

BS4142 ASSESSMENT OF  
RELOCATION OF  
TEARS RECOVERY,  
90 BRIDGE ROAD,  
LONG SUTTON,  
PE12 9EF

November 4<sup>th</sup> 2025

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## 1.0 Introduction

- 1.0.1 This report has been commissioned to determine the noise impact of the relocation of Tears Recovery to the 90 Bridge Road, Long Sutton site.
- 1.0.2 The assessment has been conducted in line with the BS4142:2014+A1:2019 as this is the introduction of noise of an industrial nature with the potential to impact on residential dwellings.

## 2.0 Site Details

- 2.0.1 The proposed site is located on Bridge Road, Long Sutton, and is close to the current site for the HGV parking area.
- 2.0.2 The site is proposed to include the existing service yards and associated buildings, as well as HGV storage area to the rear. The full site plan is shown in figure 5 below.
- 2.0.3 The closest Noise Sensitive Receptors (NSRs) are located on the North boundary of the site. This single property is not part of the development and is a residential dwelling. There are no other NSRs in the vicinity of the proposed site.
- 2.0.4 The noise sources were sampled in their existing locations to add into the noise impact model to provide the predicted impact. This included sampling at the existing service yard, existing HGV parking/storage area and the proposed new location for the background noise survey.

### 2.1 Location of Monitors

- 2.1.1 The noise location was chosen based on the proximity to the closest NSR.



Figure 1 – Background (Unattended)



Figure 2 – Service Yard

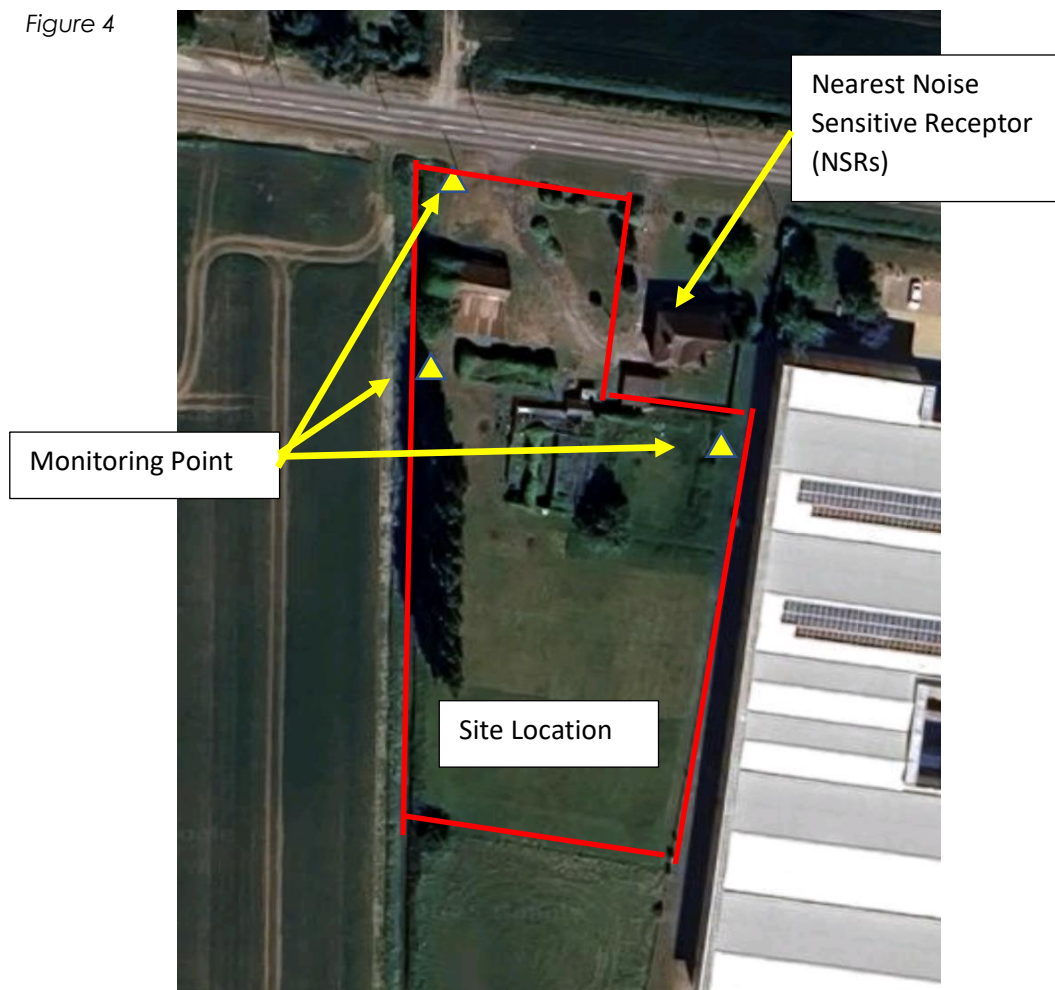
(Attended)  
HGV Yard (Attended)

Figure 3 –

- 2.1.2 Measurements were made in 15 minute periods, on 1 second averaging, to allow for the removal of anomalies and increased accuracy. The data was averaged into  $L_{Aeq1hr}$  daytime and  $L_{Aeq15min}$  night-time with data also recorded for  $L_{A90}$  in both day and night periods for the BS4142:2014 assessment.
- 2.1.3 The monitoring was conducted using 3 x Type 1 NTi XL2 sound level meter with batteries and outdoor microphone protection.
- 2.1.4 All measurements were taken after a field calibration was undertaken to ensure accuracy and repeatability of measurements. Drift was also checked post measurement to validate the measurements taken.
- 2.1.5 Further data such as wind speed, wind direction, rainfall intensity, temperature and cloud cover were all recorded at the beginning and end of the assessment at the monitoring location.
- 2.1.6 Any anomalies (such as noise by the engineer during setup and collection of the kit) were removed from the survey for a true reflection of the ambient levels in the vicinity. This was done by recording audio throughout the survey at each location and listening back through the files during the analysis process to confirm what was recorded manually during the survey.

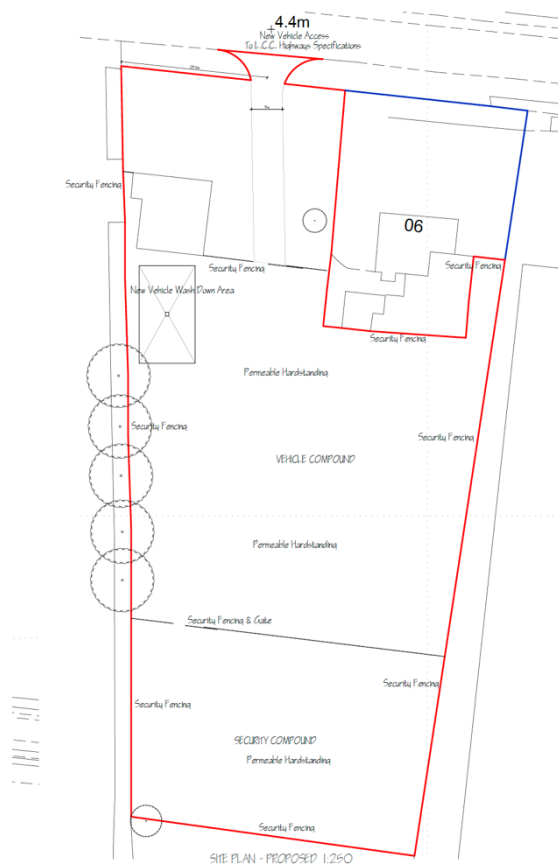
## 2.2 Plan Views of Site with Designated Work Areas

Figure 4



## 2.2 Proposed Development

Figure 5



## 3.0 Legislation

3.0.1 The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England and "these policies articulate the Government's vision of sustainable development." In respect of noise, Paragraph 174 of the NPPF states the following:

"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...."

Paragraph 185 goes on to mention:

"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;
- 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;"

3.0.2 The NPPF reinforces the March 2010 DEFRA publication, "Noise Policy Statement for England" (NPSE), which states three policy aims, as follows:

"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."

3.0.3 Together, the first two aims require that no significant adverse impact should occur and that, where a noise level which falls between a level which represents the lowest observable adverse effect and a level which represents a significant observed adverse effect, then according to the explanatory notes in the statement:

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

### **3.1 BS4142:2014 +A1 (2019)**

3.1.1 Noise effects on residential properties have been assessed according to the guidance in BS 4142:2014. This standard primarily provides a numerical method by which to determine the significance of sound of an industrial nature (i.e. the 'specific sound' from the proposed development) at residential sensitive receptors.

3.1.2 The specific sound level may then be corrected for the character of the sound (e.g. perceptibility of tones and/or impulses), if appropriate, and it is then termed the 'rating level', whether or not

a rating penalty is applied. The 'residual sound' is defined as the ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.

- 3.1.3 According to BS 4142:2014, the background sound levels adopted for the assessment should be representative of the periods being assessed. The standard recommends that the background sound level should be collected from continuous measurements of normally not less than 15-minute intervals. However, the Standard states that there is no 'single' background sound level that can be derived from such measurements. It is particularly difficult to determine what is 'representative' of the night-time period because it can be subject to a wide variation in background sound levels between the shoulder night periods.
- 3.1.4 The method chosen for this section of the report is to use the data collected at the nearest NSR for the day and night periods to provide the ambient and background noise levels. The mode  $L_{Aeq\_1hr(\\text{Day})}$  and  $L_{Aeq\_15min(\\text{Night})}$  value will then be used for each time period over the course of the measurement as the most appropriate way of creating a representative value.
- 3.1.5 The specific sound levels have been determined separately in terms of the  $L_{Aeq1hr}$  during the daytime  $L_{Aeq15min}$  during the night-time. Daytime is typically between 07:00 and 23:00 hours and night-time is typically between 23:00 and 07:00 hours, so these periods have been adopted for this assessment.
- 3.1.6 At each of the most likely sensitive receptor locations, the rating level has been determined from the predicted specific sound level. Where it has considered it to be appropriate, a rating penalty has been applied for tonality, impulsivity and/or intermittent specific sounds as described in the commentary to paragraph 9.2 of BS4142:2014. This has been applied with consideration for the main sound sources from site that contribute to the level of specific sound at the receptor location.
- 3.1.7 As per the requirements of the standard, an initial estimate of the impact of the specific sound has been obtained by subtracting the measured background sound level from the rating level of the specific sound. Table 2 provides the initial evaluation of impact following this method.

Table 1

| Magnitude  | Difference Between rating Level and Background Level | Comments                                 |
|------------|------------------------------------------------------|------------------------------------------|
| High       | <b>+10dB</b>                                         | <b>Significant Adverse impact Likely</b> |
| Medium     | <b>+5 to +10dB</b>                                   | <b>Adverse impact Likely</b>             |
| Low        | <b>0 to +5 dB</b>                                    | <b>Low Chance of Adverse Impact</b>      |
| Negligible | <b>Less than 0dB</b>                                 | <b>Low Chance of Adverse Impact</b>      |
| No Change  | <b>-10 dB</b>                                        | <b>No adverse impact</b>                 |

3.1.8 Following the initial evaluation of impact, the context of the sound has also been considered, which is a key requirement of the Standard. In evaluation of the context, the following factors have been considered:

- the absolute level of the sound;
- the character and level of the residual sound compared to the character and level of the specific sound and
- 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.

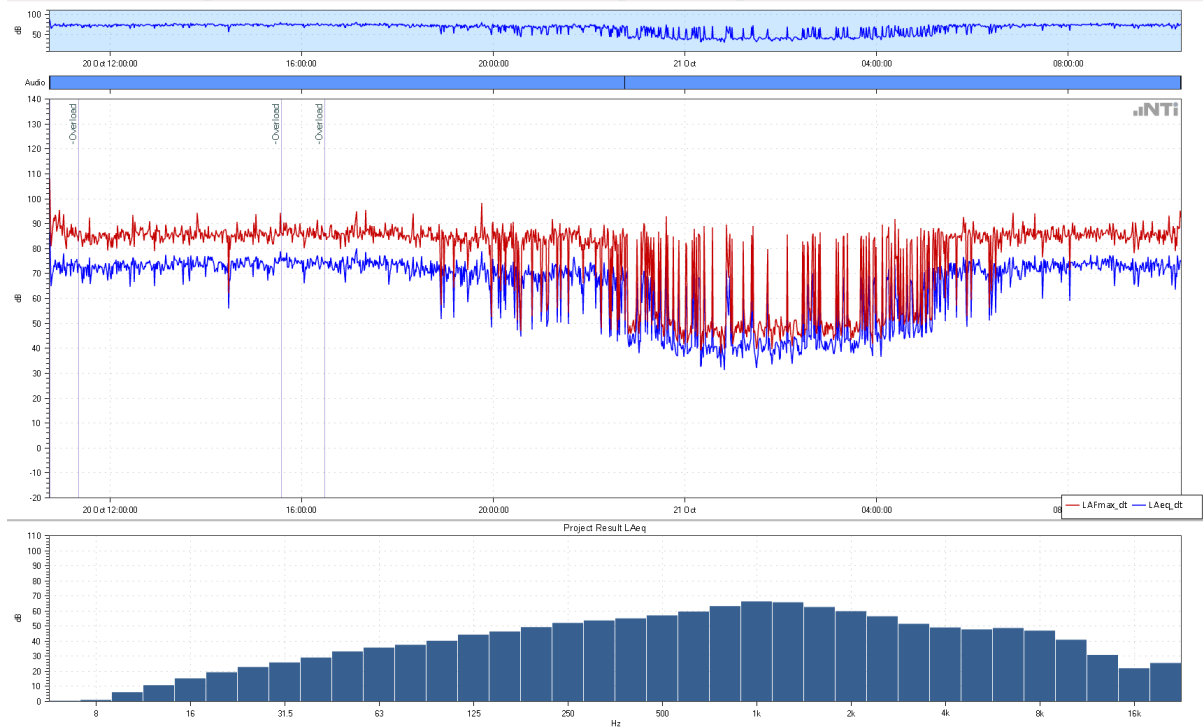
## 4.0 Results

### 4.1 – Unattended Bridge Road – 20/10/25 10.44am – 21/1/25 10.21am

Table 2

|                      | Start<br>Date/Time  | L <sub>Amax</sub><br>(Mode) | L <sub>Aeq1hr</sub><br>(Mode) | L <sub>Aeq15min</sub><br>(Mode) | L <sub>A90</sub> |
|----------------------|---------------------|-----------------------------|-------------------------------|---------------------------------|------------------|
| Day<br>(0700-2300)   | 10.44am<br>20/10/25 | 90.6dBA                     | 72.9dBA                       |                                 | 53.5dBA          |
| Night<br>(2300-0700) | 23.00pm<br>21/10/25 | 86.4dBA                     |                               | 62.8dBA                         | 39.7dBA          |

Figure 6



### Comments

Large amounts of traffic and high background noise

\*based on Appendix C

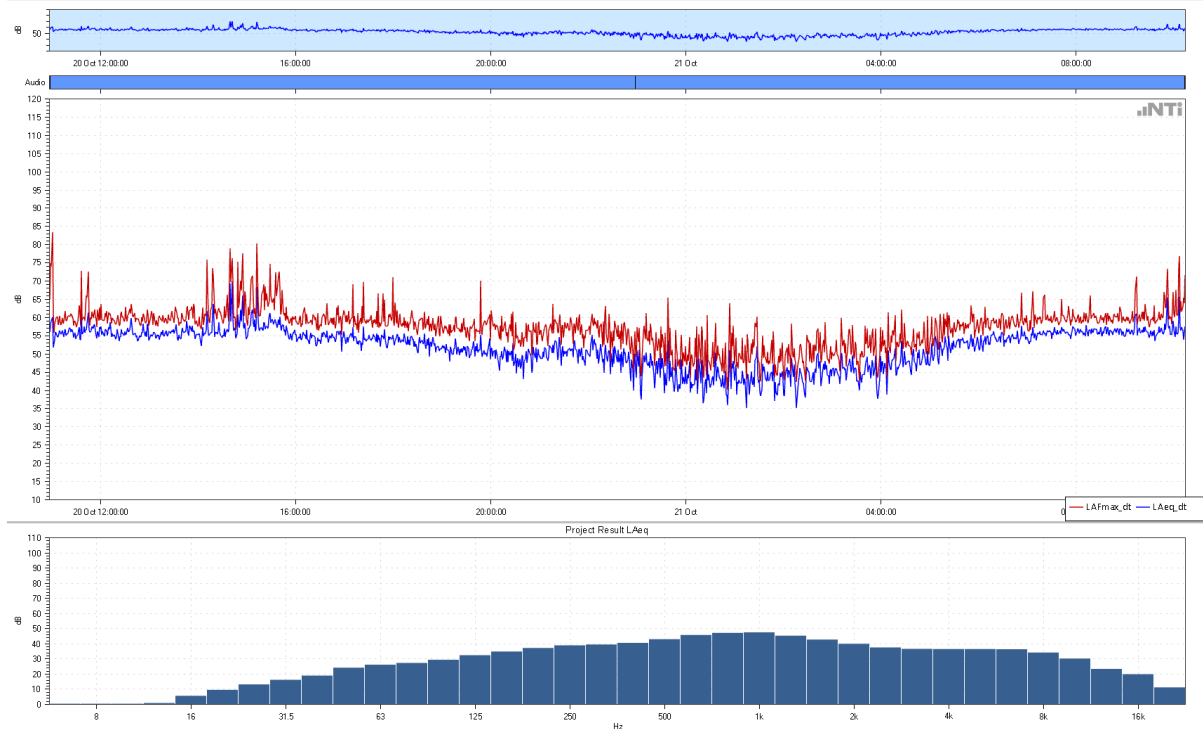
| Time       | Cloud<br>Cover | Temperature<br>(Celcius) | Presence of<br>fog/snow/ice | Wind<br>Speed<br>(m/s) | Wind<br>Direction |
|------------|----------------|--------------------------|-----------------------------|------------------------|-------------------|
| Setup      | 2              | 18                       | No                          | 0.2                    | NNE               |
| Collection | 1              | 15                       | No                          | 2.3                    | NW                |

#### 4.2 – Unattended Jet Wash Area – 20/10/25 10.57am – 21/1/25 10.14am

Table 2

|                      | Start<br>Date/Time  | L <sub>Amax</sub><br>(Mode) | L <sub>Aeq1hr</sub><br>(Mode) | L <sub>Aeq15min</sub><br>(Mode) | L <sub>A90</sub> |
|----------------------|---------------------|-----------------------------|-------------------------------|---------------------------------|------------------|
| Day<br>(0700-2300)   | 10.44am<br>20/10/25 | 65.6dBA                     | 54.8dBA                       |                                 | 50.7dBA          |
| Night<br>(2300-0700) | 23.00pm<br>21/10/25 | 59.2dBA                     |                               | 47.3dBA                         | 41.4dBA          |

Figure 7



#### Comments

Low level background noise mainly from passing traffic on main road. No tonal measurements.

\*based on Appendix C

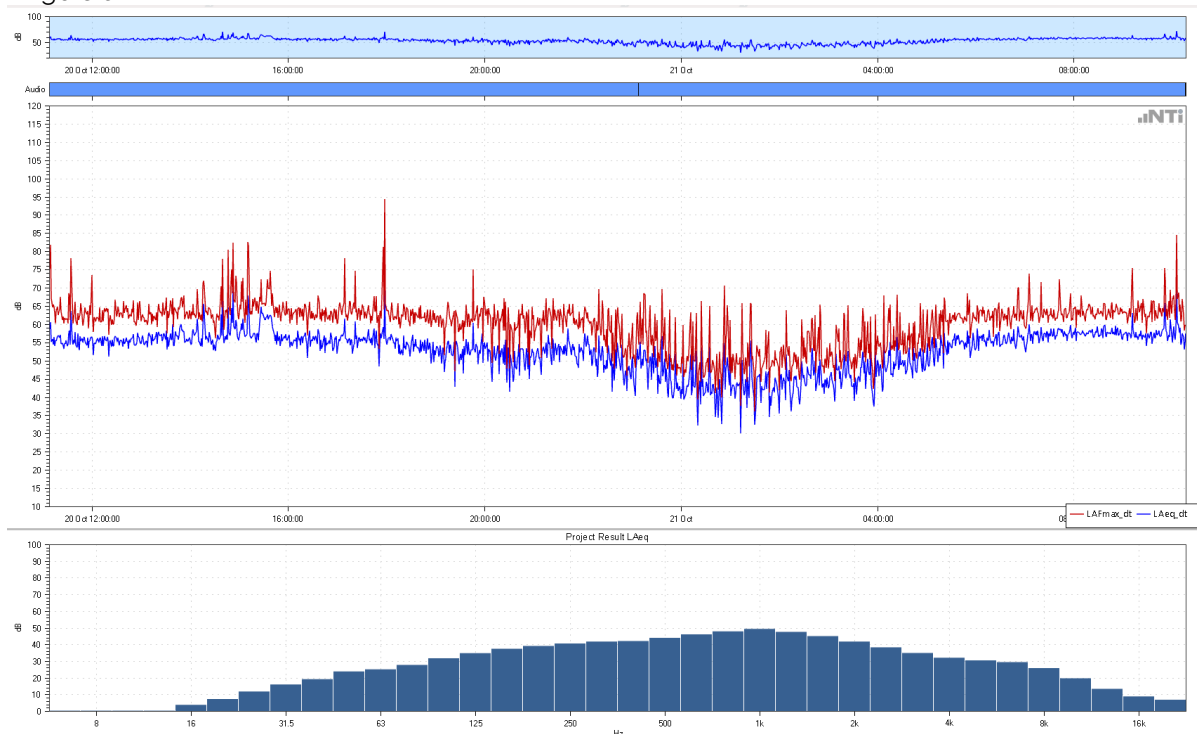
| Time       | Cloud<br>Cover | Temperature<br>(Celcius) | Presence of<br>fog/snow/ice | Wind<br>Speed<br>(m/s) | Wind<br>Direction |
|------------|----------------|--------------------------|-----------------------------|------------------------|-------------------|
| Setup      | 2              | 18                       | No                          | 0.8                    | NNE               |
| Collection | 1              | 15                       | No                          | 1.6                    | NW                |

#### 4.3 – 90 Bridge St Rear Garden – 20/10/25 11.08am – 21/1/25 10.16am

Table 2

|                      | Start<br>Date/Time  | L <sub>Amax</sub><br>(Mode) | L <sub>Aeq1hr</sub><br>(Mode) | L <sub>Aeq15min</sub><br>(Mode) | L <sub>A90</sub> |
|----------------------|---------------------|-----------------------------|-------------------------------|---------------------------------|------------------|
| Day<br>(0700-2300)   | 10.44am<br>20/10/25 | 69.5dBA                     | 56.1dBA                       |                                 | 51.5dBA          |
| Night<br>(2300-0700) | 23.00pm<br>21/10/25 | 65.0dBA                     |                               | 49.1dBA                         | 41.3dBA          |

Figure 8



#### Comments

Low level background noise mainly from passing traffic on main road. No tonal measurements.

\*based on Appendix C

| Time       | Cloud<br>Cover | Temperature<br>(Celcius) | Presence of<br>fog/snow/ice | Wind<br>Speed<br>(m/s) | Wind<br>Direction |
|------------|----------------|--------------------------|-----------------------------|------------------------|-------------------|
| Setup      | 2              | 18                       | No                          | 1.2                    | NNE               |
| Collection | 1              | 15                       | No                          | 0.9                    | NW                |

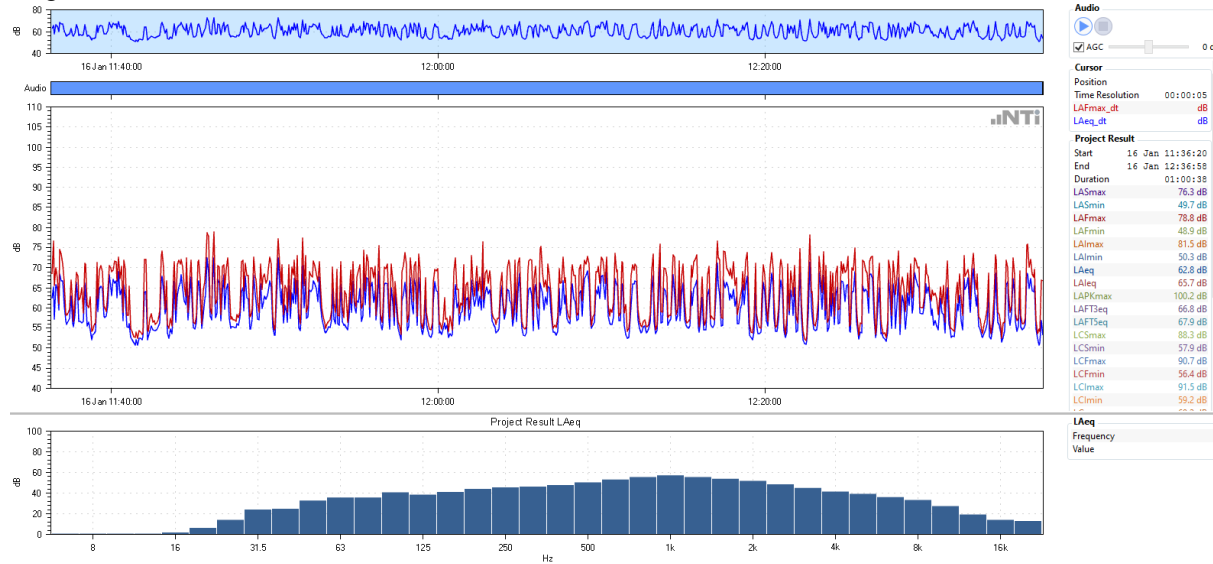


## 4.5 – Attended Service Yard/ Jet Wash Assessment

Table 2

|                    | Start<br>Date/Time  | L <sub>Amax</sub><br>(Mode) | L <sub>Aeq1hr</sub><br>(Mode) | L <sub>Aeq15min</sub><br>(Mode) | L <sub>A90</sub> |
|--------------------|---------------------|-----------------------------|-------------------------------|---------------------------------|------------------|
| Day<br>(0700-2300) | 11.36am<br>16/01/24 | 77.1dBA                     | 62.8dBA                       | 62.6dBA                         | 53.0dBA          |

Figure 8



## Comments

Industrial noise including hand tools, lifting equipment and air-powered tools.

\*based on Appendix C

| Time  | Cloud<br>Cover | Temperature<br>(Celcius) | Presence of<br>fog/snow/ice | Wind<br>Speed<br>(m/s) | Wind<br>Direction |
|-------|----------------|--------------------------|-----------------------------|------------------------|-------------------|
| Setup | 2              | 12                       | No                          | 0.2                    | NNE               |

## 5.0 Analysis of Results

### 5.1 Calculated Results

- 5.1.1 The specific noise level for the main noise sources that will emanate from the proposed site has been calculated using the CadnaA noise modelling software. This is based on the input data from the measured locations at the existing sites. Table 3 below illustrates the input data used. The max value has been used for the service area as the impulsive nature of some of the noise sources is seen as a more accurate representation of any likely disturbances/annoyance for surrounding residents in the area.

Table 3

| Location      | Input SPL Value            |
|---------------|----------------------------|
| HGV Yard      | 73dBA (L <sub>Aeq</sub> )  |
| Jet Wash Area | 77dBA (L <sub>AMax</sub> ) |

- 5.1.2 As well as the above the HGV vehicles will be assessed based on the passing levels, likely number of vehicles per hour, and the time of day. The CadnaA maps have assessed each source individually as well as providing a combined level assuming all noise sources are operational at the same time, therefore creating the worst-case scenario at the nearest NSR point.
- 5.1.3 The HGV movements used for the assessment are based on current movement levels. The report has used the full weeks' worth of vehicle movements to produce the output levels in the noise model. This is shown in table 4 below. The highest values have been used to make sure that the worst-case scenario is covered in the assessment. From table 4 a daytime value of 13 has been used, with a value of 2 during the night period.

Table 4 – number of HGV vehicles in & out

|            |          | 15th   | 16th    | 17th      | 18th     | 19th   | 20th     | 21st   |
|------------|----------|--------|---------|-----------|----------|--------|----------|--------|
|            |          | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| 7am – 11pm | In       |        |         | 1         | 1        |        |          |        |
|            | Out      | 1      |         |           |          |        |          |        |
|            | In & Out | 6      | 9       | 12        | 8        | 10     | 5        | 4      |
| 11pm – 7am | In       |        |         |           |          | 1      | 1        |        |
|            | Out      |        |         | 1         |          |        |          | 1      |
|            | In & Out | 2      |         |           |          |        |          | 1      |

5.1.4 Figure 5- below shows the calculated value for the nearest NSR. This is split into each source type and then the overall impact for the day and night values. Appendix E shows the full calculation spec to include barrier attenuation, ground attenuation and reflections.

Figure 5 – HGV Daytime



Figure 8 – All Sources - Daytime

Figure 6 – Jet Wash Area only





- 5.1.5 The main dominant noise source is the HGV haulage area. Figure 6 shows that the Jetwash has a negligible impact on the nearest NSR location.
- 5.1.6 The combined figures provide a noise impact on the nearest NSR of 63dBA. This can now be used in table 5 below to look at the likelihood of adverse impact on the nearest façade.

Table 5

| Measurement Type                         | Parameter              | Result | Comment                              |
|------------------------------------------|------------------------|--------|--------------------------------------|
| Day                                      |                        |        |                                      |
| Ambient sound                            | L <sub>Aeq</sub>       | 56dBA  | Measured at NSR- Sources not present |
| Residual sound level                     | L <sub>Aeq1hr</sub>    | 56dBA  | Measured at NSR- Sources not present |
| Background sound level                   | L <sub>A901hr</sub>    | 52dBA  | Measured at NSR- Source not present  |
| Specific Sound Level                     | L <sub>Aeq1hr</sub>    | 63dBA  | Modelled                             |
| Acoustic Feature Correction              | dBA                    | +0     | Broadband noise expected             |
| Rating Level                             | dBA                    | 63dBA  |                                      |
| Difference of Background vs Rating level | dBA                    | +11dB  |                                      |
| Chance of Adverse Impact                 |                        |        | Significant Adverse Impact Expected  |
| Night                                    |                        |        |                                      |
| Ambient sound                            | L <sub>Aeq</sub>       | 49dBA  | Measured at NSR- Source not present  |
| Residual sound level                     | L <sub>Aeq15mins</sub> | 49dBA  | Measured at NSR- Source not present  |
| Background sound level                   | L <sub>A9015mins</sub> | 41dBA  | Measured at NSR- Source not present  |
| Specific Sound Level                     | L <sub>Aeq15mins</sub> | 61dBA  | Modelled                             |
| Acoustic Feature Correction              | dBA                    | +0     | Broadband noise expected             |
| Rating Level                             | dBA                    | 61dBA  |                                      |
| Difference of Background vs Rating level | dBA                    | +20dB  |                                      |
| Likelihood of complaints                 |                        |        | Significant Adverse Impact Expected  |

- 5.1.7 As the halage area is by the far the greatest contributor to the average noise levels; this needs to be mitigated. Adding a larger wall around the residential property will only have a small impact on the noise levels experienced at first-floor level at 90 Bridge Riad.
- 5.1.8 As a screen is not practical the other option is distance. The further the haulage area moves away from the property, the more the noise levels reduce. If the haulage store area is moved so there is a 25m buffer between that area and the NSR the figures improve significantly.
- 5.1.9 Figure 9 shows the noise impact from both noise sources if a 25m buffer zone is created. This drops to 56dBA as a combined source or 51dB just

from the haulage area. As we do not have the designs for the Jet Wash area at this point no screens can be specified or recommended that would reduce the noise levels from that as well. It is just recommended that the jet wash is only active during sociable daytime hours, and not for prolonged periods of time.

Figure 9 – HGV with 25m barrier to Residential



- 5.1.10 With the calculated specific noise level being at a maximum of 56dBA at the closest NSR window this has been used in the calculations in table 6 to assess the noise impact of the units for daytime values.
- 5.1.11 Due to the nature of the site there are only the HGV in/out and the parking area that will be noise sources for the night period of 11pm-7am, in accordance with BS4142:2014+A1:2019. Therefore, the night value has been selected as 31.7dBA, rounded to 32dBA, as the highest noise impact on any of the surrounding residential properties.
- 5.1.12 Both the daytime and night-time figures are based on the 2.4m fence being present on the boundary with the neighbouring NSR.

Table 6

| <i>Measurement Type</i>                         | <i>Parameter</i>             | <i>Result</i> | <i>Comment</i>                              |
|-------------------------------------------------|------------------------------|---------------|---------------------------------------------|
| <b>Day</b>                                      |                              |               |                                             |
| <i>Ambient sound</i>                            | <b>L<sub>Aeq</sub></b>       | <b>56dBA</b>  | <b>Measured at NSR- Sources not present</b> |
| <i>Residual sound level</i>                     | <b>L<sub>Aeq1hr</sub></b>    | <b>56dBA</b>  | <b>Measured at NSR- Sources not present</b> |
| <i>Background sound level</i>                   | <b>L<sub>A901hr</sub></b>    | <b>52dBA</b>  | <b>Measured at NSR- Source not present</b>  |
| <i>Specific Sound Level</i>                     | <b>L<sub>Aeq1hr</sub></b>    | <b>56dBA</b>  | <b>Modelled</b>                             |
| <i>Acoustic Feature Correction</i>              | <b>dBA</b>                   | <b>+3</b>     | <b>Broadband noise expected</b>             |
| <i>Rating Level</i>                             | <b>dBA</b>                   | <b>56dBA</b>  |                                             |
| <i>Difference of Background vs Rating level</i> | <b>dBA</b>                   | <b>+4dB</b>   |                                             |
| <i>Likelihood of complaints</i>                 |                              |               | <b>Low Chance of Adverse Impact</b>         |
| <b>Night</b>                                    |                              |               |                                             |
| <i>Ambient sound</i>                            | <b>L<sub>Aeq</sub></b>       | <b>49dBA</b>  | <b>Measured at NSR- Source not present</b>  |
| <i>Residual sound level</i>                     | <b>L<sub>Aeq15mins</sub></b> | <b>49dBA</b>  | <b>Measured at NSR- Source not present</b>  |
| <i>Background sound level</i>                   | <b>L<sub>A9015mins</sub></b> | <b>41dBA</b>  | <b>Measured at NSR- Source not present</b>  |
| <i>Specific Sound Level</i>                     | <b>L<sub>Aeq15mins</sub></b> | <b>32dBA</b>  | <b>Modelled</b>                             |
| <i>Acoustic Feature Correction</i>              | <b>dBA</b>                   | <b>+0</b>     | <b>Broadband noise expected</b>             |
| <i>Rating Level</i>                             | <b>dBA</b>                   | <b>32dBA</b>  |                                             |
| <i>Difference of Background vs Rating level</i> | <b>dBA</b>                   | <b>-9dB</b>   |                                             |
| <i>Likelihood of complaints</i>                 |                              |               | <b>Low Chance of Adverse Impact</b>         |

## **6.0 Conclusion and Further Comments**

### **6.1 Discussion of Levels**

- 6.1.1 The specific noise level of the HGV yard, vehicle movement and the service buildings are below the required levels, in accordance with BS4142:2014, for there to be anything more than a low chance of adverse impact on the nearest NSR. As there is a 'low chance of adverse impact' the scheme should not be denied on a noise impact basis.
- 6.1.2 The night-time levels are based on the Jet Wash area not being in used and there being minimal activity on site with the haulage vehicles. This is seen to represent the true nature for the predicted noise levels in the area.
- 6.1.3 If only the HGV area is considered with the proposed 25m buff the daytime levels would be predicted as 1dB below the background noise level, which still provides the result of 'low chance of adverse impact' in accordance with BS4142:2014.

## 7.0 Credentials

| Name                    | Title                                                                              | Credentials                              |
|-------------------------|------------------------------------------------------------------------------------|------------------------------------------|
| James Flitton BSc AMIOA | Acoustic Consultant                                                                | IOA Diploma in Acoustics & Noise Control |
|                         |                                                                                    | Associate Member Institute of Acoustics  |
|                         |                                                                                    | Affiliate Member of IDE                  |
|                         |                                                                                    | CSCS Professionally Qualified person     |
| Signed                  |  |                                          |

## Appendix A – Acoustic Terminology

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Noise Level | The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near ( $L_{Aeq,T}$ ).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Decibel (dB)        | A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds $s_1$ and $s_2$ is given by $20 \log_{10} (s_1/s_2)$ . The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is $20\mu\text{Pa}$ . The threshold of normal hearing is in the region of 0 dB and 140 dB is the threshold of pain. A change of 1 dB is only perceptible under controlled conditions.                                                                                                  |
| dB(A), $L_{Ax}$     | Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) broadly agree with people's assessment of loudness. A change of 3 dB(A) is the minimum perceptible under normal conditions, and a change of 10 dB(A) corresponds roughly to halving or doubling the loudness of a sound. The background noise in a living room may be about 30 dB(A); normal conversation about 60 dB(A) at 1 metre; heavy road traffic about 80 dB(A) at 10 metres; the level near a pneumatic drill about 100 dB(A). |
| Fast Time Weighting | Setting on sound level meter, denoted by a subscript F, that determines the speed at which the instrument responds to changes in the amplitude of any measured signal. The fast time weighting can lead to higher values than the slow time weighting when rapidly changing signals are measured. The average time constant for the fast response setting is 0.125 (1/8) seconds.                                                                                                                                                                                                                                                                             |
| Free-field          | Sound pressure level measured outside, far away from reflecting surfaces (except the ground), usually taken to mean at least 3.5 metres                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Façade              | Sound pressure level measured at a distance of 1 metre in front of a large sound reflecting object such as a building façade.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| $L_{Aeq,T}$         | A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.                                                                                                                                                                                                                                                                                                                                                                                                        |
| $L_{max,T}$         | A noise level index defined as the maximum noise level recorded during a noise event with a period T. $L_{max}$ is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall $L_{eq}$ noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.                                                                                                                                                                                                                                                                         |
| $L_{10,T}$          | A noise level index. The noise level exceeded for 10% of the time over the period T. $L_{10}$ can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise. $L_{A10,18h}$ is the A-weighted arithmetic average of the 18 hourly $L_{A10,1h}$ values from 06:00-24:00.                                                                                                                                                                                                                                                                                                                                             |
| $L_{90,T}$          | A noise level index. The noise level exceeded for 90% of the time over the period T. Generally used to describe background noise level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Appendix B – Survey Instrumentation

| Type       | Manufacturer | Model  | Serial Number | Last Cal   | Cal Due    |
|------------|--------------|--------|---------------|------------|------------|
| SLM        | NTi          | XL2-TA | A2A-18475-E0  | 12/11/2024 | 12/11/2026 |
| Pre-amp    | NTi          | MA220  | 9378          | 12/11/2024 | 12/11/2026 |
| Microphone | NTi          | MC230A | A19093        | 12/11/2024 | 12/11/2026 |
| Calibrator | NTi          | CAL200 | 19829         | 12/11/2024 | 12/11/2025 |
| SLM        | NTi          | XL3-TA | A3A-1773-FO   | 09/07/2025 | 09/07/2027 |
| Pre-amp    | NTi          | MA220  | 15205         | 09/07/2025 | 09/07/2027 |
| Microphone | NTi          | MC230A | A31329        | 09/07/2025 | 09/07/2027 |
| SLM        | NTi          | XL2-TA | A2A-18475-E0  | 12/11/2024 | 12/11/2026 |
| Pre-amp    | NTi          | MA220  | 9378          | 12/11/2024 | 12/11/2026 |
| Microphone | NTi          | MC230A | A19093        | 12/11/2024 | 12/11/2026 |
| Calibrator | NTi          | CAL200 | 19829         | 12/11/2024 | 12/11/2025 |
| SLM        | NTi          | XL2-TA | A2A-18928-E0  | 06/11/2025 | 06/11/2027 |
| Pre-amp    | NTi          | MA220  | 9785          | 06/11/2025 | 06/11/2027 |
| Microphone | NTi          | MC230A | A20919        | 06/11/2025 | 06/11/2027 |

## Appendix C – Weather Conditions Chart Used

| Weather Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                                                                                  |                     |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------|---------------------|---------------|
| Measurement Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Date/Time | Description                                                                      | Beginning of Survey | End of Survey |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Temperature:                                                                     |                     |               |
| <div> <p><b>Cloud Cover</b></p> <p>Symbol    Scale in oktas (eighths)</p> <p> 0    Sky completely clear</p> <p> 1</p> <p> 2</p> <p> 3</p> <p> 4    Sky half cloudy</p> <p> 5</p> <p> 6</p> <p> 7</p> <p> 8    Sky completely cloudy</p> <p> (9)    Sky obstructed from view</p> </div> |           | Precipitation:                                                                   |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Cloud cover (oktas - see guide)                                                  |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Presence of fog/snow/ice                                                         |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Presence of damp roads/wet ground                                                |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Wind Speed (m/s)                                                                 |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Wind Direction                                                                   |                     |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           | Conditions that may cause temperature inversion (i.e. calm nights with no cloud) |                     |               |

