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December 11, 2025

Joshua Winfield

### The Common, Barwell - Noise Assessment Review

Dear Joshua,

#### Introduction

Assured Acoustics Ltd was instructed by David Wilson Homes East Midlands, to carry out an acoustic assessment review of environmental noise with respect to a proposed housing development at The Common, Barwell, Leicester LE9.

An acoustic report (AP1688/21247/2, Version 3, dated 18<sup>th</sup> December 2025) was previously issued by Spectrum Acoustics Ltd (SAL). As per our instructions, we have used the survey data and information contained in the report to determine noise mitigation measures, such that internal noise levels given in the SAL report can be achieved to assist in the discharging of Condition 22 for the site.

Condition 22 (Pre-Commencement) states as follows:

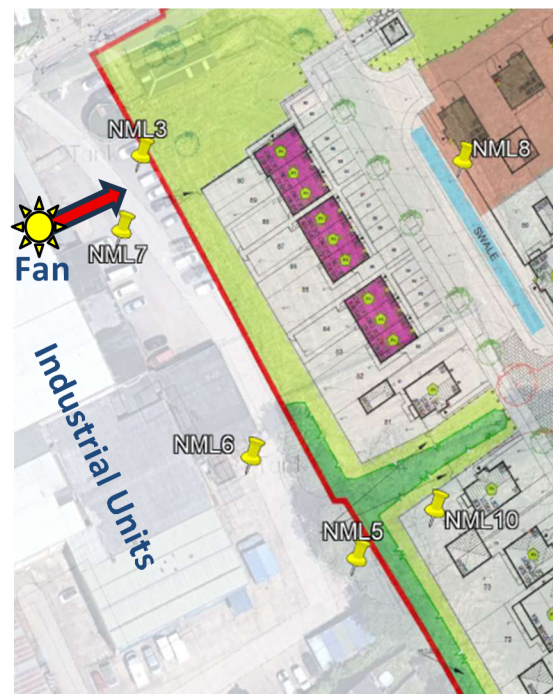
*"The details to be submitted in accordance with Condition 1, to be approved in writing by the Local Planning Authority shall include a scheme of noise mitigation for internal protecting the proposed dwellings that are located within that part of the site identified in the Noise Impact Assessment by Spectrum Acoustic Consultants dated 18 December 2023 as requiring protection, from noise from commercial operations and road traffic. The development shall thereafter be carried out in accordance with the approved details."*

#### Site Details

The site is located in Barwell, Leicester. It is flanked by Dawson Lane to the North; Leicester Road (A47) 200m to the South; green areas to east; and a residential / industrial area to the West.

A layout plan for the site (HA955/001/01), issued to us by David Wilson Homes on 2<sup>nd</sup> December 2025 has been used in our assessment.

A noise survey was previously carried out by Spectrum Acoustics (SAL) on 17<sup>th</sup> and 18<sup>th</sup> August 2021. Measurements were carried out in various locations (NMLx), including around Dawsons Lane Enterprises Centre, north-west of the site (see images below). We have not visited the site and were asked to utilise noise data and information reported by SAL.



## Results

The consultant's survey was carried out in light westerly winds over a 24-hour period. Noise sources included road traffic, aircraft, birdsong, low level noise from inside the units (doors open), deliveries, and a "cooling fan" located near measurement location NML3, as indicated in the above image.

SAL reported that the cooling fan dominated the noise climate at Position 3. The measured level at 16m from the fan was 64dBA. Daytime noise levels in other positions ranged from 44dBA (Position 9) to 57dBA (Position 4). A summary of the results utilised for our calculations are given in the table below.

| Location | 63Hz                                                       | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz | dB(A)    |
|----------|------------------------------------------------------------|-------|-------|-------|------|------|------|------|----------|
| 1        | 63                                                         | 58    | 50    | 50    | 54   | 48   | 39   | 32   | 56       |
| 1 Night  | 53                                                         | 49    | 50    | 49    | 53   | 47   | 37   | 28   | 55       |
| 2        | 57                                                         | 54    | 40    | 43    | 44   | 37   | 32   | 31   | 47       |
| 2 Night  | 52                                                         | 38    | 38    | 32    | 28   | 24   | 21   | 17   | 35       |
| 3        | 73                                                         | 75    | 66    | 59    | 56   | 53   | 48   | 39   | 64       |
| 4        | 60                                                         | 56    | 53    | 53    | 52   | 51   | 47   | 42   | 57       |
| 4        | 55                                                         | 51    | 46    | 46    | 45   | 43   | 41   | 37   | 50       |
| 5        | 58                                                         | 57    | 47    | 46    | 46   | 44   | 42   | 37   | 51       |
| 6        | 63                                                         | 57    | 55    | 53    | 52   | 51   | 46   | 41   | 57       |
| 7        | 61                                                         | 61    | 57    | 52    | 51   | 50   | 48   | 46   | 57       |
| 8        | 58                                                         | 57    | 42    | 42    | 42   | 38   | 33   | 29   | 47       |
| 9        | 52                                                         | 45    | 42    | 41    | 41   | 33   | 28   | 25   | 44       |
| 10       | Spectrum not given, only a time history graph of LAeq,5min |       |       |       |      |      |      |      | 50 (est) |

A noise map included in the report indicated the location of the cooling fan. This is shown in the site image above. Our calculations assume that the fan is still operational.

### Requirements

Requirements for noise levels inside dwellings contained in BS8233, are given in Table 1 of the SAL report, as shown below. Given the industrial nature of the cooling fan, we recommend that properties close to the fan (Plots 81-90), have internal levels 5dB below these stated values, such that 30dBA is not exceeded in all habitable rooms during the daytime or night time, when windows are shut.

| Activity                   | Location         | 07:00-23:00                    | 23:00-07:00                   |
|----------------------------|------------------|--------------------------------|-------------------------------|
| Resting                    | Living room      | 35 dB $L_{Aeq,16\text{ hour}}$ | -                             |
| Dining                     | Dining room/area | 40 dB $L_{Aeq,16\text{ hour}}$ | -                             |
| Sleeping (daytime resting) | Bedroom          | 35 dB $L_{Aeq,16\text{ hour}}$ | 30 dB $L_{Aeq,8\text{ hour}}$ |

**Table 1: Indoor ambient noise levels for dwellings**

### Assessment

Apart from the cooling fan, which is understood to operate only during daytime hours, noise levels around the site are low, such that standard double glazing ( $\geq 30\text{dB } R_w$ ) and ventilator units ( $\geq 31\text{dB } D_{n,e,w}$ ) can be used in installed to achieve the values stated in "Table 1" above.

Plots 81-90 face the east façade of the industrial units, which includes the cooling fan. Windows and external doors in view of the industrial area should have a minimum acoustic rating of  $34\text{dB } R_w$  and  $29\text{dB } R_w + C_{tr}$ . This is typically achieved using 8/16/6 glazing, as referenced in BS EN 12758. Ventilation units should have a minimum ventilation specification of  $40\text{-}42\text{dB } D_{n,e,w}$ . This is based on Greenwood 5000EAW or EAR42W units. <https://www.greenwood.co.uk/acoustic-ventilation/2500ea%2F5000ea-ac1>

Our specification is based on internal levels not exceeding 30dB  $L_{Aeq,15mins}$  on both ground and first floors when the fan is running and windows are closed. Average 16-hour daytime and 8-hour night-time levels are likely to be lower.

The above acoustic specifications are for the unit as a whole; including frames, seals and other associated elements. Tests are normally carried out in an acoustic laboratory, in accordance with BS EN ISO 140-3:1995 or BS EN ISO 10140-2:2021.

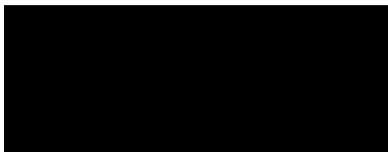
### Conclusion

Based on supplied survey data and with the recommended acoustic measures in place, we assess the site as achieving the internal levels stated in the Spectrum Acoustics report. Special consideration has also been given to Plots 81-90 near to an industrial cooling fan, such that internal noise levels in habitable rooms due to the fan, should not exceed 30dBA when the fan is running and windows and doors are closed.

Based on the above requirements and conclusions, we believe that Condition 22 can now be discharged.

I trust you find the foregoing clear and informative; however please feel free to contact us if you have any further queries.

Kind Regards,



Peter Turner Msc BSc(Hons) MIOA  
Director, Assured Acoustics