

Sound Insulation Research Project for Construction Materials Manufacturer

Background

Miller Goodall Ltd (MGL) was approached to undertake extensive field testing for a large, multi-national manufacturer of building construction materials. This was part of a research project funded by the manufacturer to quantify the effect of the addition of low density insulating fillers on the thermal and sound insulation properties of separating walls in existing social housing stock constructed circa 1950.

Action Taken

Airborne sound insulation measurements were made of separating walls prior to treatment. The walls selected for treatment were a cavity masonry construction consisting of two leaves of brick, plastered both sides with a 50 mm cavity (or less). These walls were subsequently filled with insulation which involved drilling several holes approximately 25 mm in diameter into one side of the separating wall and filling the cavity with low density, blown filler insulation before reinstating the holes with mortar.

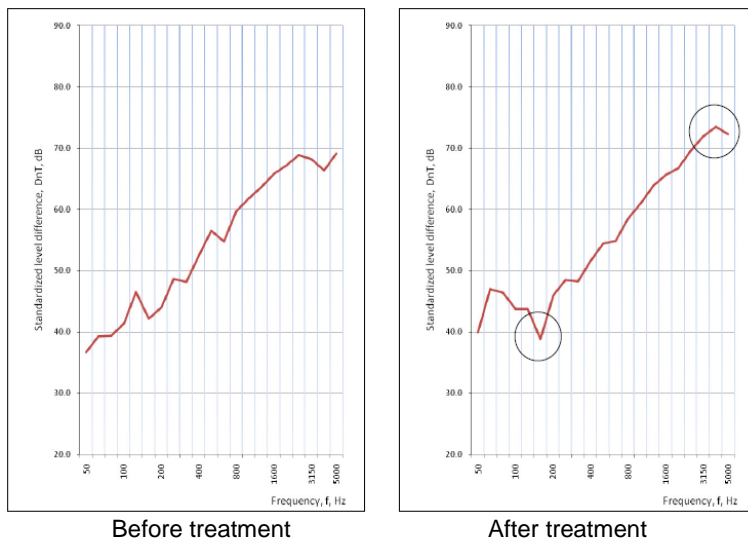


Figure 1: Airborne sound insulation before and after treatment

generated during installation, thus preventing bridging of the cavity. This resulted in no significant drop in low frequency performance of the wall with the predicted improvements in high frequency performance intact.

Summary of Findings

The testing programme determined that a revised installation method for the blown filler was adopted and subsequently demonstrated small but useful improvements in the sound insulation performance of separating walls post-treatment. This, combined with significant improvements in the thermal insulation properties of the wall, led to a successful program of treatment to existing social housing stock.

For more information about us, visit our website at www.millergoodall.co.uk. If you would like to discuss how we can help your project, please contact Miller Goodall on 01204 596166 or email info@millergoodall.co.uk.