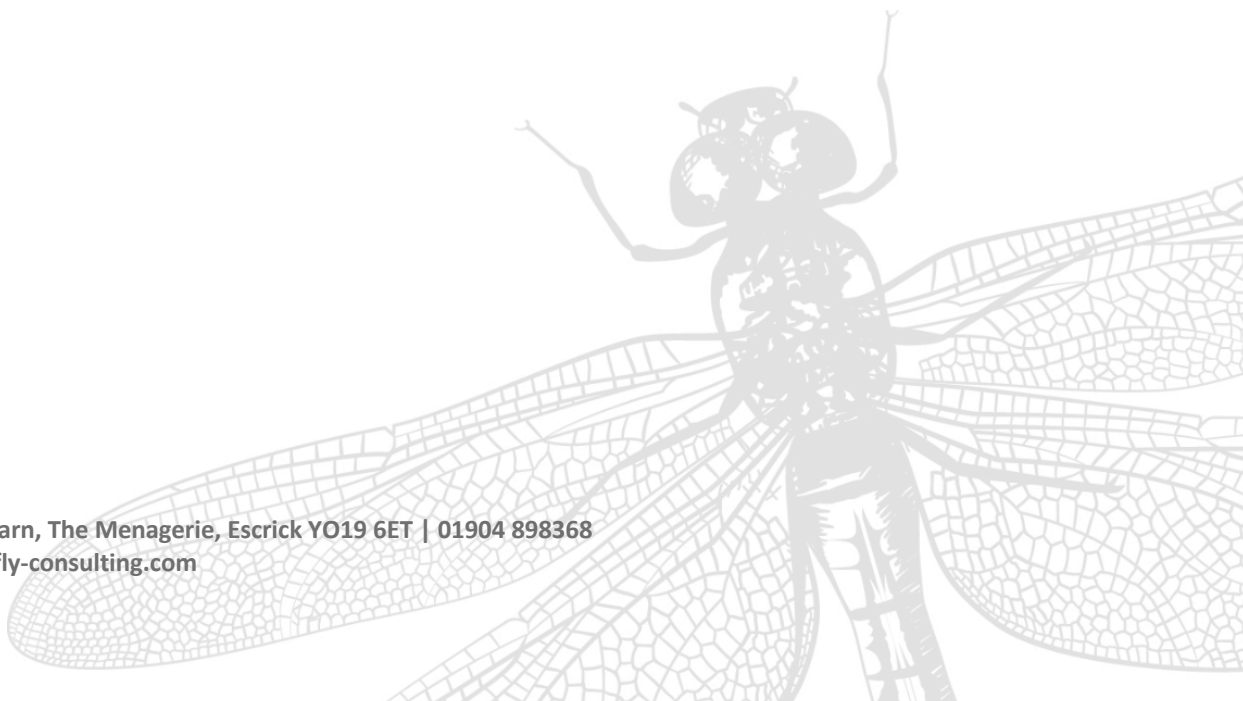




DRAGONFLY

CONSULTING

Inglemere Metals (Blackpool) Ltd
Cowley Road, Blackpool, FY4 4NE
Noise Impact Assessment
DC3704-R1v2



Report Version Issue Log

Report Number	Issue Date	Note or Change	Author	Reviewed	Approval for Issue
DC3704-R1v2	07.04.22	Report Amended to Reflect Amended Site Layout	CC	SGC	CC
DC3704-R1	01.12.21	Report Issue	CC	SGC	DV

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Dragonfly Consulting disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Limitations to this Report

This report entails a physical investigation of the site with a sufficient number of sample measurements to provide quantitative information concerning the type and degree of noise affecting the site. The objectives of the investigation have been limited to establishing sources of noise material to carrying out an appropriate assessment.

The number and duration of noise measurements have been chosen to give reasonably representative information on the environment within the agreed time, and the locations of measurements have been restricted to the areas unoccupied by building(s) that are easily accessible without undue risk to our staff.

As with any sampling, the number of sampling points and the methods of sampling and testing cannot preclude the existence of “hotspots” where noise levels may be significantly higher than those actually measured due to previously unknown or unrecognised noise emitters. Furthermore, noise sources may be intermittent or fluctuate in intensity and consequently may not be present or may not be present in full intensity for some or all of the survey duration.

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1.0 INTRODUCTION

County Planning Ltd, on behalf of Inglemere Metals (Blackpool) Ltd, has appointed Dragonfly Consulting to carry out a Noise Impact Assessment in support of a planning application for modifications to their existing scrap metal recycling site at Cowley Road, Blackpool, FY4 4NE.

The noise assessment has been conducted in accordance with the *National Planning Policy Framework* (NPPF) and *Noise Policy Statement for England* (NPSE) with reference to appropriate British Standards, recognised guidance and reference documents relevant to this site.

This report describes a noise survey of the site and the subsequent analysis to determine the noise environment of the proposed development. It then compares the results with the adopted criteria. Recommendations are also made with respect to the design of the proposed use where applicable.

A glossary of technical terminology is included in Appendix A.

1.1 Assertion of Competence

This assessment has been completed by Chris Chittock, Managing Director of Dragonfly Consulting with direct responsibilities for the acoustics projects within the firm.

I hold a Bachelor of Science Degree, with Honours, in Audio Technology from the University of Salford. I am a Corporate Member of the Institute of Acoustics. I have over 19 years of experience within the field of acoustics in both the public and private sector.

I have completed numerous assessments under BS 4142:2014+A1:2019 and I assert that I am competent to undertake this assessment under the requirements of BS 4142:2014+A1:2019.

2.0 SITE DESCRIPTION

2.1 Existing Site Conditions

The Inglemere Metals (Blackpool) Ltd site is located at the end of Cowley Road, Blackpool within an existing commercial area and allocated industrial estate. It has been in operation there since at least 1974. To the immediate south, southeast and east of the site are a number of other commercial buildings and beyond the immediate site, to the east, is an ASDA superstore.

The proposed redevelopment area of the site currently comprises of a building that has two self-contained residential apartment-dwellings within it, and offices on the ground floor, all of which are to be demolished as part of the proposals. Immediately to the rear of the apartments is the vehicle depollution bays associated with the current scrap metal recycling operations. Directly southeast of the proposed developments boundary is another building, not owned by the applicant, which is commercial in its operation on the ground floor level and first floor levels, but is suspected to be an apartment on the second floor.

The site currently operates as a scrap metal dealer offering services related to the recycling of ferrous and non-ferrous metals, end-of-life vehicles, car parts and tyres. Materials destined for recycling enter and leave the site on HGV and vehicle towed trailers, with some end-of-life vehicles being driven in by customers.

The site is unconstrained by the current planning permission, reflecting its historical use. The typical operating hours for the site are currently as follows:

- Monday to Friday:
 - 0730h – 1700h for staff;
 - 0800h – 1700h for customers.
- Saturday: 0830h-1200h.
- Sunday: Closed.

2.2 Proposed Site Conditions

The proposed development seeks to demolish the current apartment building located within the development area, fronting onto Cowley Road.

Whilst it is necessary to seek planning permission for this change use of the land following the demolition works, there is no appreciable difference in noise terms between the typical types of noise sources associated with the current site use and the future site use.

The principal external noise sources that currently exist on the site will continue to occur within the proposed use, this being HGVs delivering and collecting stock and forklift trucks operating within the site to load and unload materials, along with hand tool noise.

A concrete panel wall will be erected at the site boundaries. Whilst these are not being erected specifically for noise purposes, they may offer some benefits in reducing overall noise emissions from the site.

The development proposals are shown in the plans completed by TriCAD Solutions, provided by the Client, and referenced as follows:

- TRI-3699-02
- TRI-3699-03
- TRI-3699-04
- TRI-3699-05
- TRI-3699-06
- TRI-3699-07
- TRI-3699-08

This noise assessment completed is relevant to this iteration and previous iterations of the proposed site layout.

3.0 GUIDANCE

3.1 Consultation with Local Authority

Owing to the details already provided on the planning register, Dragonfly Consulting has not directly consulted Blackpool Council (BC) with regards to this development.

3.2 Local Planning Policy

3.2.1 Local Plan

The National Planning Policy Framework (NPPF) guides that Local Authorities should create a ‘Local Plan’. In creating their plan, the NPPF guides that the planning policies created should “*avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development*”. The term *significant adverse impacts* are akin to those described in the Noise Policy Statement for England (NPSE).

The Blackpool Local Plan Core Strategy 2017-2027 sets out a number of Core Policies with respect to development within the local area; the policies of which are considered most relevant to this assessment are shown below:

“Policy CS7: Quality of Design

2. Development will not be permitted that causes unacceptable effects by reason of visual intrusion, overlooking, shading, noise and light pollution or any other adverse local impact on local character or amenity”

“Policy CS10: Sustainable Design and Renewable and Low Carbon Energy

2.b. Mitigate any potential noise, odour, traffic or other impacts of the development so as not to cause an unacceptable impact on the environment or local amenity.”

Aside from the above, it is the understanding of Dragonfly Consulting that BC have no published qualitative or quantitative guidance or policy relating to noise other than that detailed above.

Therefore, Dragonfly Consulting as qualified independent assessors have deferred to the guidance detailed in the NPPF and the NPSE for guidance on assessment of acceptable impact in terms of noise. In addition to this, Dragonfly Consulting has assessed the site with reference to a number of British Standards and in particular with reference to the nationally accepted guidance documents detailed above, in order to provide an objective and reasonable measure of noise impact.

3.3 National Policy

3.3.1 National Planning Policy Framework (NPPF)

The NPPF does not provide any specific or quantified guidance with respect to noise and has withdrawn all previous guidance documents on the assessment of noise for planning purposes, which was detailed in Planning and Policy Guidance 24 (PPG24). Instead, the NPPF places the onus on a local authority to develop a suitable local development plan, within which noise is addressed, taking account of the guidance within the NPPF.

However, much of the previous guidance within PPG24 related to the assessment of noise using other guidance or standards specific to the type or nature of the noise being assessed. These guidance documents and referenced British Standards have not been withdrawn and remain relevant to the assessment of noise impact on a proposed residential development.

Dragonfly Consulting has referred to the guidance detailed in the NPPF and the NPSE for guidance on assessment of acceptable impact in terms of noise. These documents contain no quantitative guidance with respect to noise.

The NPPF provides guidance at Paragraph 185, amongst other factors, that:

“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 life;*

3.4 Noise Policy Statement for England (NPSE)

The document ‘Noise Policy Statement for England’ sets out the following vision for ongoing noise policy:

“Promote good health and a quality of life through the effective management of noise within the context of Government policy on sustainable development.”

This vision should be achieved through the following Noise Policy Aims:

“Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- 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.”*

To achieve this vision, the Noise Policy Statement sets three noise levels to be defined by the assessor:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. 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.

The Noise Policy Statement considers that noise levels above the SOAEL would be seen to have, by definition, significant adverse effects and would be considered unacceptable. Where the assessed noise levels fall between the LOAEL and the SOAEL noise levels, the Policy Statement requires that:

“...all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development... This does not mean that such adverse effects cannot occur.”

Where noise levels are below the LOAEL, it is considered there will be no adverse effect. Once noise levels are below the NOEL, there will be no observable change.

3.5 Best Practice and Other Relevant Guidance

3.5.1 British Standard (BS) 7445-1:2003

The assessment of noise impact for this development has been undertaken by measuring external noise levels in accordance with the guidance detailed in BS 7445-1:2003 – *Description and Measurement of Environmental Noise – Part 1: Guide to Quantities and Procedures*.

This document defines the basic quantities to be used for the description of noise in community environments and describes basic procedures for the determination of these quantities.

The methods and procedures described in this British Standard are intended to be applicable to sounds from all sources, individually and in combination, which contribute to the total noise at a site. This British Standard does not specify limits for environmental noise.

3.5.2 British Standard (BS) 4142:2014+A1:2019

BS 4142:2014 – *Methods for rating and assessing industrial and commercial sound*. This new edition of BS 4142 clarifies the application of the standard and introduces the consideration of uncertainty as part of the assessment methodology. The standard provides a method for rating and assessing sound of an industrial or commercial nature, including:

- Sound from industrial and manufacturing process;
- 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;
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as from FLT's or that from train or ship movements on or around an industrial/commercial site.

The standard is intended for use for both the assessment of complaints and the assessment of the impact of commercial and industrial noise on both new and existing residential developments.

The method 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 other premises used for residential purposes at which the sound is incident. The standard specifically excludes itself for the use of determination of nuisance.

The procedure contained in BS 4142 for assessing the likelihood of complaint requires the calculation of the noise level from the source to be assessed at a location immediately outside the relevant dwelling; this is described as the 'specific sound level'. Where the specific noise source already exists, its noise level can be derived by measuring the total noise present, or 'ambient noise', and subtracting from it the noise from sources that are not under consideration. Noises not under consideration are called the 'residual noise'.

A 'rating level' is then calculated from the specific sound level. The rating level is then compared with the measured background noise level at that measurement location. If the specific noise source does not yet exist but the details of the intended plant are known, the specific sound level can be derived from first principles using manufacturers' and other data.

The specific, ambient and residual noise levels are measured in terms of $L_{Aeq,T}$ values and the background noise level is measured in terms of an L_{A90} value.

BS 4142 considers that certain acoustic features can increase impact of a new noise source over that expected from a simple comparison between the specific noise level and the background noise level. These features can be assessed in one of three ways:

- Objective method – comparing adjoining third octave band noise levels (if available) for the sound source;
- The reference method by analysing measured plant noise levels using the Joint Nordic method;
- Using the prescribed subjective methodology.

These features and the penalties applied to calculate a rating level when assessing subjectively as defined by BS 4142 are as follows:

- Tonality – For sound ranging from not tonal to prominently tonal, the Joint Nordic Method gives a correction of between 0 and +6dB for tonality.
 - 2dB for a tone which is just perceptible;
 - 4dB where it is clearly perceptible;
 - 6dB where it is highly perceptible.
- Impulsivity – A correction of up to 9dB can be applied for sound that is highly impulsive, considering both the rapidity of change in sound level and the overall change in sound level.
 - 3dB just perceptible impulsivity;
 - 6dB clearly perceptible impulsivity;
 - 9dB highly perceptible impulsivity.
- Intermittency – Where the specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time period that contain the greatest amount of 'on' time. This can necessitate measuring the

specific sound over a number of shorter periods that are in combination less than the reference time interval in total.

- If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied.
- Where the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive from the residual acoustic environment, as a matter of professional judgement, a 3dB penalty can be applied instead.

In order to assess the significance of the impact, the background noise level is subtracted from the rating level. The standard considers that the greater the difference, the greater the significance.

- A difference of around +10 dB or more is likely to be an indication of a *significant adverse impact*, depending on the context;
 - A difference of around +5 dB is likely to be an indication of an *adverse impact*, depending on the context;
- i) 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.
- ii) 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.

The standard goes on to highlight that these values are not absolute. There are a number of factors that should be taken into account when assessing the impact and significance of the noise including:

- 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. 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;
- The character and level of the residual sound compared to the character and level of the specific sound;
- The sensitivity of the receptor and if the receptor already includes acoustic design features to mitigate noise.

3.5.3 Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment

The guidelines state that, for any assessment, the noise level threshold and significance statements should be determined by the assessor, based upon the specific evidence and likely subjective response to the noise.

The impact scale adopted in this assessment is shown in Table 3.1 below:

**Table 3.1
 Impact Scale for Comparison of Future Noise against Existing Noise**

Degree of Effect	Effect Descriptor
None / Not Significant	Less than 2.9dB L_{Aeq} change in sound level and/or all receptors are of negligible sensitivity to noise or marginal to the zone of influence of the proposals
Slight	A 3.0 to 4.9dB L_{Aeq} change in sound level at a receptor of some sensitivity
Moderate	A 3.0 to 4.9dB L_{Aeq} change in sound level at a sensitive or highly sensitive noise receptor, or a greater than 5dB L_{Aeq} change in sound level at a receptor of some sensitivity
Substantial	Greater than 5.0dB L_{Aeq} change in sound level at a noise sensitive receptor or a 5.0 to 9.9dB L_{Aeq} change in sound level at a receptor of great sensitivity to noise
Very Substantial	Greater than 10.0dB L_{Aeq} change in sound level perceived at a receptor of great sensitivity to noise

The criteria above reflect key benchmarks that relate to human perception of sound. A change of 3dB(A) is generally considered to be the smallest change in noise that is perceptible. A 10dB(A) change in noise represents a doubling or halving of the noise level.

It is considered that the criteria specified in the above table do provide a good indication as to the likely significance of changes in noise levels in this case. Therefore, the above noise threshold levels and significance statements have been used to supplement the criteria provided by the British Standard in order to assess the impact on a listener.

4.0 ASSESSMENT METHODOLOGY

4.1 Assessed Sources of Environmental Noise

With reference to the guidance detailed within Section 3.0, the following table presents the specific methodology adopted for the assessment of noise arising from the development proposals.

Table 4.1
Assessed Sources of Environmental Noise

Potential Noise Source	Relevant Assessment Methodology
Site Servicing Operations (HGV Movements)	BS 4142:2014+A1:2019

Given the existing and long-standing commercial use of the site, it would be inappropriate to assess the impact of the proposals in isolation, without giving significant consideration to the current context.

The nearest Noise Sensitive Receptors (NSRs) to the site (the part commercial part residential building to the southwest of the current site identified as 38 Cowley Road) identifies that the introduction of the homes is an agent of change with respect to the permitted commercial uses to the north which have been established since 1974 (Planning Ref: 74/1612).

The refusal of planning application ref. 14/0258 which sought permission for the change of use of 38 Cowley Road to a self-contained apartment, confirms the Council position that residential uses in this location within the allocated industrial estate are contrary to the employment and economic objectives of the NPPF and the local plan.

Consequentially, it would be inappropriate to consider the impact of the proposed expansion of the existing commercial use as an assessment in isolation, without consideration of the existing permitted use and the noise impact of that and other nearby permitted uses.

Therefore, in determining the impact of the proposals it is considered most appropriate to consider the magnitude of change in the noise impact (as previously predicted with reference to BS 4142) to determine the extent of the impact of the proposed change in use of the site.

Table 4.2
Assessed Sources of Environmental Noise

Potential Noise Source	Relevant Assessment Methodology
Change in Ambient Noise Level due to Proposals	IEMA Guidelines for Environmental Noise Impact Assessment

4.2 Selection of Assessment Criteria

The following criteria have been selected to determine the threshold of effect levels in the context of the National Planning Policy Framework and Noise Policy Statement for England.

Table 4.3
Assessment Criteria: BS 4142:2014+A1:2019

Effect Level	Criteria	Justification
Lowest Observed Adverse Effect Level (LOAEL)	Free-field external noise levels at adjacent sensitive receptor locations within +5 dB of representative background noise level	Noise levels + 5 dB above background are considered an indication of where adverse noise impacts may occur in the context of BS 4142. Noise levels below this level are an indication that it is less likely that the specific sound source will have an adverse impact
Significant Observed Adverse Effect Level (SOAEL)	Free-field external noise levels at receptor above +10 dB of representative background noise level	None Mitigate to achieve LOAEL Criteria

The following criteria have been selected to determine the threshold of effect levels in the context of the National Planning Policy Framework and Noise Policy Statement for England.

Table 4.4
Assessment Criteria: IEMA Guidelines for Environmental Noise Impact Assessment

Effect Level	Criteria	Justification
Lowest Observed Adverse Effect Level (LOAEL)	More than 3dB L_{Aeq} but less than 5dB L_{Aeq} change in sound level at adjacent sensitive receptor locations	IEMA degree of effect – Moderate
Significant Observed Adverse Effect Level (SOAEL)	More than 5dB L_{Aeq} change in sound level at adjacent sensitive receptor locations	IEMA degree of effect – Substantial

5.0 ENVIRONMENTAL NOISE SURVEY

Daytime and night-time noise measurements were undertaken over a weekend period from the 29th of October to the 1st of November 2021. In addition to this, spot measurements were also taken on a separate visit on the 21st of October 2021. These noise measurements established ambient and background noise levels at the site in the absence of the authorised activity within the site.

5.1 Survey Methodology

The equipment used during the survey is detailed in Appendix B. The sound level meters were calibrated before and after the measurements and no significant calibration drift was found to have occurred. All of the noise monitoring equipment had been calibrated to a traceable standard within the twenty-four months preceding the survey. Calibration certificates are available on request.

Two measurement locations were surveyed over the weekend period as well as two spot measurement locations in order to establish the typical ambient and background noise levels at the proposed development site. The measurement locations are hereby referred to in this report as follows:

- ‘Location 1’ – sound level meter positioned 1.5m above the ground on the roof terrace of the apartment building to be demolished;
- ‘Location 2’ – sound level meter positioned 4m above the ground, 1m away from the south-eastern façade of the apartment building to be demolished;
- ‘Location 3’ – sound level meter positioned 1.5m above the ground in the existing scrap yard;
- ‘Location 4’ – sound level meter positioned 1.5m above the ground outside of the site at the junction between Cowley Lane and Vicarage Lane.

The measurement locations are shown in Appendix C.

5.2 Survey Results

Records of the prevailing weather conditions were collated throughout the duration of the survey and, when significant precipitation and high wind speeds had occurred, the results during those periods and the periods immediately before and after were excluded from the assessment. Summaries of the measured noise levels are given in Tables 5.1 and 5.2, overleaf.

Table 5.1
Summary of Measured Noise Levels 29/10/21 to 01/11/21 – free-field, dB

Location	Date	Period	Time (h)	L _{Aeq, T}	L _{A10}	L _{A90}	L _{AMax}
1	29/10/2021	Daytime	1200-2300	57.4	54.5	50.6	90.5
	29/10/2021-30/10/2021	Night-time	2300-0700	52.8	49.4	41.9	82.9
	30/10/2021	Daytime	0700-2300	64.7	57.2	45.9	112.6
	30/10/2021-31/10/2021	Night-time	2300-0700	55.0	51.0	42.1	89.8
	31/10/2021	Daytime	0700-2300	60.9	56.8	45.1	104.3
	31/10/2021-01/11/2023	Night-time	2300-0000	72.3	69.7	50.7	96.5
2	29/10/2021	Daytime	1200-2300	56.8	53.8	48.6	89.3
	29/10/2021-30/10/2021	Night-time	2300-0700	46.9	47.7	41.6	73.2
	30/10/2021	Daytime	0700-2300	57.5	52.4	47.2	92.1
	30/10/2021-31/10/2021	Night-time	2300-0700	46.1	46.6	41.4	73.4
	31/10/2021	Daytime	0700-2300	54.8	52.6	48.9	80.8
	31/10/2021-01/11/2023	Night-time	2300-0000	46.7	48.6	43.3	66.1

Table 5.2
Summary of Spot Measured Noise Levels 21/10/21 – free-field, dB

Location	Date	Period (mm:ss)	Time (h)	L _{Aeq, T}	L _{A10}	L _{A90}	L _{AMax}
3	21/10/21	25:50	1147-1212	73.2	75.1	60.4	97.7
4		16.32	1216-1233	70.5	71.5	59.2	92.5

For the purposes of the comparative assessment, the typical ambient levels during current operating hours have been derived from a logarithmic mean average of the L_{Aeq,15min} records, sifted for rainfall. These values are shown in Table 5.3.

Table 5.3
Summary Average Noise Levels During Operating Hours 29/10/21 to 01/11/21 – free-field, dB

Location	L _{Aeq, T}
1	68.0
2	62.5

5.3 Observations and Comments

During the daytime attended portion of the noise survey, ambient noise levels at both locations were influenced by Inglemere Metals (Blackpool) Ltd and neighbouring commercial units works in all immediate directions to the development site.

5.3.1 BS 4142 Background (L_{A90}) Statistical Analysis

In accordance with Section 8 of BS 4142, the statistical analysis of measured background noise levels in proximity to the nearest noise sensitive receptors is presented in Figures 5.1 to 5.4, overleaf. Where data has returned a bi-modal distribution, the lowest consistent value has been selected to present a reasonable worst-case.

Figure 5.1
Daytime Background with No Operations (L_{A90}) Analysis – Location 1

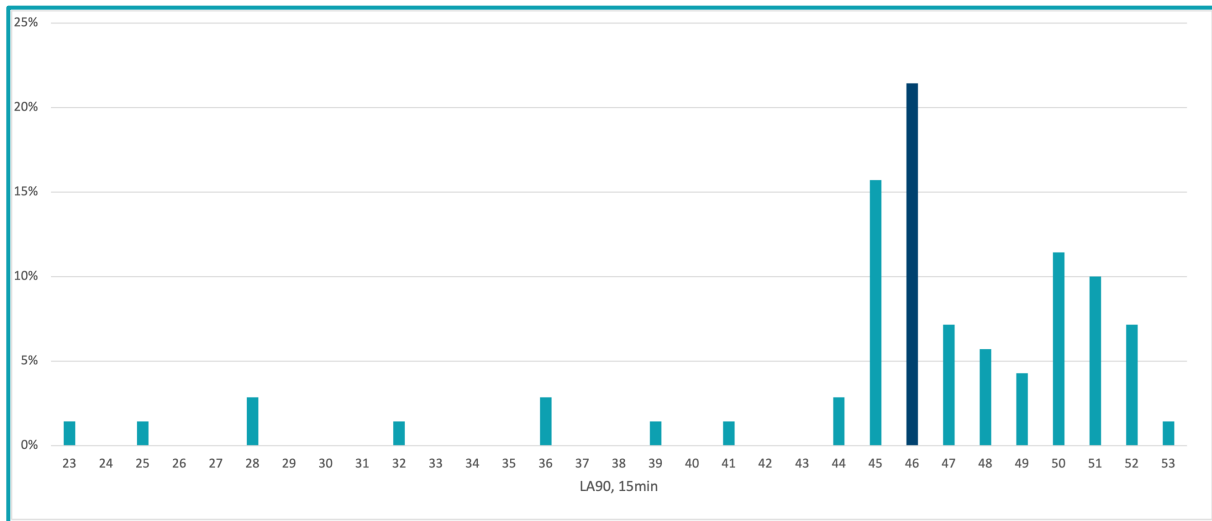


Figure 5.2
Night-time Background (L_{A90}) Analysis – Location 1

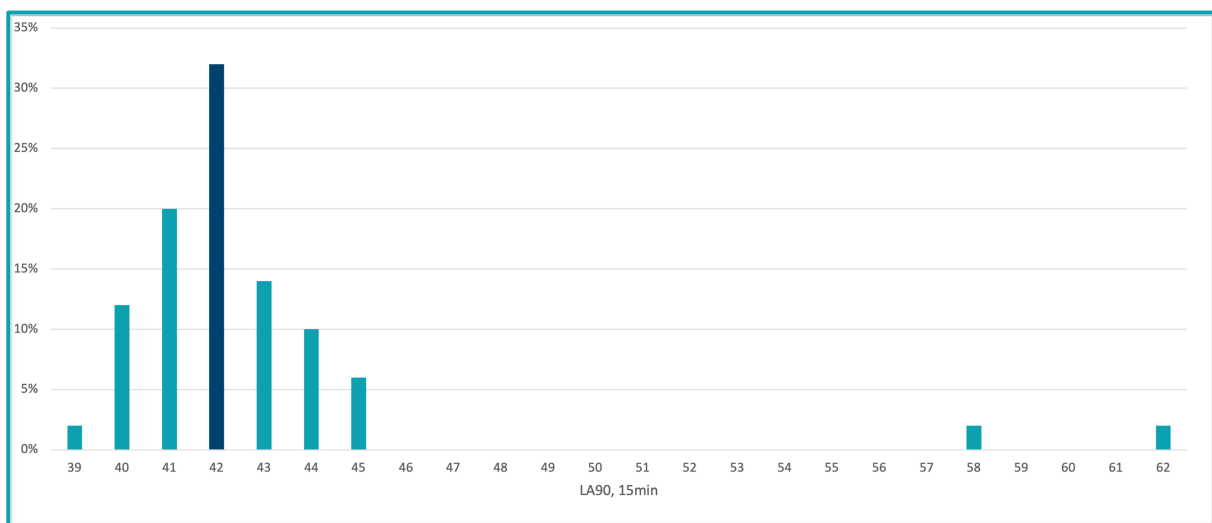


Figure 5.3
Daytime Background with No Operations (L_{A90}) Analysis – Location 2

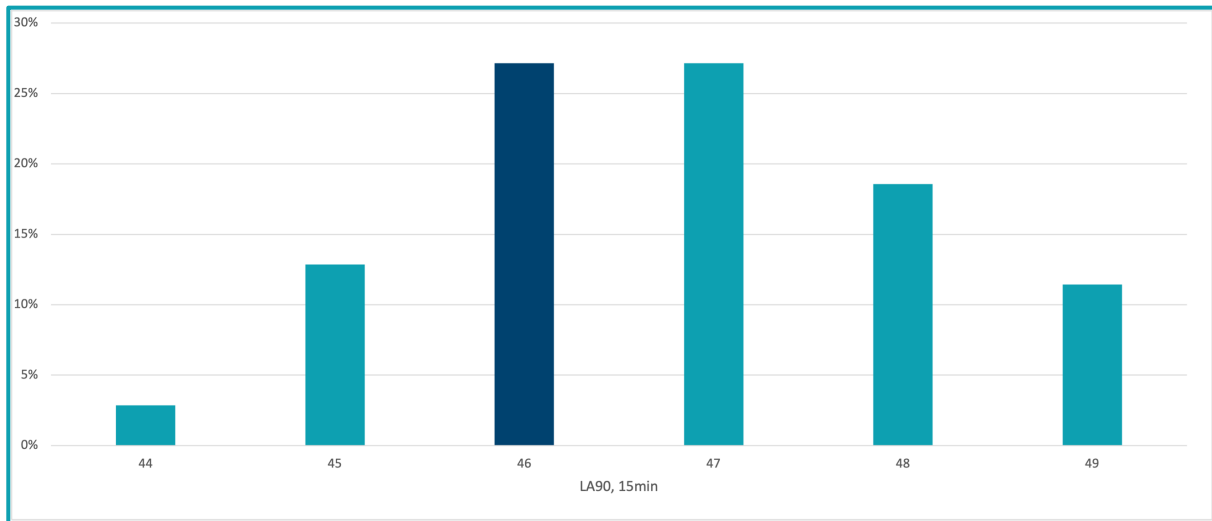
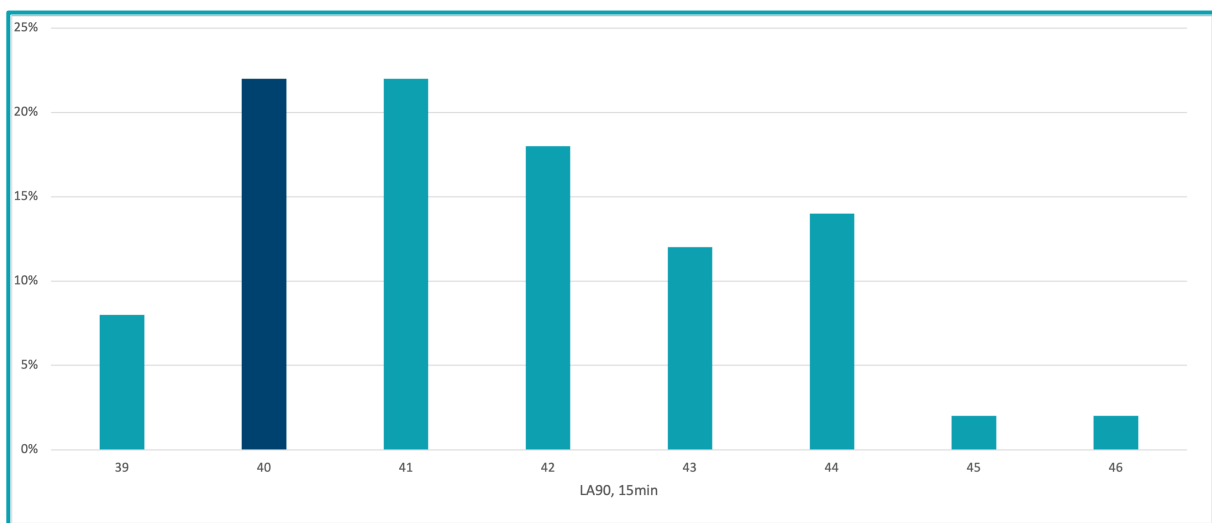


Figure 5.4
Night-time Background (L_{A90}) Analysis – Location 2



6.0 ASSESSMENT

6.1 Assessment of Noise from Current Commercial Operations

As noted previously, the authorised scrap metal yard/vehicle depollution use and the nature of the current operating business on the site generates a notable amount of noise. Although noise management measures are integral to the site operations, some noise emissions are intrinsic to the nature of the approved operations on the site.

It is considered that the noise levels measured at Locations 1 and 2 are representative of the specific noise levels at the nearest Noise Sensitive Receptor as follows:

- Location 1 – Representative of the noise levels impacting on the front façade of the NSR facing on to Cowley Road.
- Location 2 – Representative of the noise levels impacting on the rear façade of the NSR facing away from Cowley Road.

With respect to the guidance set out in BS 4142:2014+A1:2019, a 6dB character correction for clearly perceptible impulsive noise has been included in calculations for Rating Level.

Based on the average measured L_{Aeq} noise levels at Location 1 and Location 2 during the working day and the stated character correction, the Rating Noise Levels from the operation of Inglemere Metals at the NSR have been calculated as follows:

Table 6.1
Current Specific and Rating Noise Levels in dB(A)

Location	Specific Noise Level at NSR	Character Correction	Rating Level at NSR (dB)
Front Façade of NSR	62.5	+6	68.5
Rear Façade of NSR	68.0	+6	74.0

Comparing these Rating Levels with the current measured background noise levels for the daytime periods when there are no operations at Inglemere Metals (see Figures 5.1 and 5.3) as measured and assessed, following the guidance detailed in BS 4142:2014+A1:2019, gives the following outcomes:

Table 6.2
Comparison of Rating Noise Levels and Measured Background Noise Levels in dB(A)

Location	Rating Level at NSR (dB)	Assessment Period	Measured Background Noise Level, L_{A90} (dB)	Difference (dB)
Front Façade of NSR	68.5	Daytime	46	+22.5
Rear Façade of NSR	74.0	Daytime	46	+28.0

Table 6.2 shows that the Rating Level will vary between +22.5dB(A) and 28.0dB(A) above background noise level at the nearest NSR. This demonstrates that noise levels at the NSR would exceed the Significant Adverse Effect Level (SOAEL) during both the daytime and night-time periods when assessed against the methodology outlined in BS 4142:2014+A1:2019, during the no-development scenario.

The SOAEL is defined as:

“Free-field external noise levels at receptor above +10 dB of representative background noise level”

As such, the residential use at the NSR will require significant mitigation measures to control noise from the adjacent commercial uses based on the current noise emissions from the site.

Given the position of the NSR relative to the Inglemere Metals site, in addition to the other manufacturing and commercial premises which surround it, there would be no practical means for the Rating Noise Level at the NSR to be reduced through mitigation, without serious and detrimental impacts on the operation of the businesses that would likely affect the viability of the businesses in those locations.

6.1.1 Future Assessment – BS 4142:2014+A1:2019

The current proposal for development at this site relates to the removal of an existing structure which contains offices and apartments, rather than the construction of significant new buildings. Existing buildings on-site are to be altered, by further enclosing them.

Principally, the application seeks permission for the removal of the existing offices and residential apartments, and thereafter, the re-purposing of the land to expand the existing vehicle depollution yard. This would create extra space to ease HGV access into/from the site and for easier access to the de-pollution bays, currently located to the rear of the office/apartment building.

Once the apartment building is removed, this will then allow for the introduction of further storage facilities for removed pollutants and the introduction of site boundary fencing to increase site security. It is not proposed that there would be a significant reorganisation of the site layout or a change in the type and nature of noise sources currently in use at the site.

Given that noise sources associated with the operation of Inglemere Metals are spread around the site, it is difficult to definitively establish the impact of removal of this building on noise levels.

However, it is understood that only the second floor of the NSR is in residential use, with applications for the residential use of the first floor having previously been rejected, as noted above.

The area of the 2nd floor facing the area of the Inglemere Metals site where a building is to be removed is blank façade with no windows and as such no habitable spaces will be impacted by noise impacting on the side façade of the NSR.

The noise impacting on the front and rear facades of the NSR will be largely unaffected by the removal of the office/apartment building. However, the removal of the building may result in HGV movements being perceptibly closer to the NSR than was previously possible. This is contrasted against the efficiencies of having a larger operating yard that will reduce the double handling of scrap materials and depolluted vehicles, which in turn would reduce the noise impacts generated by the picking up and setting down of materials within the yard itself.

Based on measurements previously completed by Dragonfly Consulting, the following noise levels have been assumed for an HGV reverse manoeuvre into the space adjacent to the NSR at a closest distance of 8m.

Table 6.3
HGV Noise Levels in dB(A)

Manoeuvre	Measured Noise Level (dB)	Measurement Duration (Minutes)
Forward past measurement location, reverse manoeuvre and airbrake release	68.9	1

Assuming up to 4 HGV movements per hour through the working day, this results in an equivalent noise level of 51.1dB(A) $L_{Aeq, 1hr}$ at the NSR.

By adding this expected noise contribution to the existing noise level, a future specific noise level and a resultant future Rating Level can be calculated, assuming the same character corrections:

Table 6.4
Predicted Future Specific and Rating Noise Levels in dB(A)

Location	Current Specific Noise Level at NSR	Predicted HGV Noise Levels	Predicted Future Specific Noise Level at NSR	Character Correction	Rating Level at NSR (dB)
Front Façade of NSR	62.5	51.1	62.5	+6	68.5
Rear Façade of NSR	68.0	51.1	68.0	+6	74.0

Consequently, the Rating Level at the NSR will remain unchanged due to this proposal.

6.1.2 Comparison and Change in Rating Levels – BS 4142:2014+A1:2019

In order to provide an assessment of the impact of the proposed changes, a comparison has been made between the predicted Rating Levels from the current use and the predicted Rating Levels from the proposed changes to the Inglemere Metals site.

Table 6.5
Comparison of Rating Levels in dB(A)

Location	Current Rating Level (dB)	Predicted Future Rating Level (dB)	Difference (dB)
Front Façade of NSR	68.5	68.5	0
Rear Façade of NSR	74.0	74.0	0

6.1.3 IEMA Guidelines

As the site is a currently permitted for a sui generis scrap metal yard use and these operations have existed for a long time before any noise sensitive development was permitted on the land to the north of the site, the current use is considered to be an existing business and, as such, receives specific protection under the National Planning policy Framework. Paragraph 187 of the NPPF states:

“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.”

Therefore, it would be inappropriate to consider the impact of commercial noise generated by the proposed changes to the site in isolation. Instead, following relevant planning guidance as referenced above, the assessment should focus upon the *quantum* of any change in noise level resulting from the proposed changes and then assess the *impact* of those changes in order to determine the impact on the amenity of noise sensitive properties.

As such, it is considered appropriate to assess the noise impact against the IEMA Guidelines for Environmental Noise Impact Assessment.

When assessing using the IEMA guidelines, and with reference to the framework detailed in the Noise Policy Statement, the following limit has been set:

Lowest Observed Adverse Effect Level (LOAEL)

This is the level above which adverse effects on health and quality of life can be detected. For this assessment, this is defined as:

“A 3.0 to 4.9dB L_{Aeq} change in sound level at a sensitive or highly sensitive noise receptor, or a greater than 5dB L_{Aeq} change in sound level at a receptor of some sensitivity.”

When making a comparison between noise from existing site operations and proposed operations, this assessment shows that there is no expected increase in ambient level. When comparing this change to the IEMA impact scale as set out above, this change in noise level is considered to be below the Lowest Observable Effect Level.

Furthermore, it is considered that the impact of the changes will be at the No Observable Effect Level (NOEL).

Therefore, even though the predicted Rating Level from the current use and future use at are both above the SOAEL when considered independently against the requirements of BS 4142, it remains the case that the noise impact from the existing use is already above the SOAEL in any event. Therefore, the lack of predicted increase in noise from the proposed changes results in a development, where the quantum and impact of the change in noise level at the NSR is acceptable as it does not represent a significant adverse impact on residential amenity. i.e., the future development scenario will be no worse, but approving the development will remove two apartments from within the industrial estate which are considered inappropriate uses in that specific location under current planning guidance.

Impacts below the Significant Observable Adverse Effect Level (SOAEL) are considered to be *acceptable* when assessed against the guidance in the NPPF and the Local Plan.

On this basis, the assessment demonstrates that the development proposed by this planning application will not cause an adverse impact and therefore meets the requirements of the NPPF and the Blackpool Council Local Plan.

6.2 Uncertainty of the Assessment

Following current good practice, an appraisal of the uncertainty within both the on-site noise survey and the prediction calculations has been completed.

The following negative factors have been noted in considering the uncertainty of the on-site noise survey:

- Sound level meter located adjacent to, but not at or inside the NSR.

The following positive factors have been noted in considering the uncertainty of the on-site noise survey:

- Sound level meter located at first floor level.
- Low winds and no precipitation.

As such, it is considered that the uncertainty for the on-site noise survey element of the work is ± 2 dB. Uncertainty for the prediction elements of the work has been considered in line with the normal use of ISO9613 based point source propagation calculations and is predicted at ± 3 dB.

Utilising the root sum of squares method, this gives a combined uncertainty for this assessment of ± 3.6 dB.

7.0 CONCLUSIONS

Dragonfly Consulting have been appointed to carry out a Noise Impact Assessment in relation to a planning application for modifications to their existing site at 50 Cowley Road, Blackpool, FY4 4NE. The site is an existing and long-standing scrap metal recycling and car depollution yard, since 1974.

The noise assessment has been conducted in accordance with the *National Planning Policy Framework* (NPPF) and *Noise Policy Statement for England* (NPSE) with reference to appropriate British Standards, recognised guidance and reference documents relevant to this site.

This report therefore describes a noise survey of the site and the subsequent analysis to determine the noise environment of the proposed development. It then compares the results with the adopted criteria. Recommendations are also made with respect to the design of the development.

The assessment has shown that the existing permitted use of the site will have significant adverse impact on the NSR located adjacent to the site to the southwest; but that the application must be considered in context and the agent of change principle applied.

Furthermore, when considered against the relevant standards in BS 4142:2014+A1:2019, the Rating Levels of both the existing use and the future use, after the proposed changes, are above the SOAEL in this assessment, when considered against the methodology set out in BS 4142:2014.

However, when making a comparison between Rating Noise Level from existing site operations and the Rating Noise Level resulting from proposed changes to the site, the assessment shows there to be no increase. When comparing this change to the IEMA impact scale, this change in noise level is considered to be below the Lowest Observable Effect Level and at the No Observed Effect Level. Furthermore, the proposal provides an opportunity to remove two apartments from within the industrial estate which are inappropriate uses in that location.

Therefore, even though the predicted Rating Noise Level from the proposed development at the NSR is above the SOAEL when assessed against BS 4142:2014, the increase in noise levels from the proposed changes to the site is negligible. As such, the proposed changes are not expected to cause an adverse impact and therefore meet the requirements of the NPPF and the Blackpool Council Local Plan.

Appendix A – Glossary of Terminology

In order to assist the understanding of acoustic terminology and the relative change in noise, the following background information is provided.

The human ear can detect a very wide range of pressure fluctuations, which are perceived as sound. In order to express these fluctuations in a manageable way, a logarithmic scale called the decibel, or dB scale is used. The decibel scale typically ranges from 0dB (the threshold of hearing) to over 120dB. An indication of the range of sound levels commonly found in the environment is given in the following table.

Table A-1
Sound Levels Commonly Found in the Environment

Sound Level	Location
0dB(A)	Threshold of hearing
20 to 30dB(A)	Quiet bedroom at night
30 to 40dB(A)	Living room during the day
40 to 50dB(A)	Typical office
50 to 60dB(A)	Inside a car
60 to 70dB(A)	Typical high street
70 to 90dB(A)	Inside factory
100 to 110dB(A)	Burglar alarm at 1m away
110 to 130dB(A)	Jet aircraft on take off
140dB(A)	Threshold of Pain

Acoustic Terminology

dB (decibel) The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2×10^{-5} Pa).

dB(A) A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.

L_{Aeq} This is defined as the notional steady sound level which, over a stated period of time, would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.

L₁₀ & L₉₀ If a non-steady noise is to be described, it is necessary to know both its level and the degree of fluctuation. The L_n indices are used for this purpose, and the term refers to the level exceeded for n% of the time.

L_{AMax} This is the maximum A-weighted sound pressure level recorded over the period stated. L_{AMax} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall L_{Aeq} noise level but will still affect the noise environment.

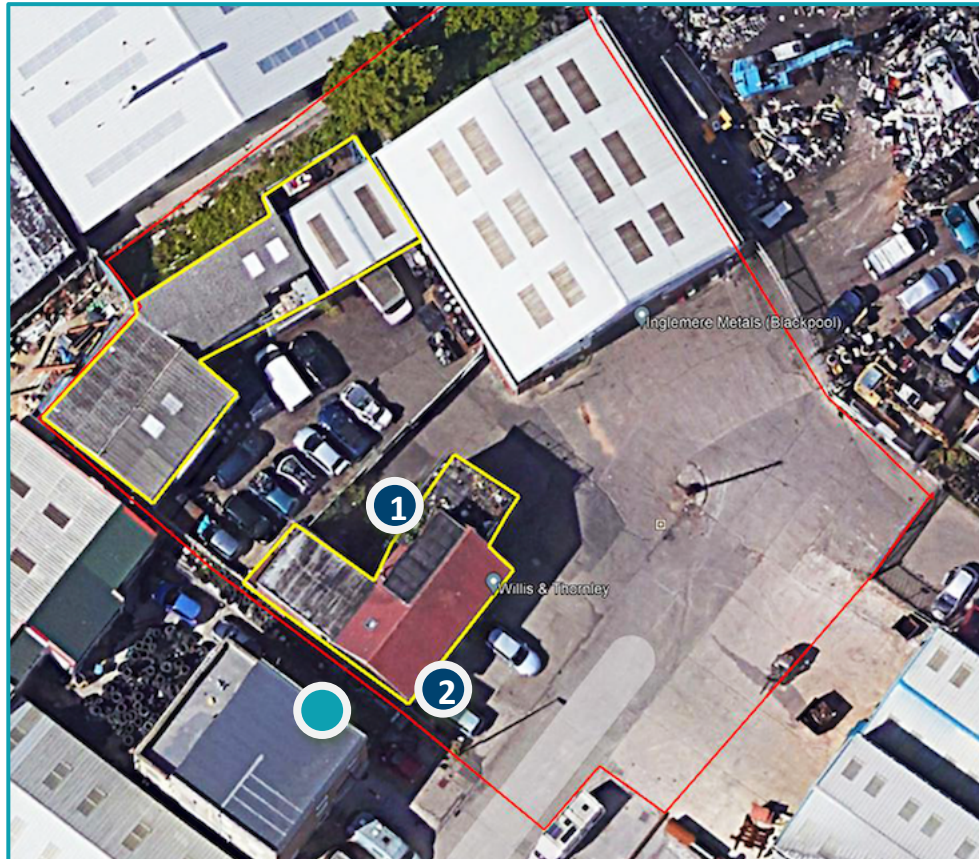
Appendix B – Monitoring Equipment

Table B-1
Noise Monitoring Equipment

Equipment	Serial Number
01dB Cube Sound Level Meter	10889
G.R.A.S 40CD Microphone	231555
01dB PRE22N Preamplifier	1610358
01dB Cube Sound Level Meter	10892
G.R.A.S 40CD Microphone	233511
01dB PRE22N Preamplifier	11071
01dB Cube Sound Level Meter	11111
G.R.A.S 40CD Microphone	287790
01dB PRE22N Preamplifier	1610535
Castle GA607 Acoustic Calibrator	043074

Appendix C – Measurement Locations

Figure C-1
Measurement Location Plan







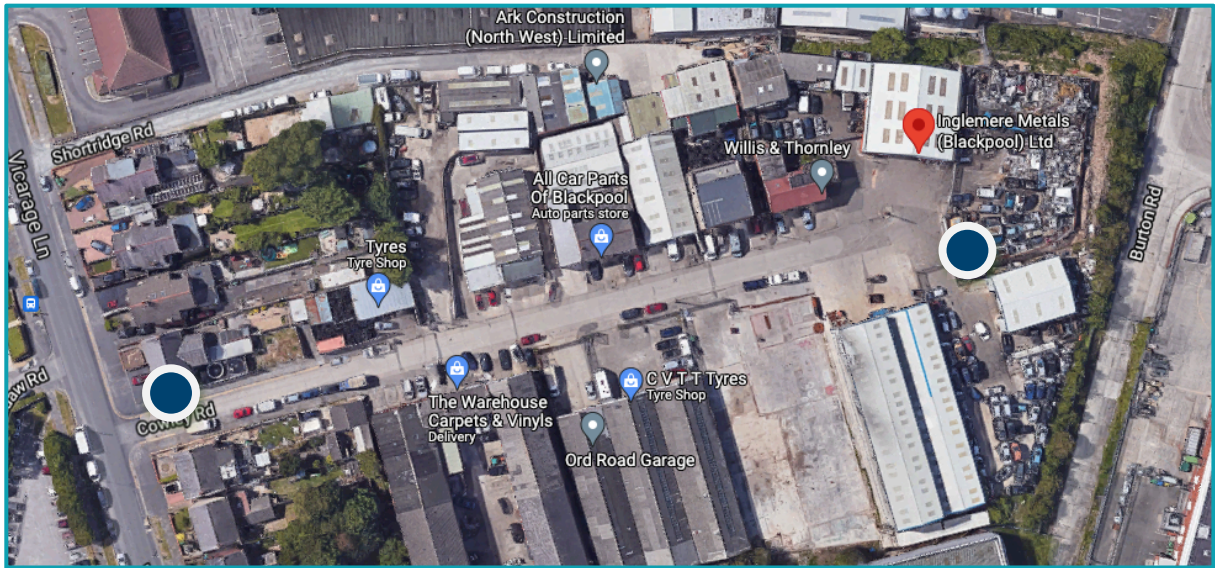

-  Measurement Locations
-  Closest NSR
-  Proposed Development Site Boundary
-  Site Boundary

Figure C-2
Spot Measurement Location Plan



 Spot Measurements