

Issue 4 - Green Star Acoustics

Green Star is starting to get established in the SA building industry. Most of us have worked on projects by now where Green Stars are a client requirement. While looking for ways to meet their 4, 5, or even 6 star requirement, remember there are a few often easily achievable credits for acoustics.

Green Star (run by the Green Building Council of SA) is a rating method to show how environmentally efficient and responsible a building is. The system has proved very successful overseas. It is heavily based on the Australian Green Star system (though adapted for South African conditions) and is similar to the English BREEAM system, among others.

GBCSA describes their aim as follows:

We aim to ensure that all buildings are built and operated in an environmentally sustainable way so that all South Africans work and live in healthy, effective and productive environments.

The Green Building Council SA is continuously developing new tools. Below are the current tools with acoustic credits. All credits award points for internal noise levels. We will focus on the other available points.

Office

The only acoustic points in the Office tool are for internal noise levels. The first point is simply a matter of specifying your attenuators correctly for each system's in-duct noise level. Speak to us or your HVAC consultant.

The second point requires a noise survey before construction starts, so must be planned for. You will then need specialist advice on your façade performance.

To be awarded the credit, you need a "suitably qualified acoustician" (that would be us) to write you a report setting out the information GBCSA needs to see.

Interiors

Also known as the Fit-out tool, essentially you get points for meeting reasonable internal acoustic targets for internal noise levels, reverberation, interference (for open working areas) and speech privacy.

Any decent, modern fit-out design should include these items in the basic specification. As with many Green Star credits, you are getting credit for good design practice.

Multi-Unit Residential

In addition to internal noise levels, another point is available for sound insulation between dwellings.

The internal noise limits credit (35dBA in bedrooms at night and 40dBA in other habitable rooms at all times) are not random limits. They are based on SANS and World Health Organisation guidelines and have long since been adopted by many other countries.

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The credit for sound insulation is a significant and welcome step forward in residential design quality. Poor domestic sound insulation is proven to cause all manner of problems such as sleep loss and stress. The credit

requires airborne insulation for separating walls and floors and impact insulation for floors. In practice, this credit means that you need to use drywalls; 240mm masonry will fall about 5 dB short.

Public and Education Buildings

Again there are two credits for HVAC and ambient noise. There is though an extra credit for acoustic absorption in classrooms and lecture rooms. Either install an NRC 0.7 ceiling throughout, or for a more attractive finish, ask us to run a few calculations.

Retail

There is only one acoustic credit available for Retail: building services noise levels must be no more than 55dBA. Again, speak to us or your HVAC consultant.

SRL SA: not just "suitably qualified acousticians"

It turns out you can buy experience. We have over 15 years of international experience in delivering successfully certified Green projects. We will assess your site and tell you how to achieve your acoustic credits.

We will help you get your rating. Call us on +27 21 680 5305.