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Internal Sound Insulation Test Report

107-109 Hampstead Road, London, NW1 3EE.

Date of Test: Wednesday 30th October 2013

Reference: 5628



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Unique Ref No. 5628

Revision No. 1

Client: Monavan Construction Ltd,
Site Name: 107-109 Hampstead Road,
 London, NW1 3EE.

Site Classification
 Purpose built dwelling-houses and flats

Date of Test: Wednesday 30th October 2013

Summary of Sound Insulation Test Results

To be submitted with full technical report

Vertical (airborne) across separating floors.

Test	Source Room	Receiver Room	DnTw+Ctr	Comment
5628-1	Ground Floor, Apartment 1, Kitchen/Living Room	First Floor, Apartment 2, Living Room	50dB	PASS
5628-3	Apartment 7, Bedroom	Apartment 5, Bedroom	57dB	PASS

To achieve a 'pass' the above DnTw + Ctr values should be 45dB or higher.

Vertical (impact) across separating floors.

Test	Source Room	Receiver Room	LnTw	Comment
5628-2	First Floor, Apartment 2, Living Room	Ground Floor, Apartment 1, Kitchen/Living Room	44dB	PASS*
5628-4	Apartment 7, Bedroom	Apartment 5, Bedroom	44dB	PASS*

To achieve a 'pass' the above LnTw should be 62dB or lower.

Horizontal (airborne) across separating walls.

Test	Source Room	Receiver Room	DnTw+Ctr	Comment
5628-5	Apartment 7, Kitchen/Living Room	Apartment 6, Bedroom 2	50dB	PASS

To achieve a 'pass' the above DnTw + Ctr values should be 45dB or higher.

* Should be taken as guidance only, impact tests were performed over laminate floor covering.



J. Howell MIOA
 Soundtesting.co.uk Ltd



General Information:

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Test Site Address: 107-109 Hampstead Road,
London,
NW1 3EE.

Client instructing Test: Monavan Construction Ltd,
12b Thorold Road,
London,
N22 8YE.

Date of Test: Wednesday 30th October 2013

Test Engineer: C. Thomas Affiliate/IOA

Classification of Test Site:

Purpose built dwelling-houses and flats

Performance Requirements:

Separating walls:	airborne	DnTw + Ctr	= 45dB or higher
Separating floors:	airborne	DnTw + Ctr	= 45dB or higher
Separating floors:	impact	Lntw	= 62dB or lower

Description of Test Site:

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A new development of nine apartments.

Floor Construction:

65mm Screed,
65mm Underfloor heating,
25mm Insulation slab,
250mm Concrete slab,
Suspended metal frame,
2no. 12.5mm Soundbloc plasterboards.

Wall Construction:

12.5mm Soundbloc plasterboard,
Render,
225mm Dense concrete block,
Render,
12.5mm Soundbloc plasterboard.

Test Conditions:

Rooms were all complete and ready to test. Some builders tools and materials were present in the rooms tested. The impact tests were performed over laminate floor covering.

Test Procedure:

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The separating floors and walls have been tested for airborne and impact sound insulation in full accordance with the methodology described in ISO 140:1998 Part 4 (airborne) and ISO 140:1998 Part 7 (impact). All of the procedures described in Annex B of the 2003 edition of Part E of the Building Regulations, have been followed.

The room to room insulation measurements and reverberation time measurements (in receiver rooms) were carried out in one third octave bands from 100Hz to 3150Hz and single number values for $D_nT_w + C_{tr}$ (airborne) and L_nT_w (impact) have been calculated using the methodology described in ISO 717: 1996 parts 1 and 2.

All airborne source and receiver room measurement have been taken using at least 2 manual moving microphone techniques with a sample time of at least 30s each and reverberation time measurements have been made using at least six fixed microphone positions. Impact tests have been performed using 4 tapping machine positions with 2, 6 second microphone positions per tapping machine position, giving a total of 8 measurements.

Equipment and Calibration:

Brüel & Kjær 2260 Sound Level Meter	Serial Number:	2520467
Sound level meter verification in accordance with BS7580, UKAS Calibration Certificate no.		01364/2
Verification of 1/3 octave filters in accordance with IEC 61260:1995, UKAS Calibration Certificate no.		01364/3
Verification of reverberation time measurements using sinusoidal signals at 125Hz, 1kHz & 10kHz		01364/4
Calibration level before test	94.0 dB	
Instantaneous calibration check after measurements	94.0 dB	
Brüel & Kjær Tapping Machine Type 3207	Serial Number:	2414592
	Calibration Certificate Number.	00305/5
Brüel & Kjær Calibrator Type 4231	Serial Number:	2422520
	Calibration Certificate Number.	01364/1
Brüel & Kjær Dodecahedron loudspeaker		
Norsonic Nor280 Power Amplifier		

Building Regulation Performance Requirements:

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"In the secretary of state's view the normal way of satisfying Requirement E1 will be to build separating walls, separating floors, and stairs that have a separating function, together with the associated flanking construction, in such a way that they achieve the sound insulation values for dwelling houses and flats, and the values for rooms for residential purposes"

Purpose built dwelling-houses and flats

Separating walls:	airborne	DnTw + Ctr	= 45dB or higher
Separating floors:	airborne	DnTw + Ctr	= 45dB or higher
Separating floors:	impact	Lntw	= 62dB or lower

Dwelling-houses and flats formed by material change of use.

Separating walls:	airborne	DnTw + Ctr	= 43dB or higher
Separating floors:	airborne	DnTw + Ctr	= 43dB or higher
Separating floors:	impact	Lntw	= 64dB or lower

Purpose built rooms for residential purposes.

Separating walls:	airborne	DnTw + Ctr	= 43dB or higher
Separating floors:	airborne	DnTw + Ctr	= 45dB or higher
Separating floors:	impact	Lntw	= 62dB or lower

Rooms for residential purposes formed by material change of use.

Separating walls:	airborne	DnTw + Ctr	= 43dB or higher
Separating floors:	airborne	DnTw + Ctr	= 43dB or higher
Separating floors:	impact	Lntw	= 64dB or lower

Results:

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Table 1 Vertical (airborne) across separating floors.

Test	Source Room	Volume	Receiver Room	Volume	DnTw+Ctr	Comment
5628-1	Ground Floor, Apartment 1, Kitchen/Living Room	103m ³	First Floor, Apartment 2, Living Room	92m ³	50dB	PASS
5628-3	Apartment 7, Bedroom	26m ³	Apartment 5, Bedroom	25m ³	57dB	PASS
To achieve a 'pass' the above DnTw + Ctr values should be 45dB or higher.						

Table 2 Vertical (impact) across separating floors.

Test	Source Room	Volume	Receiver Room	Volume	LnTw	Comment
5628-2	First Floor, Apartment 2, Living Room	92m ³	Ground Floor, Apartment 1, Kitchen/Living Room	103m ³	44dB	PASS*
5628-4	Apartment 7, Bedroom	26m ³	Apartment 5, Bedroom	25m ³	44dB	PASS*
To achieve a 'pass' the above LnTw should be 62dB or lower.						

Table 3 Horizontal (airborne) across separating walls.

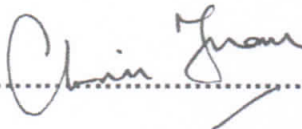
Test	Source Room	Volume	Receiver Room	Volume	DnTw+Ctr	Comment
5628-5	Apartment 7, Kitchen/Living Room	35m ³	Apartment 6, Bedroom 2	30m ³	50dB	PASS
To achieve a 'pass' the above DnTw + Ctr values should be 45dB or higher.						

* Should be taken as guidance only, impact tests were performed over laminate floor covering.

Conclusions:

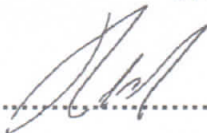
- 1 The tests demonstrate that the separating floors have achieved the airborne sound insulation requirements of Approved Document E 2003.
- 2 The tests demonstrate that the separating floors have achieved the impact sound insulation requirements of Approved Document E 2003.
- 3 The test demonstrates that the separating wall has achieved the airborne sound insulation requirements of Approved Document E 2003.

Name of test Engineer: C. Thomas AffiliateloA

Signed: 

Dated: 06/11/2013

Approved by: J. Howell BSc (Hons) Acoustics MIOA

Signed: 

Dated: 06/11/2013

For and on Behalf of:

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