



NOISE MITIGATION VERIFICATION

RESIDENTIAL DEVELOPMENT, DON STREET, MIDDLETON.

BACKGROUND & OBJECTIVES

We wish to provide clarity and verification on the proposed mitigation measures that have been implemented at the residential development of 311 dwellings (Use Class C3) with associated infrastructure, landscaping and access to Land Off Don Street, Middleton.

Hepworth acoustics were commissioned by Kellen Homes to provide a Noise and Vibration Assessment for the Proposed Residential Development off Don Street, Middleton.

Report No: P21-051-R01v7 July 2022

The assessment was prepared by David Thurstan BSc MIOA – Senior consultant for Hepworth Acoustics and is a member of the Institute of Acoustics (MIOA) .

MITIGATION MEASURES

RECOMMENDED NOISE MITIGATION SCHEME AND CONCLUSION.

The assessment determined that mitigation measures within the report would both protect the amenity for the new residents adequately from noise from the nearby commercial/industrial premises, and secondly, in so doing, to safeguard the current and future business interests of these premises.

As a result the reduced noise criteria adopted with windows closed and trickle ventilation provided:

- Non-anonymous daytime noise below 30 dB LAeq,16hr inside living rooms and bedrooms, 35 dB LAeq,16hr inside dining rooms; and
- Non-anonymous night-time noise levels not exceeding 25 dB LAeq,8hr and generally not exceeding 40 dB L_{maxF} in bedrooms.

The assessment determined noise mitigation measures were also recommended for new dwellings along the eastern boundary close to the railway line.

The mitigation measures recommended have been incorporated for the new dwellings along the eastern boundary including Upgraded Glazing & Ventilation.

- Daytime noise below 35 dB LAeq,16hr inside living rooms and bedrooms, 40 dB LAeq,16hr inside dining rooms; and
- Night-time noise levels not exceeding 30 dB LAeq,8hr and generally not exceeding 45 dB L_{maxFin} bedrooms (i.e. no more than 10 times per night).

GARDENS



The assessment determined proprietary acoustic fencing of 2.2 metres in height in areas closest to Hexpol TPE. The fences recommended have been set at a height of 2.2m

Kellen Homes also agreed the installation of a 3.1 metre high acoustic fence at the boundary of the trailer yard of Vitafoam Works. The fence recommended have been set at a height of 3.0m

The acoustic fencing must be imperforate (i.e. have no holes or gaps), have a surface mass no less than 10 kg/m² and be at least 20mm thick.

Suppliers of proprietary acoustic fences include Jacksons Fencing (www.jacksons-fencing.co.uk). For this development, a criterion of 55 dB LAeq,16hr in gardens as far as is practicable has been achieved.

GLAZING

Hepworth Acoustics recommended living rooms and bedrooms of the dwellings indicated in Figure 2 are fitted with the following high specification of glazing (minimum 33 dB Rw + Ctr):

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

Hepworth Acoustics recommend that bedrooms of the dwellings indicated in Figure 2 are fitted with the following high specification of glazing (minimum 29 dB Rw + Ctr):

- 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, they recommend standard double glazing of 4mm glass - nominal (10-16mm) cavity - 4mm glass (25 dB Rw + Ctr).

As noted in the report the use of enhanced glazing to the areas referred to in Figure 2, this Development achieves the levels stated.

Kellen Homes have all certification from their window contractors which includes all necessary documentation of compliance and quality.

VENTILATION

All living rooms and bedrooms as indicated in Figure 2, to be fitted with acoustically treated means of ventilation, instead of standard window frame slot vents, to achieve the internal noise criteria.

By providing acoustic type trickle vents, the ventilation measures to these plots meet the internal noise criteria required.

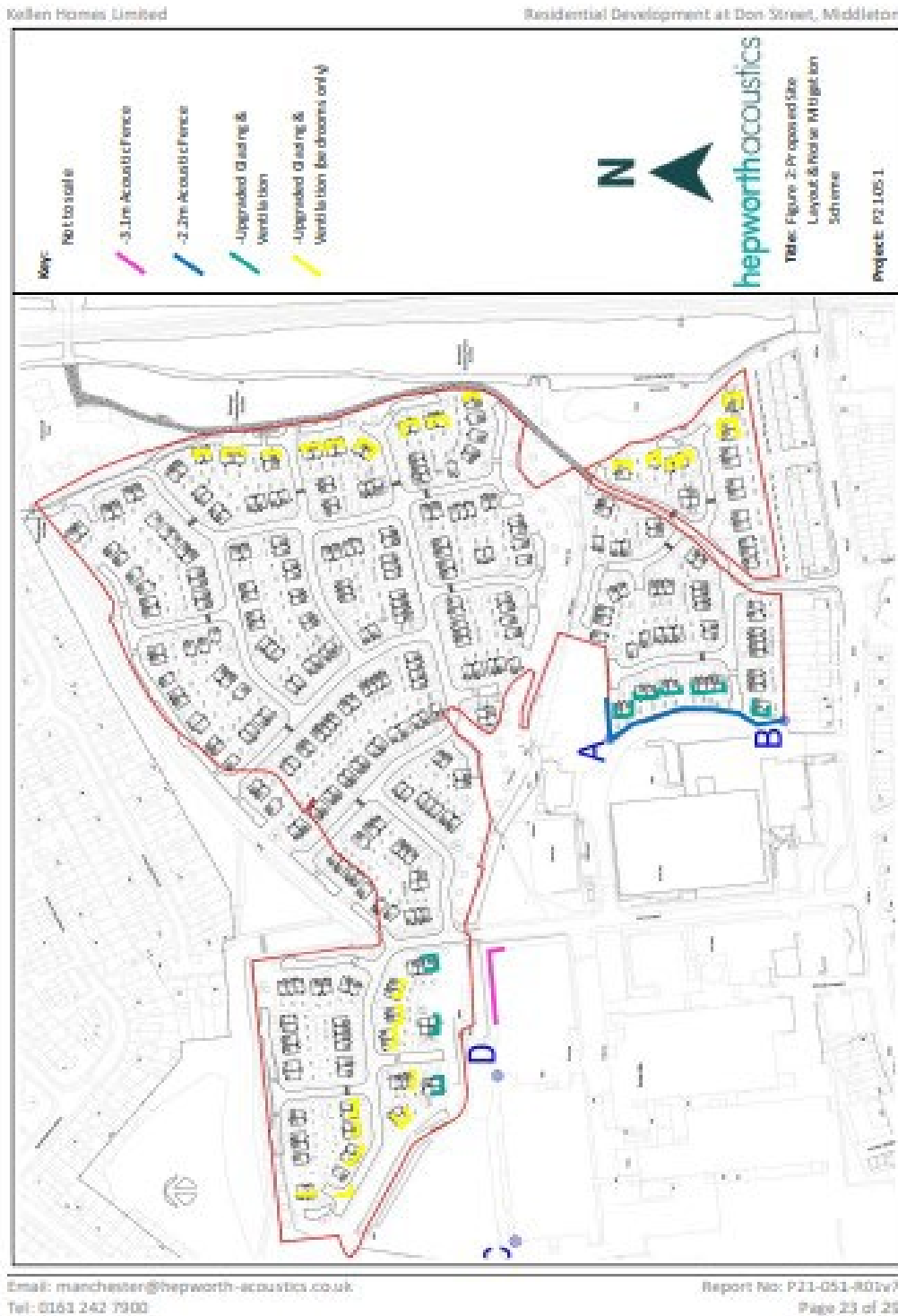
ROOMS IN ROOF SPACES

Bedrooms in roof spaces on outward facing elevations as indicated in Figure 2 have ceilings of 2 layers of 15mm dense plasterboard (Gyproc 'SoundBloc' & Gyproc 'Fireline', as required).

EXTERNAL WALLS

The construction of the external walls of dwellings provides sound insulation performance not be less than 50 dB Rw.

FIG 2.





Hepworth Acoustics concluded that, subject to the recommendations for mitigation measures made within the report that potential noise impact from the railway and the commercial/industrial premises would not result in any unacceptable harm to residential amenity by reason of noise disturbance. Also, the proposed noise mitigation measures would safeguard the business interests of the commercial/industrial premises and thus comply fully with para. 187 of the NPPF.

Furthermore, they stated 'significant adverse impacts' would be avoided and 'adverse impacts' would be mitigated/minimised, bringing the development in line with the aims of the Noise Policy Statement for England (NPSE) 2010.

By incorporating the above mitigation measures within the development Kellen Homes confirm that this development complies fully with para. 187 of the NPPF. As well as bringing the development in line with the aims of the Noise Policy Statement for England (NPSE) 2010.

We trust this report is clear & concise, but please do not hesitate to contact us should you require further information.

Prepared by:

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ARCHITECTURAL TECHNICIAN

FOR & BEHALF OF KELLEN HOMES LTD