



attenu⁸

High Performance Acoustic Products for New Build and Refurbishment



the **attenu⁸ Acoustic Flooring System** range offers solutions for **new build** and **refurbishment projects**.

attenu⁸ Product Range

attenu ⁸ SYSTEM	NEW BUILD (ROBUST DETAILS)		REFURBISHMENT
	CONCRETE FLOORS	WOODEN FLOORS	CONCRETE AND WOODEN FLOORS
Acoustic Underlay			*
Overlay FFT5	*		
Battens FFT1	*	*	
FFT3	*		

attenu⁸ products are based on the principle of using a layer of heavy material isolated by a resilient layer. This is an excellent method by which to reduce both airborne and impact sound through floors.

Increasing the relative mass of the total floor construction reduces airborne sound, whilst a properly engineered resilient layer, under loading, will reduce impact sounds.

Since impact sounds through floors are a dominant aspect of transmitted sounds, the type and thickness of the resilient layer is key to producing the required result.

attenu⁸ resilient layers are engineered to have a low resonance frequency to minimise low frequency transmitted sound, and excellent durability under continued dynamic loading.

It is also well known that sound transmitted via flanking paths needs to be sufficiently reduced to ensure the floor design determines the expected performance. With **attenu⁸** the solution to flanking ensures the performance of the board is not compromised.

MEETING CURRENT DOCUMENT E (2004) (ENGLAND & WALES) REQUIREMENTS

TO ACHIEVE THESE REQUIREMENTS TWO OPTIONS ARE AVAILABLE

DESIGNS CONFIRMED TO BE COMPLIANT BY:

1. PRE-COMPLETION TESTING OR
2. PROVEN DESIGNS APPROVED BY ROBUST DETAILS LTD., FOR WHICH NO PCT IS REQUIRED (IF THE DETAILS ARE REGISTERED AT RD LTD.)

For dwelling-houses, flats and rooms for residential purposes, the site acoustic performance requirements are:

SEPARATING FLOORS BETWEEN DWELLINGS	AIRBORNE (DnTw + Ctr)	IMPACT (LnTw)
Purpose built	45 dB min	62 dB max
Created by material change of use	43 dB min	64 dB max

Robust Detail requirements, using laboratory testing over specified structural floors, are:

STRUCTURAL FLOOR TYPE	AIRBORNE ($\Delta R_w + C_{tr}$)	IMPACT (ΔL_w)
Concrete (E-FC-1, 2, E-FS-1)	-	17 dB min
Wood (E-FT-1, 2)	15dB min	17 dB min

(Laboratory tests carried out by UCAS accredited BRE and SRL)

GLOSSARY:

ΔR_w = IMPROVEMENT IN AIRBORNE SOUND

C_{tr} = LOW FREQUENCY CORRECTION FACTOR

ΔL_w = IMPROVEMENT IN IMPACT SOUND



attenu⁸ Acoustic Underlay 10

Refurbishment to reduce noise levels

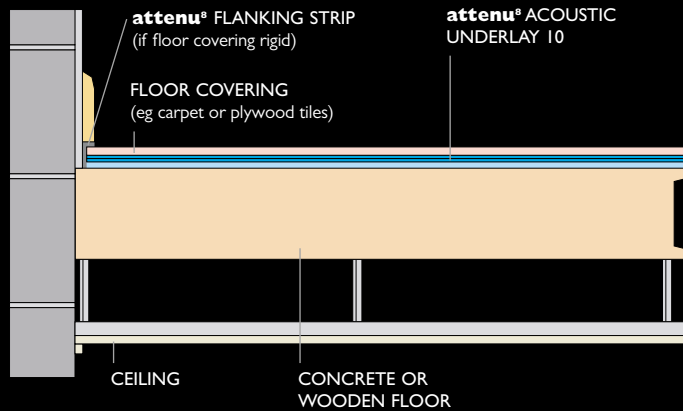
Refurbishment can be employed to meet Document E requirements (i.e. a change of use) or to substantially reduce noise transmitted from one dwelling within a shared residence (without strictly needing to meet regulatory requirements). The solution adopted depends on various restrictions: **cost, time, or restrictions on floor height increases.**

All the systems referred to in this brochure could be used. An alternative could be to use the following underlay system either under a new or existing floor surface (e.g. carpet or laminate), which would only increase the floor height by 13mm, or negligibly if substituted for the old underlay under a carpet.

attenu⁸ Acoustic Underlay System 10 for existing concrete or wooden structural floor

attenu⁸ Acoustic Underlay 10 is designed to improve the airborne and impact sound insulation of an existing floor. The high density sound barriers assist in blocking airborne noise, and the foam resilient layer assists in the absorption of impact noise.

The high density barriers are hard wearing and the resilient layer gives the floor an excellent under foot touch.



Acoustic Performance

Airborne and Impact

The construction helps meet Document E requirements

PRODUCT	DESCRIPTION	TOTAL THICKNESS	ACOUSTIC PERFORMANCE
attenu ⁸ Acoustic Underlay 10	Structured heavy barriers and resilient layer, 9kg/m ²	13mm	The construction helps meet Document E requirements

Installation Guide

- * Supplied as 1.2 x 1.2m sheets.
- * Following removal of any debris, **attenu⁸** Acoustic Underlay 10 is laid foam down directly onto timber or concrete floor.
- * It is preferred but not essential that it is bonded to the floor using a conventional contact adhesive, prior to the top surface being laid.
- * The whole area is covered, with the sheets butted tightly together and the joints taped.
- * Shaping or trimming can be done with a standard trimming blade
- * If carpets are to be placed on top, again these are preferably glued on, and a 13mm timber strip should be around the perimeter to accept the gripper rod.
- * If timber or laminate is placed on top, these should be isolated from the wall using a flanking strip.
- * For other areas such as stairs, **attenu⁸** Acoustic Underlay 10 will need to be cut and glued in place allowing for the timber perimeter strip for the gripper rod.

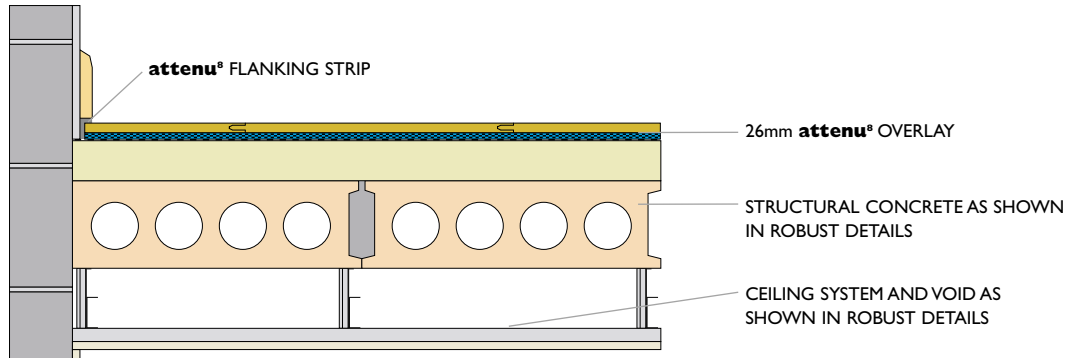
The manufacturer does not accept responsibility for the overall performance of a system in which the **attenu⁸** Acoustic Underlay 10 only forms a part.

CONCRETE SUB-FLOORS

Concrete floors, due to their high mass, have a high resistance to airborne noise but still transmit impact sounds; therefore the need to reduce impact sound is a main priority. Where a service void is required a batten system can be used (with 18mm chipboard), the resilient layer significantly reducing impact sounds, whilst the chipboard provides a new working surface.

attenu⁸ Overlay (FFT5 compliant for Robust Detail E-FC-1, 2, E-FS-1)

An overlay system is the simplest way of creating a new hardwearing surface, without significantly increasing floor height, with a resilient layer to reduce impact sound transmissions.

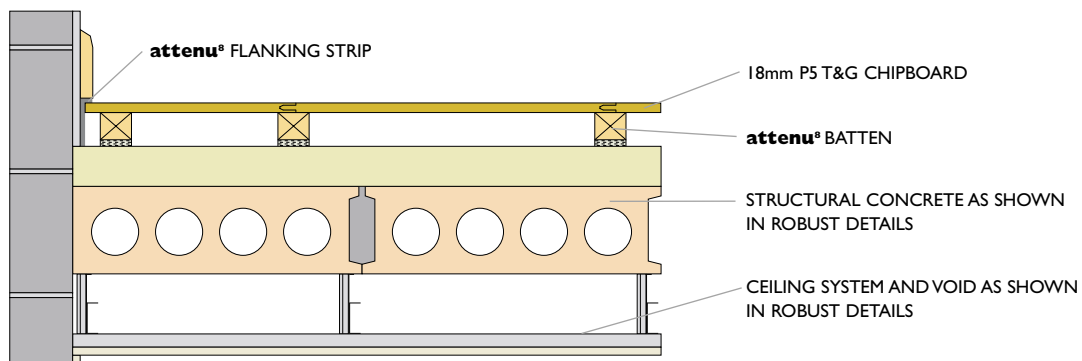


Acoustic Performance

Impact

	PRODUCT	DESCRIPTION	TOTAL THICKNESS	ACOUSTIC PERFORMANCE ΔL_w
FFT 5	attenu ⁸ Overlay	18mm P5 chipboard bonded to 8mm resilient layer	26mm	21 dB

attenu⁸ Battens (FFT1 and FFT3 compliant for Robust Detail E-FC-1, 2, 7, E-FS-1)



Acoustic Performance

Impact

	PRODUCT	DESCRIPTION	TOTAL THICKNESS (UNLOADED)	ACOUSTIC PERFORMANCE ΔL_w
FFT 1	attenu ⁸ Batten	70mm Softwood batten and 8mm resilient layer	78mm	27 dB
FFT 3	attenu ⁸ Batten	45mm Softwood batten and 8mm resilient layer	53mm	27 dB

WOODEN FLOORS *Robust Detail (E-FT-1)*

Wooden floors with their relatively low mass generally have low resistance to airborne and impact transmitted sounds.

A batten system (with the increased mass given by the chipboard) is a good method by which to both increase the relative mass and introduce a resilient layer to absorb impact sounds.



Acoustic Performance Airborne and Impact

	PRODUCT CODE	DESCRIPTION	TOTAL THICKNESS (UNLOADED)	ACOUSTIC PERFORMANCE ΔL_w	ACOUSTIC PERFORMANCE $\Delta R_w + C_{tr}$
FFT 1	attenu® Batten	60mm Softwood batten and 15mm resilient layer	75mm	20 dB	15 dB



WOODS

INSULATION

BRIDGWATER DEPOT

Dunball Industrial Estate,
Bridgwater,
Somerset TA6 4TP

Tel: 01278 686066

Fax: 01278 685361

Email: bridgwater@woodsinsulation.co.uk

CARDIFF DEPOT

Southpoint,
Foreshore Road,
Cardiff CF10 4SP

Tel: 0292 066 2928

Fax: 0292 066 2929

Email: cardiff@woodsinsulation.co.uk

SHOBDON DEPOT

Hangar 4,
Shobdon Airfield,
Nr Leominster,
Herefordshire HR6 9WD

Tel: 01568 708888

Fax: 01568 708181

Email: shobdon@woodsinsulation.co.uk

WOLVERHAMPTON DEPOT

Unit 9,
Merryhills Ent. Park,
Park Lane,
Wolverhampton WV10 9TJ

Tel: 01902 733711

Fax: 01902 733722

Email: wolverhampton@woodsinsulation.co.uk