

# SHARPS REDMORE

ACOUSTIC CONSULTANTS ▪ Established 1990



## Report

---

**Aldi, London Road,  
Gravesend**

Plant noise assessment

**Prepared by**  
Mark Taylor MIOA

**Date** 19th February 2025  
**Project No** 2422788

### Head Office

#### Sharps Redmore

The White House, London Road,  
Copdock, Ipswich, IP8 3JH

**T** 01473 730073

**E** [contact@sharpsredmore.co.uk](mailto:contact@sharpsredmore.co.uk)

**W** [sharpsredmore.co.uk](http://sharpsredmore.co.uk)

### Regional Locations

South England (Head Office),  
North England, Wales, Scotland

#### Sharps Redmore Partnership Limited

Registered in England No. 2593855

#### Directors

RD Sullivan BA(Hons), PhD, CEng, MIOA, MAAS, MASA;

KJ Metcalfe BSc(Hons), MIOA;

N Durup BSc(Hons), MSc, PhD, CEng, FIOA, MInstP, MASA, MAES;

GJ King MIOA, MCIEH

#### Company Consultant

TL Redmore BEng, MSc, PhD, MIOA



# Contents

---

- 1.0 Introduction
- 2.0 Establishing criteria
- 3.0 Fixed plant noise assessment
- 4.0 The noise model and prediction methodology
- 5.0 Assessment conclusions

# Appendices

---

- A. Noise source data – proposed plant
- B. Noise model input data – proposed plant
- C. Predicted noise level – summary proposed plant
- D. Proposed plant layout drawing

## DISCLAIMER

This report has been prepared with all reasonable skill, care and diligence commensurate with an acoustic consultancy practice under the terms and brief agreed with our client at that time. Sharps Redmore provides no duty or responsibility whatsoever to any third party who relies upon its content, recommendations or conclusions.

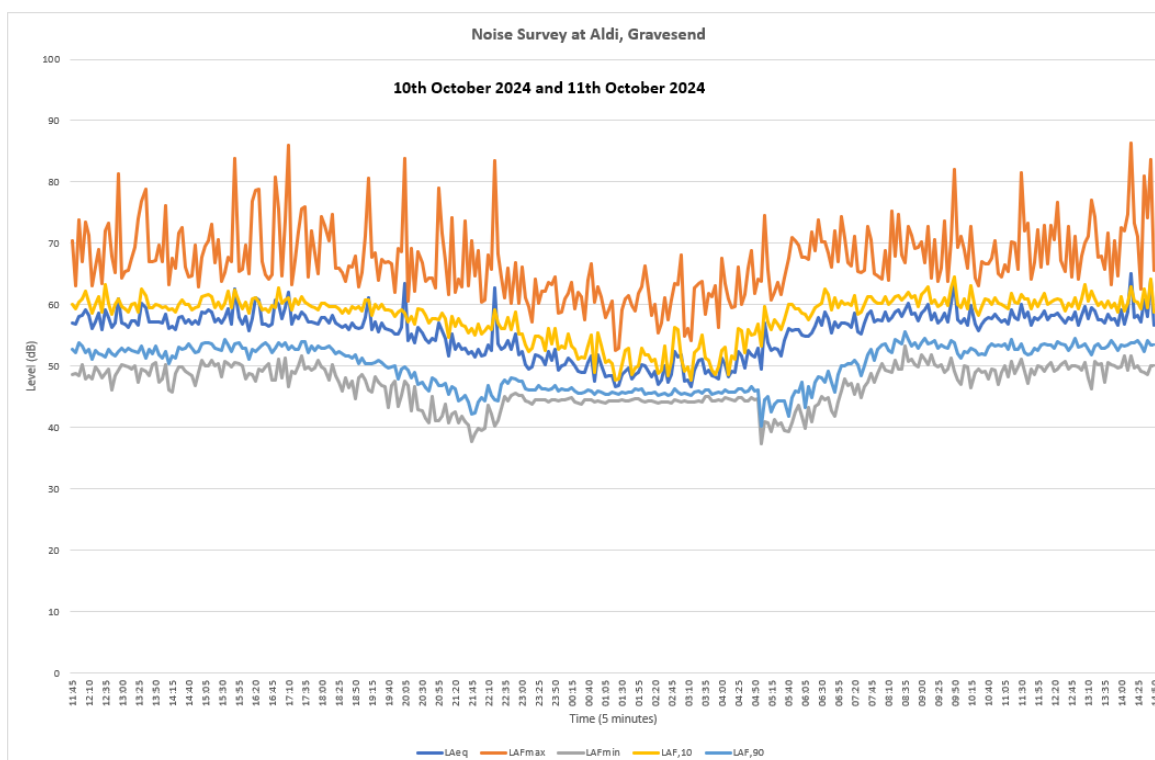
## **1.0 Introduction**

- 1.1 Sharps Redmore (SR) has been instructed to undertake a noise assessment of the proposed replacement plant to serve the existing Aldi store on London Road, Gravesend.
- 1.2 The proposal is to install the replacement refrigeration plant at the rear of the store, along with additional air source heat pumps (ASHP's) – See plant layout drawing in Appendix D.
- 1.3 The assessment criteria are presented at section 2.
- 1.4 An assessment of predicted plant noise levels is contained at section 3.
- 1.5 Details of the noise model methodology are presented in Section 4.
- 1.6 The site is located on London Road, Gravesend. The nearest residential properties to the proposed plant are located in London Road, Thames Way, Vauxhall Court, and St Marks Avenue.

## 2.0 Establishing criteria

- 2.1 It is usual in dealing with fixed sources of ventilation and refrigeration noise to use BS 4142:2014+A1:2019 “Method for rating and assessing industrial and commercial sound” as a means of establishing the potential impact from the new sources to the nearest residential properties.
- 2.2 A noise survey was undertaken at the site, between 10th and 11th October 2024, on the rear boundary of the store. The survey was undertaken using a Norsonic 140 Type 1 sound level meters, which was calibrated before and after the survey, with no sign of any drift. The sound level meter was set-up, to continually record noise levels at 5-minute intervals. All measurements were carried out in free-field conditions.
- 2.3 The weather was dry, with low wind speeds, as such would not have an adverse impact of the environmental noise survey.
- 2.4 A summary of the survey results are shown in Figure 1 below:

**Figure 1: Environmental noise survey data**



- 2.5 As can be seen from the survey data presented, there does appear to be an anomaly in the  $L_{A90}$  and  $L_{Amin}$  noise data between 2200 and 0500 hours. As the survey was unattended we cannot speculate what extraneous noise may have had an influence. However, based on the trend before and after these times, based on our experience, the background noise level is likely to be between 35 and 40 dB  $L_{A90}$ .
- 2.6 As part of a previous planning application for an extension to the store, Application Ref 20120967, an acoustic report was issued by Acoustic Consultancy Partnership Ltd, which included an environmental noise survey at various locations around the site, and established a minimum background noise level at night of 37 dB  $L_{A90}$ , at a location representative of the noise climate in Thames Way, against which consent was granted.
- 2.7 Based on the environmental noise survey undertaken by ourselves, and previously by others, the following background noise levels are considered to be representative of the noise climate at the nearest residential properties to the store:

**Table 1: Typical background**

| Time                                  | Typical background $L_{A90}$ |
|---------------------------------------|------------------------------|
| Day (0700-2300) based on late evening | 45 dB                        |
| Night (2300-0700)                     | 37 dB                        |

### 3.0 The fixed plant noise control scheme – conclusions and recommendations

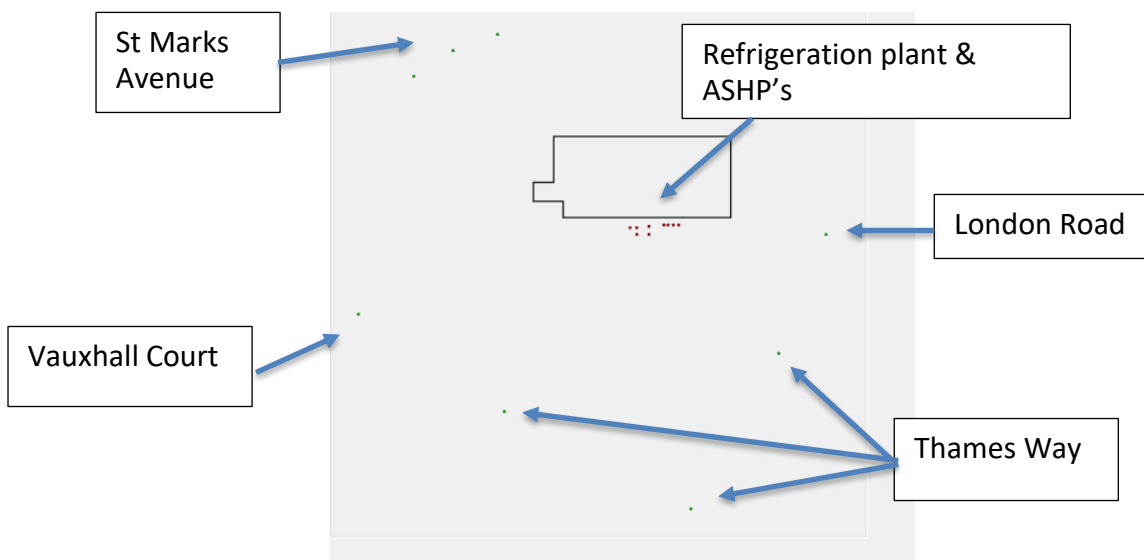
- 3.1 Based on the environmental noise model (see Section 5.0), the predicted noise levels without any additional mitigation are as follows:

**Table 2 – Predicted noise levels at nearest residential properties from the proposed plant**

| Receptor location | Daytime 0700-2300             |                                |            | Night 2300-0700               |                                |            |
|-------------------|-------------------------------|--------------------------------|------------|-------------------------------|--------------------------------|------------|
|                   | Predicted<br>L <sub>Aeq</sub> | Background<br>L <sub>A90</sub> | Difference | Predicted<br>L <sub>Aeq</sub> | Background<br>L <sub>A90</sub> | Difference |
| London Road       | 37 dB (34+3)                  | 45 dB                          | -8         | 37 dB (34+3)                  | 37 dB                          | 0          |
| Thames Way        | 37 dB (34+3)                  | 45 dB                          | -8         | 37 dB (34+3)                  | 37 dB                          | 0          |
| Vauxhall Court    | 33 dB (30+3)                  | 45 dB                          | -12        | 33 dB (30+3)                  | 37 dB                          | -4         |
| St Marks Avenue   | 18 dB (15+3)                  | 45 dB                          | -27        | 18 dB (15+3)                  | 37 dB                          | -19        |

- 3.2 A schedule of manufacturers noise data used for the proposed plant is shown in Appendix A.
- 3.3 The noise control system is based on the selection of intrinsically quiet equipment, distance from the plant to the receptors, and screening from the building itself.
- 3.4 Based on our experience, the type of plant proposed is neither tonal or impulsive in character, however the refrigeration plant may be intermittent, therefore a +3 dB character correction has been applied to the predicted noise levels in Table 2.
- 3.5 The predicted rating noise levels are significantly below the background noise climate during the day, and do not exceed the background noise climate at night. Based on the guidance in BS 4142:2014+A1:2019, where the rating level does not exceed the background noise climate, it is considered to be a low impact.
- 3.6 Detailed below is a sketch from the noise model detailing the location of the store, the plant, and the receptors:

**Figure 2: Noise model source and receptor locations**



## **4.0 The noise model and prediction methodology**

4.1 The noise model employed has been written in-house to provide an accurate prediction method for assessing environmental noise from, in particular, plant and equipment items which can be perceived as being point sources. It has been mainly used for the prediction of noise emanating from superstores.

4.2 There are three input spreadsheets containing:

- noise sources data
- receiver data
- acoustic screening data

These are included in Appendix A.

4.3 The noise sources data include one of the following forms for each item of plant:

- either, octave band sound power levels in the range of 63 to 8000Hz – this being available from manufacturer of many of the supply and extract fans.
- or, octave band sound pressure levels in the range of 63 to 8000Hz – this is available usually for the small, externally mounted split units' condenser fans from the manufacturer's product catalogue when measured at one metre in anechoic conditions, thus allowing straight forward calculation of the equivalent sound power levels.
- or, single value sound pressure levels at a stated distance

4.4 The relative location of the plant using X and Y co-ordinates with an arbitrary datum point and a Z (height) co-ordinate based on supporting steel and screening heights from the main contractor and then the equipment heights based, in this case, on the mechanical services contractor drawings.

4.5 Where known, the area and orientation of the noise outlet is entered together with its location adjacent to either one, two or three reflective surfaces so that the calculation can establish the directivity pattern and outlet reflection losses.

4.6 The receiver data needed are the X, Y and Z co-ordinates so that the relative distance and angle can be calculated between the source and the receiver.

4.7 Finally, several types of acoustic screening may be entered. In this case, this is designated "R" meaning a ring barrier indicating the building itself.

4.8 The noise model carries out "text book" atmospheric side calculations at each receiver position from each source allowing for the attenuation from such as the calculated distance and screening. The calculations are performed in eight Octave bands from 63 to 8000Hz but can then be summarised as dBA, NR or NC for convenience. In this case, the overall summary levels are in dBA. Calculations for the plant are included in Appendix C. The computer maintains a logarithmic total of the noise levels in Octave bands.

- 4.9 At the end of each program “run”, the overall day or night time noise level at each receiver position are calculated and ranked in descending order of noise level. Where this ranking shows that the receiver position’s noise level exceeds the noise criterion, each calculation can be interrogated to determine the plant items needing more detailed inspection to establish the attenuation needed. The process is repeated until either the noise level meets the noise criterion or the program demonstrates that other noise control methods are needed. This may take the form of restricting the offending plant’s period of operation or improving the screening or re-selection to give quieter plant.
- 4.10 Plant noise predictions are shown in summary form; full calculations of noise from each source to each receptor are available on request.

## **5.0 Assessment conclusions**

- 5.1 This assessment has been undertaken in accordance with the guidelines in BS 4142:2014+A1:2109.
- 5.2 Whilst there is some uncertainty regarding the recent night time noise survey data, to ensure a robust approach, environmental noise survey data issued to discharge Condition 5 of planning application 20120967 has also been used.
- 5.3 The predicted rating noise levels are significantly below the background noise climate during the day, and does not exceed the background noise climate at night. Based on the guidance in BS 4142:2014+A1:2019, where the rating level does not exceed the background noise climate, it is considered to be a low impact.
- 5.4 This assessment therefore objectively demonstrates that noise arising from the fixed plant, complies with the requirement of paragraph 198 of the NPPF to avoid significant adverse impact.

## **APPENDIX A**

### **NOISE SOURCE DATA**

| CLIENT :Aldi                                                                                                                                                                                                                                                                                                                                      |       |              |                    | A Sht: 1 of 1                   |     |     |     |    |    |    |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------|--------------------|---------------------------------|-----|-----|-----|----|----|----|----|
| PROJECT :Gravesend                                                                                                                                                                                                                                                                                                                                |       |              |                    | PROJECT No:2422788              |     |     |     |    |    |    |    |
| CONSULTANT:MT                                                                                                                                                                                                                                                                                                                                     |       |              |                    | DATE :19 February 2025          |     |     |     |    |    |    |    |
| SOUND POWER LEVELS (Lw) & SOUND PRESSURE LEVELS (Lp)<br>FOR FANS AND OTHER EQUIPMENT                                                                                                                                                                                                                                                              |       |              |                    |                                 |     |     |     |    |    |    |    |
| EQUIPMENT NAME/REFERENCE                                                                                                                                                                                                                                                                                                                          | Lw/Lp | DIST.<br>(m) | OP.<br>TIME<br>DNA | MID FREQUENCY OCTAVE BANDS (HZ) |     |     |     |    |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                   |       |              |                    | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| ASHP                                                                                                                                                                                                                                                                                                                                              | Lp    | 5            | A                  | Maximum 38dBA at 5 metres       |     |     |     |    |    |    |    |
| ASHP                                                                                                                                                                                                                                                                                                                                              | Lp    | 5            | A                  | Maximum 38dBA at 5 metres       |     |     |     |    |    |    |    |
| ASHP                                                                                                                                                                                                                                                                                                                                              | Lp    | 5            | A                  | Maximum 38dBA at 5 metres       |     |     |     |    |    |    |    |
| ASHP                                                                                                                                                                                                                                                                                                                                              | Lp    | 5            | A                  | Maximum 38dBA at 5 metres       |     |     |     |    |    |    |    |
| Gas cooler                                                                                                                                                                                                                                                                                                                                        | Lp    | 10           | A                  | Maximum 43dBA at 10 metres      |     |     |     |    |    |    |    |
| Refrigeration pack                                                                                                                                                                                                                                                                                                                                | Lp    | 10           | A                  | Maximum 35dBA at 10 metres      |     |     |     |    |    |    |    |
| LT CU                                                                                                                                                                                                                                                                                                                                             | Lp    | 10           | A                  | Maximum 33dBA at 10 metres      |     |     |     |    |    |    |    |
| LT CU                                                                                                                                                                                                                                                                                                                                             | Lp    | 10           | A                  | Maximum 33dBA at 10 metres      |     |     |     |    |    |    |    |
| HT CU                                                                                                                                                                                                                                                                                                                                             | Lp    | 10           | A                  | Maximum 36dBA at 10 metres      |     |     |     |    |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                   |       |              |                    |                                 |     |     |     |    |    |    |    |
| NOTES:<br>1. Lw/Lp:<br>Lw means sound power level (dB)<br>Lp means sound pressure level at stated distance (dB/m)<br>2. Operational time (OP.TIME D/N/A):<br>D (Day) - could operate at any time between 0700 & 2300<br>N (Night) - could operate at any time between 2300 & 0700<br>A (All) - could operate at any time during the day and night |       |              |                    |                                 |     |     |     |    |    |    |    |

## **APPENDIX B**

### **NOISE MODEL INPUT DATA**

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Filename : P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date : 19 February 2025

Entries by : MT

Project number : 2422788

Project title : Gravesend

Client's name : Aldi

Map/plot details :

Length :3200

Width :3200

Height :250

## SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Source data - description, coordinates, outlet size, percentage to atmosphere, directivity,  
sound levels and running period.

Filename : P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

| Source<br>Description | Coordinates |       |      | Outlet details |       |        | Run Lp/ dBA Dist. |     |    | Mid frequency octave bands |     |      |     |     |     |    |    |    |    |
|-----------------------|-------------|-------|------|----------------|-------|--------|-------------------|-----|----|----------------------------|-----|------|-----|-----|-----|----|----|----|----|
|                       | X(m)        | Y(m)  | Z(m) | A(mm)          | B(mm) | Ang. % | Q                 | DNA | Lw | Y/N                        | (m) | 63   | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| ASHP                  | 179.5       | 198.0 | 1.5  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 5.0  | 38  | 0   | 0   | 0  | 0  | 0  | 0  |
| ASHP                  | 181.0       | 198.0 | 1.5  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 5.0  | 38  | 0   | 0   | 0  | 0  | 0  | 0  |
| ASHP                  | 182.5       | 198.0 | 1.5  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 5.0  | 38  | 0   | 0   | 0  | 0  | 0  | 0  |
| ASHP                  | 184.0       | 198.0 | 1.5  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 5.0  | 38  | 0   | 0   | 0  | 0  | 0  | 0  |
| Gas cooler            | 175.0       | 195.0 | 1.5  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 10.0 | 43  | 0   | 0   | 0  | 0  | 0  | 0  |
| Refrigeration pack    | 175.0       | 197.5 | 2.6  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 10.0 | 35  | 0   | 0   | 0  | 0  | 0  | 0  |
| LT CU                 | 171.0       | 195.0 | 1.0  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 10.0 | 33  | 0   | 0   | 0  | 0  | 0  | 0  |
| LT CU                 | 169.0       | 197.0 | 1.0  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 10.0 | 33  | 0   | 0   | 0  | 0  | 0  | 0  |
| HT CU                 | 171.0       | 197.0 | 1.0  | 0              | 0     | 0      | 100               | 2   | A  | P                          | Y   | 10.0 | 36  | 0   | 0   | 0  | 0  | 0  | 0  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: [srp@sharpsredmore.co.uk](mailto:srp@sharpsredmore.co.uk)

Receptor data - description and coordinates

Filename : P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

| Receptor<br>Description | Coordinates |       |      | DNA |
|-------------------------|-------------|-------|------|-----|
|                         | X(m)        | Y(m)  | Z(m) |     |
| London Road             | 230.0       | 195.0 | 7.5  | A   |
| Thames Way              | 215.0       | 158.0 | 4.5  | A   |
| Thames Way              | 188.0       | 110.0 | 4.5  | A   |
| Thames Way              | 130.0       | 140.0 | 7.5  | A   |
| Vauxhall Court          | 85.0        | 170.0 | 7.5  | A   |
| St Marks Avenue         | 102.0       | 244.0 | 4.5  | A   |
| St Marks Avenue         | 114.0       | 252.0 | 4.5  | A   |
| St Marks Avenue         | 128.0       | 257.0 | 4.5  | A   |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Barrier data - description and coordinates

Filename : P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

| Barrier<br>type | Coordinates |               |      |       |                |      |
|-----------------|-------------|---------------|------|-------|----------------|------|
|                 | X(m)        | Start<br>Y(m) | Z(m) | X(m)  | Finish<br>Y(m) | Z(m) |
| R               | 200.0       | 200.0         | 5.0  | 148.0 | 200.0          | 5.0  |
| R               | 148.0       | 200.0         | 5.0  | 148.0 | 205.0          | 5.0  |
| R               | 148.0       | 205.0         | 5.0  | 139.0 | 205.0          | 5.0  |
| R               | 139.0       | 205.0         | 5.0  | 139.0 | 211.0          | 5.0  |
| R               | 139.0       | 211.0         | 5.0  | 145.0 | 211.0          | 5.0  |
| R               | 145.0       | 211.0         | 5.0  | 145.0 | 225.0          | 5.0  |
| R               | 145.0       | 225.0         | 5.0  | 200.0 | 225.0          | 5.0  |
| R               | 200.0       | 225.0         | 5.0  | 200.0 | 200.0          | 5.0  |

## **APPENDIX C**

### **PREDICTED NOISE LEVELS - SUMMARY**

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time overall receptor listings

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                 | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                 | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| London Road     | 51                              | 41  | 34  | 28  | 25 | 24 | 24 | 26 | 34  |
| Thames Way      | 51                              | 41  | 34  | 28  | 25 | 24 | 24 | 26 | 34  |
| Thames Way      | 49                              | 39  | 32  | 26  | 23 | 22 | 22 | 24 | 32  |
| Thames Way      | 47                              | 37  | 30  | 24  | 21 | 20 | 20 | 22 | 30  |
| Vauxhall Court  | 47                              | 37  | 30  | 24  | 21 | 20 | 20 | 22 | 30  |
| St Marks Avenue | 38                              | 26  | 17  | 6   | 0  | 0  | 0  | 0  | 15  |
| St Marks Avenue | 38                              | 26  | 16  | 6   | 0  | 0  | 0  | 0  | 15  |
| St Marks Avenue | 38                              | 25  | 16  | 5   | 0  | 0  | 0  | 0  | 15  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: [srp@sharpsredmore.co.uk](mailto:srp@sharpsredmore.co.uk)

Night-time source sound pressure levels at receptor: London Road

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 48                              | 38  | 31  | 25  | 22 | 21 | 21 | 23 | 31  |
| HT CU                       | 41                              | 31  | 24  | 18  | 15 | 14 | 14 | 16 | 24  |
| Refrigeration pack          | 40                              | 30  | 23  | 17  | 14 | 13 | 13 | 15 | 23  |
| ASHP                        | 39                              | 29  | 22  | 16  | 13 | 12 | 12 | 14 | 22  |
| LT CU                       | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| LT CU                       | 37                              | 27  | 20  | 14  | 11 | 10 | 10 | 12 | 20  |
|                             |                                 |     |     |     |    |    |    |    |     |
| Total Free field Lp and dBA | 51                              | 41  | 34  | 28  | 25 | 24 | 24 | 26 | 34  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Thames Way

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 48                              | 38  | 31  | 25  | 22 | 21 | 21 | 23 | 31  |
| HT CU                       | 41                              | 31  | 24  | 18  | 15 | 14 | 14 | 16 | 24  |
| Refrigeration pack          | 40                              | 30  | 23  | 17  | 14 | 13 | 13 | 15 | 23  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| LT CU                       | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| ASHP                        | 37                              | 27  | 20  | 14  | 11 | 10 | 10 | 12 | 20  |
| LT CU                       | 37                              | 27  | 20  | 14  | 11 | 10 | 10 | 12 | 20  |
| Total Free field Lp and dBA | 51                              | 41  | 34  | 28  | 25 | 24 | 24 | 26 | 34  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Thames Way

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 44                              | 34  | 27  | 21  | 18 | 17 | 17 | 19 | 27  |
| HT CU                       | 37                              | 27  | 20  | 14  | 11 | 10 | 10 | 12 | 20  |
| Refrigeration pack          | 36                              | 26  | 19  | 13  | 10 | 9  | 9  | 11 | 19  |
| LT CU                       | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| LT CU                       | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| ASHP                        | 33                              | 23  | 16  | 10  | 7  | 6  | 6  | 8  | 16  |
| ASHP                        | 33                              | 23  | 16  | 10  | 7  | 6  | 6  | 8  | 16  |
| ASHP                        | 33                              | 23  | 16  | 10  | 7  | 6  | 6  | 8  | 16  |
| ASHP                        | 33                              | 23  | 16  | 10  | 7  | 6  | 6  | 8  | 16  |
| Total Free field Lp and dBA | 47                              | 37  | 30  | 24  | 21 | 20 | 20 | 22 | 30  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Thames Way

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 46                              | 36  | 29  | 23  | 20 | 19 | 19 | 21 | 29  |
| HT CU                       | 39                              | 29  | 22  | 16  | 13 | 12 | 12 | 14 | 22  |
| Refrigeration pack          | 38                              | 28  | 21  | 15  | 12 | 11 | 11 | 13 | 21  |
| LT CU                       | 36                              | 26  | 19  | 13  | 10 | 9  | 9  | 11 | 19  |
| LT CU                       | 36                              | 26  | 19  | 13  | 10 | 9  | 9  | 11 | 19  |
| ASHP                        | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| ASHP                        | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| ASHP                        | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| ASHP                        | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| Total Free field Lp and dBA | 49                              | 39  | 32  | 26  | 23 | 22 | 22 | 24 | 32  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: [srp@sharpsredmore.co.uk](mailto:srp@sharpsredmore.co.uk)

Night-time source sound pressure levels at receptor: Vauxhall Court

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 44                              | 34  | 27  | 21  | 18 | 17 | 17 | 19 | 27  |
| HT CU                       | 37                              | 27  | 20  | 14  | 11 | 10 | 10 | 12 | 20  |
| Refrigeration pack          | 36                              | 26  | 19  | 13  | 10 | 9  | 9  | 11 | 19  |
| LT CU                       | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| LT CU                       | 34                              | 24  | 17  | 11  | 8  | 7  | 7  | 9  | 17  |
| ASHP                        | 32                              | 22  | 15  | 9   | 6  | 5  | 5  | 7  | 15  |
| ASHP                        | 32                              | 22  | 15  | 9   | 6  | 5  | 5  | 7  | 15  |
| ASHP                        | 32                              | 22  | 15  | 9   | 6  | 5  | 5  | 7  | 15  |
| ASHP                        | 32                              | 22  | 15  | 9   | 6  | 5  | 5  | 7  | 15  |
| Total Free field Lp and dBA | 47                              | 37  | 30  | 24  | 21 | 20 | 20 | 22 | 30  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: St Marks Avenue

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 36                              | 24  | 15  | 6   | 0  | 0  | 0  | 0  | 14  |
| HT CU                       | 29                              | 16  | 6   | 0   | 0  | 0  | 0  | 0  | 5   |
| Refrigeration pack          | 28                              | 16  | 7   | 0   | 0  | 0  | 0  | 0  | 4   |
| LT CU                       | 26                              | 14  | 4   | 0   | 0  | 0  | 0  | 0  | 0   |
| LT CU                       | 26                              | 13  | 4   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 11  | 1   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 11  | 1   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 11  | 1   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 11  | 1   | 0   | 0  | 0  | 0  | 0  | 0   |
| Total Free field Lp and dBA | 38                              | 26  | 17  | 6   | 0  | 0  | 0  | 0  | 15  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: St Marks Avenue

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 36                              | 24  | 15  | 6   | 0  | 0  | 0  | 0  | 14  |
| Refrigeration pack          | 29                              | 16  | 7   | 0   | 0  | 0  | 0  | 0  | 5   |
| HT CU                       | 28                              | 15  | 5   | 0   | 0  | 0  | 0  | 0  | 4   |
| LT CU                       | 26                              | 13  | 4   | 0   | 0  | 0  | 0  | 0  | 0   |
| LT CU                       | 25                              | 12  | 2   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 22                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 22                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 22                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 22                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| Total Free field Lp and dBA | 38                              | 26  | 16  | 6   | 0  | 0  | 0  | 0  | 15  |

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: St Marks Avenue

Filename: P:\24 - Projects\2422788 Aldi Gravesend-MOT\Noysplot\190225\_1

Date: 19/02/2025

|                             | Mid frequency Octave bands (Hz) |     |     |     |    |    |    |    | dBA |
|-----------------------------|---------------------------------|-----|-----|-----|----|----|----|----|-----|
|                             | 63                              | 125 | 250 | 500 | 1k | 2k | 4k | 8k |     |
| Gas cooler                  | 36                              | 23  | 14  | 5   | 0  | 0  | 0  | 0  | 13  |
| Refrigeration pack          | 28                              | 16  | 6   | 0   | 0  | 0  | 0  | 0  | 4   |
| HT CU                       | 28                              | 15  | 6   | 0   | 0  | 0  | 0  | 0  | 4   |
| LT CU                       | 25                              | 13  | 3   | 0   | 0  | 0  | 0  | 0  | 0   |
| LT CU                       | 25                              | 12  | 3   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 10  | 1   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| ASHP                        | 23                              | 10  | 0   | 0   | 0  | 0  | 0  | 0  | 0   |
| Total Free field Lp and dBA | 38                              | 25  | 16  | 5   | 0  | 0  | 0  | 0  | 15  |

## **APPENDIX D**

### **PLANT LAYOUT DRAWINGS**

