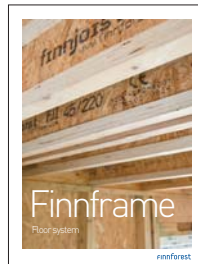


Local Stockist

Available Through:



→ www.finnforest.co.uk

For more information and a list of stockists in your area visit www.finnforest.co.uk or call our technical team on 01205 883 835.

Finnforest is a wood products company delivering service-oriented solutions developed in collaboration with its customers. Its premium solutions are based on ecological, high quality Nordic wood as a raw material.

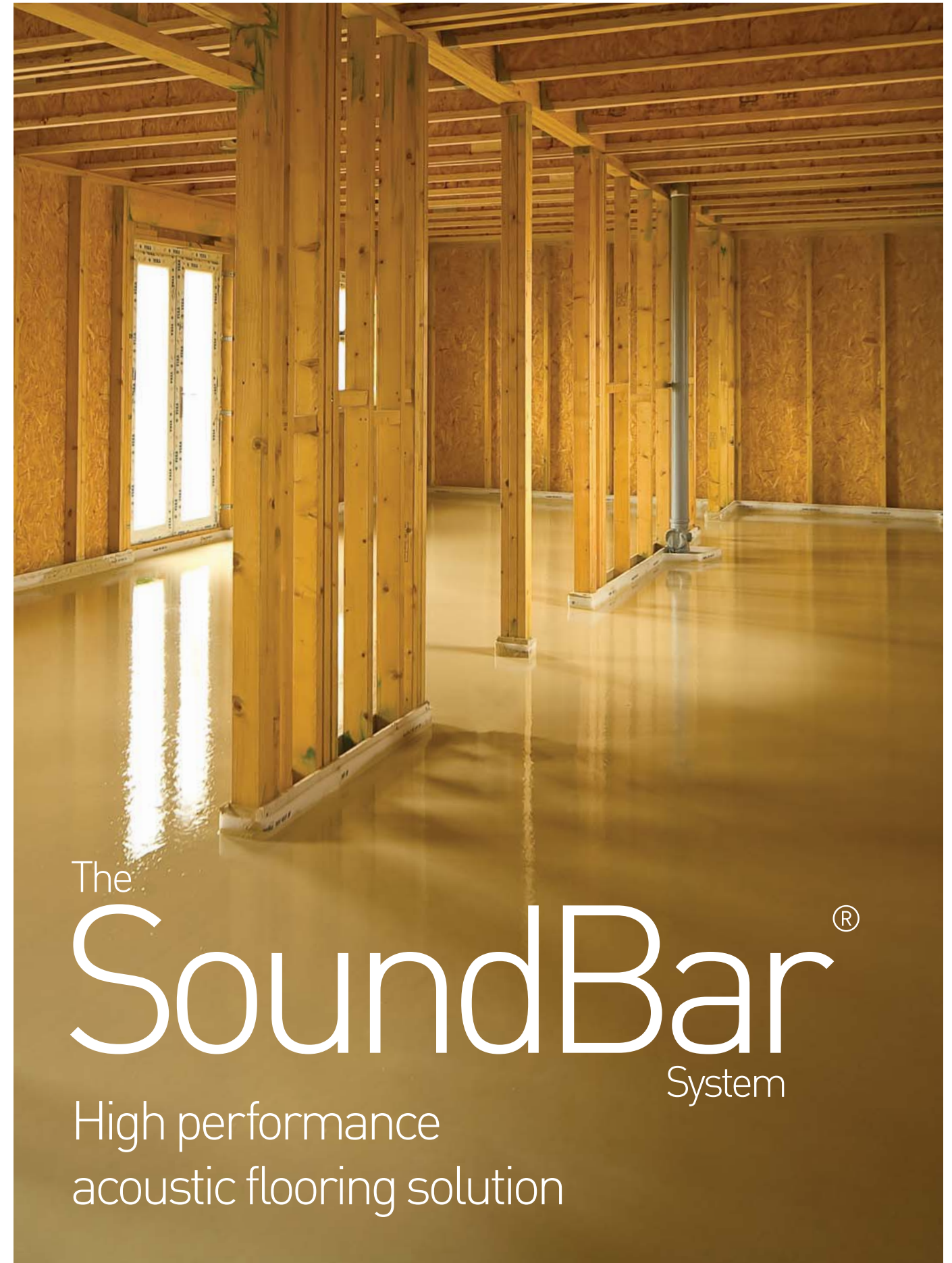
Wood is the only building material that is truly renewable, if well managed. Forest certification schemes give assurance that the timber is legal and from sustainable sources. Finnforest UK sources certified timber over uncertified and is an approved Chain of Custody supplier.

FF3081 February 2009.

The photographs in this brochure are for illustration purposes only. Finnforest reserves the right to change the range without notice.

Every effort has been made to ensure that colours are accurate within the limitations of natural lighting conditions and the four colour printing process.

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The
SoundBar[®]
System

High performance
acoustic flooring solution

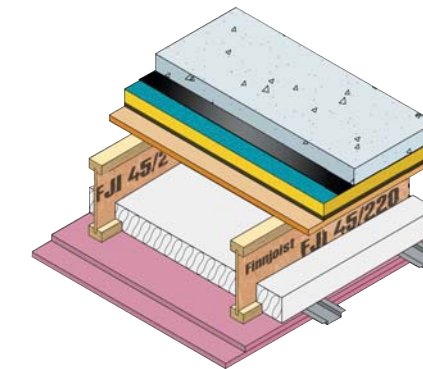
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The SoundBar® System - technical guide

A revolution in acoustic flooring.

The SoundBar System is a unique, total screeded flooring solution which is the only system of its kind to have achieved Robust Detail, E-FT-4. This provides the developer with the confidence and assurance of achieving a performance standard over and above Part E of the building regulations, two EcoHomes credits if registered with Robust Detail.

The SoundBar System delivers - providing a shallower, high quality floor. Designed to improve upon the acoustic performance of a traditional timber floor. What is more, the design, installation and total project management is controlled through one company.



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Structural design	05
Technical details	06-07
Additional detailing	
Installation of vertical services	08
Flats and communal areas	09
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The system

A revolutionary acoustic floor solution for compartment floors.

The SoundBar System comprises 4 key components:

Finnjoist (FJI)

Comprised of a high quality OSB web and Kerto flanges.

SoundBar edge strip

Foam edge strip designed to accommodate the SoundBar board.

SoundBar board

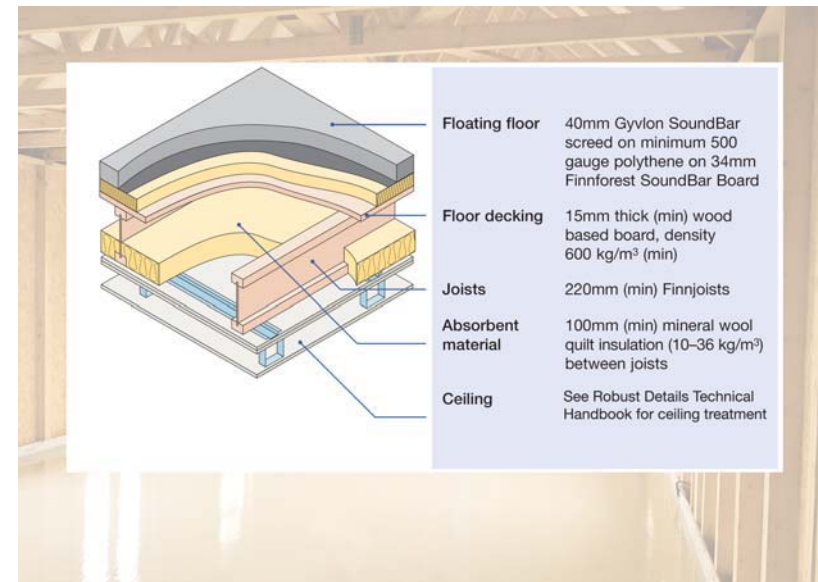
Two component 34mm thick acoustic board

SoundBar Gyvlon screed

Lafarge Gyvlon pump-applied self-levelling synthetic anhydrite screed.



Robust Detail E-FT-4



Refer to Robust Details Technical Handbook for full specification. Please consult the Robust Details (RD) handbook if you wish to register the floors and any separating walls with Robust Details Ltd (RDL).

Sound reduction results

INDICATIVE SOUND TEST RESULTS ACHIEVED ON SITE				
	TIMBER FRAME (JAN 2008)	TIMBER FRAME (FEB 2007)	TIMBER FRAME (APRIL 2006)	REQUIREMENT PART E
Airborne Sound $D_{nT,w}+C_{Tr}$	>51dB	>55dB	>52dB	>45dB
Impact Sound $L'_{nT,w}$	<56dB	<52dB	<53dB	<63dB

Through rigorous laboratory tests, The SoundBar System exceeded Part E stringent performance requirements for the transfer of both Airborne and Impact Sound, >45dB and <63dB respectively.

On-site the results were equally impressive. Having performed over 19 live site tests over a period of 33 months The SoundBar Systems laboratory performances transferred to site deliver outstanding results. The table above

provides an indication of performance over and above Part E across various live sites, weather conditions and seasons. Each time The SoundBar System outperformed the requirements set down in Part E.

These results have been further supported by the achievement of a Robust Detail RD E-FT-4, the only hybrid I-Joist and screeded flooring system to do so.

Structural design

During the structural design, the structural engineer or building designer must check two different load situations; during construction and in general use. Both load cases are of importance and must be considered for the construction of

The SoundBar System in order to get the required performance. They must also be registered and checked in order to be covered by the BM-TRADA Certification.

Loading and deflection limits

During construction

- The dead load must be taken as the load of the floor at the time of the Lafarge Gyvlon screed installation. Usually this is 0.40kN/m².
- The live load must be taken as the load of the Lafarge Gyvlon screed. At 40mm nominal thickness this should be set to 0.99kN/m². The load should be patterned for continuous beam members over internal supports.
- No other loads should be applied.

In general use

- The dead load must be taken as 1.75kN/m². This allows for the dead load of The SoundBar System and includes a suspended ceiling system of 0.15kN/m².
- The live load must be taken according to BS6399:Part 1 or BSEN1991-1-1.
- A partition load of 0.25kN/m² should be added when the exact location of non load bearing partitions is not known or these can be moved during the design time of the building (50 years).

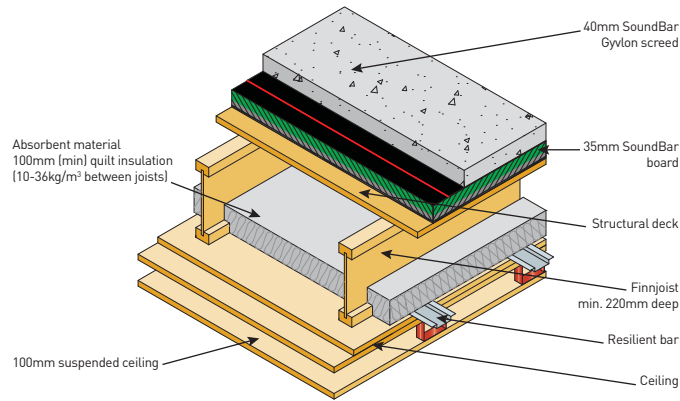
LOADING		
LOAD TYPE	DURING CONSTRUCTION	IN GENERAL USE
Dead load (kN/m ²)	0.37 - 0.40	1.75
Partition load (kN/m ²)	-	0.25
Live load (kN/m ²)	0.99 (40mm)	According to BS6399:1 or BSEN1991-1-1

DEFLECTION LIMITS		
	BS5268 AND NHBC TECHNICAL STANDARD	IMPROVED BS5268, BSEN1995-1-1 AND NHBC TECHNICAL STANDARD
U_{inst}	L/333 or 12mm	L/350 or 12mm
U_{fin}	L/200	Refer to NA to BSEN1995-1-1
$U_{1kN \text{ point}}$	-	Refer to NA to BSEN1995-1-1
Lowest natural frequency	-	>8Hz
Under Construction U_{inst}	L/333 or 5mm	L/333 or 5mm

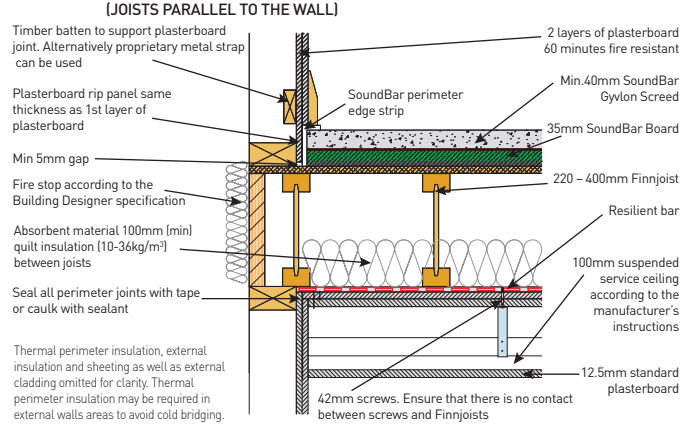
Notes:
 (L) Engineering span between supports
 U_{inst} Instantaneous deflection under live, partition and dead load
 U_{fin} Final deflection under live, partition and dead load
 $U_{1kN \text{ point}}$ Deflection under 1kN point load (vibration criteria)

Technical details

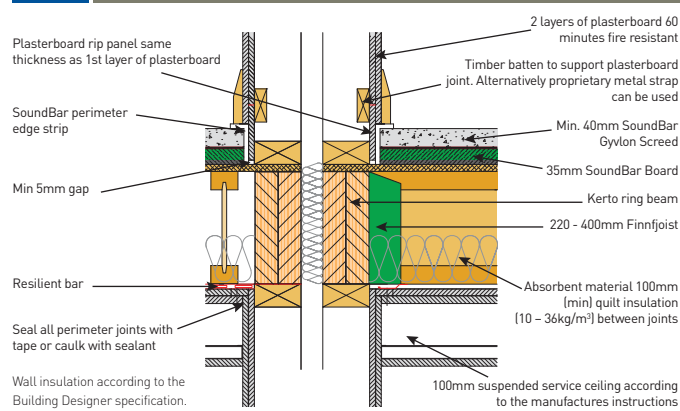
ST0 SOUND BAR E-FT-4



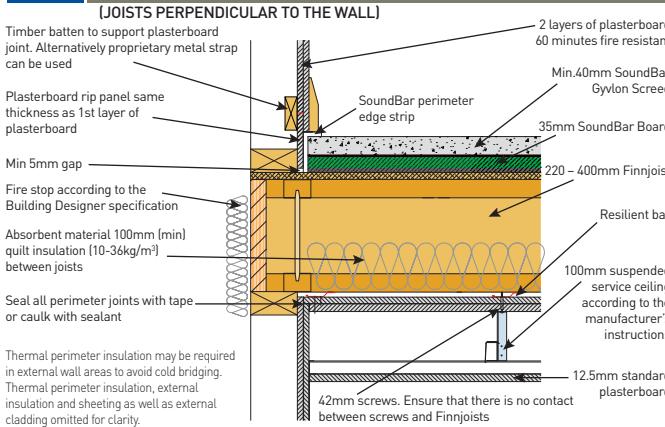
ST1b EXTERNAL (FLANKING) WALL JUNCTION



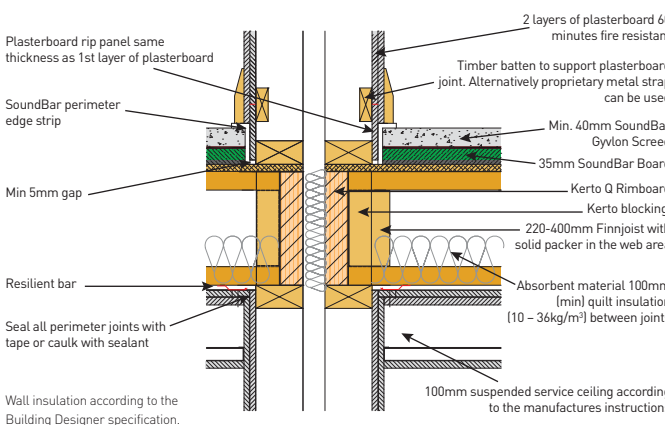
ST2b SEPARATING WALL JUNCTION Disproportionate collapse



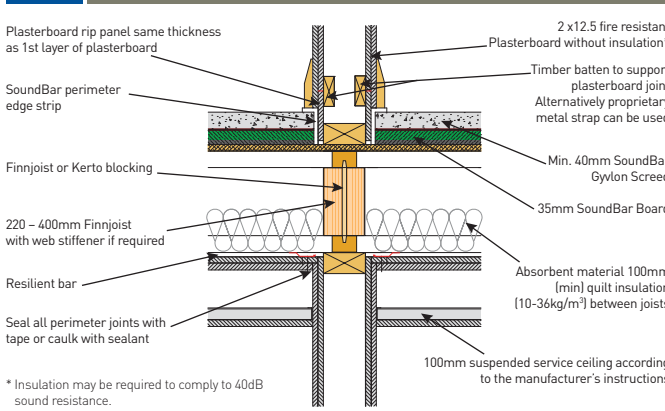
ST1a EXTERNAL (FLANKING) WALL JUNCTION



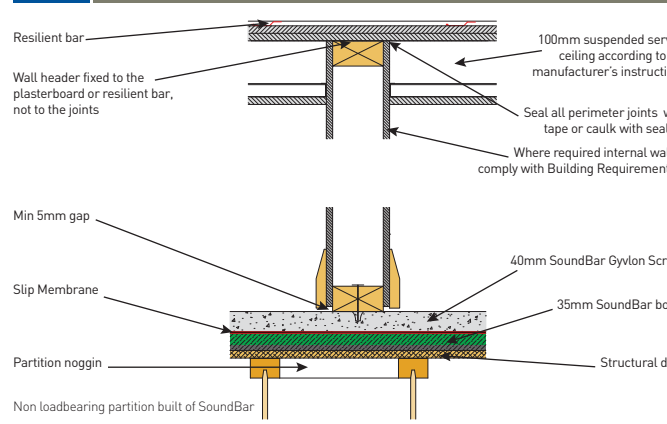
ST2a SEPARATING WALL JUNCTION



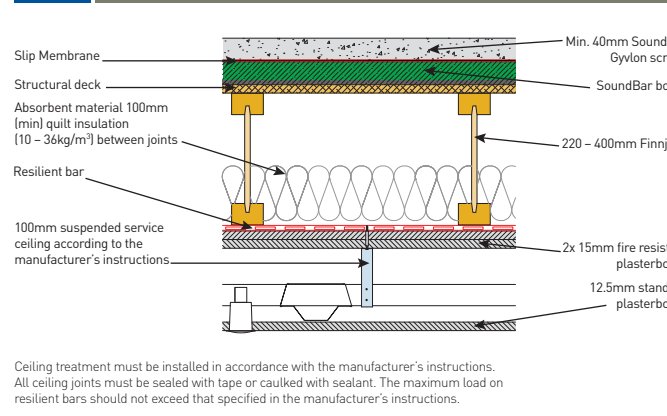
ST3 INTERNAL WALL JUNCTION LOADBEARING



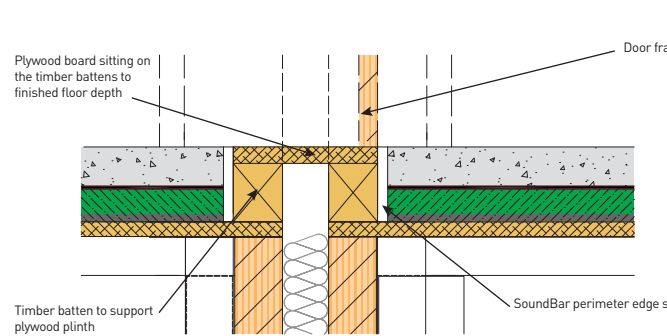
ST4a INTERNAL WALL JUNCTION (NON LOADBEARING)



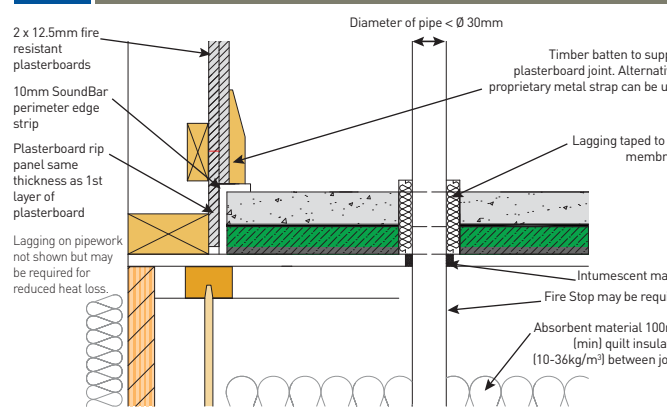
ST5a FLOATING FLOOR TREATMENT FOR FINNFOREST ACOUSTIC FLOOR



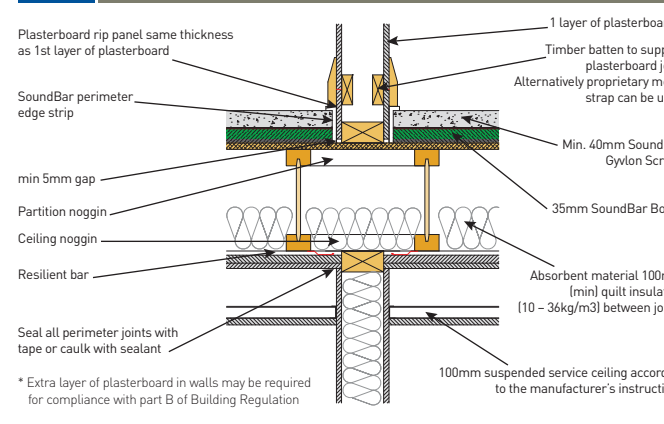
ST6 SEPARATING WALL JUNCTION. DOOR DETAIL



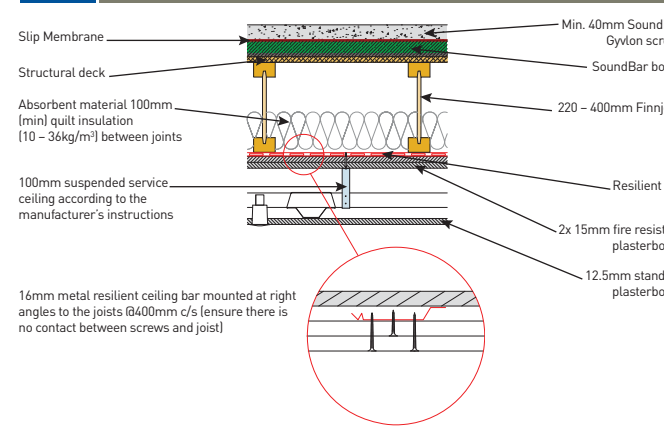
ST7b SMALL PIPE PENETRATION



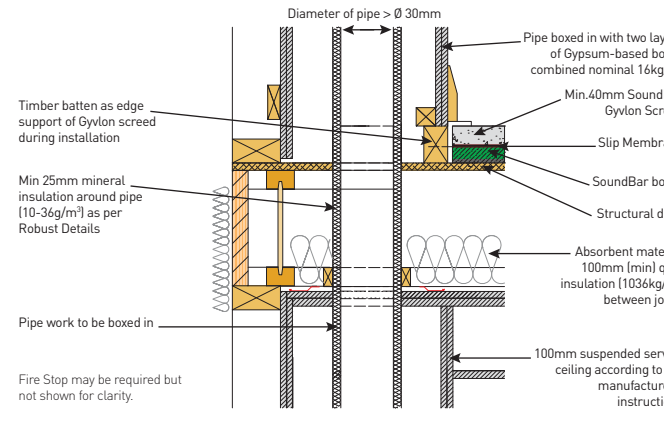
ST4b INTERNAL WALL JUNCTION NON LOADBEARING



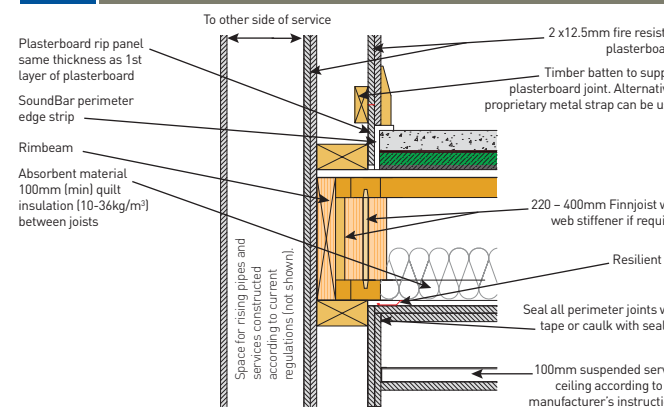
ST5b DIAGRAM SHOWING FIXING OF RESILIENT BAR



ST7a LARGE PIPE PENETRATION



ST7c DECOUPLED RISER SHAFT DETAIL



Additional detailing

Installation of vertical services.

The SoundBar System allows for a suspended ceiling underneath the 2 layers of 15mm fire resistant plasterboard. In this suspended ceiling, all services can be horizontally distributed. There are no provisions made for services within the depth of the screed or the acoustic board.

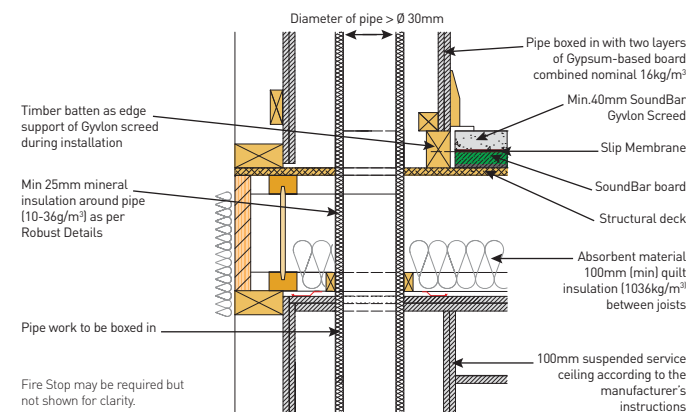
When services need to penetrate through The SoundBar System, there are two options:

A. Decoupled riser shaft/ large pipe penetration

In this case, the service shaft is completely enclosed in a plasterboard shaft. The shaft is isolated from the rest of the structure to resist both fire and sound according to the building regulations. Advice should be sought with regards to the

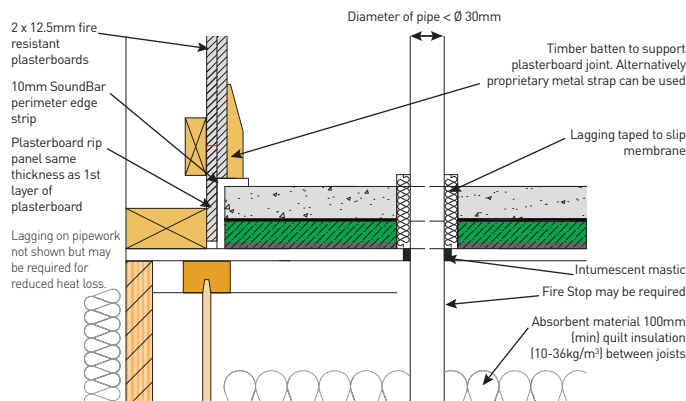


resistance of fire. The riser shaft is best constructed as a non load bearing construction with the wall sitting on the structural deck of The SoundBar System floor.



B. Small pipe penetration

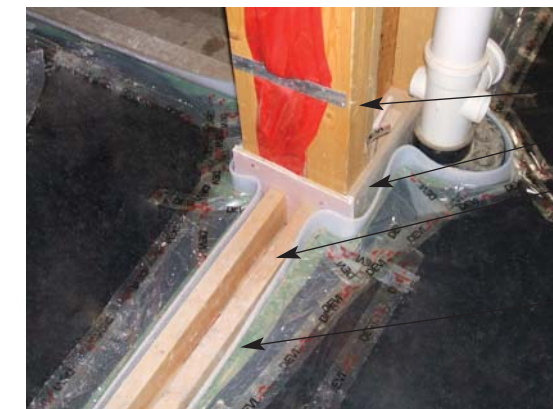
In this situation, the pipe work is fitted with lagging of at least 10mm thickness before the installation of the acoustic board and the slip membrane. It is important that the screed is completely sound-isolated from the penetrating pipe work and the lagging is above the final screed level.



Flats and communal areas.

In timber frame buildings, the wall between communal and residential areas are always built in a party wall construction. This is a two leaf timber frame structural wall with plasterboard on the inside and an insulation quilt in between the wall studs of each wall construction. The party wall construction is usually breached with the entrance door to the flats

Detail ST6 under construction



- Party wall timber frame
- Plasterboard rip
- Timber batten to support threshold board and SoundBar screed under construction (at least 75mm high)
- Edging strip

Detail ST6 finished



- Threshold board
- The timber batten has been removed and cut so the threshold board sits flush with the final screed level on both the communal and flat area.

DO NOT install The SoundBar System across the timber frame cavity to avoid cracking in case differential settlement occurs.

Installation sequence

Available Through:



Benfield ATT Group
...passionate timber frame professionals



1. Installation of a 150mm plasterboard rip with 5mm gap to the structural deck, so there is a solid back for the SoundBar Gyvlon screed.



2. The SoundBar edge strip is installed with the self adhesive backing against the plasterboard rip.



7. Fast application, up to 2000m² per day.



8. 48 hours later screed is dry enough to walk on.



3. The board is installed tight against the edging strip, laid in a staggered pattern with no gaps between the boards.



4. A slip membrane with minimum 500µm thickness is laid, lapped and taped at the edges and the laps.

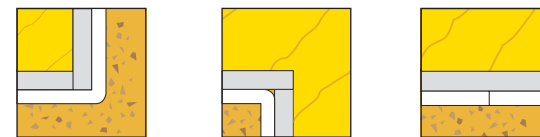
Do's and Don'ts

Please consult the RD handbook if you intend to register the floors, and separating walls with RDL.

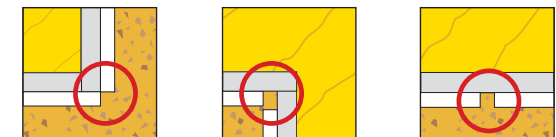
The SoundBar edge strip

This must always be continuous and shall have no gaps. When joining the edge strip, please ensure an adhesive tape is used to link the two ends. Also ensure the apron and slip membrane are lapped according to the Lafarge Gyvlon Installation Manual.

DO



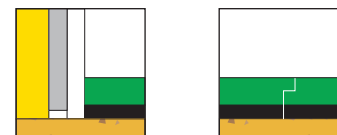
DO NOT



The SoundBar Board

For best use of material and least wastage on site the acoustic board should be installed in a brick pattern with the first row having the machine edge removed.

DO



DO NOT



Before the installation of the acoustic board, please ensure:

1. The floor is free of all debris and all holes in the structural deck have been closed flush to the top of the deck.
2. The structure is wind and water tight.
3. The noggin or the proprietary metal strap is installed behind the plasterboard rip.

4. The plasterboard rip is of the same thickness as the first layer of plasterboard.
5. The threshold noggins and noggins around openings are in place.
6. The SoundBar System edge strip has been installed.



5. Install under floor heating at this point if required*.

* The installation of underfloor heating will affect the depth of the screed. Please consult the technical team on 01205 883 835.



6. 40mm minimum SoundBar Gyvlon screed is then poured and levelled.