

Kate Solomon

Wales & West Housing
Archway House, 77 Parc Ty Glas
Llanishen
Cardiff
CF14 5DU

04/06/2026

Our Ref: 7784/L3

Dear Kate,

Re: Ty Brynseion, Dowlais

The following letter discusses the latest proposals for new air source heat pumps at Ty Brynseion, Dowlais, CF48 3SR.

1. ASHP NOISE ASSESSMENT**1.1 Proposed ASHP Location**

It is proposed to locate five ASHPs in a compound on the northern site boundary.

Figure 1.1 below shows the development site and the closest existing SSRs listed below in Table 1.1

Table 1.1 – Nearest Off-site Sound Sensitive Receivers

Sound Sensitive Receiver (SSR)	Approx. Distance (m) to nearest ASHPs
Gwernllwyn Court	25
Dowlais Elim Church	10

Nearest residential apartments within Ty Brynseion are around 5-10m away.

Figure 1.1 - Site Plan Showing Nearest SSRs and ASHP Locations

1.2 Proposed ASHPs

5no Maxa i-290 0127 SSL ASHPs are proposed running during both the day and night.

The following sound power levels has been provided for ASHPs running in heating mode:

Table 1.2 – ASHP L_{wA} Spectra

	L_{wA}	Octave Band Centre Frequencies (dBA)						
		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz
0127 SSL	58	34.7	41.8	50.3	54.8	50.7	48.6	40.3

The above data is quoted for 'partial load' confirmed as the required operating mode for heating. It has been confirmed that full load (required for cooling) is not needed.

1.3 Predicted ASHP noise levels

1.3.1 Noise Map Model

The above ASHP source noise levels have been used to set up a noise map using *iNoise* (2026.1) which in turn uses methodology from ISO9613 (2024).

This model allows noise levels from noise sources to be predicted over large distances and varying terrain. Attenuation is included accounting for distance, air absorption, ground absorption and screening losses from site topography/local structures where applicable.

1.3.2 Screening

A solid fence around the ASHP compound is not indicated to be required and therefore no screening is allowed for in the model.

1.3.3 Noise Map Results

The noise map model in Figure B.1 of Appendix B shows the predicted noise contour plot across the surrounding area to critical SSRs at 4.5m above local ground height.

The following initial noise prediction has been carried out to estimate the resultant sound levels at the SSRs.

Table 1.3 - ASHP Noise Prediction

Receptor	Predicted ASHP Sound level
Gwernllwyn Court	26dB(A)
Dowlais Elim Church	32dB(A)
Ty Brynseion	36dB(A)

1.4 ASHP noise impact assessment

1.4.1 Guidance / Criteria

At the time of writing a new draft *Air Source Heat Pumps Professional Advice Note* (2026) has been published for consultation by the IoA and CIEH. This guidance is intended to provide alternative assessment options for proposed ASHP installations to which Permitted Development Rights (PDR) do not apply. It sets out three possible pathways to compliance.

For this development a 'Level 1' method is considered appropriate, which requires demonstration that the 37dB(A) criterion of MCS020a is achievable. If ASHP noise levels are indicated to exceed the 37dB(A), a detailed BS4142:2014 impact assessment may be required.

1.4.2 Existing Neighbouring Sound Sensitive Receptors

Predicted ASHPs sound levels of $\leq 27\text{dB } L_{Aeq}$ are indicated at the closest SSRs on Gwenllwyn Court during day and night. Noise from ASHPs would therefore fall well below the 37dB L_{Aeq} ASHP noise limit quoted in the latest MCS020 guidance for permitted developments.

ASHP sound levels at Dowlais Elim Church also fall below the MCS020 guidance figure. 32dB(A) during the daytime period which should not be considered significant for a non-residential receptor.

Therefore, this would represent a low impact. A further 'Level 2' assessment in accordance with BS 4142:2014+A1:2019 and undertaking a baseline noise survey at nearest sound sensitive receptors is not indicated to be required.

1.4.3 Ty Brynseion

For ASHP noise at the closest windows of Ty Brynseion, a level of 36dB L_{Aeq} outside windows is indicated. This level also falls below the MCS020 37dB L_{Aeq} ASHP noise limit.

It is understood that ASHPs are to provide both heating and hot water, and windows of the nearest flats may be opened; allowing a minimum 10dB through a partially open window would bring internal noise levels to below 30dB(A) meeting the BS 8233 night-time desirable internal ambient noise guidance value.

Regards,

A handwritten signature in black ink, appearing to read 'Paul McGrath'.

Paul McGrath

BSc(Hons) MIOA | Director

Hunter Acoustics

APPENDIX A - ACOUSTIC TERMINOLOGY

Human response to noise depends on a number of factors including loudness, frequency content and variations in level with time. Various frequency weightings and statistical indices have been developed in order to objectively quantify 'annoyance'.

The following units have been used in this report:

dB(A)	The sound pressure level A-weighted to correspond with the frequency response of the human ear and therefore a persons' subjective response to frequency content.
L_{eq}	The equivalent continuous sound level is a notional steady state level which over a quoted time period would have the same acoustic energy content as the actual fluctuating noise measured over that period.
L_{max}	The highest instantaneous sound level recorded during the measurement period.
L_{10}	The sound level which is exceeded for 10% of the measurement period. i.e. The level exceeded for 6 minutes of a 1 hour measurement - used as a measure of background noise.
L_{90}	The sound level which is exceeded for 90% of the measurement period. i.e. The level exceeded for 54 minutes of a 1 hour measurement - used as a measure of background noise.
$L_{A,r,Tr}$	The 'rating' level, as described in BS 4142:2014 – the specific noise plus any adjustment for the characteristic features of the noise.
SSR	Sound sensitive receiver

APPENDIX B – NOISE MAP MODELS

Figure B.1 – Predicted ASHP Noise Levels $L_{Aeq,T}$ at First Floor Level (4.5m above local ground height)

