

**NOISE ASSESSMENT OF
SITE AT
STATION ROAD
MIRFIELD**

An Assessment on Behalf of
Darren Smith Homes

**NOISE ASSESSMENT OF
SITE AT
STATION ROAD
MIRFIELD**

Environmental Studies

June 2017

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1. Background

It was requested that a noise assessment be conducted in relation to a planned housing development at Mirfield, West Yorkshire.

2. Criteria

BS 8233:2014 ('Sound insulation and noise reduction for buildings – Code of practice') gives guidance on acceptable noise levels within dwellings. The following table shows the internal noise levels it recommends with regard to housing:-

BS8233:2014 Table 4

Indoor ambient noise levels for dwellings

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB L _{Aeq} 16hour	--
Dining	Dining room/area	40 dB L _{Aeq} 16hour	--
Sleeping (daytime resting)	Bedroom	35 dB L _{Aeq} 16hour	30 dB L _{Aeq} 8hour

3. Method of Assessment

The site at Mirfield was visited on 25th January 2017, and noise measurements were conducted at representative locations within the site.

The results of the daytime noise measurements were used to assess the site.

4. Noise Measurements

Noise measurements were conducted on 25th January 2017 between 11am and 2pm.

Equipment used: Norsonic Nor140 Precision Sound Analyser
(serial no. 1402751)

Calibration: Field calibration was carried out before and after the noise measures

All equipment used was within manufacturer's spec. calibration.

Weather: At the time of the noise measures the weather was warm and sunny with a slight south-westerly breeze.

Noise Sources: The site of the proposal lies to the west of Station Road, and 100 metres north of the Leeds/Huddersfield and Wakefield/Huddersfield rail lines.

Figure 1. Noise Measurement Locations



Station Road, Mirfield

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= Location of short sample noise measurements.



= Loading bay for Co-Op Supermarket



= Recycling bins



= Station Road

5. Results

The measured noise values at the Mirfield site were as follow:

Daytime Noise Values

Location (see Fig 1)	Measured L _{Aeq} (dB)	Comment
1	65.2	Sample daytime road traffic noise level – but includes traffic using Lidl
2	57.0	Cars using Co-Op car park
3	53.4	No loading/unloading taking place

5.1 Discussion & Recommendations

The noise measurement exercise showed the typical daytime noise climate at the site. The results included noise from cars using the Lidl car park which occupied the site – these will obviously no longer be a factor once the proposed development takes place.

Unfortunately, no loading/unloading took place at the Co-Op store during the measurement exercise. Upon enquiry I was informed that whilst infrequent, deliveries could arrive at any time during the day, with no notice beforehand. A number of recycling bins and bottle banks are located at the south-western boundary of the Co-Op car park; clearly there is potential for noise events from this source when they are emptied/replaced.

The proposed layout of the development is such that the least noise-sensitive area (the community facility & pool) is located closest to the loading bay. Additional acoustic protection could be afforded to the closest residential units to the loading bay by border treatment. There is currently a wall on the southern boundary of the loading area, but it is not of a consistent height – were this to be completed and heightened then this would help minimise the risk of noise from this source.

The walls proposed on the embankment as part of the development may help reduce both car park noise and noise from the recycling banks to residents on the ground floor of Block D (the wall being 2.4 metres high in this area).

The main noise sources likely to affect the development lie to the north and east (car park/delivery/recycling noise to the north and road traffic noise to the east). To guard against noise sources to the north it is recommended that windows of an enhanced acoustic specification are considered for use in habitable rooms (Living Rooms, Dining Rooms and Bedrooms) in Block D which face north, such that the internal noise environment quoted within BS 8233 may be preserved. It is further recommended that each such room is fitted with an alternative means of acoustic ventilation such that the resident can keep windows closed if they so choose.

Whilst standard glazed units in habitable rooms in the eastern façades of blocks A and D should suffice to control road traffic noise when closed, it is recommended that habitable rooms here are also fitted with an alternative means of acoustic ventilation such that the resident can keep windows closed if they so choose.

It is assessed that the mitigation measures discussed above would protect the noise climate of future residents to acceptable levels.

6. Conclusions

Whilst the proposed location of the planned development at Mirfield is quite close to potentially disturbing noise sources, the design layout together with recommended mitigation features are such that the influence of these noise sources will be minimised.

Tim Summers AMIOA

June 2017

APPENDIX 1

TYPICAL SOUND REDUCTION FOR BUILDING ELEMENTS

STRUCTURAL ELEMENT

REF NO		RTraffic Noise Reduction In dB(A)
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WINDOWS

1.	Single, 4mm glass, part open	12
2.	Single, 4mm glass	18-20
3.	Sealed unit 4/6/4 (4mm glass/6mm space/4mm glass)	25
4.	Sealed unit 6/12/6	26
5.	Sealed unit 4/12/10	29
6.	Single 6.4 laminated glass	29
7.	Triple glazed sealed unit	31
8.	Sealed unit 6/12/10	32
9.	Sealed unit 6.4 laminated/8/10	34
10.	Double 4/150/4 with lined reveals	34
11.	Double 6/100/4 with lined reveals	37
12.	Double 6/200/6 with lined reveals	42

*All windows are closed (including sealing strip) except where indicated