

Sound Advice

ACOUSTICS LTD

REPORT REFERENCE:

SA - 7360

INTERNAL NOISE ASSESSMENT

CLIENT:

Aura Gas

SITE:

Aura House

New Road

Bedhampton

Hampshire

PO9 1DE

Report Presented By

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1 INTRODUCTION

Sound Advice Acoustics Ltd has been instructed by Aura Gas to assess the internal construction of the proposed re development at Aura House, New Road, Bedhampton, Hampshire, PO9 1DE.

This assessment has been based on the requirements of the current Building Regulations 2010 Approved Document E 2003 Edition incorporating 2004, 2010, 2013 AND 2015 amendments.

Construction consists of an existing commercial property, which is being converted to comprise six residential flats.

The following report assesses selected room separating walls and floors for the airborne and impact sound insulation properties in accordance with Building Regulations 2010 Approved Document E 2003 Edition incorporating 2004, 2010, 2013 and 2015 amendments. Prediction calculations have been carried out using the Bastian© prediction software system and has been based on the proposed construction materials and design.

2 CRITERIA

The Building Regulation Part E of schedule 1 states that:

“E1. Dwelling-houses, flats and rooms for residential purposes shall be designed and constructed in such a way that they provide reasonable resistance to sound from other parts of the same building and from other parts of the same building and from adjoining buildings.

This does not apply to:

For purpose built dwellings and dwellings formed by material change of use the Building Regulations Approved Document E2 2003 ‘Resistance to the Passage of Sound’ requires separating structures to adhere to the following requirements as detailed in table 0.1a of the above document.

Dwellings houses and flats – performance standards for separating walls, separating floors and stairs that have a separating function.

Table 0.1a: Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function		
	Airborne Sound Insulation	Impact Sound Insulation
	$D_{nT,w} + C_{tr}$ dB (Minimum values)	$L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and Stairs	45	62
Dwelling-houses and flats Formed by material change of use		
Walls	43	-
Floors and Stairs	43	64

3 PROCEEDURE

Calculation of the airborne and impact predicted sound transmission between rooms in buildings was carried out.

The calculations were carried out at selected areas between units. All standard separation constructions were deemed to have been constructed to the requirements of the Building Regulations 2010 Approved Document E 2003 Edition incorporating 2004, 2010, 2013 and 2015 amendments.

The following areas have been selected and calculations carried out accordingly.

Predicted internal levels		Figure
Flat 5 – Lounge	Flat 4 - Bedroom	1
Flat 5 – Kitchen	Flat 6 - Kitchen	2
Flat 2 – Kitchen	Flat 3 – Kitchen	3
Flat 4 – Lounge	Flat 1 – Lounge	4
Flat 4 – Bedroom	Flat 1 – Bedroom	5
Flat 6 – Lounge	Flat 3 – Lounge	6
Flat 6 – Bedroom	Flat 3 – Bedroom	7

5 CALCULATION SUMMARY

5.1 Airborne Test, Flat 5 – Lounge to Flat 4 - Bedroom

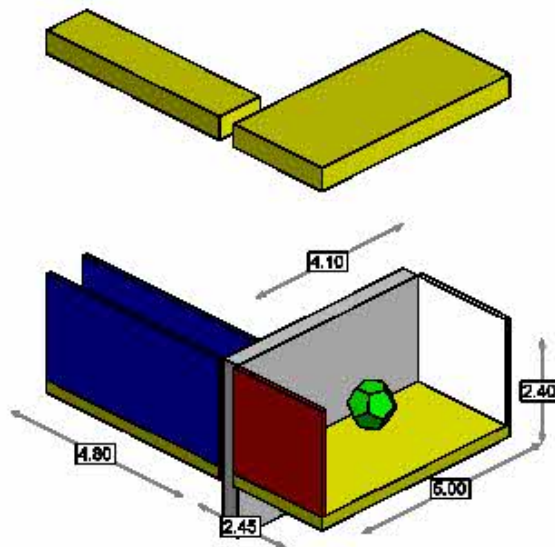
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
1	Flat 5 – Lounge	Flat 4 - Bedroom	43.0	53.7	PASS

BASTIAN® - Worksheet 1 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flg. 1, 5 - Lounge/Kitchen to 4 - Bedroom
Worksheet: Worksheet 1 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			$D_{nT,w}$ (0.5 L'nT,w)		
	Basic Element	Additional	Type		Basic Element	Additional	dB	%	dB
K1	Aura block wall						65.2	8	
X1	Lightweight External wall with 12.5mm plasterb		4		Lightweight External wall with 12.5mm plasterb		60.9	21	
X2	Lightweight External wall with 12.5mm plasterb		2		Lightweight External wall with 12.5mm plasterb		55.7	68	
X3	Decklan 26T, 22mm c/board, 200mm joist with		13		Decklan 26T, 22mm c/board, 200mm joist with		84.3	0	
X4	Standard ceiling with tiled roof		14		Standard ceiling with tiled roof		68.6	3	
						Total:	53.7	100	
					Sound Source	T	L1	L2	
						s	dB(A)	dB(A)	
						0.5			

5.2 Airborne Test, Flat 5 – Kitchen to Flat 6 - Kitchen

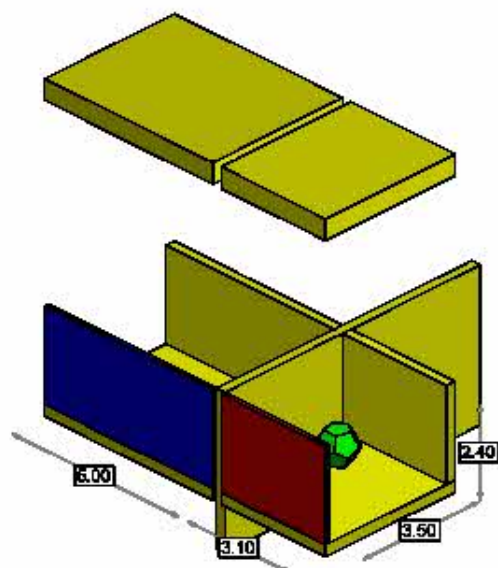
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
2	Flat 5 – Kitchen	Flat 6 - Kitchen	43	52.8	PASS

BASTIAN® - Worksheet 1 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 2, 5 - Kitchen to 6 - Kitchen
Worksheet: Worksheet 1 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			$D_{nT,w}$ (0.5)		$L_{nT,w}$ (s)	
Nr	Basic Element	Additional	Type	Nr	Basic Element	Additional	dB	%	dB	%
K0	Aura lightweight wall			18	Aura lightweight wall		80.5	18		
K1	Aura lightweight wall			19	Aura lightweight wall		80.4	0		
K2	Lightweight External wall with 12.5mm plasterb			18	Lightweight External wall with 12.5mm plasterb		54.0	79		
K3	Decklon 26T, 22mm c/board, 200mm joist with			19	Decklon 26T, 22mm c/board, 200mm joist with		76.6	0		
K4	Standard ceiling with tiled roof			20	Standard ceiling with tiled roof		69.3	2		
						Total:	52.8	100		
					Sound Source	T	L1	L2		
						s	dB(A)	dB(A)		
						0.5				

5.3 Airborne Test, Flat 2 – Kitchen to Flat 3 – Kitchen

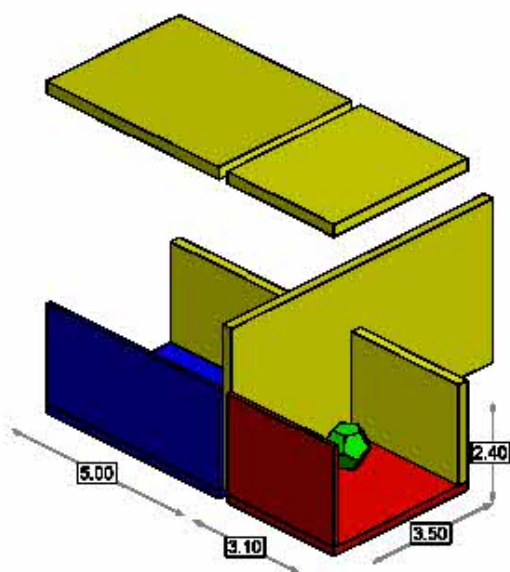
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
3	Flat 2 - Kitchen	Flat 3 – Kitchen	43.0	50.2	PASS

BASTIAN® - Worksheet 1 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 3, 2 - Kitchen to 3 - Kitchen
Worksheet: Worksheet 1 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			$D_{nT,w}$ (0.5)		$L_{nT,w}$ (1)	
No.	Basic Element	Additional	Type	No.	Basic Element	Additional	dB	%	dB	%
X0	Aura lightweight wall						60.8	10		
X1	Aura lightweight wall		19		Aura lightweight wall		60.4	0		
X2	Lightweight External wall with 12.5mm plasterb		18		Lightweight External wall with 12.5mm plasterb		51.3	84		
X3	200mm solid concrete		18		200mm solid concrete		62.5	6		
X4	Decklan 26T, 22mm c/board, 200mm joist with		19		Decklan 26T, 22mm c/board, 200mm joist with		76.6	0		
					Total:		50.2	100		
					Sound Source		T	L1	L2	
					s		dB(A)	dB(A)		
							0.5			

5.4 Airborne Test, Flat 4 – Lounge to Flat 1 – Lounge

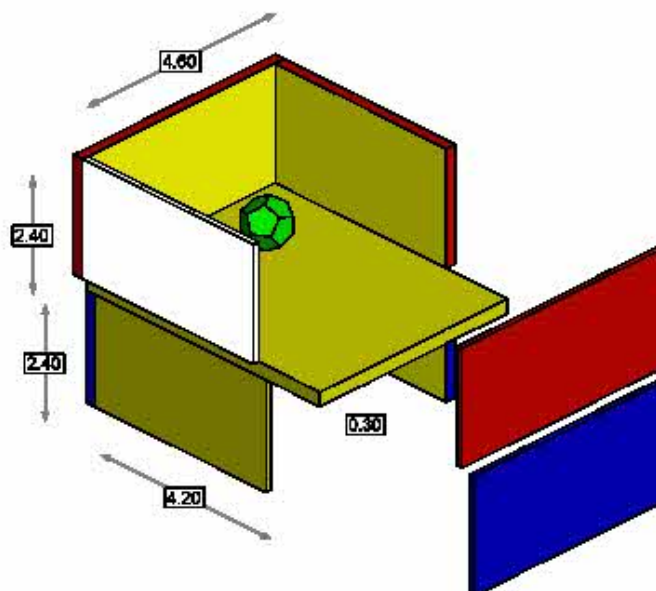
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
4	Flat 4 - Lounge	Flat 1 - Lounge	43.0	49.6	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 4, 4 - Lounge to 1 - Lounge
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			$D_{nT,w}$ (0.5) L'nT,w (0			
Ni	Basic Element	Additional	Type	Basic Element	Additional	dB	%	dB	%	
X1	Deck on 26T, 22mm c/b, 200mm joist with 45kg/m²					56.2	22	51.0	67	
X11	Internal Wall Type A		4	Internal Wall Type A		59.3	11	48.7	25	
X12	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin	95.4	0	7.9	0	
X13	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin	95.8	0	7.5	0	
X14	Lightweight External wall with 12.5mm plasterboard		17	Lightweight External wall with 12		51.3	67	42.0	8	
					Total:	49.6	100	53.0	100	
				Sound Source	T	L1	L2			
					s	dB(A)	dB(A)			
						0.5				

5.4.1 Impact Test, Flat 4 – Lounge to Flat 1 – Lounge

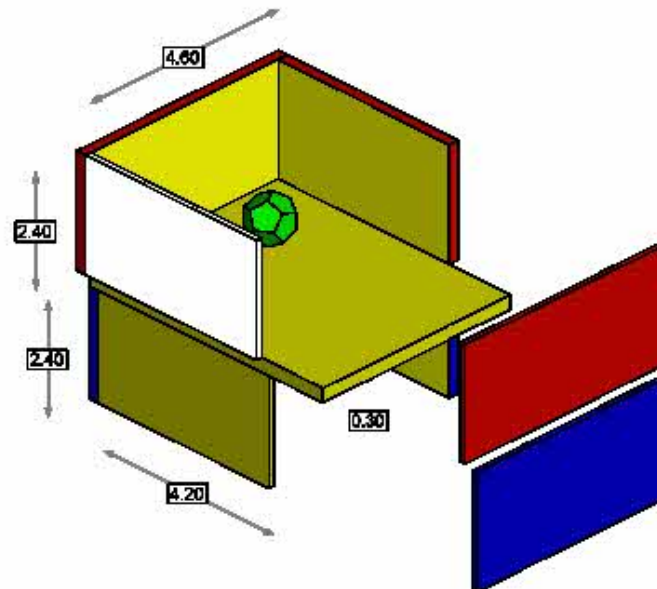
FIGURE NO.	FROM	TO	REQUIRED MAX LnT,w dB	ACHIEVED LnT,w dB	RESULT
4	Flat 4 - Lounge	Flat 1 - Lounge	64.0	53.0	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 4, 4 - Lounge to 1 - Lounge
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			DnT,w (0.5)		LnT,w (0.5)	
M	Basic Element	Additional	Type	M	Basic Element	Additional	dB	%	dB	%
X1	Decklan 26T, 22mm c/board, 200mm joist with 45kg/m²						58.2	22	51.0	67
X11	Internal Wall Type A		4		Internal Wall Type A		59.3	11	46.7	25
X12	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18		Lightweight External wall with 12.5mm plasterboard	BG wall lin	95.4	0	7.9	0
X13	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18		Lightweight External wall with 12.5mm plasterboard	BG wall lin	95.8	0	7.5	0
X14	Lightweight External wall with 12.5mm plasterboard		17		Lightweight External wall with 12.5mm plasterboard		51.3	67	42.0	8
					Total:		49.6	100	53.0	100
					Sound Source	T	L1	L2		
						s	dB(A)	dB(A)		
						0.5				

5.5 Airborne Test, Flat 4 – Bedroom to Flat 1 – Bedroom

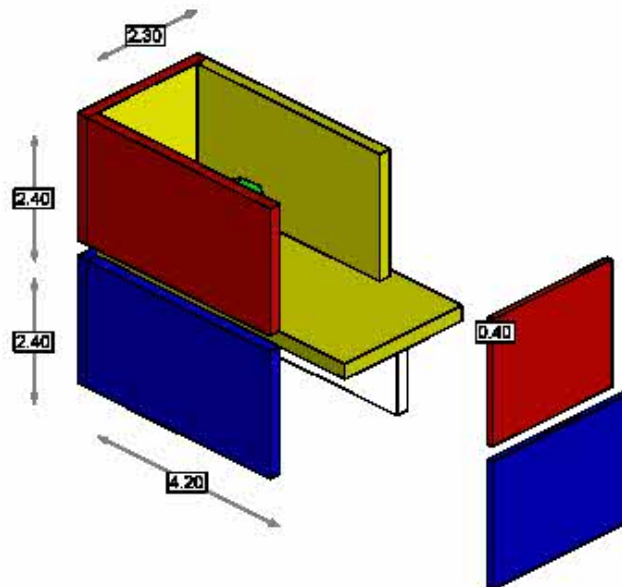
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
5	Flat 4 - Bedroom	Flat 1 - Bedroom	43.0	51.6	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 5, 4 - Bedroom to 1 - Bedroom
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			$D_{nT,w}$ (0.5)		$L_{nT,w}$ (0	
M	Basic Element	Additional		Basic Element	Additional	Type	dB	%	dB	%
X1	Deck/26T, 22mm c/board, 200mm joist with 45kg/m						57.2	29	53.1	77
X11	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin		93.3	0	12.8	0
X12	Internal Wall Type A		3	Internal Wall Type A			68.1	2	45.8	14
X13	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin		97.2	0	8.8	0
X14	Lightweight External wall with 12.5mm plasterboard		17	Lightweight External wall with 12			53.5	68	43.4	8
						Total:	51.6	100	54.2	100
						Sound Source	T	L1	L2	
						s	dB(A)	dB(A)		
						0.5				

5.5.1 Impact Test, Flat 4 – Bedroom to Flat 1 – Bedroom

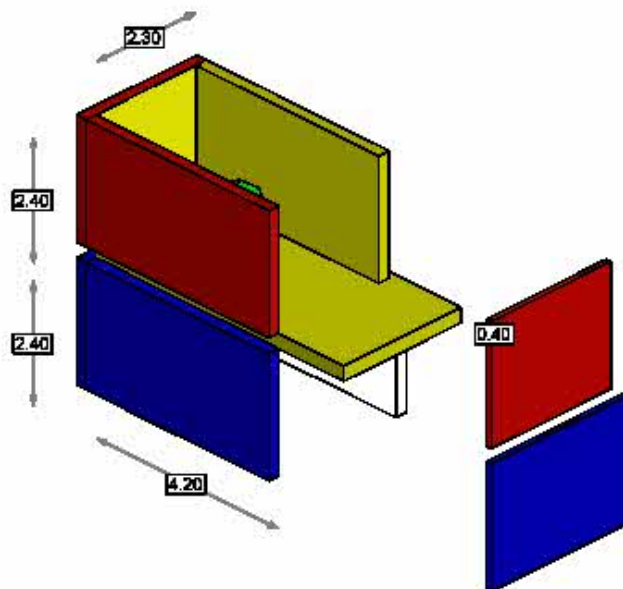
FIGURE NO.	FROM	TO	REQUIRED MAX LnT,w dB	ACHIEVED LnT,w dB	RESULT
5	Flat 4 - Bedroom	Flat 1 - Bedroom	64.0	54.2	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Fltq.5, 4 - Bedroom to 1 - Bedroom
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Receiving Room			DnT,w (0.5)		LnT,w (0.5)	
Nr	Basic Element	Additional	Type	Basic Element	Additional	dB	%	dB	%
X1	Deck/lon 26T, 22mm c/board, 200mm joist with 45kg/m					57.2	29	53.1	77
X11	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin	93.3	0	12.6	0
X12	Internal Wall Type A		3	Internal Wall Type A		68.1	2	45.8	14
X13	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin	97.2	0	8.8	0
X14	Lightweight External wall with 12.5mm plasterboard		17	Lightweight External wall with 12		53.5	68	43.4	8
					Total:	51.6	100	54.2	100
				Sound Source		T	L1	L2	
					s	dB(A)	dB(A)		
					0.5				

5.6 Airborne Test, Flat 6 – Lounge/Kitchen to Flat 3 – Lounge/Kitchen

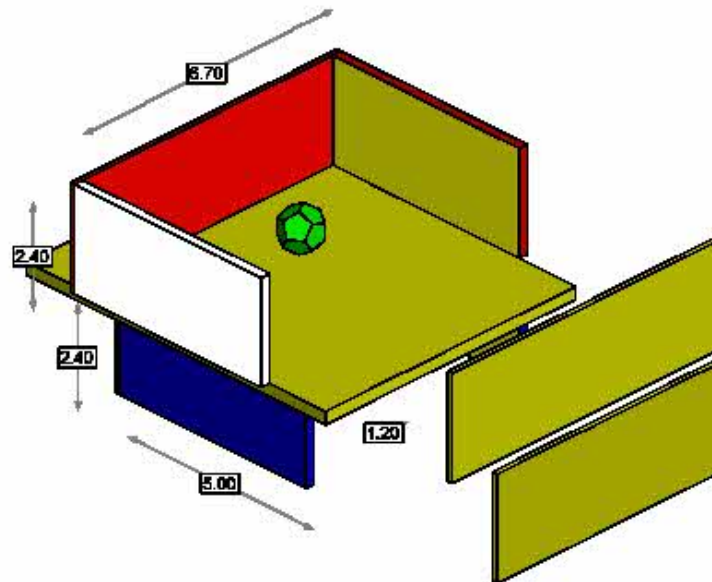
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
6	Flat 6 – Lounge/Kitchen	Flat 3 – Lounge Kitchen	43.0	49.2	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Ftq.6, 6 - Lounge to 3 - Lounge
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room				Junction		Receiving Room				$D_{nT,w}$ (0.5 $L_{nT,w}$)	
N	Basic Element	Additional	Type	N	Basic Element	Additional	Type	dB	%	dB	%
X1	Deckon 26T, 22mm c/board, 200mm joist with 45kg/m							96.1	20	49.2	82
X1	Lightweight External wall with 12.5mm plasterboard	BG wall lin	4	X1	Lightweight External wall with 12.5mm plasterboard	BG wall lin	4	90.0	0	9.2	0
X2	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	X2	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	96.8	0	4.6	0
X3	Lightweight External wall with 12.5mm plasterboard		17	X3	Lightweight External wall with 12.5mm plasterboard		17	50.8	68	40.1	10
X4	Internal Wall Type A		19	X4	Internal Wall Type A		19	58.2	12	39.1	8
						Total:		49.2	100	50.1	100
					Sound Source	T		L1	L2		
						s		dB(A)	dB(A)		
						0.5					

5.6.1 Impact Test, Flat 6 – Lounge/Kitchen to Flat 3 – Lounge/Kitchen

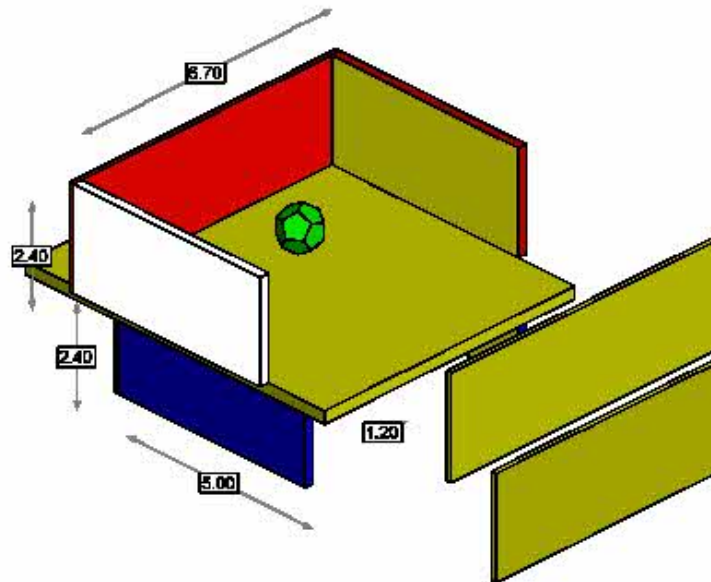
FIGURE NO.	FROM	TO	REQUIRED MAX LnT,w dB	ACHIEVED LnT,w dB	RESULT
6	Flat 6 – Lounge/Kitchen	Flat 3 – Lounge/Kitchen	64.0	50.1	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Ftg. 6, 6 - Lounge to 3 - Lounge
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct	Receiving Room			DnT,w (0.5)		LnT,w (0	
N/I	Basic Element	Additional	Type	Basic Element	Additional		dB	%	dB	%
X1	Deck/lin 26T, 22mm c/board, 200mm joist with 45kg/m						56.1	20	49.2	62
X1	Lightweight External wall with 12.5mm plasterboard	BG wall lin	4	Lightweight External wall with 12	BG wall lin		90.0	0.	9.2	0.
X12	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18	Lightweight External wall with 12	BG wall lin		96.6	0.	4.6	0.
X13	Lightweight External wall with 12.5mm plasterboard		17	Lightweight External wall with 12			50.8	68	40.1	10
X14	Internal Wall Type A		19	Internal Wall Type A			58.2	12	39.1	8
					Total:		49.2	100	50.1	100
				Sound Source	T		L1	L2		
					s		dB(A)	dB(A)		
					0.5					

5.7 Airborne Test, Flat 6 – Bedroom to Flat 3 – Bedroom

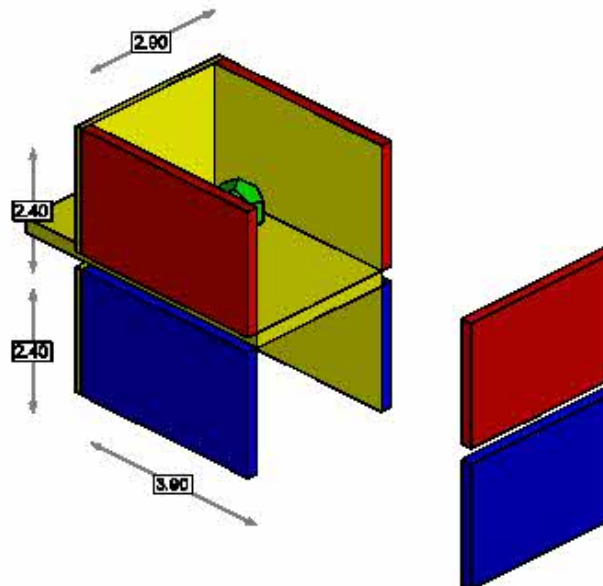
FIGURE NO.	FROM	TO	REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
7	Flat 6 – Bedroom	Flat 3 – Bedroom	43.0	54.0	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 7, 6 - Bedroom to 3 - Bedroom
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

Sending Room			Junct		Receiving Room			$D_{nT,w} (0.5)$		$D_{nT,w} (0.5)$	
N	Basic Element	Additional	Type		Basic Element	Additional		dB	%	dB	%
X1	Deck on 26T, 22mm c/board, 200mm joist with 45kg/m							56.5	53	53.1	89
X11	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18		Lightweight External wall with 12	BG wall lin		94.3	0	11.0	0
X12	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18		Lightweight External wall with 12	BG wall lin		94.3	0	11.0	0
X13	Internal Wall Type A				Internal Wall Type A			57.1	47	44.0	11
X14	Lightweight External wall with 12.5mm plasterboard	BG wall lin	18		Lightweight External wall with 12	BG wall lin		95.3	0	10.0	0
					Total:			54.0	100	53.6	100
					Sound Source			T		L1	L2
								s		dB(A)	dB(A)
								0.5			

5.7.1 Impact Test, Flat 6 – Bedroom to Flat 3 – Lounge/Kitchen

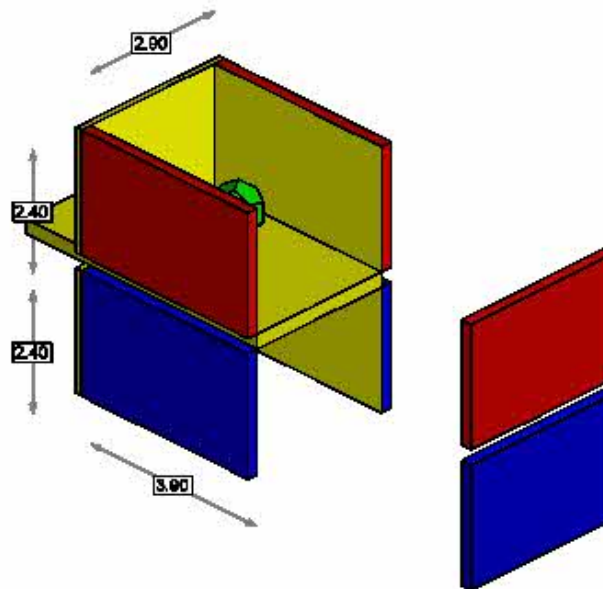
FIGURE NO.	FROM	TO	REQUIRED MAX LnT,w dB	ACHIEVED LnT,w dB	RESULT
6	Flat 6 – Bedroom	Flat 3 – Bedroom	64.0	53.6	PASS

BASTIAN® - Worksheet 3 [DM Ts (1)]

Project Info

Project Name: Aura House
Client: Aura Gas
Project No.: Flt. 7, 6 - Bedroom to 3 - Bedroom
Worksheet: Worksheet 3 [DM Ts (1)]
Program: BASTIAN V 2.3

Room View



Worksheet-Table

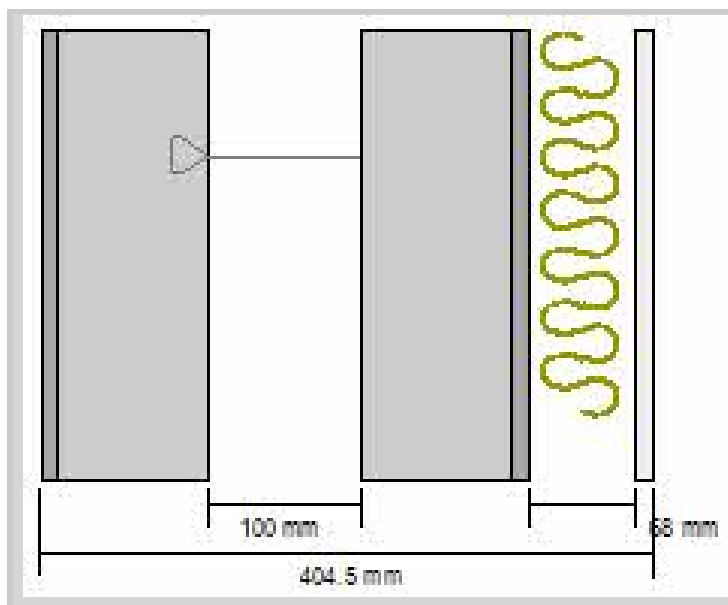
Sending Room			Junct		Receiving Room		DnT,w (0.5)		LnT,w (0	
N	Basic Element	Additional	Type		Basic Element	Additional	dB	%	dB	%
X/d	Deck/lon 26T, 22mm c/boad, 200mm joist with 45kg/m						56.5	53	53.1	89
X/f1	Lightweight External wall with 12.5mm plasterboard	B/G wall lin	18		Lightweight External wall with 12	B/G wall lin	94.3	0	11.0	0
X/f2	Lightweight External wall with 12.5mm plasterboard	B/G wall lin	18		Lightweight External wall with 12	B/G wall lin	94.3	0	11.0	0
X/f3	Internal Wall Type A		19		Internal Wall Type A		57.1	47	44.0	11
X/f4	Lightweight External wall with 12.5mm plasterboard	B/G wall lin	18		Lightweight External wall with 12	B/G wall lin	95.3	0	10.0	0
					Total:		54.0	100	53.6	100
					Sound Source		T	L1	L2	
						s	dB(A)	dB(A)		
							0.5			

6 RECOMMENDATIONS

6.1 Separating Wall (dwelling dividing)

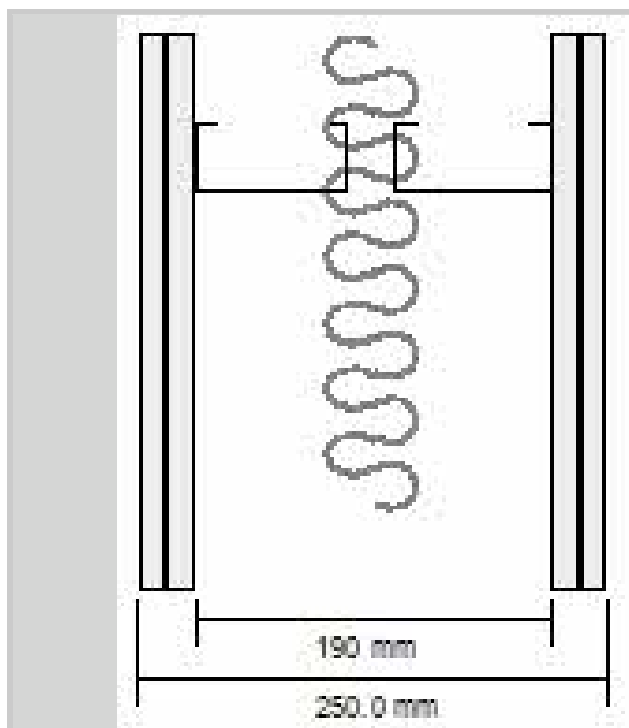
Calculations have been based on the following calculated attenuation figures for the proposed separating wall construction between the residential apartments:

6.1.1 Wall Type 1



12mm Plaster
100mm block (450kg/m³)
100mm clear cavity
100mm block (450kg/m³)
12mm Plaster
20mm Void
48mm Metal Stud with 50mm of APR 1200
12.5mm plasterboard

6.1.2 Wall Type 2



2 x 15mm Soundbloc
70mm metal stud
50mm cavity with 50mm of 45kg/m³ mineral wool
70mm metal stud
2 x 15mm Soundbloc

6.2 Separating Wall (non-load bearing internal dwelling)

Calculations have been based on the following calculated attenuation figures for the proposed separating wall within residential apartments. The construction can be either 12.5mm wallboard / 70mm metal stud including 50mm mineral wool / 12.5mm wallboard or equivalent (Rw 40dB minimum), or 2 x 12.5mm plasterboard / 70mm metal stud with no insulation / 2 x 12.5mm wallboard or equivalent (Rw 40dB minimum).

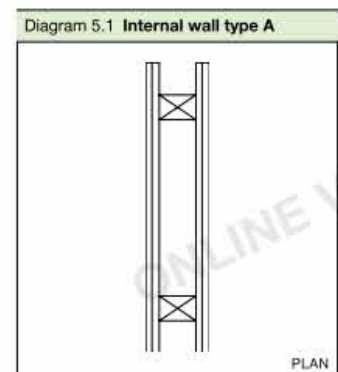
The following extract from Building Regulations Approved Document E 'Resistance to the Passage of Sound' should be followed.

The following construction details are suggested:

Rw 40 dB minimum. Building Regulations Part E suggest that either of the following wall details are acceptable to achieve this criteria. One of these two must be selected.

6.2.1 Internal Wall Type A:

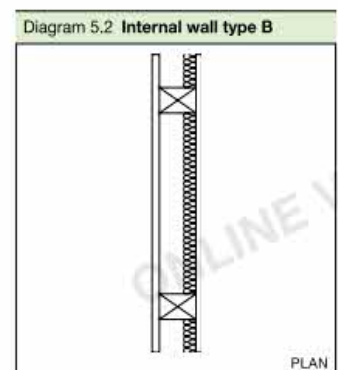
- ✓ Timber or metal frames with plasterboard lining on each side of frame.
- ✓ Each lining to be two or more layers of plasterboard, each sheet of a minimum mass per unit of 10kg/m².
- ✓ Lining Fixed to timber frame with a minimum distance between linings of 75mm, or metal frame with a minimum distance of 45mm.
- ✓ All joints well sealed.



6.2.2 Internal Wall Type B

Timber or metal frames with plasterboard lining each side of the frame and absorbent material.

- ✓ Single layer of plasterboard of minimum mass per unit area 10kg/m². Linings fixed to timber frame with a minimum distance between linings of 75mm, or metal frame with a minimum distance between linings of 45mm.
- ✓ An absorbent layer of un-faced mineral wool batts or quilt (minimum thickness 25mm, minimum density 10kg/m³) which may be wire reinforced, suspended in the cavity.



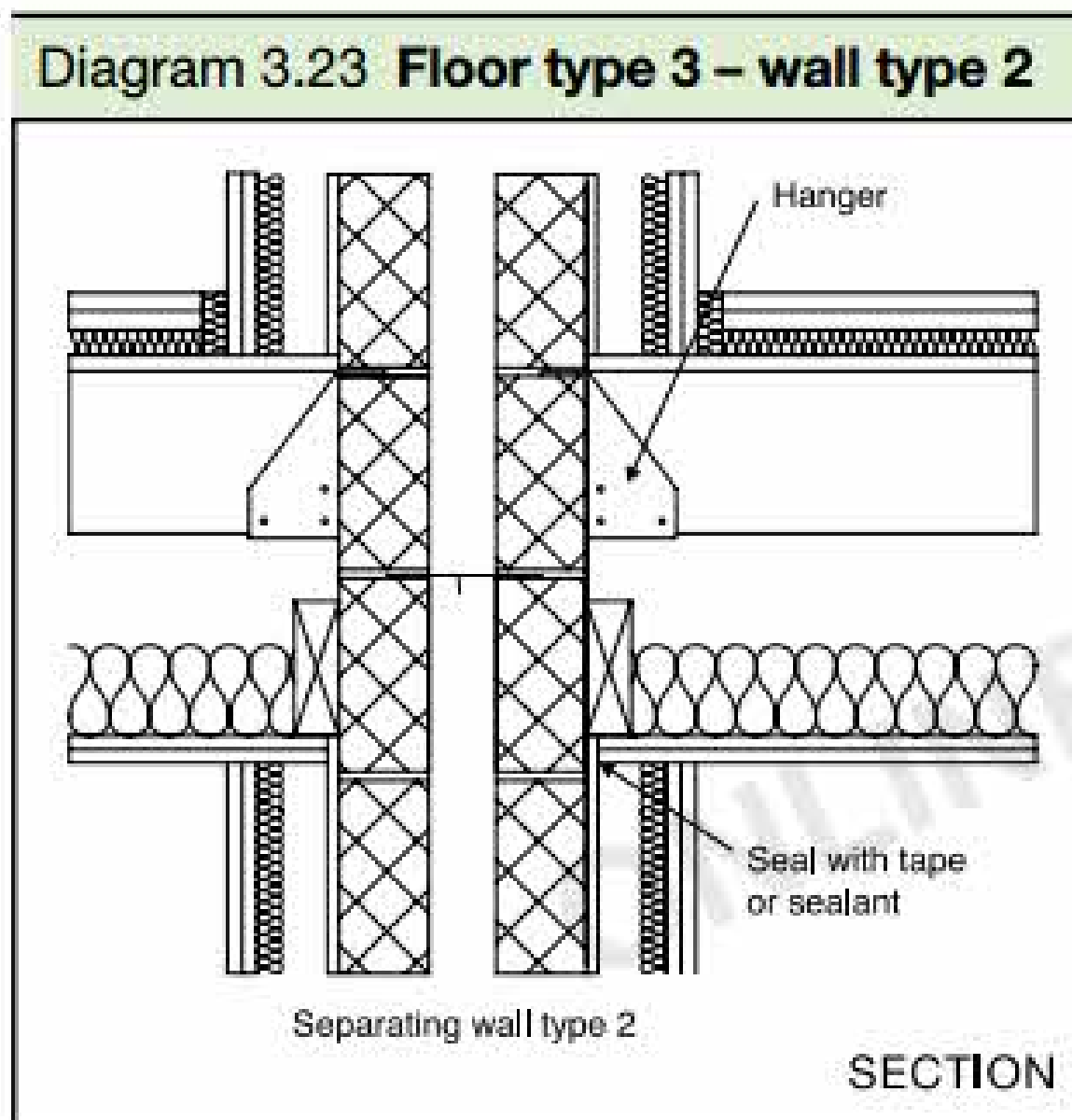
6.3 Outer wall lining system

As shown in section 3 Diagram 3.23 Floor type 3 of Approved Document E Resistance to the Passage of Sound it will be necessary to install a wall lining system on the external walls, this should be as a minimum 10mm void, 70mm metal stud with APR 1200 insulation and 2 x 15mm soundbloc. This is to alleviate any flanking transmission issues that may occur, as is typical in this kind of construction.

The following extract from Building Regulations Approved Document E ‘Resistance to the Passage of Sound’ should be followed.

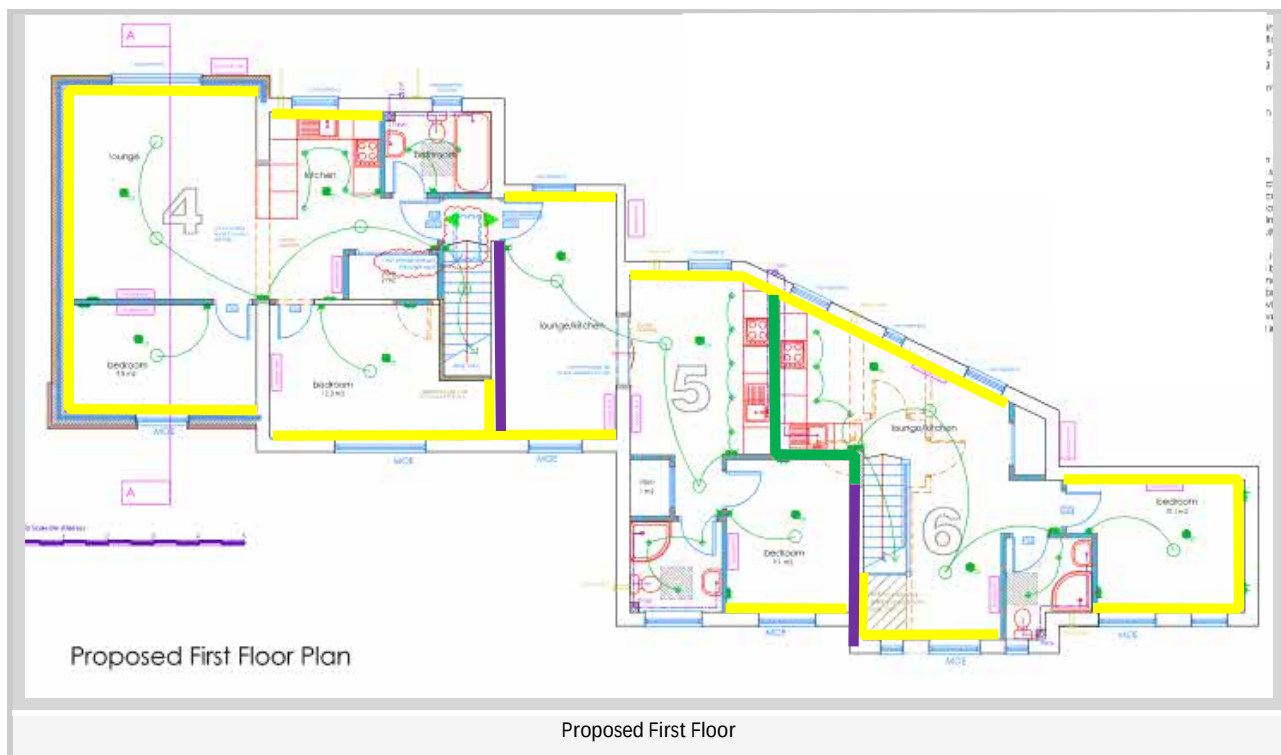
6.4 Detail showing a wall lining system

The following diagram illustrates the typical design that should be adopted for wall lining systems where timber floors are installed with concrete supporting walls.

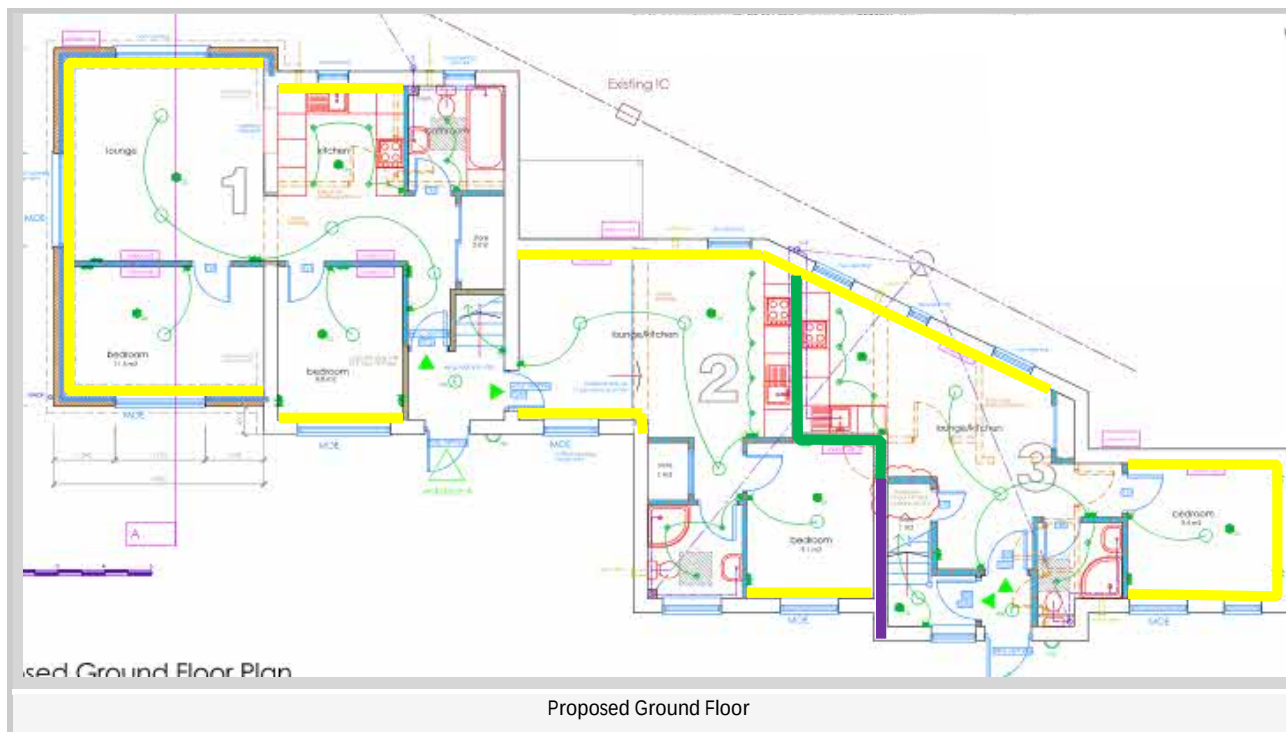


6.5 Proposed Locations of Independent Wall Liner

6.5.1 Proposed First Floor



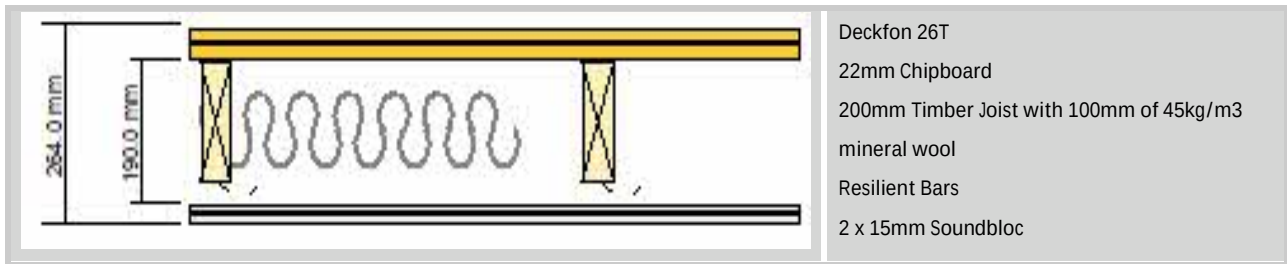
6.5.2 Proposed Ground Floor



- Key:
- Proposed Independent Wall Liner
 - Proposed New - Wall Type 2
 - Existing Wall – Wall Type 1

6.6 Flooring

Calculations have been based on the following calculated attenuation figures for the proposed separating floor construction between the residential apartments:



6.7 Flanking Noise

Flanking strips should be used on all floors and wrapped up the walls and folded over in order that the skirting boards do not touch the floor. Any deviations from this specification should be checked with ourselves prior to alteration for further calculation and analysis.

6.8 RSJ's & SVP's

Where there are any metal RSJ's or soil pipes (SVP's) these should be wrapped in 45kg/m3 insulation and double boarded with 2 layers of 15mm soundbloc. Alternatively a preparatory Acoustic SVP could be considered if the downpipes do not run vertically through the entire building. The following company supplies suitable products, although other are available on the market.

Aliaxis – 01622 852796

Lenham, Maidstone, Kent, ME17 2DE

Mr Adam Catrell.

6.9 Spot Lights

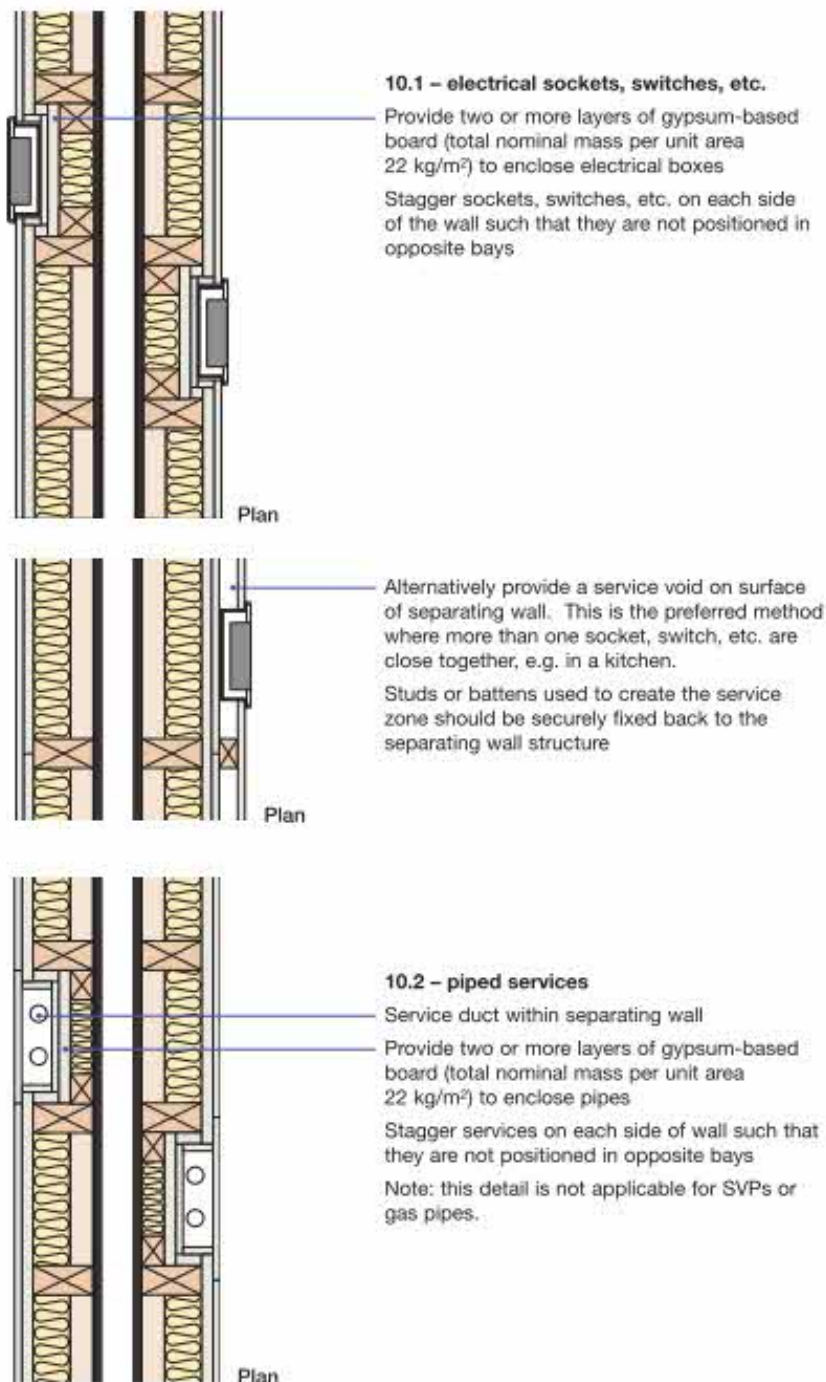
It is highly recommended that any spotlights installed within separating floors between dwellings be fitted with suitable acoustic hoods with the number of spotlights per room limited to 6 for rooms of areas less than 20m².

6.10 Sockets within Separating Walls

Back to back sockets should be avoided within the separating party walls of the apartments as this will reduce the overall wall sound insulation. If sockets are installed within these walls they must be fitted with suitable British Gypsum Acoustic Boxes, or equivalent, in order to maintain the acoustic integrity of the wall itself.

Care should be taken when installing the electrical cables and a minimal diameter hole drilled for the cables to be fed through. Once the cable is installed the hole should be sealed completely around the cable using non setting acoustic mastic in order to maintain the acoustic integrity of the wall.

The following excerpt from the robust detail book gives guidance for services and sockets in the separating wall:



7 CONCLUSION

Sound Advice Acoustics Ltd has been instructed by Aura Gas to assess the internal construction of the proposed re development at Aura House, New Road, Bedhampton, Hampshire, PO9 1DE.

This assessment has been based on the requirements of the current Building Regulations 2010 Approved Document E 2003 Edition incorporating 2004, 2010, 2013 and 2015 amendments. The selected rooms within the development have indicated compliance with the current Building Regulations therefore confirming the proposed design details.

It is therefore recommended that the proposed construction methods are adopted for this development throughout. Any deviations from this specification should be checked with ourselves prior to alteration for further calculation and analysis.