

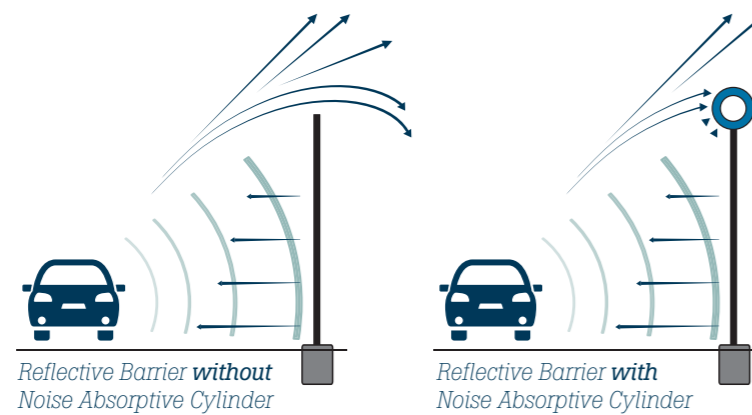


NoiseMaster® NOISE ABSORPTIVE CYLINDER

The noise absorptive cylinder attached to the top of an existing noise barrier provides a greater noise reduction than that achieved by the equivalent increase in the noise barrier height. The reason for this is the acoustic performance of the noise absorptive cylinder.

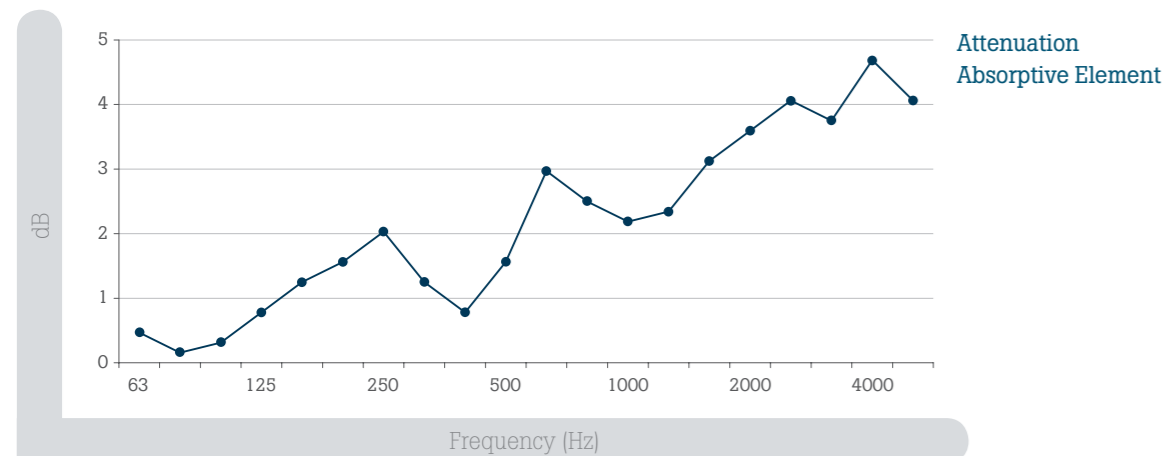
ACOUSTIC PERFORMANCE

The acoustic performance of a noise barrier is determined by the diffraction of noise at the top edge of the barrier. The diffraction edge performance of the noise absorptive cylinder is considerable. Modelling indicates that the installation of the absorptive cylinder can reduce the noise levels at the receiver by up to 7 dB(A) depending upon the frequency of the noise. Field results indicate the absorptive cylinder will provide an additional noise reduction of 2-3 dB(A) compared to the equivalent height conventional noise barrier. The graph below shows the typical noise reduction spectrum provided by the absorptive cylinder for road traffic noise.



Reflective Barrier *without*
Noise Absorptive Cylinder

Reflective Barrier *with*
Noise Absorptive Cylinder



WHY USE AN ABSORPTIVE CYLINDER?

Installing an absorptive cylinder on an existing noise barrier will potentially reduce the existing traffic noise levels, extend the acoustic life of the barrier and delay the retrofitting of the existing noise barrier with a significantly higher noise barrier.



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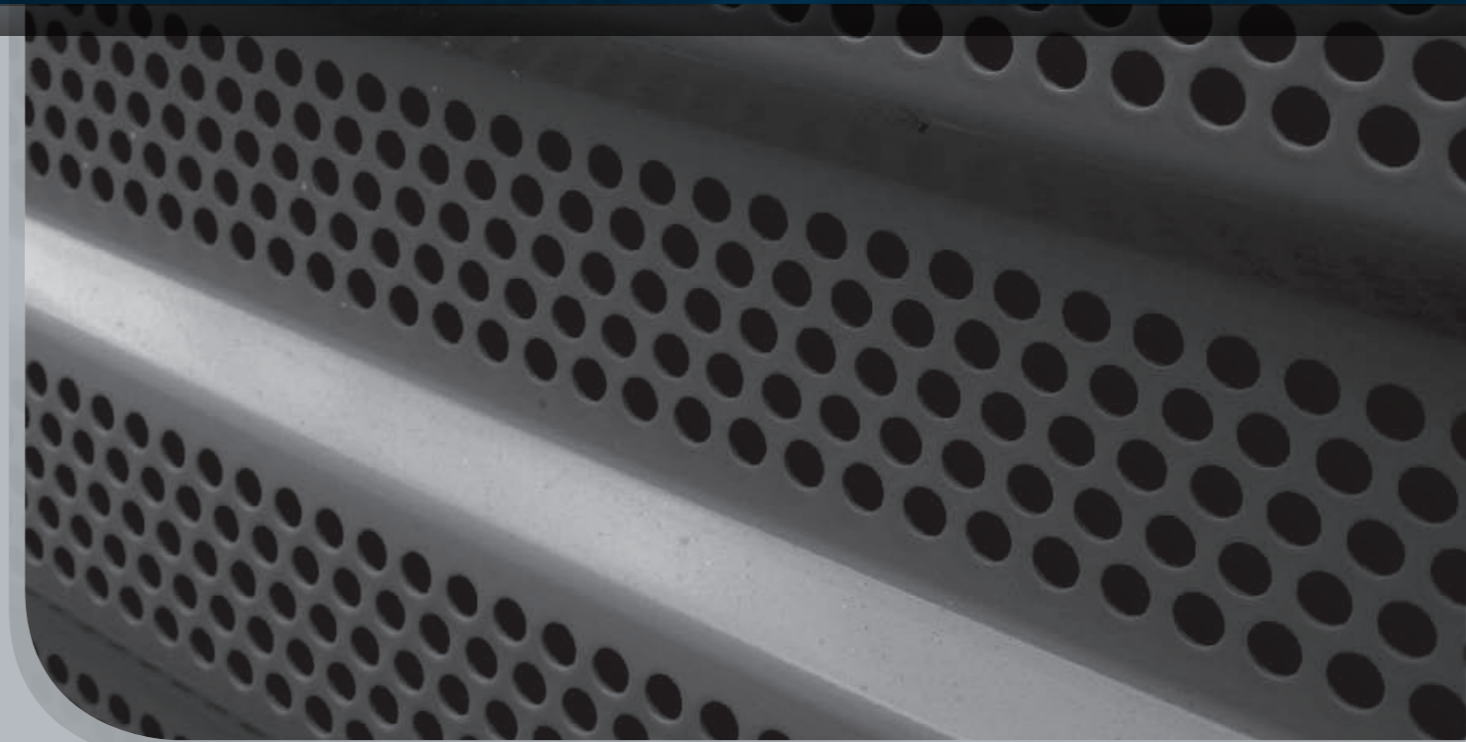
The Australian-owned Graham Group of companies manufactures a wide range of steel and galvanised products.

- Galintel
Galvanised steel lintel bars
- Weldlok
Grating, handrail and drainage products
- Mastermesh
Expanded and perforated metals
- Galvanising Services
Hot-dip galvanising
- Graham Rolling Mills
Hot-rolled and heavy-gauge coil slitting



NoiseMaster® NOISE ABSORPTIVE PANELS

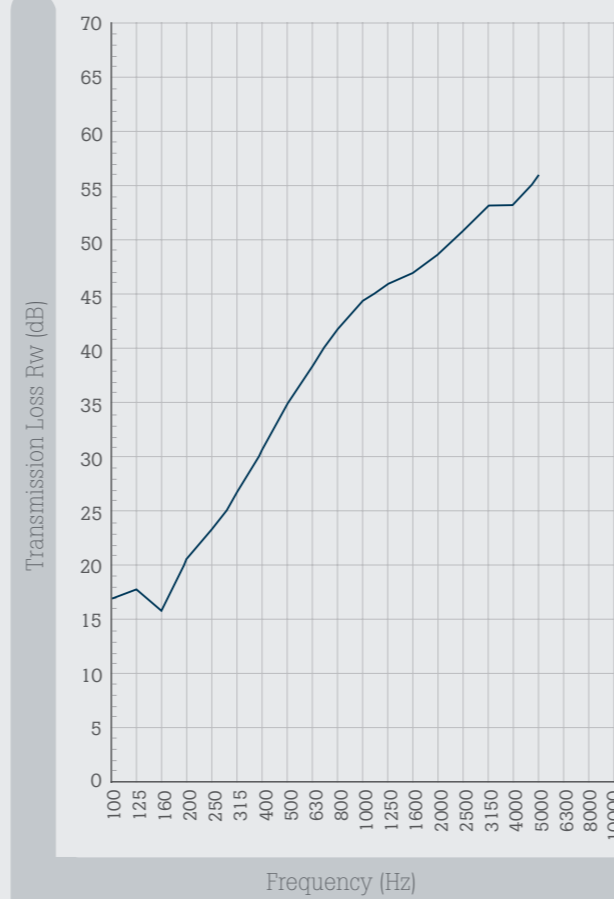
*A simple, effective and aesthetically pleasing
solution to unwanted environmental noise*



Noise pollution is one of Australia's growing environmental problems.

Mastermesh have teamed in a strategic alliance with PAN URANIA to market a range of tailor made Noise Absorptive Barriers.

Our Aim is to provide Engineered & Turn-key solutions for Road, Rail & other Infrastructure applications.



Extract from the ISTITUTO GIORDANO Test Report No. 136955

Usable measurement surface of test sample: 10.50 m²
Filter Type: 1/3 octave
Source room volume: 57.0 m³
Test result: 500 Hz evaluation index in the frequency band ranging between 100 Hz and 3150 Hz:
Rw = 36 dB
Receiving room volume: 88.0 m³
Noise Type: Pink
 Frequency bands with negative deviation exceeding 8dB

Testing & Certification

The NoiseMaster® panels have been tested & certified by the ISTITUTO GIORDANO Polytechnic Research Dept. & Certification Centre, Gatteo, Italy. Test compliant with various Australian, State Road Authority requirements. (Test reports available on request.) Assessment of the noise absorptive coefficient in accordance with ISO Std. 354, 1985. Assessment of sound transmission loss in accordance with ISO Std. 140-3 and ISO Std. 717-1.

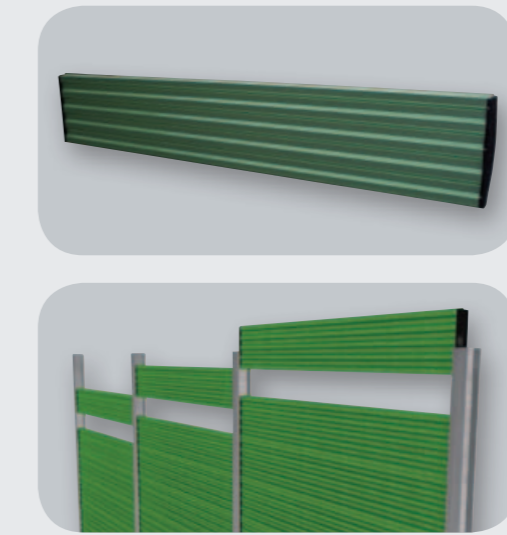
DURING MANUFACTURING:

CE barrier marking in accordance with EN 14388 – highway noise barriers
 Load resistance – EN1794-1 – static and wind load
 Load resistance – EN1794-1 – own weight
 Load resistance – EN1794-1 – dynamic load and from snow clearing on the road
 Load resistance – EN1794-1 – stone impact resistance
 EN 1794-2 – falling fragments
 EN 1794-2 – light reflection

Typical Wall Assembly

The noise wall is formed with universal beams installed at 3.0m intervals and the NoiseMaster® panel inserted between the beams.

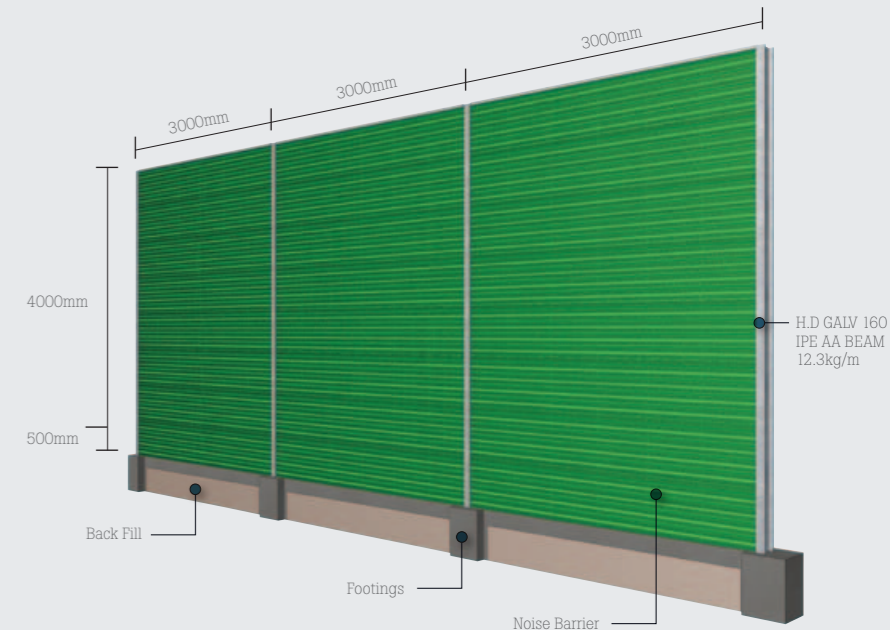
Each panel is fitted with vibration dampening end plates for a tight fit. The construction of each individual panel is such that it allows the passage of air to flow in and around the mineral wool baffle so performance is unaffected through all weather conditions.



Panel Detail

Standard panel dimensions – 3000mm x 500mm x 120mm

Front panel – 1.2mm aluminium sheet, perforated, profiled & painted
 Rear panel – 1.2mm reflective aluminium sheet, profiled & painted
 Internally suspended 80mm mineral fibre core coated with a black scrim on one side for protection against weathering & a bitumous sheath on the other for mass.



NoiseMaster®

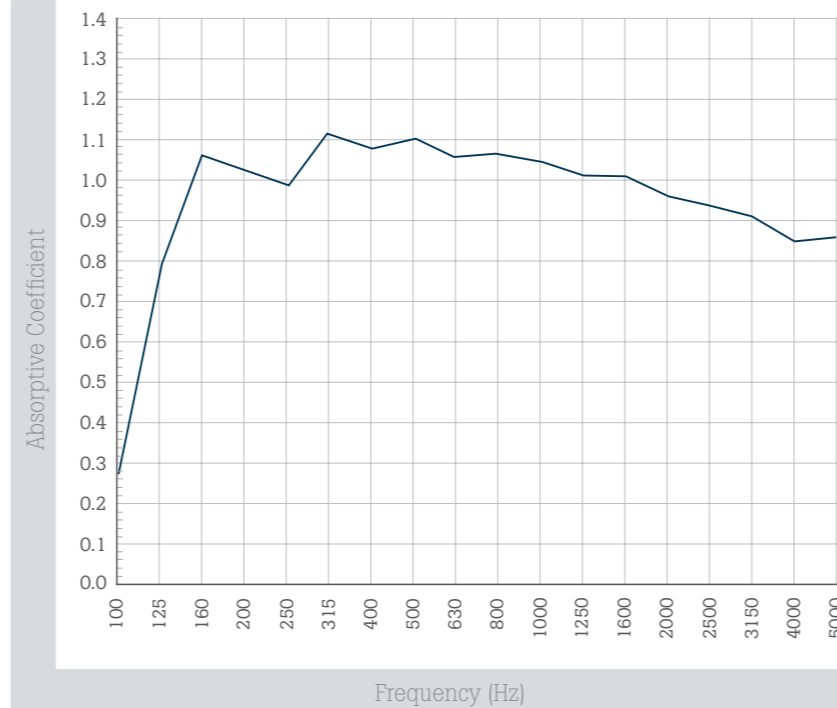
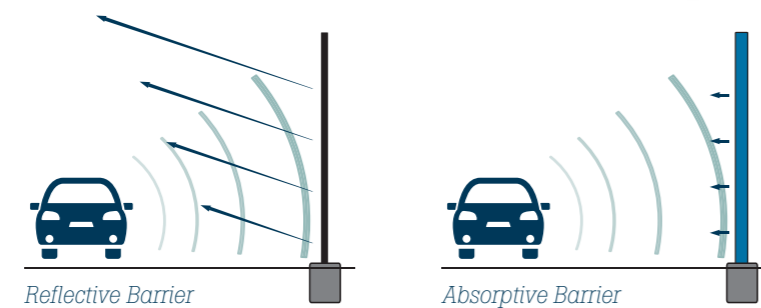
NOISE ABSORPTIVE PANELS

APPLICATIONS

- Road/Freeway Installations
- Rail/Public Transport
- Urban Environmental
- Road & Rail Tunnels

Absorptive Vs Reflective

Reflective barriers are generally made from materials such as brick, concrete, timber & steel. When noise strikes the reflective barrier a small amount of the energy is transmitted through the barrier while the bulk is reflected back in the general direction of the source. With an Absorptive barrier most of the noise is absorbed by the barrier, so there is very little reflected noise.



Extract from the ISTITUTO GIORDANO Test Report No. 136956

Development of Sound Absorptive Coefficient for Third Octave

Reverberation Room Volume: 200 m³
Noise Type: Pink
Filter Type: 1/3 Octave
Test Results: Sound absorptive coefficient $\alpha = 1.00$ at 500Hz
 Experimental Results



Product Characteristics

The NoiseMaster® panel complies with or exceeds the requirements of most Australian Road Authorities for the performance of Noise Barriers.

- Panel density – 16kg m²
- Transmission loss up to Rw 36 dB
- Absorptive coefficient up to 1
- Made from durable aluminium for long service life
- Anti-Graffiti painted coating
- Optional colors – front/back
- Fire Resistant
- Vermin proof
- Each panel fitted with anti-vibration/dampening end plates
- Meets wind loading requirements

Product Features

- Ease of installation
- Zero maintenance
- Extensive track record of use in Europe 15yrs+
- Architectural solutions – variable colors, perforations and attachments
- Versatility to retrofit barrier panel height due to increase of traffic volume
- Retro fitting to existing noise walls
- Environmentally sustainable recyclable materials
- Modular design ensures easy replacement
- Excellent weather & corrosion resistance
- Standard stock panels on demand

