

Issue ID	Issue Title	No. of credits available	Minimum standards
Hea 13	Acoustic Performance	2	No

Aim

To ensure the acoustic performance of the building meets the appropriate standards for its purpose.

Assessment Criteria

The following demonstrates compliance:

First Credit

1. The building complies with the following:
 - a. The values for noise intrusion from external sources in table 1 of HTM 08-01 *Acoustics*⁵⁷ are not exceeded.
 - b. The values for internal noise from mechanical and electrical services in table 2 of HTM 08-01 *Acoustics* are not exceeded.
 - c. The *weighted standardized level differences* measured between rooms on site are not lower than the values of the sound insulation ratings (dB $D_{nT,w}$) in Table 4 of HTM 08-01: *Acoustics* (the values in table 4 are determined according to the privacy requirements, noise generation of the source room and noise sensitivity of the receiving room as specified in Table 3 of HTM 08-01: *Acoustics*)
 - d. Impact noise is controlled at source and the *weighted standardised impact sound pressure level* ($L'_{nT,w}$) does not exceed 65dB in noise sensitive rooms
2. Pre-completion acoustic testing is carried out by a *suitably qualified acoustician* in accordance with HTM 08-01 *Acoustics*, Chapter 7 *Testing and Validation* to ensure that all relevant spaces (as built) achieve the performance standards required, and any required. Remedial works in spaces that do not meet the standards are completed prior to handover and occupation.

Second credit

3. Sound-absorbent treatment is provided to control reverberation in rooms and circulation spaces in accordance with paragraphs 2.110 of HTM 08-01 *Acoustics*.
4. Pre-completion acoustic testing is carried out by a *suitably qualified acoustician* in accordance with HTM 08-01 *Acoustics*, Chapter 7 *Testing and Validation* to ensure that all relevant spaces (as built) achieve the performance standards required, and any required. Remedial works in spaces that do not meet the standards are completed prior to handover and occupation.

Compliance Notes	
New Build	There are no additional or different criteria to those outlined above specific to new-build projects.
Refurbishment	There are no additional or different criteria to those outlined above specific to refurbishment projects.
Extensions to existing buildings	There are no additional or different criteria to those outlined above specific to assessments of extensions to existing buildings.

Fit Out Only	Fit out-only assessments of buildings with <i>acoustically sensitive spaces</i> must be assessed against the sound insulation criteria for this BREEAM issue.
Awarding the second credit	The first credit does not have to be achieved to award the second credit.
Unoccupied spaces	Where the term ' <i>unoccupied space</i> ' is referenced in this BREEAM issue, it refers to the nature of the space for the purpose of carrying acoustic calculations or measurements i.e. such measurements must be carried when the space is unoccupied and therefore devoid of sources of noise. Care should be taken to avoid confusing this term with the definition " <i>occupied space</i> " (see relevant definitions) as they have two different meanings within the context of this BREEAM issue.
Privacy	Where ranges of noise levels are specified where privacy is not deemed by the final occupier to be an issue, it is acceptable to disregard the lower limit of the range and consider the noise levels to be lower or equal to the upper limit of the range.
Reverberation times	Where the reverberation times stated above or in the referenced documents are not appropriate for the type of space/building assessed, the acoustician must confirm why this is the case. In addition the acoustician must set alternative appropriate reverberation times and provide these to demonstrate compliance.

Schedule of Evidence Required

Req.	Design Stage	Post Construction Stage
1&3	<p>A copy of the design plan for each level of the building with each room/area clearly labelled.</p> <p>A copy of the specification clause confirming:</p> <ul style="list-style-type: none"> The building will comply with the performance standards required by HTM 08-01. <p>OR</p> <p>A copy of the acoustician's calculations confirming:</p> <ul style="list-style-type: none"> The specific performances standards achieved for each room/area The standards comply with the levels required in HTM 08-01. 	<p>Copies of acoustic field test report/results confirming:</p> <ul style="list-style-type: none"> The required performance levels have been achieved for each room/area of the completed building. Where relevant, any remedial work/actions required to meet the performance standards. <p>Evidence, such as a formal letter from the acoustician or their test report confirming that they meet BREEAM's definition of a <i>suitably qualified acoustician</i>.</p> <p>A letter from the design team or main contractor confirming:</p> <ul style="list-style-type: none"> Any and all required remedial works have been carried out in accordance with the acoustician's recommendations.
2&4	<p>A copy of the specification clause or a formal letter from the project team confirming:</p> <ul style="list-style-type: none"> A programme of pre-completion acoustic testing by a <i>suitably qualified acoustician</i> will be commissioned. Where rooms/areas do not comply with the required levels, appropriate remedial works will be actioned and completed. 	As outlined above.

Additional Information

Relevant definitions

Suitably qualified acoustician: Those organisations or individuals having UKAS accreditation or accredited by a European equivalent of UKAS. The definition includes organisations or individuals registered to schemes that are UKAS accredited, or equivalent, to ensure consistency and technical competence in sound testing. At the time of writing the Association of Noise Consultants (ANC) Registration Scheme is in the process of obtaining UKAS accreditation and can be deemed to comply with this requirement until advised otherwise.

Weighted standardized level differences ($D_{nT,w}$): *'unit for rating airborne sound insulation on site'*⁵⁷.

Weighted standardised impact sound pressure level ($L'_{nT,w}$): *'unit for rating impact airborne sound insulation on site'*⁵⁷.