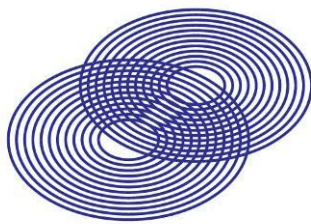


ADNITT ACOUSTICS
Renaissance House
32 Upper High Street
Epsom, Surrey
KT17 4QJ

T: +44 (0)20 7099 9735
F: +44 (0)845 127 5121
E: enquiry@adnitt.com
W: www.adnitt.com



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Issue Date 25 March 2026

Project **Nando's Prestwich**
Valley Park Rd, Prestwich, Manchester M25 3TG

Title **Noise Impact Assessment**
Sub Title **External Mechanical Plant**

Client Nando's UK & IRE
Erico House
93-99 Upper Richmond Road
Putney
SW15 2TG

Case No

Author Graham Shaw BSc(Hons) MSc
MIOA MInstP

Graham
Shaw

Digitally signed by Graham Shaw
DN: cn=Graham Shaw, o=Adnitt
Acoustics, ou=Glasgow,
email=gshaw@adnitt.com
Reason: I am the author of this
document
Date: 2026.03.25 13:24:31

Checked Matthew Watts BA(Hons) AMIOA

Matthew
Watts

Digitally signed by Matthew Watts
DN: cn=Matthew Watts, o=Adnitt
Acoustic Services Ltd, ou=Epsom,
email=mwatts@adnitt.com
Reason: I have reviewed this document
Location: Epsom
Date: 2026.03.25 13:38:09

Signatories acknowledge their responsibility for the current revision only.

Revision	Reason	Author	Checked	Date
00	First Issue	Graham Shaw	Matthew Watts	25/03/26

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Appendix A: GLOSSARY OF ACOUSTIC TERMS

Appendix B: MECHANICAL PLANT NOISE LEVELS

Figure S26006/ TH 1 : Time History of Automated Measurements at Position P1

1. INTRODUCTION

- 1.1 Adnitt Acoustics have been commissioned by Nando's UK & IRE to undertake a noise impact assessment for the proposed Nando's Prestwich restaurant, Valley Park Rd, Prestwich, Manchester M25 3TG.
- 1.2 The project comprises the refurbishment of the disused TGI Friday's restaurant into a new Nando's restaurant which will include the installation of new external mechanical plant.
- 1.3 An environmental noise survey and noise impact assessment is required as part of the planning application for the new mechanical plant equipment.
- 1.4 The following tasks have been undertaken:
- Environmental background noise survey
 - New plant equipment noise emission criteria
 - Indicative plant assessment including mitigation measures if required
- 1.5 As this is a technical report it will refer to some technical terms. To assist the reader a glossary has been included in Appendix A.

Statement of Qualification

- 1.6 The assessment was undertaken by Graham Shaw BSc(Hons) MSc MIOA MInstP for and on behalf of Adnitt Acoustic Services Ltd.
- 1.7 Graham has a BSc(Hons) in Physics with Music from the University of Edinburgh (2010) and an MSc (Distinction) in Architectural and Environmental Acoustics from London South Bank University (2012).
- 1.8 He has over 14 years post-graduate experience as an Acoustical Consultant working as a Consultant for Adnitt Acoustics since January 2012.
- 1.9 Graham is a corporate Member of both the Institute of Acoustics and Institute of Physics.
- 1.10 On this basis, Graham Shaw is considered to be a Suitably Qualified Person for the purposes of this assessment.

2. LOCAL AUTHORITY CRITERIA

Bury Council

- 2.1 We understand that Bury Council do not set specific noise limits within their planning guidance documents.
- 2.2 Bury Council Unitary Development Plan (UDP) is currently under review and as such we have used the Draft Bury Local Plan (March 2025) as the basis for our assessment. Policy LP-BE8 provides the following guidance on amenity:

Policy LP-BE8: Amenity

The Council will ensure that new development would not lead to unacceptable adverse impacts on the amenity of the surrounding area or users and occupants of the development, particularly in terms of:

- a. Overshadowing and loss of light;
- b. Dominance and loss of privacy by virtue of separation distances, height, depth, mass, location of a building/extension and window positions;
- c. Pollution and general disturbance arising from noise, vibration, smell, litter, artificial light and opening hours; and**
- d. Parking and servicing provision associated with the proposed development and its effects in terms of road safety, traffic generation and movement.

- 2.3 On this basis we propose noise limits based on achieving a 'low impact' as defined in BS 4142 (see below).
- 2.4 A 'low impact' is generally considered to be equivalent to a LOAEL in relation to the NPPG depending on the context and as such we consider that this target is appropriate and is consistent with Policy LP-BE8.

National Planning Policy

- 2.5 Since March 2012 national planning policy has been governed by the National Planning Policy Framework (NPPF). The July 2021 version of the NPPF states:

Paragraph 174

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

- 2.6 The National Planning Practice Guidance (Noise section updated July 2019) provides the following advice regarding noise:

“Plan-making and decision making need to take account of the acoustic environment and in doing so consider:

- *whether or not a significant adverse effect is occurring or likely to occur;*
- *whether or not an adverse effect is occurring or likely to occur; and*
- *whether or not a good standard of amenity can be achieved.*

In line with the Explanatory note of the Noise Policy Statement for England (NPSE), this would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase wherever applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation. As noise is a complex technical issue, it may be appropriate to seek experienced specialist assistance when applying this policy.”

- 2.7 The observed effect levels are defined as follows:

Significant Observed Adverse Effect Level (SOAEL): This is the level of noise exposure above which significant adverse effects on health and quality of life occur.

Lowest Observed Adverse Effect Level (LOAEL): this is the level of noise exposure above which adverse effects on health and quality of life can be detected.

No Observed Effect Level (NOEL): this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

- 2.8 Although the word ‘level’ is used here, this does not mean that the effects can only be defined in terms of a single value of noise exposure. In some circumstances adverse effects are defined in terms of a combination of more than one factor such as noise exposure, the number of occurrences of the noise in a given time period, the duration of the noise and the time of day the noise occurs.
- 2.9 A hierarchy of noise impacts is given as part of the National Planning Practice Guidance (NPPG) as shown in the table below.

Table 1 - National Planning Practice Guidance with regard to Noise

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 Level (NOAEL)	No specific measures required
		Lowest Observed Adverse Effect Level	

Perception	Examples of Outcomes	Increasing Effect Level	Action
<i>Noticeable and intrusive</i>	<i>Noise can be heard and causes small changes in behaviour and/or attitude, e.g. 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.</i>	<i>Observed Adverse Effect</i>	<i>Mitigate and reduce to a minimum</i>
		<i>Significant Observed Adverse Effect Level</i>	
<i>Noticeable and disruptive</i>	<i>The noise causes a material change in behaviour and/or attitude, e.g. 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.</i>	<i>Significant Observed Adverse Effect</i>	<i>Avoid</i>
<i>Noticeable and very disruptive</i>	<i>Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory</i>	<i>Significant Observed Adverse Effect</i>	<i>Prevent</i>

British Standard BS 4142:2014+A1:2019

2.10 British Standard BS 4142:2014+A1:2019¹ (BS 4142) uses the following terms:

Background Sound Level - The sound level that is exceeded by the existing ambient sound at the assessment location for 90% of a given time interval.

Specific Sound Level - The sound level produced by the specific sound source at the assessment location.

Rating Level - The specific sound level plus any adjustment for the characteristic features of the sound.

2.11 BS 4142 also gives the following guidance on determining typical background sound levels:

¹ BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound

“The background sound level is an underlying level of sound over a period, T, and might in part be an indication of relative quietness at a given location. It does not reflect the occurrence of transient and/or higher sound level events and is generally governed by continuous or semi-continuous sounds.

In using the background sound level in the method for rating and assessing industrial and commercial sound it is important to ensure that values are reliable and suitably represent both the particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.

Among other considerations, diurnal patterns can have major influence on background sound levels and, for example, the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night-time period for sleep purposes. Furthermore, in this general context it can also be necessary to separately assess weekends and weekday periods.

Since the intention is to determine a background sound level in the absence of the specific sound that is under consideration, it is necessary to understand that the background sound level can in some circumstances legitimately include industrial and/or commercial sounds that are present as separate to the specific sound.”

2.12 BS 4142 provides the following guidance on the assessment of impacts:

“Obtain an initial estimate of the impact of the specific sound by subtracting the measured background sound level from the rating level and consider the following:

- a) Typically the greater this difference, the greater the magnitude of the impact.*
- b) A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.*
- c) A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.*
- d) The lower the rating level is relative to the measured background sound level, the less likely it is that specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.*

NOTE 2 Adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.

...Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.”

ANC BS 4142:2014+A1:2019 Technical Note

- 2.13 This report also makes reference to a Technical Note² produced by an Association of Noise Consultants (ANC) Working Group (WG) which reviewed BS 4142:2014+A1:2019 (BS4142) to address any content regarded as ambiguous.
- 2.14 The Technical note is offered as a resource from which the reader may access the views of the members of the WG, which complement BS 4142 itself, in the application of BS 4142 where professional judgement is required and where a range of interpretations is possible.

² [ANC BS 4142 Technical Note v1.0 \(association-of-noise-consultants.co.uk\)](https://www.association-of-noise-consultants.co.uk/anc-bs-4142-technical-note-v1.0)

3. SITE DESCRIPTION

- 3.1 The proposed Nando's development is located at Valley Park Rd, Prestwich, Manchester M25 3TG on the site of a previous TGI Friday's restaurant.
- 3.2 The site is located adjacent to a Premier Inn Hotel and south of the M60 Motorway.
- 3.3 The immediate vicinity is a mixture of commercial, residential and educational buildings.

Figure 1 - Site Plan



- 3.4 The main contributors to the existing background noise climate in the immediate area have been identified as:
- Road Traffic noise from the M60, A56 and surrounding access roads
- 3.5 The nearest noise sensitive receptors have been identified as:
- NSR 1 - Premier Inn (hotel)
 - NSR 2 - Clough-Side College (educational)
 - NSR 3 - Residential Houses on Bury New Road (residential)

4. MEASUREMENT METHODOLOGY

- 4.1 To establish the existing environmental noise climate an automated noise survey was undertaken between Tuesday 3rd and Monday 9th March 2026.

Table 2 - Measurement Locations

Time Period	Measurements
Automated noise measurements from 03/03/26 to 09/03/26	P1 15 minute repeat measurements

- 4.2 The measurement locations are shown on the site plan below and are described in more detail below.

Figure 2 - Measurement Location Plan





Position P1 - The microphone was located at the rear of the Premier Inn, 2m above local ground level and more than 3.5m from the nearest vertical reflecting surface and we consider it to be under free-field conditions.

The location was chosen to be representative of the background sound levels at the Premier Inn which is the nearest noise sensitive receiver to the proposed new mechanical plant equipment.

- 4.3 The acoustic parameters L_{Aeq} , L_{A90} and $L_{AF,Max}$ were measured at P1 in each measurement period during the survey along with octave band frequency measurements.
- 4.4 Audio triggers were used for high level sounds to allow for retrospective source identification if required.
- 4.5 A one second time history was also recorded which allows post processing of the results to different measurement time bases if required.
- 4.6 Noise survey measurements were carried out in accordance with guidelines laid down in BS 7445:1991 Part 2, Calculation of Road Traffic Noise and other relevant standards.

Equipment and Weather Conditions

- 4.7 The equipment used is detailed in the table below. The sound level meter was fitted with a windshield. A sensitivity check was undertaken on the sound level meter before and after the measurements and the variation was within 0.5dB for the sound level meter. Calibration certificates are available on request.

Table 3 - Equipment Details

Equipment Description	Manufacturer Type Number	& Serial Number	Calibration Details	
			Last Date	Certificate Reference
Integrating sound level meter	Cirrus Optimus Green CR:171B	G061816	17 March 2025	236241
Microphone	Cirrus MK224	216642A	10 March 2025	236257
Acoustic Calibrator	Cirrus CR:515	60611	20 March 2025	236253

- 4.8 The weather during the automated survey has been reviewed using local publicly available weather station data³.
- 4.9 According to this data, there was minimal rain during the survey with low wind speeds typically below 5m/s (11mph, 18kph) with a generally south easterly wind direction through the course of the measurement period.

³<https://www.wunderground.com/dashboard/pws/ILANCASH14/graph/2026-03-23/2026-03-23/monthly>
[accessed on 23/03/26]

- 4.10 As the weather station was not located directly next to the microphone there could be some local variation.
- 4.11 We have analysed the data and the weather did not appear to have had a material effect on the measured noise levels.

5. NOISE SURVEY RESULTS

- 5.1 The following tables present a summary of the noise measurements from the automated survey. The time history charts are appended for reference, S26006/TH1.

Table 4 - Automated Measurement Summary

Location	Time Period, T	$L_{Aeq,T}$ (dB)	*Typical L_{AFMax} (dB)	**Typical $L_{A90(15min)}$ (dB)
P1	07:00-23:00	57	-	51
	23:00-00:00***	50	-	47
	00:00-07:00	51	72	42
	08:00-20:00****	57	-	51
All values are free-field values * Typical L_{AFmax} value is the value not normally exceeded more than 10 times a night ** Established based upon the 'line-of-best-fit' method *** Period of operation for some equipment used during the clean down period after closing at 23:00 **** Time period for college operating hours				

6. MECHANICAL PLANT ASSESSMENT

- 6.1 At the time of writing this report the final location and selection of mechanical plant items has not yet been confirmed.
- 6.2 In this section we set out the proposed plant noise limits and provide an indicative assessment based on mechanical plant used on recent Nando's projects.
- 6.3 For the purpose of this assessment we have assumed that the opening times for the proposed Nando's is between 07:00 and 23:00 daily. On this basis some mechanical plant equipment could be operating into the night time period and this is detailed in Appendix B.

Mechanical Plant Limits

- 6.4 As discussed in Section 2, Bury Council do not set specific noise limits and as such we consider that the 'low impact' is appropriate and is generally considered to be equivalent to a LOAEL in relation to the NPPG depending on the context.
- 6.5 On this basis the noise limits have been proposed so that the rating level from the proposed mechanical plant equipment should be no higher than the existing typical background noise level as determined using the guidance in BS 4142 at 1m from the nearest noise sensitive windows to the proposed development.

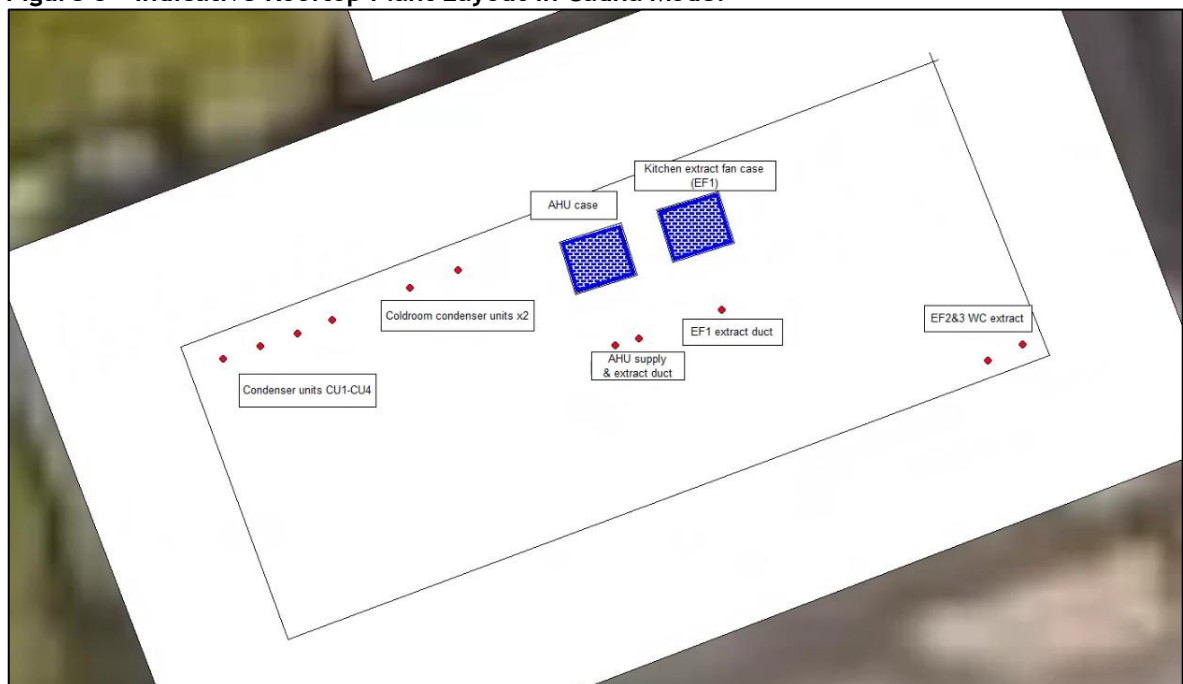
Table 5 - Proposed Mechanical Plant Noise Limits

Position	Measurement Period	Typical Background Noise Level ($L_{A90, 15min}$, dB)	Proposed Mechanical Plant Limit, ($L_{A,Tr}$, dB)
NSR 1 (Premier Inn) NSR 3 (Residential Houses on Bury New Road)	Daytime (07:00 - 23:00)	51	51
	Early night-time (23:00 - 00:00)	47	47
	Late night-time (00:00 - 07:00)	42	42
NSR 2 (Clough-Side College)*	Daytime (08:00 - 20:00)	51	51
Free-field values *This should only apply during operational hours of the college, which we have assumed to be 08:00-20:00			

Indicative Plant Assessment

- 6.6 The following assessment has been undertaken using indicative plant equipment from other recent Nando's projects.
- 6.7 The new mechanical plant is to be installed alongside the development of the new Nando's restaurant. This includes the following external plant which is described in more detail in Appendix B including the indicative plant schedule:
- 4 x AC Condensers
 - 2 x Coldroom Condensers
 - 2 x WC Extract Fans
 - 1 x AHU
 - 1 x Kitchen Extract Fan
- 6.8 We have assumed that all of the above plant items will be located on the roof of the restaurant building where the previous mechanical plant items were located.
- 6.9 From review of available satellite images, the plant area is located within a sunken section of the roof which provides an approximate 2m high barrier on all boundaries. This has been included in our assessment.
- 6.10 An assessment of the effect of mechanical plant noise on the nearest noise sensitive receptors has been undertaken using proprietary acoustic modelling software Canda(A) v.2026.
- 6.11 We have used the same daytime and night-time assumptions in from previous Nando's projects and assumed operational periods for each piece of equipment is included in the summary table in **Error! Reference source not found.**
- 6.12 The mechanical plant data has been input into proprietary noise modelling Software Cadna(A) and a 3D noise model of the site has been constructed to calculate the external noise levels.

Figure 3 - Indicative Rooftop Plant Layout in Cadna Model



6.13 The following mitigation measures are predicted to be required based on the indicative noise data and assumed plant layout as in Figure 3.

- (i) Acoustic attenuators for the AHU extract and supply on the atmospheric side and Kitchen extract on the atmospheric side:

Table 6 - Acoustic Attenuator Minimum Performance

Location	No. off	Dimension (mm) L	Max PD Pa	Insertion Loss, dB @ Octave Band Centre Frequency (Hz)							
				63	125	250	500	1k	2k	4k	8k
AHU & Kitchen Extract Atmos Side	As req'd	1500	50	5	11	21	33	37	36	27	18

6.14 Generally the ductwork should be located away from the Premier Inn to the south side of the building. Final attenuator performances would be confirmed based on the final mechanical plant selection.

6.15 We have assumed that the rooftop plant walls are a minimum of 2m in height and all equipment will be below this height.

Indicative Assessment Results

6.16 The calculated noise levels including the mitigation measures from the model are as follows; a 1hr assessment period has been used for the daytime assessment and a 15minute period has been used for the night time assessment.

6.17 As a precautionary measure we have assumed that each item of plant is operating for 100% of the assessment period for the identified operating time in Appendix B.

Table 7 - Predicted External Mechanical Plant Noise Levels

Location	Assumed Use	Proposed Mechanical Plant Limit, ($L_{Ar,Tr}$, dB)	Predicted level ($L_{Ar,Tr}$, dB)*
NSR 1 NSR 3	Hotel	Day - 51dB $L_{Ar,Tr}$ Early Night - 47dB $L_{Ar,Tr}$ Late Night - 42dB $L_{Ar,Tr}$	Day - 44dB $L_{Ar,Tr}$ Early Night - 44dB $L_{Ar,Tr}$ Late Night - 29dB $L_{Ar,Tr}$
NSR 2	Educational	Day - 51dB $L_{Ar,Tr}$	Day - 33dB $L_{Ar,Tr}$
NSR 3	Residential	Day - 51dB $L_{Ar,Tr}$ Early Night - 47dB $L_{Ar,Tr}$ Late Night - 42dB $L_{Ar,Tr}$	Day - 34dB $L_{Ar,Tr}$ Early Night - 33dB $L_{Ar,Tr}$ Late Night - <20dB $L_{Ar,Tr}$
*Based on the noise data and previous Nando's assessments with equivalent equipment, we do not expect any tonal or impulsive components to be present and any intermittency from the condenser units will likely not be readily distinguishable as these are predicted to be 10dB below the background sound level. As such, no acoustic feature corrections have been applied.			

6.18 The external noise levels at the nearest noise sensitive receivers are predicted to achieve the proposed mechanical plant limit which is the equivalent to a 'low impact' according to BS 4142 which is considered to be equivalent to a LOAEL in relation to the NPPG.

- 6.19 As such the indicative assessment demonstrates the feasibility of the assessment against the requirements of Policy LP-BE8 and the development should not be refused on noise grounds.
- 6.20 Once the equipment selection and location has been finalised a review of the noise levels should be undertaken to confirm compliance with the proposed limits in this report or any alternative limits imposed by Bury Council as part of a planning condition.

Vibration Isolation

- 6.21 All mechanical plant and associated equipment must be isolated from the structure using suitable anti-vibration mounts. These mounts are typically supplied by the equipment manufacturer.

7. CONCLUSION

- 7.1 Adnitt Acoustics have undertaken a noise impact assessment for the proposed Nando's Prestwich restaurant, Valley Park Rd, Prestwich, Manchester M25 3TG.
- 7.2 The project comprises the refurbishment of the disused TGI Friday's restaurant at the Pompey centre into a new Nando's restaurant which will include the installation of new external mechanical plant.
- 7.3 We understand that Bury Council do not set specific noise limits within their planning guidance documents.
- 7.4 We have proposed noise limits based on achieving a 'low impact' as defined in BS 4142 (see below).
- 7.5 A 'low impact' is generally considered to be equivalent to a LOAEL in relation to the NPPG depending on the context and as such we consider that this target is appropriate and is consistent with Policy LP-BE8 from the draft local plan.
- 7.6 At the time of writing this report the final location and selection of mechanical plant items has not yet been confirmed.
- 7.7 We have set out the proposed plant noise limits and provided an indicative assessment based on mechanical plant used at other recent Nando's projects.
- 7.8 Including the proposed mitigation measures, the external noise levels at the nearest noise sensitive receivers are predicted to achieve the proposed mechanical plant limit which is the equivalent to a 'low impact' according to BS 4142 which is considered to be equivalent to a LOAEL in relation to the NPPG.
- 7.9 As such the indicative assessment demonstrates the feasibility of the assessment against the requirements of Policy LP-BE8 and the development should not be refused on noise grounds.
- 7.10 Once the equipment selection and location has been finalised a review of the noise levels should be undertaken to confirm compliance with the proposed limits in this report or any alternative limits imposed by Bury Council as part of a planning condition.

Graham Shaw BSc(Hons) MSc MIOA MInstP

for ADNITT ACOUSTICS

APPENDIX A: GLOSSARY OF ACOUSTIC TERMS

Ambient Noise	The noise climate heard over a period of time due to all normal sources, in the absence of extraneous or atypical sounds. Used to describe noise in the absence of the introduced sound, generally.		
Ambient Noise Level	Describes the average noise level of the ambient noise over a stated period of time, e.g. hourly noise		
	Parameter: A-weighted Continuous Equivalent Sound Pressure Level determined over the time period T.	$L_{eq,T}$ or $L_{Aeq,T}$	
	Expressed in decibels / A-weighted decibels	dB(A) or dB	
Decibel scale dB	A linear numbering scale used to define a logarithmic amplitude scale, thereby compressing a wide range of amplitude values to a small set of numbers		
dB(A)	An electronic filter in a sound level meter, which approximates under defined conditions the frequency response of the human ear.		
$L_{Aeq,T}$	The equivalent continuous sound level. The steady dB(A) level which would produce the same A-weighted sound energy over a stated period of time as the measured sound pressure level.		
L_{Amax}	The maximum dB(A) level measured during a survey period.		
L_{A10}	The dB(A) level exceeded for 10% of the survey period, often used as a quantifier of traffic noise level.		
L_{A90}	The dB(A) level exceeded for 90% of the survey period. Used in BS 4142:1997/2014 as being representative of the background noise level.		
Acoustic screening	Physical barrier to sound formed by fence, wall, building or other structure, which has the effect of reducing the sound transmitted.		
Individual Event Noise	The noise of a distinctive event with the varying noise climate, usually a transient activity, such as a vehicle pass-by, aircraft flyover or similar, rather than an isolated impulsive noise.		
Individual Event Noise Level	Describes the highest noise level during the event as measured under particular conditions of time-weighting		
	Parameter: A-weighted Maximum Sound Pressure Level with FAST or SLOW time weighting	$L_{Amax,FAST}$ or $L_{Amax,F}$ $L_{Amax,SLOW}$ or $L_{Amax,S}$	
	Expressed in decibels / A-weighted decibels	dB(A) or dB	
Sound Reduction Index R_w	Single number rating used to describe the sound insulation of building elements as defined in BS EN ISO 717 1997.		
Weighted element-normalized level difference $D_{n,e,w}$	Single number rating used to describe the sound insulation of building elements as defined in BS EN ISO 717 1997.		

APPENDIX B: MECHANICAL PLANT NOISE LEVELS

The noise levels used in the assessment are as follows which are taken from recent Nando's projects.

- We have assumed that all sound levels quoted on the equipment schedule **do not** include attenuators or acoustic boxes and that these performances are applied separately in the acoustic model in accordance with our mitigation measures discussion in the main report.
- Operational times as noted in the table based on previous projects and a nominal restaurant opening time of 07:00-23:00 daily.

Table 8 - Indicative External Mechanical Plant Noise Data for Calculation

Unit(s)	Reference	Metric	dBA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total No.	Operational Period
Kitchen Extract	EF1 - Exhaust	Lw (no atten)	96	87	93	100	94	90	84	80	74	1	Day & Early Night
Kitchen Extract	EF1 - Case	Lw (no atten)	81	86	84	87	73	71	71	66	58	1	Day & Early Night
Extract Fans	EF2 & EF3	Lp @3m	48	59	54	49	45	41	38	32	25	2	Day Only
AC Condenser Units	CU1-CU3	Lw	71	73	72	70	71	64	58	59	54	3	Day Only
AC Condenser Units	CU4	Lw	49	51	50	48	49	42	36	37	32	1	Day Only
Catering Condensers	No Ref	Lp @ 1m	58	61	57	57	56	54	49	42	34	2	24hrs
AHU	AHU1-Supply	Lw (no atten)	92	84	101	92	87	86	84	78	71	1	Day & Early Night
AHU	AHU1-Exhaust	Lw (no atten)	95	88	101	95	94	90	84	79	71	1	Day & Early Night
AHU	AHU1 - Case	Lw (no atten)	73	80	88	74	62	57	52	45	38	1	Day & Early Night
Day = 07:00-23:00 Early Night = 23:00-00:00 Late Night = 00:00-07:00 L _w = sound power level L _p = sound pressure level at the specified distance													

B.1 Equipment Schedule

Item	Description	Model Number	Dimension WxHxD (mm)	Weight (KG)	Noise Level (dBA)	Duty	Electrical Data	Filters
EF1	Ruck Kitchen Extract Fan	MPC T 630 D4 I K01	900 x 900 x 900	178	81	14400m³/s @ 1000Pa	7.16kW, 400V/3ph/50Hz Current: 14.73A, Fused At: 16.0A	
EF2	Systemair Circular Duct Fan	K 200 L Sileo	Ø336 (+40) x 174 Ø200 spigots	4.8	47.8 @ 3m	965m³/h	145W, 0.631A 230V/1ph/50Hz	
EF3	Systemair Circular Duct Fan	K 200 L Sileo	Ø336 (+40) x 174 Ø200 spigots	4.8	47.8 @ 3m	965m³/h	145W, 0.631A 230V/1ph/50Hz	
AHU1	Ruck Supply Fan	MPC 630 D4 40	900 x 900 x 900	144	73	13680m³/h @ 400Pa	4.52kW, 400V/3ph/50Hz Current: 9.0A, Fused At: 10.0A	
EHB1	Electric Heater Battery	N/A	N/A	N/A	N/A	36kW	36kW, 3PHS, 3STG	
AC1	Daikin Ducted Indoor Unit	FBA125A	1400 x 245 x 800	46	62	12.1kW Nominal Cooling	N/A	
AC2	Daikin Ducted Indoor Unit	FBA125A	1400 x 245 x 800	46	62	12.1kW Nominal Cooling	N/A	
AC3	Daikin Ducted Indoor Unit	FBA125A	1400 x 245 x 800	46	62	12.1kW Nominal Cooling	N/A	
AC4	Daikin Wall Mounted Indoor Unit	FTXM50R	1040 x 300 x 295	14.5	58	5.0kW Nominal Cooling	N/A	
CU1	Daikin Outdoor Unit	RZASG125MV1	940 x 990 x 320	70	71	12.1kW Nominal Cooling	230V/1ph/50Hz 28.2A, Fuse: 32A	
CU2	Daikin Outdoor Unit	RZASG125MV1	940 x 990 x 320	70	71	12.1kW Nominal Cooling	230V/1ph/50Hz 28.2A, Fuse: 32A	
CU3	Daikin Outdoor Unit	RZASG125MV1	940 x 990 x 320	70	71	12.1kW Nominal Cooling	230V/1ph/50Hz 28.2A, Fuse: 32A	
CU4	Daikin Outdoor Unit	RXM50R	954 x 734 x 401	49	49	5.0kW Nominal Cooling	220-240V/1ph/50Hz	
ESP1	Purified Air Electrostatic Precipitators	ESP 4500E	1350 x 630 x 640	118	N/A	Up to 2.1m³/s	230V/1ph/50Hz 40W	
ESP2	Purified Air Electrostatic Precipitators	ESP 4500E	1350 x 630 x 640	118	N/A	Up to 2.1m³/s	230V/1ph/50Hz 40W	
UV1	Purified Air UV-C Filtration Unit	UV-C 4500	1350 x 630 x 900	89	N/A	Up to 2.1m³/s	220-240V/1ph/50Hz 1120-1680W	
UV2	Purified Air UV-C Filtration Unit	UV-C 4500	1350 x 630 x 900	89	N/A	Up to 2.1m³/s	220-240V/1ph/50Hz 1120-1680W	

Figure S26006/ TH 1 : Time History of Automated Measurements at Position P1

