



Socialising in comfort: the importance of acoustics in hospitality

● Frontier™ Acoustic Fins in Empire

The Waverley Brewhouse, Western Australia



Introduction

When a pleasurable sensory experience is the main goal of your business, it's imperative that the space is carefully designed to provide patrons with the best experience possible in order to gain repeat business. Noise reduction and better acoustics not only improve sensory experience, but protect the hearing and overall wellbeing of everyone within the space. By reducing noise within a venue overall, acoustic treatment also contributes to customer retention and return and thus the ongoing profitability of the venue.

Socialising in comfort: the importance of acoustics in hospitality

As an industry, hospitality is based around sensory experience. People dine out at restaurants to taste. They go to cinemas to see films. They go to venues to listen to music. When a pleasurable sensory experience is the main goal of your business, it's imperative that the space is carefully considered and designed to provide patrons with the best experience possible in order to gain repeat business. Designers and specifiers working within hospitality spaces such as restaurants, conference centres, hotels and event spaces understand that there are a variety of factors that go into creating a venue's desired ambience. These include lighting, the shape and construction materials used, interior fixings, and—importantly—the acoustics within the space¹.

Excess noise is the most notable result of poor acoustic treatment in hospitality spaces, but it is important to distinguish noise from sound. Noise is unwanted sound², and can be caused by a variety of factors—from the environment, to excess reverberation within a space. Excess noise can cause a variety of negative health impacts, from annoyance and stress, to temporary or even permanent hearing loss in extreme cases³. Research has shown that noise is one of restaurant patrons' greatest annoyances in their dining experiences—with almost a quarter of people saying they found noise in restaurants to negatively affect their experience⁴. It has also been proven that excessive noise can decrease people's ability to taste food⁵. Similarly, poorly designed conference rooms can cause issues for both speakers and listeners—while noisy offices can increase stress, decrease productivity, and even cause privacy issues⁶.

Given the range of negative impacts, it is imperative that designers and specifiers invest in proper acoustic treatment for restaurant spaces. Noise reduction and better acoustics not only improve sensory experience, but protect the hearing and overall wellbeing of everyone within the space. By reducing noise within a venue, acoustic treatment contributes to customer retention and return, and thus, the ongoing profitability of the venue.

This whitepaper will look at how acoustic treatment in hospitality spaces can positively affect patrons, staff and business outcomes, as well as provide a detailed overview of the aspects that come into play when selecting a high performance acoustic treatment solution for a venue.

The health factors

The negative impacts of poor acoustics and excess noise on humans are well documented around the world. International studies have indicated that excess noise plays a part in everything from reduced lifespan to an increase in dementia, stroke and heart attack^{7,8}. Domestically, the Australian Government has released numerous research reports and whitepapers outlining not only the potentially harmful effects of excess noise, but the regulation in place to combat it in residential settings, as well as commercial settings⁹.

Global figures note that noise in restaurants can frequently exceed 80 dBA¹⁰, which places those subjected to it at risk of permanent hearing damage, by the Australian Government's standards¹¹. While it would be incorrect to suggest that hearing damage, or loss, can occur from a single trip to a noisy venue, damage to hearing is cumulative and takes effect over time.

The design factors

In the past, luxury design in hospitality spaces was characterised by the use of plush soft furnishings such as thick, fabric-covered seating, carpets and velvet curtains. These materials are naturally sound absorbent, and while they added to the desirable aesthetic of the time, they also provided some acoustic absorption, as excess noise could be soaked up by the fittings in the space.

However, modern architectural trends in hospitality environments tend to favour hard surfaces such as polished concrete, glass, wood and steel. This trend towards minimalism and industrial-leaning design is global and has become synonymous with upmarket establishments.

According to the noise/stress concept, noise can also act as a stressor, which affects the human sympathetic and endocrine systems, and can affect adrenalin, cortisol and can suppress the immune system—making people more prone to disease¹².

Noise as a workplace hazard is itself a separate, yet heavily regulated domain—one that directly affects restaurant owners and managers who have a duty of care to their staff members¹³. Given the potentially detrimental effects of excessive noise exposure within hospitality environments, effective acoustic treatment of spaces is an essential factor that will directly affect the overall wellbeing of staff and customers alike.

The hard surfaces of contemporary design simply reflect sound, rather than absorb it, resulting in significant amounts of reverberation and echo, which contribute to the overall buildup of noise. The measurement of reverberation within a space is called Reverberation Time (RT)—the time it takes for sound to dissipate entirely after it has come from the source. Hospitality spaces must be designed in accordance with AS/NZS 2107:2016 - Acoustics: Recommended design sound levels and reverberation times for building interiors, which sets out acoustic performance requirements. It is widely accepted that Reverberation Times in hospitality environments should be less than one second in order to facilitate audible conversation, however some restaurants may wish to design for longer times in order to create a noisier, 'livelier' ambience.



● MacQ1, Tasmania

● Quietspace Panel in Nude Black

● Design: Circa Morris Nunn Architects

● Tompkin Sports Bar, Western Australia

● Frontier™ Acoustic Fins in Empire and Cube™ in Empire

● Design: Finespun Architecture



Acoustic treatment: the solution

Acoustic treatment options are a simple, yet highly effective means of reducing noise within a hospitality environment. There are, however, a number of factors that may hold venue owners and designers back from opting to treat spaces. Some of these considerations are addressed below.

Aesthetics

There has been a perception in the past that acoustic solutions have a standardised, 'carpeted' look that makes them difficult to style. However, modern solutions offer a broad range of shapes, sizes, colours, and thicknesses to suit any design. For hospitality applications, acoustic panelling is generally the most appropriate solution. Panels can be used on walls and ceilings to provide noise reduction while not encroaching on the floorspace of the venue itself. Panels can be specified in a range of colours, but also in a range of high-quality prints. These are virtually unlimited and include brick, woodgrain and timbers, marbles and stones, as well as photorealistic graphics and images. This means that the aesthetic of the panels can be customised to complement the interior design of any space.

Sustainability

Many modern acoustic treatments are produced using predominantly recycled materials. Made from 100% polyester fibre, Autex Acoustics® solutions comprise a minimum of 45% recycled PET plastic. This reduces the amount of plastic waste going to landfill, and means that the products can be further recycled or reused at the end of their lifespan.

Sustainability initiatives and advances can also be found in the manufacturing processes of acoustic solutions. Instead of using environmentally harmful adhesives as bonding agents, they use heat and compression, which reduces demand for those damaging chemicals. Similarly, where products are printed, manufacturers use vegetable ink, which has a range of visual and environmental benefits. Any designers and specifiers concerned about a product or brand's sustainability initiatives should look for certifications such as GreenRate, Declare, Red List Free, HPD, and CDPH Standard.

Wellbeing

The factors surrounding good acoustics as a health and wellbeing issue are detailed above, and it is correct that the primary concern in this regard is to minimise hearing damage and increase overall enjoyment in hospitality settings. However, Autex Acoustics solutions are also non-toxic, non-allergenic, contain no irritants, and are low in Volatile Organic Compounds (VOCs). VOCs are carbon-based chemicals that evaporate at room temperature and can aggravate asthma and respiratory difficulties, cause headaches, and have been linked to numerous other health issues¹⁵.

Autex Acoustics®

For over 50 years, Autex Acoustics has been at the forefront of advances in acoustic solutions. As a leader in non-woven architectural textiles, Autex Acoustics supplies an increasingly sophisticated range of products to the building industry. Autex Acoustics solutions are made from 100% polyester fibre, with a minimum of 45% recycled PET plastics. They are non-allergenic, non-toxic and low VOC, making them healthy and safe for use across all hospitality applications.

Autex Acoustics Cube™ is an environmentally conscious, versatile and decorative acoustic panel. It is lightweight and semi-rigid, meaning it can be used as a wallcovering, creative medium and stand-alone feature. Cube is available in a range of sizes and thicknesses, so it can fit easily into any space. Available in a range of colours and customisable print options, Cube offers incredible visual and functional design flexibility, as well as excellent acoustic performance.

Autex Acoustics Quietspace® Panel provides high acoustic performance and is designed to absorb a minimum of 85% of the sound energy it meets, making it perfect for reducing reverberation and echo in spaces with high noise levels. Designed for minimal intrusiveness and able to blend into any interior environment, Quietspace Panel is available in black, white, or grey; for more colourful applications it can be laminated or overlaid with Vertiface®.

The modular Frontier™ system is available in two variations—Fins and Raft—and is designed to interact with spaces using an innovative adjustable channel and clip system—giving you complete control over the height, spacing, and placement of each individual component. Incredibly lightweight, Frontier Acoustic Fins and Raft are made from 100% polyester fibre and cut to form elegant 2D and 3D shapes.



● MacQ1,
Tasmania

● Quietspace Panel
in Nude Black

● Design: Circa Morris Nunn Architects

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