SOUND BARRIER SOLUTIONS

DARTON BUSINESS PARK
PADEL COURTS
Barnsley
S75 5QX

NOISE IMPACT ASSESSMENT

Giles Parker MA Cantab, MIOA, MIMechE

March 2026

Sound Barrier Solutions Limited
Registered Office: 25 Goodacre Road, Hathern, Loughborough, Leicestershire, LE12 5NX
Tel : +44 (0)7966 445234 Email: gilesparker@soundbarriersolutions.com
Registered in Cardiff No. 3577151

Document Control Sheet

Project Title	**Darton Business Park Padel Courts**
Document Title	**Noise Impact Assessment**
Issue Version	**01**

Record of Issue

Issue	Author	Date	Check	Date	Authorised	Date
01	**GFHP**	**24/03/26**	**BDS**	**24/03/26**		**26/03/26**

CONTENTS

page

1. INTRODUCTION

Aim of the Study

1.1. The aim of this study was to carry out a noise impact assessment for the installation of five new Padel Court inside an industrial building unit on the Darton Business Park near Barnsley (Ref Fig 1). This was carried out under instruction from Eyre Investments Ltd with specific regard to the noise impact on the nearest neighbouring residential properties on Station Road and Orchard Croft (Ref Fig 3) which were located the far side of the rail line that ran along the north-eastern boundary of the park.

1.2. In order to carry out the noise impact assessment it was important to first characterise the noise correctly on the basis of what residents actually perceive to be annoying. People are acutely more aware of sudden changes in noise than just average noise levels per se. Similar noise assessments have focussed on the impact of the average noise level during a typical padel-court match or training session, which is valid but not the complete picture. In reality it will also be the sudden thuds of padel-ball strikes that will be perceived as intrusive rather than just the average level.

1.3. This study therefore also determines the impact noise of typical padel-strikes on court and assesses the impact of this at the neighbouring receptors. It will then use this to consider whether further noise mitigation will be required to enable the chosen noise criteria to be met. Since there are no noise standards directly focussed specifically on padel-court noise, criteria have been drawn from other related guidelines and guidance notes to assess both the average noise levels and the maximum noise levels associated with padel strikes.

1.4. To carry out an assessment, it will be necessary to simulate the noise generated by an active padel court. Measured noise levels were therefore utilised that had previously been taken for an existing padel court in use at Ashtead in Surrey. These noise measurements were focussed on the impact noise of the padel-strikes. Measurements were also taken for the existing and ambient background sound levels around the at the boundary of the business park during the assumed padel court operating times.

1.5. The intention was for the padel courts to potentially be in use at any time from **0600** to **0000** in a 24 hour period. Ambient and Background noise levels were therefore monitored for sample durations during the middle of the day and late and night, as representative and worst case periods.

1.6. The noise measurements were used in the production of a three-dimensional computer model that was constructed to assess the spread of padel court noise towards the chosen noise sensitive receptors (NSRs). The computer model was then used to assess the predicted noise levels at the NSRs against the noise criteria to determine whether further mitigation will be required for compliance.

Proposed Padel Courts

1.7. The proposed padel courts will be positioned within the industrial building unit at the north-eastern corner of the Darton Business Park. These were located at a horizontal distance of more than 60m from the nearest neighbouring residents as shown in Figure 2. The plans and elevations for a typical padel court is shown in Figure 5.

2. ASSESSMENT & DESIGN CRITERIA

Noise Policy Statements and Guidance: NPSE & NPPG

2.1. The NPSE: Noise Policy Statement for England aims '*through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development, to:*

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life.*

2.2. NPSE provides general guidance which enables decisions to be made regarding the acceptable noise burden to place on society, using three key phrases – the No Observed Effect Level (NOEL), the Lowest Observed Adverse Effect Level (LOAEL) and the Significant Observed Adverse Effect Level (SOAEL).

2.3. According to NPPG, the *National Planning Policy Guidance,* in paragraph 123, planning policies and decisions should aim to avoid noise from giving rise to 'Significant Adverse Impacts' on health quality of life as a result of new development. Appendix D of this report provides the NPPG Observed Effect Levels in Tabulated form. For this study the most applicable criteria are found in "**Sport England Design Guidance Note on Artificial Grass (AGP) Acoustics – Planning Implications" (2015)** and in the **"CIEH Guidance on the Control of Noise (Clay Target Shooting)".** There are no directly relevant acoustic standards for Padel Courts so these criteria have been utilised for relevant guidance.

Sport England Design Guidance

2.4. The Sport England Design Guidance note on Artificial Grass Pitch (AGP) Acoustics – Planning Implications (2015) was primarily written with artificial grass pitches in mind, however since it considers the impact of sporting activities it has been applied for the assessment of padel-court noise in this study. The AGP Guidance states: *'It is suggested an appropriate assessment time period is for one hour, $LAeq_{1hour}$ as this is typically the time period for a community sports session on an AGP'*. In referring to the same numerical LAeq values, the AGP guidance proposes a noise limit of **50dBA $LAeq_{1hr}$** for free-field daytime noise as more realistic and more stringent than the WHO guidance limit (below) of 50dBA $LAeq_{16hr}$ for the daytime and evening use of an AGP.

2.5. Since it is based on an hourly LAeq value, it is only assessing the average noise emanating from the padel-court as a whole. In other words it ignores the peaks and flattens out the noise. LOAEL for the average padel court noise level will therefore be **50dBA $LAeq_{1hr}$**. It is a useful assessment tool but does not take into account the impact of padel-strikes on court.

CIEH Guidance on the Control of Noise

2.6. The Chartered Institute of Environmental Health (CIEH) guidance document 'Clay Target Shooting: Guidance on the Control of Noise' describes how noise from clay pigeon target shooting can occur and provides advice on methods to minimise or prevent annoyance and intrusion. The guidance includes details of a recommended method for the measurement and subsequent assessment of clay target shooting noise produced by the Building Research Establishment (BRE) and derived from research. The BRE research suggests that there is no fixed shooting noise level at which annoyance starts to occur. Annoyance is less likely to occur at a mean shooting noise level (mean SNL) below **55 dBA**, and highly likely to occur at a mean shooting noise level (mean SNL) above **65 dBA**.

Applied to "Other" Bangs!

2.7. The CIEH guidelines have been adopted and applied to 'other bang types' such as skate park board strikes or sports involving bat-strikes which both generate impulsive noise or maximum noise levels, measured as Lamax. These are created by, skate boarding jumps and tricks and indeed by padel-strikes on a padel court. Therefore, based on CIEH guidelines, impulsive noise levels from padel strikes activities should not generally exceed 55 dB LAF,Max when measured at the nearest noise sensitive location. Using the CIEH guideline approach, and depending on the context*, the threshold for the Observable Adverse Impact Level, OAEL, would be **55dBA $SNL_{,mean}$**.

**With regard to context, Appendix 5 of the CIEH guidelines states that planning permission should not normally be granted for a major shoot if the mean SNL exceeds 55dB(A) where background level is less than 45dBA.*

2.8. In accordance with CIEH guidance, the SNL is defined as the logarithmic average of the 25 highest shot levels over a 30 minute measurement period. The shot levels will have been obtained from recorded levels corrected where necessary for residual noise. For the purposes of this assessment for the new padel courts, the mean SNL has been derived from the logarithmic average of the maximum noise levels due exclusively to padel-strikes recorded over a sample 30 minute measurement.

WHO Guidelines (1999)

2.9. The 1999 version of the WHO Guidelines for Community Noise is referenced in the Sport England Design Guidance Not (see below). It therefore remains relevant for this assessment. As described above, in NPSE, the level at which adverse effects start to be experience is called LOAEL. This level therefore gives a threshold of acceptability or compliance.

2.10. In the WHO Guidelines for Community Noise, the outdoor continuous noise value of **50dB $LAeq_{,T}$** is the threshold above which few will be moderately annoyed during the daytime or evening. This is equivalent to an indoor daytime limit of **35dB $LAeq_{,T}$** for living space and speech intelligibility (assuming 15 dB attenuation from outdoors to indoors through a partially open window). This can therefore be regarded as LOAEL. It should however be noted that its relevance in the WHO Guidelines is normally for noise of a continuous character and averaged over a 16 hour time period from 07:00 to 23:00. The Padel court noise is occasional and impulsive in character and only between the hours of 09:00 to 19:00.

IOA/CIEH Guidelines for Level Change

2.11. Adding the Padel Court will result in an increase in the Ambient noise levels in the vicinity of the club and at the NSRs. Noise mitigation measures will then further reduce the Ambient noise levels. The IOA/CIEH Working party produced guidelines to assess the impact of a change to the ambient noise level in terms of the subjective response and its significance. The impact scale adopted in the assessment is shown in the table below. This scale is now readily accepted in environmental noise assessments for transport, industrial and construction applications.

Change in Noise Level dB(A)	Subjective Response	Significance
0	No change	No Impact
0.1 - 2.9	Barely Perceptible	Minor Impact
3.0 - 4.9	Noticeable	Moderate Impact
5.0 - 9.9	Up to a doubling or halving of loudness	Substantial Impact

2.12. This scale can be related directly to the NPSE guidance effect levels (see below). Avoiding an increase in the cumulative noise level of +3dB would be to avoid adverse impact. This should be assessed where the residents are going to be: Internally within rooms and externally in gardens. For context, it is also important to take into account the duration of difference during a typical day. For example for the Padel Courts their use is anticipated to be between the hours of 0600 at 0000 in a 24 hour period.

Change in Noise Level dB(A)	NPSE Effect Level
0	NOEL
0.1 - 2.9	LOAEL
3.0 - 4.9	ADVERSE
5.0 - 9.9	SOAEL

3. NOISE SURVEY – March 2026

Measurement Approach *(Appendices A – B)*

3.1. A short term attended noise survey was carried out at the boundary of the Darton Business Park in direct line with the most exposed receptors at Nos 12 to 18 Orchard Croft located more than 60 metres from the north eastern façade of the business unit containing the 5 proposed padel courts (Ref Fig 3). The receptors are also significantly shielded by the elevated rail line running adjacent to the north eastern boundary (as shown in Figure 1).

3.2. Because of the lack of security in the location, it was not possible to carry out an unattended noise survey. Instead two separate hour long measurements were carried out representative of the day and night periods when the padel courts are anticipated to be in use.

3.3. The monitoring was recorded from 13:45 to 14:45 and from 22:00 to 23:00 on 17th March 20260. During these periods, the existing ambient LAeq and background sound levels (LA90) were logged continuously. A 01 dB Fusion Noise Analyser was used with microphone mounted at a height of 1.5 metres as shown in Figures 1 and 5 and at least 3 metres clear of any reflective surfaces.

3.4. During the monitoring periods activity on site was minimal with the occasional passing site vehicle or van on the boundary internal site route. There was also birdsong during the daytime and traffic noise from the nearby road network. The other primary existing noise source was from passing trains on the elevated rail track. The monitoring periods were fully attended. During the whole of 17th March, conditions were dry and relatively still (well below 5m/s).

Measurement Apparatus

3.5. For the noise survey the following equipment was deployed:

EQUIPMENT	TYPE	CALIBRATION DATE
Integrating Real Time Analysers	01-dB type FUSION (type 1)	22nd Apr 2024
Microphones:	01-dB type 40CD half inch	22nd Apr 2024
Calibrator:	01-dB type CAL31 (class 1)	22nd Apr 2024
Integrated Weather Station	VAISALA WXT536 – 6 transducers	N/A

3.6. The analyser was verified according to the procedure given in BS7580:1997. The analyser also conforms to BS7580:1997 verifying conformance to BSEN60851:1994 Type 1, BSEN60804:1994 Type 1. Calibration certificates are available on request. Before and after in-field noise calibration corrections are tabulated below.

On-Site Calibration : 01-dB CAL01 Calibration Level : 94.00dB Free-field Correction: -0.20 dB								
Location	Analyser 01-dB Fusion	Calibrator 01-dB Cal01	Date	Time	New Corr	Date	Time	New Corr
Loc 1	12088	91641	17/03/2026	13:30:50	-0.34	17/03/2026	14:58:31	-0.06
Loc 1	12088	91641	17/03/2026	21:36:09	-0.22	17/03/2026	23:13:28	-0.38

Survey Results *(Ref Appendices A & B)*

3.7. Appendix A shows the time histories for the ambient and background sound levels at the boundary of the Darton Business Park from 13:45 – 14:45 and from 22:00 – 23:00. Appendix B provides the half-hourly Ambient $LAeq_{30min}$ and Background $LA90_{30min}$ sound Levels during those periods.

3.8. Appendix B gives a lowest 30 min daytime Ambient $LAeq,_{30min}$ as **52dBA** during the daytime and **48dBA** during the night-time (prior to midnight). If we were to discount the passing trains, the time histories in Appendix A show that at its lowest the $LAeq,_{T}$ is about **37dBA** just prior to midnight.

3.9. The $LA90_{30min}$ during these same periods was typically **46dBA** $LA90,_{30min}$ during the daytime and **37dBA** during the night-time (prior to midnight).

3.10. For context, this is at or below the 45dBA level referenced in Appendix 5 of the CIEH guidelines (See para 2.7 above.). The mean SNL due to padel strikes should therefore normally not exceed 55dBA at the noise sensitive receptors.

4. METHOD OF ANALYSIS

Constructing the Computer Noise Model

4.1. In order to carry out the assessment, the computer noise modelling software package "CadnaA 2025" was used. This is a three-dimensional computational system allowing for precise acoustic modelling of particular noise sources: road, rail traffic or industrial sources of noise. It shows how the noise interacts with adjacent buildings, taking into account different ground conditions and it examines the effects at different noise frequencies.

4.2. The model was used to provide a calibrated model of the active padel court as a noise source. It was then used to predict the noise levels which would be transmitted to the surrounding noise sensitive receptors For this application, CadnaA was programmed to calculate the spread of noise using the industry standard noise calculation method ISO9613-2:2024. This was considered the most appropriate method since it includes for multiple noise reflections from off walls and buildings and can simulate bot the average noise levels and the thuds of the padel strikes.

4.3. The computer noise model is then capable of determining the optimum noise barrier/mitigation design in terms of position, height, performance and type. The model incorporates the real topography of the area using accurate 1.0m LIDAR data as well as all existing buildings. The calculations assumed a general ground absorption level of 0.5. Noise sensitive receptor positions were incorporated in the model to represent the most exposed window facades, (positioned 1.0m from the façade), and for garden spaces.

4.4. By necessity Padel Courts are very standard in design and use. Sound Barrier Solutions have produced an accurate, in-house generic padel court in terms of its dimensions, source specification and noise generation. This is utilised in this report and described below.

Simulation of Padel Court – Average Noise Levels

4.5. Figure 2 shows the location of the 5 proposed padel courts in the business unit. The court itself was simulated as a semi-reflective ground surface. The end glass walls were simulated as 3m high reflective walls with two glass panels at either end extending down the sides (in a "U" shape - Ref Figure 5).

4.6. The average noise level of the court was simulated as a surface source 1.5 metres above the ground. This surface source was calibrated to the value of **68.7 dBA $LAeq,_T$** * measured adjacent to the half-way net at a height of 1.5 metres.

** This value was obtained by measurement from the existing Ashtead Padel court in Surrey. The measurement was undertaken by a third party consultancy at the halfway point on the court, adjacent to the net and based on 22 minutes of continuous play without a break with 4 players and therefore represents worst case use of a padel court. [The Ashtead noise impact assessment report can be provided on request].*

Simulation of Padel Court – Padel Strike Level

4.7. The padel-strikes were simulated based on the assumed positions of the four players. 4 point sources were used to simulate the padel strikes at a height of 1.5 metres. Each player position was assumed to be central in their own quadrant, half way between the net line and the back of the court.

4.8. At any one time, a padel-strike could take place anywhere on the court. In order to simulate the **$SNL_{,mean}$** value, the same value was assigned to each of the 4 point sources and these were calibrated <u>together</u> to match in-house measured levels at specific monitoring positions*

** Measurements were carried at by Sound Barrier Solutions at the existing Ashtead Padel court in Surrey. Specific measurements were taken at the boundary of the site of padel strikes during intensive use of the court over a half hour period with 4 players.*

Simulating Breakout Noise from the Business Park Unit

4.9. The internal noise generated by the 5 padel courts is simulated in the noise model in the locations show in the 3D model image in Figure 6. The internal noise climate is highly resonant and reflective. The model was used to determine the average and maximum sound levels due to the padel courts at the internal façade wall of the business unit.

4.10. According to Watson & Downey, *"noise break-out"* from a building is predicted based on the sound pressure levels inside the building (L_{int}) and the sound reduction index (SRI) of the building skin. Sound pressure level at a distance of 1m outside othe building can be predicted as:

$L_{ext} = L_{int} – SRI – 6$ dB

Where 6dB arises because of the correction between an internal diffuse field and an external free field.

4.11. The average internal noise levels predicted in the model are therefore used to determine a value for the average noise levels external to the building walls. In the model theses values are used to characterise surface sources are entered to represent the breakout padel court noise through the side wall and roof of the business unit as shown in Figure 7.

4.12. In SRI of the existing business unit is unknown. We have assumed an SRI of 20dB which is very low and represents worst-case. For comparison the airborne sound attenuation through a partially open window is 15dB.

Noise Sensitive Receptors

4.13. Figure 3 shows the 5 Noise Sensitive Receptors (NSRs) chosen for the analysis. All two storey properties, these represent the most exposed receptors at distances of more than 60 metres. They include as illustrated:

- **12 Orchard Croft**, (ground and first floor rear façades)
- **14 Orchard Croft**, (ground and first floor rear façades)
- **16 Orchard Croft**, (ground and first floor rear façades)
- **18 Orchard Croft**, (ground and first floor rear façades)
- **"X"** – unknown property, (ground and first floor rear façades)

4.14. The intention of this impact assessment was to demonstrate that all receptors achieve LOAEL for both the average noise level and padel-strike noise level of a padel court event.

Amenity Space Noise Map

4.15. The daytime LAeq, $_{1hr}$ CadnaA model was used to assess the spread of padel court noise at ground floor level across the amenity space towards the chosen noise receptors. This was carried out for the average noise level (only) to generate a ground floor LAeq$_{,1hr}$ noise map shown in Map 1 (Chapter 8). This was carried out to assess the external amenity noise levels in accordance with the AGP Guidance to determine whether LOAEL can be achieved for the complete garden spaces.

Analysis Uncertainty

4.16. ISO9613-2 is a validated method of calculating sound levels. In its purest form independent of measured data, ISO9613-2 estimates its accuracy for broadband noise for heights of 0 to 5m as being +/-3dB. However, this is based on a single ray calculation for a singular point. The CadnaA noise model for this assessment is built up of the order of 100 ray calculations for typically 5,000 separate analysis points. The accuracy is therefore greatly enhanced.

4.17. Furthermore, this analysis is based on a noise model that has also been calibrated to accurately measured noise levels. We would therefore estimate the uncertainty of predicted noise calculations in this analysis as being in the region of +/-2dB.

5. NOISE IMPACT ASSESSMENT

Sports England Design Guidance

5.1. Table 5.1 below shows the predicted LAeq$_{,1hr}$ noise levels at the NSRs due to the hourly average spread of noise from the proposed padel courts during the daytime hours of use. All the predicted values are well below the Sports England Design Guidance noise limit of 50 dBA Laeq$_{,1hr}$ with a highest predicted level of **26dBA Laeq$_{,1hr}$** at first floor level on Orchard Croft, thus achieving LOAEL. This is not surprising as the courts are located within the closed business unit. Any noise breakout is going to be substantively shielded by the elevated rail line. Any padel court noise propagating to the receptors is therefore expected to be significantly attenuated.

Table 5.1 : Predicted LAeq$_{,1hr}$ Padel Court Noise Levels

Address	Floor	LAeq$_{1hr}$ dBA	LOAEL < 50
12 ORCHARD CROFT	GROUND	23	LOAEL
12 ORCHARD CROFT	FIRST	26	LOAEL
14 ORCHARD CROFT	GROUND	24	LOAEL
14 ORCHARD CROFT	FIRST	26	LOAEL
16 ORCHARD CROFT	GROUND	21	LOAEL
16 ORCHARD CROFT	FIRST	23	LOAEL
18 ORCHARD CROFT	GROUND	21	LOAEL
18 ORCHARD CROFT	FIRST	23	LOAEL
X	GROUND	17	LOAEL
X	FIRST	22	LOAEL

5.2. Noise Map 1 shows the average spread of noise at ground floor level specifically from the active padel-court towards the receptors with no mitigation. *For reference the dark blue is 45-50 dBA which will only occur close to the external wall of the building unit.* The noise map confirms that the external noise levels around all the most exposed properties would be well under the Sports England Design Guidance Limit and classified as LOAEL in accordance with NPSE.

CIEH Guidance

5.3. Table 5.4 below shows the predicted **$SNL_{,mean}$** noise levels at the NSRs due to padel strike noise based on the logarithmic average of the 25 highest padel strike levels over a 30 minute measurement period. Table 5.4 also assumes the Mitigation Measure noise barrier section is installed. A maximum event is instantaneous. It could therefore happen at any position on court at any time.

5.4. For the active Padel Court, the highest predicted SNL_{mean} of **34dBA** will be received at first floor level on Orchard Croft according to Table 5.4. This is well below the Lowest Observable Adverse Impact Level of 55dBA SNL_{mean} given in the CIEH Guidance. This is not surprising as the courts are located within the closed business unit. Any noise breakout is going to be substantively shielded by the elevated rail line. Any padel court noise propagating to the receptors is therefore expected to be significantly attenuated.

Table 5.4 : Predicted SNL_{mean} Padel Strike Noise Levels

Address	Floor	Court 1 Mean SNL	LOAEL < 55	ADVERSE 55 to 65	SOAEL > 65
12 ORCHARD CROFT	GROUND	31	LOAEL		
12 ORCHARD CROFT	FIRST	34	LOAEL		
14 ORCHARD CROFT	GROUND	32	LOAEL		
14 ORCHARD CROFT	FIRST	34	LOAEL		
16 ORCHARD CROFT	GROUND	29	LOAEL		
16 ORCHARD CROFT	FIRST	31	LOAEL		
18 ORCHARD CROFT	GROUND	29	LOAEL		
18 ORCHARD CROFT	FIRST	31	LOAEL		
X	GROUND	25	LOAEL		
X	FIRST	30	LOAEL		

5.5. Noise Map 2 shows the SNL spread of noise from the active padel-court towards the receptor. *For reference the dark blue is 45-50 dBA which will only occur close to the external wall of the building unit.* The noise map confirms compliance with the CIEH guideline level, and classified as LOAEL in accordance with NPSE.

WHO Guidelines

5.6. According to Table 5.1 above the highest external noise level at a receptor façade due to padel court noise is predicted to be 26dBA. Assuming an attenuation of 15dB for partially open windows, the internal level

due to padel court noise would be 11dBA. According to the WHO guidelines, this is more than 10dB below the limit WHO threshold for sleeping and would thus be classified as NOEL in accordance with NPSE.

IOA/CIEH Guidelines for Level Change

5.7. According to Table 5.1 above the highest average padel noise at first floor façade level on the Orchard Close is predicted to be **26dBA $LAeq_{,1hr}$**. According to para 3.8 above, the lowest ambient LAeq level occurring just prior to midnight was measured to be **37dBA $LAeq_{,T}$**. Adding the padel noise to this would result in no perceptible increase in the ambient noise level at the first floor façade of Orchard Close. According to the IOA Guidelines this would be predicted to have no impact and would be considered NOEL in accordance with NPSE.

6. CONCLUSIONS & RECOMMENDATIONS

Compliance With Guidelines

6.1. The assessment of the proposed new padel courts at the Darton Business Park in Barnsley has been carried out in accordance with the following guidelines: The "Sport England Design Guidance Note on Artificial Grass (AGP) Acoustics – Planning Implications" (2015), the "CIEH Guidance on the Control of Noise (Clay Target Shooting)", the WHO Guidelines (1999) and the IOA/CIEH Guidelines for Level Change.

6.2. The assessment demonstrates compliance with all of these guidelines at the NSRs with regard to the predicted noise levels generated by the padel court. We would therefore recommend that the scheme can proceed without the need for further noise mitigation.

7: FIGURES

FIG 1: DARTON BUSINESS PARK, BARNSLEY (showing monitoring location)

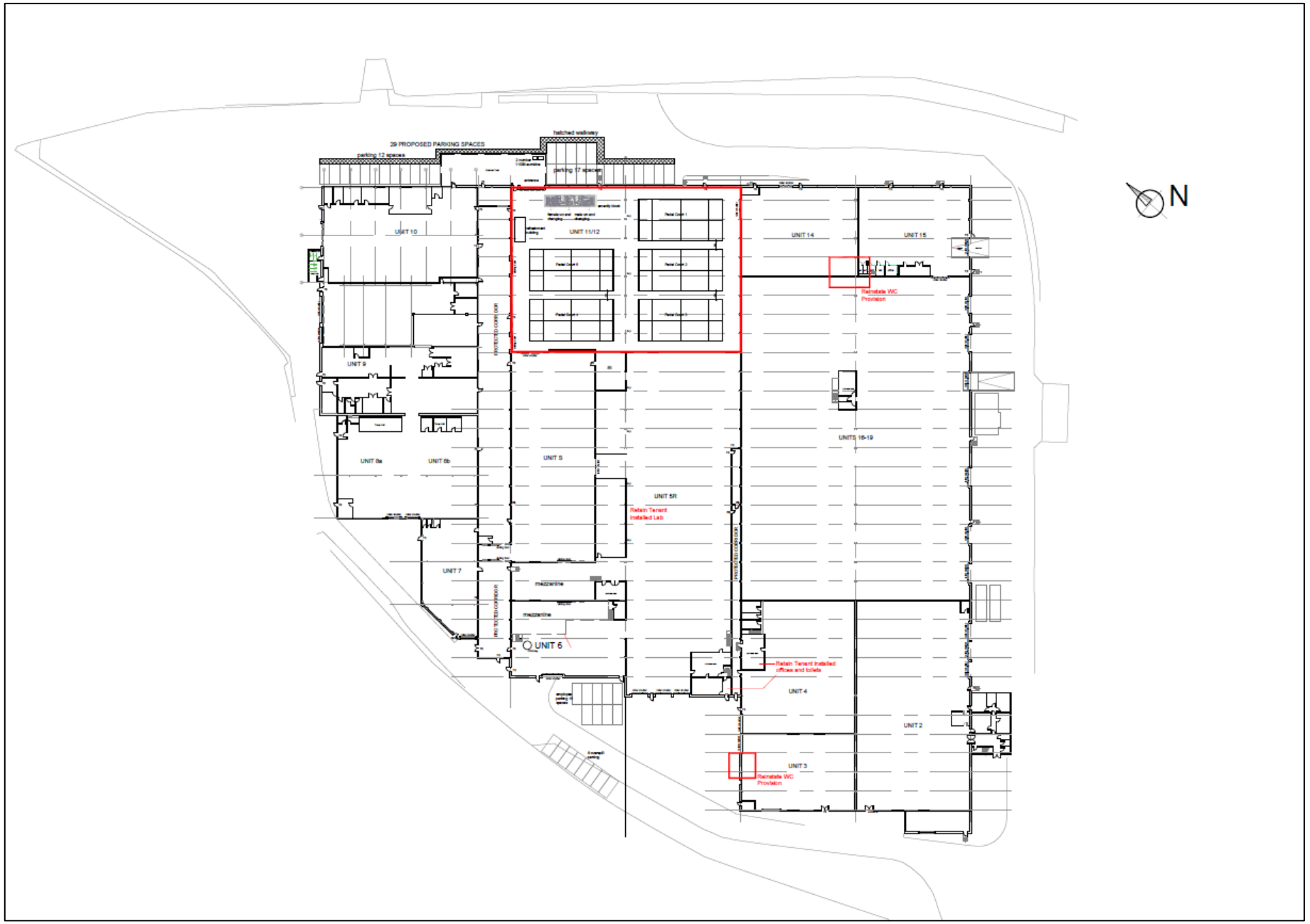


FIG 2: PROPOSED LOCATION OF PADEL COURTS

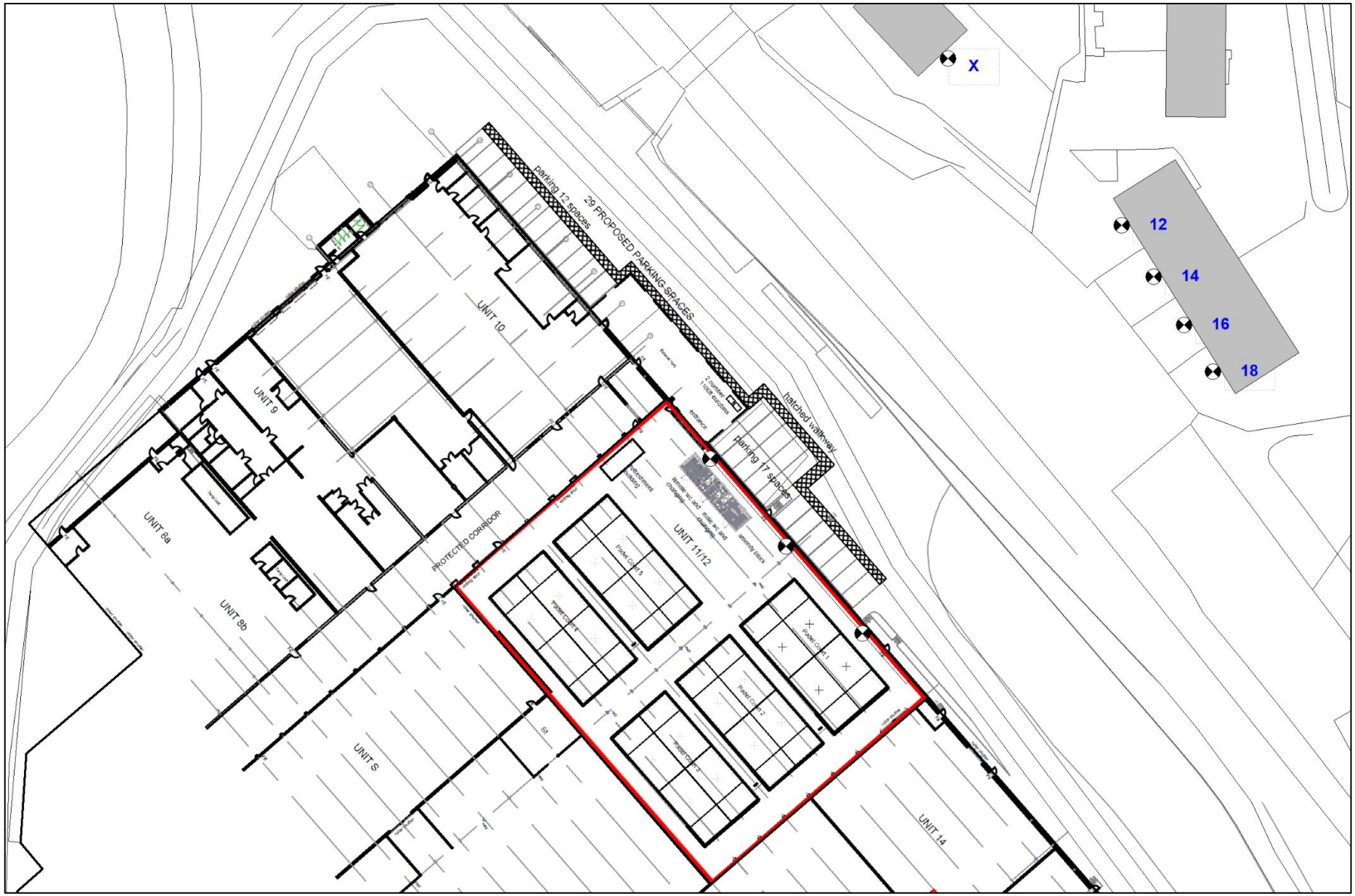


FIG 3: NOISE SENSITIVE RECEPTORS (NSRs)

FIG 5: NOISE MONITORING LOCATION

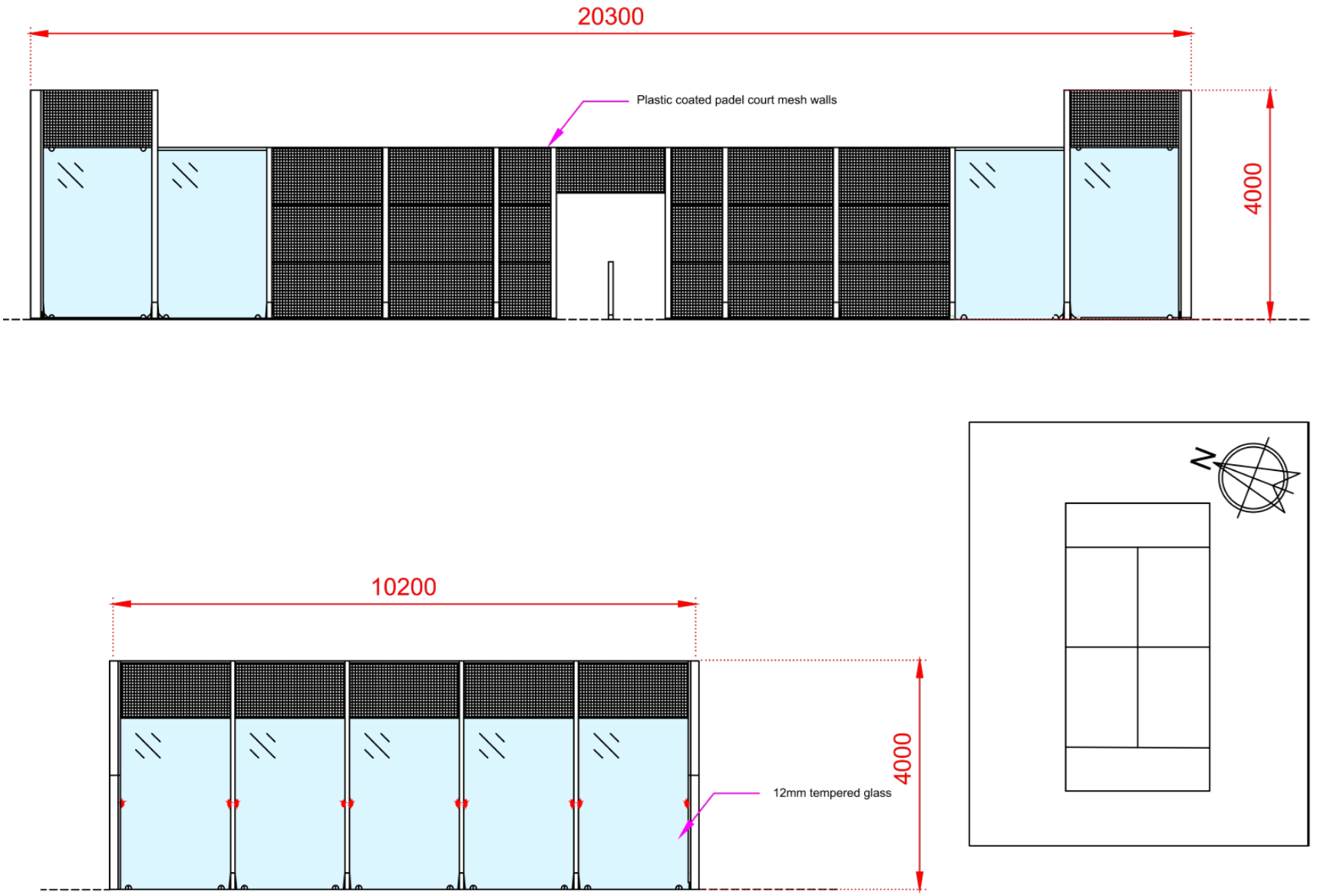


FIG 5: TYPICAL PADEL COURTS PLANS AND ELEVATIONS

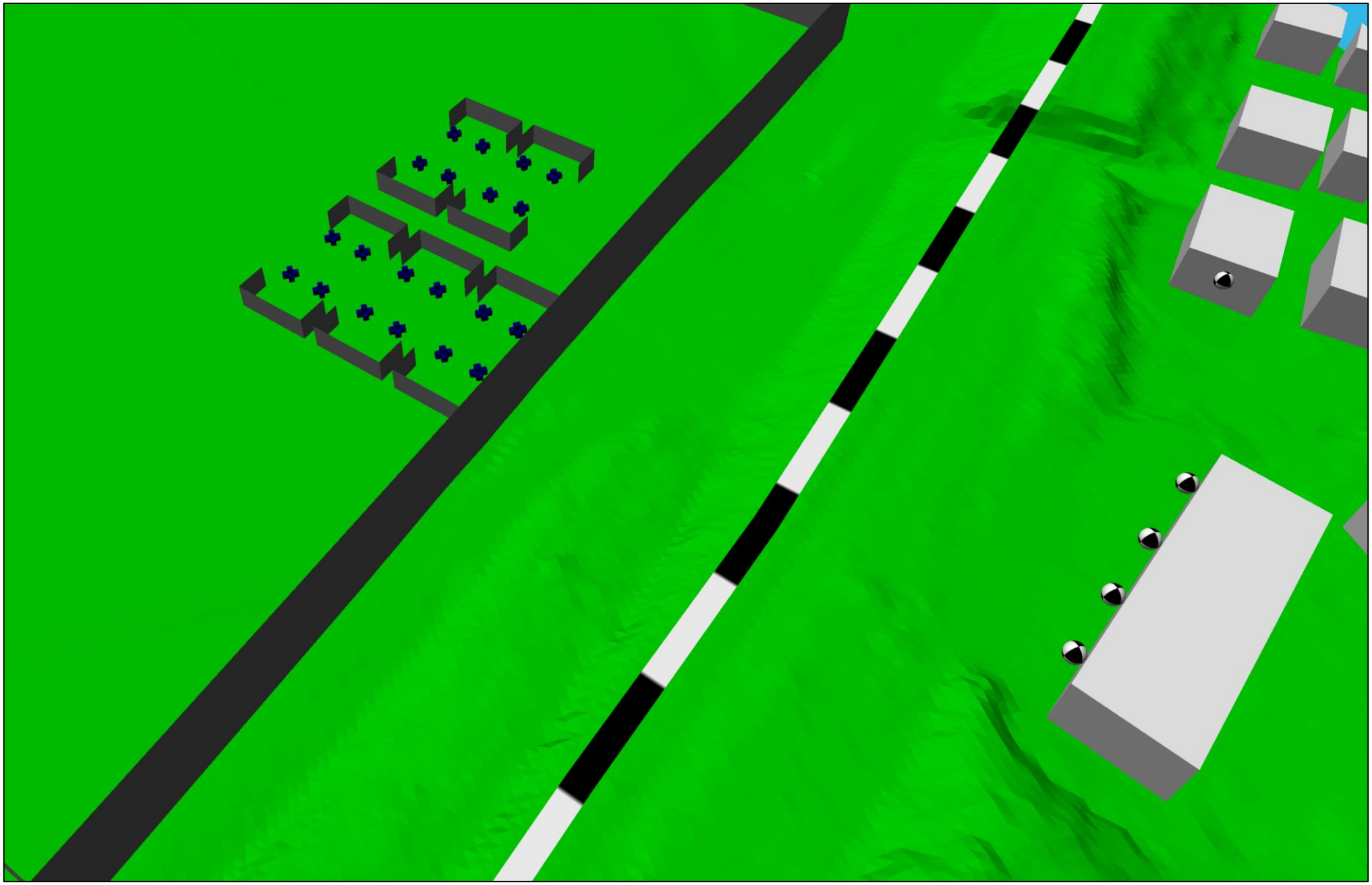


FIG 6: 3D SIMULATION VIEW (Showing internal court locations)

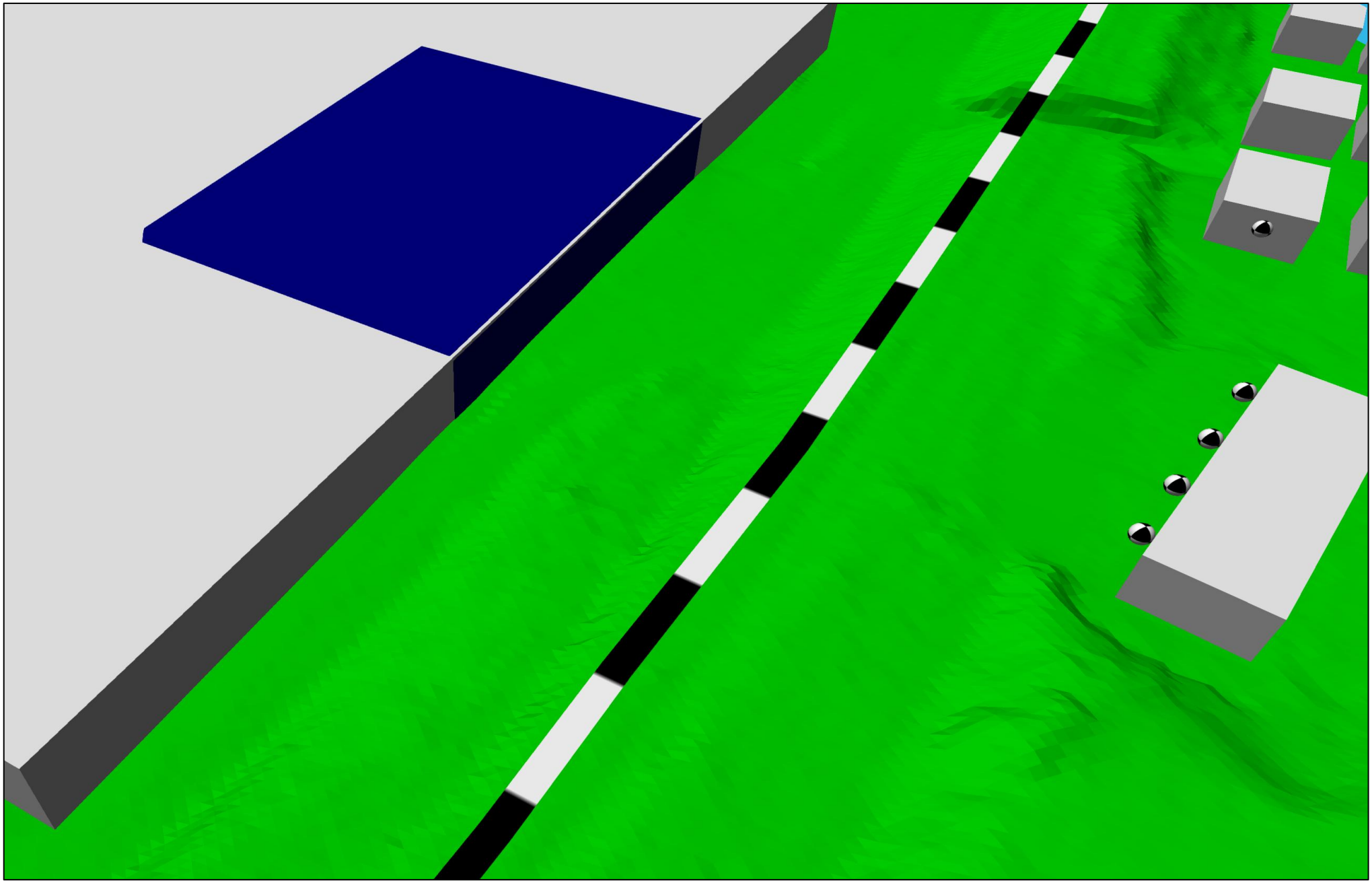
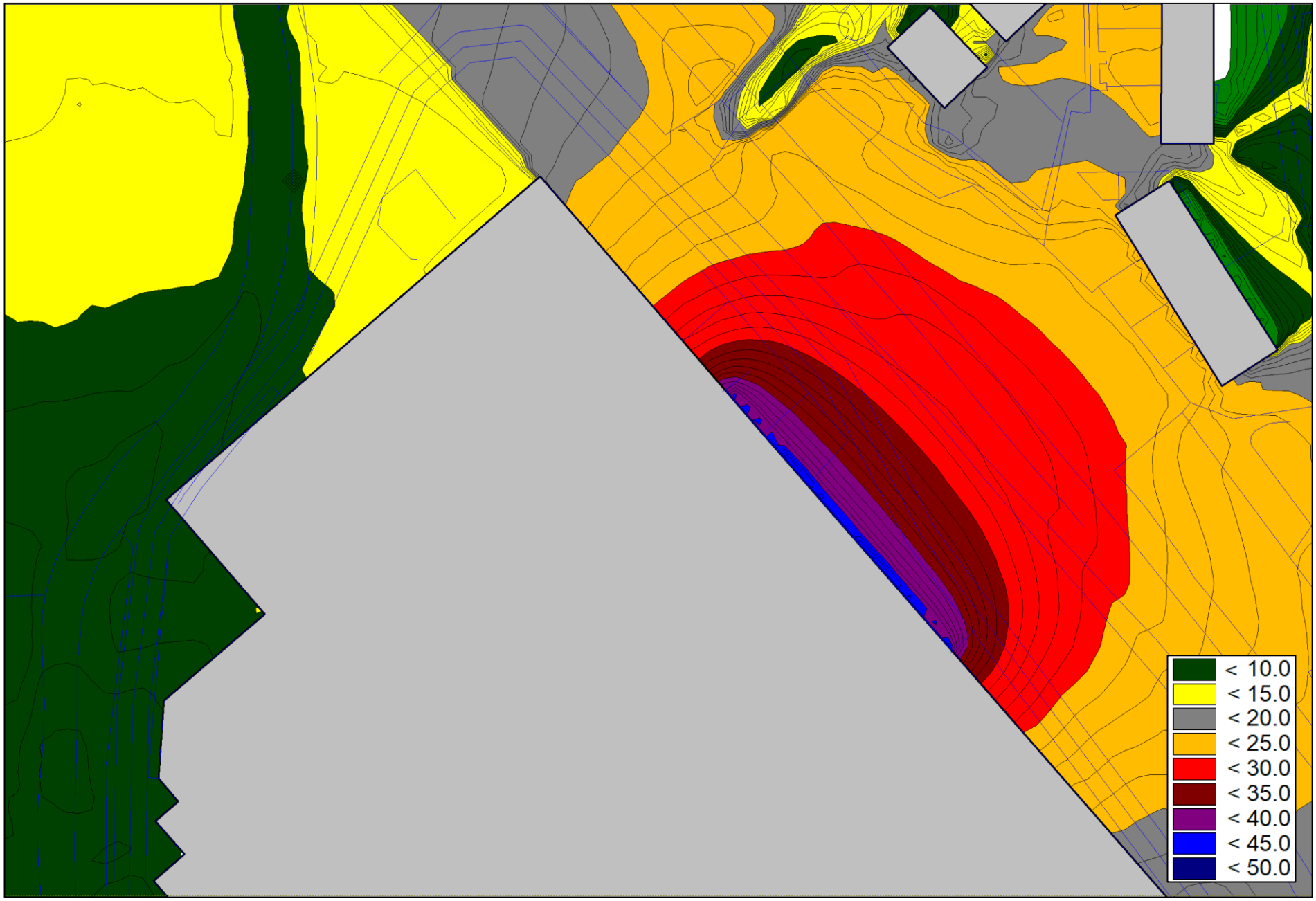
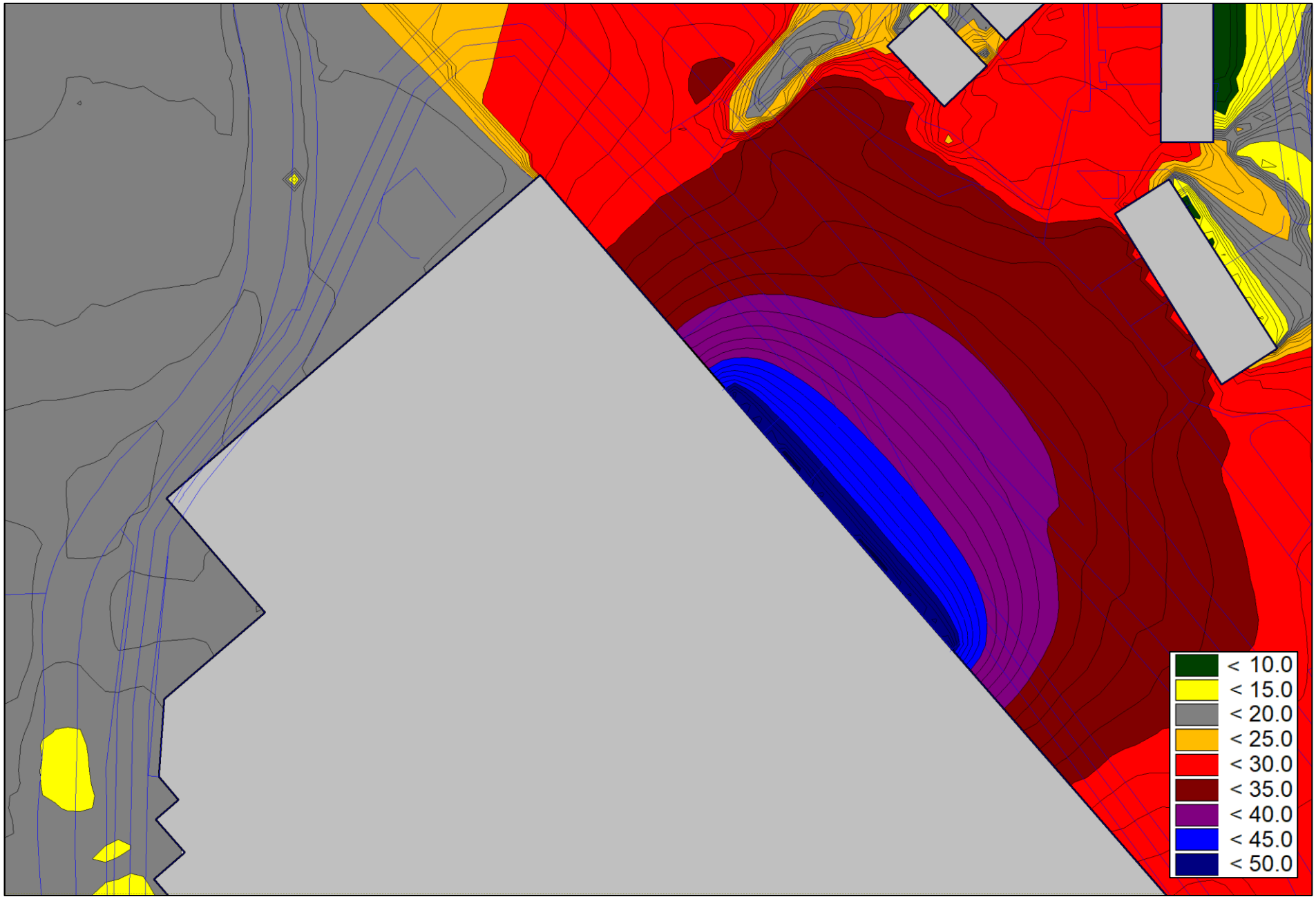


FIG 7: 3D SIMULATION VIEW (Showing external breakout noise sources)

8: NOISE MAPS



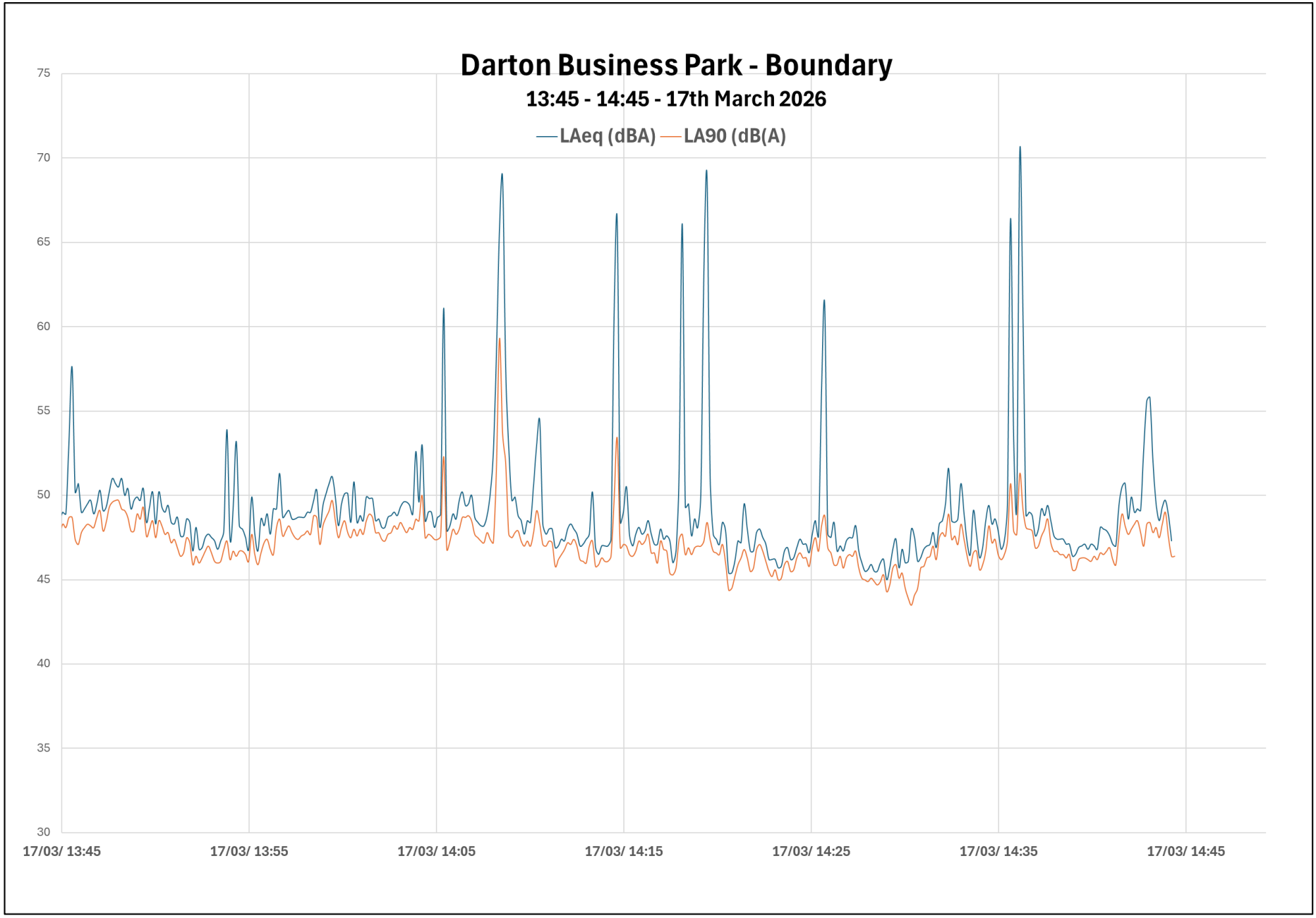
MAP 1: Padel Courts - Ground Floor Noise: LAeq,T (average) dBA

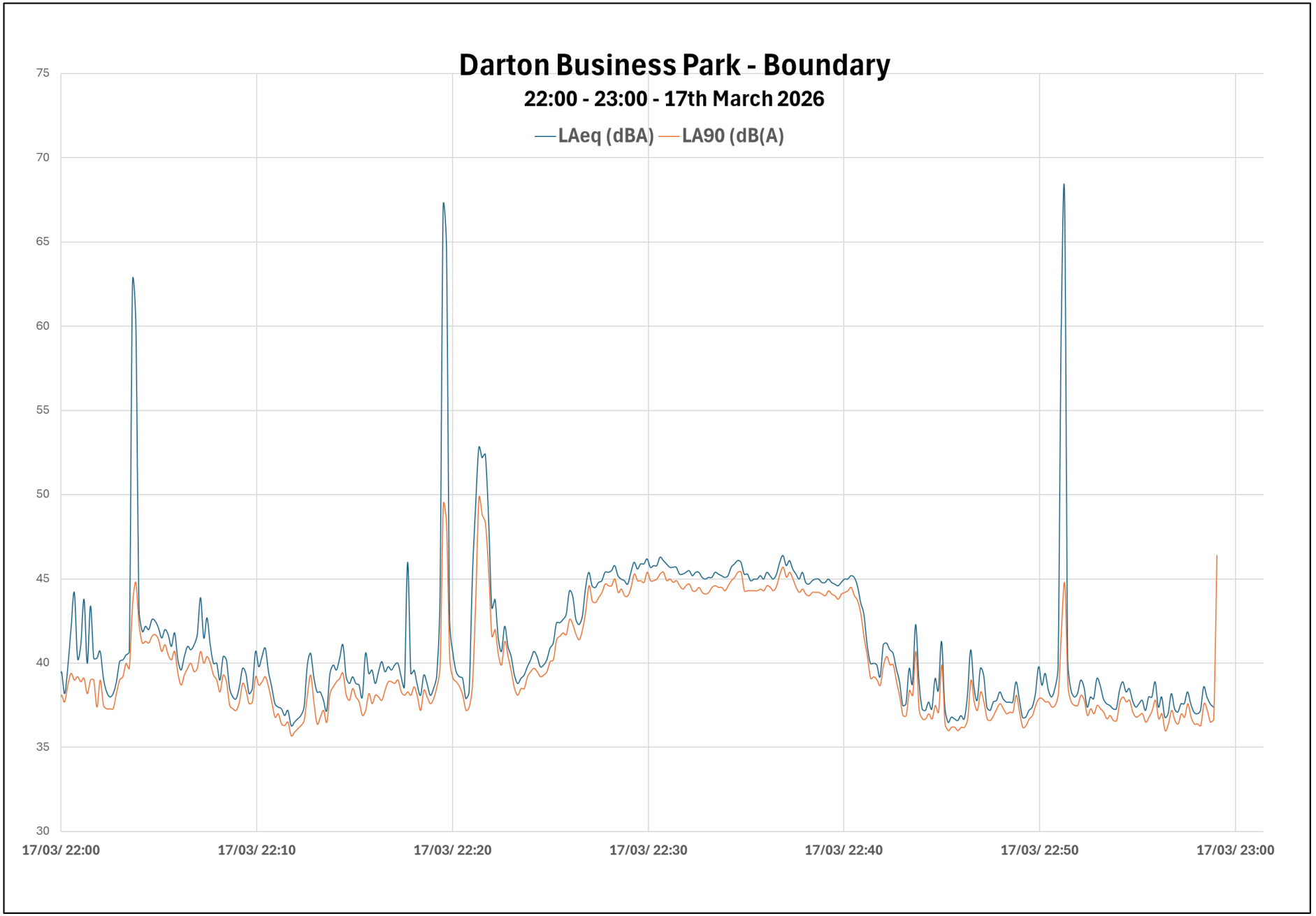


MAP 2: Padel Courts Ground Floor Noise: LAMax dBA

9: APPENDICES

APPENDIX A: NOISE MEASUREMENT TIME HISTORY




Darton Business Park - Boundary
22:00 - 23:00 - 17th March 2026
LAeq (dBA)
LA90 (dB(A)
75
70
65
60
55
50
45
40
35
30
17/03/ 22:00
17/03/ 22:10
17/03/ 22:20
17/03/ 22:30
17/03/ 22:40
17/03/ 22:50
17/03/ 23:00

APPENDIX B

Half-hour Ambient Sound Levels

Measurements in dB(A) – 17th March 2026

30-min start	Leq	LMax	L90
13:45	52	78	47
14:15	54	80	46
22:00	49	74	38
22:30	48	75	37

APPENDIX C
NPPG OBSERVED EFFECT LEVELS

Perception	Examples of outcomes	Increasing effect level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, eg turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, eg avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, eg regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, eg auditory and non-auditory	Unacceptable Adverse Effect	Prevent