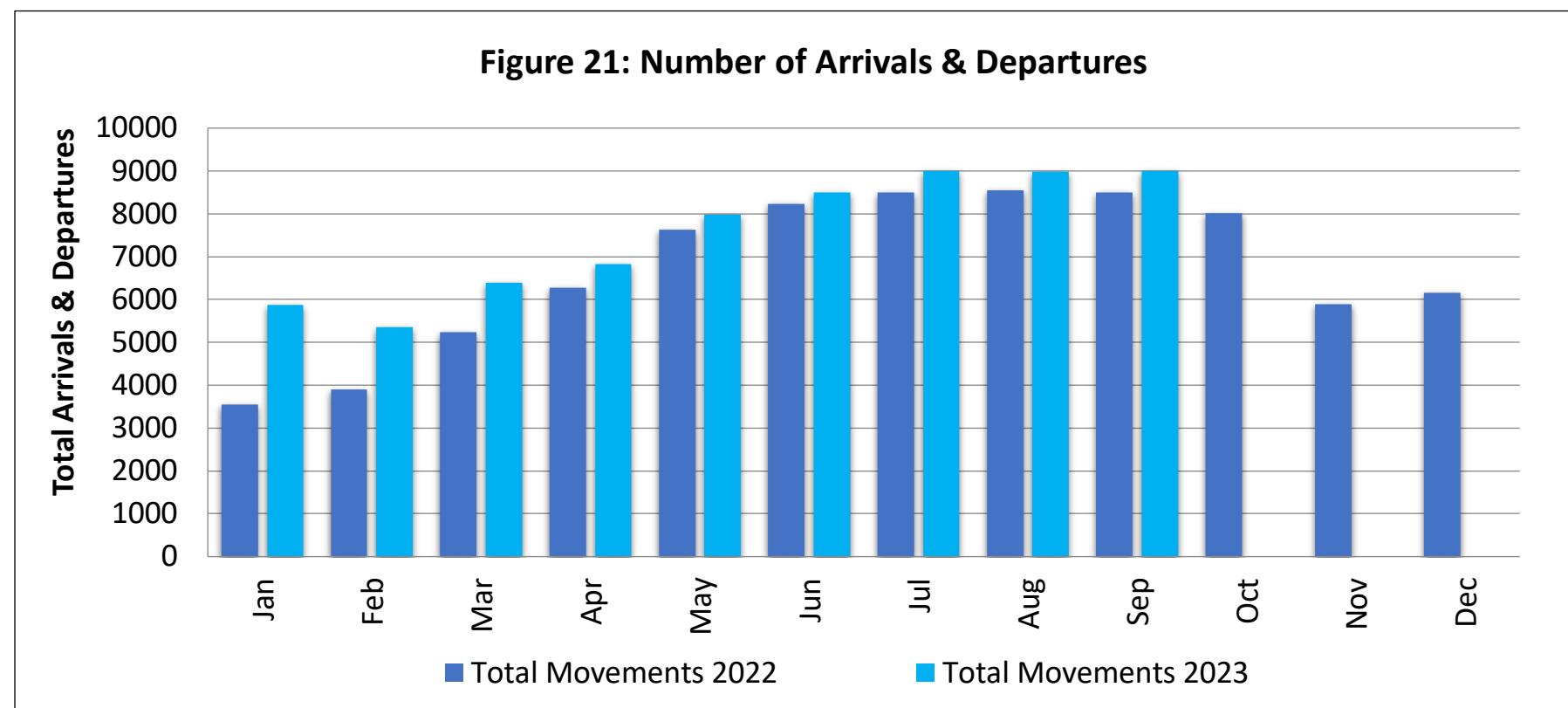


Figure 24 (right) Birmingham Airport has one runway which operates in two directions, known as Runway 15 and Runway 33; the direction of operation is primarily dependent upon meteorological conditions.

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 2022 and 2023. There has been an increase in movements for all months in Q3 of 2023 vs 2022.

Figure 22 (top middle) shows monthly runway usage for 2023. The average split (dotted line) is also shown. For the 9 months shown, the average split is 40% R15 and 60% R33.

Figure 23 (bottom left) shows quarterly runway usage over a 5-year period. Over Q3 of 2023 the average runway split is 47% R15 and 53% R33. The number of Air Traffic Movements (ATMs) by runway for the 3rd Qtr 2023 was 12,595 ATMs on runway 15 and 14,373 ATMs on runway 33.



