

# Enabling Innovation

## Gill Hewitt – Sound Absorbing Textile Art Panels

### Overview

Gill Hewitt was studying for a Masters Degree in Design at Bath Spa University when she won innovation award funding to test sound absorbing textile art panels to establish the random incidence sound absorption coefficients in order to determine whether or not they met the performance criterion defined in BSEN 354:2003 and European equivalent.

### About the Project

Gill Hewitt designs and produces textile art panels with high sound absorption performance, offering both aesthetic and acoustic benefit to contemporary architectural interiors. These often contain hard and reflective planes and surfaces, prone to uncomfortable flutter echo. The panels promote a feeling of positive acoustic comfort whilst controlling and regulating reflected sound and making speech and music more intelligible.

Initial tests carried out to determine whether the panels retained their sound absorption qualities suggested good results. Primary research indicated that a combination of art and acoustic panels was a product that was required but not currently available. However, to move the concept on, it would be necessary to establish BSEN 354:2003 performance in order for the product to be specified by architects and interior designers. Gill, therefore, applied to the University's Business Support Office for innovation funding to construct a number of test panels and undertake this testing to achieve industry certification.

Inspiration for designs is usually taken from within the structure and rhythms of nature. 'Strata', a flexible modular system of sound absorbing wall panels, was inspired by the exposed texture of rock formation. The designs allow for any number of panels to be combined together to fit any given space. 'Minato' and 'Strata 2' are smaller versions of the flexible modular system, where panels can be placed together to make a larger piece of sound-absorbing artwork.

The highly original textiles are developed to optimise acoustic performance. Source fabrics are hand-dyed, or digitally printed using Gill's photographic imagery, prior to being constructed using non-woven technology. The substrate of the panels consists almost entirely of glass, over 70% of which is recycled from household glass and glass wool.



Gill Hewitt Katsura Design

### Fast Facts

- Innovation award funding enabled testing to BS and European industry standards and achieved the highest level absorption class
- The sound-absorbing textile art panels combine art with function
- Gill Hewitt's concept is now commissioned by architects and interior designers

## Benefits

An increasingly significant part of today's populations are recognised to have imperfect hearing. Also, in this age of the service industry and an older workforce, working spaces need to be inspirational, comfortable and controllable, where communication is encouraged between staff. Visual and sound-absorbing art will make an important contribution to well-being in work environments. These panels, therefore, have a practical – as well as an aesthetic – benefit to public and group environments. They combine art with function.

An increasing trend in the building industry is the creation of buildings and spaces that are flexible, whilst avoiding waste and maximising the use of prefabrication. The modular and dimensionally coordinated panelled approach to surface of Gill Hewitt's designs allows for integration of these components, as panels may be fixed or relocated within the architectural whole.

## Outcomes

High performance sound absorption was certified by sound testing laboratories, achieving an international performance standard, as designated in EN ISO 354, of Class A, NRC 1.00 per ASTM C423-01 – the highest possible absorption class.

In May 2008, Gill exhibited at the International Contemporary Furniture Fair in New York. Billed as North America's singular showcase for contemporary design, it attracts those at the forefront of design trends and provides an exhibition of inspirational and thought-provoking items.

The innovation award funding also enabled some professional photographs to be taken of the panels for use in PR and trade literature. As a result, Gill was able to provide professional images of her work in support of her exhibition at TENT 2008 in London and her 'Strata' wall panels were illustrated and recommended in the November/December 2008 edition of International Design Magazine.

Working with interior designers and architects, current projects include installations for restaurants, auditoria, work and reception areas. Interest has also been shown in the panels for recording studios, conference rooms, boardrooms, residential and exhibition displays.

[www.gillhewitt.com](http://www.gillhewitt.com)



Gill Hewitt Strata Design Used in Reception Area

## Perspective

“All the industry testing was a nerve-wracking experience and I was glad of the help and support from the Business Support Office. Thanks to this opportunity, I'm now in a good position to promote my concept.”

**Gill Hewitt**  
Innovation Award Winner 2007

“It's been very rewarding to be a small part in the development of what is destined to be a highly commercial and innovative new business.”

**Susan Cherrett**  
Business Support Manager  
Bath Spa University

Bath Spa University's Business Support Office acts as a catalyst for engaging with employers, providing enterprise opportunities for students and graduates, and maximising on the expertise of the university for the benefit of the local business community. For further information, contact the Business Support Office at [businessenquiries@bathspa.ac.uk](mailto:businessenquiries@bathspa.ac.uk)  
[www.bathspabusiness.com](http://www.bathspabusiness.com)