WAVE DYNAMICS

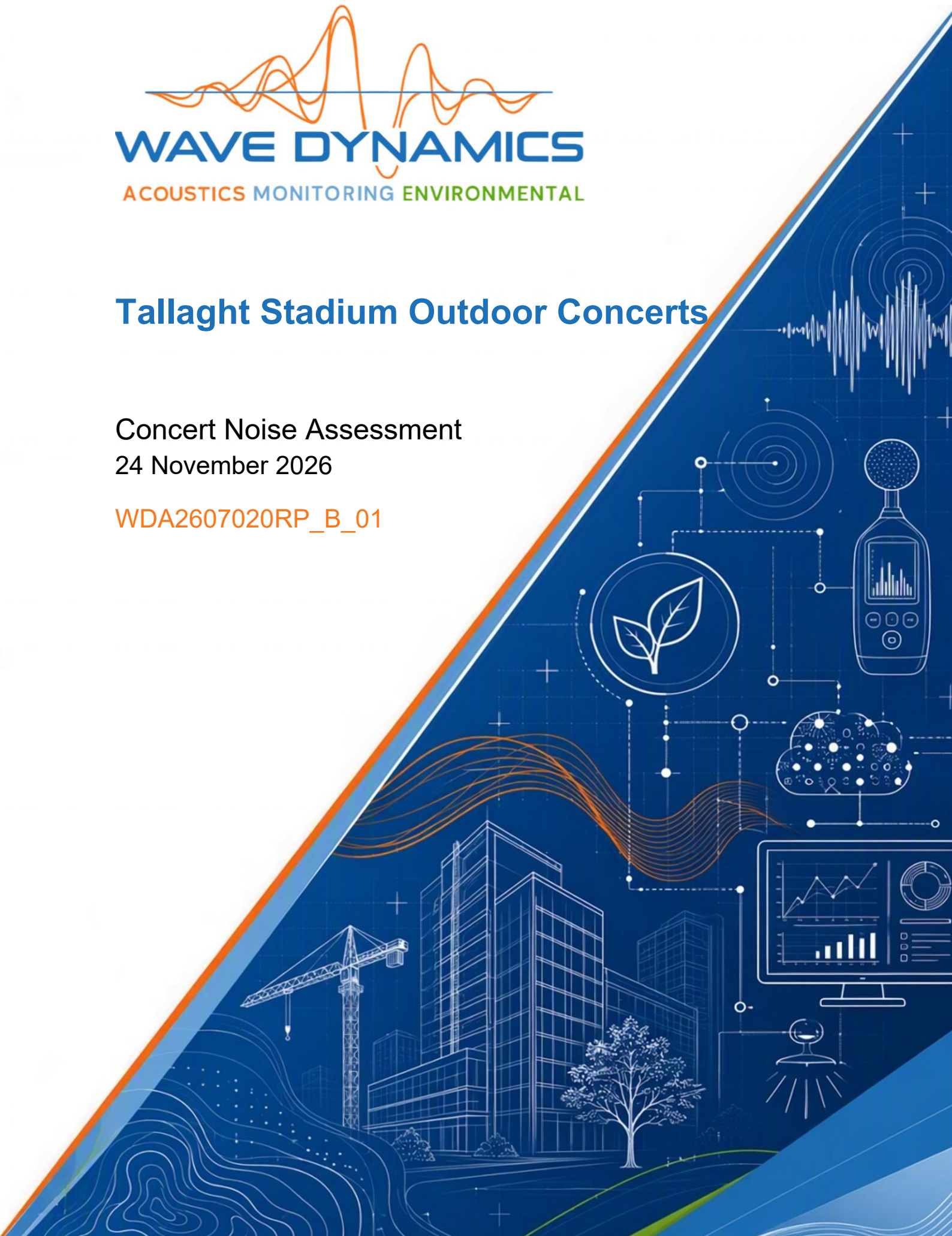
ACOUSTICS MONITORING ENVIRONMENTAL

Tallaght Stadium Outdoor Concerts

Concert Noise Assessment

24 November 2026

WDA2607020RP_B_01



Notice

This document is intended only for the use of South Dublin County Council. The information and document are specifically for Tallaght Stadium Outdoor Concerts, Tallaght Stadium, Whitestown Way, Tallaght, Dublin 24 and should not be reproduced, edited or copied in any form without the permission of Wave Dynamics. This document relates to the acoustic elements of the project on which Wave Dynamics were engaged. Wave Dynamics assumes no responsibility to any other party arising in connection with this document and its contents.

Document Information

Project Name:	Tallaght Stadium Outdoor Concerts
Address:	Tallaght Stadium, Whitestown Way, Tallaght, Dublin 24
Project Number	WDA2607020
Report Title	Concert Noise Assessment
Client	South Dublin County Council

Document History

Revision	Status	Description	Author	Reviewer	Issue Date
B	01	Concert Noise Assessment	JM	SR	24/11/2026

Dublin Office
Wave Dynamics
Block 5, 1st Floor,
Airvista Office Park,
Santry, Dublin 9
D09 A3X2

Wexford Office
Wave Dynamics
Unit 14 Enterprise Centre,
Gorey Business Park,
Ramstown Gorey, Wexford
Y25 Y2C8

Cork Office
Wave Dynamics
City Gate Bldg 1000,
Units 1201 & 1202,
Cork,
T12 H1XY

Phone (IRL): +353 (0)1 9125070
Phone (UK): +44 20 8157 2967
Email: info@wdacoustics.com
Web: www.wdacoustics.com

Executive Summary

Wave Dynamics (WD) has been commissioned by South Dublin County Council (SDCC) to undertake a noise assessment for proposed outdoor concert events at Tallaght Stadium Outdoor Concerts, Tallaght Stadium, Whitestown Way, Tallaght, Dublin 24, to support the Part 8 planning application for large-scale concerts, musical performances and similar events each year at Tallaght Stadium.

A baseline noise survey was undertaken at the nearest noise sensitive premises to the west (L1) and south (L2) of the stadium between 18 September 2026 and 29 September 2026. The evening of Friday 18 September 2026 and the afternoon of Sunday 27 September 2026 (14:00–18:00) were not included in the baseline noise review for the purposes of setting the event noise criteria, as football matches took place at the stadium. The background noise level (the arithmetic average of the hourly L_{A90} values over the last four hours of a concert (19:00–23:00)), was 56 dB at L1 and 54 dB at L2.

Concert noise criteria have been set with reference to The Noise Council *Code of Practice on Environmental Noise Control at Concerts* (1995) (the Code) and Dublin City Council's *Guidelines for Event Organisers* (2025). The following criteria have been adopted for concert events, when measured at 1 m from the façade of the nearest noise sensitive premises:

- Events 1 to 5 in a calendar year: Music Noise Level (MNL) not to exceed 75 dB $L_{Aeq,15min}$, a 75 dB $L_{Aeq,5min}$ limit on rehearsals and sound checks, and;
- amplified concert music to finish by 22:45 (the proposal curfew), and no concert music between 23:00 and 09:00, other than recorded egress music as set out below.

Recorded egress music: recorded music at a reduced level may be played within the stadium during audience egress, to manage the rate of crowd departure, until the venue is clear (approximately 23:30hrs). This is not concert music. It should be played through the in-house or production system at a level agreed in the Noise Management Plan (NMP), and from 23:00 it should not be audible inside noise sensitive premises with windows open in a typical manner for ventilation, in line with the Code.

Public address: safety, emergency and egress announcements made through the public address (PA) system are not music and are not included in the music noise level (MNL). They should be set at the level needed to be heard and understood across the audience and egress areas, including during an evacuation.

The following measures are recommended to control concert noise, as set out in Section 6 and the Concert NMP in Appendix B:

- A noise propagation test before each event to set the sound system control limit at the mixer position;
- Stage location, orientation and sound system design that direct sound away from the nearest homes;
- Continuous noise monitoring at the nearest noise sensitive premises and the mixer position during sound checks and during events;
- A 22:45 curfew for amplified concert music, with limited times for sound checks and rehearsals;
- Advance notice to residents, a complaints line staffed during each event and a complaints log; and
- A post-event noise report to SDCC.

The assessment demonstrates that, subject to implementation of the Noise Management Plan and the mitigation measures set out herein, the proposed use of Tallaght Stadium for up to five large-scale concerts, musical performances and similar events annually can be accommodated without giving rise to significant adverse impacts on the surrounding properties.

Contents

Executive Summary 1
Contents 2
1 Introduction 3
1.1 Statement of Competence 3
2 Site Description 4
2.1 Noise Sensitive Locations 4
3 Planning Context 5
4 Project Criteria 6
4.1 Acoustic Standards 6
4.2 Code of Practice on Environmental Noise Control at Concerts 6
4.3 Dublin City Council's Guidelines for Event Organisers 6
4.4 Application of the Guidelines to Tallaght Stadium 7
4.5 Adopted Concert Noise Criteria 8
5 Baseline Noise Survey 9
5.1 Measurement Locations 9
5.2 Survey Methodology and Personnel 10
5.2.1 Attended Noise Measurements 10
5.2.2 Unattended Noise Measurements 10
5.3 Measurement Equipment 10
5.4 Subjective Noise Environment 11
5.5 Weather Conditions 11
5.6 Noise Measurement Results 11
5.6.1 Attended Measurement Results 11
5.6.2 Unattended Measurement Results 12
5.6.3 Discussion of Measurement Results 14
5.7 Screening of the Baseline Data 15
5.8 Background Noise Level 15
6 Noise Mitigation and Management 17
7 Conclusion 18
Appendix A – Glossary of Terms 19
Appendix B – Concert / Event Noise Management Plan 20

1 Introduction

Wave Dynamics (WD) has been commissioned by South Dublin County Council (SDCC) to undertake a noise assessment for proposed outdoor concert events at Tallaght Stadium Outdoor Concerts, Tallaght Stadium, Whitestown Way, Tallaght, Dublin 24. The report will accompany the Part 8 planning application to SDCC for the use of the stadium for large-scale concerts, musical performances and similar events each year.

The proposed events form part of the wider multi-functional use of Tallaght Stadium and are intended to support cultural, entertainment and economic activity within South Dublin County while making efficient use of existing strategic public infrastructure. The maximum proposed audience attendance is 22,000 persons, per event, and a maximum of five events in any calendar year.

The scope of this report is to:

- quantify the existing (baseline) noise environment at the nearest noise sensitive premises;
- screen the baseline data for periods that are not representative (football events, extraneous events and unsuitable weather);
- set concert noise criteria for events with reference to the Code of Practice on Environmental Noise Control at Concerts and other Industry Standard Guidelines; and
- set out recommendations for noise mitigation and provide a concert noise management plan to ensure that the relevant noise limits are not exceeded for future events.

Appendix A outlines a glossary of the acoustic terminology used in this report and Appendix B contains the proposed Concert Noise Management Plan (NMP).

1.1 Statement of Competence

Wave Dynamics (WD), an acoustic consultancy that specialises in noise and vibration, completed this report. Our consultants have extensive experience in noise impact assessments for entertainment and leisure venues and have completed numerous similar projects in Ireland, the UK and Europe.

The assessment and this report were prepared by JM, who is Director (Acoustics) with Wave Dynamics. JM has extensive experience in assessing noise and vibration impacts across a variety of sectors, including residential, industrial, commercial and renewable development. JM has over 25 years' experience as an acoustic consultant, holds a Pg Diploma in Acoustics and Noise Control (Institute of Acoustics), is a Member of the Institute of Acoustics (MIOA) and is a former Chairman of the Irish Branch of the Institute of Acoustics.

The review was completed by SR, Director | Senior Consultant, SR has experience of numerous planning stage assessments. SR's qualifications include; BEng (Hons) in Mechanical and Manufacturing Engineering, Diploma in Acoustics and Noise Control (Institute of Acoustics), IOA Certificate of Competence in Environmental Noise Measurement and SITRI certified sound insulation tester. SR is a member of both Engineers Ireland and the Institute of Acoustics.

2 Site Description

Tallaght Stadium is located on Whitestown Way, Tallaght, Dublin 24. The stadium is bounded by Whitestown Way to the west, with apartments and the Maldron Hotel on the opposite side of the road, and by a car park to the south, with apartments beyond. The N81 bounds the north of the stadium, and Old Bawn Community School and Sean Walsh Park lie to the east.

2.1 Noise Sensitive Locations

The nearest Noise Sensitive Locations (NSLs) to the stadium are described below and shown in Figure 1.

- NSL1 – apartments on the west side of Whitestown Way and the Maldron Hotel, opposite the stadium (represented by measurement location L1); the Maldron Hotel is a receptor for measurement purposes; as guests change nightly, advance notification is made through the hotel operator (Appendix B, Section 10).
- NSL2 – apartments to the south of the stadium car park (represented by measurement location L2); and
- NSL3 – Old Bawn Community School (concerts and sound checks are not to take place while the school is in use; this relies on the event organiser's commitment on event timing, see Appendix B, Section 3).

Apartments on the Springfield side of the N81, which lie on one of the post-event pedestrian crossing routes, are outside the NSL set for this assessment. NSL1 and NSL2 are the closest noise sensitive receivers to the stage and the audience area, and achieving the concert noise limits at NSL1 and NSL2 will control music noise at more distant receivers.



Figure 1: Site location, measurement locations and noise sensitive locations

3 Planning Context

The original planning permission for the stadium (Reg. Ref. S97A/0063, An Bord Pleanála Ref. PL06S.102312) includes the following conditions relevant to noise:

- Condition 4 – "The site shall not be used for concerts without a prior grant of planning permission."; and
- Condition 5 – "Details of the public address system shall be submitted for the agreement of the planning authority before the stadium is used.", "In order to protect the amenities of the adjoining school and of adjoining houses."

No concert, event or public address noise limits were identified in the later stadium applications reviewed (S97A/0063EP, S97A/0063FEP, SD058/0016 and S168/0004). This report sets out the noise criteria proposed for concert use in response to Condition 4.

The South Dublin County Development Plan 2022-2028 supports the enhancement and utilisation of strategic recreational, sporting and cultural infrastructure, subject to the protection of residential amenity. The proposed concert use is considered to represent an ancillary and complementary use of the existing stadium facility and will contribute to the cultural offering and economic vitality of the County while remaining subject to operational controls designed to protect surrounding residential properties.

This assessment has therefore been prepared to demonstrate that appropriate noise management measures can ensure compatibility between the proposed events and nearby sensitive receptors.

4 Project Criteria

The acoustic criteria for the project are set out in this section; the purpose of the criteria is to protect the amenity of the nearest noise sensitive premises from music noise during concert events.

4.1 Acoustic Standards

There is no Irish statutory or national numerical criterion for noise from outdoor concerts. The acoustic standards and guidance used to develop the criteria for the project are:

- The Noise Council (1995) *Code of Practice on Environmental Noise Control at Concerts*.
- Dublin City Council, *Guidelines for Event Organisers* (2025).
- ISO 1996-1:2016 *Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures*.
- ISO 1996-2:2017 *Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of sound pressure levels*.
- Previous experience on similar projects.

4.2 Code of Practice on Environmental Noise Control at Concerts

The Code of Practice on Environmental Noise Control at Concerts (The Noise Council, 1995) sets limits on the music noise level (MNL), the $L_{Aeq,15min}$ of the music at 1 m from the façade of any noise sensitive premises, for events held between 09:00 and 23:00, depending on the type of venue and the number of concert days per calendar year, as summarised in Table 1.

Table 1: Code of Practice on Environmental Noise Control at Concerts – music noise level guidelines (Table 1)

Concert days per calendar year, per venue	Venue category	Guideline
1 to 3	Urban stadia or arenas	The MNL should not exceed 75 dB(A) over a 15 minute period

1) MNL measured 1 m from the façade of any noise sensitive premises.
2) Events 4 to 12: All venues: The MNL should not exceed the background noise level by more than 15 dB(A) over a 15 minute period
3) Background noise level: the arithmetic average of the hourly L_{A90} measured over the last four hours of the proposed event (or over the whole event if shorter), on an equivalent day and at an equivalent time when no concert is taking place.

For events continuing between 23:00 and 09:00 the Code recommends that music noise should not be audible within noise sensitive premises with windows open in a typical manner for ventilation.

4.3 Dublin City Council's Guidelines for Event Organisers

Dublin City Council's Guidelines for Event Organisers (Section 5.3.1) refer to 'the Code' and require that music noise does not exceed 75 dB $L_{Aeq,15min}$ at any noise sensitive premises during a concert, and 75 dB $L_{Aeq,5min}$ during rehearsals and sound checks. These limits do not vary with the number of events held at a venue.

4.4 Application of the Guidelines to Tallaght Stadium

For up to three concert days per year, the Code sets an MNL of 75 dB $L_{Aeq,15min}$. Five concert days are proposed for this application. Applied strictly, the Code would set a background-related limit of background +15 dB for the fourth and fifth concerts. We do not consider it appropriate to apply a background-related criterion to the fourth and fifth concerts at Tallaght Stadium. We propose that a single MNL of 75 dB $L_{Aeq,15min}$ applies to all five events, for the following reasons:

- **Established Irish practice**. In Ireland, outdoor concert noise limits are set by the local authority under the outdoor event licensing provisions of Part XVI of the Planning and Development Act 2000. In practice, a single site-specific MNL has been applied to each venue whatever the number of concert days, rather than the tiered approach in Table 1. Dublin City Council's guidelines apply 75 dB $L_{Aeq,15min}$ to all events. An MNL of 75 dB $L_{Aeq,15min}$ is applied to concerts at Croke Park, the Aviva Stadium, Malahide Castle, the Royal Hospital Kilmainham, Collins Barracks, Dublin Castle and Trinity College Dublin, several of which regularly host more than three concert days in a year. Dublin City Council licensed five concerts at Croke Park in September 2022. At Marlay Park, a single MNL has been applied across the full annual concert programme, which is greater than three days, and no background-related limit has been used. Large Irish stadia typically hold concerts under a cap, often set in their original planning permission, at a maximum of three concerts per year, each with a noise limit of 75dB $L_{Aeq,15min}$. Any subsequent events typically proceed, with the same noise criteria, once the Local Authority approves the event management plan. Any concerts beyond three typically require a separate outdoor event licence (OEL), these additional events may be subject to extra conditions and permissions prior to being granted, however historically the noise criteria typically remains the same.
- **The background-related criterion is not workable for stadium concerts**. The baseline survey (Section 5) measured representative background levels of 56 dB L_{A90} at L1 and 54 dB L_{A90} at L2. The resulting limits of 71 and 69 dB $L_{Aeq,15min}$ (L1 and L2) are 4 to 6 dB below the 75 dB criterion. It is unlikely that this could reasonably be met by a stadium-scale concert with a sound system that provides acceptable audience coverage.
- **Age and status of the Code**. The Code was published in 1995 and is guidance, not a statutory requirement.
- **Limited number of events and controls on their effect**. The proposal is for five concert days in a calendar year. All amplified concert music will finish by 22:45. A noise management plan will be implemented, with real-time noise monitoring at the nearest noise sensitive premises (control limit of 75 dB $L_{Aeq,15min}$ during concerts), a control limit at the mix position, a 75 dB $L_{Aeq,5min}$ limit on rehearsals and sound checks, advance notice to residents and a dedicated complaints line. These measures limit how long and how often residents are exposed, which addresses the concern behind the Code's stricter criterion for venues with more concert days.

A MNL of 75 dB $L_{Aeq,15min}$ at 1 m from the façade of the nearest noise sensitive premises is therefore proposed for the five concert events at Tallaght Stadium. This is consistent with the limits applied at comparable stadium and outdoor concert venues in Ireland. While the Code adopts a tiered approach based on event frequency, international and Irish regulatory practice has evolved towards the application of venue-specific operational controls supported by real-time monitoring and management procedures. In this instance, the proposed operational controls, restrictions on event frequency and curfew arrangements provide an equivalent and robust means of protecting residential amenity and a single MNL of 75 dB $L_{Aeq,15min}$ is proposed for all five events.

A MNL of 75 dB $L_{Aeq,15min}$ at 1 m from the façade of the nearest noise sensitive premises represents an upper limit rather than a target operating level, with music noise at surrounding sensitive receptors to be minimised as far as reasonably practicable.

4.5 Adopted Concert Noise Criteria

The following criteria have been adopted for concert events, when measured at 1 m from the façade of the nearest noise sensitive premises:

- Events 1 to 5 in a calendar year: MNL not to exceed 75 dB $L_{Aeq,15min}$,
- a 75 dB $L_{Aeq,5min}$ limit on rehearsals and sound checks, and;
- amplified concert music to finish by 22:45 (the proposal curfew), and no concert music between 23:00 and 09:00, other than recorded egress music as set out below.

Recorded egress music: recorded music at a reduced level may be played within the stadium during audience egress, to manage the rate of crowd departure, until the venue is clear (approximately 23:30hrs). This is not concert music. It should be played through the in-house or production system at a level agreed in the NMP, and from 23:00 it should not be audible inside noise sensitive premises with windows open in a typical manner for ventilation, in line with the Code.

Public address: safety, emergency and egress announcements made through the public address (PA) system are not music and are not included in the music noise level (MNL). They should be set at the level needed to be heard and understood across the audience and egress areas, including during an evacuation.

5 Baseline Noise Survey

Attended and unattended noise surveys were undertaken to quantify the existing noise environment at the nearest noise sensitive locations.

5.1 Measurement Locations

The measurement locations are described in Table 2 and shown in Figure 1. The monitoring positions were selected to be representative of the noise climate at the nearest noise sensitive locations while minimising direct influence from extraneous sources.

Noise sensitive location NSL3 comprises the nearby educational facility (Old Bawn Community School) and associated outdoor areas. Educational uses are recognised as noise-sensitive receptors during normal operating hours; however, the proposed concert events will predominantly occur outside school teaching periods, with amplified music commencing in the evening and concluding in accordance with the prescribed event curfew. As a result, the potential for interference with classroom activities or the educational function of the facility is considered limited. Furthermore, the temporary and infrequent nature of the proposed events, together with the operational controls and noise management measures outlined in this report, ensure that significant adverse effects on the amenity or operation of the school are not anticipated.

It is also noted that concert events are expected to take place primarily during periods when the school is not in full academic operation, further reducing the potential for any adverse effects on teaching, learning or other educational activities.

Table 2: Noise measurement locations

Location	Type	Description	Coordinates (lat, long)	Height above ground (m)
L1	Attended and unattended	Balcony / roof terrace of the apartments between the apartments and the Maldron Hotel on the west side of Whitestown Way, facing the stadium – representative of NSL1	53.283762, -6.375539	~8
L2	Attended and unattended	Pole-mounted in the car park to the south of the stadium, in front of the apartments to the south – representative of NSL2	53.282170, -6.374433	~2

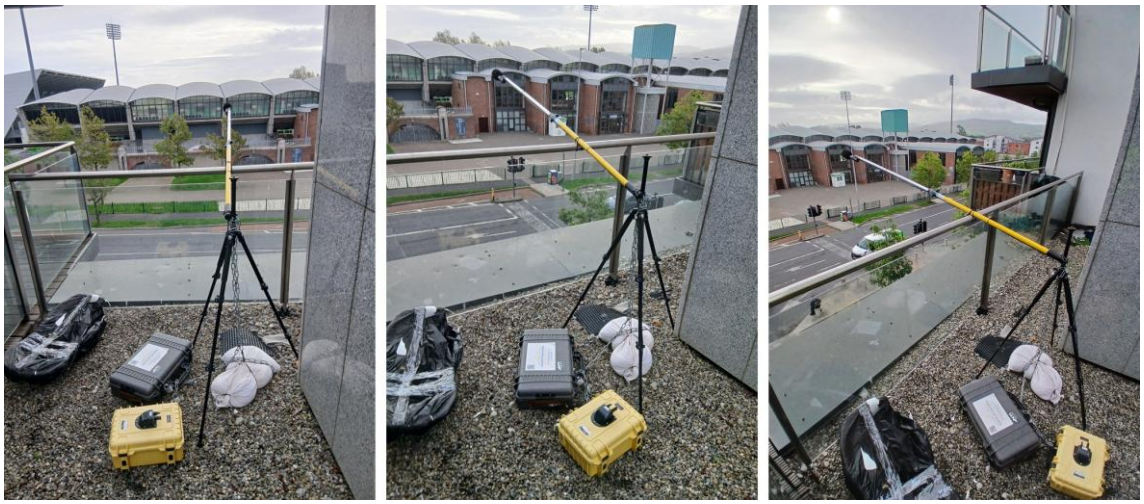


Figure 2: Measurement location L1 (west, Whitestown Way)



Figure 3: Measurement location L2 (south car park)

5.2 Survey Methodology and Personnel

The attended and unattended surveys were completed by a Wave Dynamics field engineer. Noise measurements were undertaken in general accordance with ISO 1996-1:2016 and ISO 1996-2:2017 using Class 1 sound level meters conforming to IEC 61672-1:2013.

5.2.1 Attended Noise Measurements

Attended measurements were taken over 15-minute periods at locations L1 and L2 at the deployment of the loggers on 18 September 2026 and at their collection on 29 September 2026. Care was taken to avoid any effect on the measurements from extraneous noise, acoustic vibration or interference. The weather conditions were calm (wind speed less than 5 m/s) with no rain, and a windshield was used for the duration of the measurements.

5.2.2 Unattended Noise Measurements

Unattended noise loggers were deployed at L1 (NTi XL3, approximately 8 m above ground) and L2 (Norsonic Nor140, pole-mounted approximately 2 m above ground), both in free-field conditions. The L1 logger recorded from 09:39 hrs on 18 September 2026 to 09:46 hrs on 29 September 2026 and the L2 logger from 08:40 hrs on 18 September 2026 to 09:03 hrs on 29 September 2026. The L2 logger recorded in consecutive 15-minute samples; the L1 logger recorded at 1-second intervals, which have been combined into consecutive 15-minute samples for the analysis.

5.3 Measurement Equipment

Class 1 sound level meters / noise loggers conforming to IEC 61672-1:2013 were used for the measurements and the field calibrator conforms to IEC 60942:2017. Table 3 summarises the measurement equipment used. All equipment was within its calibration period on the dates of the survey. Calibration certificates are available on request.

Table 3: Measurement equipment and calibration details

Description	WD Asset Number	Model	Serial No.	Calibration Certificate No.	Calibration Due Date
Sound Level Meter / Noise Logger (L1)	SLM11	NTi XL3	A3A-01753-F0	UCRT25/1878	12/06/2027

Description	WD Asset Number	Model	Serial No.	Calibration Certificate No.	Calibration Due Date
Sound Level Meter / Noise Logger (L2)	SLM8	Norsonic Nor140	1403345	SLM250258	09/05/2027
Acoustic Calibrator	Cal7	Cirrus CR:515	107358	AC260323	25/03/2027

The sound level meters were calibrated before and after the survey and no significant drift was noted.

5.4 Subjective Noise Environment

During the attended noise survey and the deployment and collection of the monitoring equipment, the following noise sources were identified:

- road traffic noise from Whitestown Way (R723, west of the stadium);
- vehicles entering and leaving the stadium car park (L2);
- aircraft overhead;
- noise from the apartments (L1); and
- birdsong, tree foliage and distant construction noise.

5.5 Weather Conditions

Weather data for the survey period was reviewed from the Met Éireann Casement weather station, approximately 5 km from the site. The evenings (19:00–23:00) of 19 to 28 September 2026 were dry; rain recorded on the morning of 27 September 2026 did not affect the evening assessment period. No periods were excluded for weather.

5.6 Noise Measurement Results

5.6.1 Attended Measurement Results

The results of the attended noise measurements are summarised in Table 4.

Table 4: Attended noise measurement results (dB re 20 µPa)

Location	Coordinates	Date	Time (hrs)	Period	Duration (mins)	L_{Aeq} dB	L_{AFmax} dB	L_{A90} dB	Comments
L2	53.282170, -6.374433	18/09	08:23	Day	15	65	75	59	Road traffic
L1	53.283762, -6.375539	18/09	09:23	Day	15	69	78	63	Road traffic
L2	53.282170, -6.374433	29/09	09:24	Day	15	68	87	56	Road traffic; fire brigade and ambulance passed
L1	53.283762, -6.375539	29/09	09:47	Day	15	67	76	60	Road traffic

5.6.2 Unattended Measurement Results

The results of the unattended noise monitoring at L1 and L2 are summarised in Table 5 and Table 6. The days on which a football match took place at the stadium are shown for information; the match periods were not used to set the concert noise criteria. The 15-minute time histories are shown in Figure 4 to Figure 7.

Table 5: Summary of unattended noise monitoring results at location L1

Start Date	Daytime $L_{Aeq,12hr}$ (07:00–19:00) dB	Evening $L_{Aeq,4hr}$ (19:00–23:00) dB	Night-time $L_{Aeq,8hr}$ (23:00–07:00) dB[1]	Daytime L_{A90} (07:00–19:00) dB[2]	Evening L_{A90} (19:00–23:00) dB[2]	Night-time L_{A90} (23:00–07:00) dB[1,2]
Fri 18/09/2026 [3,4]	69	–	62	63	–	48
Sat 19/09/2026	67	66	62	60	56	45
Sun 20/09/2026 [3]	66	66	61	58	55	45
Mon 21/09/2026 [3]	67	65	62	60	55	45
Tue 22/09/2026	68	66	62	60	56	45
Wed 23/09/2026	68	66	62	61	56	45
Thu 24/09/2026 [3]	68	66	63	61	57	46
Fri 25/09/2026 [3]	68	67	62	61	58	47
Sat 26/09/2026	67	66	62	60	55	46
Sun 27/09/2026 [3,4]	68	66	62	59	55	44
Mon 28/09/2026	68	66	62	61	55	47
Tue 29/09/2026 [3]	71	–	–	62	–	–

1) Where the night-time period is referred to, the date is the date on which the measurement commenced at 23:00 hrs; it finished at 07:00 hrs on the following calendar day.
2) Arithmetic average of the $L_{A90,15min}$ values for the period.
3) Shortened measurement duration.
4) Football match at the stadium: Friday 18 September 2026 (evening, excluded) and Sunday 27 September 2026 (afternoon, 14:00–18:00 excluded).

Table 6: Summary of unattended noise monitoring results at location L2

Start Date	Daytime $L_{Aeq,12hr}$ (07:00–19:00) dB	Evening $L_{Aeq,4hr}$ (19:00–23:00) dB	Night-time $L_{Aeq,8hr}$ (23:00–07:00) dB[1]	Daytime L_{A90} (07:00–19:00) dB[2]	Evening L_{A90} (19:00–23:00) dB[2]	Night-time L_{A90} (23:00–07:00) dB[1,2]
Fri 18/09/2026 [3,4]	67	–	61	62	–	50
Sat 19/09/2026	66	64	59	59	55	46
Sun 20/09/2026	65	63	59	59	53	46
Mon 21/09/2026 [3]	65	62	60	58	54	47
Tue 22/09/2026	65	63	60	58	54	48
Wed 23/09/2026	65	63	60	58	55	45
Thu 24/09/2026	65	64	61	59	56	49
Fri 25/09/2026	66	64	60	60	56	48
Sat 26/09/2026	66	64	59	59	54	43
Sun 27/09/2026 [3,4]	65	64	60	58	55	47
Mon 28/09/2026	66	63	59	58	52	46
Tue 29/09/2026 [3]	65	–	–	58	–	–

1) Where the night-time period is referred to, the date is the date on which the measurement commenced at 23:00 hrs; it finished at 07:00 hrs on the following calendar day.
2) Arithmetic average of the $L_{A90,15min}$ values for the period.
3) Shortened measurement duration.
4) Football match at the stadium: Friday 18 September 2026 (evening, excluded) and Sunday 27 September 2026 (afternoon, 14:00–18:00 excluded).

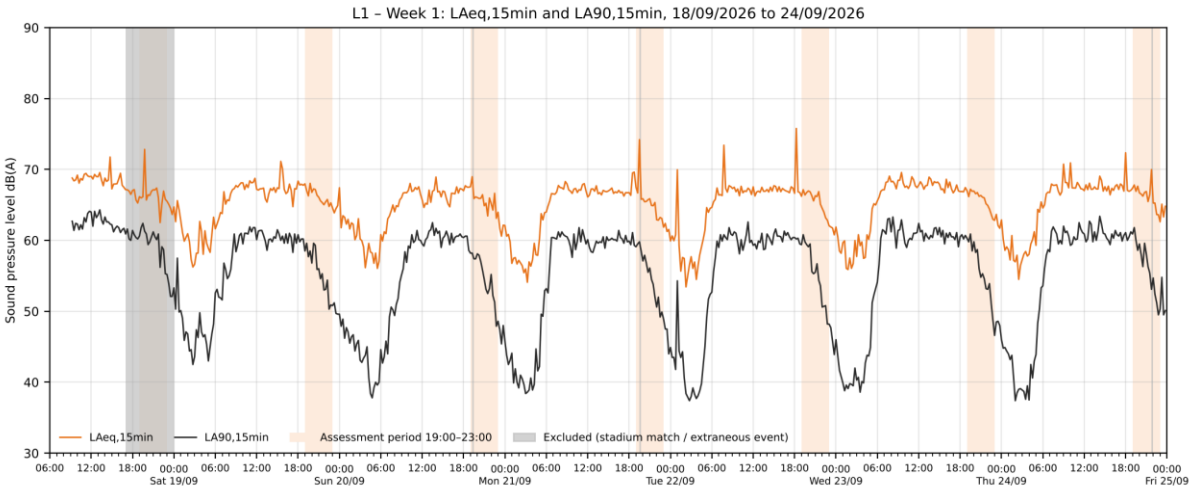


Figure 4: L1 – Week 1: $L_{Aeq,15min}$ and $L_{A90,15min}$, 18 to 24 September 2026

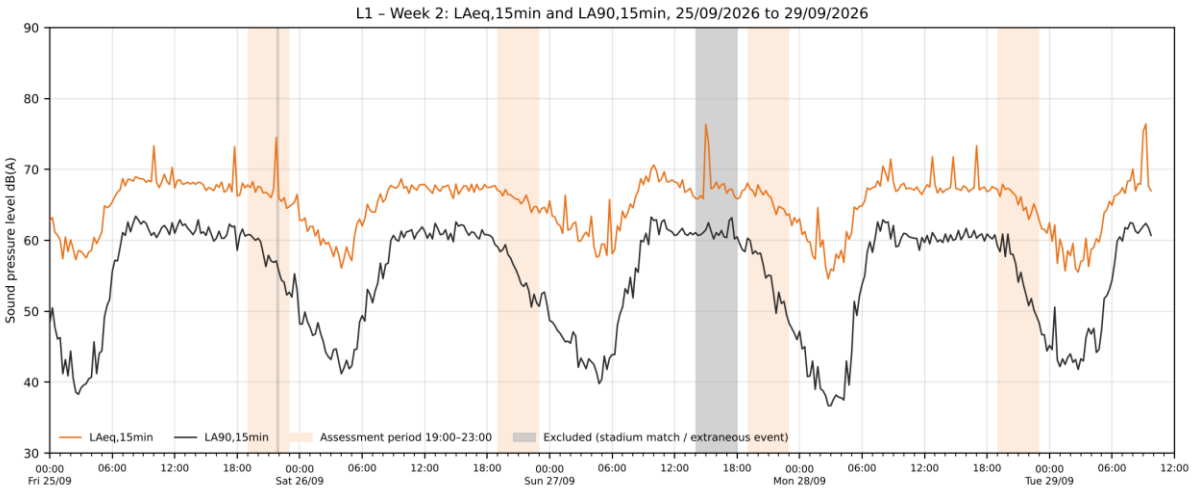


Figure 5: L1 – Week 2: $L_{Aeq,15min}$ and $L_{A90,15min}$, 25 to 29 September 2026

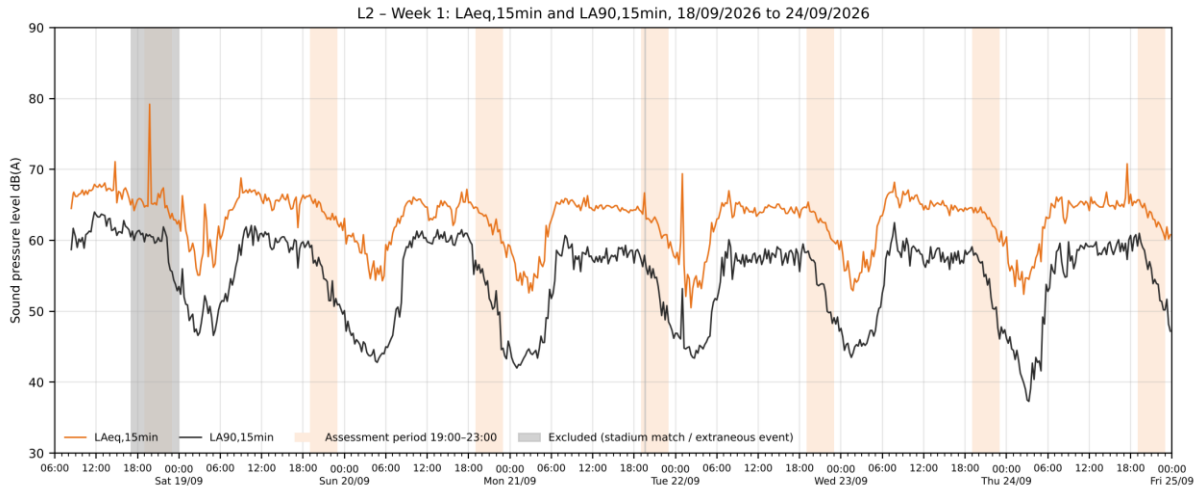


Figure 6: L2 – Week 1: $L_{Aeq,15min}$ and $L_{A90,15min}$, 18 to 24 September 2026

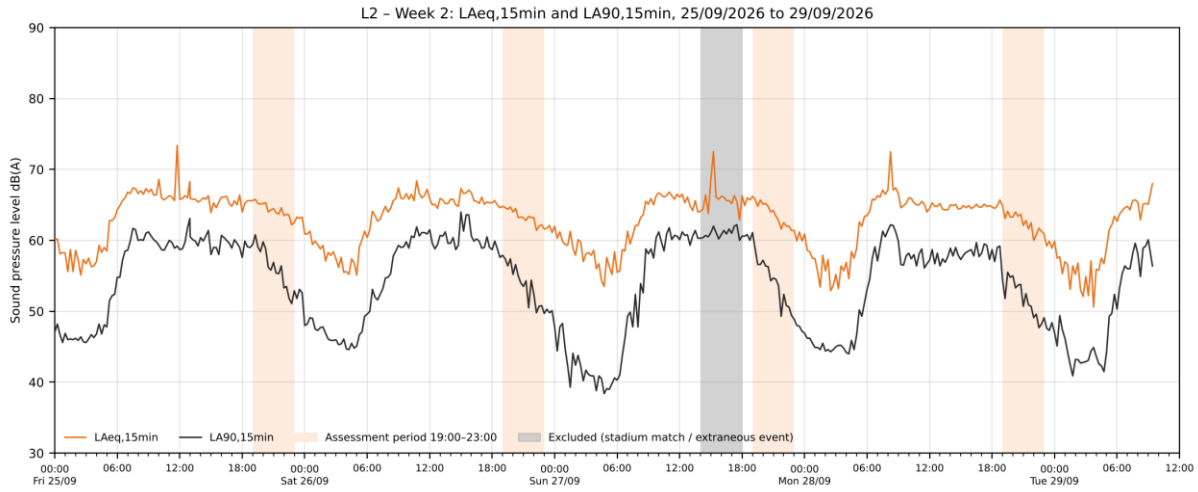


Figure 7: L2 – Week 2: $L_{Aeq,15min}$ and $L_{A90,15min}$, 25 to 29 September 2026

5.6.3 Discussion of Measurement Results

The baseline noise survey comprises weekday and weekend noise data at both locations. The noise environment at both locations was dominated by road traffic, with a clear daily pattern: levels were steady during the day, fell through the evening and were lowest between approximately 02:00 and 05:00.

L1 was the slightly louder of the two locations. The evening $L_{Aeq,4hr}$ was 65–67 dB at L1 and 62–64 dB at L2, and the evening L_{A90} was 55–58 dB at L1 and 52–56 dB at L2. L1 is elevated (approximately 8 m above ground) on the apartments facing Whitestown Way, with a direct view of the road and its traffic. L2 is approximately 2 m above ground in the car park, further from Whitestown Way and partly screened from it by the surrounding buildings; its noise environment is influenced by the car park and more distant traffic.

The measured baseline environment demonstrates that the surrounding area already experiences relatively elevated urban background noise levels associated primarily with road traffic and commercial activity. While residential receptors remain sensitive to noise, the existing acoustic environment is not characterised as a quiet rural or suburban setting.

5.7 Screening of the Baseline Data

The evening data (19:00–23:00) at L1 and L2 were screened to remove data that are not representative of the baseline noise environment on a day with no concert:

- **Stadium events:** The evening of Friday 18 September 2026 was not included in the baseline noise review for the purposes of setting the event noise criteria, as a football match took place at the stadium. A second match took place on the afternoon of Sunday 27 September 2026; the period 14:00–18:00 was excluded and the evening data were retained; and
- **Isolated extraneous events:** These events have been excluded, where relevant. Extraneous events may include emergency service vehicle activity, temporary construction works, local maintenance activities or other atypical short-duration events which are not representative of normal background conditions.

The excluded periods are shaded in Figure 4 to Figure 7.

5.8 Background Noise Level

In line with the Code, the background noise level has been taken as the arithmetic average of the hourly L_{A90} values over the last four hours of a concert (19:00–23:00). The hourly L_{A90} values for each evening are presented in Table 7 for L1 and Table 8 for L2. The background levels recorded are broadly consistent with the site's urban context and proximity to strategic transportation infrastructure.

Table 7: Arithmetic average of hourly L_{A90} values, 19:00–23:00, at L1

Date	$L_{A90,1hr}$ 19:00–20:00 dB	$L_{A90,1hr}$ 20:00–21:00 dB	$L_{A90,1hr}$ 21:00–22:00 dB	$L_{A90,1hr}$ 22:00–23:00 dB	Average L_{A90} (19:00–23:00) dB
Sat 19/09/2026	59	58	55	52	56
Sun 20/09/2026	58	57	53	52	55
Mon 21/09/2026	59	57	54	50	55
Tue 22/09/2026	60	57	55	50	56
Wed 23/09/2026	60	58	54	52	56
Thu 24/09/2026	60	58	57	52	57
Fri 25/09/2026	61	59	57	54	58
Sat 26/09/2026	59	57	54	52	55
Sun 27/09/2026 [4]	59	57	53	51	55
Mon 28/09/2026	59	58	54	51	55
Average (valid evenings)	**59**	**58**	**55**	**52**	**56**

1) $L_{A90,1hr}$: arithmetic average of the $L_{A90,15min}$ values in the hour.
2) Average: arithmetic average of the hourly L_{A90} values (19:00–23:00); bottom row: arithmetic average of all evenings shown.
3) Friday 18 September 2026 not included (football match at the stadium).
4) Sunday 27 September 2026: football match in the afternoon; the evening was not affected.

Table 8: Arithmetic average of hourly L_{A90} values, 19:00–23:00, at L2

Date	$L_{A90,1hr}$ 19:00–20:00 dB	$L_{A90,1hr}$ 20:00–21:00 dB	$L_{A90,1hr}$ 21:00–22:00 dB	$L_{A90,1hr}$ 22:00–23:00 dB	Average L_{A90} (19:00–23:00) dB
Sat 19/09/2026	58	57	54	52	55
Sun 20/09/2026	56	55	51	49	53
Mon 21/09/2026	57	56	54	50	54
Tue 22/09/2026	58	55	54	50	54
Wed 23/09/2026	58	56	54	50	55
Thu 24/09/2026	60	57	55	52	56
Fri 25/09/2026	59	58	56	52	56
Sat 26/09/2026	57	55	53	51	54
Sun 27/09/2026 [4]	58	56	53	51	55
Mon 28/09/2026	54	54	51	49	52
Average (valid evenings)	**58**	**56**	**53**	**51**	**54**

1) $L_{A90,1hr}$: arithmetic average of the $L_{A90,15min}$ values in the hour.
2) Average: arithmetic average of the hourly L_{A90} values (19:00–23:00); bottom row: arithmetic average of all evenings shown.
3) Friday 18 September 2026 not included (football match at the stadium).
4) Sunday 27 September 2026: football match in the afternoon; the evening was not affected.

The background noise level over the course of the survey is 56 dB L_{A90} at L1 and 54 dB L_{A90} at L2.

6 Noise Mitigation and Management

The following measures are recommended. They are set out in full in the Concert Noise Management Plan in Appendix B, which should be agreed with SDCC before the first event:

- **Event information:** the stage location and orientation, sound system, audience area, number of concert days per year, event times and sound check times should be confirmed so that the music noise level at each NSL can be predicted.
- **Sound system design:** the stage is located in front of the South Stand and faces north, away from NSL2 (Appendix B, Section 5), with directional (line array) loudspeakers, delay towers to reduce the main system level and cardioid sub-bass arrays.
- **Propagation test:** a noise propagation test should be carried out before each event to set the control limit at the mixer position.
- **Monitoring:** music noise should be monitored continuously at NSL1, NSL2 and the mixer position during sound checks and each event, with alerts before a limit is reached. Where the L2 position in the south car park is occupied by event infrastructure on an event day, a proxy position representative of NSL2 should be agreed with SDCC before the first event.
- **Curfew:** amplified concert music should finish by 22:45, with sound checks and rehearsals limited to agreed daytime hours.
- **Egress and holding area:** audience egress should be managed through the agreed routes and arrangements with the amenity of residents in mind, and crowd noise at the N81 holding area, opposite NSL1, should be managed as set out in Appendix B, Section 9.
- **Community liaison:** Residents and other local stakeholders shall be notified in advance of each event. A dedicated community contact and complaints service shall be established and maintained throughout each event and shall remain operational until audience dispersal has been completed.
- **Reporting:** a post-event noise report should be submitted to SDCC after each event.

7 Conclusion

Wave Dynamics (WD) was commissioned by SDCC to undertake a noise assessment for proposed outdoor concert events at Tallaght Stadium Outdoor Concerts, Tallaght Stadium, Whitestown Way, Tallaght, Dublin 24.

A baseline noise survey was undertaken at L1 (apartments on Whitestown Way) and L2 (apartments south of the car park) between 18 and 29 September 2026. The noise environment at both locations is dominated by road traffic, with L1 the louder location. The typical evening baseline (19:00–23:00) is 65–67 dB $L_{Aeq,4hr}$ and 56 dB L_{A90} at L1, and 62–64 dB $L_{Aeq,4hr}$ and 54 dB L_{A90} at L2. The football match periods on 18 September 2026 (evening) and 27 September 2026 (afternoon) were not used to set the criteria.

NSL3 comprises a nearby educational facility and, having regard to the predominantly evening timing of concerts, together with school operating patterns and the temporary and infrequent nature of the proposed events, significant adverse effects on educational activities are not anticipated.

Concert noise criteria have been set with reference to The Noise Council *Code of Practice on Environmental Noise Control at Concerts* (1995) (the Code) and Dublin City Council's *Guidelines for Event Organisers* (2025). The following criteria have been adopted for concert events, when measured at 1 m from the façade of the nearest noise sensitive premises:

- Events 1 to 5 in a calendar year: Music Noise Level (MNL) not to exceed 75 dB $L_{Aeq,15min}$,
- a 75 dB $L_{Aeq,5min}$ limit on rehearsals and sound checks, and;
- amplified concert music to finish by 22:45 (the proposal curfew), and no concert music between 23:00 and 09:00, other than recorded egress music as set out below.

Recorded egress music: recorded music at a reduced level may be played within the stadium during audience egress, to manage the rate of crowd departure, until the venue is clear (approximately 23:30hrs). This is not concert music. It should be played through the in-house or production system at a level agreed in the Noise Management Plan (NMP), and from 23:00 it should not be audible inside noise sensitive premises with windows open in a typical manner for ventilation, in line with the Code.

Public address: safety, emergency and egress announcements made through the public address (PA) system are not music and are not included in the music noise level (MNL). They should be set at the level needed to be heard and understood across the audience and egress areas, including during an evacuation.

Subject to the mitigation and the Concert Noise Management Plan in Appendix B, concert noise at the stadium can be controlled to the criteria set out in this report.

Having regard to the baseline acoustic environment, the proposed operational restrictions, event frequency limits, curfew arrangements, real-time monitoring requirements and the measures contained within the Concert Noise Management Plan, it is concluded that the proposed use of Tallaght Stadium for up to five large-scale concerts, musical performances and similar events annually can be accommodated without resulting in significant adverse impacts on the amenity of the surrounding area.

Appendix A – Glossary of Terms

Table 1: Glossary of acoustic terms

Term	Definition
dB	Decibel – the scale in which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the RMS pressure of the sound field and the reference pressure of 20 micropascals (20 μPa).
dB(A)	An A-weighted decibel – a measure of the overall noise level across the audible frequency range (20 Hz – 20 kHz) with A-frequency weighting to compensate for the varying sensitivity of the human ear to sound at different frequencies.
Hertz (Hz)	The unit of frequency, in cycles per second.
Ambient sound	The totally encompassing sound in a given situation at a given time, usually composed of sound from many sources near and far.
Background sound level, $L_{A90,T}$	The A-weighted sound pressure level that is exceeded by the residual sound at the assessment position for 90 % of a given time interval, T.
$L_{Aeq,T}$	The A-weighted equivalent continuous sound level over the time period T – the steady level containing the same acoustic energy as the varying noise over that period.
$L_{A90,T}$	The A-weighted sound level just exceeded for 90 % of the measurement period, calculated by statistical analysis. See also background sound level.
L_{AFmax}	The maximum A-weighted sound level measured with a fast (125 ms) time constant – maximum is not peak.
NSL	Noise sensitive location – a dwelling or other location where a person may experience adverse impacts due to noise.
Music noise level (MNL)	The A-weighted equivalent continuous sound level of the music, $L_{Aeq,15min}$, at 1 m from the façade of a noise sensitive premises (Code of Practice on Environmental Noise Control at Concerts).
Background noise level (concerts)	The arithmetic average of the hourly L_{A90} over the last four hours of the proposed event, on an equivalent day and time when no concert is taking place.
Mixer position (front of house, FOH)	The sound engineer's control position in the audience area, where the overall sound system level is set and monitored.

Appendix B – Concert / Event Noise Management Plan

1. Purpose and Scope

This Concert Noise Management Plan (NMP) sets out how music and other event noise from outdoor concerts and events at Tallaght Stadium will be controlled, so that the noise limits in this report are met at the nearest noise sensitive premises. It applies to every concert day, including the build, sound checks and rehearsals, the event and the load-out. The event organiser should submit the NMP, updated for each event with the details below, to SDCC at least six weeks before the event.

2. Roles and Responsibilities

Table 1: Concert noise management – roles and responsibilities

Role	Responsibility
Event organiser / promoter	Overall responsibility for compliance with the noise limits; appoints the noise consultant; ensures that the sound engineer and all performers follow the noise consultant's instructions.
Event operator	Agrees the stage location and event times; operates the complaints line; liaises with SDCC and residents.
Noise consultant (suitably qualified)	Carries out the propagation test, sets the mixer position control limit, monitors noise during sound checks and events, advises the sound engineer and prepares the post-event report.
Sound engineer	Controls the sound system level at the mixer position to the control limit and reduces it immediately when instructed by the noise consultant.
SDCC	Agrees the NMP; may attend to verify monitoring and compliance; receives complaints and the post-event report.

3. Event Details

The following details are to be confirmed for each event and added to this plan:

- event date(s), number of concert days in the calendar year; Event dates and sound check times should be chosen so that they do not coincide with times when Old Bawn Community School is in use;
- performer schedule, music start and finish times (amplified concert music to finish by 22:45) and audience egress arrangements;
- sound check and rehearsal times;
- stage location and orientation, sound system type, loudspeaker positions (including delay towers and sub-bass arrays) and the mixer position; and for the planning application the sound system is described as a performance envelope and design principles for a representative event (Section 5), and the rig for each event is confirmed through this plan;
- build and load-out times and any generators, plant or traders' amplified music.
- No concert event shall proceed until the Event-Specific Noise Management Plan has been reviewed and accepted by SDCC.

4. Noise Limits

Table 2: Concert noise limits at the nearest noise sensitive premises

Location	Events MNL dB $L_{Aeq,15min}$	Sound checks and rehearsals
Nearby NSLs	75	Not to exceed the event limit ($L_{Aeq,5min}$)

1) Measured at 1 m from the façade of the noise sensitive premises, between 09:00 and 23:00.

2) Amplified concert music to finish by 22:45. No amplified music between 23:00 and 09:00 other than recorded egress music at a reduced level (Section 9); music noise should not be audible inside noise sensitive premises with windows open for ventilation during that period.

5. Sound System Design and Set-up

- The stage (approximately 12 m by 25 m) is located in front of the South Stand and faces north along the long axis of the pitch, with the standing audience on the pitch between the stage and the North Stand and the East and West Stands either side. This places NSL2 behind the stage, with the South Stand between the sound system and the apartments, and NSL1 approximately 90 degrees off axis to the west. The South Stand position is considered the practicable optimum.
- Directional line-array loudspeakers should be used, aimed to cover the audience area with the least spill beyond the stadium.
- Delay towers should be used to reach the rear of the audience area, so that the main system can run at a lower level.
- Sub-bass loudspeakers should be arranged as cardioid or end-fire arrays to reduce low-frequency sound towards the homes.
- This assessment is based on a representative event, so the sound system is defined by the performance envelope and design principles above rather than a particular rig. The sound system design for each event should be provided to the noise consultant in advance, and its compliance should be confirmed by the propagation test and control limit in Section 6, to meet the limits in Table 2.

6. Propagation Test and Control Limit

- A noise propagation test should be carried out once the sound system has been installed and before the first sound check, using pink noise (or agreed alternative sound source) and representative music at the planned level.
- Levels should be measured at the mixer position and at the monitoring positions at NSL1 and NSL2 at the same time.
- The difference between the mixer position and each NSL should be used to set a mixer position control limit ($L_{Aeq,15min}$) that achieves the noise limits in Section 4 at both NSLs, with a margin for weather and audience effects.
- The control limit should be given to the sound engineer in writing and displayed at the mixer position.

7. Noise Monitoring During Sound Checks and Events

- Class 1 sound level meters should be set up at the monitoring positions at NSL1 and NSL2 (at 1 m from the façade, or at proxy positions agreed with SDCC with a correction to the façade) and at the mixer position. The L2 position in the south car park may be occupied by event infrastructure on event days; a proxy position representative of NSL2 should be identified and agreed with SDCC before the first event.
- Monitoring should run continuously from the start of the sound checks until the end of the event, recording $L_{Aeq,15min}$, $L_{Aeq,1min}$, L_{AFmax} and the 63 Hz and 125 Hz octave bands.
- Real-time readings should be visible to the noise consultant and the sound engineer, with an amber alert 3 dB below a limit and a red alert at the limit.
- The noise consultant should also carry out attended measurements at the NSLs during the event, with particular attention to the headline act.
- The noise consultant should have two-way radio contact with the sound engineer and the event organiser at all times during sound checks and the event.

8. Actions if a Limit is Approached or Exceeded

- **Amber (within 3 dB of a limit):** the noise consultant warns the sound engineer, who holds the level and avoids any further increase.
- **Red (at or above a limit):** the sound engineer reduces the overall level at the mixer position immediately, by at least 3 dB, until the level at the NSL is back below the limit.
- Each instance, its cause and the action taken should be recorded with the time.
- Repeated exceedances should be raised with the event organiser, who has authority to require further reductions.

- Any exceedance of the adopted limits shall be documented and reported within the post-event monitoring report together with corrective actions undertaken.

9. Curfew, Sound Checks and Other Noise Sources

- Amplified concert music should finish by 22:45 on each concert day.
- Recorded music may be played at a reduced level during audience egress, to manage the rate of crowd departure, until the venue is clear (approximately 23:30). The level should be agreed in this plan and checked at the mixer position, and from 23:00 the music should not be audible inside noise sensitive premises with windows open for ventilation.
- Sound checks and rehearsals should take place only at times agreed with SDCC within the window of 10:00 to 18:00, and for the shortest time necessary; residents should be told the times in advance.
- Public address announcements, other than safety, emergency and egress announcements, should be kept to essential messages and set to the lowest level needed. Safety, emergency and egress announcements are excluded from this restriction: they should be set at the level needed to be heard and understood across the audience, egress and holding areas, and they are not part of the music noise level.
- Build and load-out activities, generators and deliveries should be located and timed to minimise noise at the homes. The south car park adjoins NSL2 and is used for event infrastructure (including the boneyard, sanitary provision, coach, shuttle, bus, taxi, accessible and staff parking, and vehicle holding during build and break); generators, plant and the noisiest activities should be located as far from the NSL2 apartments as practicable.
- The event organiser shall demonstrate that overnight load-out activities are operationally necessary, and all reasonable steps shall be taken to minimise activities adjacent to residential properties between 23:00 and 07:00.
- Overnight load-out (23:00–07:00) may be undertaken subject to a load-out noise method statement submitted with this plan, which should include: broadband (white noise) reversing alarms or banksmen in place of tonal alarms; no dropping of steel, flight cases or rigging; no amplified music or shouted instructions; engines and generators switched off when not in use; the noisiest activities near NSL2 scheduled before 23:00 where practicable; a site noise manager on duty; and the complaints line kept staffed until load-out activity near the homes has finished.
- Stewards should manage audience egress through the agreed routes and arrangements (including the managed dwell, the N81 holding area and the crossing operated jointly with An Garda Síochána).
- The N81 holding area at the corner of the North and West Stands, across Whitestown Way from NSL1, may hold up to approximately 4,370 people from 22:45. Crowd noise in the holding area is not music noise and is not subject to the music noise limits, but it should be managed: no amplified music or entertainment in the holding area; PA and steward messaging limited to safety and crowd-management information, with loudspeakers directed away from NSL1 where practicable; complaints about crowd noise during egress recorded separately from music noise complaints in the complaints log (Section 10).

10. Community Liaison and Complaints

- Residents within the area agreed with SDCC (including the apartments on Whitestown Way and south of the car park) should receive a letter at least two weeks before each event, giving the event dates, times, sound check times and the complaints line number.
- The Maldron Hotel should be notified through the hotel operator at least four weeks before each event, giving the same information, so that the operator can inform guests staying on concert days.
- A complaints line should be staffed from the start of the sound checks until the audience has left on each concert day.
- Each complaint should be logged (time, address, nature of the complaint), passed to the noise consultant, who should measure at or near the complainant's address where possible, and acted on.
- Complainants should receive a response, and SDCC should be informed of complaints in the timescale it sets.

11. Records and Reporting

- The noise consultant should keep the monitoring data, the propagation test results, the control limit, the record of exceedances and actions, and the complaints log.
- A post-event noise report should be submitted to SDCC within 14 days of each event.

12. Review

The NMP should be reviewed after each event, and before the next event, taking account of the monitoring results, complaints and any comments from SDCC, and updated where needed.