



MCS 020 noise impact assessment for 30 Patshull Road

This assessment was done in relation to the neighbour window most likely to be affected by noise from the heat pump.

This is the result of the assessment:

| Step | Instruction | Result |
|-----------|----------------------|-------------|
| 1 | Sound power | 58 |
| 2 | Directivity Q | 4 |
| 3 | Distance | 4.8 |
| 4 | dB reduction | -17 |
| 5 | Solid barrier | -10 |
| 6 | Sound pressure level | 31 |
| 7 | Background noise | 40 |
| 8 | Difference | 9 |
| 9 | Decibel correction | 40.5 |
| 10 | FINAL RESULT | PASS |

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Assessor notes

In order to be as clear as possible, below will outline the key decisions that have helped form the assessment:

- A sound power rating of 58dB (STEP 1) was used as the assessment is regarding two 7kW Vaillant heat pumps. Using manufacturer's data, the sound power of each heat pump is 55dB. A doubling of sound equates to a 3dB increase. Hence, a 58dB rating has been used.
- A directivity of 4 (STEP 2) is used, as both heat pump has two acoustic barriers (ground and adjacent wall).
- A solid barrier correction of -10dB (STEP 5) was used as you can not see the heat pumps from the assessment point.