DublinAirport

Dublin Airport
Quarterly Noise and Flight Track Monitoring Report
January to March (Q1) 2026

Executive Summary

- This report presents data and information from Dublin Airport's Noise Monitoring Terminals (NMTs) and flight track monitoring system.
- The publication of this quarterly report is a requirement under Condition 10 of North Runway's planning permission.
- The report is split into two parts:
  - Part 1: Noise Monitoring – Permanent monitors
  - Part 2: Flight Track Monitoring
- Noise data is presented in this report in five different metrics - Lden, Lnight, Leq16h, Lmax and SEL.
- This report includes the 2024 Modelled Annual Noise Contours for the Lden and Lnight metrics and compares this data with the measured data at the 25 permanent NMT locations.
- The reporting of environmental noise from transport systems – airports, road and rail - is regulated by the EU Environmental Noise Directive (END).
- The END refers to the Lden and Lnight metrics to assess noise impact and to measure longer term improvements and goals.
- These two metrics are also used by the World Health Organization (WHO).
- Lmax and SEL are single event metrics and are not generally used on their own to assess noise impact by authorities. By including the number or frequency of events, they can provide a different way of representing the noise situation.
- This report demonstrates good correlation between the noise measurements obtained from NMTs and the modelled noise contours - this provides confidence in the accuracy of the contours. Noise contours cover the entire study area whereas noise monitors only report noise at the actual monitoring locations.

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Part 1: Noise Monitoring Data
Permanent NMT

Parts 1 and 2: Contents

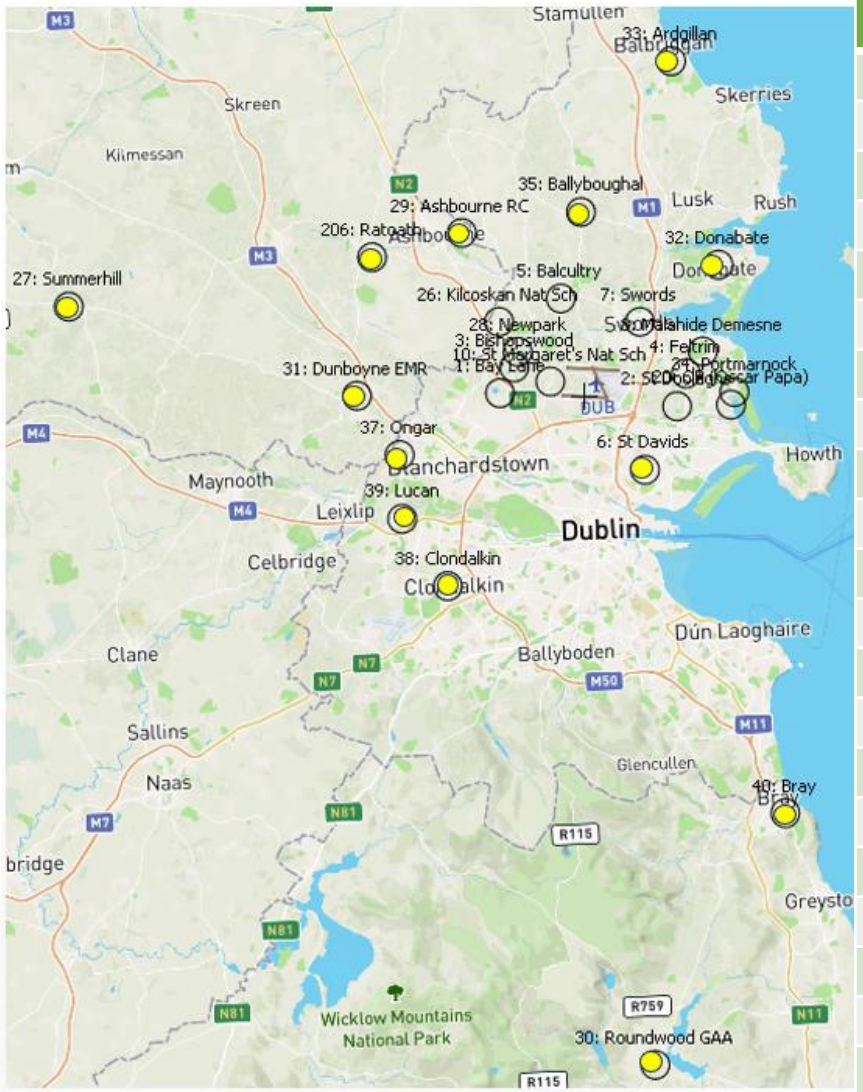
Explanation of Terms

Term	Definition
Aircraft Noise	The noise generated by aircraft operating to or from Dublin Airport. For our noise monitors, this excludes aircraft not travelling to or from Dublin Airport and noise from local activity such as road traffic, wind, birds, dogs and community activity. (These other noise sources are included in the measured Total Noise.)
(Correlated) Aircraft Noise Event	This is a noise event that is matched to an aircraft flight near the location of the NMT and the time of the noise event. Only correlated aircraft noise events are used to calculate the measured aircraft noise (e.g. Lden, Lnight, Leq16) at the NMT location.
Downtime (minutes)	The number of minutes during the period that each monitor was not operational.
Lden	Lden is the day-evening-night level. It is a descriptor of noise level based on energy equivalent noise level (Leq) over a whole day or longer, with a penalty of 5 dBA for evening noise (19:00-23:00h or 7-11pm) and a penalty of 10 dBA for night-time noise (23:00-7:00h or 11pm-7am). The 5-decibel penalty means that an evening flight is treated as the equivalent of three daytime flights. The 10-decibel penalty means that a night flight is the equivalent of 10 daytime flights.
Leq	Leq is the Equivalent Continuous Sound Level and is the average sound level, over the given period, that has the same total energy as the actual time-varying noise.
Leq16(hr)	Leq16h is the Leq over the 16-hour day-time period (7am-11pm). The Summer Leq16hr covers the 92 days from mid-June to mid-September and, at Dublin airport, is used for assessing the Residential Noise Insulation Scheme.
Leq8(hr)	Leq8h is the Leq over the 8-hour night-time period (11pm-7am). The Summer Leq16hr covers the 92 days from mid-June to mid-September. Leq8h and Lnight cover the same period, so monthly and quarterly values are identical. If the summer period is busier, the Summer Leq8h would be higher than the Annual Lnight.
Lmax	Lmax is the maximum instantaneous noise level recorded at an NMT during a noise event. Leq1sec (approx. Lmax) is displayed at each NMT on the Dublin Airport WebTrak site however, it also includes non-aircraft noise.
Lnight	Lnight is the night-time (11pm-7am) Leq average noise indicator. Like Lden, in this document, Lnight is reported monthly, quarterly and annually.
Measured noise levels	This is the assessment of the noise level at an NMT derived from data from the NMT. Each measured noise level is only at the NMT point location.
Modelled noise levels	This is calculated using computer software which takes into account all Dublin Airport flight operational activity. It calculates the noise levels at thousands of points across the study area and is used to produce Noise Contours. The Modelled noise level can also be calculated at each NMT point location.
(Notes: Comparing Measured and Modelled Noise Levels)	Measured noise levels at each NMT location should be the same, or close to, the Modelled noise levels. Measured data may miss some less noisy aircraft noise events, especially if the NMT is far from the airport (the aircraft is higher) or if the aircraft track is far from the NMT. Modelled data includes all aircraft activity in the entire study area. This means that Measured data should be equal to, or slightly lower than, the Modelled data. Good agreement between the Measured and Modelled data gives confidence that the Modelled Noise Contours provide good information on actual noise levels, including at locations that do not have an NMT.

Explanation of Terms (Cont.)

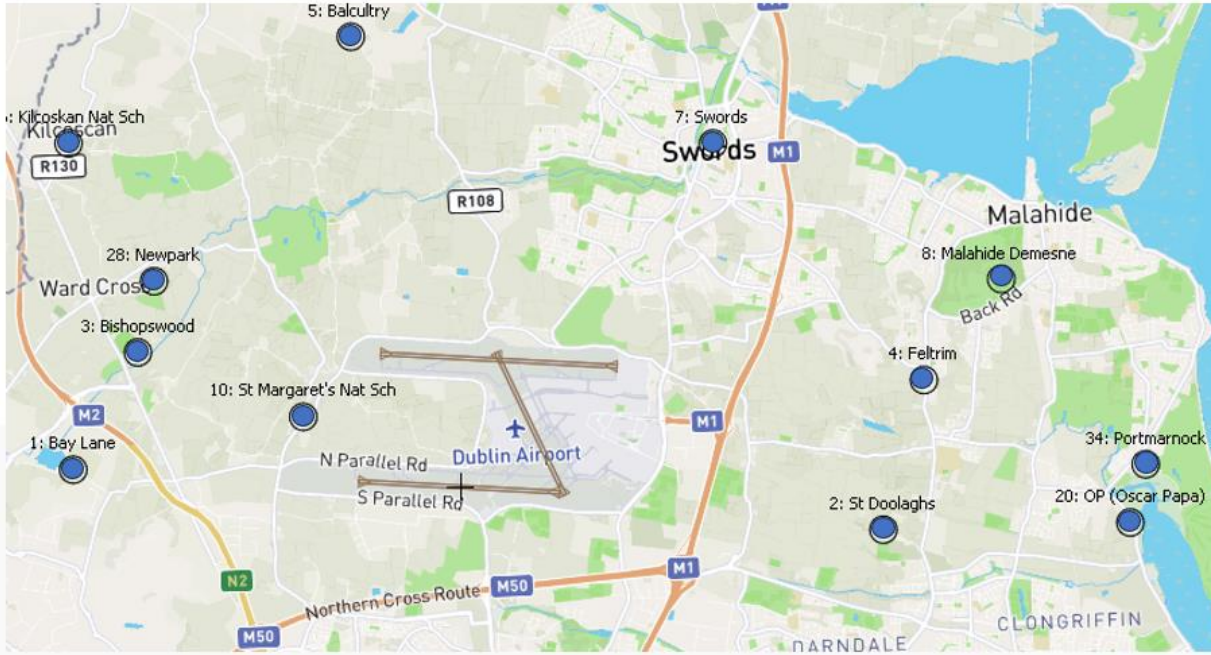
Term	Definition
NMT	NMT means Noise Monitoring Terminal. They are generally located in community areas. An NMT includes a high-quality, calibrated microphone and provides continuous noise level data at the location of the NMT.
Noise Contours	Contours are lines that join points of the same modelled noise level covering a study area. All noise contours are modelled. Each year Dublin Airport publishes Annual Lden and Lnight contours and Summer Leq16h and Leq8h contours.
Noise Event	A noise event is detected at an NMT location when the noise level rises above and then falls below a pre-set threshold level. This can be caused by many different sources including aircraft, vehicles on a road, dogs barking, wind, sirens etc.
Number Above	Number Above is a single event metric unlike Lden or Lnight which are time-averaged noise metrics. N60 is the number of (aircraft noise) events with Lmax ≥ 60 dBA. N(SEL)70 is the number of (aircraft noise) events with SEL ≥ 70 dBA. Note that N60 value includes the events in N65, N70 and higher.
SEL	SEL or Sound Exposure Level represents the total noise energy contained in a noise event, as if the same noise energy were compressed into a single second. For a short event (like a single dog bark) the SEL is approximately the same value as the Lmax. For an aircraft noise event, usually 10 to 30 seconds, the SEL value is typically about 10 decibels higher than the Lmax. The SEL values of the Correlated Aircraft Noise Events are added up and used to calculate average noise level metrics over longer periods, including annual or monthly Lden & Lnight, or monthly or summer Leq16 & Leq8.
Single Event noise metrics	Including Lmax and SEL, these measure the noise of individual events. Along with the (daily or hourly) number of events at each noise level, these metrics provide a different perspective attempting to quantify the various experiences of individuals near flight paths.
Time-Averaged noise levels	Including Annual Lden and Lnight and Summer Leq16/8h, averaged noise levels allow the comparison of different locations around an airport, (and also other airports) where aircraft types, power settings, overflight frequency, operational time of day, and tracks heights vary. The EU and WHO uses Lden and Lnight to assess the total impact on communities for road, rail and air transport noise.
Total Noise	Total Noise is a measure of noise from all noise sources (including aircraft and non-aircraft activity) during the period. This means that Aircraft Noise cannot exceed Total Noise.
YTD	Year to date

Permanent Noise Monitoring Terminal (NMT) Locations Q1 2026



= *Permanent NMTs located further out from Dublin Airport*

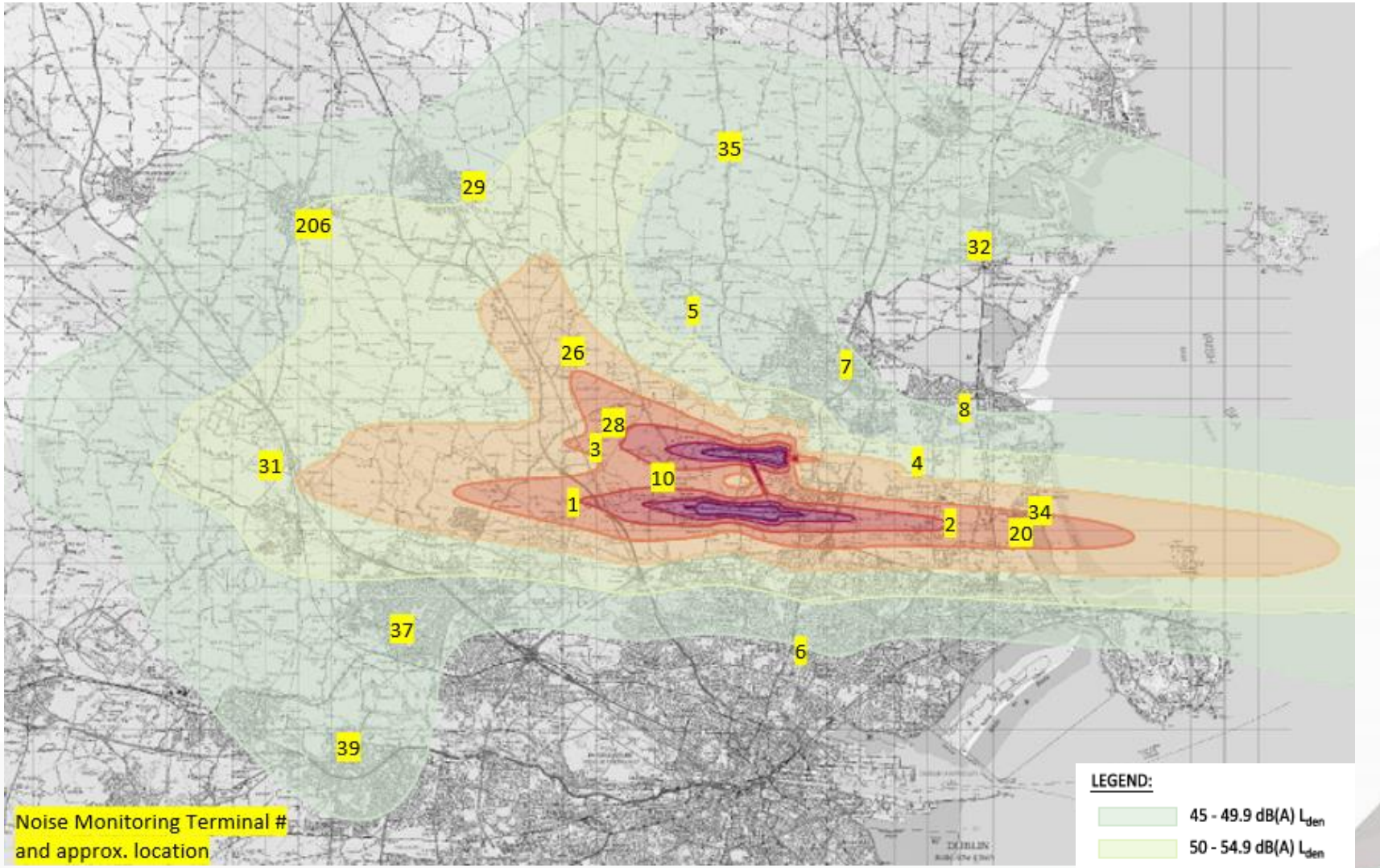
#	NMT Name	Since
1	Bay Lane	2015
2	St. Doolaghs	2015
3	Bishopswood	2015
4	Feltrim	2015
5	Balcultry	2015
6	St.Davids	2015
7	Swords	07/2022
8	Malahide	07/2022
10	St.Margarets NS	07/2022
20	Coast Rd (OP)	2015
26	Kilcoskan NS	12/2022
27	Summerhill	09/2023
28	Newpark	09/2023
29	Ashbourne	09/2023
30	Roundwood	09/2023
31	Dunboyne	09/2023
32	Donabate	09/2023
33	Ardgillan	01/2024
34	Portmarnock	06/2024
35	Ballyboughal	06/2024
37	Ongar	08/2024
38	Clondalkin	08/2024
39	Lucan	08/2024
40	Bray	08/2024
206	Ratoath	03/2024



= *Permanent NMTs located near Dublin Airport*

Modelled Lden Noise Contour Levels at Permanent NMT Locations

#	NMT Name	Lden 2023	Lden 2024
1	Bay Lane	65	64.0
2	St. Doolaghs	65	64.8
3	Bishopswood	60	61.1
4	Feltrim	54	54.1
5	Balcultry	49	49.2
6	St.Davids	44	43.3
7	Swords	45	45.7
8	Malahide	46	46.3
10	St.Margarets NS	63	63.7
20	Coast Rd (OP)	63	62.7
26	Kilcoskan NS	58	59.5
27	Summerhill	38	35.8
28	Newpark	60	61.8
29	Ashbourne	49	50.0
30	Roundwood	36	37.7
31	Dunboyne	54	53.1
32	Donabate	45	45.1
33	Ardgillan	33	33.3
34	Portmarnock	54	58.2
35	Ballyboughal	47	49.0
37	Ongar		48.3
38	Clondalkin		43.4
39	Lucan		46.0
40	Bray		33.6
206	Ratoath	47	50.5



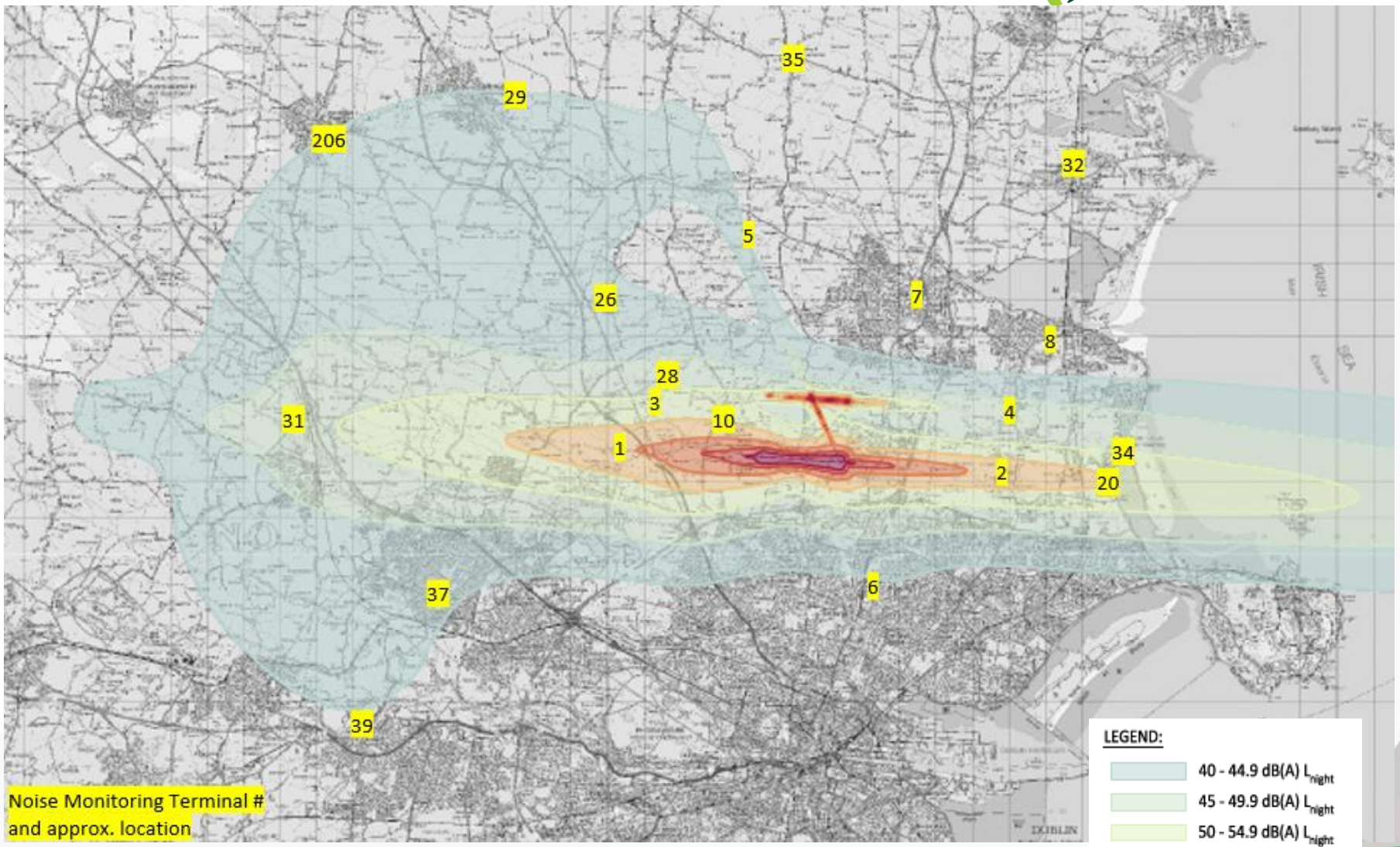
Map of 2024 Annual Lden Noise contours

5 NMT (27, 30, 33, 38, 40) are located outside this map's boundaries

Including Permanent NMT installations

Modelled Lnight Noise Contour Levels at Permanent NMT Locations

#	NMT Name	Lnight 2023	Lnight 2024
1	Bay Lane	58.5	58.4
2	St. Doolaghs	57.0	57.0
3	Bishopswood	49.1	49.4
4	Feltrim	46.4	47.3
5	Balcultry	39.0	40.5
6	St.Davids	36.0	36.3
7	Swords	36.7	36.9
8	Malahide	38.4	38.5
10	St.Margarets NS	55.2	55.7
20	Coast Rd (OP)	55.0	55.0
26	Kilcoskan NS	40.5	40.4
27	Summerhill	31.3	28.1
28	Newpark	44.6	44.9
29	Ashbourne	39.3	40.1
30	Roundwood	28.3	30.1
31	Dunboyne	47.0	47.2
32	Donabate	36.7	37.2
33	Ardgillan	23.8	23.4
34	Portmarnock		50.3
35	Ballyboughal		36.9
37	Ongar		42.3
38	Clondalkin		36.8
39	Lucan		39.7
40	Bray		24.9
206	Ratoath		40.5



Map of 2024 Annual Lnight Noise contours

5 NMT (27, 30, 33, 38, 40) are located outside this map's boundaries

Including Permanent NMT installations

NMT – Operational Downtime and Number of Correlated Aircraft Noise Events

NMT	Location	January		February		March		Q1 2026
		Downtime (mins)	# Aircraft Events	Downtime (mins)	# Aircraft Events	Downtime (mins)	# Aircraft Events	# Aircraft Events
1	Bay Lane	7	1912	5	2017	72	1304	5233
2	St. Doolaghs	5	9237	4	8522	73	9456	27215
3	Bishopswood	17	5692	63	5123	84	4800	15615
4	Feltrim	5	1892	3	1215	175	1722	4829
5	Balcultry	4	29	681	16	130	41	86
6	St.Davids	6	73	1	60	130	34	167
7	Swords	255	2	76	1	134	4	7
8*	Malahide*							
10	St.Margarets NS	191	3648	61	3602	136	5741	12991
20	Coast Rd (OP)	60	7934	0	7161	120	8177	23272
26	Kilcoskan NS	52	4195	15720	1296	3862	6287	11778
27	Summerhill	211	153	63	129	130	57	339
28	Newpark	263	6539	64	5829	129	7350	19718
29	Ashbourne	203	324	66	291	131	422	1037
30	Roundwood	200	0	1322	0	129	0	0
31*	Dunboyne*					131	584	584*
32	Donabate	153	10	16	4	78	5	19
33*	Ardgillan*	31753	0	65	2	130	4	6*
34	Portmarnock	220	5223	66	4995	130	5747	15965
35	Ballyboughal	200	63	62	39	129	85	187
37	Ongar	235	85	63	75	130	97	257
38	Clondalkin	187	10	67	6	133	7	23
39	Lucan	254	13	62	13	128	21	47
40	Bray	201	0	62	0	129	0	0
206	Ratoath	231	298	65	248	132	495	1041

- **NMT 8 (Malahide)** was out of service in Q3 and Q4 2025 and Q1 2026 due to a lost windsock and access issues.
- **NMT 31 (Dunboyne)** was out of service in Q4 2025 and Q1 2026 due to a lost windsock and access issues. The windsock was restored at Dunboyne in March.
- **NMT 33 (Ardgillan)** was out of service due to a power failure at the school car park in January.

Including Permanent NMT installations only

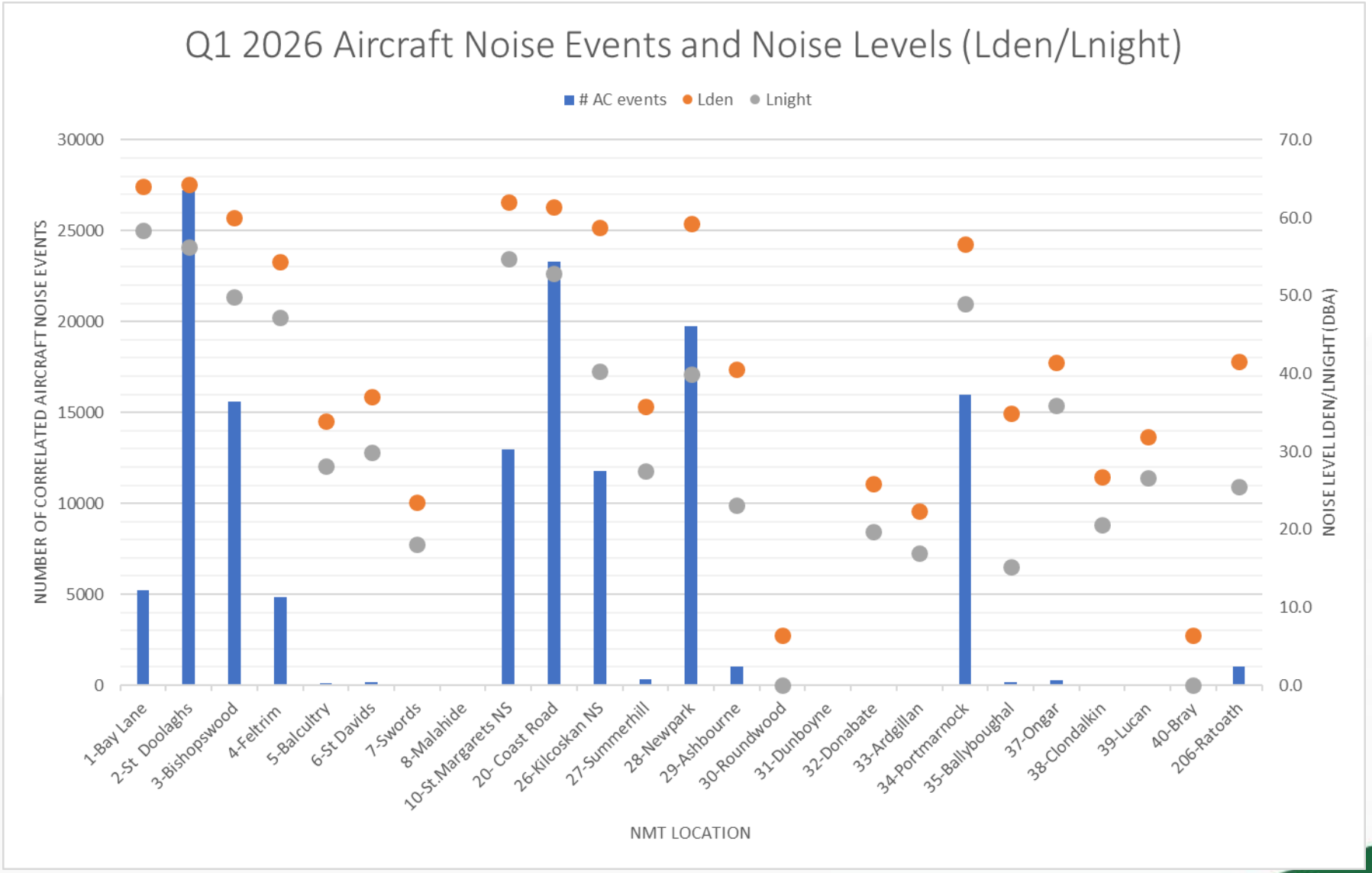
NMT – Q1 2026 Monthly and Quarterly Lden, Lnight and Leq16hr

NMT	Location	# Correlated Aircraft Noise Events				Lden (dBA)				Lnight (=Leq 8h) (dBA)				Leq16h (dBA)			
		Jan	Feb	Mar	Q1	Jan	Feb	Mar	Q1	Jan	Feb	Mar	Q1	Jan	Feb	Mar	Q1
1	Bay Lane	1912	2017	1304	5233	64.3	65.0	62.3	64.0	58.7	59.2	56.9	58.3	53.4	55.0	45.5	52.7
2	St. Doolaghs	9237	8522	9456	27215	64.2	64.1	64.5	64.3	56.2	56.0	56.5	56.3	61.2	61.2	61.5	61.3
3	Bishopswood	5692	5123	4800	15615	60.4	60.4	59.0	60.0	49.2	49.8	50.4	49.8	59.8	59.5	57.1	58.9
4	Feltrim	1892	1215	1722	4829	54.8	50.6	55.9	54.4	48.6	42.9	48.0	47.2	48.6	47.6	52.5	50.2
5	Balcultry	29	16	41	86	33.4	32.0	35.4	33.9	27.7	25.8	29.8	28.1	22.6	25.5	24.5	24.3
6	St.Davids	73	60	34	167	38.6	37.1	34.4	37.0	31.6	29.7	27.4	29.9	35.6	34.5	31.3	34.2
7	Swords	2	1	4	7	23.5	21.7	24.6	23.5	18.3	16.4	19.2	18.1	0.0	0.0	13.2	8.9
8*	Malahide*																
10	St.Margarets NS	3648	3602	5741	12991	60.9	61.6	63.2	62.0	53.4	54.4	55.8	54.7	57.3	57.7	59.8	58.4
20	Coast Rd (OP)	7934	7161	8177	23272	61.2	61.5	61.6	61.4	52.4	52.9	53.1	52.8	59.1	59.3	59.3	59.2
26	Kilcoskan NS	4195	1296	6287	11778	58.6	55.5	60.4	58.7	37.4	32.4	43.8	40.3	59.1	56.4	60.9	59.3
27	Summerhill	153	129	57	339	35.9	37.0	33.9	35.8	28.1	26.6	27.7	27.5	33.6	34.9	28.5	33.0
28	Newpark	6539	5829	7350	19718	58.9	58.2	60.3	59.3	38.1	31.8	43.1	39.9	59.4	59.2	60.7	59.8
29	Ashbourne	324	291	422	1037	40.1	39.4	41.7	40.5	18.2	22.8	25.4	23.0	40.8	40.4	42.4	41.3
30	Roundwood	0	0	0	0	6.4	6.4	6.4	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31*	Dunboyne*			584	584*			49.9	49.9*			44.5	44.5*			34.6	34.6*
32	Donabate	10	4	5	19	26.8	21.2	27.0	25.8	20.9	0.0	21.8	19.8	20.3	22.9	0.0	19.9
33*	Ardgillan*		2	4	6*		18.0	24.3	22.4*		10.8	19.1	16.9*		15.4	0.0	12.4*
34	Portmarnock	5223	4995	5747	15965	57.0	56.7	56.2	56.7	49.5	48.6	48.5	48.9	53.9	54.2	53.2	53.8
35	Ballyboughal	63	39	85	187	35.6	32.1	36.0	35.0	19.7	0.0	0.0	15.2	36.3	33.9	37.3	36.1
37	Ongar	85	75	97	257	40.9	41.0	42.1	41.4	35.4	35.4	36.7	35.9	27.6	28.4	27.4	27.8
38	Clondalkin	10	6	7	23	27.7	25.8	26.3	26.7	22.0	17.8	20.8	20.6	19.8	20.1	15.7	18.9
39	Lucan	13	13	21	47	29.9	31.2	33.7	31.9	24.6	25.7	28.5	26.6	9.9	14.7	0.0	11.1
40	Bray	0	0	0	0	6.4	6.4	6.4	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
206	Ratoath	298	248	495	1041	40.6	39.8	43.3	41.5	23.0	23.9	27.8	25.4	41.6	40.8	44.1	42.5

Including Permanent NMT installations only

*see notes on page 10

NMT – Q1 2026 Aircraft Noise Events and Measured Lden and Lnight



2024-25 and Quarterly 2026 (YTD) Measured Lden, Lnight & Leq16hr

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NMT	Location	Lden (dBA) [Modelled Contour and Measured]								Lnight (=Leq 8h) (dBA) [Modelled Contour and Measured]								Leq16h (dBA) [Measured]						
		'24 Model	'24 NMT	'25 NMT	Q1 2026	Q2 2026	Q3 2026	Q4 2026	2026	'24 Model	'24 NMT	'25 NMT	Q1 2026	Q2 2026	Q3 2026	Q4 2026	2026	'24 NMT	'25 NMT	Q1 2026	Q2 2026	Q3 2026	Q4 2026	2026
1	Bay Lane	64.0	63.4	63.9[11]	64.0					58.4	57.8	58.5[11]	58.3					51.6	46.8[11]	52.7				
2	St. Doolaghs	64.8	64.3	64.3	64.3					57.0	56.5	56.3	56.3					61.0	61.4	61.3				
3	Bishopswood	61.1	58.4	59.1	60.0					49.4	45.1	46.0	49.8					58.4	58.8	58.9				
4	Feltrim	54.1	52.4	51.8	54.4					47.3	45.3	45.3	47.2					48.5	46.3	50.2				
5	Balcultry	49.2	44.1	38.4	33.9					40.5	37.2	25.4	28.1					37.8	38.7	24.3				
6	St.Davids	43.3	42.8	38.9	37.0					36.3	34.8	28.5	29.9					39.3	38.6	34.2				
7	Swords	45.7	38.7	34.9	23.5					36.9	26.8	25.4	18.1					37.2	33.5	8.9				
8*	Malahide*	46.3	38.9	39.5[6]						38.5	32.0	33.7[6]						32.6	30.1[6]					
10	St.Margarets	63.7	63.4	62.1	62.0					55.7	56.1	54.7	54.7					59.6	58.5	58.4				
20	Coast Rd (OP)	62.7	62.6	63.3	61.4					55.0	54.5	54.9	52.8					59.6	60.8	59.2				
26	Kilcoskan NS	59.5	60.4	59.8	58.7					40.4	36.0	36.3	40.3					61.1	60.4	59.3				
27	Summerhill	35.8	33.8	33.5	35.8					28.1	23.3	24.7	27.5					33.5	31.5	33.0				
28	Newpark	61.8	61.3	60.3	59.3					44.9	36.7	36.4	39.9					61.9	60.8	59.8				
29	Ashbourne	50.0	39.7	40.4	40.5					40.1	23.4	22.3	23.0					40.4	41.1	41.3				
30	Roundwood	37.7	17.7	12.4	6.4					30.1	0.0	0.0	0.0					19.2	13.1	0.0				
31*	Dunboyne*	53.1	50.4	51.3[9]	49.9[1]					47.2	44.9	46.0[9]	44.5[1]					38.3	32.4[9]	34.6[1]				
32	Donabate	45.1	32.7	29.1	25.8					37.2	21.6	19.1	19.8					31.1	27.9	19.9				
33*	Ardgillan*	33.3	30.1	27.7	22.4[2]					23.4	20.9	20.3	16.9[2]					27.8	24.0	12.4[2]				
34	Portmarnock	58.2	54.8[8]	56.6	56.7					50.3	46.9[8]	49.3	48.9					52.1[8]	53.0	53.8				
35	Ballyboughal	49.0	38.3[8]	38.6	35.0					36.9	24.1[8]	21.1	15.2					38.7[8]	39.5	36.1				
37	Ongar	48.3	40.6[3]	41.9	41.4					42.3	34.8[3]	36.6	35.9					32.0[3]	27.1	27.8				
38	Clondalkin	43.4	37.8[3]	26.8	26.7					36.8	24.5[3]	20.0	20.6					38.6[3]	22.2	18.9				
39	Lucan	46.0	33.8[3]	33.9	31.9					39.7	25.3[3]	27.8	26.6					32.6[3]	24.3	11.1				
40	Bray	33.6	33.4[3]	26.4	6.4					24.9	16.4[3]	8.0	0.0					34.0[3]	26.2	0.0				
206	Ratoath	50.5	47.0[10]	45.2	41.5					40.5	27.1[10]	27.4	25.4					47.4[10]	45.9	42.5				

Including Permanent NMT installations only. [Superscript shows # Months in the year]

*see notes on page 10

Total Noise versus Aircraft Noise Q3, Q4 2025 & Q1 2026

NMT	Location	Lden Q3 2025			Lden Q4 2025			Lden Q1 2026		
		Total Noise (dBA)	Aircraft Noise (dBA)	# Aircraft Noise Events	Total Noise (dBA)	Aircraft Noise (dBA)	# Aircraft Noise Events	Total Noise (dBA)	Aircraft Noise (dBA)	# Aircraft Noise Events
1	Bay Lane	64.4 (45d)**	62.4 (45d)**	2041 (45d)**	67.4	63.3	4075	68.3	64.0	5233
2	St. Doolaghs	65.3	64.8	35619	65.6	64.7	30687	65.5	64.3	27215
3	Bishopswood	63.2	58.1	16433	64.8	59.7	15611	65.1	60.0	15615
4	Feltrim	60.8	50.9	2336	61.9	51.9	2908	62.1	54.4	4829
5	Balcultry	55.8	35.6	84	58.6	37.3	92	60.3	33.9	86
6	St.Davids	57.7	35.5	195	62.1	35.5	153	61.2	37.0	167
7	Swords	66.6	24.4	9	66.2	27.5	7	64.3	23.5	7
8*	Malahide*									
10	St.Margarets NS	66.2	62.6	17255	67.2	62.3	14634	67.5	62.0	12991
20	Coast Rd (OP)	66.6	64.1	33833	67.4	62.9	27256	67.0	61.4	23272
26	Kilcoskan NS	63.2	60.7	19895	64.6	60.1	17754	64.4	58.7	11778
27	Summerhill	58.0	32.7	240	58.6	34.2	351	58.1	35.8	339
28	Newpark	62.8	61.7	26054	63.1	60.3	23723	62.9	59.3	19718
29	Ashbourne	56.0	41.2	1452	58.9	41.7	1588	58.8	40.5	1037
30	Roundwood	59.0	6.4	0	58.0	17.5	2	57.9	6.4	0
31*	Dunboyne*	60.6	51.3	2276				62.7*	49.9*	584*
32	Donabate	54.3	24.8	20	56.9	25.0	15	57.2	25.8	19
33*	Ardgillan*	54.2	26.6	13	57.3	26.6	11	57.3*	22.4*	6*
34	Portmarnock	59.0	56.1	15382	60.4	56.6	16502	61.2	56.7	15965
35	Ballyboughal	61.3	39.2	396	62.5	38.1	308	62.7	35.0	187
37	Ongar	59.0	42.1	339	61.1	42.4	305	62.0	41.4	257
38	Clondalkin	59.0	26.8	29	60.1	27.5	24	59.6	26.7	23
39	Lucan	54.7	35.4	95	56.3	32.3	55	56.3	31.9	47
40	Bray	55.1	17.9	4	58.8	6.4	0	58.5	6.4	0
206	Ratoath	54.8	46.2	3590	57.3	43.3	1577	57.6	41.5	1041

- **Total Noise** includes all noise sources detected at the NMT.
- **Aircraft Noise** only includes noise events that are correlated with the flight radar and time of aircraft operational events – i.e. arrivals and departures at Dublin Airport.

Including Permanent NMT installations only *see notes on page 10 ** NMT1 45 days in Q3 only due to power failure and part replacement

Q1 2026 Lmax and SEL Number Above (NA) data (Daily Average)

NMT	Location	Average Number of Aircraft Noise Events per DAY Above Lmax (dBA) [e.g. N60 = Number of events above Lmax 60dBA]						# Aircraft N Events / DAY	Average Number of Aircraft Noise Events per DAY Above SEL [e.g. N(SEL)70 = Number of events above SEL 70dBA]						# Aircraft N Events
		N60	N65	N70	N75	N80	N85	(Av day Q1)	N(SEL)70	N(SEL)75	N(SEL)80	N(SEL)85	N(SEL)90	N(SEL)95	(Total in Q1)
1	Bay Lane	58.2	58.2	55.9	36.1	10.8	0.7	58	58.2	57.9	51.6	31.6	6.4	0.7	5234
2	St. Doolaghs	302.4	301.7	283.2	130.9	5.2	0.1	302	302.4	301.5	284.4	103.3	4.2		27221
3	Bishopswood	172.3	160.7	130.2	70.2	4.3	0.2	174	172.6	168.8	136.5	58.1	2.6	0.0	15619
4	Feltrim	53.7	48.1	18.8	8.3	0.2	0.0	54	53.7	48.4	22.1	6.8	0.2		4837
5	Balcultry	0.8	0.5	0.1	0.0			1	0.8	0.4	0.0	0.0			86
6	St.Davids	1.9	1.8	0.9	0.0			2	1.9	1.8	0.8	0.0			167
7	Swords	0.1	0.0					0	0.1	0.0					7
8*	Malahide*							1							
10	St.Margarets NS	144.1	137.4	129.1	70.7	8.6	0.2	144	143.8	139.1	126.4	60.3	6.1		12996
20	Coast Rd (OP)	258.6	258.6	219.7	24.3	0.7	0.0	259	258.6	258.6	222.1	31.4	1.8	0.0	23274
26	Kilcoskan NS	131.3	127.8	113.2	43.5	5.9	0.1	131	131.2	129.1	118.8	49.0	6.2	0.0	11816
27	Summerhill	3.5	1.4	0.1	0.0			4	3.1	1.3	0.2	0.0			339
28	Newpark	219.0	177.9	120.3	58.7	7.9	0.5	219	218.9	176.4	127.6	66.4	7.5	0.2	19732
29	Ashbourne	11.5	9.5	2.4	0.2	0.0		12	11.5	7.5	2.4	0.2			1037
30	Roundwood							0							1
31*	Dunboyne*	18.9	13.0	4.4	1.7	0.7	0.2	19	18.4	13.4	4.5	1.4	0.5	0.1	1721
32	Donabate	0.2	0.1	0.0				0	0.2	0.1	0.0				19
33*	Ardgillan*	0.1	0.0					0	0.1	0.0					6
34	Portmarnock	177.5	153.3	41.4	4.2	0.0		178	177.1	151.2	54.6	5.1	0.1		15975
35	Ballyboughal	2.1	2.1	2.1	0.2	0.0		2	2.1	2.0	1.2				187
37	Ongar	2.7	1.2	0.1				3	2.8	1.9	0.3				261
38	Clondalkin	0.2	0.1					0	0.2	0.1	0.0				23
39	Lucan	0.5	0.1					1	0.5	0.2					48
40	Bray							0							1
206	Ratoath	11.6	11.0	2.9	0.4			12	11.6	9.8	3.0	0.3			1041

* See notes on page 10

This data shows Lmax and SEL distributions of correlated aircraft noise events each day averaged over the quarter.
For example, N60 = number of daily events over Lmax 60 dBA. Blank suggests zero aircraft event. 0.0 suggests some events but negligible.

Q1 2026 Lmax and SEL Percentages in 5-decibel bands (3 months)

NMT	Location	Percentage of Aircraft Noise Events in each Lmax Range (dBA)						# Aircraft Noise Events /DAY	Percentage of Aircraft Noise Events in each SEL Range (dBA)						# Aircraft Noise Events
		60-64.9	65-69.9	70-74.9	75-79.9	80-84.9	85-89.9	(Av day Q1)	70-74.9	75-79.9	80-84.9	85-89.9	90-94.9	95-99.9	(Total in Q1)
1	Bay Lane		4%	34%	43%	17%	1%	58	0%	11%	34%	43%	10%	1%	5234
2	St. Doolaghs	0%	6%	50%	42%	2%	0%	302	0%	6%	60%	33%	1%		27221
3	Bishopswood	7%	18%	35%	38%	2%	0%	174	2%	19%	45%	32%	1%	0%	15619
4	Feltrim	11%	54%	20%	15%	0%	0%	54	10%	49%	29%	12%	0%		4837
5	Balcultry	33%	38%	8%	1%			1	42%	38%	2%	1%			86
6	St.Davids	1%	49%	49%	1%			2	4%	53%	43%	1%			167
7	Swords	43%	57%					0	43%	57%					7
8*	Malahide*							1							
10	St.Margarets NS	5%	6%	40%	43%	6%	0%	144	3%	9%	46%	38%	4%		12996
20	Coast Rd (OP)		15%	76%	9%	0%	0%	259		14%	74%	11%	1%	0%	23274
26	Kilcoskan NS	3%	11%	53%	29%	4%	0%	131	2%	8%	53%	33%	5%	0%	11816
27	Summerhill	56%	34%	2%	1%			4	47%	31%	4%	1%			339
28	Newpark	19%	26%	28%	23%	3%	0%	219	19%	22%	28%	27%	3%	0%	19732
29	Ashbourne	17%	62%	19%	1%	0%		12	35%	44%	20%	2%			1037
30	Roundwood							0							1
31*	Dunboyne*	31%	45%	14%	6%	2%	1%	56	26%	47%	16%	5%	2%	0%	1721
32	Donabate	42%	53%	5%				0	53%	32%	5%				19
33*	Ardgillan*	50%	50%					0	50%	33%					6
34	Portmarnock	14%	63%	21%	2%	0%		178	15%	54%	28%	3%	0%		15975
35	Ballyboughal			90%	9%	1%		2	2%	42%	57%				187
37	Ongar	51%	38%	4%				3	31%	56%	9%				261
38	Clondalkin	35%	30%					0	43%	26%	9%				23
39	Lucan	88%	13%					1	67%	31%					48
40	Bray							0							1
206	Ratoath	5%	70%	22%	4%			12	16%	58%	24%	2%			1041

* See notes on page 10

Including Permanent NMT installations only. Blank suggests zero aircraft event. 0% suggests some events but negligible.

Q1 2026 Lmax data (Day, Evening & Night averages over the 3 months)

NMT	Location	Average Number of Day time Events over each Lmax Level (Day Period is 12 hours, 7am to 7pm)						Average Number of Evening time Events over each Lmax Level (Evening Period is 4 hrs, 7pm to 11pm)						Average Number of Night time Events over each Lmax Level (Night Period is 8 hours 11pm to 7am)					
		N60	N65	N70	N75	N80	N85	N60	N65	N70	N75	N80	N85	N60	N65	N70	N75	N80	N85
1	Bay Lane	28.5	28.5	27.2	21.4	16.5	14.5	16.0	16.0	15.8	13.8	9.4	8.0	71.8	71.8	71.1	59.1	43.0	36.3
2	St. Doolaghs	424.6	424.3	410.4	302.2	216.6	212.4	104.3	104.3	101.9	76.8	52.4	52.2	75.9	75.6	73.4	54.3	38.7	38.0
3	Bishopswood	240.5	240.5	227.7	178.6	123.9	120.5	41.2	41.2	39.5	32.1	21.2	20.6	64.0	52.5	36.5	33.0	32.7	32.7
4	Feltrim	72.3	69.8	49.0	41.0	36.3	36.2	12.8	12.5	9.2	8.0	6.4	6.4	22.3	19.5	14.3	13.0	11.2	11.2
5	Balcultry	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.3	1.0	0.8	0.7	0.7	0.7
6	St.Davids	3.0	3.0	2.3	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.4	0.3	0.3	0.3
7	Swords	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
8*	Malahide*																		
10	St.Margarets NS	181.3	181.3	181.2	141.4	98.0	90.9	45.0	45.0	41.7	31.2	22.9	22.5	62.2	55.6	50.5	42.5	32.1	31.3
20	Coast Rd (OP)	367.2	367.2	339.7	202.3	184.2	183.6	91.5	91.5	84.2	48.4	45.8	45.7	58.5	58.5	54.4	32.2	29.3	29.2
26	Kilcoskan NS	222.4	219.4	207.4	149.0	116.9	111.3	36.5	36.3	34.5	23.9	18.4	18.2	3.7	3.4	2.6	2.0	1.9	1.8
27	Summerhill	5.4	3.9	2.8	2.7	2.7	2.7	0.7	0.5	0.4	0.4	0.3	0.3	1.2	0.8	0.7	0.7	0.7	0.7
28	Newpark	367.4	334.1	286.6	235.1	191.3	184.2	65.9	59.1	49.7	40.0	33.3	33.0	4.9	3.9	3.3	2.8	2.6	2.6
29	Ashbourne	19.2	17.9	11.9	9.8	9.6	9.6	3.3	2.8	1.7	1.7	1.7	1.7	0.5	0.3	0.2	0.2	0.2	0.2
30	Roundwood	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31*	Dunboyne*	2.0	1.2	0.5	0.1	0.1	0.0	9.7	5.7	1.3	0.5	0.1	0.0	43.1	30.8	11.1	4.3	1.7	0.4
32	Donabate	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1
33*	Ardgillan*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
34	Portmarnock	226.1	226.1	146.0	117.1	113.1	113.1	56.8	49.4	32.2	28.5	28.4	28.4	72.1	55.3	40.6	36.1	36.0	36.0
35	Ballyboughal	3.9	3.9	3.9	2.1	1.9	1.9	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
37	Ongar	0.6	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	4.6	3.4	2.5	2.4	2.4	2.4
38	Clondalkin	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
39	Lucan	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.5	0.5	0.5	0.5
40	Bray	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
206	Ratoath	20.9	20.5	13.3	10.8	10.4	10.4	1.7	1.6	0.9	0.9	0.8	0.8	0.6	0.4	0.3	0.3	0.3	0.3

* See notes on page 10

This data shows Lmax events during day, evening and night periods, averaged over the quarter.
For example, N60 = number of events over Lmax 60 dBA (in this case the figure is the daily average over the quarter.)

DublinAirport

Part 2: Flight Track Monitoring

Part 2: Contents

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22	Standard Instrument Departures (SID) South Runway	• AirNav Ireland maps displaying the departure SIDs from South Runway towards the West and the East.
23	Busy day Flight Tracks - Westerly and Easterly Operations	Examples of a typical 'busy day' flight pattern
24	Noise Contour Modelling (1) – Core Flight Tracks	Explanation of how noise contours are modelled using core flight tracks
25	Noise Contour Modelling (2) – Dispersed Flight Tracks	Explanation of how noise contours are modelled using dispersed flight tracks
26	Conclusion	

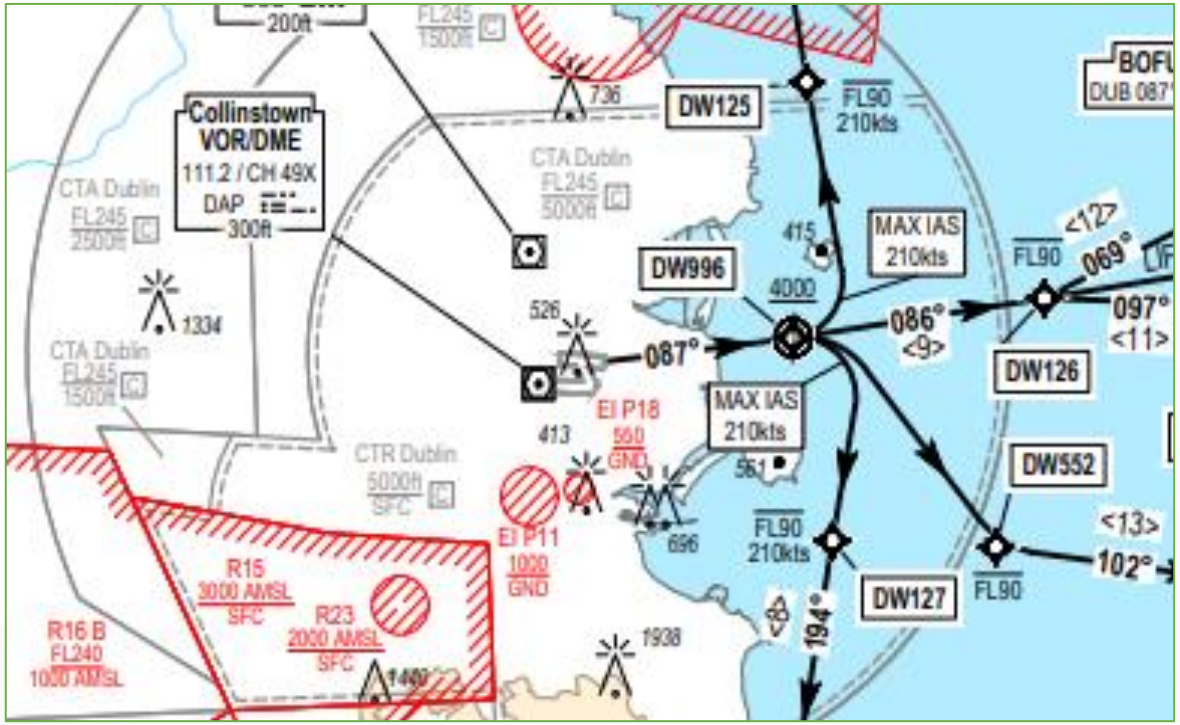
Explanation of Terms

Term	Definition/ Explanation
Arrival Tracks	Arriving aircraft must fly in a straight line for at least the final 11km of their approach before landing on the runway. Aircraft approach the airport at a precise downward angle of 3 degrees, which means that they are at a height of 1,800ft when they join the final approach at the 11km point.
Departure Tracks	Departing jet aircraft are required to follow procedures defined by the SID and to stay within the Environmental Corridor, also called the Noise Preferential Route (NPR), below 3000ft for the South Runway and below 4000ft for the North Runway, unless directed by Air Traffic Control.
Easterly vs Westerly Operations	In general, aircraft land and take-off facing into the wind. If the wind is easterly (blowing from the east), aircraft land from the west and take-off towards the east. If the wind is westerly (blowing from the west), aircraft land from the east (over the Irish Sea) and take-off towards the west. A moderate cross-wind component can be tolerated, but a strong north or south wind will require the use of the Crosswind Runway.
Standard Instrument Departure (SID)	Depending on the departure runway and final destination, departing aircraft follow routes called Standard Instrument Departures (SID). SIDs allow aircraft to safely depart an airspace following pre-defined routes. (See Pages 20 and 21)
Flight Track	A flight track is the actual path flown by an aircraft (as opposed to a route or SID which indicate where an aircraft should go.) Flight track monitoring is based on flight radar data that is incorporated into the Noise and Flight Track Monitoring System.
Noise Modelling	A computer program is used to model airport operations and calculate the noise contours. Input data include all aircraft operations, aircraft types, runway use, time of day and flight tracks.
Modelled Flight Track	Arrival noise is dominated by the straight final approach which is relatively easy to model for the noise contour calculations. Departing aircraft generally follow the SID
Track Dispersion	In practice there is a spread or dispersion of actual tracks flown to either side of a main central track. This is modelled using a central flight track and secondary (dispersed) flight tracks to either side and the operations area divided between these tracks using a normal distribution.

Standard Instrument Departures (SID) North Runway

- Jet aircraft departures are required to follow these Standard Instrument Departures (SID).
- SID's are developed taking into account various safety, operational and environmental considerations amongst others.

SID for North Runway (28R) departures to the west (westerly operations in westerly winds)

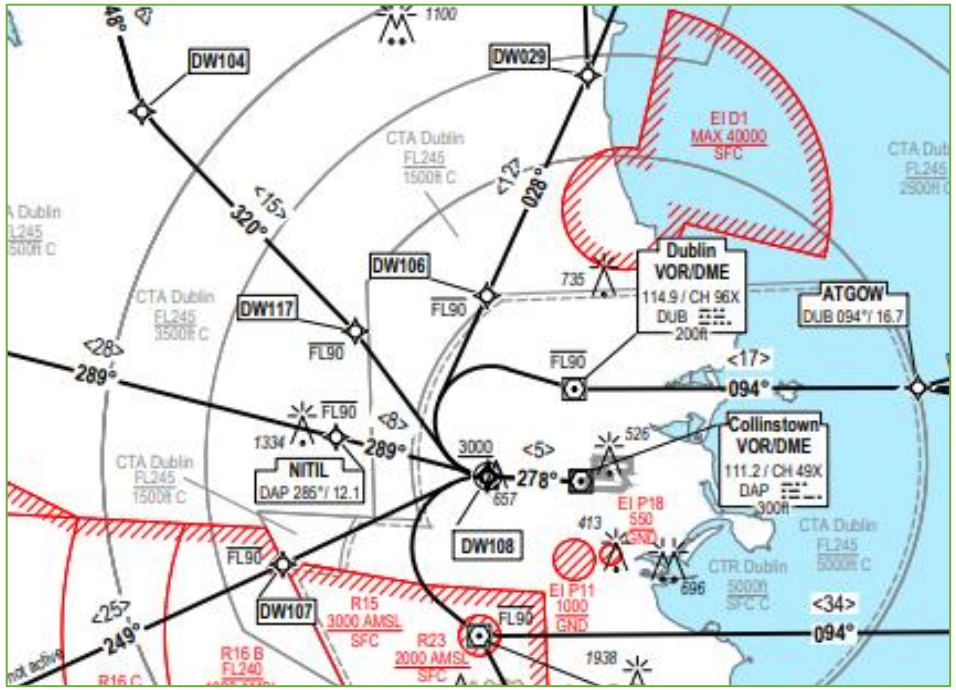


SID for North Runway (10L) departures to the east (easterly operations in easterly winds)
Note: This is only used during periods when the South Runway is closed.

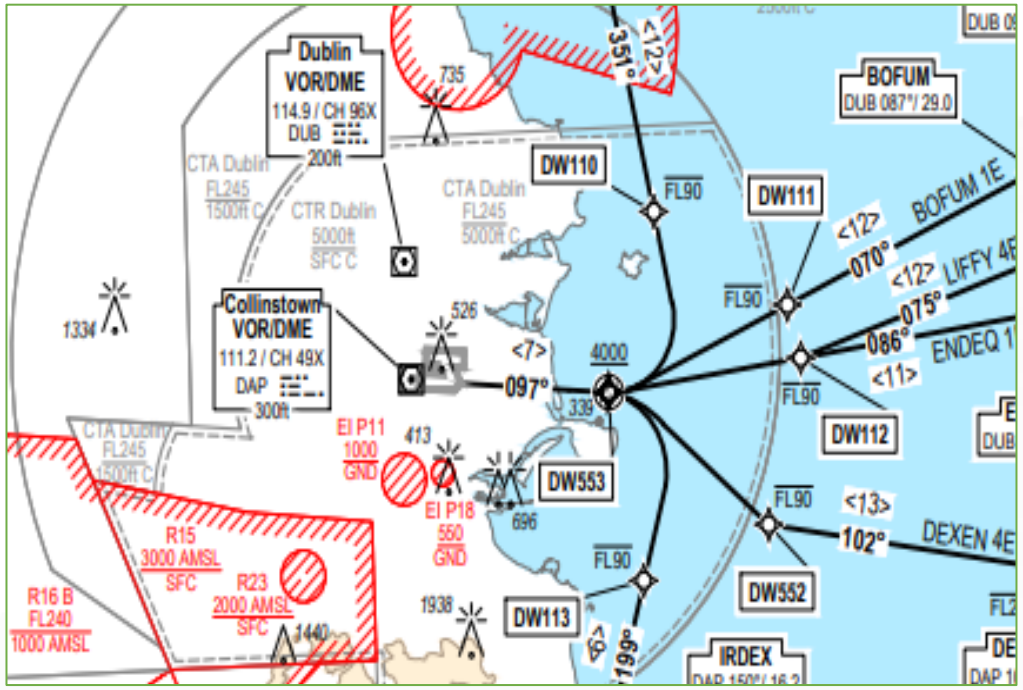
Diagrams are from the AirNav Ireland Aeronautical Information Package

Standard Instrument Departures (SID) South Runway

- Jet aircraft departures are required to follow Standard Instrument Departures (SID)



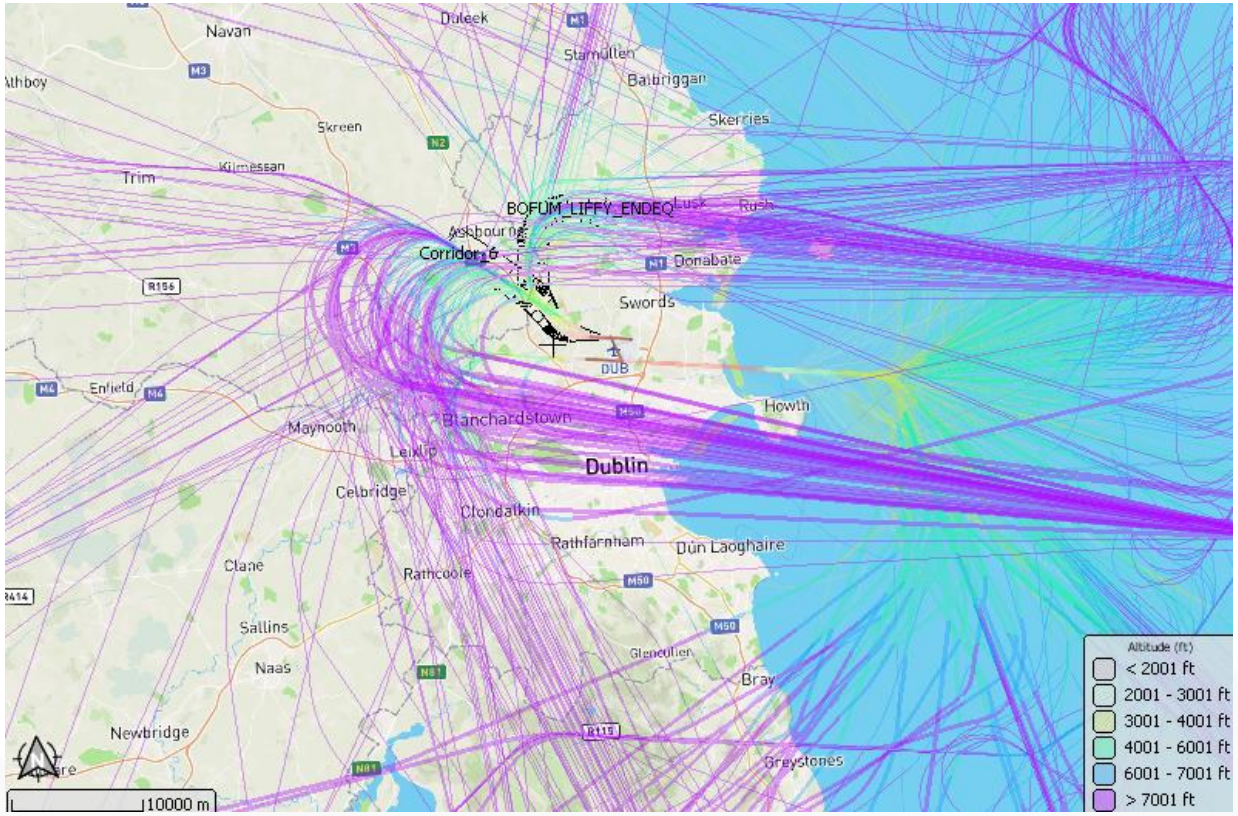
SID for South Runway (28L) Departures to the west (Westerly operations in westerly winds)

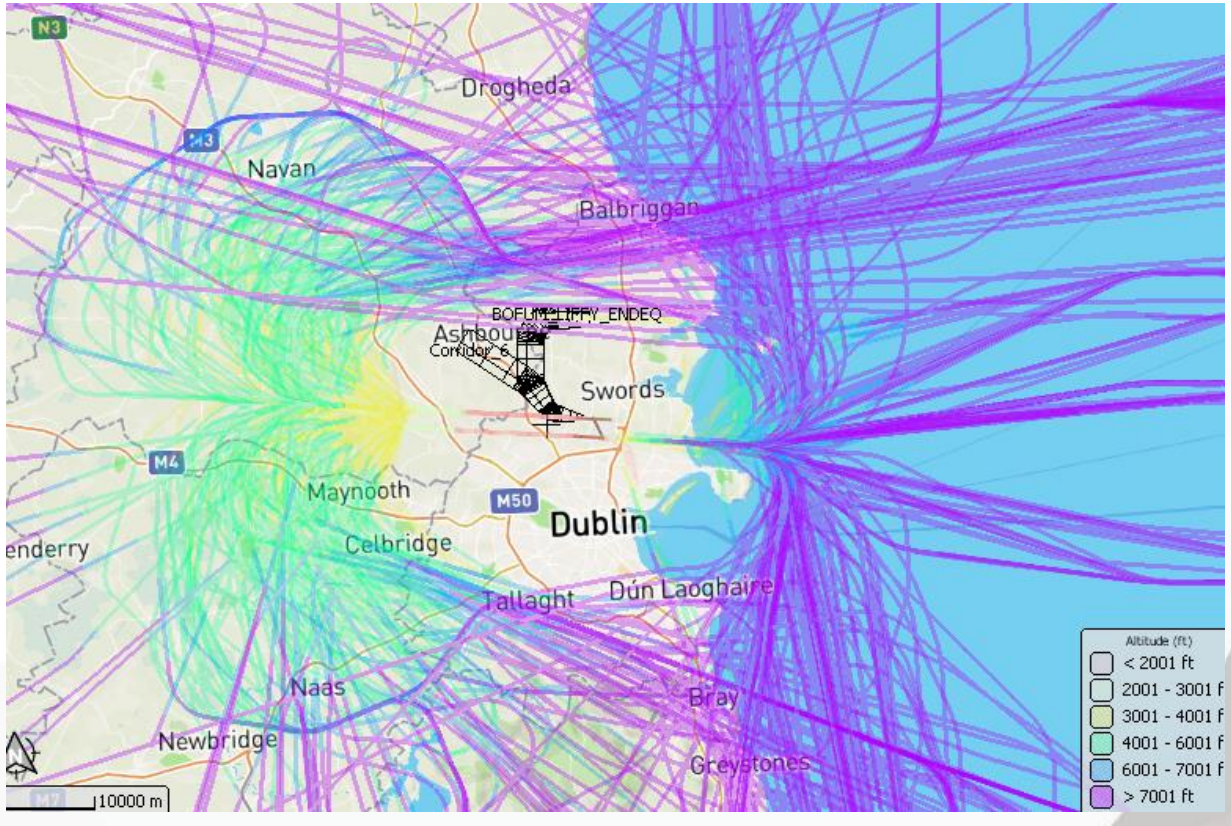


SID for South Runway (10R) Departures to the east (Easterly operations in easterly winds)

Diagrams are from the AirNav Ireland Aeronautical Information Package

Busy Day Flight Tracks





Operations on 2nd Jan 2026

- 729 movements, westerly conditions
- Colours indicate aircraft height

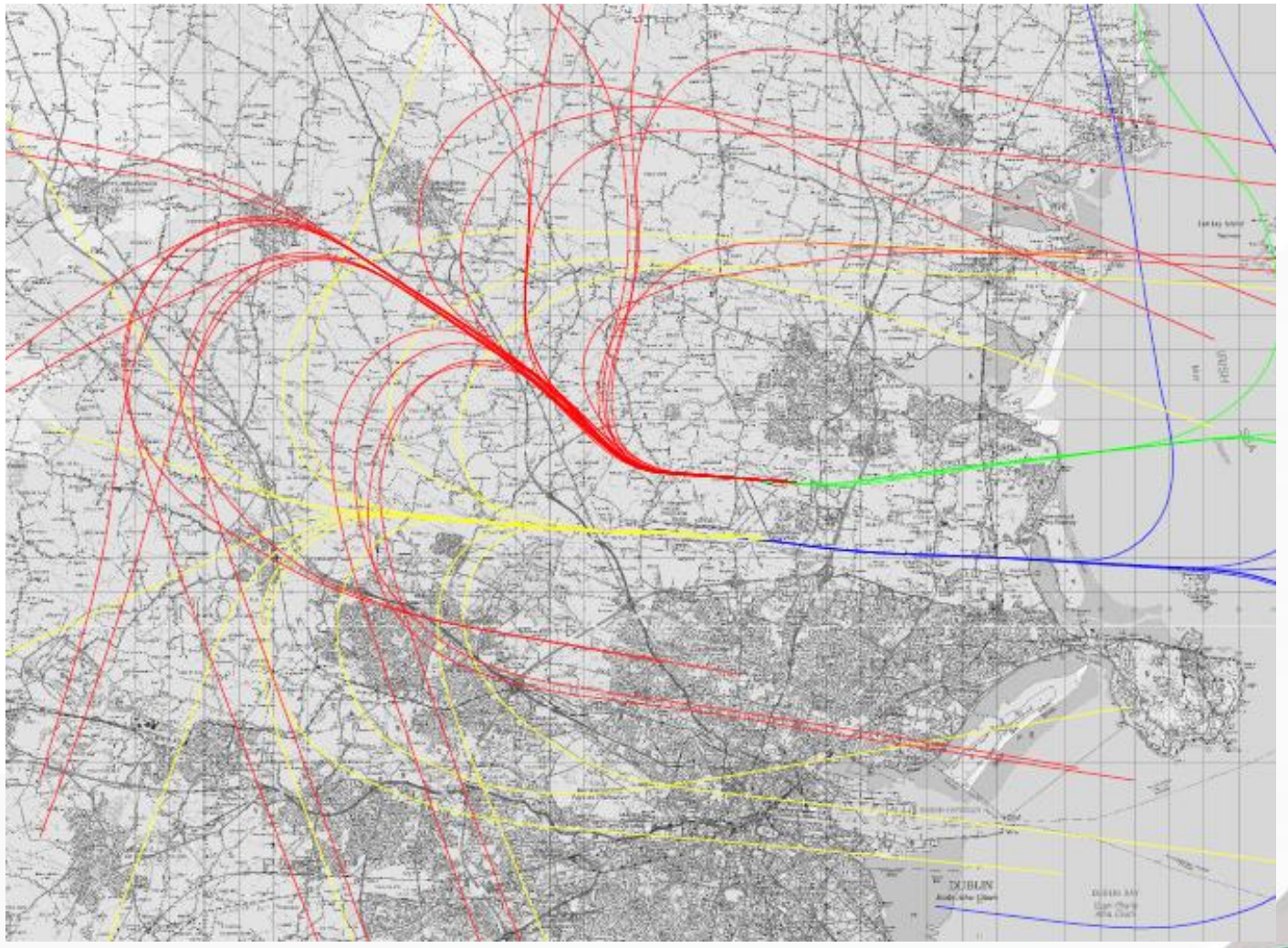
Operations on 6th February 2026

- 697 movements, easterly conditions
- Colours indicate aircraft height

Noise Contour Modelling (1) – Core Departure Flight Tracks

Noise contours are calculated by a computer model based on input of the aircraft operations at the airport. This process includes certain steps :

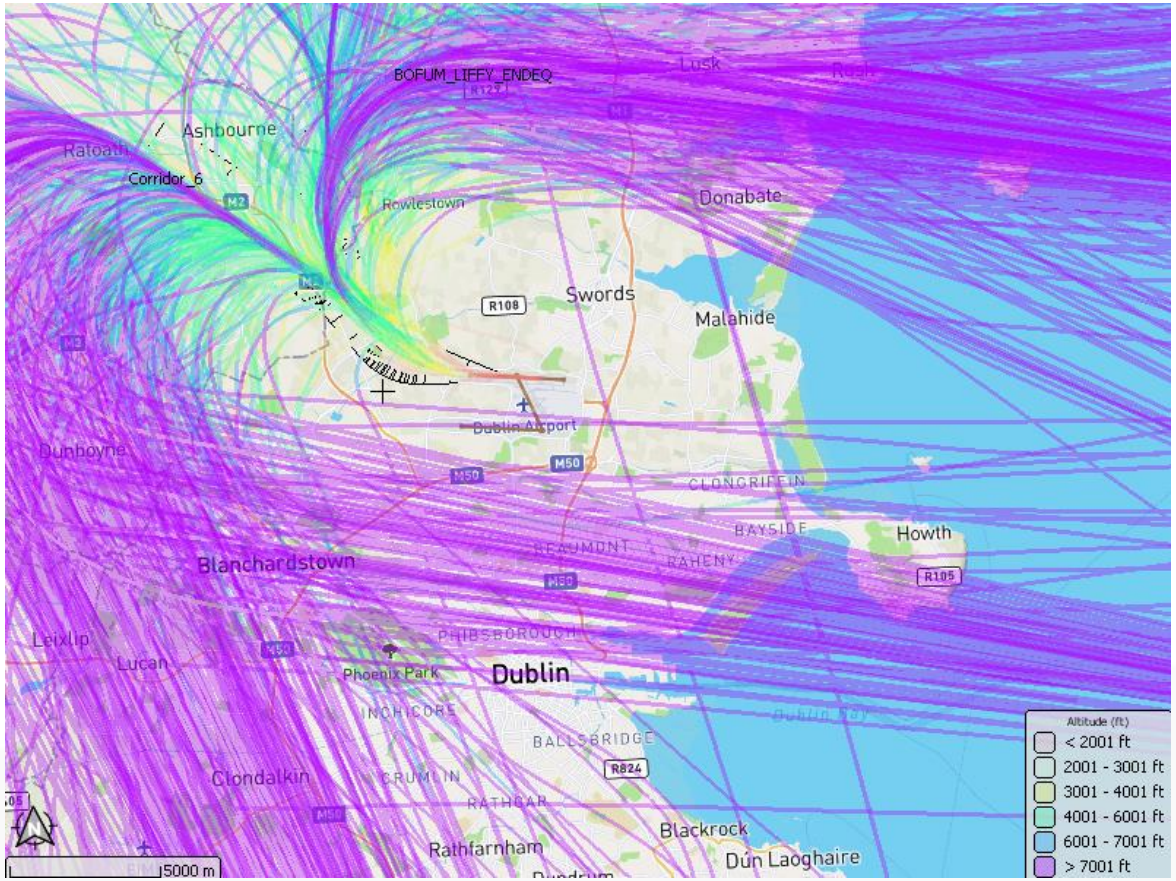
- Flight track data is extracted from the airport's Noise and Flight Track Monitoring system.
- Typical flight tracks are identified for each of the runways (as depicted here)
- Dispersed tracks are created either side of the central lines to reflect actual operations (see next page)
- A grid array of noise calculation points is used to develop the noise contours for each metric.



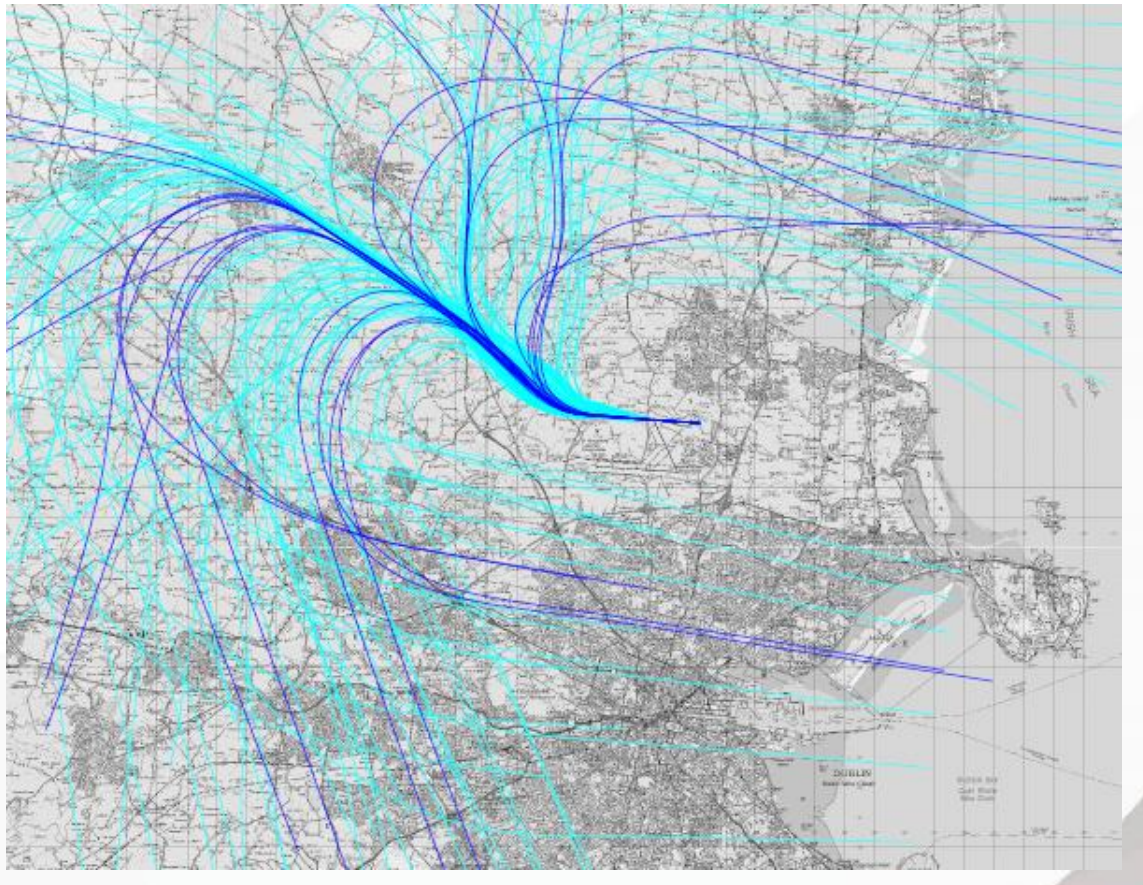
Main departure flight paths in calculation model for the two main runways – easterly and westerly departures

Noise Contour Modelling (2) – Dispersed Flight Tracks

In practice, the spread or scatter of actual flight tracks is modelled by creating dispersed tracks either side of the central or main track as shown.



Actual (Monitored) Flight Paths:
North Runway (28R) – westerly departures
10-17 March 2026



Modelled Departure Flight Paths:
North Runway (28R) – westerly operations
Dark blue = centreline flight paths
Light blue = dispersion flight paths

Conclusion

Noise Monitoring

- Dublin Airport had a network of 25 permanent Noise Monitoring Terminals (NMT) covering the entire Q1 2026 period, at locations ranging from less than 1 km to over 40 km from the runways.
- NMT locations are selected across a wide area to cover the region including the nearest, most-impacted residences, heavily populated areas and less-impacted, further-out locations.
- Measured aircraft noise data is presented in both time-averaged and single-event noise metrics.

Flight Track Monitoring

- Flight track data is used to positively identify aircraft noise from the NMT data and filter out non-aircraft noise.
- Monitored flight tracks are also used to ensure that the operations in the noise contour model are representative of actual airport activity.
- Airline track adherence is reported in Dublin Airport's monthly operations reports.

Noise Contour Validation

- There is good correlation between the Measured and Modelled aircraft noise levels.
- This demonstrates that the noise modelling is sufficiently representative of the totality of aircraft operations at Dublin Airport and thus that the Modelled noise levels accurately represent community noise exposure levels.
- This mean that the contours can be used to assess the noise at locations which do not have an NMT in the immediate vicinity.
- In general, noise impact assessment and mitigations at the airport including Noise Insulation and Dwelling Purchase Schemes are based on the modelled noise contours, so the Noise and Flight Track Monitoring, presented herein, provides support to the assessment and mitigation work at the airport.

End

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