robin ashley architects
Hawk Works, 105 Mary Street
Sheffield S1 4RT
t: 0114 258 7450
e: contact@raarchitects.co.uk
w: www.raarchitects.co.uk

Elaine Ward
Planning and Building Control
Barnsley MBC
PO Box 634
Barnsley
S70 9GG

18 July 18

18-009-15

Dear Elaine,

By email only

7 Eastgate Barnsley 2016/1523
Discharge of conditions PP-07120629

Further to our earlier discussion we are pleased to enclose information in respect of the discharge of condition 3 of the above approval.

Pursuant of compliance with that conditions we have taken the advice of professional and qualified acousticians acoustic Design Technology and enclose a report from them in which describes the constructional build up put forward.

In addition we enclose technical literature which describes the ventilation product that will be used to provide background ventilation in lieu of opening windows or trickle vents. As requested we have contacted Mr Paul Denton but he was at the time of writing not available.

With regard to the windows a standard mock sash UPVC window was used for the acoustic calculations and is therefore proposed in the style and appearance shown on the approved drawings. As discussed to preserve the acoustic performance a fixed window must be used.

We trust this is adequate for your current purposes however, please feel free to contact us if we need to discuss any aspect in greater detail.

Yours sincerely

James Norton RIBA
Associate
for
Robin Ashley Architects LLP

ACOUSTIC DESIGN TECHNOLOGY
Noise and Vibration Consultants

Our Ref:- ADT 2753/AML

12 July 2018

James Norton Esq.
Robin Ashley Architects LLP
Hawk Works
105 Mary Street
SHEFFIELD
S1 4RT

Dear James

Re:- 7 Eastgate, Barnsley

Further to our recent discussions, we are writing to provide the information required to discharge Condition 3 of Planning Application 2016/1523.

The condition refers to the proposals set out in the Noise Assessment Report by Noise Survey Ltd referenced 209 BARN dated 16th June 2017 (hereafter referred to as the acoustic report), and requires details to be submitted to, and approved by the Council prior to commencement.

Sound Insulation Requirements

Taken from the acoustic report, the sound insulation requirements for the external building fabric are summarised in the following table.

Room	Sound Insulation Requirement
Lounge (Eastgate elevation)	R_w26 dB
Dining Room (Eastgate elevation)	R_w21 dB
Bedroom (Eastgate elevation)	R_w38 dB
Lounge (rear elevation)	R_w16 dB
Dining Room (rear elevation)	R_w11 dB
Bedroom (rear elevation)	R_w56 dB

ACOUSTIC DESIGN TECHNOLOGY LIMITED
CROSSLAND GRANGE, GREENWAYS, CHESTERFIELD, DERBYSHIRE S40 3HF
Telephone: 01246 554841 Facsimile: 01246 550141 Website: www.acousticdesign.co.uk E-mail: mail@acousticdesign.co.uk
Company Registered in England No. 4528227
V.A.T. Registration No. 593 7456 92

Living Rooms

The proposal is to install 4 / 16 / 4 low argon hermetically sealed double glazed units in these rooms. The composite sound reduction of the facades, taking into account the properties of the existing brick walls, will be at least R_w38 dB, and will therefore more than satisfy the requirements.

A sample calculation, 2753/C1 is appended to this report. The acoustic performance data from the wall are taken from British Gypsum test report BTC 2797A, and the figures for the glazing unit are taken from the appended Pilkington datasheet.

Bedrooms Overlooking Eastgate

As for the living rooms, 4 / 16 / 4 low argon hermetically sealed double glazed units fitted in the existing brick walls will achieve the required performance of R_w38 dB.

Rear Facing Bedrooms

The requirement for the rear facing bedrooms is very high, and can only be achieved by means of wide airspace secondary double glazing.

The attached calculation 2753/C2 shows that by augmenting the standard glazing unit with an additional 10.4mm pane of laminated glass separated from the primary unit by 200mm, the sound insulation of the window the composite sound reduction index of the wall (including the window) increases to R_w57 dB.

The figures used for the acoustic performance of the window in this calculation have been predicted using proprietary Insul software, and the calculation is appended to this report.

Pitched Roof

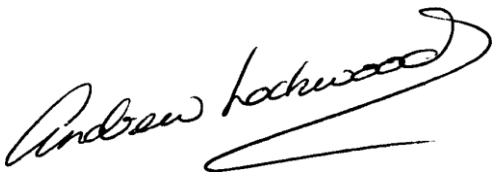
Although not explicitly required by the planning condition, we have also looked at the sound insulation properties of the pitched roof at 2nd floor level. Insul software has again been used to predict the sound insulation properties. Underdrawn with 2 layers of 12.5mm soundbloc on resilient bars, the predicted performance is R_w56 dB, as shown on the appended calculation.

Mechanical Ventilation

As acoustic consultants, we are not qualified to provide technical details about the proposed mechanical ventilation system. However, the key point from an acoustic perspective is that it will be a ducted system, and will therefore not require trickle vents in the building facades which may otherwise compromise the sound insulation performance of the building facades.

We trust this now provides you with the information you require, though please do not hesitate to contact us if we may be of any further assistance.

Yours sincerely,



Andrew Lockwood B.Sc.(Hons.), M.I.O.A.
Director

COMPOSITE SOUND REDUCTION CALCULATIONS

	Area	Octave Band Centre Frequency - Hz								R_w
		63	125	250	500	1k	2k	4k	8k	
Brick Wall + internal lining	10	30	41	48	58	66	71	77	75	60
4 / 16 / 4 hermetically sealed unit	2	20	24	20	25	35	38	35	35	31
Composite sound reduction index	12	26	31	28	33	43	46	43	43	38

CALCULATION 2753/C1

	Area	Octave Band Centre Frequency - Hz								R_w
		63	125	250	500	1k	2k	4k	8k	
Brick Wall + internal lining	10	30	41	48	58	66	71	77	75	60
4 / 16 / 4 unit plus 10mm secondary glazing with 200mm cavity	2	19	35	41	48	52	57	6	60	51
Composite sound reduction index	12	25	39	46	54	59	64	67	67	57

CALCULATION 2753/C2

Table 3 – Pilkington **Insulight**

Sound Insulation (dB) for Glass Thickness (mm)																				
Thirdoctaveband Centre Frequency (Hz)	4/12/4		6/12/6		6/12/6.4 PVB		10/12/4		10/12/6		10/12/6.4 PVB		Pilkington Acoustic Laminate							
													6/12/7		6/12/11		10/12/16		13/12/13		16/12/16	
100	25		17		19		23		27		27		25		26		30		30		31	
125	24	24	26	20	24	21	28	25	27	26	28	27	27	26	25	26	33	30	27	28	34	32
160	23		22		21		26		24		26		26		25		28		27		33	
200	21		18		19		19		24		26		23		25		30		31		34	
250	21	20	18	19	19	20	23	22	29	27	30	29	24	25	28	28	34	33	38	34	38	37
315	19		24		24		26		31		32		28		32		36		39		39	
400	22		27		28		31		33		34		30		35		40		41		43	
500	25	25	29	29	32	31	33	33	34	34	36	36	34	33	39	38	43	42	44	44	46	45
630	30		33		34		36		37		40		37		43		45		48		48	
800	33		37		38		39		39		41		42		46		44		51		50	
1000	36	35	39	38	40	39	41	40	41	40	42	41	45	44	47	47	41	41	53	52	48	46
1250	38		39		40		41		41		41		46		47		39		52		43	
1600	40		39		39		41		39		41		46		46		39		49		43	
2000	41	38	34	36	35	37	45	43	37	38	42	42	45	46	43	43	44	42	45	47	46	46
2500	35		37		39		45		40		44		48		42		48		48		50	
3150	31		42		44		42		43		49		51		47		53		52		53	
4000	40	35	47	45	49	47	44	44	47	46	53	52	52	52	54	51	58	56	57	55	59	57
R_m (dB)	29		30		31		34		34		36		36		37		39		42		42	
R_w (dB)	31		33		34		36		38		40		38		41		42		45		46	
R_{TRA} (dBA)	25		26		27		29		32		34		31		33		37		38		41	

Sound Insulation Prediction (v8.0.11)

- Key No. 2567

Margin of error is generally within Rw +/- 3 dB

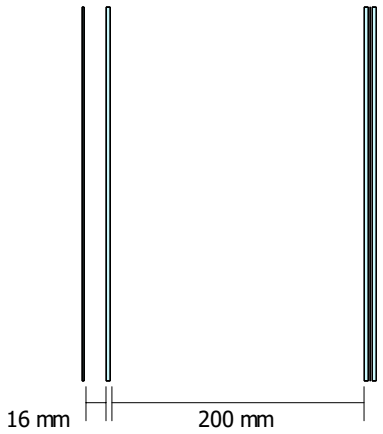
Job Name:

Job No.: Page No.:

Notes:

Date: 12 Jul 18 Initials:

File Name: 2018-07-12 secondary double glazing.ixl



Rw	51 dB	
C	-1 dB	
C_{tr}	-5 dB	
D_{nTw}	53 dB	[V:50m3] [A:11m2]

System description

+ 1 x 4.0 mm Glass (ρ:2430 kg/m3,E:52GPa,η:0.02, ρs:9.72 kg/m², fc:3498 Hz)

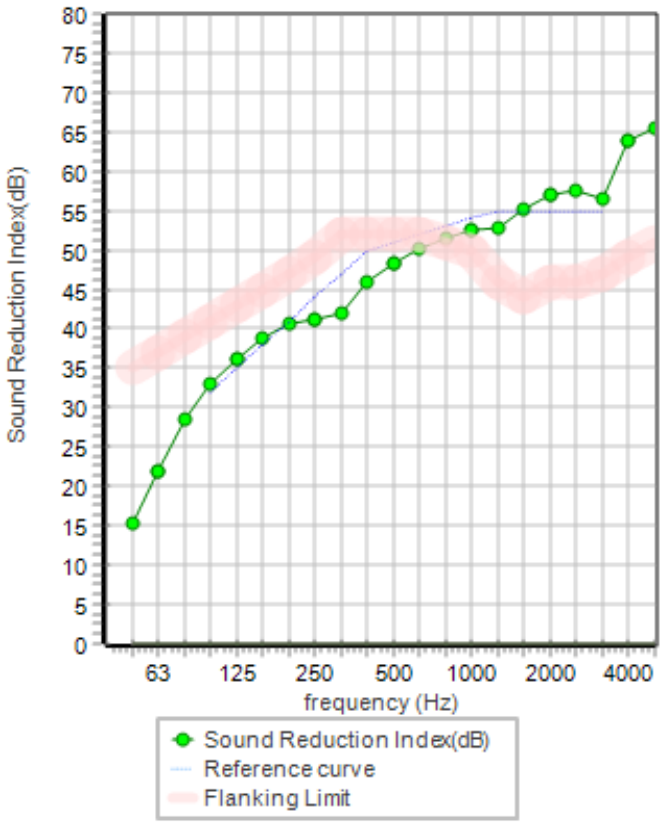
+ 1 x 4.0 mm Glass (ρ:2430 kg/m3,E:52GPa,η:0.02, ρs:9.72 kg/m², fc:3498 Hz)

+ 1 x 10.4 mm Laminated Glass (generic PVB-0.38 mm) (ρ:2430 kg/m3,E:46GPa,η:0.06, ρs:12.2 kg/m², fc:2982 Hz)

Mass-air-mass resonant frequency =48 Hz , 257 Hz

Panel Size 2.7x4 m; Mass 44.6 kg/m²

frequency (Hz)	R(dB)	R(dB)
50	15	
63	22	19
80	29	
100	33	
125	36	35
160	39	
200	41	
250	41	41
315	42	
400	46	
500	48	48
630	50	
800	51	
1000	52	52
1250	53	
1600	55	
2000	57	57
2500	58	
3150	56	
4000	64	60
5000	66	



Sound Insulation Prediction (v8.0.11)

- Key No. 2567

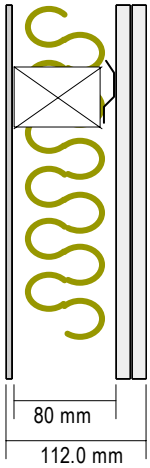
Margin of error is generally within Rw +/- 3 dB

Job Name:

Job No.: Page No.: Notes:

Date: 12 Jul 18 Initials:

File Name: 2018-06-29 sloping roof.ixl



Rw	56 dB	
C	-3 dB	
C_{tr}	-10 dB	
D_{nTw}	58 dB	[V:50m3] [A:11m2]

System description

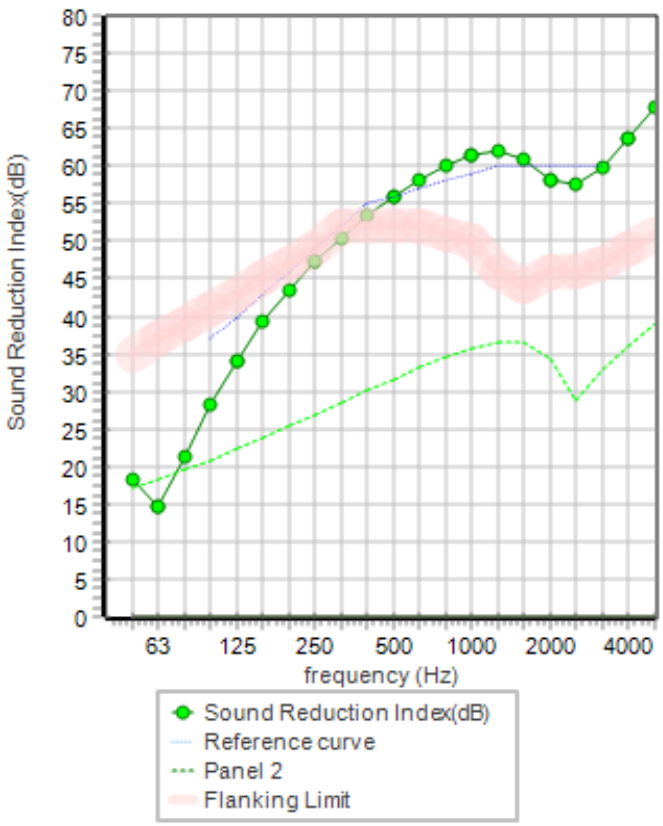
Panel 1 : 1 x 7.0 mm Roofing Slates (ρ:2910 kg/m3,E:68GPa,η:0.01, ρs:20.4 kg/m², fc:1915 Hz)

Cavity: Timber stud + resil. rail/bar: Stud spacing 600 mm , Infill Fibreglass (10kg/m3) Thickness 60 mm (ρ:10 kg/m3, Rf:4000 Pa.s/m2)
Panel 2 + 2 x 12.5 mm Gyproc SoundBloc 12.5mm (ρ:848 kg/m3,E:3.8GPa,η:0.01, ρs:10.6 kg/m², fc:2462 Hz)

Mass-air-mass resonant frequency =58 Hz

frequency (Hz)	R(dB)	R(dB)
50	18	
63	15	17
80	21	
100	28	
125	34	32
160	39	
200	44	
250	47	46
315	51	
400	53	
500	56	55
630	58	
800	60	
1000	61	61
1250	62	
1600	61	
2000	58	59
2500	58	
3150	60	
4000	64	63
5000	68	

Panel Size 2.7x4 m; Mass 42.2 kg/m²



QUIET, WARMTH & STYLE

GRANADA
secondary glazing

Product Guarantee

Here at Granada we aim to supply a product that – with regular maintenance – will give many years of trouble-free operation.

We have invested heavily into our machinery, premises and people, to ensure that the quality of the finished product is consistently delivered to the best of our ability.

Through these commitments to quality, we are confident in surpassing other window manufacturers with the comprehensive warranty that we offer on our products and installation.

The warranty period begins from the date of supply, and guarantees that the goods supplied will be free from inherent defects for a period of:

Five years for Aluminium frames and glazing
Two years for moving parts (including, but not limited to springs, locks, handles, rollers, hinges etc.)

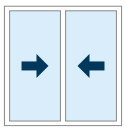
Product Index - Based on 4mm Glass

Key : (T) = Traditional range (H) = Heritage range

Glass Range : (T) = 4mm to 6.8mm (H) = 4mm to 8.8mm

Horizontal Sliding

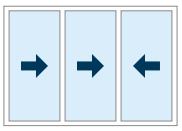
SS2 or HSS2



2 panel

	Max width	or	max height
(T)	2,400mm		1,800mm
(H)	3,200mm		2,700mm

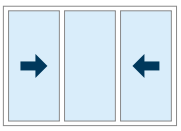
CO3 or HCO3



3 panel

	Max width	or	max height
(T)	3,600mm		1,800mm
(H)	4,900mm		2,700mm

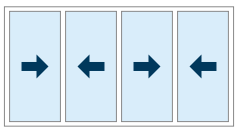
SS3 or HSS3



3 panel (fixed centre panel)

	Max width	or	max height
(T)	3,600mm		1,800mm
(H)	4,900mm		2,700mm

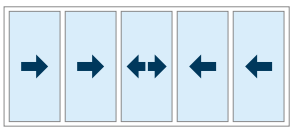
SS4 or HSS4



4 panel

	Max width	or	max height
(T)	4,900mm		1,800mm
(H)	4,900mm		2,700mm

SS5 or HSS5

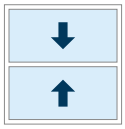


5 panel

	Max width	or	max height
(T)	4,900mm		1,800mm
(H)	4,900mm		2,700mm

Vertical Sliding

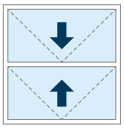
BVS or HBVS



Balanced vertical slider

	Max width	or	max height
(T)	1,500mm		3,000mm
(H)	1,500mm		3,000mm

TBVS or HTBVS



Tilt-in balanced vertical slider

	Max width	or	max height
(T)	1,500mm		3,000mm
(H)	1,500mm		3,000mm

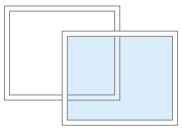
Insert Panel

INS

	Max width	or	max height
(T)	1,200mm		2,000mm

Lift Out

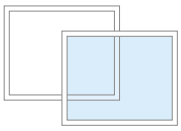
LO or HLO



Lift out unit

	Max width	or	max height
(T)	2,000mm		2,000mm
(H)	On Application		

SLLO

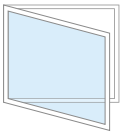


Slimline Lift out unit

	Max width	or	max height
(T)	2,000mm		2,000mm

Hinged Casement

HU



Traditional hinged casement

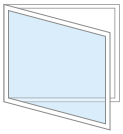
	Max width	or	max height
(T)	950mm		2,100mm

Optional extras:

- Curved head window
- Gothic head window
- Trickle vent
- Acoustic trickle vent
- Acoustic tile board
- Shaped corners
- Flyscreen

Hinged Casement - (Heritage hinged unit will house up to 28mm sealed unit)

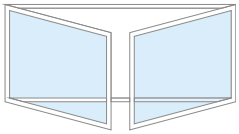
HHU or HHU-TT



Heritage hinged casement

	Max width	or	max height
(H)	1,400mm		2,400mm

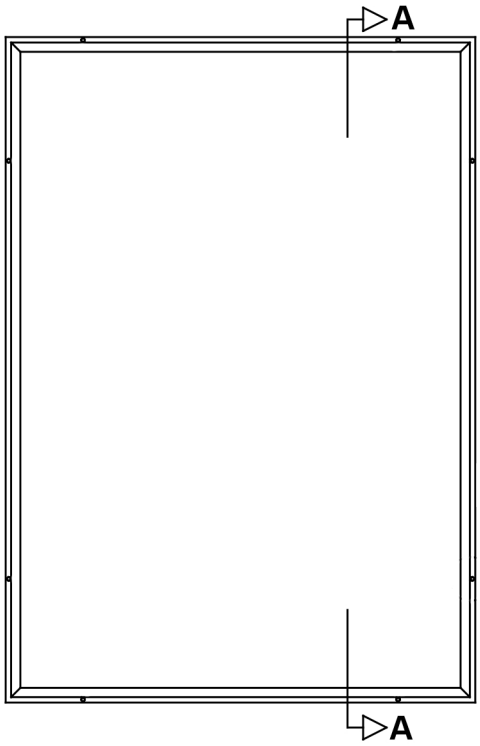
DHHU

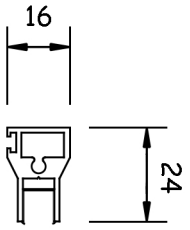


Double heritage hinged casement

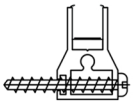
	Max width	or	max height
(H)	2,800mm		2,800mm

All windows are supplied fully assembled and ready to install. Units comprise of an aluminium outer frame joined to a seasoned hardwood timber surround.



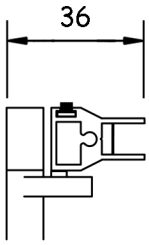


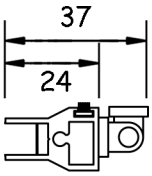
Section A-A



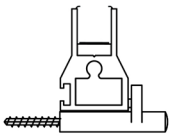
(Direct Face Fixed)

Optional Extra





(Hinged with Turnbuckle)



(Tunbuckle Fixing)

Standard Product Specification:

Aluminium 6063T6 alloy to BS EN 755 standard, powder coated to BS 6496 to 60 micron finish.

Stock finish: White - Interpon SA 098E high gloss.

Standard gasket colour is black.

In line with our company policy of continuous product development and improvement, Granada reserves the right to make minor alterations to specification without notice.

Optional Extras

- White gasket
- RAL colours
- Flyscreen

Type: Insert Pannel		
Reference: INS	Rev: 1	

GRANADA
secondary glazing

Campbell Way
Dinnington
Sheffield
S25 3QD

Tel: 01909 499 899
W: www.granadaglazing.com

UKAS ACCREDITATION INDEPENDENTLY ACCREDITED TEST INFORMATION

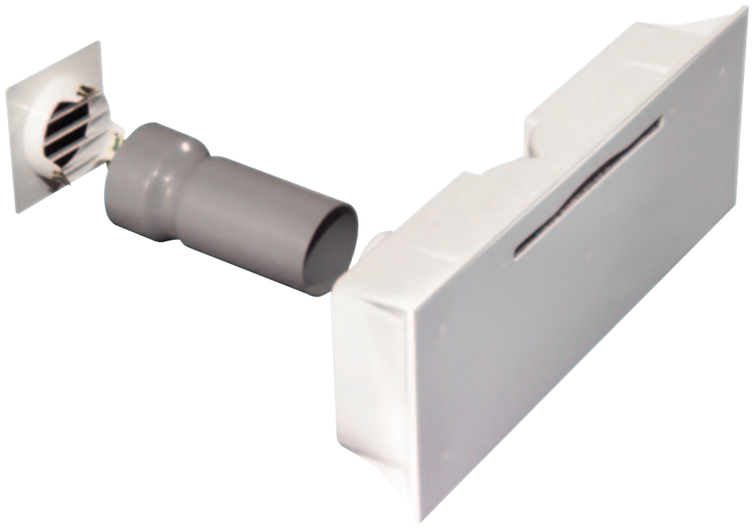
MA3051

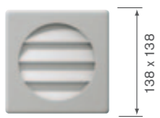
Acoustic wall ventilator

Physical specification

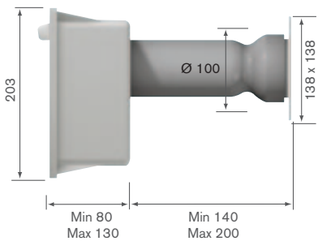
All measurements in millimetres

Weight: 2.65kg
Materials: PVC: Casing for wall vent, duct, external grille and internal ventilator. Acoustic lining and material inside wall vent

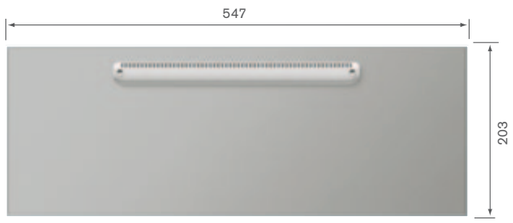




External grille



Side



Internal

Features and benefits

Highest performing acoustic background ventilator.

Provides acoustic attenuation to Dn,e,w 55dB(A).

2500mm² equivalent area performance.

Suitable for external wall thicknesses of 140mm and above.

Can be installed in internal wall constructions of between 100mm and 150mm.

Supplied with internal controllable vent and white/sand external grilles.

Conforms to acoustic requirements of Noise Insulation Regulations 1975, one of only a small number of products available in the UK.

Models and control options

Model	Operation
MA3051	Internal controllable trickle ventilator

Performance

Model	Acoustic performance Dn,e,w (dB)	Equivalent area mm²
MA3051	55	2500

Frequency	100	125	160	200	250	315	400	500
dB	45	48	47	44	46	49	49	49

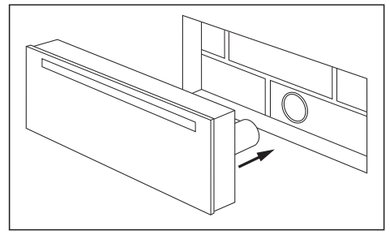
Frequency	630	800	1000	1250	1600	2000	2500	3150
dB	49	56	54	57	66	65	68	66

Installation

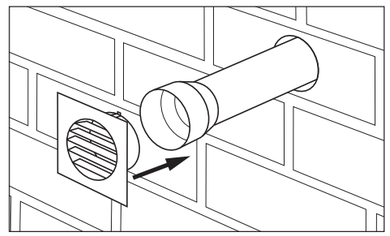
Instructions are provided with product including wall template for cut out.

Bonding compound is required to complete installation.

Protective strip to protect internal unit until decoration is complete within dwelling.



Push into cut out in wall



Push fit external grille