

ARR/C/4053 01

20th May 2026**Day's Property Holdings**

Assessment of the noise impact of the new mechanical equipment associated with the Commercial Units at the Former Day's Motor Group Car Dealership.

Prepared for:-

Day's Property Holdings
c/o ARC Building Management
Grainstore Studios
Tradeston Street
Kinning Park
Glasgow
G5 8BH

Prepared by:



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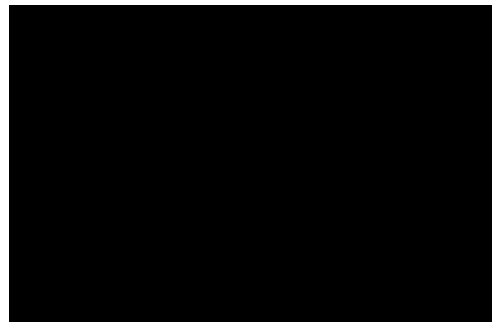
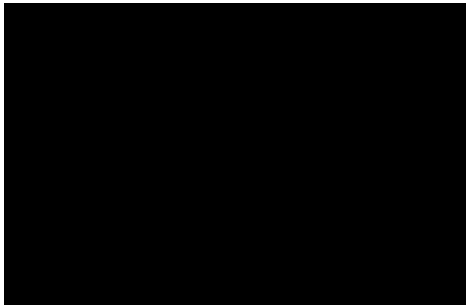
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1.0 **SUMMARY**

The general noise climate was dominated at all times by general traffic. The mechanical equipment associated with the site was inaudible at the residential positions and in fact inaudible at just a few metres away.

Based on an assumption of all equipment running continuously, the predicted noise from the external mechanical plant is substantially below what a BS 4142 *initial estimate* would rate as *low impact depending on the context*.

The general context is an established commercial area with the units inaudible at just a few metres away. The impact is likely to be negligible, indeed essentially zero.



2.0 INTRODUCTION

ADC was asked to carry out an independent assessment of the above site with regards to the impact of proposed mechanical equipment.

This report begins by summarising assessment standards and, where appropriate, discusses alternative interpretations.

After a brief statement of survey details we discuss basic results and the resulting assessment. The impact is discussed along with any recommendations for mitigation.

3.0 ASSESSMENT STANDARDS

3.1 NPPF, NPSE and NPPG

The National Planning Policy Framework (NPPF), the Noise Policy Statement for England (NPSE) and the National Planning Practice Guidance (NPPG) provide nothing in the way of quantitative criteria but instead provide general policy aims and statements and some guidance on how certain situations can be interpreted.

The NPPF's main statement on noise is to be found in paragraph 198:-

198. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:
- a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life⁷²;
 - b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and
 - c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Paragraph 200 is also relevant:-

200. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

The NPPF refers to the NPSE which sets out the following aims:-

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

It also introduces the concepts of:

- *NOEL – No Observed Effect Level. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.*
- *LOAEL – Lowest Observed Adverse Effect Level. This is the level above which adverse effects on health and quality of life can be detected.*
- *SOAEL – Significant Observed Adverse Effect Level. This is the level above which significant adverse effects on health and quality of life occur.*

SOAEL is clearly something the policy seeks to avoid in aim 1. Aim 2 represents situations between SOAEL and LOAEL, and seeks to minimise and mitigate the effects.

The NPPG section on noise adds some further detail, much of it reproducing the NPPF and NPSE, but some useful qualitative guidance is provided in the Noise Exposure Hierarchy, as follows:-

Response	Examples of outcomes	Increasing effect level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, 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 small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, 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.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

It also makes the point that the subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation, including the level of the noise in absolute terms and how it might compare with the underlying background noise, the impulsiveness or intermittence pattern of the noise, its spectral content, and the time of day. It discusses in very general terms the issues to consider when introducing noise sources to existing noise sensitive area, new residential development in areas affected by existing noise sources (most of which have their own specific guidance, such as BS 4142, BS 8233, etc.) and the potential impact on wildlife.

3.2 BS 8233 and WHO

BS 8233 was updated in March 2014. Its guidance is primarily intended for new buildings, but the criteria are routinely referred to for putting general noise climates into context.

The criteria in Table 4 of BS 8233 are based on WHO guidance and give the desirable criteria for indoor ambient noise levels for dwellings as follows:-

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	35 dB $L_{Aeq, 16 \text{ hour}}$	-
Dining	Dining Room	40 dB $L_{Aeq, 16 \text{ hour}}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq, 16 \text{ hour}}$	30 dB $L_{Aeq, 8 \text{ hour}}$

The standard does not explicitly state criteria for bedroom noise in terms of dB L_{Amax} but the WHO Guidelines for Community Noise (or similar) are widely used with a recommendation that the noise inside bedrooms should not typically exceed 45 dB L_{Amax} , for instance no more than 10 to 15 times a night.

BS 8233 goes on to state that, where necessary, the criteria can be relaxed by up to 5 dB and still achieve reasonable conditions.

Note that the standard accepts the widely used rule of thumb that, for a partly open window, the levels just outside will be 15dB higher than those just inside. Other standards suggest a difference of 13 dB. These bring us to an external equivalent of the above table, as follows:-

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	48 to 50 dB $L_{Aeq, 16 \text{ hour}}$	-
Dining	Dining Room	53 to 55 dB $L_{Aeq, 16 \text{ hour}}$	-
Sleeping (daytime resting)	Bedroom	48 to 50 dB $L_{Aeq, 16 \text{ hour}}$	43 to 45 dB $L_{Aeq, 8 \text{ hour}}$

Garden area criteria are 50 dB L_{Aeq} and 55 dB L_{Aeq} being considered desirable and reasonable respectively.

3.3 BS 4142

BS 4142 was updated in November 2014. The standard is very complicated but, basically, it describes methods for rating and assessing sound of an industrial and/or commercial nature, which includes:

- sound from industrial and manufacturing processes
- sound from fixed installations which comprise mechanical and electrical plant and equipment
- sound from the loading and unloading of goods and materials at industrial and/or commercial premises

- d) sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

The methods described in this British Standard use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident.

Characteristics and Context

Certain acoustic features can increase the significance of impact over that expected from a basic comparison between the specific sound level and the background sound level. Where such features are present at the assessment location, we need to add a character correction to the specific sound level to obtain the rating level.

These features can include tonality, impulsivity and intermittency with corrections typically ranging potentially from 0dB to 9 dB. Corrections at the higher end would represent characteristics which are highly perceptible in the context of the ambient noise as a whole. Corrections at the lower end would represent characteristics which are just perceptible in the presence of the ambient noise as a whole,

The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.

Assessment

We obtain an *initial estimate* of the impact of the specific sound by subtracting the measured background sound level from the rating level and considering the following.

- a) Typically, the greater this difference, the greater the magnitude of the impact.
- b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- c) A difference of around +5 dB 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 the 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.

Where the initial estimate of the impact needs to be modified due to the context, pertinent factors need to be taken into consideration, including the following.

1) The absolute level of sound.

For a given difference between the rating level and the background sound level, the magnitude of the overall impact might be greater for an acoustic environment where the residual sound level is high than for an acoustic environment where the residual sound level is low.

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.

Where residual sound levels are very high, the residual sound might itself result in adverse impacts or significant adverse impacts, and the margin by which the rating level exceeds the background might simply be an indication of the extent to which the specific sound source is likely to make those impacts worse.

2) The character and level of the residual sound compared to the character and level of the specific sound.

We need to consider whether it would be beneficial to compare the frequency spectrum and temporal variation of the specific sound with that of the ambient or residual sound, to assess the degree to which the specific sound source is likely to be distinguishable and will represent an incongruous sound by comparison to the acoustic environment that would occur in the absence of the specific sound. Any sound parameters, sampling periods and averaging time periods used to undertake character comparisons should reflect the way in which sound of an industrial and/or commercial nature is likely to be perceived and how people react to it.

3) The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

3.4 Local Authority

Planning Condition 13 applies here:-

- 13 Within 3 months of the date of this permission, a Noise Impact Assessment of the proposed mechanical plant, compiled by appropriately experienced and competent persons, shall be submitted to and approved in writing by the Local Planning Authority. The Noise Impact Assessment shall be undertaken in accordance with BS4142:2014 and detail the noise levels associated with the use of the mechanical plant and include an analysis of whether noise mitigation measures/attenuation/sound insulation are required to control the noise (and if so full details of these mitigation measures), and a timescale for the implementation of these noise mitigation measures. Upon the LPA's approval of the Noise Impact Assessment, any required mitigation measures shall be implemented in accordance with the approved Noise Impact Assessment and retained thereafter.

4.0 BASIC APPROACH TO MODELLING

We have used the well-established CadnaA modelling software which calculates noise propagation based on the processes of *ISO 9613 : Acoustics – Attenuation of sound during propagation outdoors*. Obviously, modelling software is reliant on the inputs and assumptions. The keys ones are:-

1. The ground is mainly reflective (coefficient of 0.11 assumed).
2. Calculations are based on two orders of reflections.
3. The proposed site buildings and the surrounding buildings are assumed to be mainly reflective (0.5 dB loss on reflection assumed).
4. The surrounding trees and vegetation will provide a small degree of absorption but this has been neglected.
5. The source data is based on measurements on site. The units were measured at a short distance (1 m, for instance), and the modelling was set up with these source levels and adjusted as necessary to match the measured levels exactly.
6. All units are assumed to run continuously.

5.0 SURVEY DETAILS

5.1 Site Times and Personnel

The site surveys were carried out by Mark Pimlet of ADC Acoustics from approximately 09:40 to 13:40 on 8th May 2026. The times were chosen to represent what was likely to be the quieter times (ie. non-rush hour) of the normal working day.

5.2 Instrumentation

Instrumentation used was a Rion NL-52. This is a Class I sound level meter which holds a current calibration certificate and which was field-calibrated as necessary. For the main measurements, the meter was set up to measure continuous 5 minute samples of the noise climate.

The measurements close to the mechanical equipment were individual samples.

In all cases, the measurements have been gathered in terms of dB L_{eq} , dB L_{max} and dB L_{90} in overall A-weighted terms, and in octave bands across the frequency range. See Definition of Acoustic Terms in Appendix 1.

5.3 Measurement Positions

The main measurement position was as shown by the yellow star on the following plan.



The position was chosen to represent the nearest residential properties.

The microphone was 1.3 m above ground and well away from other reflecting surfaces.

5.4 Survey Conditions

Weather conditions were as follows:-

Rain	:	none, dry roads (apart from around 10 minutes of light drizzle)
Cloud	:	90%
Temperature	:	12 Celsius
Wind	:	negligible

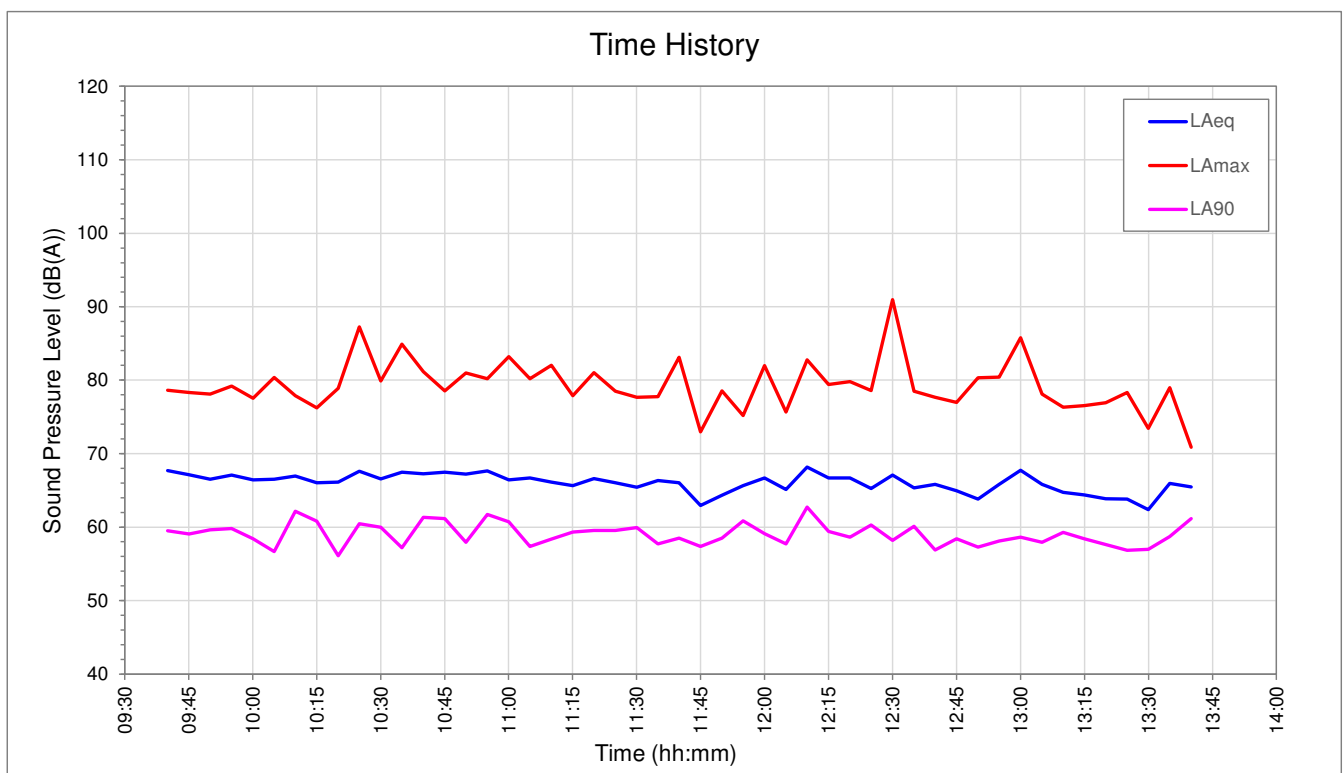
The general noise climate appeared to be normal and representative.

6.0 RESULTS AND DISCUSSIONS

6.1 Background Sound Levels

The general noise climate was dominated at all times by general traffic. The mechanical equipment associated with the site was inaudible at the residential positions and in fact inaudible at just a few metres away.

Full results are shown in Appendix 2. They are summarised graphically below.



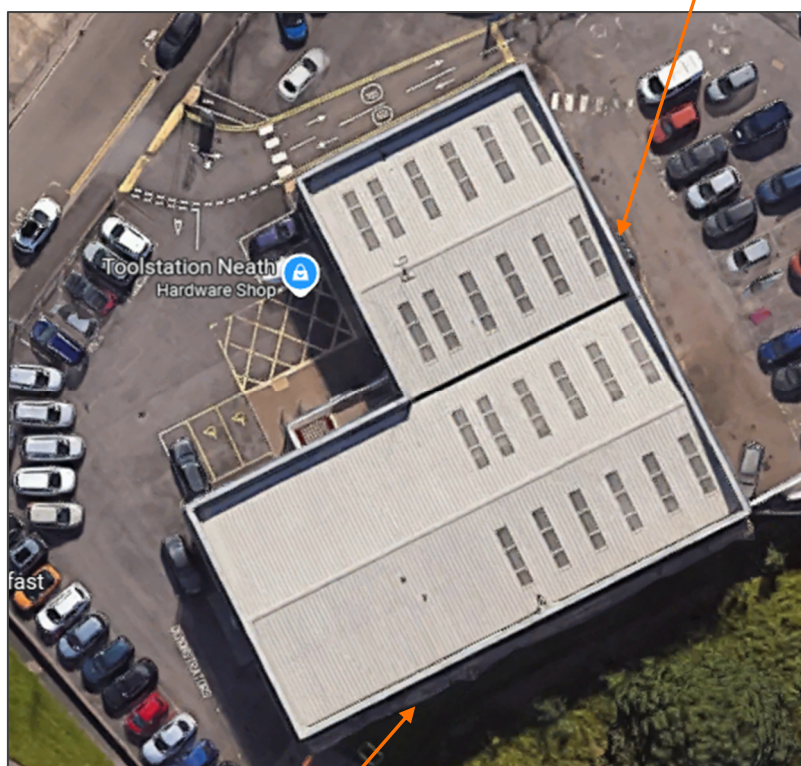
We have used the lowest 15-minute period in the assessment (lowest in terms of the LA90 index). BS 4142 does not require us to use the lowest periods, but it is a means of mitigating potential uncertainty arising from varying conditions, for instance on different days of the week. The levels for these periods are as follows:-

Time Period	Index	dB(A)
Lowest 15 Minutes	Leq	63
	Lmax	77
	L90	57

6.2 Source Noise Levels

The only mechanical equipment we could identify was a single unit located next to the Toolstation loading bay to the northeast, and a row of 5 units on the Howdens southeast wall, about 2 to 2.5 m above the ground.

Measurements were made at 1 m horizontally from the Toolstation Unit at a height of around 1m, and at 1 m horizontally and 1 m below the central Howden's unit, at a height of around 1.3 m. In all cases the units were barely audible due to the general traffic, even at these short distances.



The measured levels are summarised below:-

<i>Position</i>	<i>Index</i>	<i>dB(A)</i>
1 m horizontally from Tootstation Unit*	Leq	57
	Lmax	64
	L90	51
1 m horizontally, and 1 m vertically below Central Howdens Unit**	Leq	56
	Lmax	63
	L90	54

* Operated continuously

** Operated randomly. During the measurements, the two larger units and the central smaller unit were running.

It is important to note that these measurements were dominated by the general traffic noise. There was no means of turning them on and off manually for testing purposes and so the following assessment is based on the somewhat extreme worst case assumption of the measured levels taken at face-value as the noise from the units.

The CadnaA model was set up with the sources as measured, and calibrated (adjusted to reproduce these close-in measured levels exactly).

6.3 Predicted Noise Levels

Based on items operating as measured (the Toolstation unit running, along with the two largest Howdens units and one of the smaller units running) the calculated levels at the residential facades are as shown below:-



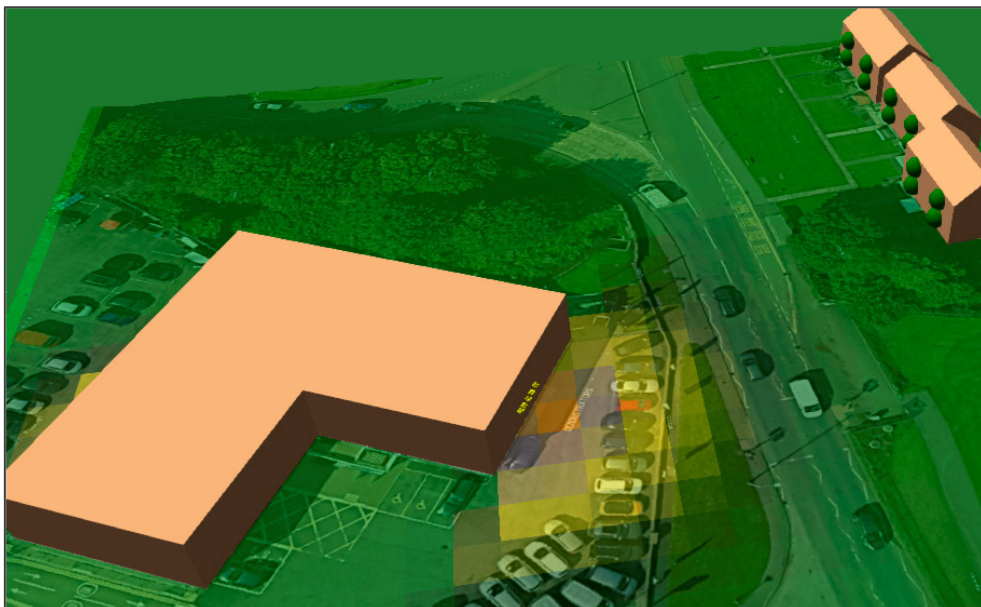
Note that:-

- The beige shapes are surrounding buildings.
- The yellow crosses are point sources of the mechanical units.
- The coloured octagons show the noise levels at the residential facades. Note that the software is set up to present the noisiest floor level.
- Note that the noise contours are shown for guidance as to how the noise propagates. The contours are at a height of 1.5 m.

If we assumed that the Toolstation unit is running and all 5 of the Howdens units are running, the calculated levels at the residential facades are 2 to 3 dB higher, as shown below:-



The following 3D view should help to visualise the model.



6.4 Assessments

For the assessment of proposed noise, BS 4142 requires us to assess the predicted commercial noise against the *background sound level*, which is the noise climate without development described in terms of the underlying dB L_{A90} index. This gives us the *initial estimate*. This must then be considered in terms of *context* to arrive at the final assessment.

With all units running, the assessment is as follows:-

<i>Assessment Inputs</i>	<i>Daytime</i>
Specific Sound Level	32 dB L _{Aeq}
Feature Corrections ¹	
tonality	0 dB
impulsivity	0 dB
intermittency	0 dB
other	0 dB
Rating Level	32 dB L _{Ar}
Background Sound Level	57 dB L _{A90}
Rating Level Excess re. Background	-25 dB

This is substantially below what a BS 4142 “*Initial estimate*” rates as “*low impact depending on the context*”.

Context

The general context is an established commercial area with the units inaudible at just a few metres away. The impact is likely to be negligible, indeed essentially zero.

6.5 Mitigation

No mitigation is necessary.

6.6 Discussion of Uncertainty

BS 4142 requires us to

“Consider the level of uncertainty in the data and associated calculations. Where the level of uncertainty could affect the conclusion, take reasonably practicable steps to reduce the level of uncertainty”.

The measurements of Background/Residual Sound were taken at times regarded as representing what are likely to be the worst case (quietest) time of the day. It is inconceivable that any variation that might occur on

¹ The units are extremely unlikely to be tonal or impulsive. They will be intermittent to a degree at source but, at just a few metres away they were inaudible and so no character corrections apply.

different days or at different times (even if the units were to run through the night), would be anywhere near enough to change the assessment.

7.0 CONCLUSIONS/RECOMMENDATIONS

Based on an assumption of all equipment running continuously, the predicted noise from the external mechanical plant is substantially below what a BS 4142 *initial estimate* would rate as *low impact depending on the context*.

The general context is an established commercial area with the units inaudible at just a few metres away. The impact is likely to be negligible, indeed essentially zero.

We recommend that you issue this report to Planners and that Officers are encouraged to contact us directly with any queries.

Appendix 1

Definition of Acoustic Terms

The Decibel

The decibel is the basic unit of noise measurement and is denoted dB. Technically, it is a means of expressing the difference in noise level between the measured noise and a standard level of noise. Most often the threshold of human hearing is used as the standard reference but it really should be stated. The threshold of human hearing is a sound pressure of $20\mu\text{Pa}$ or a sound power of 1pW .

A sound pressure level or SPL should be expressed in dB(re. $20\mu\text{Pa}$). A sound power level or SWL should be expressed in dB(re. 1pW). If the reference levels are omitted, it will often (but not always) be safe to assume that they are referenced to the threshold of human hearing.

A-Weighting and dB(A)

The human hearing system responds differently to different frequencies. The A-weighting system takes account of this by emphasising mid and high frequencies more than low frequencies to give an overall level. An A-weighted noise level, therefore, reflects the way normal, healthy hearing would perceive the overall level of the noise. The basic unit is dB(A), although other systems of expressing A-weighted levels are discussed below.

Other weighting systems, such as C-Weighting, denoted dB(C), reflect the human hearing system's response at higher noise levels.

NR and NC Levels

NR curves and NC curves are a series of curves representing noise levels across the frequency range. A given noise climate has an NR level or NC level if it equals a point on the curve at any frequency. They are particularly, although by no means exclusively, used as a means of specifying noise limits in an indoor environment, for instance from mechanical services or traffic noise break-in from the outside. They are typically expressed as NR or NC followed by a number, e.g. NR40, NC55, etc.

Equivalent Continuous Sound Level, L_{eq}

This can be simplistically described as a way of expressing the average noise level.

The unit is dB L_{eq} . For A-weighted levels the unit is dB(A) L_{eq} or, in more modern units, dB L_{Aeq} .

Maximum Level, $L_{\max}$

This is the maximum level reached (usually for a fraction of a second) in the measurement period.

The unit is dB $L_{\max}$. For A-weighted levels the unit is dB(A) $L_{\max}$ or, in more modern units, dB $L_{A\max}$.

Statistical (Percentile) Levels, L_n

During a measurement of fluctuating noise, it is often useful to establish the levels exceeded for a percentage of the time. L_n is the index representing the level exceeded for $n\%$ of the measurement period.

The unit is dB L_n . For A-weighted levels, the unit is dB(A) L_n or, in more modern units, dB L_{An} .

Common examples are as follows :-

dB L_{A90} is the A-weighted level exceeded for 90% of the time and is often used to describe the underlying background noise.

dB L_{A50} is the A-weighted level exceeded for 50% of the time. Mathematically, it is the median, another kind of average.

dB L_{A10} is the A-weighted level exceeded for 10% of the time and has traditionally been used to describe the intermittent highs in the noise climate such as passing cars or aircraft.

Frequency Analysis

Here the audible frequency range is divided up into bands and the noise level is expressed in each frequency band from low pitches to high pitches.

Octave Band analysis is where the frequency range is divided into 8 bands from 63 Hz to 8kHz, or sometimes into 10 bands from 31.5 Hz to 16kHz.

1/3 Octave Band analysis provides more detailed subdivision into 24 bands from 50 Hz to 10kHz, or sometimes into 30 bands from 20Hz to 20kHz.

Narrow Band analysis takes this further with the possibility of many thousands of bands, possibly only 1Hz wide, or even less.

In all types of frequency analysis, the level in each band can be expressed in terms of L_{eq} , $L_{\max}$, L_n , etc. as defined above.

Sound Insulation

Sound insulation is best expressed across the frequency range in octave bands or third octave bands. Often, however, in known environments such as domestic sound insulation and speech privacy, it is simpler to express the sound insulation as a single figure. A higher value means better sound insulation.

The most common ways are $\text{dB } D_{nTw}$, $\text{dB } R_w$ and $\text{dB}_{(\text{mean } 100-3150\text{Hz})}$. The first two are ways of expressing average sound insulation, weighted to account for speech frequencies. The third is simply an un-weighted mean value.

The Building Regulations Approved Document E (ADE) routinely refer to $D_{nTw} + C_{tr}$. The C_{tr} term is a negative number which is used to modify the D_{nTw} value for the insulation properties at lower frequencies.

ADE also uses the L_{nTw} index for impact sound transmission. It is a measure of the level of noise in the room below a room in which a standard tapping machine is being used. It represents the impact sound transfer such as footfall noise, scraping chairs, washing machines, etc. A lower value means better insulation.

Reverberation Time

The most common measure of Reverberation Time is, effectively the time taken for sound from a steady source to decay by 60 dB after it has been abruptly cut off. In practice it is often difficult to measure a 60 dB decay and so decays of 30 dB, 20 dB, or even 10 dB are often used and adjusted pro rata, although the exact measure is not quite the same.

Reverberation Time is generally expressed as RT in seconds. We may, if we are being precise, add subscripts 60, 30, etc to show whether the basis of the measure is 60 dB decay, 30 dB decay, etc. E.g. the $RT_{60} = 0.52\text{s}$, the $RT_{30} = 0.49\text{s}$, etc.

RT can be expressed in octave bands or 1/3 octave bands across the frequency range, or at central frequencies such as 500 Hz or 1kHz.

Appendix 2

Measurements in full

<i>Time Period</i>	<i>Index</i>	<i>dB(A)</i>	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1k</i>	<i>2k</i>	<i>4k</i>	<i>8k</i>
09:40	Leq	68	71	64	64	62	65	60	51	43
	Lmax	79	85	79	75	74	76	70	64	57
	L90	60	62	57	55	53	57	53	43	33
09:45	Leq	67	70	67	64	62	64	59	51	43
	Lmax	78	83	87	79	74	74	67	64	55
	L90	59	63	58	57	53	56	52	44	35
09:50	Leq	67	70	64	63	61	64	58	52	44
	Lmax	78	83	79	72	73	76	67	63	62
	L90	60	64	58	57	55	57	52	45	37
09:55	Leq	67	69	64	63	62	65	59	51	44
	Lmax	79	86	81	76	76	75	71	68	66
	L90	60	63	59	57	55	57	52	45	37
10:00	Leq	66	69	64	62	61	64	58	50	43
	Lmax	78	81	78	73	72	73	72	63	57
	L90	58	63	58	55	53	55	51	45	35
10:05	Leq	67	69	64	63	62	64	58	52	43
	Lmax	80	86	78	76	75	78	71	69	64
	L90	57	61	57	54	52	54	48	44	35
10:10	Leq	67	72	66	64	62	64	59	51	43
	Lmax	78	87	78	77	73	74	69	64	58
	L90	62	64	60	59	57	60	54	46	37
10:15	Leq	66	72	66	63	61	63	58	51	45
	Lmax	76	86	77	72	71	73	66	65	65
	L90	61	66	60	58	56	58	53	46	38
10:20	Leq	66	68	63	62	61	64	58	50	42
	Lmax	79	81	75	73	73	76	71	68	63
	L90	56	60	56	53	51	53	47	39	31
10:25	Leq	68	71	73	66	63	64	59	50	43
	Lmax	87	92	97	90	79	82	76	70	71
	L90	60	62	58	57	55	58	53	43	34
10:30	Leq	67	68	63	62	61	64	58	50	46
	Lmax	80	82	77	73	73	74	71	72	74
	L90	60	61	57	56	55	57	52	44	34
10:35	Leq	67	71	73	66	62	64	59	52	43
	Lmax	85	88	95	83	77	77	77	77	63
	L90	57	61	57	54	52	54	50	42	33
10:40	Leq	67	71	65	64	62	65	59	51	45
	Lmax	81	86	80	78	80	76	71	69	66
	L90	61	63	59	58	56	59	54	45	35
10:45	Leq	67	70	66	64	63	65	59	52	47
	Lmax	79	80	82	77	75	73	69	67	69
	L90	61	63	59	57	56	58	54	45	35
10:50	Leq	67	72	66	64	63	64	59	52	45
	Lmax	81	85	80	78	78	77	71	71	60
	L90	58	63	59	55	54	55	50	43	33
10:55	Leq	68	69	65	63	62	65	59	51	46
	Lmax	80	81	79	75	76	78	69	64	69
	L90	62	63	59	58	56	59	54	45	35

<i>Time Period</i>	<i>Index</i>	<i>dB(A)</i>	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1k</i>	<i>2k</i>	<i>4k</i>	<i>8k</i>
11:00	Leq	66	70	66	63	61	63	59	54	45
	Lmax	83	81	80	80	77	77	75	78	63
	L90	61	64	59	58	56	58	53	44	35
11:05	Leq	67	71	65	63	62	64	59	52	45
	Lmax	80	85	79	77	79	75	70	71	67
	L90	57	63	58	54	52	54	50	44	35
11:10	Leq	66	75	66	63	62	63	57	50	53
	Lmax	82	96	81	80	81	75	69	66	76
	L90	58	64	59	56	53	55	51	45	37
11:15	Leq	66	72	65	63	61	62	58	51	45
	Lmax	78	89	79	76	75	73	70	64	66
	L90	59	64	59	56	55	56	52	46	38
11:20	Leq	67	72	66	64	62	63	59	53	48
	Lmax	81	87	79	78	76	77	73	71	69
	L90	60	65	59	57	55	56	52	46	38
11:25	Leq	66	72	66	64	61	63	58	51	46
	Lmax	79	91	77	75	74	74	70	66	70
	L90	60	64	59	57	55	56	52	45	36
11:30	Leq	65	70	64	62	60	63	57	50	50
	Lmax	78	82	78	71	71	73	67	59	74
	L90	60	64	58	57	55	57	52	44	36
11:35	Leq	66	69	64	63	61	64	58	51	43
	Lmax	78	79	77	75	73	74	71	66	58
	L90	58	62	57	54	53	55	49	44	35
11:40	Leq	66	72	70	65	63	61	57	53	47
	Lmax	83	88	90	85	81	75	73	69	66
	L90	59	66	59	55	53	55	51	45	38
11:45	Leq	63	70	64	60	58	60	55	50	44
	Lmax	73	80	74	69	71	66	62	65	64
	L90	57	64	59	54	52	54	49	44	37
11:50	Leq	64	72	64	62	60	61	56	51	44
	Lmax	79	89	77	73	72	77	68	61	59
	L90	58	65	59	55	54	55	50	46	39
11:55	Leq	66	69	65	62	60	63	57	51	43
	Lmax	75	81	78	73	69	73	66	61	52
	L90	61	64	58	57	55	58	53	47	39
12:00	Leq	67	73	75	67	62	62	57	51	45
	Lmax	82	89	94	84	75	74	70	65	63
	L90	59	64	59	57	55	56	51	46	39
12:05	Leq	65	71	64	62	60	62	57	51	43
	Lmax	76	83	77	74	70	71	69	63	55
	L90	58	63	58	55	53	54	50	45	37
12:10	Leq	68	70	66	65	63	65	60	53	46
	Lmax	83	83	79	76	76	80	75	72	67
	L90	63	64	60	60	57	60	55	47	38
12:15	Leq	67	71	66	64	62	64	58	52	47
	Lmax	79	85	82	79	74	75	69	67	71
	L90	59	64	59	57	54	56	52	45	37
12:20	Leq	67	71	69	65	62	64	58	51	45
	Lmax	80	85	91	81	76	73	67	65	60
	L90	59	63	58	56	54	56	50	44	37

<i>Time Period</i>	<i>Index</i>	<i>dB(A)</i>	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1k</i>	<i>2k</i>	<i>4k</i>	<i>8k</i>
12:25	Leq	65	70	65	63	61	62	57	51	45
	Lmax	79	83	76	79	79	69	67	64	66
	L90	60	64	60	58	56	57	52	46	38
12:30	Leq	67	70	65	62	60	65	60	53	45
	Lmax	91	80	83	73	74	90	83	77	65
	L90	58	64	59	57	53	54	51	45	38
12:35	Leq	65	70	65	64	61	62	57	50	43
	Lmax	78	87	81	80	76	72	71	62	58
	L90	60	64	59	58	55	57	52	45	38
12:40	Leq	66	69	65	63	61	63	57	50	43
	Lmax	78	81	79	74	74	75	69	64	60
	L90	57	63	57	55	53	53	49	44	37
12:45	Leq	65	71	64	62	61	62	57	51	44
	Lmax	77	86	74	73	71	73	71	66	61
	L90	58	64	58	56	54	55	51	44	36
12:50	Leq	64	70	64	61	59	61	56	50	45
	Lmax	80	83	75	72	67	79	69	61	67
	L90	57	65	58	54	53	54	50	45	37
12:55	Leq	66	70	64	63	61	63	58	52	52
	Lmax	80	86	76	74	74	77	69	63	76
	L90	58	64	59	56	54	54	51	45	36
13:00	Leq	68	70	66	66	64	64	60	54	47
	Lmax	86	81	83	84	82	81	79	73	67
	L90	59	64	58	57	54	56	50	43	35
13:05	Leq	66	72	68	63	61	63	57	51	43
	Lmax	78	86	85	75	73	73	68	69	65
	L90	58	64	59	57	53	54	50	44	35
13:10	Leq	65	75	66	63	60	61	56	50	43
	Lmax	76	93	79	79	72	69	65	63	55
	L90	59	65	59	57	55	56	52	46	38
13:15	Leq	64	71	68	62	60	60	57	51	44
	Lmax	77	85	87	75	70	69	70	64	59
	L90	58	66	60	56	55	54	50	46	39
13:20	Leq	64	72	69	62	59	60	56	50	45
	Lmax	77	87	90	77	69	67	64	61	67
	L90	58	66	61	57	52	53	50	45	38
13:25	Leq	64	71	63	61	60	60	56	51	44
	Lmax	78	83	76	75	77	74	69	65	61
	L90	57	65	58	55	53	53	49	43	36
13:30	Leq	62	70	64	61	58	59	54	49	42
	Lmax	73	81	75	72	71	69	64	58	62
	L90	57	65	58	55	53	53	49	44	36
13:35	Leq	66	71	66	64	61	63	58	51	44
	Lmax	79	82	80	80	76	74	70	67	63
	L90	59	65	59	57	55	55	51	44	36
13:40	Leq	65	70	65	63	60	63	57	50	43
	Lmax	71	78	74	68	66	68	62	56	52
	L90	61	66	60	59	56	58	53	46	38

<i>Time Period</i>	<i>Index</i>	<i>dB(A)</i>	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1k</i>	<i>2k</i>	<i>4k</i>	<i>8k</i>
Lowest 15 Minutes	Leq	63	71	66	61	59	60	55	50	44
	Lmax	77	84	85	75	74	71	66	62	64
	L90	57	65	59	56	53	53	49	44	37