

Addendum Report

Unit B, Aberfan Shopping Centre, Port Talbot, SA13 1PB

Client: ET Planning Limited
Project: Unit B, Aberfan Shopping Centre, Port Talbot
Reference: 250805-R005
Report date: October 22, 2025
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ACA Acoustics Limited's has undertaken an assessment of the potential noise impact of a proposed fitness gym (report reference 250805-R001), which has been submitted to Neath Port Talbot Borough Council in support of planning application reference P2025/0664.

C. Banks an Environmental Health Officer of Neath Port Talbot Borough Council has requested additional information to assist their consideration of the development. This addendum report has been prepared in response to provide the information requested.

Impact Sound Transmission to adjoining Receptors

The Environmental Health Officer has noted

"Even though the acoustic report provides a relatively detailed assessment of the noise impacts from gym operations, it should be noted by planning that the potential for noise transfer from gym operations (particularly noise transfer of music and especially impact noise of weights being dropped – the latter which is almost impossible to stop clients doing within a gym) to other premises, especially the adjoining residential units above, should be acknowledged and considered within the determination, even after noise mitigation has been outlined. Reduction of impact noise from gyms is considerably difficult to achieve when noise-sensitive premises are adjoining. Further emphasis should be made of this point with regard to the gyms proposal over a 24hr use.

The acoustic report details that, after noise impact tests were conducted, 'Measured results indicate that there is significant impact sound transmission through the existing building'. The report has not provided an actual mitigation route but recommended a likely form of workable mitigation by another company but this is not acceptable to put into a planning condition. Due to the level of noise intrusion risk to residential, this information needs to be submitted as part of a full application and not conditioned upon granting permission. There is also no detailed calculations of noise break-in to residential premises using the recommended mitigation detailed in the report therefore it is not evidential this mitigation is robust to achieve the necessary noise criteria."

In response to the above request for information, ACA Acoustics have undertaken a further testing exercise on site in conjunction with the proposed gym operator and *Absolute Performance*, a specialist gym and acoustic flooring supplier.

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Impact sound tests were conducted in accordance with Method 1 of ProPG: Gym Acoustic Guidance (ProPG: GAG) using a variety of different flooring samples and configurations.

The tests were carried out in three drop locations, being the closest location of potential heavy impacts during the operation of the gym within the main gym space (Position A) and smaller side space (Position C), along with the proposed location for the free-weight station (Position B).

A fine time history was recorded at first floor level in the residential block as short-term (0.1 second) instantaneous sound pressure levels over the duration of the weight drops. Measurements were recorded in 1/3rd octave sound levels to allow comparison against the G-curve criteria of ProPG: GAG.

Five weight drops were conducted for each drop location and flooring configuration. The tests were then repeated for different flooring samples until the weight drops became inaudible against the prevailing background noise and the measurement results achieved required criteria.

Results of the testing demonstrated that the following flooring configuration ensure weight drop noise was subjectively inaudible and complied with the recommended criteria of ProPG: GAG, that heavy weight impacts should not exceed G25 to residential receptors during the daytime, and G20 overnight.

Test Positions	Flooring Configuration	Measured LAfmax dBA	Measured G Curve	Criteria G curve
Position A to residential block	Absolute Performance 70mm tile on 2 layers of 25mm dimpled rubber	35dB*	G25*	G20 – G25
Position A to residential stair core	Absolute Performance 70mm tile on 2 layers of 25mm dimpled rubber	31dB*	G20*	G20 – G25
Position B to residential block	Absolute Performance 70mm tile on 2 layers of 25mm dimpled rubber	34dB*	G25*	G20 – G25
Position C to residential block	Absolute Performance 70mm tile on 2 layers of 25mm dimpled rubber	34dB*	G20*	G20 – G25

*: Existing sound levels from extraneous sources such as from neighbouring flats fluctuated from a low level of 34dB - 35dB and higher throughout the survey. As such, it is not possible to measure below this level. Noise from the weight drops with this flooring configuration were subjectively inaudible and no

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'spike' or 'peak' was identifiable as being associated with the weight drops. Residual sound levels in the stair core were slightly lower, but again noise from the weight drops was subjectively inaudible at this location.

This indicates that the actual specific level of the weight drop sound transmission during the test was considerably below the level shown in the table above and will comply with the guideline criteria of G25 during the daytime and G20 at night.

Areas of the gym where there will be no heavy impacts, such as cardio areas (exercise bikes, rowing machines, etc.) will not require high-performance flooring and standard gym rubber flooring would be acceptable to these areas.

The author considers that results of these further tests have identified an appropriate acoustic flooring configuration which will achieve acceptable sound levels to the adjoining residential receptors and should allay concerns of the Environmental Health Officer.