

**Hergest Camp Farm
Lower Hergest
Kington
Hereford
NR5 3ER**

NOISE MONITORING PROTOCOL

Acoustics Report M2303/R01
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To: Hergest Camp Farm
Lower Hergest
Kington
Hereford
NP5 3ER

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1. Noise Monitoring Protocol

This document presents the protocol for noise monitoring at Hergest Camp Farm, Hereford.

The monitoring would be undertaken as required to review the effectiveness of noise control measures implemented at the development or in the event of received noise complaints.

The noise monitoring must only be undertaken by an independent specialist company, with the personnel either members of the Institute of Acoustics or Association of Noise Consultants.

1.1 Monitoring equipment

- *Noise monitor*: must conform to BS EN 61672-1, Class 1
- *Calibrators*: must conform to BS EN 60942, Class 1
- *Calibration Verification*: Both the noise monitor and calibrator must hold calibration certificates traceable to national standards. The certificates must be dated within 1 year for the calibrator and 2 years for the noise monitor
- *Weather monitor (anemometer)*: Anemometer capable of measuring the wind speed and direction

1.2 Monitoring Protocol

- *Field calibration*: At the start and end of every measurement session, the accuracy of the noise monitor must be checked with the calibrator. If there is a difference greater than 0.5dB between the two sets of calibration, the measurements made may be compromised and therefore repeat measurement should be considered.
- *Weather conditions*: measurements must only be conducted in dry conditions, wind speeds no greater than 5m/s (as measured at the start of the noise monitoring using the anemometer). Measurements should not be undertaken when there is fog or snow
- *Noise monitor configuration*: set to measure the L_{eq} , L_{90} , $L_{max,F}$ parameters. Additionally, if the monitor includes a filter set, 1/3 octave band measurements should also be recorded (this allows for a more detailed analysis of the noise emissions and the review of tonality in accordance with the 'objective' methodology given in BS4142:2014+A1:2019).
- *Noise monitor location*: Noise monitor, either hand held or mounted on a tripod, to be positioned at 1.2 - 1.5m above local ground. The monitor should be away from any reflective surfaces (i.e., free-field); for situations where this is not possible (for instance near field measurements of an individual extract fan, the distance from the reflective surface (e.g., facade/roof) must be noted.

The location of the monitor will depend on the noise being investigated; for general noise emissions from the development, measurements around the site/farm boundary would generally be sufficient (this would allow for comparison with previous measurements to identify any noise creep). Review of noise emissions from individual items of plant/activities should be undertaken in the near vicinity of the noise source in order to minimise the influence of other noise sources. For complaints, ideally measurements would also be undertaken at the location that the complaints have been received or a suitable surrogate location.

- *Noise measurement duration*: The duration of the measurements will depend on noise source(s) under investigation. For steady noise sources, a measurement duration of 5 – 10minutes would typically be sufficient. For time varying noise sources, a longer duration

should be used that captures the entire noise event; it may also be acceptable/desirable to undertake consecutive measurements, typically between 5 to 15-minute durations; the chosen duration would be up to the discretion of the assessor

- *Extraneous noise sources:* As far as is practicable, the pause facility on the noise measurement equipment should be used to exclude extraneous noise (e.g., low flying aircraft and road traffic passing in front of the microphone) so that the results recorded are representative of the noise source under investigation.
- *Environmental noise:* Measurements of the general environmental (residual) noise should also be undertaken without the contribution of the noise source(s) under investigation. This is to allow for the correction of the influence of the residual noise and for review of the noise impact
- *Observation:* During the noise measurements the following observations should be made:
 - Noise characteristics of the noise source (e.g., tonality, impulsivity, intermittency and any other distinguishable characteristics)
 - Duration and frequency of noise event(s)
 - General noise environment characteristics
 - Audibility and context of the noise source against the general noise environment
 - Perceived likelihood of annoyance

1.3 Information to be reported

- Date and time of noise measurements
- Wind speed/direction
- Location(s) of noise monitor
- Duration of measurements and recorded noise levels
- Description of the general noise environment, including comment of any extraneous noise such as road traffic/aeroplanes
- Comment on the noise source(s) under investigation, to include as applicable; perceived noise characteristics, duration and frequency of occurrence, audibility and potential of annoyance
- Any identified uncertainty in the measurements undertaken