

Date: 12th March 2025

## NOISE MITIGATION VERIFICATION DON STREET, MIDDLETON

### 1. BACKGROUND & OBJECTIVES

E3P have been commissioned to provide clarity and verification on the mitigation measures that were proposed for the residential development at Don Street in Middleton and provide confirmation that the installed measures meet the requirements of the Noise Assessment. Planning permission has been granted, based on the recommended noise mitigation measures detailed within the Noise Impact Assessment, completed by Hepworth Acoustics (P21-051-R01v6).

The planning condition this report relates to is as follows:

#### **Noise Mitigation Measures**

*Notwithstanding the approved Noise & Vibration Assessment (P21-051-R01v6), no part of the development shall be occupied until full details of any noise mitigation measures have been submitted to and approved by the Local Planning Authority.*

*These measures shall include:*

- i. Acoustic barriers to residential gardens; and*
- ii. Glazing, external walls, and ventilation specifications*

*A verification report shall be submitted to and approved in writing by the Local Planning Authority prior to first occupation of any dwelling requiring upgraded acoustic mitigation measures.*

**Reason:** *To safeguard the living conditions of future residents in accordance with Core Strategy Policy G9 and the National Planning Policy Framework.*

This Technical Note has been produced by Lee Faulkner, Associate Director at E3P, who holds the Post Graduate Diploma in Acoustics and Noise Control, is a full member of the Institute of Acoustics (MIOA) and a full member of the Institute of Environmental Science (MIEnvSci).

### 2. MITIGATION MEASURES

#### 2.1. BARRIERS

The assessment determined that barriers would be required at certain garden areas:

-  2.2 to 3 m high barriers for plots closest to the commercial/industrial premises.

It is noted that barriers have been recommended at the below plots as noted in Figure 2 of the NIA.





Figure 1 Plan showing barrier locations



The client has confirmed that these barriers have been noted and installed at the relevant garden edges. With regards the requirements for the barriers, Hepworth Acoustics noted the following:

*The acoustic fencing must be imperforate (i.e. have no holes or gaps), have a surface mass no less than 10 kg/m<sup>2</sup> and be at least 20mm thick.*

The client has confirmed that all barriers include the following:

*6x4 timber posts at 2 m centres.  
4x2 timber rails ( 5 rails per bay ).  
6x1 timber boards vertically fixed to 4x2 rails.  
3x1 timber boards fixed over joint.  
6x1 gravel board to bottom.*

It is considered that these would create a traditional close boarded fence design which would achieve the above requirements. As such, as long as the locations and heights are consistent with the NIA, the requirement for barriers is fulfilled.

## 2.2. FAÇADE INSULATION

### 2.2.1. GLAZING

The NIA recommended the following glazing requirements:

*We recommend that living rooms and bedrooms of the dwellings indicated in Figure 2 are fitted with the following high specification of glazing (minimum 33 dB R<sub>w</sub> + C<sub>tr</sub>):*



- 8.4mm Solaglas 'Stadip Silence' laminated glass - nominal (8-20mm) cavity - 6mm glass; or
- 10mm glass - nominal (8-20mm) cavity - 6mm glass.

We recommend that bedrooms of the dwellings indicated in Figure 2 are fitted with the following high specification of glazing (minimum 29 dB  $R_w + C_{tr}$ ):

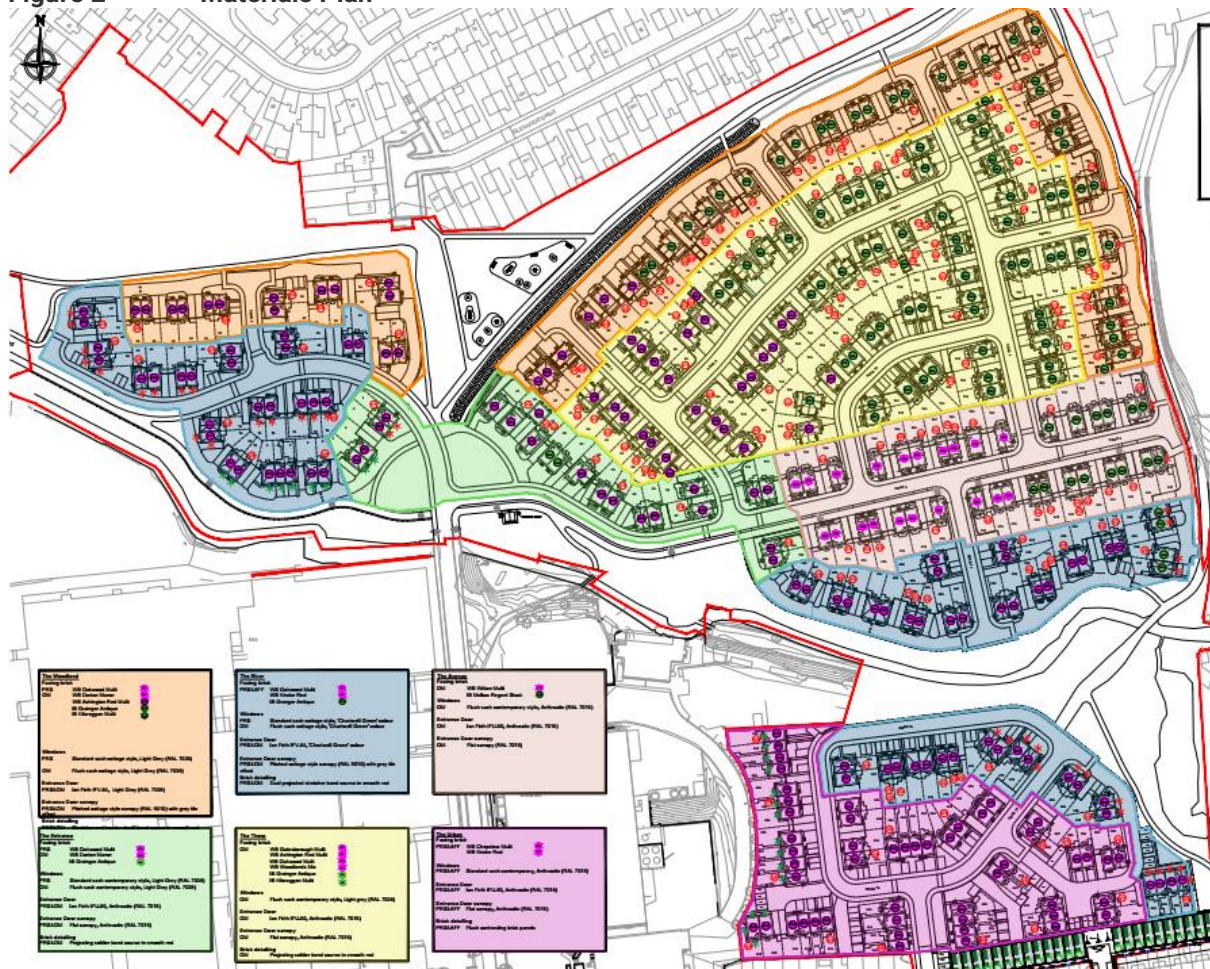
- 6.4mm Solaglas 'Stadip Silence' laminated glass - nominal (8-20mm) cavity - 4mm glass; or
- 8mm glass - nominal (8-20mm) cavity - 4mm glass.

For all other living rooms and bedrooms, on the development, we recommend standard double glazing of 4mm glass - nominal (10-16mm) cavity - 4mm glass (25 dB  $R_w + C_{tr}$ ).

*Due care and attention must be taken to ensure that all glazing is well-fitted.*

The client has provided a Materials Plan detailing the glazing requirements and installation locations, this is shown below:

## Figure 2 Materials Plan





The glazing schedule confirms that the following unit is to be installed in the affected plots/habitable rooms:

 6.8 mm glass / 16 mm air space / 4 mm glass.

This glazing unit provides a reduction of 38 dB  $R_w$  (-1; -5), with a reduction of 33 dB  $R_w + C_{tr}$  in accordance with the requirements of the report. The specification sheet is appended to the rear of the report.

### 2.2.2. VENTILATION

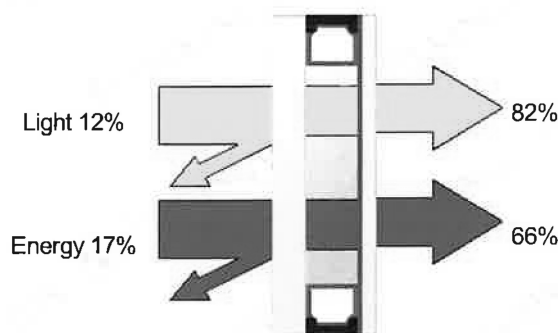
In addition to the above, a whole dwelling ventilation system is required in order to allow background ventilation and fresh air flow within the plots without the need for opening windows. Kellen Homes have confirmed that a Positive Input Ventilation system is to be installed in all plots. This negates the need for window mounted trickle ventilators and provides the necessary background ventilation without the need for opening windows.

Accordingly, E3P confirm that all relevant mitigation measures have been, or will be, installed at the development in accordance with the approved Noise Impact Assessment.

I trust the report is clear and concise but please do not hesitate to contact me should you require further information.

Yours sincerely,  
For and on behalf of E3P Ltd

Lee Faulkner  
**Associate Director**



## DESCRIPTION

| Position                             | Product                          | Process   | Thickness (nominal)<br>mm | Weight<br>kg/m <sup>2</sup> |
|--------------------------------------|----------------------------------|-----------|---------------------------|-----------------------------|
| Pilkington <b>Insulight™</b> Protect |                                  |           |                           |                             |
| Glass 1                              | Pilkington <b>Optilam™</b> Clear | Laminated | 6.8                       |                             |
| Cavity 1                             | Argon (90%)                      |           | 16.0                      |                             |
| Glass 2                              | Pilkington <b>K Glass™</b> S     | Toughened | 4.0                       |                             |
| Product Code                         | 6.8L-16Ar-KS4T                   |           | 26.8                      | 25.76                       |

## PERFORMANCE

| Light                                                                                                  |        |               | Energy                        |                                        |             |
|--------------------------------------------------------------------------------------------------------|--------|---------------|-------------------------------|----------------------------------------|-------------|
| Transmittance                                                                                          | LT     | 82%           | Direct Transmittance          | ET                                     | 57%         |
|                                                                                                        | UV %   | 1%            | Reflectance                   | ER                                     | 17%         |
| Reflectance Out                                                                                        | LR out | 12%           | Absorptance                   | EA                                     | 26%         |
| Reflectance In                                                                                         | LR in  | 12%           | Total Transmittance           | g                                      | 66%         |
| <b>Performance Code</b>                                                                                |        |               | Shading Coefficient Total     |                                        | 0.76        |
| U <sub>g</sub> -value/Light/Energy                                                                     |        | 1.2 / 82 / 66 | Shading Coefficient Shortwave |                                        | 0.66        |
| Ra                                                                                                     |        | 97            | Sound Reduction               | R <sub>w</sub> (C;C <sub>tr</sub> ) dB | 38 (-1; -5) |
| The values of some of characteristics are displayed as NPD. This stands for No Performance Determined. |        |               | Thermal Transmittance         | W/m <sup>2</sup> K                     | 1.2         |

## Carbon Footprint

|     |                                    |    |
|-----|------------------------------------|----|
| GWP | kgCO <sub>2</sub> e/m <sup>2</sup> | 57 |
|-----|------------------------------------|----|

Global Warming Potential (GWP) values derived from the Life Cycle Assessment (LCA) that underpins the third-party verified product Environmental Product Declarations (EPDs). They are declared for modules A1 to A3; the scope of the EPDs is cradle-to-grave and module D in accordance with the requirements of Product Category Rules EN 15804:2012+A2:2019/AC:2021 and EN17074:2019. As noted in the EPD, indicators for modules A1 to A3 should not be used without considering indicators for module C.

Pilkington Spectrum allows you to combine a wide range of products available from Pilkington and determine their key properties such as light transmittance, g value and U value. The program includes restrictions that prevent some combinations being selected that may be considered unwise or impractical. Even with these restrictions, it is still possible to create product combinations that may not be available from your supplier. Please check with your supplier that your chosen product combination is possible, available in the sizes required and in a timescale appropriate to your project. Furthermore, it is essential that you check that your product combination is appropriate for satisfying local, regional, national and other project-specific requirements.

Calculations are made according to EN standards 410 and 673/12898

Pilkington Spectrum Version UK:7.4.1

12/03/2025