

MILLER GOODALL
ACOUSTICS AND AIR QUALITY

NOISE ASSESSMENT

on behalf of

LIDL GB LTD

for the site at

FALLOWFIELD RETAIL PARK, MANCHESTER

M14 6FS

REPORT DATE: 14 JANUARY 2026

REPORT NUMBER: 102452-9

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

ANC | ACOUSTICS & NOISE CONSULTANTS

Summary

A noise assessment has been undertaken to predict and assess the impact of HGV deliveries and associated servicing operations for the Lidl store at Fallowfield Retail Park, Manchester M14 6FS, in support of an application to vary the existing delivery and servicing hours condition (Condition 11) attached to planning permission *ref. 139751/FO/2024*.

Previous noise impact assessment for the site, reported under ref. 102452_V6, considered both HGV deliveries and fixed plant and recommended that delivery hours could be granted from 07:00 to 23:00 Monday to Saturday and 08:00 to 17:00 Sundays and Bank Holidays, subject to appropriate mitigation and management controls. The Local Authority granted conditional planning approval with a condition limiting deliveries to 07:30 – 20:00 Monday to Saturday, with no deliveries permitted on Sundays or Bank Holidays.

The current assessment focuses solely on HGV deliveries and servicing operations during proposed extended hours relative to the existing condition. The mechanical fixed plant noise is controlled independently and is not reassessed in this report.

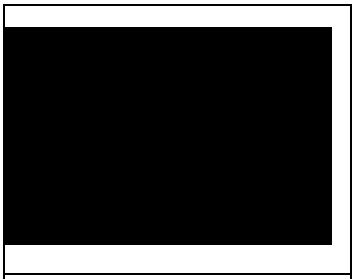
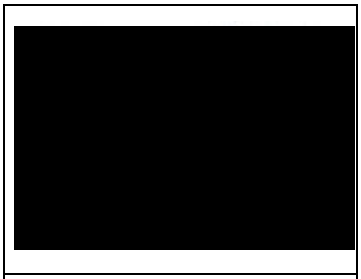
New background sound measurements have been undertaken at locations more representative of residential façades on Birchfields Road and Peaceville Road during key early morning, late evening and Sunday periods that are most relevant to the proposed extended hours. The measurement periods were:

- Sunday 30th November 2025 07:00 hours to 10:00 hours, and 15:00 hours – 18:00 hours
- Tuesday 2nd December 2025 06:00 hours – 07:00 hours, and 20:00 hours – 23:00 hours

Representative background sound levels for each period and location have been derived in accordance with BS 4142:2014+A1:2019 (BS 4142). Noise from HGV deliveries and servicing operations has been predicted at the façades of the nearest dwellings using a 3D CadnaA noise model of the site and surrounding area, based on the consented layout and previously agreed mitigation, including the delivery bay acoustic fence.

The predicted rating levels during the various extended periods have been compared with the corresponding representative background sound levels to determine the likely impact in BS 4142 terms. The assessment predicts a low noise impact during all assessed periods, and it is therefore recommended that HGV deliveries can be permitted to occur between 06:00 – 23:00 hours Monday – Saturday, and 07:00 – 18:00 Sundays and Bank Holidays, without adversely impacting the residential amenity of the worst-affected noise-sensitive receptors.

Record of changes

Prepared By	William Wright MIOA	Reviewed By	Lise W. Tjellesen MIOA
Signed		Signed	
Date	14 January 2026	Date	14 January 2026

Version	Date	Change	Initials
1	14 January 2026	Initial Issue	WW

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Contents

Summary **1**

Contents **4**

1 Introduction **6**

2 Site Description **6**

3 Proposed Development **7**

4 Policy Context **7**

4.1 Noise Policy Statement for England 7

4.2 National Planning Policy Framework 9

4.3 Planning Practice Guidance – Noise 10

4.4 Local Planning Policy 11

5 Acoustic Standards and Guidance **13**

5.1 BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound' 13

6 Noise Survey **14**

6.1 Measurements of Existing Noise Sources 14

6.2 Monitoring Results 18

6.3 Determination of Representative Background Sound Level 20

7 Impact of Noise from the Proposed Development **21**

7.1 Noise Modelling 21

7.2 Noise Sensitive Receptor and Prediction Heights 22

7.3 Modelling of HGV Delivery Noise 22

7.4 Modelling of Baseline Mitigation 23

7.5 Noise Model Results 23

7.6 BS 4142 Assessment 24

7.7 Context and Summary of Assessment 26

8 Mitigation Measures **29**

8.2 Consideration of Other Discipline Requirements 29

9 Conclusions **29**

APPENDICES 31

Appendix 1: Site Location, Monitoring Location and Most Affected Noise Sensitive Receptor 33

Appendix 2: Proposed Development Plan, Including Modelled Mitigation 35

Appendix 3: Predicted HGV Delivery Specific Noise Level – 4.0 m Grid Height ... 37

Glossary of Terms 39

1 Introduction

1.1 Miller Goodall Ltd has, on behalf of Lidl GB Ltd, undertaken a noise assessment in respect of the impact of noise from HGV Deliveries associated with a proposed Lidl store on Fallowfield Retail Park, Manchester, to support a variation of Condition 11 of planning permission 139751/FO/2024.

2 Site Description

2.1 The site is located at Fallowfield Retail Park, Manchester M14 6FS. The site location is shown outlined in red in Appendix 1. At present the existing site is occupied by commercial tenants, with plant mounted on the eastern facades of the units, and on the roof (see Figure 1). Existing deliveries have been observed at the site at 06:00 hrs on a Sunday morning.

2.2 The site is located off Birchfields Road, which bounds the site to the west. Semi-detached residential dwellings are located on the opposite side of Birchfields Road, with ground floor and first floor windows facing the retail park.

2.3 Directly north of the site, Birchfields Primary School is located.

2.4 To the south of the site, the B5094 Moseley Road and the A34/A5079 Kingsway, both main routes through the area meet. A few commercial premises are also located to the south of the site.

2.5 The site is bounded to the east by a railway line (the Styal Line), a commuter line that links Manchester to Manchester airport. On the opposite side of the railway line, residential dwellings are located along Peaceville Road and Kingsmere Avenue, with ground-floor and first-floor windows. Some properties also have second floor windows. These properties are the closest to the proposed loading bay and plant area.

2.6 Based on the most recent modelling results, the worst-affected noise-sensitive receptors (NSRs) have been identified as 136-138 Birchfields Road (NSR1) to the west and 6 Peaceville Road (NSR2) to the east.

2.7 The railway line is significant within the context of this noise assessment since it is elevated to the site and provides significant screening to the many residential dwellings along Peaceville Road and Kingsmere Avenue (see Figure 1 below).

Figure 1: The existing site



3 Proposed Development

3.1 The proposed development consists of a Lidl supermarket and sub-let units, with 103 parking spaces. The existing retail units would be demolished as part of the proposals. The proposed development plans are shown in Appendix 2.

3.2 The plans show that the HGV loading area is proposed to be located at the northeastern side of the site, between the new Lidl store and the railway line. Dry-Coolers and pumping station plant are proposed to be sited within a rooftop plant area, and outdoor VRF units are proposed to be located at the east side of the store at ground level.

3.3 The plans also show a loading area for the sub-let units (Unit 4 and Unit 4A). Noise emissions associated with Unit 4 and Unit 4A are outside the scope of this assessment and may be addressed by the future tenant at a later date.

4 Policy Context

4.1 Noise Policy Statement for England

4.1.1 The Noise Policy Statement for England (NPSE[1]), published in March 2010, sets out the long-term vision of Government noise policy. The Noise Policy aims, as presented in this document, are:

[1] Noise Policy Statement for England, Defra, March 2010

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

- avoid significant adverse effects on health and quality of life;
- mitigate and minimise adverse effects on health and quality of life; and
- where possible, contribute to the improvement of health and quality of life."

4.1.2 The NPSE makes reference to the concepts of NOEL (No Observed Effect Level) and LOAEL (Lowest Observed Adverse Effect Level) as used in toxicology but applied to noise impacts. It also introduces the concept of SOAEL (Significant Observed Adverse Effect Level) which is described as the level above which significant adverse effects on health and the quality of life occur.

4.1.3 The first aim of the NPSE is to avoid significant adverse effects, taking into account the guiding principles of sustainable development (as referenced in Section 1.8 of the Statement). The second aim seeks to provide guidance on the situation that exists when the potential noise impact falls between the LOAEL and the SOAEL, in which case:

"…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".

4.1.4 Importantly, the NPSE goes on to state:

"This does not mean that such adverse effects cannot occur".

4.1.5 The Statement does not provide a noise-based measure to define SOAEL, acknowledging that the SOAEL is likely to vary depending on the noise source, the receptor and the time in question. NPSE advises that:

"Not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available"

4.1.6 It is therefore likely that other guidance will need to be referenced when applying objective standards for the assessment of noise, particularly in reference to the SOAEL, whilst also taking into account the specific circumstances of a proposed development.

4.2 National Planning Policy Framework

4.2.1 The National Planning Policy Framework (NPPF[2]) initially published in March 2012, was updated in December 2024 with corrections and clarifications in a February 2025 update. One of the documents that the NPPF replaces is Planning Policy Guidance Note 24 (PPG 24) "Planning and Noise"[3].

4.2.2 The revised NPPF advises that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives). One of these is an environmental objective which is described in par. 8 (c):

"to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

4.2.3 At par. 187 we are advised that:

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

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

4.2.4 Par. 198 goes on to state:

"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:

[2] National Planning Policy Framework, Ministry of Housing, Communities and Local Government, December 2024

[3] Planning Policy Guidance 24: Planning and Noise, DCLG, September 1994

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.

4.2.5 Par. 200 seeks to ensure that any development does not prejudice the legally permitted operations and activities of other, existing non-residential uses, stating:

"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."

4.3 Planning Practice Guidance – Noise

4.3.1 As of March 2014, a Planning Practice Guidance[4] for noise was issued which provides additional guidance and elaboration on the NPPF. The guidance was updated in July 2019. It advises that when plan-making and decision-taking, the Local Planning Authority should consider the acoustic environment in relation to:

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

4.3.2 In line with the Explanatory Note of the NPSE, the PPG goes on to reference the LOAEL and SOAEL in relation to noise impact. It also provides examples of outcomes that could be expected for a given perception level of noise, plus actions that may be required to bring about a desired outcome. However, in line with the NPSE, no objective noise levels are provided for LOAEL or SOAEL although the PPG acknowledges that:

[4] Planning Practice Guidance – Noise, http://planningguidance.planningportal.gov.uk/blog/guidance/noise/, 06 March 2014

"...the subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation".

4.3.3 Examples of these factors include:

- The source and absolute noise level of the source along with the time of day that it occurs;
- Where the noise is non-continuous, the number of noise events and pattern of occurrence;
- The frequency content and acoustic characteristics of the noise;
- The effect of noise on wildlife;
- The acoustic environment of external amenity areas provided as an intrinsic part of the overall design;
- The impact of noise from certain commercial developments such as night clubs and pubs where activities are often at their peak during the evening and night.

4.3.4 The PPG also provides general advice on the typical options available for mitigating noise. It goes on to suggest that Local Plans may include noise standards applicable to proposed developments within the Local Authority's administrative boundary, although it states that:

"Care should be taken, however, to avoid these being implemented as fixed thresholds as specific circumstances may justify some variation being allowed".

4.3.5 The PPG was amended in December 2014 to clarify guidance on the potential effect of noise from existing businesses on proposed new residential accommodation. Even if existing noise levels are intermittent (for example, from a live music venue), noise will need to be carefully considered and appropriate mitigation measures employed to control noise at the proposed accommodation.

4.4 Local Planning Policy

4.4.1 Manchester City Council's (MCC's) 'Planning and Noise Technical Guidance, October 2022', states the following in '3.7.1.5 Industrial/Commercial Developments':

"BS 4142 should be used to assess the likely impact of noise from industrial and commercial sources at noise sensitive premises (section 3.5). One of the indications of the impact of a BS 4142 assessment is the lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

The council consider that new developments should contribute and enhanced the area in which they are located and where possible i.e. prevent 'noise creep', contribute to the improvement of people's health and quality of life as per the NPSE. With this in mind the design objective should be:

'The development should be designed so as to achieve a rating of 5 dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.'

Where this criterion cannot be achieved, the various noise control measures considered as part of the assessment should be fully explained (i.e. relocation of noise sources, use of quieter equipment, enclosures, screening, restriction of the hours of operation) and the achievable noise level should be identified. This information will allow a judgement to be made concerning the application and its likely impact on the surrounding area.

In addition to the above, maximum noise levels should also be adequately controlled. Where particular uses generate high noise levels of a short duration (e.g. loud bangs) on a regular basis, these should aim to be controlled so as not to exceed 60 dB (L_{Amax}) at the façade of noise sensitive premises nearby in accordance with the recommendations of the World Health Organisation (section 3.6).

Deliveries and collections are usually controlled by restricting operational hours but depending on the extent of these activities, a Noise Management Plan (NMP) may be requested, which would include an assessment of noise. This would usually involve assessing the noise upon arrival, loading/unloading period and then departure.

The NMP may also need to include controls such as acoustically sealed delivery bays, and restrictions on vehicle mounted refrigeration units and audible alarm systems. Where applicable, the noise assessment will take account of multiple noise sources operating simultaneously and state the cumulative impact."

4.4.2 The guidance then goes on to explain that noise emissions from fixed plant should also be controlled to a Rating level 5 dB below the Background Sound Level.

4.4.3 MCC's overarching design objective of achieving a BS 4142 rating level 5 dB below the typical background level is set out in the context of industrial and commercial noise sources. Delivery and collection activity is addressed separately in the MCC guidance, which indicates these activities are typically controlled through operational restrictions (notably hours) and, where necessary, a Noise Management Plan that assesses noise during arrival, loading and unloading, and departure. In this context, delivery noise is generally managed via operational controls and by demonstrating that maximum noise events are appropriately limited, rather than by relying solely on the 5 dB below the background design objective used for fixed plant and industrial processes.

5 Acoustic Standards and Guidance

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

5.1.1 BS 4142:2014+A1:2019[5] provides guidance on the assessment of the likelihood of complaints relating to noise from industrial sources. It replaced the 1997 edition of the Standard in October 2014 and was amended in June 2019. The amended version corrected a number of printing errors and further clarified that the standard is used to assess external noise levels, and not internal noise levels (although this can form part of the discussion regarding context). The key aspects of the Standard are summarised below.

5.1.2 The standard presents a method of assessing potential noise impact by comparing the noise level due to industrial sources (the Rating Level) with that of the existing background noise level at the nearest noise sensitive receiver in the absence of the source (the Background Sound Level).

5.1.3 The Specific Noise Level - the noise level produced by the source in question at the assessment location - is determined and a correction applied for certain undesirable acoustic features such as tonality, impulsivity or intermittency. The corrected Specific Noise Level is referred to as the Rating Level.

5.1.4 In order to assess the noise impact, the Background Sound Level is arithmetically subtracted from the Rating Level. The standard states the following:

- *Typically, the greater this difference, the greater the magnitude of the impact,*

[5] BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound

- *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,*
- *The lower the Rating Level is relative to the measured Background Sound Level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the Rating Level does not exceed the Background Sound Level, this is an indication of the specific sound source having a low impact, depending on the context.*

5.1.5 In addition to the margin by which the Rating Level of the specific sound source exceeds the Background Sound Level, the 2014+A1:2019 edition places emphasis upon an appreciation of the context, as follows:

> *An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.*

5.1.6 The 2014 edition of BS 4142 also introduced a requirement to consider and report the uncertainty in the data and associated calculations and to take reasonably practicable steps to reduce the level of uncertainty.

6 Noise Survey

6.1 Measurements of Existing Noise Sources

6.1.1 Noise measurements were undertaken during multiple separate site visits at monitoring positions representative of the nearest and worst-affected noise-sensitive receptors (NSRs).

6.1.2 The measurement periods were:

- Sunday 30th November 2025 07:00 hours to 10:00 hours, and 15:00 hours – 18:00 hours
- Tuesday 2nd December 2025 06:00 hours – 07:00 hours, and 20:00 hours – 23:00 hours

2025 Background Sound Survey

6.1.3 Noise measurements were undertaken at locations representative of the nearest and worst-affected residential receptors in accordance with BS 7445-1: 2003[6]. The calibration of the sound level meters was checked before and after each measurement with negligible deviation (<0.1 dB). Details of the equipment used are shown in Table 1, overleaf.

[6] BS 7445-1: 2003 Description and measurement of environmental noise - Part 1: Guide to quantities and procedures

Table 1: Noise monitoring equipment

Measurement Position	Equipment Description	Type Number	Manufacturer	Serial No.	Date Calibrated	Calibration Certification Number
MP1	Class 1[7],[8] Integrating Real Time 1/3 Octave Sound Analyser	NTi XL2-TA	NTi Audio	A2A-11111-E0	16/10/2023	05451/1
	Pre-amplifier	Nti MA220	NTi Audio	6908	16/10/2023	05451/1
	Microphone	NTi MC230A	NTi Audio	A14423	16/10/2023	05451/1
	Class 1 Calibrator[9]	CAL 200	Larson Davies	14154	22/08/2024	06881/2
	Outdoor microphone housing	NTi WP30	NTi Audio	N/A	N/A	N/A
MP2	Class 1[10],[11] Integrating Real Time 1/3 Octave Sound Analyser	NTi XL2-TA	NTi Audio	A2A-15860-E0	27/02/2023	06143/1
	Pre-amplifier	NTi MA220	NTi Audio	8102	27/02/2023	06143/1
	Microphone	NTi MC230A	NTi Audio	A16445	27/02/2023	06143/1
	Class 1 Calibrator[12]	NOR 1251	Norsonic	32798	29/05/2024	U47928
	Outdoor microphone housing	NTi WP30	NTi Audio	NA	NA	NA

[7] IEC 61672-1 (2002) Electroacoustics – Sound level meters Part 1: Specifications

[8] IEC 61260 (1995) Electroacoustics – Octave-band and fractional-octave-band filters

[9] IEC 60942 (2003) Electroacoustics – Sound calibrators

[10] IEC 61672-1 (2002) Electroacoustics – Sound level meters Part 1: Specifications

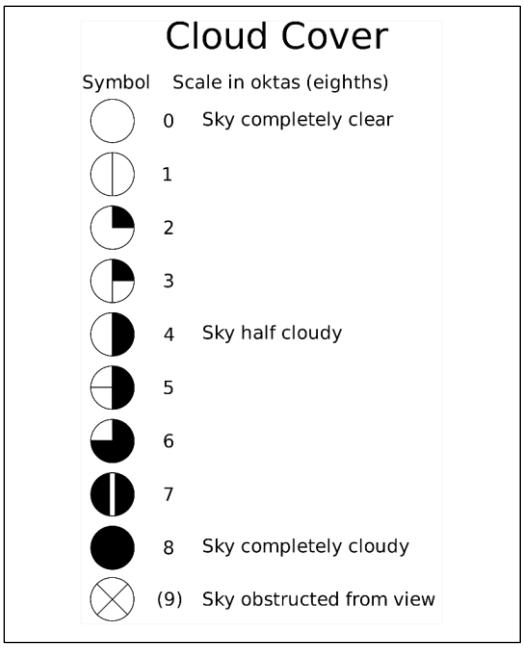
[11] IEC 61260 (1995) Electroacoustics – Octave-band and fractional-octave-band filters

[12] IEC 60942 (2003) Electroacoustics – Sound calibrators

6.1.4 Noise monitoring was undertaken at the times specified in Table 2, below. Weather conditions were determined both at the start and on completion of the survey. The measurement location is shown in Appendix 1.

Table 2: Dates, times and weather conditions during noise measurements

Measurement Locations	Date/Time	Weather conditions		
		Description	Sunday	Tuesday
MP1 and MP2	Sunday 30th November Tuesday 2nd December 2025	Temperature:	3 °C	5 °C
		Precipitation:	Dry	Dry
		Cloud cover (oktas – see opposite):	1	6
		Any fog/snow/ice?	No	No
		Any damp roads/wet ground?	Dry	Slightly damp roads on evening survey
		Wind speed:	< 3 m/s	< 1.5 m/s
		Wind direction:	Various	
		Any conditions that may cause temp. inversion (e.g. calm nights with no cloud):	No	No



6.1.5 MP1 was positioned on the grass verge on the opposite side of Birchfields Road from the nearest residential façades (NSR1), with an approximate set-back from the nearside kerb comparable to the dwellings' set-back on the far side. MP2 was positioned on Peaceville Road, adjacent to No. 6 Peaceville Road (NSR2). The measurement locations are shown on the site location plan in **Appendix 1**.

6.1.6 Measurements were made under free-field conditions at a height of 1.5 m above the ground.

6.1.7 Upon commencement of each of the surveys, the dominant noise source in the area at both monitoring locations was road traffic from Birchfields Road and Kingsway, and it is noticeably louder at MP1 than at MP2. Train passes on the Styal Line were frequent and dominant while occurring.

6.2 Monitoring Results

6.2.1 A summary of the broadband measurement data is provided in Table 3 below. All data are sound pressure levels in dB re 20 µPa.

Table 3: Summary of Results from Background Sound Level Surveys

Measurement Location	Date	Time	$L_{Aeq,T}$ (dB)	$L_{AFmax,T*}$ Range (dB)	Background $L_{AF90,T}$ (dB)
MP1	30/11/2025	07:00 – 08:00	67	82	52
		08:00 – 09:00	68	84	54
		09:00 – 10:00	68	81	56
		15:00 – 16:00	73	96	64
		16:00 – 17:00	73	87	64
		17:00 – 18:00	74	99	65
MP1	02/12/2025	06:00 – 06:15	72	88	55
		06:15 – 06:30	72	84	60
		06:30 – 06:45	74	85	61

Measurement Location	Date	Time	$L_{Aeq,T}$ (dB)	$L_{AFmax,T*}$ Range (dB)	Background $L_{AF90,T}$ (dB)
		06:45 – 07:00	75	86	63
		20:00 – 21:00	73	91	63
		21:00 – 22:00	80	116	62
		22:00 – 23:00	73	101	61
		07:00 – 08:00	53	68	49
		08:00 – 09:00	58	85	49
		09:00 – 10:00	61	99	49
MP2	30/11/2025				
		15:00 – 16:00	58	82	51
		16:00 – 17:00	56	81	51
		17:00 – 18:00	56	80	51
		06:00 – 06:15	57	75	47
		06:15 – 06:30	56	76	49
		06:30 – 06:45	56	75	50
		06:45 – 07:00	59	78	51
MP2	02/12/2025				
		20:00 – 21:00	56	80	48
		21:00 – 22:00	55	81	46
		22:00 – 23:00	56	79	46

* Data were logged at 15-minute intervals. Sunday and Tuesday evening results are presented as 1-hour periods; Tuesday early-morning results are presented at 15-minute resolution. All raw data was post-processed within the Nti processing software Nti Data Explorer (Version 2.26.0.0).

6.3 Determination of Representative Background Sound Level

6.3.1 The $L_{AF90,15min}$ data has been analysed in accordance with BS 4142 to determine a representative Background Sound Level during the noise monitoring. It is appropriate in this case to select the lowest measured background sound level that occurred during each period at both positions for a conservative assessment.

6.3.2 Representative Background Sound Levels

6.3.3 Table 4 presents the representative background sound levels, $L_{A90,15min}$, that have been used for the BS 4142 assessment.

Table 4: Representative Background Sound Levels

NSR	Assessment Period	Representative Background Sound Level, $L_{A90,T}$ (dB)
1	Sunday 07:00 – 10:00	52
	Sunday 15:00 – 18:00	64
	Tuesday 06:00 – 07:00	55
	Tuesday 20:00 – 23:00	61
2	Sunday 07:00 – 10:00	49
	Sunday 15:00 – 18:00	51
	Tuesday 06:00 – 07:00	47
	Tuesday 20:00 – 23:00	46

6.3.4 The proposed representative background sound levels are considered conservative, with the lowest measured sound levels being chosen as assessment criteria.

7 Impact of Noise from the Proposed Development

7.1 Noise Modelling

7.1.1 Prediction of noise levels at sensitive receptors was carried out using CadnaA software package. Miller Goodall Ltd. archive noise data from Lidl HGV deliveries was used to populate an environmental noise model.

7.1.2 General horizontal plan information for the surrounding area, including the proposed development site, was imported from Google Maps. The most up-to-date site layout was then aligned and georeferenced within the model. This was used to determine road positions, building footprint areas and relative locations and is considered accurate to within 5%. Topography was modelled with Digital Terrain Model (DTM) Lidar Survey data obtained from DEFRA to ensure that the screening effects of the railway line were modelled as accurately as possible.

7.1.3 The following parameters were assigned to the model:

- Propagation model: ISO 9613:2024[13]
- Default ground absorption: 0.1 (acoustically reflecting)
- Three orders of reflection
- Buildings are reflecting (smooth, non-structured façade)
- HGV movements were modelled as line sources at a height of 1.0 m above ground level and calibrated using spectral data previously recorded by Miller Goodall Ltd.
- HGV refrigeration units were modelled as line sources (when moving) and point sources (during loading / unloading operations) at a height of 2.5 m above ground level and calibrated using spectral data previously recorded by Miller Goodall Ltd.
- HGV delivery activity is modelled as a 15 m long line source at a height of 1.5 m above the loading bay floor and calibrated using spectral data previously recorded by Miller Goodall Ltd.

[13] ISO 9613-2: 2024 Acoustics - Attenuation of sound during propagation outdoors – Part 2: Engineering method for the prediction of sound pressure levels outdoors.

7.2 Noise Sensitive Receptor and Prediction Heights

7.2.1 The highest modelled specific sound levels occur at 136-138 Birchfields Road (NSR1) and 6 Peaceville Road with respect to HGV delivery. The locations of the most affected NSRs are indicated on the figure in Appendix 1.

7.2.2 Noise level grids are presented in Appendix 3 and are calculated at a height of 4.0 m above ground level to represent the worst case of a bedroom window, which could also be used as living space during the daytime.

7.2.3 The specific sound levels at all noise-sensitive dwellings in the vicinity are annotated on the noise grids in Appendix 3. The annotations on all NSRs, correspond to heights of 4.0 m above ground level.

7.3 Modelling of HGV Delivery Noise

7.3.1 The operation of the whole delivery process is undertaken by one person which reduces the requirement for talking and shouting, and all goods and waste are moved in sealed containers.

7.3.2 The process takes approximately 40 minutes, including the entry of the delivery vehicle into the yard, opening the rear container doors, reversing onto the ramp (reverse alarms restricted as necessary within the site noise management plan), unloading the stock, loading waste to be removed and finally leaving the site.

7.3.3 The loading bay allows goods to be moved internally within the wagon, directly into the Lidl store. The moving of goods is therefore effectively an internal process.

7.3.4 Octave band data for a typical delivery is shown below in Table 5. This data, measured at 2.0 m from the mid-point of the wagon when parked (16.5 m articulated vehicle), shows the measured noise level at a Lidl store in Colne, Lancashire during a delivery adjusted to take account of the contributions from residual sound at the monitoring location due to other noise sources not associated with the LIDL store. This data was measured without refrigeration plant operating on the HGV.

7.3.5 The refrigeration plant on the HGV is located near the driver's cab. This has therefore been measured separately for the purposes of calibrating the refrigeration plant as a point source within the noise model.

7.3.6 Table 5 below shows octave band and single figure values used to populate the sources in the model.

7.3.7 It is understood that there will be one delivery per day at the proposed store.

Table 5: Noise Source Inputs of Delivery Activities used in CadnaA Noise Model

Noise Source	Sound Power Level, L_W (dB), at Octave Band Centre Frequency (Hz)								dB(A)
	63 Hz	125 Hz	250 Hz	500 Hz	1.0 kHz	2.0 kHz	4.0 kHz	8.0 kHz	
HGV Movement	96	94	92	96	98	96	91	91	102
Refrigeration Plant	111	98	92	91	89	82	76	69	94
Delivery Activity	97	91	85	84	87	85	81	74	91

7.4 Modelling of Baseline Mitigation

7.4.1 At the time of issuing this report, baseline noise mitigation is indicated in the proposals by the inclusion of an acoustic fence on SMR Architects External Works drawing reference 7397-SMR-00-ZZ-DR-A-2004-A3, Revision C4.

7.4.2 An acoustic fence has been proposed adjacent to the eastern edge of the loading bay. In the CadnaA computer noise model the acoustic fence has been modelled to be 3.5 m in height and is modelled to extend 2.0 m northwards of the position indicated on the SMR Architects External Works drawing referenced above. The extent of the proposed fence is indicated on the figure in Appendix 2 and is assumed to be included in the baseline mitigation for the purpose of this assessment.

7.4.3 The location of the baseline noise mitigation is indicated on the figure in Appendix 2.

7.5 Noise Model Results

7.5.1 Full noise model results and grids are presented in Appendix 3.

7.5.2 The specific noise level resulting from HGV deliveries noise within the model is 48 dB $L_{Aeq,T}$ at NSR1 and 43 dB at NSR2.

7.6 BS 4142 Assessment

7.6.1 Eight BS 4142 noise impact assessments have been undertaken in order to assess the potential noise impact at the most affected NSRs during the earliest and latest times of a weekday and a Sunday. The assessments are detailed in this section of the report.

7.6.2 HGV Noise Impact Assessment

7.6.3 The BS 4142 numerical assessment of noise impact at the most affected NSR, due to the likely contributions of HGV delivery noise associated with the proposed development, is presented in Table 6 and Table 7 for NSR1 and NSR2 respectively. A 3 dB acoustic feature correction has been applied for impulsivity. The correction has 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.

Table 6: BS 4142 Impact of HGV Delivery noise at NSR1

Assessment Period	Receptor Location	Specific Noise Level ($L_{Aeq,15min}$ dB)	Acoustic Feature Correction (dB)	Rating Level (dB)	Background Sound Level ($L_{AF90,T}$ dB)	Excess of Rating Level over Background Sound Level (dB)	Initial Estimate of Impact
Sunday (07:00-10:00)	NSR1 Birchfields Road	48	+ 3 *(Impulsivity)*	51	52	-1	Indication of low Impact
Sunday (15:00-18:00)	NSR1 Birchfields Road	48	+ 3 *(Impulsivity)*	51	64	-13	Indication of negligible impact
Tuesday (06:00-07:00)	NSR1 Birchfields Road	48	+ 3 *(Impulsivity)*	51	55	-4	Indication of low impact
Tuesday (20:00 – 23:00)	NSR1 Birchfields Road	48	+ 3 *(Impulsivity)*	51	61	-10	Indication of negligible impact

7.6.4 It can be seen from Table 6 above that the initial BS 4142 numerical assessment of the impact of noise from HGV delivery events indicates a likelihood of low to negligible impact at NSR1 during all proposed delivery hours.

Table 7: BS 4142 Impact of HGV Delivery noise at NSR2

Assessment Period	Receptor Location	Specific Noise Level ($L_{Aeq,15min}$ dB)	Acoustic Feature Correction (dB)	Rating Level (dB)	Background Sound Level ($L_{AF90,T}$ dB)	Excess of Rating Level over Background Sound Level (dB)	Initial Estimate of Impact
Sunday (07:00-10:00)	NSR2 Peaceville Road	43	+ 3 *(Impulsivity)*	46	49	-3	Indication of low Impact
Sunday (15:00-18:00)	NSR2 Peaceville Road	43	+ 3 *(Impulsivity)*	46	51	-5	Indication of low Impact
Tuesday (06:00-07:00)	NSR2 Peaceville Road	43	+ 3 *(Impulsivity)*	46	47	-1	Indication of low Impact
Tuesday (20:00 – 23:00)	NSR2 Peaceville Road	43	+ 3 *(Impulsivity)*	46	46	0	Indication of low Impact

7.6.5 It can be seen from Table 7 above that the initial BS 4142 numerical assessment of the impact of noise from HGV delivery events indicates a likelihood of low impact at NSR2 during all proposed delivery hours.

7.7 Context and Summary of Assessment

7.7.1 The assessments in Section 7.6 detail the results of the initial numerical assessment of sound levels at the most affected NSRs across the assessed daytime, early-morning and late-evening periods. It is important to note that the numerical assessment of impact is influenced by the context of the proposals, including the surrounding environment and the operating characteristics.

HGV Delivery Noise Impact

7.7.2 The initial BS 4142 numerical assessment of the impact of noise from HGV delivery events indicates a likelihood of low impact at both NSR1 and NSR2 during both the daytime and the night-time period.

7.7.3 Representative background sound levels used in the noise impact assessment were determined conservatively, taking the lowest measured 1-hour or 15-minute period for day and night periods, respectively, undertaken at the extreme ends of the proposed delivery hours. The derived assessment criteria used in the assessment is therefore considered to represent a worst-case scenario.

7.7.4 Considering the context of the existing acoustic environment, it should also be noted that delivery activities to the existing commercial units were observed on previous site visits undertaken by Miller Goodall Ltd. in December 2020, just after 06:00 hrs on Sunday morning, and between 04:00 and 05:00 hrs on Sunday morning during the noise survey undertaken in August 2022. The existing site's historical commercial usage and continuing commercial use of the northern adjacent units indicate that the character of noise resulting from the proposed deliveries is in keeping with the existing sound environment, making complaints less likely.

7.7.5 It should be recognised that the delivery process incorporates a number of control and noise management measures, as described in the Noise Management Plan (NMP) by Miller Goodall Limited on behalf of Lidl GB Ltd, dated December 2025 (*Ref*: NA_102452-8 NMP Lidl Fallowfield October 2025).

7.7.6 Based on the results of the numerical assessments and taking into account the context of the site, a low noise impact is predicted from proposed HGV deliveries during the assessed periods.

Proposed Delivery Hours

7.7.7 It is understood that planning condition No. 11 associated with the approved application (139751/FO/2024) states that:

'Deliveries, servicing and collections, including waste collections shall not take place outside of the following hours: 07.30 to 20.00 hrs Monday to Saturday; No deliveries/waste collections on Sundays and Bank Holidays'.

7.7.8 This report has been prepared to support a variation of that condition, on the basis of updated background sound monitoring undertaken at the nearest and worst-affected residential receptors, and the BS 4142 assessment of predicted HGV delivery noise during the earliest and latest parts of the proposed delivery window, and during representative Sunday periods.

7.7.9 As set out in Section 6, background sound surveys were undertaken at Birchfields Road (NSR1) and Peaceville Road (NSR2) during the key periods most relevant to the proposed extended hours, namely 06:00–07:00 and 20:00–23:00 (weekday) and 07:00–10:00 and 15:00–18:00 (Sunday). These periods represent the times when deliveries are most likely to be perceptible and therefore, provide an appropriate and robust basis for assessing the proposed operating hours.

7.7.10 The BS 4142 assessment results indicate that, during all assessed periods, the delivery rating level at the worst-affected receptors is at, or below, the representative background sound level, with differences ranging from -13 dB to -1 dB at NSR1, and -3 dB to 0 dB at NSR2. In BS 4142 terms, a rating level that does not exceed the background sound level is an indication of low impact, subject to context. The context here is characterised by a baseline environment dominated by road traffic on Birchfields Road and frequent rail pass-bys on the adjacent Styal Line, together with the short duration and limited frequency of delivery events at the existing retail stores adjacent to the north (Iceland and Home Bargains).

7.7.11 In addition, the delivery process and service yard operation incorporate established control and management measures, including the use of the recessed loading bay, the proposed acoustic barrier, and operational procedures set out within the site Noise Management Plan. These measures are intended to minimise avoidable noise (for example, limiting idling, discouraging raised voices, controlling alarms where necessary, and managing the unloading process so far as reasonably practicable).

7.7.12 Taking the above into account, it is considered that an amended delivery condition allowing deliveries, servicing and collections (including waste collections) to take place within the following hours would not result in an unacceptable impact on residential amenity at the nearest NSRs. We proposed the following wording in place of the current Condition 11:

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

06:00 to 23:00 hours Monday to Saturday; and

07:00 to 18:00 hours on Sundays and Bank Holidays.'

8 Mitigation Measures

8.1.1 This assessment assumes the baseline mitigation and operational controls already secured as part of the approved scheme, including the approved service-yard acoustic barrier (annotated in Appendix 2) and the Noise Management Plan prepared by Miller Goodall Ltd. No additional mitigation is proposed as part of this delivery-hours assessment.

8.2 Consideration of Other Discipline Requirements

8.2.1 It is recommended that you confirm the suitability of all recommended noise mitigation measures with your architects, structural engineers, building contractors, fire consultants and material manufacturers prior to procurement and field application so that when the recommended noise control measures are implemented on-site, they will satisfy the requirements of all disciplines, therefore, should not cause any health and safety issues.

9 Conclusions

9.1 Miller Goodall Ltd has, on behalf of Lidl GB Ltd, undertaken a noise assessment of HGV deliveries and associated servicing activity for the Lidl store at Fallowfield Retail Park, Manchester M14 6FS. The assessment has been prepared in support of an application to vary the delivery hours restriction set out under Condition 11 of planning permission ref. 139751/FO/2024.

9.2 This report focuses on delivery and servicing noise only during the proposed extended hours. Mechanical fixed plant noise is controlled separately under the extant consent and is not reassessed in this report. The proposal includes sub-let units; any delivery and servicing activity associated with those units falls outside the scope of this assessment and may be addressed by the future tenant as required.

9.3 Updated background sound monitoring was undertaken in November and December 2025 at locations representative of the nearest and worst-affected residential receptors at Birchfields Road (NSR1) and Peaceville Road (NSR2) during periods most relevant to the proposed delivery window, namely 06:00–07:00 and 20:00–23:00 on a weekday, and 07:00–10:00 and 15:00–18:00 on a Sunday. Representative background sound levels were derived for each period in accordance with BS 4142, adopting a conservative approach based on the lowest measured values.

9.4 Delivery noise levels were predicted at the façades of the nearest dwellings using a 3D CadnaA model based on the consented site layout and the baseline mitigation secured as part of the approved scheme, including the acoustic fence at the service yard/loading bay. The model predicts specific delivery sound levels of 48 dB $L_{Aeq,T}$ at NSR1 and 43 dB $L_{Aeq,T}$ at NSR2. Applying an acoustic feature correction for impulsivity results in rating levels of 51 dB at NSR1 and 46 dB at NSR2.

9.5 Comparison of the predicted delivery rating levels with the representative background sound levels indicates that, during all assessed periods, the delivery rating level is at or below the background sound level (differences ranging from -13 dB to -1 dB at NSR1, and -3 dB to 0 dB at NSR2). In BS 4142 terms, a rating level that does not exceed background is an indication of low impact, subject to context. The context here includes a baseline environment influenced by road traffic and frequent rail pass-bys, together with the short duration and limited frequency of delivery events.

9.6 The assessment also assumes that delivery activity will be controlled through the secured mitigation and operational management measures, including installation and retention of the acoustic fence in accordance with the approved plans, and operation in accordance with the Noise Management Plan prepared by Miller Goodall Ltd (*Ref*: NA_102452-8 NMP Lidl Fallowfield October 2025).

9.7 On the basis of the above, it is concluded that a variation to the delivery restriction to allow deliveries within the following hours would not result in an unacceptable impact on residential amenity at the nearest noise-sensitive receptors. We recommend that the varied Condition 11 be worded as follows:

"Deliveries, servicing and collections, including waste collections, shall not take place outside of the following hours: 06:00 to 23:00 hours Monday to Saturday; and 07:00 to 18:00 hours on Sundays and Bank Holidays."

APPENDICES

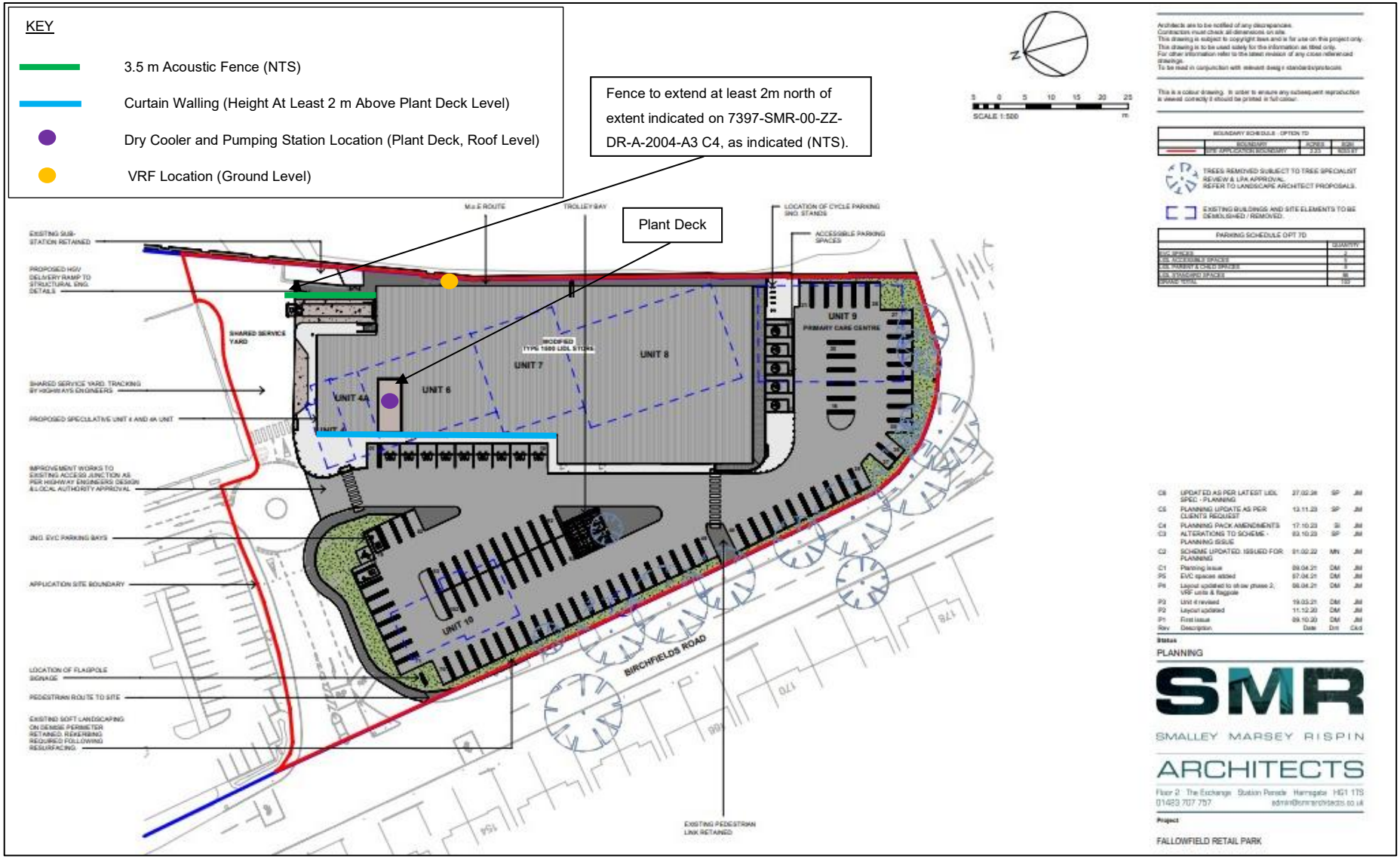
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Appendix 1: Site Location, Monitoring Location and Most Affected Noise Sensitive Receptor



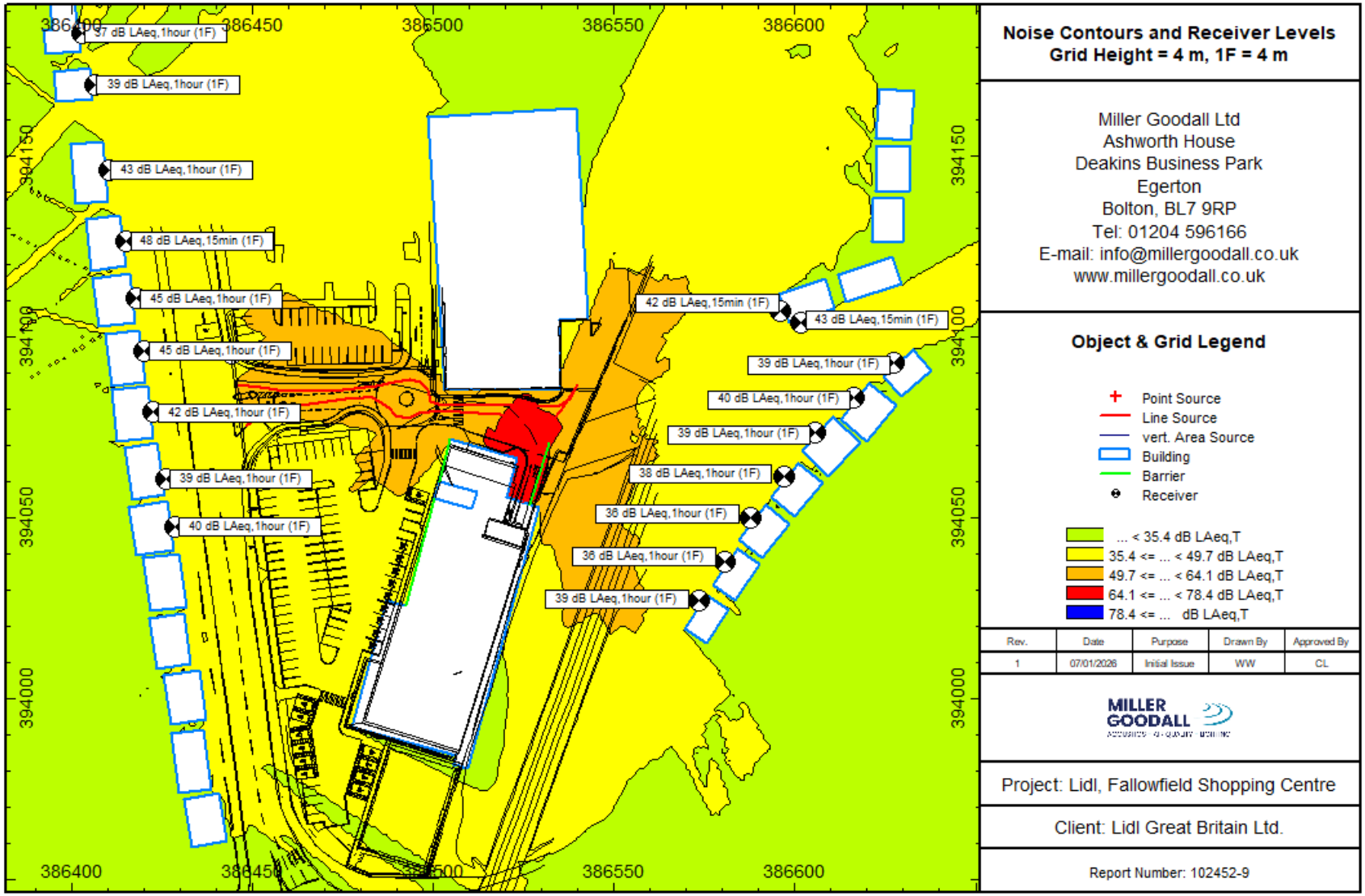
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Appendix 2: Proposed Development Plan, Including Modelled Mitigation



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Appendix 3: Predicted HGV Delivery Specific Noise Level – 4.0 m Grid Height



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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: 2014+A1:2019 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.

L_{Amax} The highest A weighted noise level recorded during the time period. It is usually used to describe the highest noise level that occurred during the event.

R_w Single number rating used to describe the sound insulation of building elements and is defined in BS EN ISO 10140-2: 2010 (formerly BSEN ISO 140-3:1995). It is derived by measurement under laboratory conditions and does not take into account the effects of flanking transmissions.

$D_{nT,w}$ The weighted standardized level difference is a single figure rating used to describe the sound insulation of a construction separating two rooms, for example a wall or floor, and is defined in BS EN ISO 16283-1:2014 (formerly BSEN ISO 140-4:1998). It is derived by

measurement of an in-situ construction and therefore takes into account the effects of flanking transmissions, workmanship etc.

$D_{ne,w}$ The weighted element-normalized level difference is a single figure rating used to describe the sound insulation of small elements within a larger construction and is defined in BS EN ISO 10140-2:2010 (BSEN ISO 140-10:1991). It is most often used to rate the sound insulation performance of ventilator units e.g. trickle vents.

C_{tr} A single-number spectrum adaptation term used to characterise the sound insulation rating with respect to urban traffic. It is defined in ISO 717-1:2013.


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