



ADDENDUM REPORT

on behalf of

LIDL GB LTD

for the site at

FALLOWFIELD RETAIL PARK, MANCHESTER M14 6FS

REPORT DATE: 7 SEPTEMBER 2022

REPORT NUMBER: 102452-4

**Miller Goodall Ltd
Ground Floor
Ashworth House
Deakins Business Park
Blackburn Road
Egerton
Bolton
Lancashire
BL7 9RP**

Tel: 01204 596166

www.millergoodall.co.uk

Company registration number 5201673

Summary

A Noise Assessment was undertaken with respect to the impact of noise from a proposed Lidl Store on the Fallowfield Retail Park site (report ref 102452_V3), submitted in support of a planning application for the site (application number 130189/FO/2021).

The proposed Lidl store has the following condition (10) for delivery hours:

Deliveries, servicing, and collections, including waste collections shall not take place outside the following hours:

07:30 to 20:00 hrs Monday to Saturday

No deliveries/waste collections on Sundays or Bank Holidays.

This report assesses noise from deliveries and is an addendum to Miller Goodall report ref 102452_V3 to support a section 73 variation to the delivery hours condition. Noise from deliveries was assessed and worst-case noise monitoring was undertaken at the site to determine whether extended delivery hours were possible at the site.

Based on the available information within Noise Assessment 102452_V3, and this addendum report, the impact of deliveries from noise emissions from the proposed Lidl store is low when assessed to BS 4142:2014+A1:2019 and it is considered that extended delivery hours are appropriate for the site and the condition (10) can be amended.

Our assessment has determined that delivery hours between 05:00 to 00:00 Monday to Sunday, including bank holidays would be acceptable at the site.

Record of changes

Prepared By Jo Miller MIOA

Reviewed By

Michael Rickard MIOA

Signed

Signed

Date

7 September 2022

Date

7 September 2022

Version	Date	Change	Initials
1	7 September 2022	Initial Issue	JLM

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1 Introduction

1.1 Miller Goodall provided a noise assessment (report ref 102452_V3) in support of a planning application (application number 130189/FO/2021) to erect a new Lidl store on the Fallowfield Retail Park site.

1.2 The application was approved with a condition which restricted the delivery hours as follows for the site:

Deliveries, servicing, and collections, including waste collections shall not take place outside the following hours:

07:30 to 20:00 hrs Monday to Saturday

No deliveries/waste collections on Sundays or Bank Holidays.

1.3 These delivery hours would make servicing the site difficult, particularly at weekends.

1.4 This addendum report provides additional noise monitoring data for the site to determine the impact of extended delivery hours on the site. Noise monitoring was based on a worst case, i.e. quietest Sunday times, to determine the impact at this time.

1.5 Monitoring Results

1.5.1 A further assessment was undertaken on 14th August 2022, between 03:55 and 07:00 on a Sunday morning. A summary of the broadband measurement data is provided in Table 1 below and is shown graphically in Chart 1. All data are sound pressure levels in dB re 20 μ Pa. T

1.5.2 It is worth noting that Background Sound Levels in the area would increase later during the day and during the weekday, due to increases in road traffic noise locally.

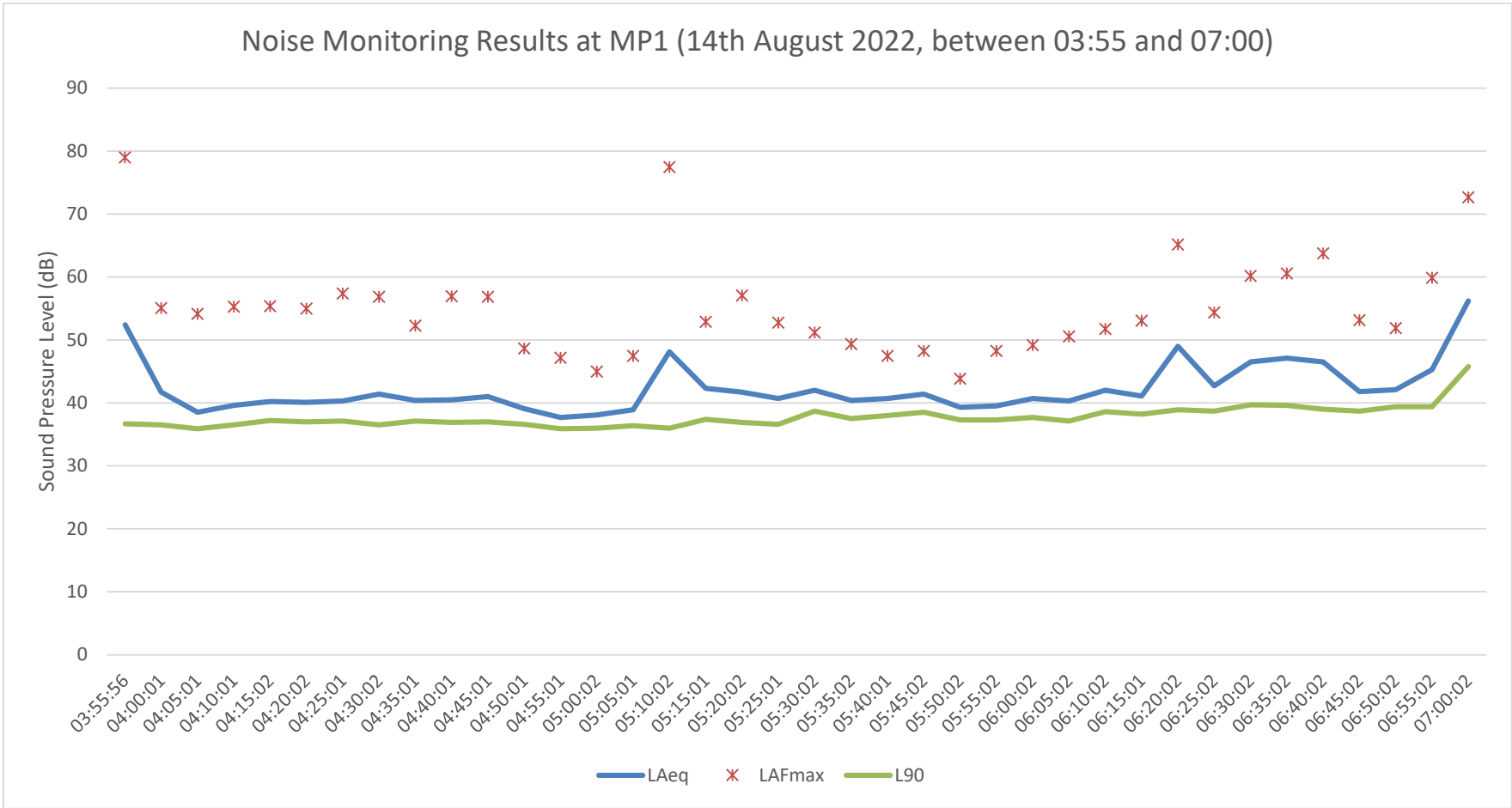
Table 1: Summary of noise measurements at MP1 from 14/08/2022 03:55 – 07:00

Measurement Location	$L_{Aeq,2hour}$ (dB)	$L_{AFmax,5min}$ Range (dB)	Mode $L_{AF90,5min}$ (dB)
MP1	45	44- 79	37

1.5.3 The $L_{AFmax,5min}$ events in the table above were either delivery or stock related activity (however no HGV movement was observed) ongoing at the retail park, that was clearly audible and distinctive against the ambient acoustic environment, which continued until approximately 05:00. Prominent bangs and crashes, roller doors, what sounded like metal scraping along the ground, etc were all audible from the retail park between 04:00-05:00.

1.5.4 The 1 second noise levels have not been presented in this report but are kept on file for future reference.

Chart 1: Time History of Measured Sound Levels at MP1



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1.6 Determination of Representative Background Sound Level

- 1.6.1 $L_{AF90,5min}$ data has been analysed in accordance with BS 4142:2014+A1:2019 to determine a representative Background Sound Level during the noise monitoring. The modal L_{A90} value was 37 dB. This value is in line with the former survey for the site, which was L_{A90} 37 – 39 dB.
- 1.6.2 However, careful consideration should be given to the fact that the monitoring period represents one of the quietest and most sensitive times of the week. Weekday mornings for example, will have higher Background Sound Levels.

2 Noise Modelling

- 2.1 The proposed noise sources were incorporated into the existing model of the site associated with noise assessment 102452_V3. The same modelling data was used as provided within the former report.

2.2 Noise Model Results

- 2.2.1 Full noise model results and grids are shown in Appendix 1A and 1B.
- 2.2.2 The Specific Noise Level resulting from the cumulative contributions of plant and HGV delivery noise was 34 dB $L_{Aeq,1hour}$ for the daytime and 35 dB $L_{Aeq,15min}$ for the night time.
- 2.2.3 It should be noted that the noise levels above are rounded to the closest dB level.
- 2.2.4 The noise modelling results also show that noise levels are considerably higher at the most affected receptor than other nearby receptors. This is due to an opening in the earth bund that the railway runs along (the railway continues over the gap via a bridge). At present the gap is visually screened by greenery, but this does not form acoustic screening. The unscreened area of the railway line is marked in Figure 1.

Figure 1: Screening Provided by Railway Line



2.3 BS 4142:2014+A1:2019 Assessment

- 2.3.1 A BS 4142 noise impact assessment has been undertaken to assess the potential noise impact at the most affected location of the proposed development site and is detailed in this section of the report.
- 2.3.2 37 dB $L_{AF90,15min}$ was determined to be the representative Background Sound Level from both Sunday morning assessments undertaken. When considering the impact on a weekday early morning period, it must be noted that the typical Background Sound Level is likely to be higher than the 37 dB $L_{AF90,15min}$ measured on a Sunday.
- 2.3.3 Table 2 provides an assessment for the HGV deliveries for the worst-case assessment for a Sunday early morning.

Table 2: BS 4142:2014+A1:2019 Cumulative Impact of Plant and HGV Delivery Noise

Assessment Period	Predicted Specific Noise Level (dB)	Acoustic Feature Correction (dB)	Rating Level (dB)	Background Sound Level ($L_{AF90,5min}$, dB)	Excess of Rating Level over Background Sound Level (dB)	Initial Estimate of Impact
Weekend Night-time (23:00-07:00)	35 ($L_{Aeq,1hour}$)	+ 3 (Impulsivity)	38	37	+1	Low Impact
Daytime (07:00-23:00)	34 ($L_{Aeq,15min}$)	+ 3 (Impulsivity)	37	>37	0 (minimum below)	Low Impact

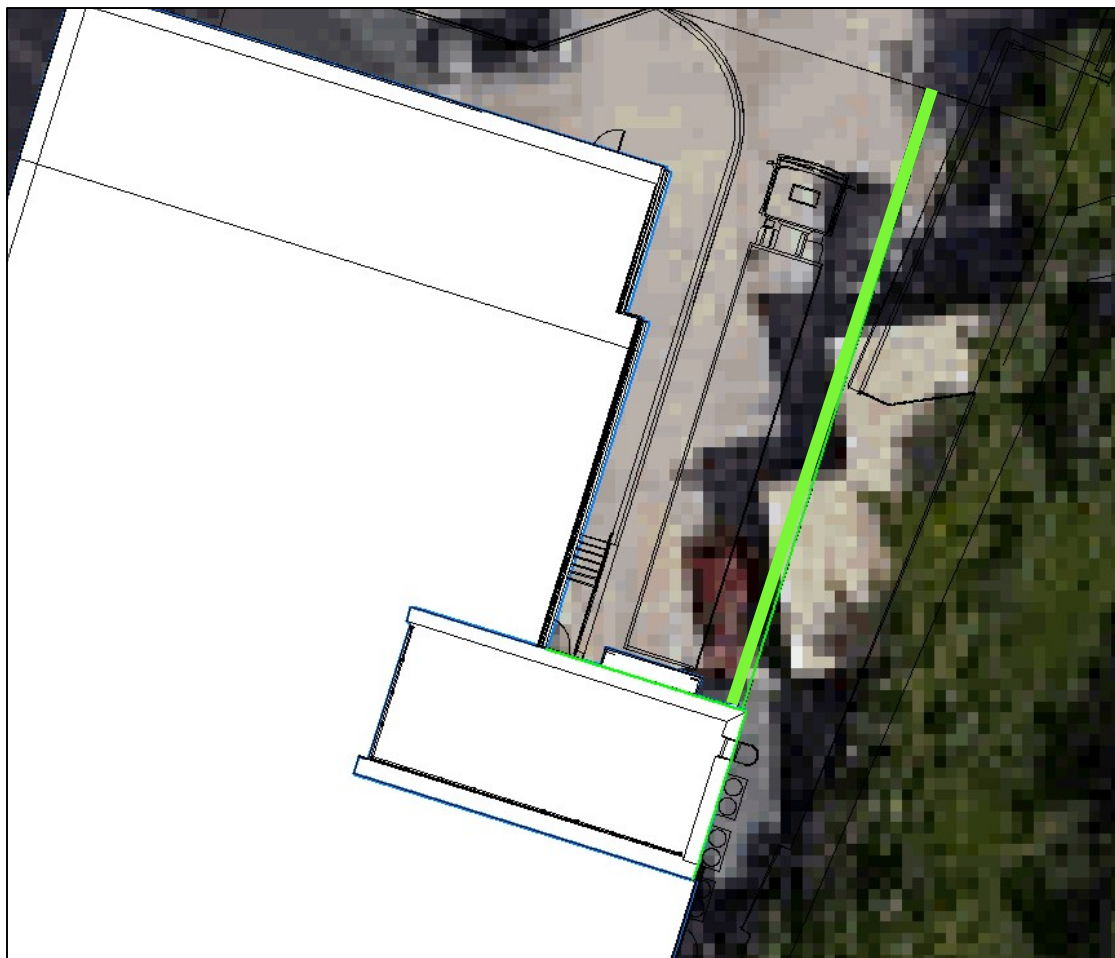
- 2.3.4 A 3 dB Character Correction has been applied for impulsivity. A 6 dB Character Correction has not been applied because, the HGV backs up directly to the loading bay, allowing the goods to be moved directly into the store from the back of the wagon. Impulsive characteristics caused by the unloading of goods is effectively an internal process and would therefore not be as perceptible at the receptors, as for example, a delivery where the goods exited the HGV via a tail-lift and were rolled externally into the store.
- 2.3.5 Although the above assessment does not meet the Local Authority Criteria of a Rating Level 5 dB below the Background Sound Level, it should be recognised that the delivery process incorporates a number of control and noise management measures (described in Section 7.2 of report ref:102452V3), and that the assessment above is based on the Background Sound Level of what is likely to be one of the quietest periods of the week.
- 2.3.6 It is likely that during a Sunday daytime, the Local Authority's criteria will be achieved by a significant margin.
- 2.3.7 It should also be noted that delivery activities were observed just after 06:00 hrs during the noise survey. We are not aware of any complaints to date in relation to existing deliveries at the site. We would therefore recommend that delivery hours are extended to 05:00-00:00 hrs daily.

3 Mitigation Measures

3.1 Acoustic Barrier

- 3.1.1 As discussed in 102542V3, it is recommended that a noise barrier is erected to provide additional screening to the loading bay area, due to a gap in the mound of earth upon which the railway line runs, which exposes some residential properties along Peaceville Road. The barrier results in a reduction of 7 dB within the noise model.
- 3.1.2 The barrier is to be constructed from continuous, imperforate material with a minimum mass of 12 kg/m^2 and is to extend from the ground to a minimum height of 2.5 m above the level of the site. The barrier must not be within the recessed loading bay area (e.g., the barrier is in addition to the screening provided by the recessed loading bay, and the recessed loading bay does not form part of the 2.5 m of screening required) Close-boarded or overlapped timber panelling would be suitable in this regard; hit-and-miss fencing would not. Alternatively, a proprietary acoustic fence with a minimum weighted sound reduction index of 25 dB R_w would be appropriate.
- 3.1.3 The location of the proposed barrier is indicated in Figure 2, below:

Figure 2: Location of Barrier (marked in green)



- 3.2 It should be noted that the barrier extends further than the 15 m length of the HGV. The gap in the earth mound is directly north east of the loading bay area, and the barrier would become less effective if the length of barrier were to be reduced.
- 3.3 Often, the visual impact of barriers on residents is considered. In the case of the recommended barrier, it would be screened from view entirely from properties along Peaceville Road due to the elevated railway line. The gap in the earth directly to the north east is entirely screened from view with greenery within the Network Rail land, therefore preventing any potential visual impact to the residents.

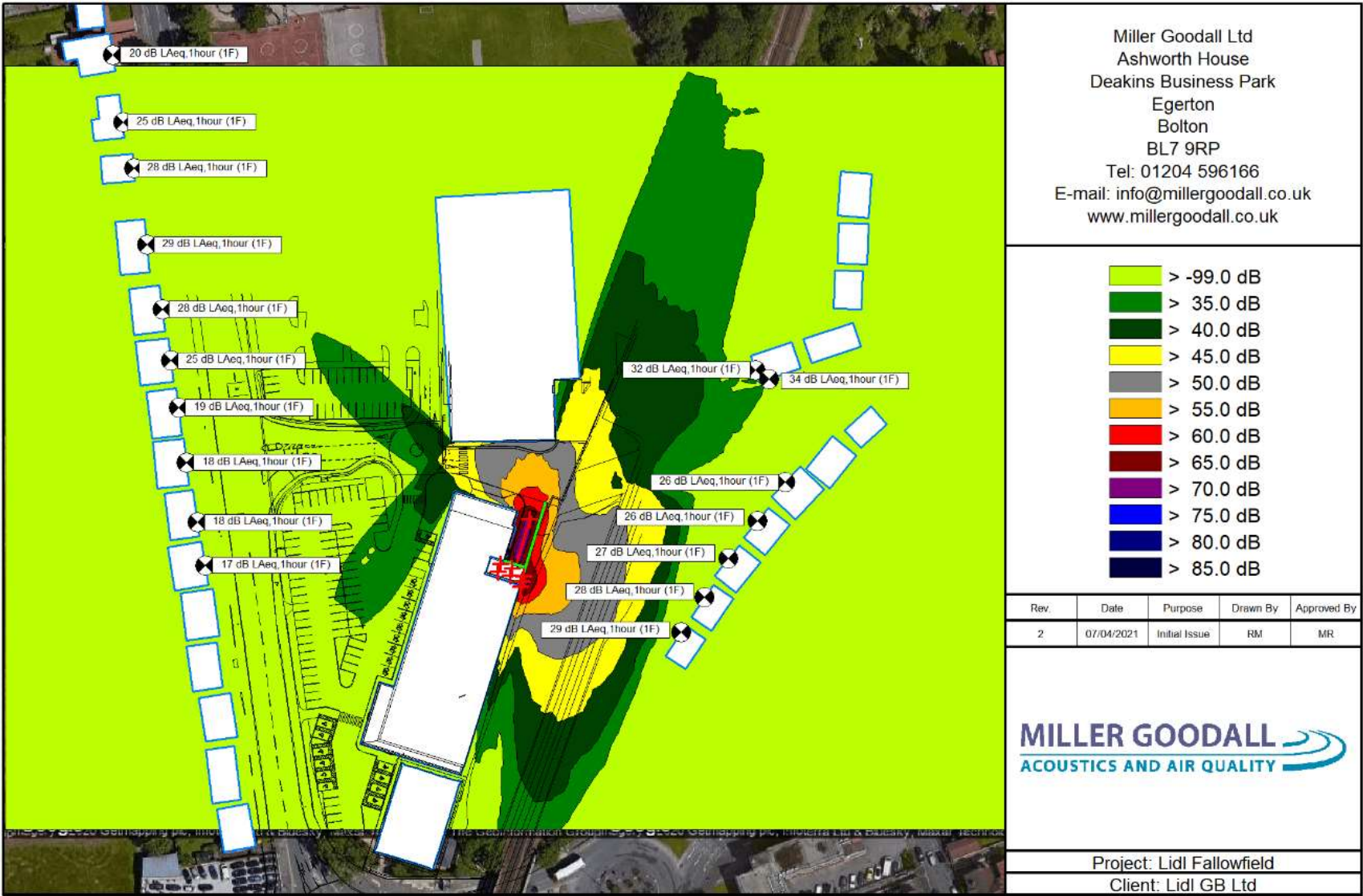
4 Conclusions

- 4.1 A Noise Assessment was undertaken with respect to the impact of noise from a proposed Lidl Store on the Fallowfield Retail Park site (report ref 102452_V3), submitted in support of a planning application for the site (application number 130189/FO/2021).
- 4.2 The approval has been granted with a condition restricting delivery to the site on Sunday's and Bank Holidays. This addendum report has been undertaken to determine whether deliveries at the site can be extended.
- 4.3 This report assesses noise from fixed plant and HGV's associated the Lidl store and is an addendum to Miller Goodall report ref 102452_V3. Further background noise monitoring has been undertaken at the quietest time during a Sunday morning to determine a representative background sound level.
- 4.4 Based on the available information within Noise Assessment 102452_V3, and this addendum report, the impact of noise from HGV deliveries is low when assessed to BS 4142:2014+A1:2019. Consequently, it is recommended that the delivery hours are extended on the site to:

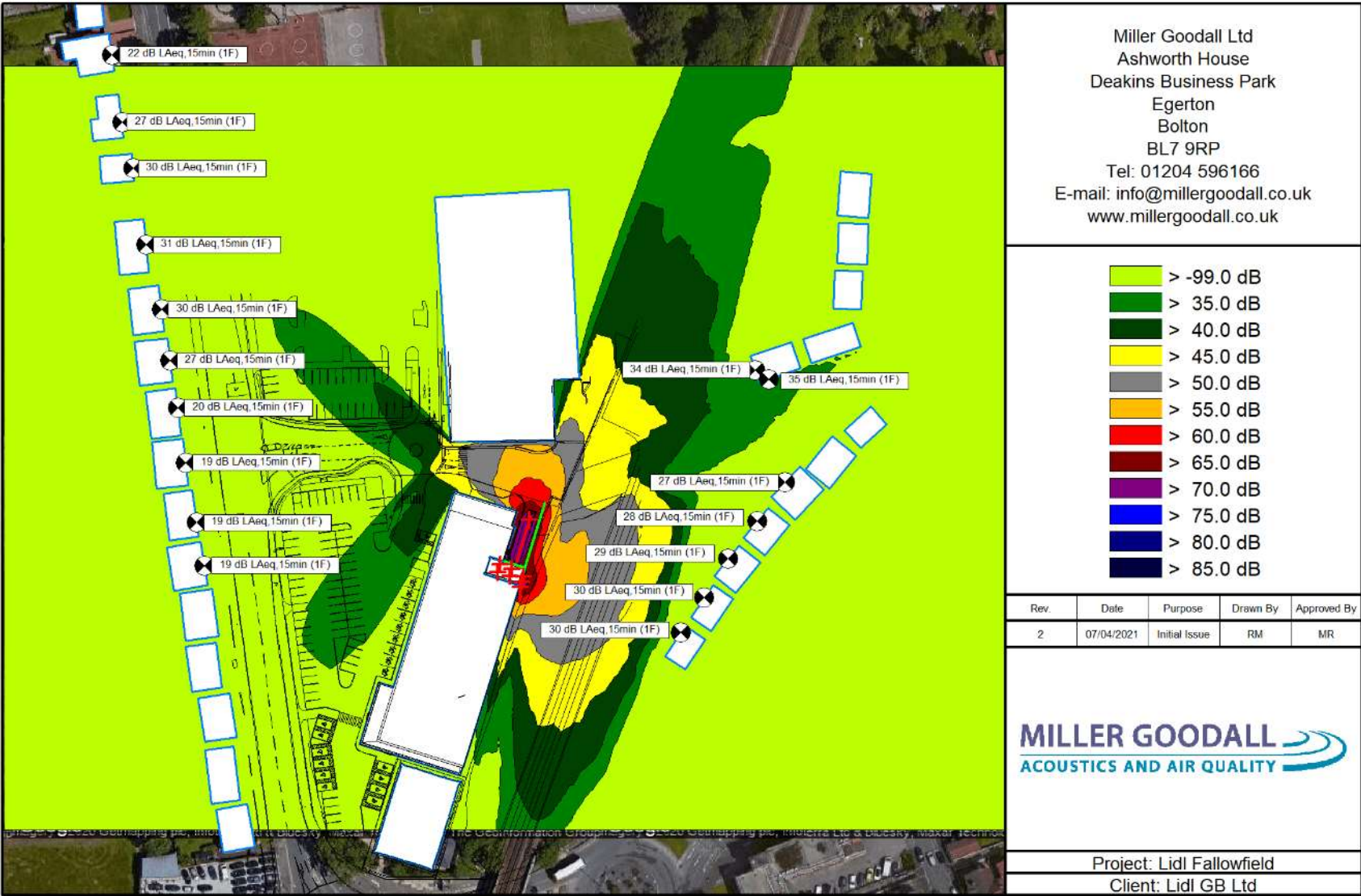
Monday to Sunday (including Bank Holiday)

05:00 to 00:00.

Appendix 1A: Predicted Daytime HGV Delivery and Plant Noise Specific Noise Level – 4.0m Grid Height (dB)



Appendix 1B: Predicted Night-time HGV Delivery and Plant Noise Specific Noise Level – 4.0m Grid Height (dB)



Glossary of Terms

Decibel (dB) The unit used to quantify sound pressure levels; it is derived from the logarithm of the ratio between the value of a quantity and a reference value. It is used to describe the level of many different quantities. For sound pressure level the reference quantity is 20 μPa , 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 usually only perceptible under controlled conditions.

dB L_A 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 L_A broadly agree with an individual's assessment of loudness. A change of 3 dB L_A is the minimum perceptible under normal conditions, and a change of 10 dB L_A corresponds roughly to halving or doubling the loudness of a sound. The background noise level in a living room may be about 30 dB L_A ; normal conversation about 60 dB L_A at 1 meter; heavy road traffic about 80 dB L_A at 10 meters; the level near a pneumatic drill about 100 dB L_A .

$L_{A90,T}$ The A weighted noise level exceeded for 90% of the specified measurement period (T). In BS 4142: 1997 it is used to define background noise level.

$L_{Aeq,T}$ The equivalent continuous sound level. The sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period (T). $L_{Aeq,T}$ is used to describe many types of noise and can be measured directly with an integrating sound level meter.

