PRO SOUND™

SoundScreed 18

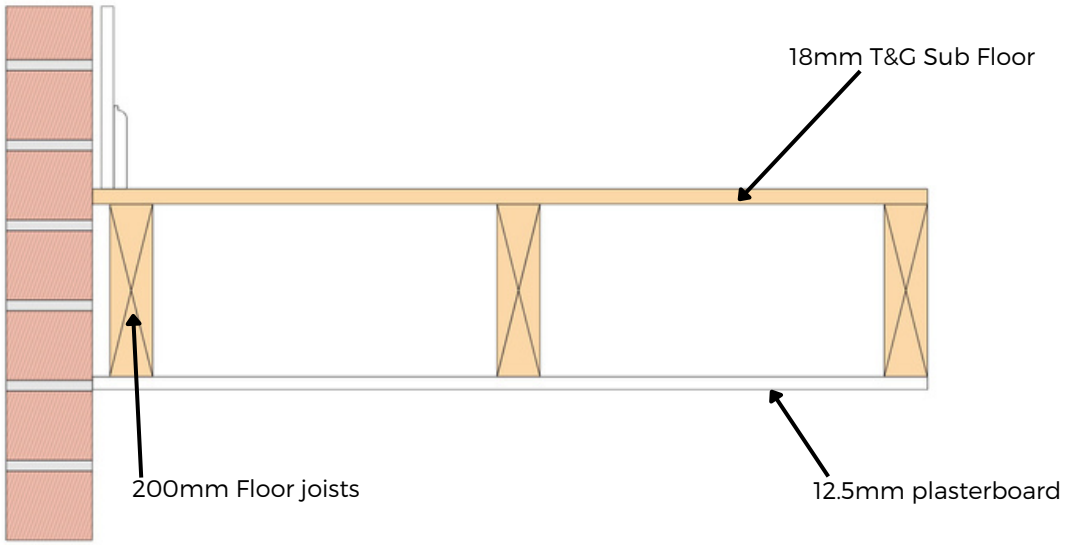
Floor Performance Data

the soundproofing store

www.soundproofingstore.co.uk
sales@soundproofingstore.co.uk
01423 206208

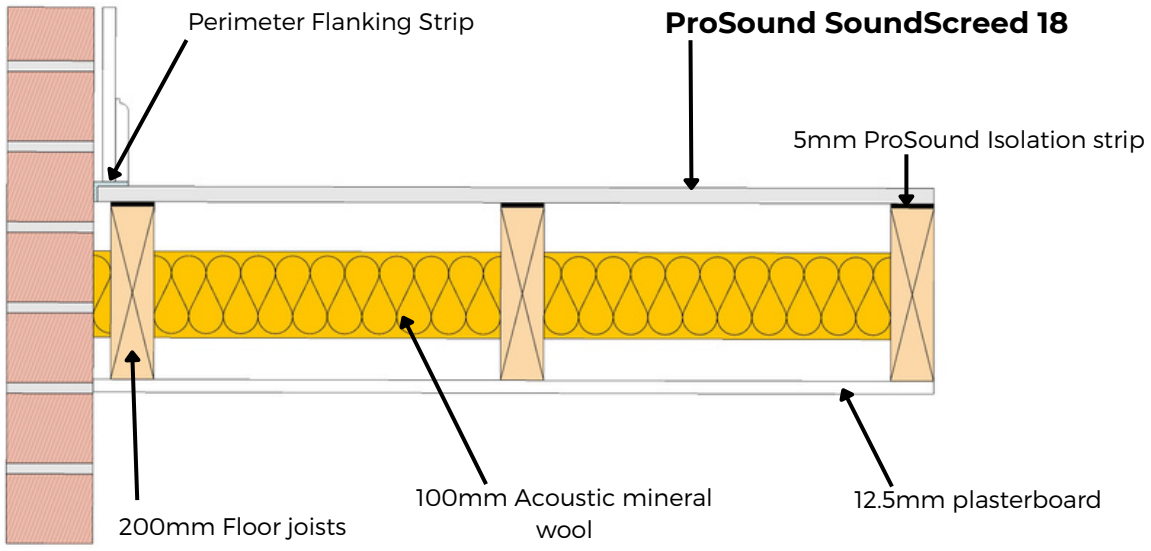
Timber Joisted Floor: Build-up

Untreated Floor



Treated Floor

Fig.1

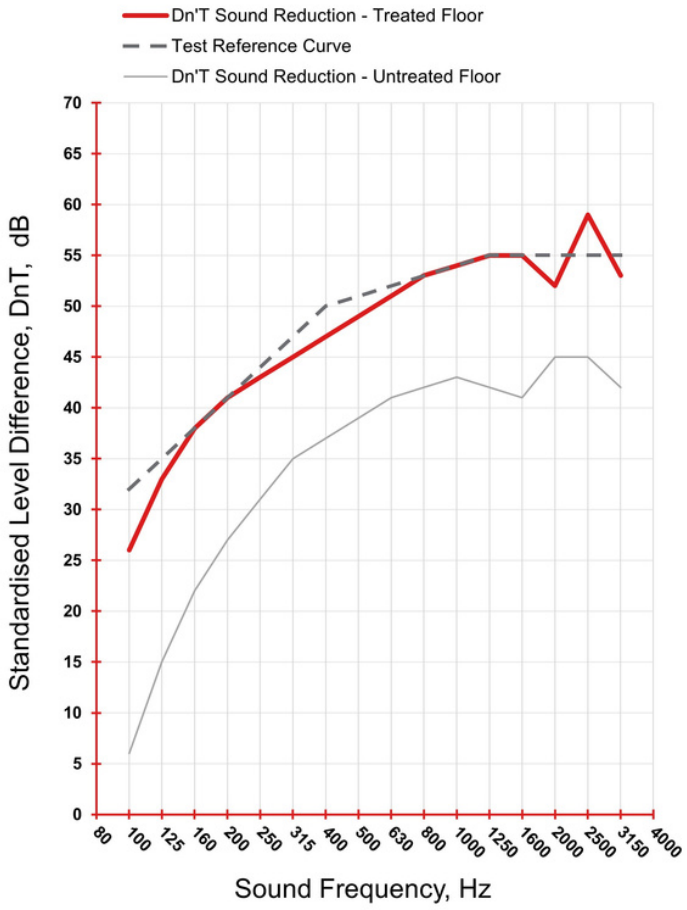


Structure Layers	Weight Per Sqm
18mm SoundScreed 18	27Kg m^2
5mm Isolation Strip	N/A
200mm Timber Floor Joists	N/A
100mm Acoustic Mineral Wool Fitted Between Floor Joists	6Kg m^2
12.5mm Plasterboard	9.3Kg m^2

Timber Joisted Floor: Airborne Test Data

Standardised airborne sound level difference according to BS EN ISO 140-4
Field measurement of airborne sound insulation between rooms
Source room volume - 47m^3
Receiving room volume - 42m^3

Frequency - Hz	DnT Value 1/3 Octave -dB Untreated Floor	DnT Value 1/3 Octave -dB Treated Floor
63	#	#
80	#	#
100	6	26
125	15	33
160	22	38
200	27	41
250	31	43
315	35	45
400	37	47
500	39	49
630	41	51
800	42	53
1000	43	54
1250	42	55
1600	41	55
2000	45	52
2500	45	59
3150	42	53
4000	#	#



# Indicates limitations of measurements
* Resonate Frequency - 41Hz

Reference: Fig. 1

Airborne Sound Test Results

Untreated Floor	Treated Floor	Floor Improvement
DnT,w = 38dB	DnT,w = 51dB	DnT,w = 13dB
DnT,w + Ctr = 25dB	DnT,w + Ctr = 44dB	DnT,w + Ctr = 19dB

Rating according to ISO 717-1

With airborne noise a higher value equals a better performance

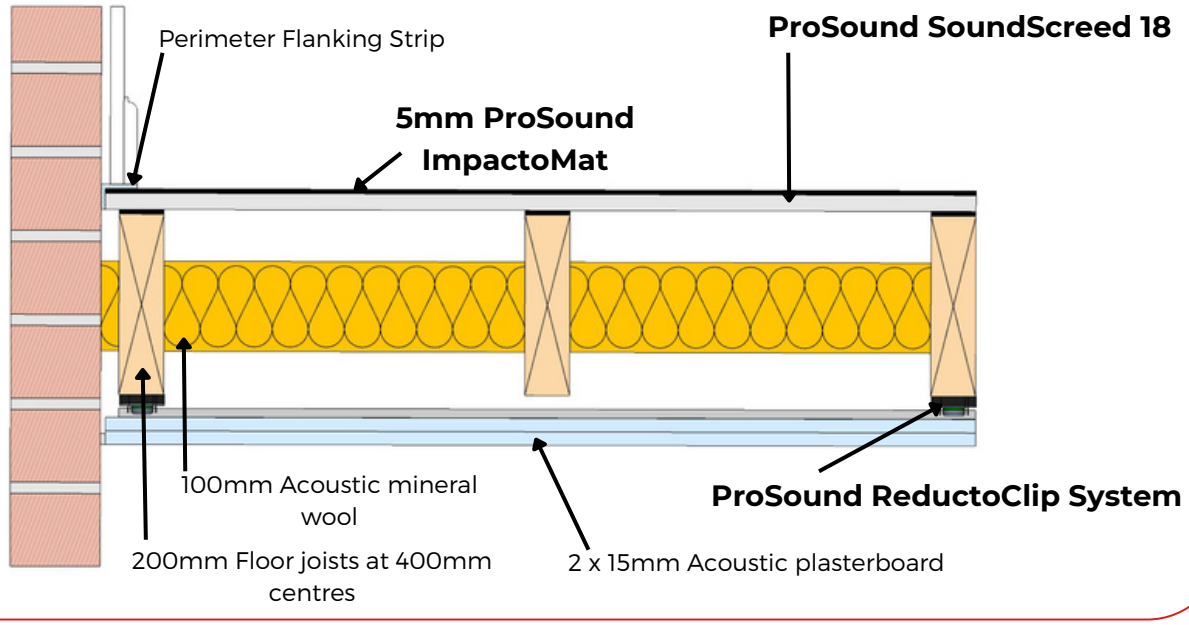
- Note SoundScreed 18 is not designed to improve impact noise performance on its own

Timber Joisted Floor: Build-up (Recommended for Part E)

The below is recommended when needing to pass Part E Building Regulations.

Treated Floor

Fig.2



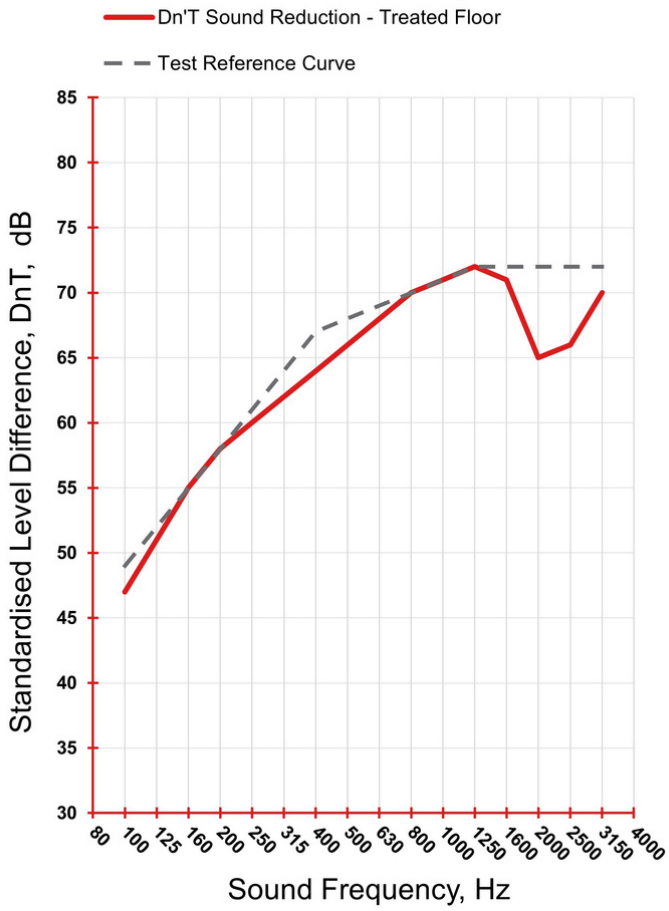
Structure Layers	Weight Per Sqm
5mm ImpatocMat	4kg m^2
18mm SoundScreed 18	27Kg m^2
5mm Isolation strip on Joists	N/A
200mm Timber Floor Joists Filled with 100mm 60Kg m^3 Mineral Wool	6Kg m^2
25mm ReductoClip & Furring Bar	N/A
15mm Acoustic Plasterboard	12.8Kg m^2
15mm Acoustic Plasterboard	12.8Kg m^2

Timber Joisted Floor: Airborne Test Data (Recommended For Part E)

Standardised airborne sound level difference according to BS EN ISO 140-4
Field measurement of airborne sound insulation between rooms
Source room volume - 47m^3
Receiving room volume - 42m^3

Frequency - Hz	DnT Value 1/3 Octave -dB Treated Floor
63	#
80	#
100	47
125	51
160	55
200	58
250	60
315	62
400	64
500	66
630	68
800	70
1000	71
1250	72
1600	71
2000	65
2500	66
3150	70
4000	#

# Indicates limitations of measurements
* Resonate Frequency - 34Hz



Reference: Fig. 2

Airborne Sound Test Results

Treated Floor
DnT,w = 68dB
DnT,w + Ctr = 63dB

DnT,w -This measurement type is used in Scottish Part E Building Regulations.

DnT,w + Ctr - This measurement type is used in England and Wales Part E Building Regulations.

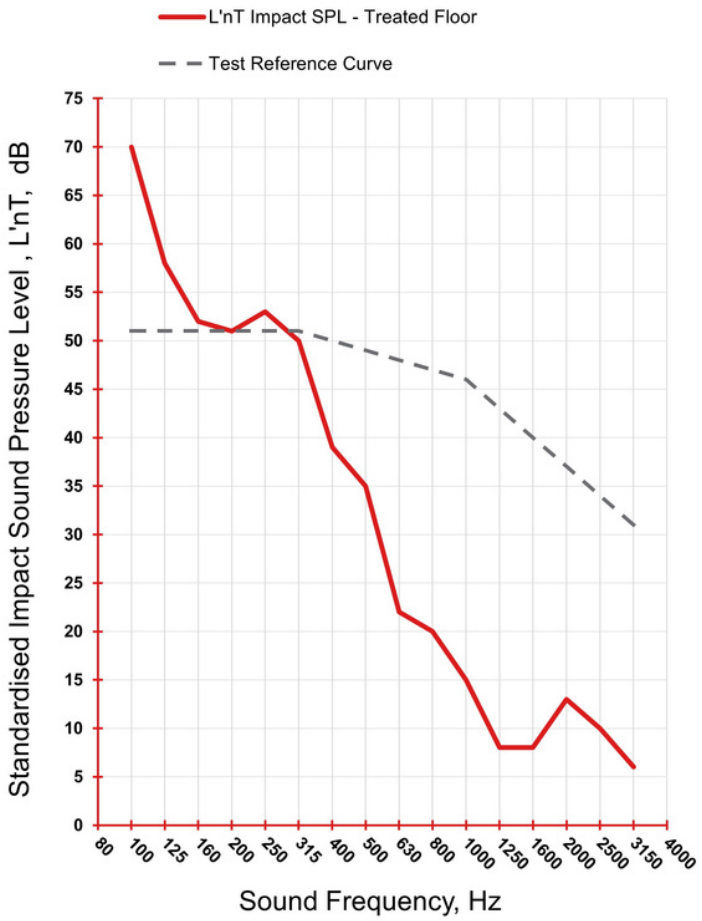
Rating according to ISO 717-1

With airborne noise a higher value equals a better performance

Timber Joisted Floor: Impact Test Data (Recommended For Part E)

Standardised impact sound pressure levels difference according to BS EN ISO 140-7
Field measurement of impact sound insulation of floors
Source room volume - 47m^3
Receiving room volume - 42m^3

Frequency - Hz	L'nT Value 1/3 Octave -dB Treated Floor
63	#
80	#
100	70
125	58
160	52
200	51
250	53
315	50
400	39
500	35
630	22
800	20
1000	15
1250	8
1600	8
2000	13
2500	10
3150	6
4000	#



# Indicates limitations of measurements
* Resonate Frequency - 34Hz

Reference: Fig. 2

Impact Sound Test Results

Treated Floor
L'nT,w = 49dB

Rating according to ISO 717-2

With impact noise a lower value equals a better performance

Part E Regulations For England & Wales

Element of Construction	Airborne Sound DnT,w + Ctr Minimum Value	Impact Sound L'nT,w Maximum Value
Floors		
Separating floors between purpose built dwelling-houses and flats (i.e. New Build) & purpose built rooms for residential use.	(Higher than) 45dB	(Lower than) 62dB
Separating floors between dwelling-houses flats and residential rooms formed by a material change of use (i.e. conversions)	(Higher than) 43dB	(Lower than) 64dB

Part E Regulations For Scotland

Element of Construction	Airborne Sound DnT,w Minimum Value	Impact Sound L'nT,w Maximum Value
Floors		
Separating floors between dwelling-houses flats and rooms for residential purposes. New build and conversions	(Higher than) 56dB	(Lower than) 53dB
Separating floors between dwelling-houses flats and rooms for residential purposes. Conversion of traditional buildings	(Higher than) 53dB	(Lower than) 58dB

Technical Terms

DnT,w - Weighted Standardised Field Level Difference

The difference, in decibels, between the level of noise either side of a structure tested in the field / on site.

This measurement type is used in Scottish Part E Building Regulations.

DnT,w + Ctr - Weighted Standardised Field Level Difference Adjusted For Control

The difference, in decibels, between the level of noise either side of a structure tested in the field / on site. But it is adjusted to include how well it stops low frequency noise.

This measurement type is used in England and Wales Part E Building Regulations.

L'nT,w - Weighted Standardised Field Impact Sound Pressure Level

The amount of impact noise transmitted through a floor structure, in field conditions, so includes flanking transmission.

This measurement type is used in all Part E Building Regulations.

Sound Tests

Sound tests are carried out by and independent testing company.

For airborne testing high volume "white" noise is generated from a single loudspeaker in the source room, positioned in order to obtain a diffuse sound field.

A spatial average of the resulting one-third octave band noise levels between 100 Hz and 3150 Hz is obtained by using a moving microphone technique over a minimum period of 15 seconds at one position.

The same measurement procedure is followed in the receiver room.
The entire procedure is then repeated, with the loudspeaker located in a different position.
The results of the tests are rated in accordance with BS EN ISO 717-1: 1997

For impact testing a tapping machine is placed on the floor which has a set of 5 steel hammers to produce impact noise on the separating floor. Level measurements are acquired in the receiving room at 2 microphone positions, at one third octave band intervals from 100 to 3150 Hertz using an average time of at least 6 seconds for each of 4 tapping machine positions, creating 8 individual measurement readings.
The procedure is repeated in different positions.
The results of the tests are rated in accordance with BS EN ISO 717-2: 1997