

Sealed Air®

Stratocell™ Whisper®

Sound Absorbing
Polyethylene Foam

NRC = 1

*Would you feel safe
at a pool where the
lifeguard had to
wear ear muffs?*



BRANZ Appraised
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Stratocell® Whisper™ FR
Sound Absorbing Foam



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New Zealand swimming pools are too loud!

The ambient noise level of indoor pools can be very high, especially when young children are present. While this noise is very unpleasant for patrons, it can become a health and safety issue for staff, whether they are lifeguards or instructors. **Working in a noisy environment significantly increases the risk of hearing loss, poor speech intelligibility, and increases the potential for accidents.** Indoor pools are locations where communication is essential- students need to hear instructions, safety talks need to be heard, and lifeguards need to listen out for danger. Pools tend to echo because they're largely made from hard surfaces like steel, glass, and cement. When reverberation and echo is high, it is human instinct to raise our voices to be heard; in fact lifeguards and swim coaches have been measured speaking at over 100 decibels.

Bad building acoustics also impact learning. Classrooms have acoustic standards with most authorities recommending response times of under 0.6 seconds to be used at a learning environment.

Why don't we consider pools to be learning environments? Often simply because it's too hard to fix them from an acoustic materials perspective.

The Health and Safety in Employment Regulations 1995

Regulation 11 requires employers to take all practicable steps to ensure that no employee is exposed to noise above the following levels:

- (a) Eight-hour equivalent continuous A-weighted sound pressure level, $L_{Aeq,8h}$, of 85 dB(A); and
- (b) Peak sound pressure level, L_{peak} , of 140 dB, — whether or not the employee is wearing a personal hearing protector.

Case Study:

Wollondilly Community Leisure Centre NSW, Australia

The Problem: In the modern era indoor swimming facilities cater for hundreds of swimmers of all ages in the summer season – providing fun, fitness and health. These open plan expansive indoor facilities can also be a health hazard – creating deafening noise levels for swimmers, staff and patrons.

This was the case at the indoor swimming complex at the Wollondilly Community Leisure Centre in the picturesque town of Picton, southwest of Sydney. Built by Wollondilly Shire Council in 2003, the facility boasts a 25m x 8-lane heated indoor pool operated by Leisure Management Services. It allows year round swim classes, school swimming carnivals and aquatic programs – seven days a week.

Wollondilly Leisure Centre employs 65 staff members, including 25-30 swimming instructors. Up to 500 people of all ages use the facility each day in summer and at times the noise was ear-splitting.

“The existing material banners were old, stained and ineffective in reducing noise,” said David Emmett, Facilities Maintenance Coordinator at Wollondilly Shire Council.

“Visually they were a blight on the centre,”

Wollondilly Leisure Centre manager James Barnes agrees. *“On most days it was hard to have a conversation,”* Mr Barnes said. *“It was difficult for the swimming instructors to talk to the kids and parents couldn’t talk to each other – it was really unpleasant.”*





15 year warranty
against acoustic
degradation*

Stratocell™ Whisper®

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The Solution: Stratocell Whisper®, a revolutionary new sound absorbing material was chosen to fix the problem. Stratocell Whisper is ideal for indoor and outdoor environments where reverberant noise is a problem. 100 lightweight panels were fitted at strategic positions in the pool area.

The lightweight panels absorb sound energy, reduce echo and eliminate the problem of reverberation. The acoustic sound absorbing panels not only control noise, they allow workers and patrons to speak and hear more effectively to provide a safer environment. The product is washable, durable, long lasting and easy to install and is totally unique as it does not lose acoustic performance over time in high humidity environments like many alternatives.

Why was Stratocell Whisper® chosen? *“There were other alternatives however, they were unable to supply any scientific proof that the product worked,”* said Mr Emmett. Sealed Air was able to provide evidence of effectiveness for the product in high moisture environments. *“Council is satisfied that there is a significant noise and reverberation reduction in the indoor pool area,”*

Mr Emmett said.

Acoustic engineer Rodney Stevens carried out reverberation testing. *“Before installation we measured response times (RT) of 3 to 4 seconds,”* Mr Stevens said. *“But after installing only 100 panels the results improved significantly to between 0.6 and 0.8 seconds. This is close to the recommended response times for classrooms of 0.4 to 0.6 seconds. The pool complex has become an enjoyable recreational facility because of the acoustic environment”.*

James Barnes said the new panels were installed in just two days – and there was no need to close the pool. *“The staff especially are happy with the outcome, it’s made a huge difference,”* he said.

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*warranty applies in indoor pools when installed in accordance with manufacturers recommendations as a vertical baffle and protected from UV light, organic acids, physical abrasion, immersion and solvents.

