

Custom Quietstone panels between the rail tracks.

Epping to Chatswood Rail Tunnel, Sydney, Australia.

Bespoke Quietstone Panels were designed to combat rolling noise between train wheels and track whilst facilitating safety and access. The finished product highlights our ethos of providing solutions, not products.

Client: Transport Infrastructure Development Corporation (TIDC)

Material supplied: 18,990m² running along 25 kilometers of track

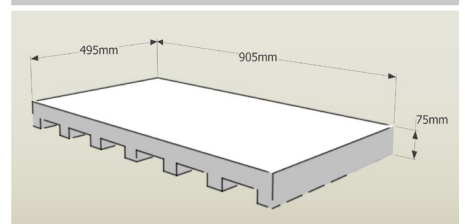
To reduce rolling noise generated by the contact of train wheels and the track, the engineers deemed that a porous absorber placed between the tracks would provide higher performance than lining the walls of the tunnel. The challenge was to find a long lasting, non combustible material with enough durability to withstand high impact from track workers, cleanability, and high sound absorption. The only product which answers all these requirements is Quietstone.

We designed bespoke panels with feet running along the bottom. The benefits being that acoustic performance is increased by adding an air gap, and workers have a higher platform to work across. The client gave us the order after we surpassed their target acoustic performance.

The tunnel, pre-installation.

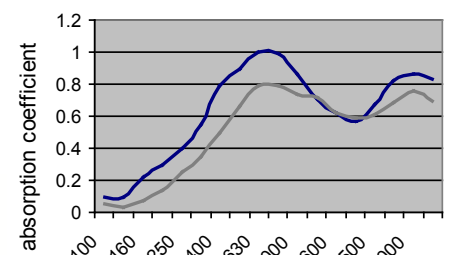


Panel details.



Sound absorption data. Tested to ISO EN 354: 2003

Data provided by the University of Salford. UKAS accredited.



— measured performance
— required performance

Advantages of using Quietstone

- high sound absorption especially considering the non fibrous nature of the material
- non toxic will not release harmful fibers or toxins
- long life span materials used are proven to last for many years
- durable can withstand impact and strong pressure changes
- ease of installation Quietstone panels were simply bonded between the tracks
- non combustible In tunnels, fire safety is of utmost importance

Sound absorption coefficients, α_p

	125 Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	EN-ISO 11654 α_w
Measured Performance	0.15	0.40	0.90	0.85	0.60	0.85	0.65 (M) (H): class C

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