



# Dublin Airport

## Quarterly Noise and Flight Track Monitoring Report

October to December (Q4) 2025

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- 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.

# Part 1: Noise Monitoring Data

## Permanent NMT

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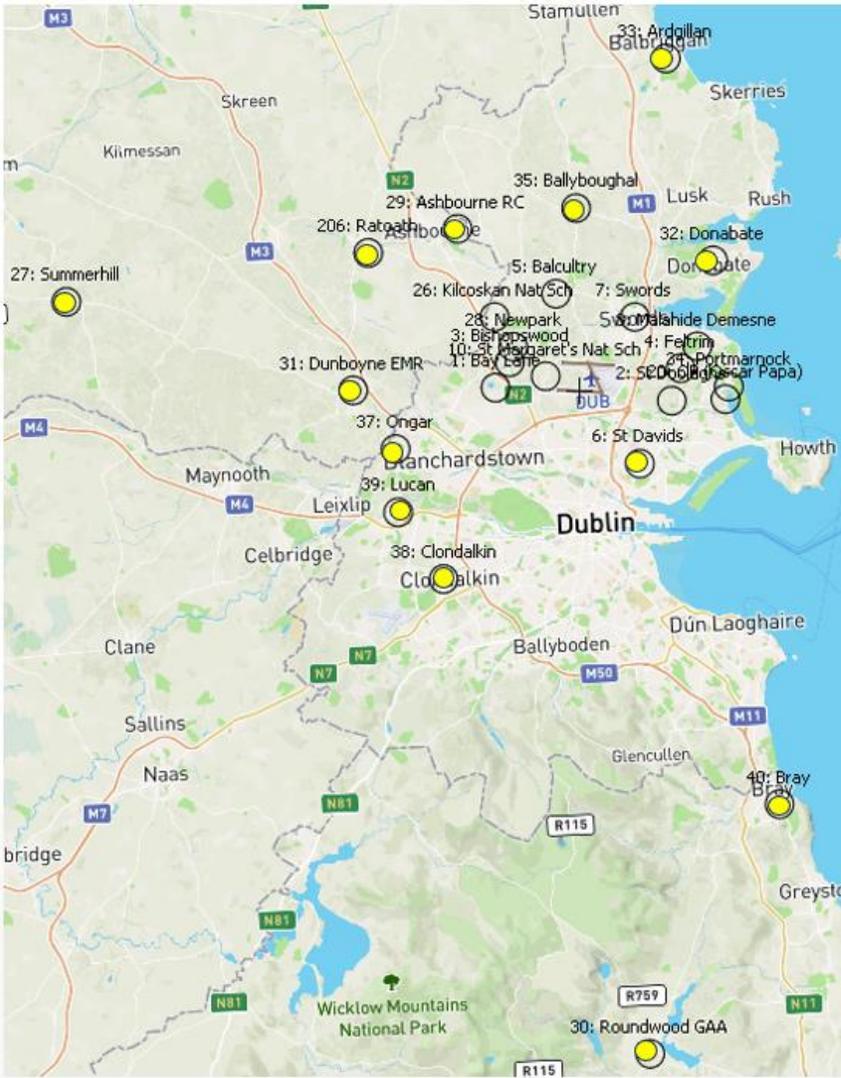


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9	Modelled Lnight Noise Contour Levels at NMT Locations	<ul style="list-style-type: none"> <li>• Map of 2024 Lnight Annual Aircraft Noise Contours</li> <li>• 2023 and 2024 Lnight noise levels at each NMT as indicated in the Noise Contour map.</li> </ul>
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16	NMT – Q4 2025 Lmax and SEL Percentages (3 months)	Measured Single Event data at each NMT: <ul style="list-style-type: none"> <li>• The distribution (%) of events over the quarter in each 5-decibel Lmax band (e.g. Lmax 60 - 65 dBA) and each SEL band (e.g. SEL 75 - 80 dBA).</li> </ul>
17	NMT – Q4 2025 Lmax/SEL data divided by Day, Evening and Night	<ul style="list-style-type: none"> <li>• Average of the Number of Aircraft Events over each Lmax value 60 to 85 [N60 to N85] – divided by the Day Evening and Night periods.</li> </ul>

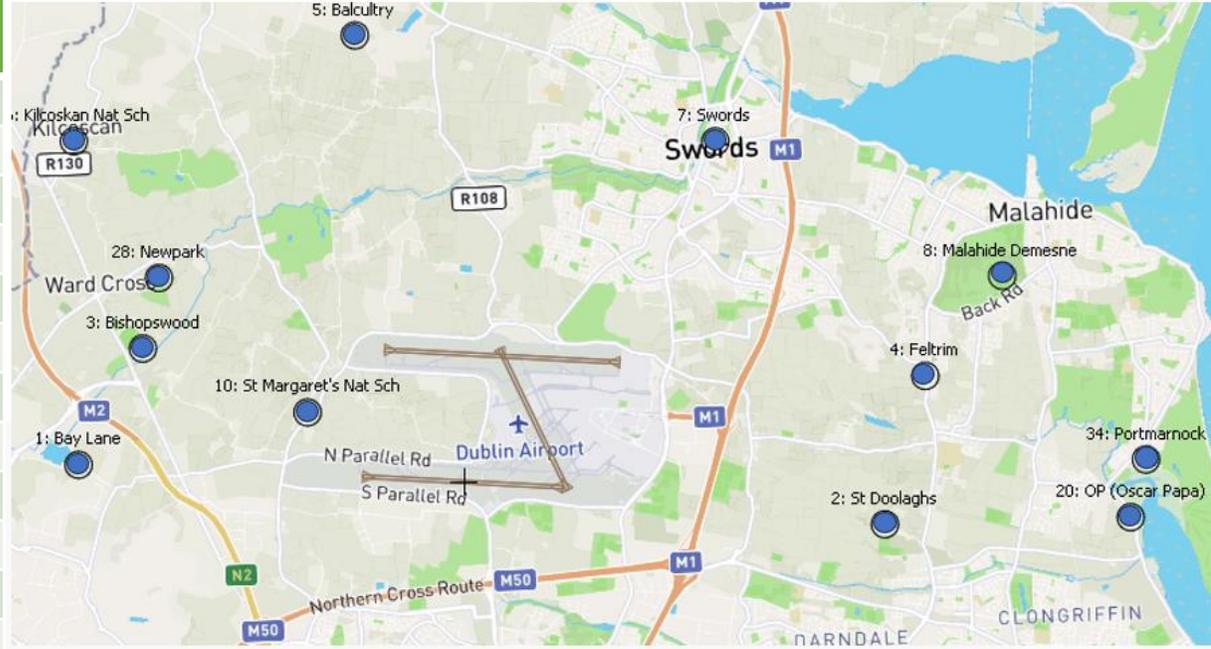
Term	Definition
<b>Aircraft Noise</b>	The noise generated by aircraft operating to or from Dublin Airport. For our noise monitors, this excludes aircraft not travelling to or from Dublin Airport and noise from local activity such as road traffic, wind, birds, dogs and community activity. (These other noise sources are included in the measured Total Noise.)
<b>(Correlated) Aircraft Noise Event</b>	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.
<b>Downtime (minutes)</b>	The number of minutes during the period that each monitor was not operational.
<b>Lden</b>	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.
<b>Leq</b>	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.
<b>Leq16(hr)</b>	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.
<b>Leq8(hr)</b>	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.
<b>Lmax</b>	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 <u>includes</u> non-aircraft noise.
<b>Lnight</b>	Lnight is the night-time (11pm-7am) Leq average noise indicator. Like Lden, in this document, Lnight is reported monthly, quarterly and annually.
<b>Measured noise levels</b>	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.
<b>Modelled noise levels</b>	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.
<b>(Notes: Comparing Measured and Modelled Noise Levels)</b>	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.

Term	Definition
<b>NMT</b>	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.
<b>Noise Contours</b>	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.
<b>Noise Event</b>	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.
<b>Number Above</b>	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 $L_{max} \geq 60$ dBA. N(SEL)70 is the number of (aircraft noise) events with $SEL \geq 70$ dBA. Note that N60 value includes the events in N65, N70 and higher.
<b>SEL</b>	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 $L_{max}$ . For an aircraft noise event, usually 10 to 30 seconds, the SEL value is typically about 10 decibels higher than the $L_{max}$ . 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.
<b>Single Event noise metrics</b>	Including $L_{max}$ 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.
<b>Time-Averaged noise levels</b>	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.
<b>Total Noise</b>	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.
<b>YTD</b>	Year to date

# Permanent Noise Monitoring Terminal (NMT) Locations Q4 2025



#	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 N	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

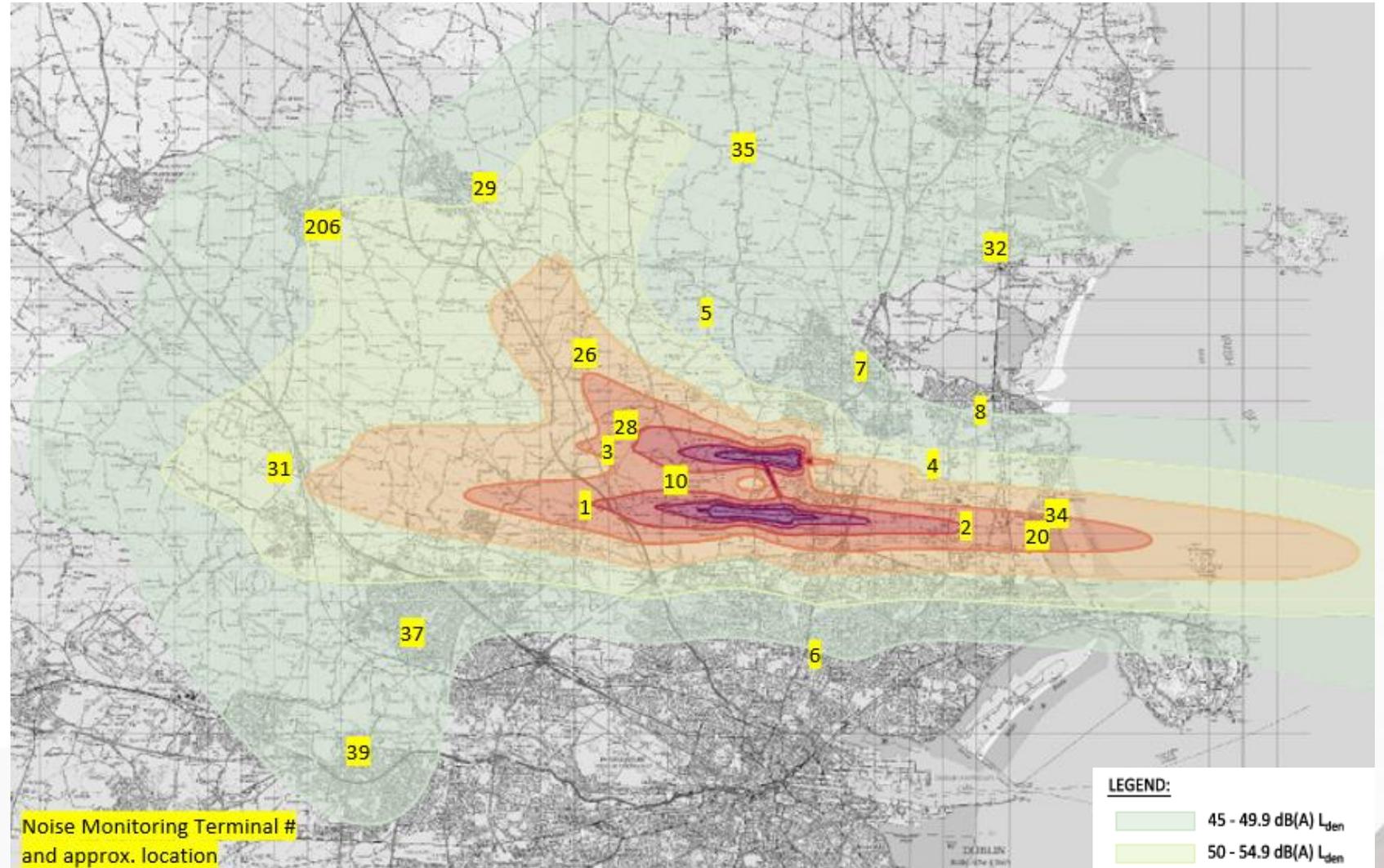


● = Permanent NMTs located near Dublin Airport

● = Permanent NMTs located further out from 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



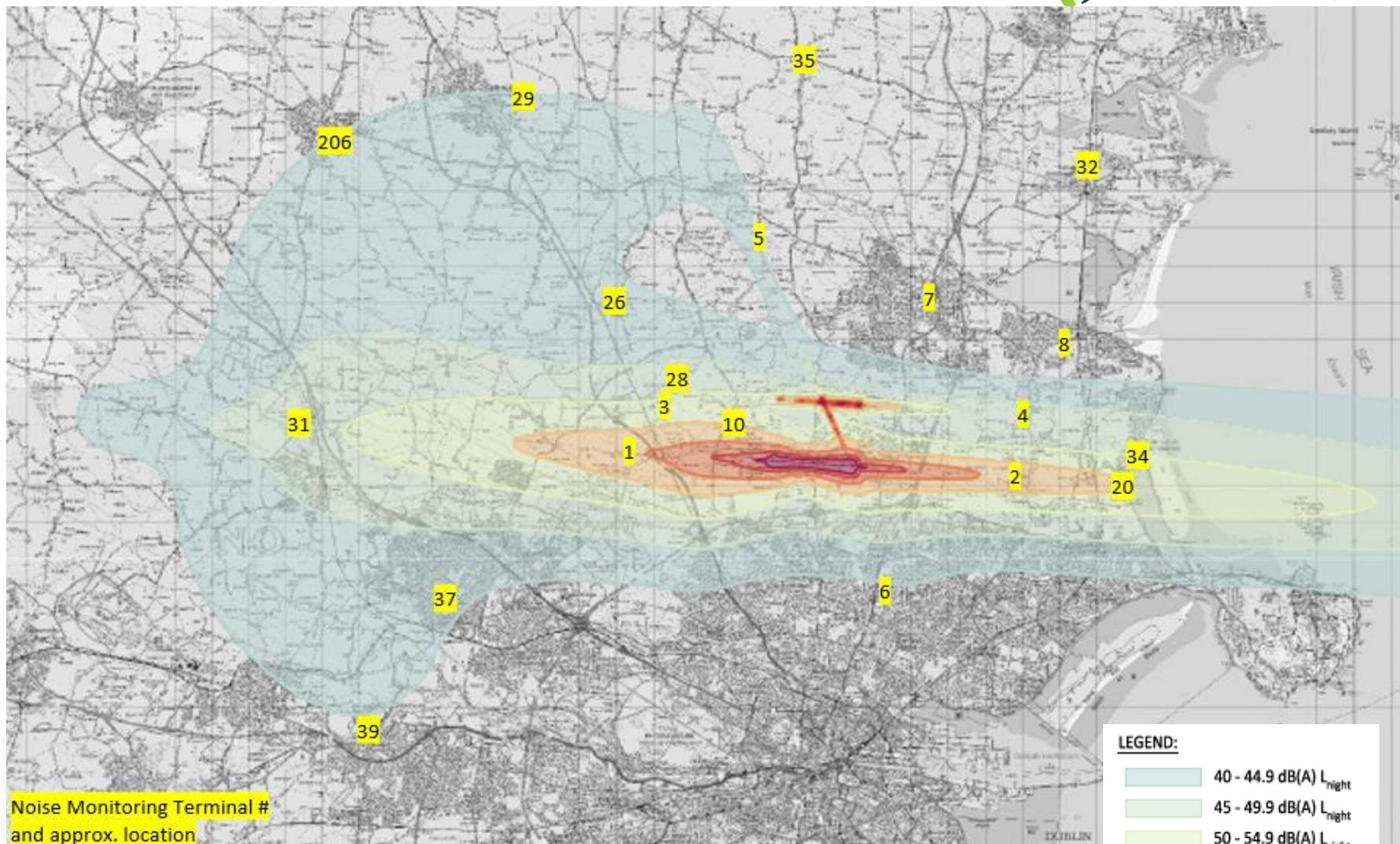
Map of 2024 Annual Lden Noise contours

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

Including Permanent NMT installations

# Modelled Night 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



Noise Monitoring Terminal # and approx. location

## 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	October		November		December		Q4 2025
		Downtime (mins)	# Aircraft Events	Downtime (mins)	# Aircraft Events	Downtime (mins)	# Aircraft Events	# Aircraft Events
1	Bay Lane	47	1416	5	1291	3	1368	4075
2	St. Doolaghs	80	11223	4	9595	112	9869	30687
3	Bishopswood	89	5300	10	4534	37	5777	15611
4	Feltrim	81	829	3	766	4	1313	2908
5	Balcultry	138	54	2	17	2	21	92
6	St.Davids	73	54	1	38	3	61	153
7	Swords	129	0	72	2	229	5	7
8	Malahide (NMT Down due to lost Windsock)							
10	St.Margarets NS	99	5564	74	4816	193	4254	14634
20	Coast Rd (OP)	121	10033	9	8799	0	8424	27256
26	Kilcoskan NS	165	6598	0	6187	0	4969	17754
27	Summerhill	169	126	65	94	1418	131	351
28	Newpark	69	9063	66	7448	229	7212	23723
29	Ashbourne	136	386	67	650	165	552	1588
30	Roundwood	157	0	142	0	524	2	2
31	Dunboyne (NMT Down due to lost Windsock)							
32	Donabate	128	3	78	5	366	7	15
33	Ardgillan	119	4	65	6	506	1	11
34	Portmarnock	114	6023	107	4753	289	5726	16502
35	Ballyboughal	88	86	142	89	223	133	308
37	Ongar	87	108	161	101	279	96	305
38	Clondalkin	69	10	67	7	265	7	24
39	Lucan	69	14	65	25	161	16	55
40	Bray	122	0	96	0	193	0	0
206	Ratoath	93	766	138	473	163	338	1577

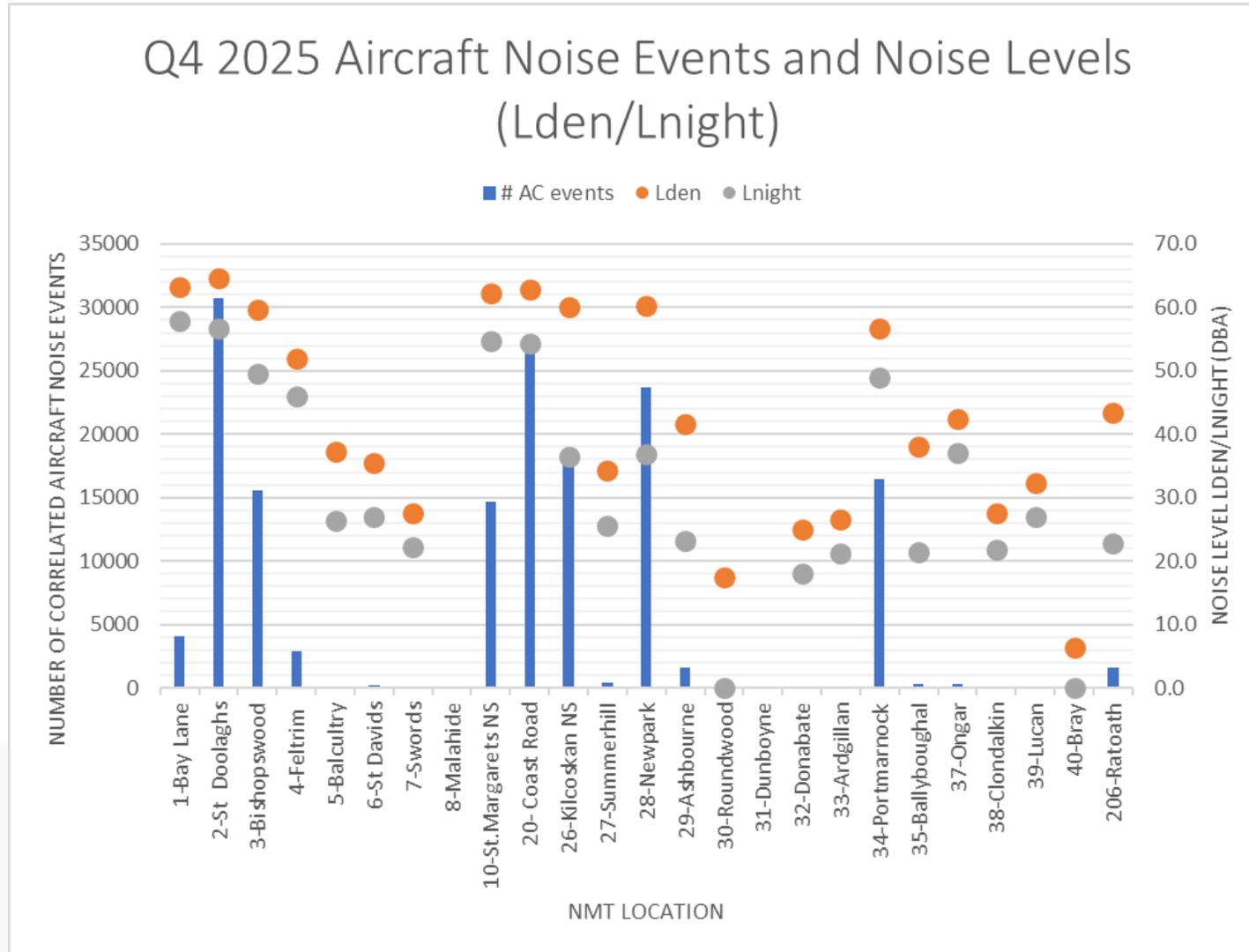
#8 and #31 were down due to lost windshield

Including Permanent NMT installations only

# NMT – Q4 2025 Monthly and Quarterly Lden, Lnight and Leq16hr



NMT	Location	# Correlated Aircraft Noise Events				Lden (dBA)				Lnight (=Leq 8h) (dBA)				Leq16h (dBA)			
		Oct	Nov	Dec	Q4	Oct	Nov	Dec	Q4	Oct	Nov	Dec	Q4	Oct	Nov	Dec	Q4
1	Bay Lane	1416	1291	1368	4075	63.0	63.2	63.6	63.3	57.7	58.0	58.3	58.0	44.7	40.9	45.8	44.3
2	St. Doolaghs	11223	9595	9869	30687	65.0	64.4	64.5	64.7	57.0	56.4	56.5	56.6	61.9	61.5	61.7	61.7
3	Bishopswood	5300	4534	5777	15611	59.2	59.6	60.4	59.7	47.7	50.3	50.2	49.6	58.5	57.7	59.2	58.5
4	Feltrim	829	766	1313	2908	54.3	50.1	49.6	51.9	48.7	44.0	42.4	45.9	44.3	43.5	46.2	44.9
5	Balcultry	54	17	21	92	41.1	31.6	32.4	37.3	26.8	25.5	26.8	26.4	42.3	23.5	23.1	37.6
6	St.Davids	54	38	61	153	36.1	34.3	35.9	35.5	27.5	26.2	27.0	26.9	35.0	32.8	35.0	34.4
7	Swords	0	2	5	7	6.4	22.6	31.8	27.5	0.0	17.3	26.5	22.3	0.0	0.0	0.0	0.0
8	Malahide																
10	St.Margarets NS	5564	4816	4254	14634	62.4	62.5	61.9	62.3	54.5	55.3	54.6	54.8	59.5	58.9	58.3	59.0
20	Coast Rd (OP)	10033	8799	8424	27256	63.3	63.0	62.3	62.9	54.9	54.2	53.9	54.4	61.0	60.8	60.0	60.6
26	Kilcoskan NS	6598	6187	4969	17754	60.6	60.3	59.2	60.1	38.1	37.7	30.0	36.5	61.2	61.0	59.9	60.8
27	Summerhill	126	94	131	351	34.7	34.1	33.9	34.2	26.6	25.4	24.7	25.6	32.3	32.3	32.8	32.5
28	Newpark	9063	7448	7212	23723	61.3	60.2	59.0	60.3	37.4	39.0	31.2	36.9	61.8	60.9	59.7	60.9
29	Ashbourne	386	650	552	1588	39.8	42.7	42.1	41.7	20.5	25.2	22.7	23.2	40.5	43.4	43.0	42.5
30	Roundwood	0	0	2	2	6.4	6.4	22.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	23.7	19.0
31	Dunboyne																
32	Donabate	3	5	7	15	26.7	24.0	23.4	25.0	21.2	14.9	13.6	18.0	16.3	22.2	23.2	21.4
33	Ardgillan	4	6	1	11	30.2	24.7	12.9	26.6	24.9	18.8	0.0	21.1	15.1	18.2	13.7	16.0
34	Portmarnock	6023	4753	5726	16502	57.0	56.0	56.8	56.6	49.4	48.3	49.1	49.0	53.7	52.7	53.9	53.5
35	Ballyboughal	86	89	133	308	36.4	37.6	39.7	38.1	0.0	19.5	25.0	21.3	37.4	38.3	40.6	39.0
37	Ongar	108	101	96	305	41.4	42.5	43.2	42.4	36.0	37.1	37.8	37.0	29.2	27.2	27.5	28.1
38	Clondalkin	10	7	7	24	23.4	28.3	29.1	27.5	16.9	22.7	23.6	21.9	17.4	19.3	19.4	18.8
39	Lucan	14	25	16	55	29.7	33.9	32.4	32.3	23.9	28.5	27.1	26.9	21.4	13.7	12.3	17.7
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	766	473	338	1577	45.1	42.9	41.1	43.3	18.5	24.8	22.8	22.7	46.3	44.1	42.2	44.5



# 2024 and Quarterly 2025 (YTD) Measured Lden, Lnight & Leq16hr



NMT	Location	Lden (dBA) [Modelled Contour and Measured]							Lnight (=Leq 8h) (dBA) [Modelled Contour and Measured]							Leq16h (dBA) [Measured]					
		'24 Model	'24 NMT	Q1 2025	Q2 2025	Q3 2025	Q4 2025	2025	'24 Model	'24 NMT	Q1 2025	Q2 2025	Q3 2025	Q4 2025	2025	'24 NMT	Q1 2025	Q2 2025	Q3 2025	Q4 2025	2025
1	Bay Lane	64.0	63.4	63.7	63.8	63.0 *	63.3	63.5	58.4	57.8	58.2	58.6	57.7*	58.0	58.1	51.6	50.6	42.5	41.7*	44.3	46.4
2	St. Doolaghs	64.8	64.3	63.4	64.3	64.7	64.7	64.3	57.0	56.5	55.4	56.1	56.8	56.6	56.3	61.0	60.5	61.7	61.6	61.7	61.4
3	Bishopswood	61.1	58.4	58.6	59.7	58.1	59.7	59.1	49.4	45.1	44.0	43.3	43.5	49.6	46.0	58.4	58.7	59.8	58.2	58.5	58.8
4	Feltrim	54.1	52.4	51.5	52.4	51.0	51.9	51.8	47.3	45.3	44.0	45.9	45.1	45.9	45.3	48.5	48.3	47.2	43.4	44.9	46.3
5	Balcultry	49.2	44.1	40.9	37.7	35.8	37.3	38.4	40.5	37.2	27.1	25.8	18.0	26.4	25.4	37.8	41.4	36.8	37.3	37.6	38.7
6	St.Davids	43.3	42.8	40.6	40.9	35.6	35.5	38.9	36.3	34.8	28.8	31.7	19.7	26.9	28.5	39.3	40.8	39.7	36.9	34.4	38.6
7	Swords	45.7	38.7	37.3	37.8	24.3	27.5	34.9	36.9	26.8	18.6	30.3	19.0	22.3	25.4	37.2	37.9	34.5	11.0	0.0	33.5
8	Malahide	46.3	38.9	35.8	41.4				38.5	32.0	28.9	35.9				32.6	31.0	28.9			
10	St.Margarets	63.7	63.4	61.8	61.7	62.6	62.3	62.1	55.7	56.1	54.6	54.4	55.0	54.8	54.7	59.6	57.9	57.9	59.2	59.0	58.5
20	Coast Rd (OP)	62.7	62.6	62.6	63.3	64.1	62.9	63.3	55.0	54.5	54.1	54.9	56.0	54.4	54.9	59.6	60.3	60.9	61.4	60.6	60.8
26	Kilcoskan NS	59.5	60.4	58.7	59.4	60.7	60.1	59.8	40.4	36.0	35.0	37.4	36.1	36.5	36.3	61.1	59.4	60.0	61.1	60.8	60.4
27	Summerhill	35.8	33.8	31.3	34.9	32.8	34.2	33.5	28.1	23.3	24.0	24.0	24.9	25.6	24.7	33.5	27.7	33.2	30.8	32.5	31.5
28	Newpark	61.8	61.3	59.0	59.7	61.7	60.3	60.3	44.9	36.7	34.3	37.0	36.9	36.9	36.4	61.9	59.6	60.2	62.1	60.9	60.8
29	Ashbourne	50.0	39.7	38.7	39.1	41.2	41.7	40.4	40.1	23.4	19.8	23.0	22.4	23.2	22.3	40.4	39.4	39.8	42.0	42.5	41.1
30	Roundwood	37.7	17.7	0.0	0.0	6.4	17.5	12.4	30.1	0.0	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	19.0	13.1
31	Dunboyne	53.1	50.4	50.6	51.9	51.3			47.2	44.9	45.1	46.7	46.1			38.3	35.2	28.6	30.8		
32	Donabate	45.1	32.7	29.8	32.3	24.8	25.0	29.1	37.2	21.6	18.4	21.8	16.7	18.0	19.1	31.1	29.3	31.0	23.1	21.4	27.9
33	Ardgillan	33.3	30.1	28.5	28.7	26.6	26.6	27.7	23.4	20.9	11.8	21.7	21.3	21.1	20.3	27.8	28.1	24.7	11.0	16.0	24.0
34	Portmarnock	58.2	54.8 <sup>8</sup>	54.6	58.3	56.1	56.6	56.6	50.3	46.9 <sup>8</sup>	47.0	51.5	48.3	49.0	49.3	52.1 <sup>8</sup>	51.6	53.5	53.2	53.5	53.0
35	Ballyboughal	49.0	38.3 <sup>8</sup>	38.1	38.8	39.2	38.1	38.6	36.9	24.1 <sup>8</sup>	24.9	18.1	0.0	21.3	21.1	38.7 <sup>8</sup>	38.6	39.9	40.1	39.0	39.5
37	Ongar	48.3	40.6 <sup>3</sup>	39.9	42.8	42.1	42.4	41.9	42.3	34.8 <sup>3</sup>	34.4	37.4	36.8	37.0	36.6	32.0 <sup>3</sup>	27.5	27.0	25.4	28.1	27.1
38	Clondalkin	43.4	37.8 <sup>3</sup>	22.9	28.3	26.8	27.5	26.8	36.8	24.5 <sup>3</sup>	16.8	20.1	19.9	21.9	20.0	38.6 <sup>3</sup>	16.6	26.6	19.8	18.8	22.2
39	Lucan	46.0	33.8 <sup>3</sup>	30.6	35.3	35.4	32.3	33.9	39.7	25.3 <sup>3</sup>	22.6	28.9	30.0	26.9	27.8	32.6 <sup>3</sup>	24.8	27.8	21.0	17.7	24.3
40	Bray	33.6	33.4 <sup>3</sup>	24.7	31.4	17.9	6.4	26.4	24.9	16.4 <sup>3</sup>	10.6	10.6	0.0	0.0	8.0	34.0 <sup>3</sup>	24.9	31.2	17.2	0.0	26.2
206	Ratoath	50.5	47.0 <sup>10</sup>	44.3	46.3	46.1	43.3	45.2	40.5	27.1 <sup>10</sup>	28.4	28.0	28.4	22.7	27.4	47.4 <sup>10</sup>	45.0	46.9	46.7	44.5	45.9

# Total Noise versus Aircraft Noise Q2, Q3 & Q4 2025

NMT	Location	Lden Q2 2025			Lden Q3 2025			Lden Q4 2025		
		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	65.6	63.8	4431	64.4 (45d)*	62.4	2041 (45d)*	67.4	63.3	4075
2	St. Doolaghs	65.0	64.3	33551	65.3	64.8	35619	65.6	64.7	30687
3	Bishopswood	63.5	59.7	20662	63.2	58.1	16433	64.8	59.7	15611
4	Feltrim	59.7	52.5	5095	60.8	50.9	2336	61.9	51.9	2908
5	Balcultry	69.1	37.6	75	55.8	35.6	84	58.6	37.3	92
6	St.Davids	55.1	40.8	330	57.7	35.5	195	62.1	35.5	153
7	Swords	60.8	37.7	48	66.6	24.4	9	66.2	27.5	7
8	Malahide(Q2 only)	61.8	41.5	369						
10	St.Margarets NS	66.0	61.7	14223	66.2	62.6	17255	67.2	62.3	14634
20	Coast Rd (OP)	66.3	63.3	30742	66.6	64.1	33833	67.4	62.9	27256
26	Kilcoskan NS	62.5	59.4	14130	63.2	60.7	19895	64.6	60.1	17754
27	Summerhill	58.9	34.9	106	58.0	32.7	240	58.6	34.2	351
28	Newpark	61.5	59.7	15013	62.8	61.7	26054	63.1	60.3	23723
29	Ashbourne	57.1	39.1	851	56.0	41.2	1452	58.9	41.7	1588
30	Roundwood	55.0	6.4	0	59.0	6.4	0	58.0	17.5	2
31	Dunboyne(Q4 down)	59.0	51.9	2338	60.6	51.3	2276			
32	Donabate	54.7	32.4	32	54.3	24.8	20	56.9	25.0	15
33	Ardgillan	53.2	28.6	21	54.2	26.6	13	57.3	26.6	11
34	Portmarnock	60.8	58.3	9705	59.0	56.1	15382	60.4	56.6	16502
35	Ballyboughal	62.3	38.8	338	61.3	39.2	396	62.5	38.1	308
37	Ongar	60.1	42.8	280	59.0	42.1	339	61.1	42.4	305
38	Clondalkin	58.0	28.2	35	59.0	26.8	29	60.1	27.5	24
39	Lucan	54.7	35.3	78	54.7	35.4	95	56.3	32.3	55
40	Bray	58.1	31.5	38	55.1	17.9	4	58.8	6.4	0
206	Ratoath	55.3	46.3	3971	54.8	46.2	3590	57.3	43.3	1577

- **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.
- **NMT 8 (Malahide)** down Q3 & Q4 due to lost Windsock
- **NMT 31 (Dunboyne)** down Q4 due to lost windsock

# Q4 2025 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 Q4)	N(SEL)70	N(SEL)75	N(SEL)80	N(SEL)85	N(SEL)90	N(SEL)95	(Total in Q4)
1	Bay Lane	44.3	44.3	42.5	26.3	6.4	0.2	44.3	44.3	44.0	40.2	24.6	3.0	0.1	4075
2	St. Doolaghs	333.7	333.2	312.9	144.2	6.8	0.3	333.7	333.7	332.7	312.2	109.3	5.1	0.1	30702
3	Bishopswood	168.6	160.3	130.9	66.4	3.8	0.1	169.8	169.0	165.4	131.5	46.4	2.5	0.1	15618
4	Feltrim	31.6	25.9	6.3	1.8	0.1	<0.05	31.6	31.5	26.2	7.6	1.7	0.1	0.04	2908
5	Balcultry	0.9	0.7	0.4	0.3	0.1		1.0	0.9	0.7	0.4	0.3	0.1		92
6	St.Davids	1.7	1.6	1.0	0.1	<0.05		1.7	1.7	1.6	0.7	0.1			153
7	Swords	0.1	<0.05					0.1	0.1	<0.05					9
8	Malahide (NMT down)														
10	St.Margarets NS	158.7	152.9	146.3	81.0	9.9	0.3	159.2	158.5	153.8	143.1	66.2	7.1	<0.05	14642
20	Coast Rd (OP)	296.6	296.6	266.6	42.5	2.7	0.1	296.6	296.6	296.6	268.5	52.2	3.5	0.7	27283
26	Kilcoskan NS	193.0	187.2	171.5	77.3	10.2	0.1	193.0	193.0	189.6	176.8	83.1	9.8		17760
27	Summerhill	3.5	1.2	0.1				3.9	3.2	1.2	0.1				358
28	Newpark	257.7	211.1	150.0	76.4	11.1	0.6	257.9	257.5	207.4	156.3	85.2	10.5	0.2	23723
29	Ashbourne	17.3	13.7	2.6	0.2			17.3	17.3	11.4	2.5	0.2			1589
30	Roundwood	<0.05	<0.05	<0.05				<0.05	<0.05	<0.05	<0.05	<0.05			4
31	Dunboyne(NMT Down)														
32	Donabate	0.2	0.1	<0.05				0.2	0.2	0.1	<0.05				15
33	Ardgillan	0.1	0.1	<0.05				0.1	0.1	0.1	<0.05				12
34	Portmarnock	179.6	153.6	35.8	4.3	<0.05	<0.05	179.6	179.0	151.1	46.9	5.0	0.1		16525
35	Ballyboughal	3.3	3.3	3.3	0.2			3.3	3.3	3.3	2.2	0.1	<0.05		308
37	Ongar	3.1	1.6	0.1				3.3	3.2	2.2	0.4				305
38	Clondalkin	0.2	0.1	<0.05				0.3	0.2	0.1					24
39	Lucan	0.6	0.1	<0.05				0.6	0.6	0.2	<0.05				56
40	Bray	0						0	0						0
206	Ratoath	17.2	16.4	4.9	0.7	<0.05	<0.05	17.2	17.2	14.6	5.1	0.6			1579

This data shows Lmax and SEL distributions of correlated aircraft noise events each day averaged over Q2 2025. For example, N60 = number of daily events over Lmax 60 dBA.

# Q4 2025 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 Q4)	70-74.9	75-79.9	80-84.9	85-89.9	90-94.9	
1	Bay Lane		4%	37%	45%	14%	<0.5%	44	1%	9%	35%	49%	7%	<0.5%	4075
2	St. Doolaghs	<0.5%	6%	51%	41%	2%	<0.5%	334	0%	6%	61%	31%	2%	<0.5%	30702
3	Bishopswood	5%	17%	38%	37%	2%	<0.5%	170	2%	20%	50%	26%	1%	<0.5%	15618
4	Feltrim	18%	62%	14%	5%	<0.5%	<0.5%	32	17%	59%	18%	5%	0%		2908
5	Balcultry	21%	32%	10%	20%	13%		1	22%	34%	5%	25%	8%		92
6	St.Davids	2%	39%	55%	3%	1%		2	4%	54%	38%	4%			153
7	Swords	56%	22%					<0.5	67%	11%					9
8	Malahide(NMT Down)														
10	St.Margarets NS	4%	4%	41%	45%	6%	<0.5%	159	3%	7%	48%	37%	4%	<0.5%	14642
20	Coast Rd (OP)		10%	76%	13%	1%	<0.5%	297		9%	73%	16%	1%	<0.5%	27283
26	Kilcoskan NS	3%	8%	49%	35%	5%	<0.5%	193	2%	7%	49%	38%	5%		17760
27	Summerhill	60%	28%	3%				4	52%	27%	3%				358
28	Newpark	18%	24%	29%	25%	4%	<0.5%	258	19%	20%	28%	29%	4%	<0.5%	23723
29	Ashbourne	21%	64%	14%	1%			17	34%	51%	14%	1%			1589
30	Roundwood		25%	25%				<0.5		25%		25%			4
31	Dunboyne(NTM Down)														
32	Donabate	13%	60%	27%				<0.5	33%	60%	7%				15
33	Ardgillan	17%	50%	25%				<0.5	42%	33%	17%				12
34	Portmarnock	14%	66%	18%	2%	<0.5%	<0.5%	180	16%	58%	23%	3%	<0.5%		16525
35	Ballyboughal			93%	7%			3	0%	34%	63%	3%	<0.5%		308
37	Ongar	48%	43%	4%				3	30%	54%	12%				305
38	Clondalkin	58%	21%	8%				<0.5	50%	33%					24
39	Lucan	80%	18%	2%				1	66%	30%	2%				56
40	Bray	0%						0	0%						0
206	Ratoath	5%	67%	25%	4%	<0.5%	<0.5%	17	15%	55%	26%	3%			1579

Including Permanent NMT installations only

# Q4 2025 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	5.3	5.3	4.5	1.8	0.3	0.0	1.4	1.4	1.3	0.8	0.1	0.0	37.6	37.6	36.8	23.6	6.0	0.2
2	St. Doolaghs	235.0	234.8	219.4	99.5	5.4	0.2	57.6	57.5	54.5	26.3	0.4	0.0	41.1	40.9	39.1	18.4	0.9	0.1
3	Bishopswood	117.6	117.6	103.0	53.3	3.3	0.1	25.0	25.0	22.7	12.3	0.4	0.0	26.0	17.7	5.1	0.7	0.0	0.0
4	Feltrim	19.7	17.4	3.4	0.1	0.0	0.0	3.1	2.6	0.5	0.1	0.0	0.0	8.8	5.9	2.4	1.5	0.0	0.0
5	Balcultry	0.6	0.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0
6	St.Davids	1.5	1.5	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0
8	Malahide(NMT Down)																		
10	St.Margarets NS	104.8	104.8	104.6	59.0	8.7	0.2	24.6	24.6	21.8	9.9	0.3	0.0	29.4	23.5	19.9	12.1	0.9	0.0
20	Coast Rd (OP)	211.2	211.2	190.0	31.8	2.2	0.1	51.0	51.0	45.8	5.1	0.2	0.0	34.4	34.4	30.8	5.7	0.3	0.0
26	Kilcoskan NS	164.5	159.3	146.3	66.7	9.9	0.1	27.6	27.3	25.0	10.5	0.2	0.0	1.0	0.6	0.2	0.1	0.0	0.0
27	Summerhill	2.8	1.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0
28	Newpark	214.8	178.2	127.4	65.6	10.5	0.6	41.5	32.1	22.3	10.7	0.5	0.0	1.4	0.8	0.2	0.1	0.0	0.0
29	Ashbourne	14.7	12.0	2.6	0.2	0.0	0.0	2.4	1.6	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0
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(NMT Down)																		
32	Donabate	0.1	0.1	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
33	Ardgillan	0.1	0.1	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	110.1	110.1	28.6	3.9	0.0	0.0	31.0	23.2	3.4	0.2	0.0	0.0	38.6	20.4	3.8	0.2	0.0	0.0
35	Ballyboughal	3.1	3.1	3.1	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	Ongar	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.6	1.3	0.1	0.0	0.0	0.0
38	Clondalkin	0.1	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
39	Lucan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.0
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	15.6	14.9	4.8	0.7	0.0	0.0	1.5	1.4	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0

This data shows Lmax events during day, evening and night periods, averaged over Q4 2025.  
 For example, N60 = number of events over Lmax 60 dBA (in this case the figure is the daily average over the quarter.)



## Part 2: Flight Track Monitoring

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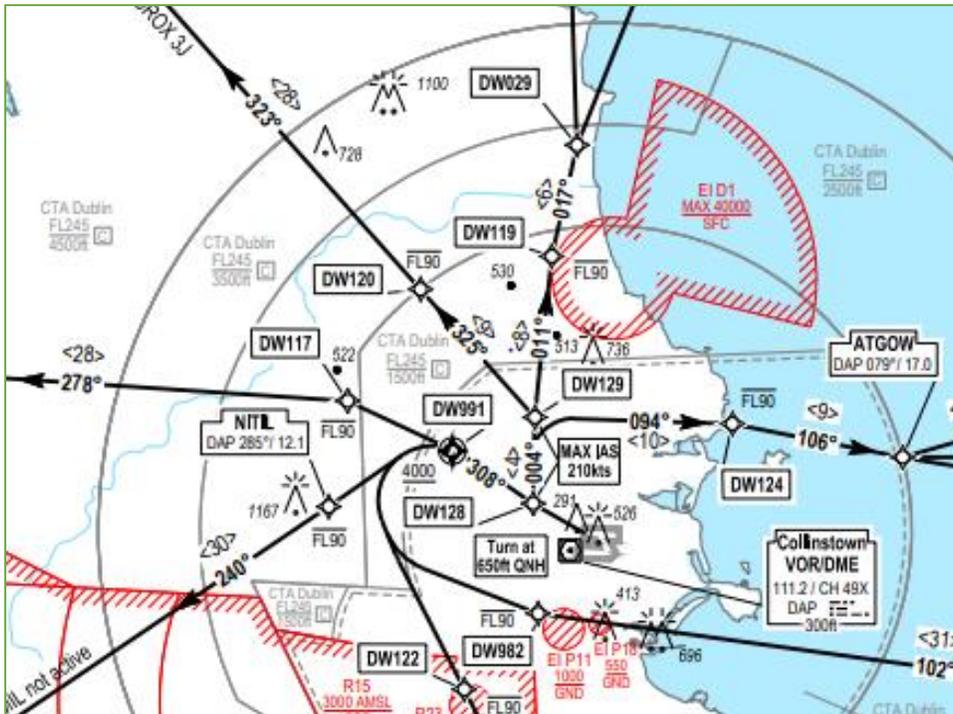


Page	Page Heading	Page Content
20	Explanation of Terms	
21	Standard Instrument Departures (SID) North Runway	<ul style="list-style-type: none"><li>• AirNav Ireland maps displaying the departure SIDs from North Runway towards the West and the East.</li></ul>
22	Standard Instrument Departures (SID) South Runway	<ul style="list-style-type: none"><li>• AirNav Ireland maps displaying the departure SIDs from South Runway towards the West and the East.</li></ul>
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	

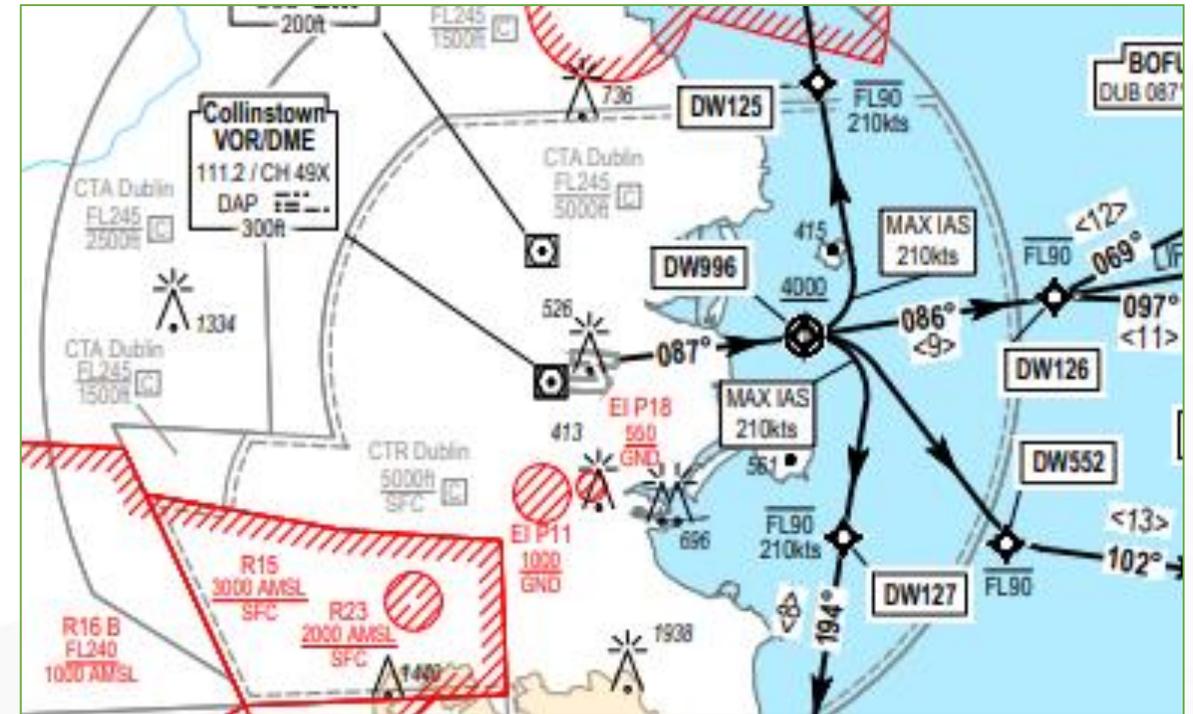
Term	Definition/ Explanation
<b>Arrival Tracks</b>	Arriving aircraft must fly in a straight line for at least the final 11km of their approach before landing on the runway. Aircraft approach the airport at a precise downward angle of 3 degrees, which means that they are at a height of 1,800ft when they join the final approach at the 11km point.
<b>Departure Tracks</b>	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.
<b>Easterly vs Westerly Operations</b>	<p>In general, aircraft land and take-off facing into the wind.</p> <p>If the wind is easterly (blowing from the east), aircraft land from the west and take-off towards the east.</p> <p>If the wind is westerly (blowing from the west), aircraft land from the east (over the Irish Sea) and take-off towards the west.</p> <p>A moderate cross-wind component can be tolerated, but a strong north or south wind will require the use of the Crosswind Runway.</p>
<b>Standard Instrument Departure (SID)</b>	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)
<b>Flight Track</b>	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.
<b>Noise Modelling</b>	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.
<b>Modelled Flight Track</b>	<p>Arrival noise is dominated by the straight final approach which is relatively easy to model for the noise contour calculations.</p> <p>Departing aircraft generally follow the SID</p>
<b>Track Dispersion</b>	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.

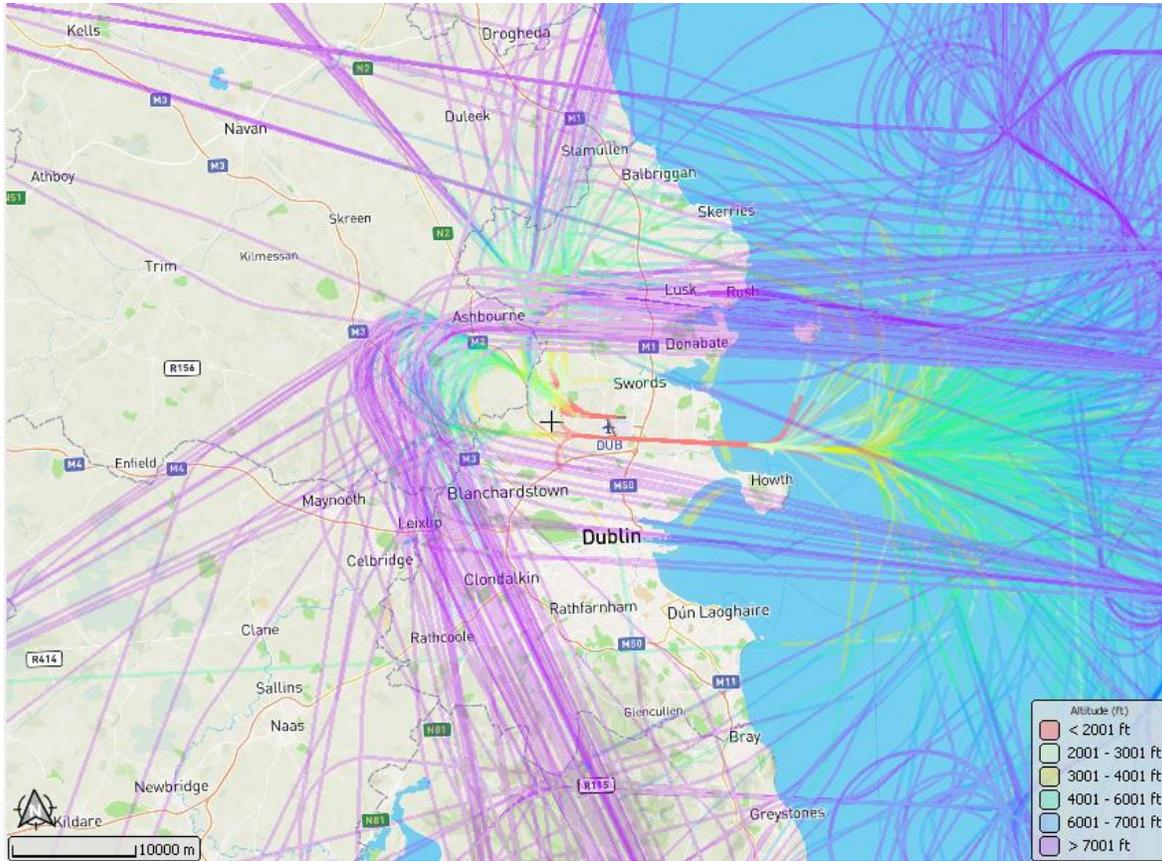


*SID for North Runway (28R) departures to the west (westerly operations in westerly winds)*



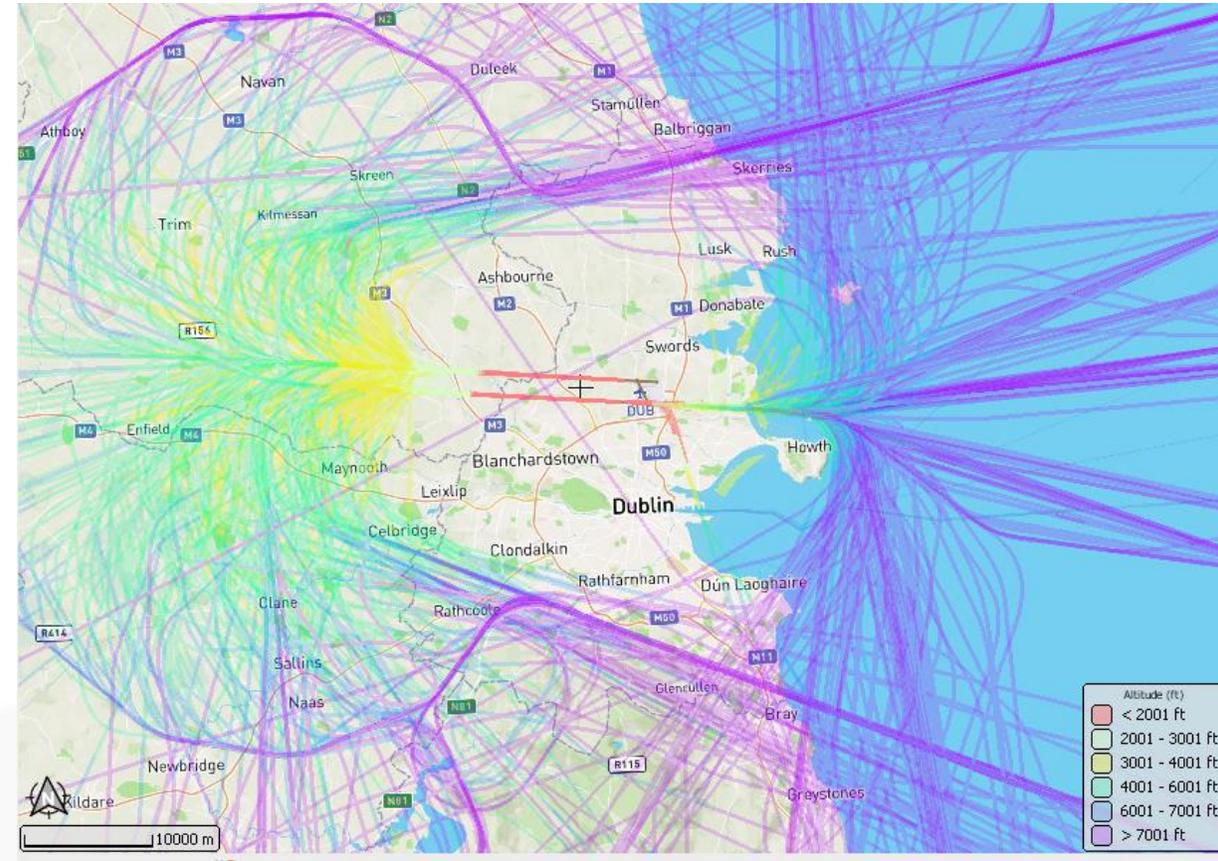
*SID for North Runway (10L) departures to the east (easterly operations in easterly winds)  
Note: This is only used during periods when the South Runway is closed.*





## Operations on 12 December 2025

- 714 movements, westerly conditions
- Colours indicate aircraft height

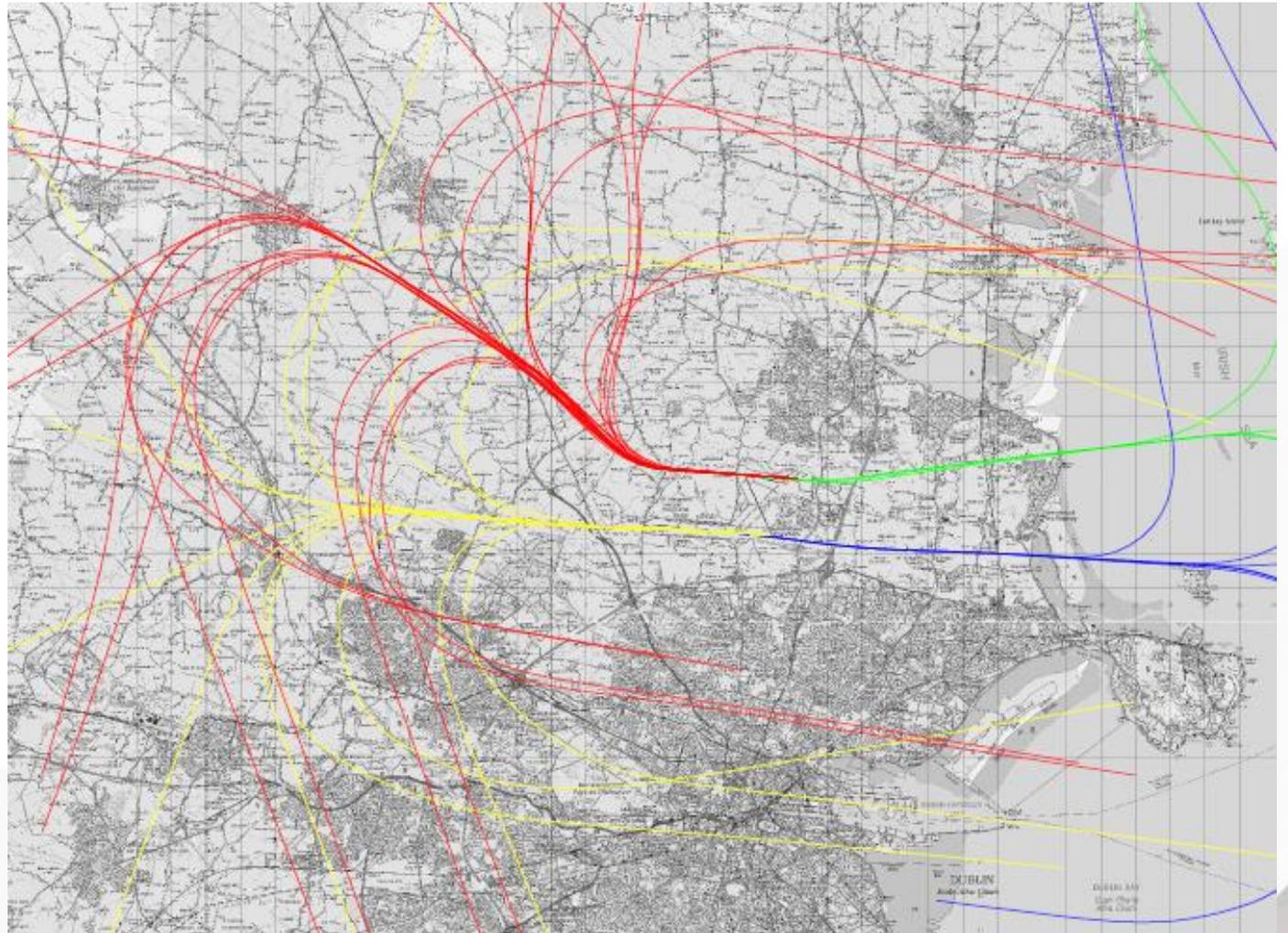


## Operations on 21 December 2025

- 715 movements, easterly conditions
- Colours indicate aircraft height

Noise contours are produced by a computer-based model using detailed information about aircraft operations at the airport. This process includes certain steps:

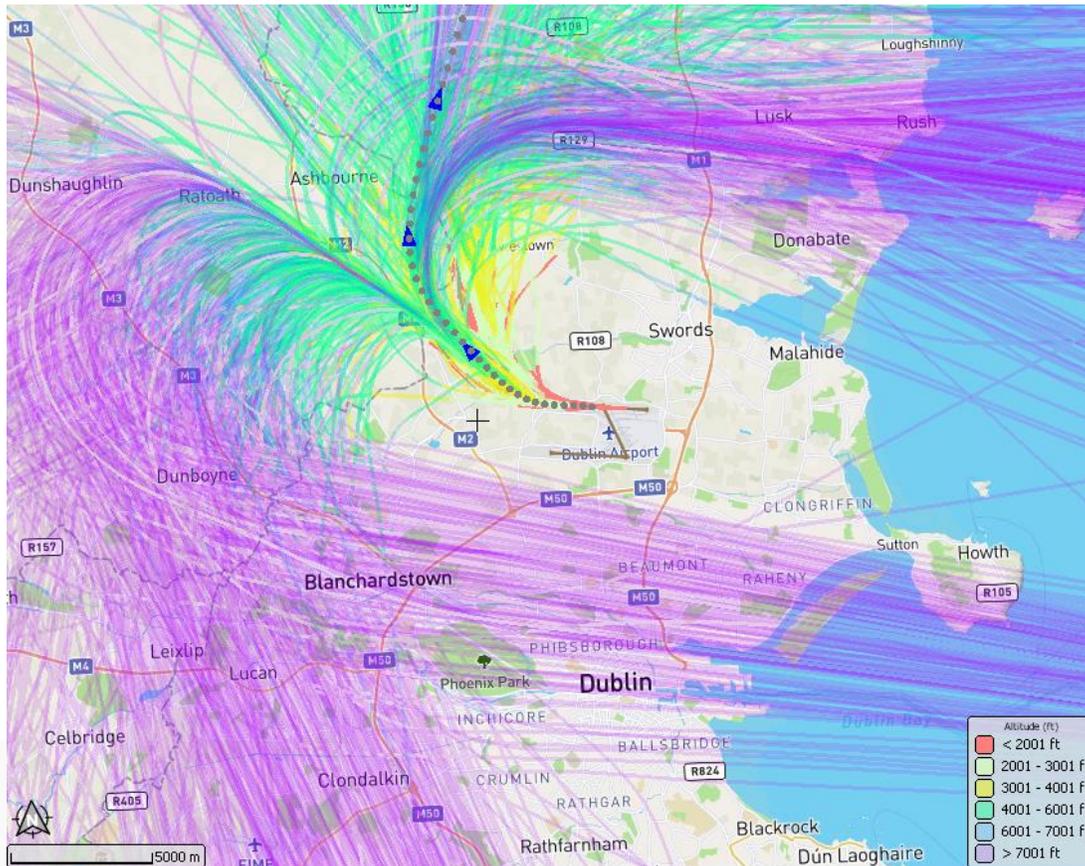
- **Extracting flight-track data**  
Data is taken from the airport's Noise and Flight Track Monitoring system, capturing the actual paths flown by aircraft.
- **Identifying representative tracks**  
Typical or 'central' flight tracks are identified for each of the runways (as depicted here), based on observed operational patterns.
- **Creating dispersed tracks**  
Additional tracks are created either side of the central lines to reflect the natural spread of aircraft movements(see next page)
- **Running the noise model**  
A grid of calculation points is established across the study area and used to develop the noise contours for each metric.



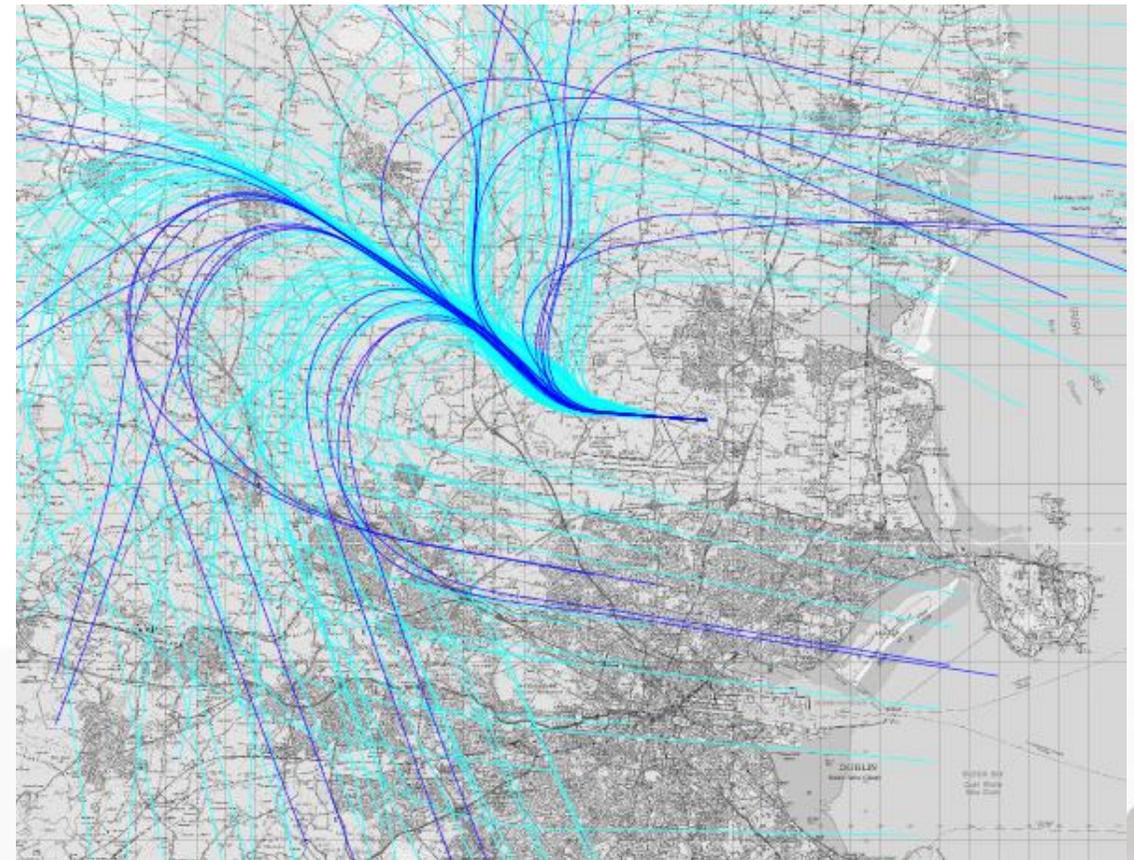
Main departure flight paths in calculation model for the two main runways – easterly and westerly departures

# 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  
6-19 Dec 2025



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

## Noise Monitoring

- Dublin Airport had a network of 25 permanent Noise Monitoring Terminals (NMT) covering the entire Q4 2025 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 means 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

**For further information, please visit  
our website:**

**[www.dublinairport.com](http://www.dublinairport.com)**