

Tim Farnworth
Halliday Meecham Architects Ltd
111 Piccadilly
Manchester
M1 2HY

July 31, 2023

Our Ref: CSGA-C2129-T1

FAO: Tim Farnworth

Emailed to: tf@hallidaymeecham.com, jamie.huen@warden.co.uk,
adrian.atkinson@warden.co.uk

Dear Tim,

Re: Sound Insulation Review of Replacement Cladding - 56 High Street

CSG Acoustics Ltd have been commissioned by Halliday Meecham Architects to provide a sound insulation review of changes to cladding at 56 High Street, Manchester.

Some existing cladding is to be replaced and this letter details a review of the changes in terms of sound insulation. This is to assess any change in sound insulation caused by the works to the façade and ensure the proposed changes do not reduce the sound insulation performance.

The original façade acoustic performance requirement and the external noise levels are unknown and therefore no absolute noise break-in levels have been assessed. This assessment reviews the likely difference in acoustic performance due to the change and provides a specification for materials, where necessary.

Yours Sincerely,



Andy Ryan BSc(Hons) MIOA
Associate Consultant
andy@csgacoustics.co.uk

London Office

83 Victoria Street, London, SW1H 0HW
T: 0207 084 6346

Manchester Office

Design House, 23 Copperas Street, Manchester, M4 1HS
T: 0161 300 9691

1 Façade Sound Insulation Review

The appended drawings from Halliday Meecham show the proposed changes to the façade cladding. INSUL Sound insulation software has been used to assess the existing and proposed constructions to allow direct comparison.

The following table details our sound insulation assessment of each type. The assessment includes a low frequency correction (C_{tr}) to account for the possibility of low frequency traffic noise.

The façade consists of facing brickwork, spandrel panels, stone and aluminum cladding. The majority of the development will have the brickwork, stonework and cladding carefully removed to install cavity barriers and then the facing elements will be reinstalled. Therefore, no degradation of sound insulation is expected for these areas of the façade, as no fundamental changes are being made to the construction.

Cladding at Penthouse level/roof level is being replaced. The existing Insulated aluminum sandwich panel is being removed and replaced with a new insulated aluminum cladding, sheathing board and mineral wool insulation. As shown in drawing '5540-HMA-HS-ZZ-DR-A-21101_P1 External Wall Treatment - Cladding at Rood Level' appended to this letter. All existing windows will be refitted and resealed.

Table 1.1: Sound Insulation Assessment

Façade Type	Cladding Details		Sound Insulation Prediction
Penthouse/ Roof level Cladding Existing Insulated sandwich panel	Existing	75mm Insulated Aluminium sandwich panel 150mm SFS Section 'c' channel (~50mm) - Stud spacing ~500mm 2 x 12.5mm Plasterboard	R_w 51 dB C_{tr} -3 dB $R_w + C_{tr} =$ 48dB
Penthouse/ Roof level Cladding New cladding system	Proposed	- New 75mm Insulated aluminium cladding system with recessed joints 15mm Sheathing board (RCM) 150mm mineral wool slab - Existing 'c' channel 2 new 12.5mm plasterboard layers as per original specification - Existing windows refitted and sealed - New cavity barrier installed (Rockwool)	R_w 53 dB C_{tr} -2 dB $R_w + C_{tr} =$ 51 dB

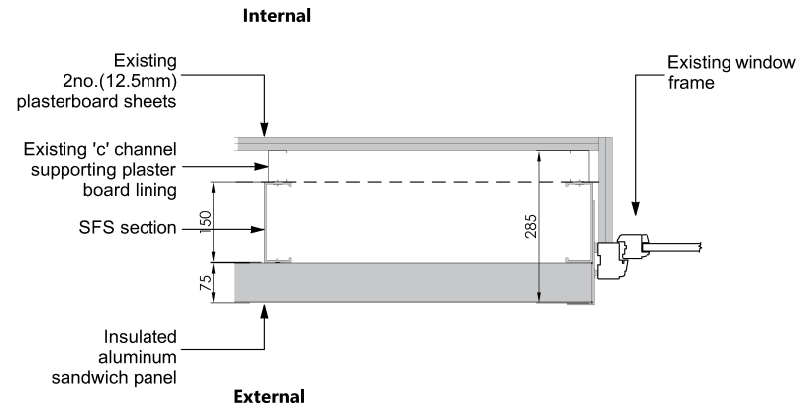
As seen in the table above, the calculated sound insulation performance of the elements of the façade which are to be changed show a slight improvement in performance.

This therefore demonstrates that provided the reinstalled windows are suitable sealed and all elements are suitably installed, the overall façade sound insulation will not show any degradation in terms of sound insulation performance.

Please note:

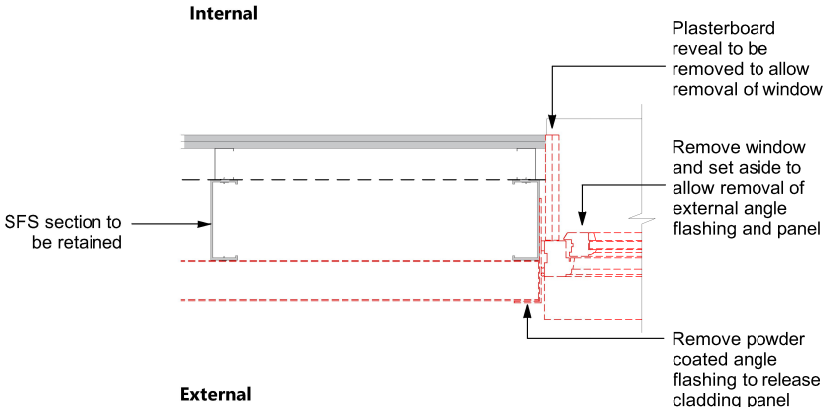
The contents of this drawing are based on (survey/ existing) information taken on site. Halliday Meecham Architects can accept no responsibility for the accuracy of this information and/or works based upon it. The contractor must check the accuracy of these drawings prior to installation on site and notify Halliday Meecham Architects of any discrepancies.

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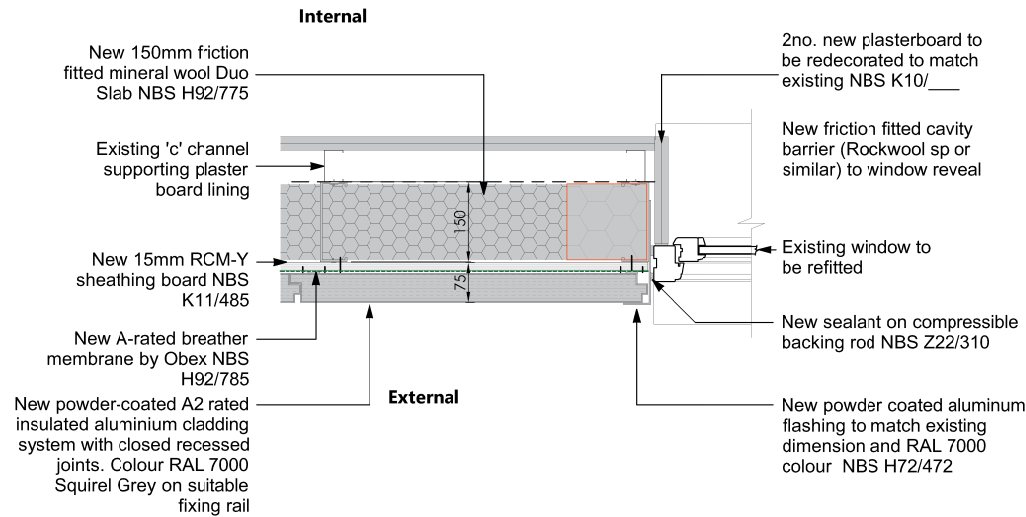
Existing wall build up - cladding at penthouse level

1 : 5 @ A3



Strip out cladding at penthouse level

1 : 5 @ A3



Proposed cladding at penthouse level

1 : 5 @ A3

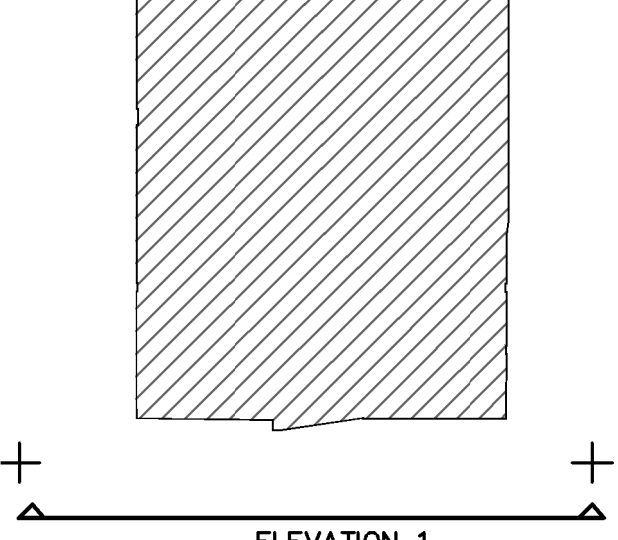
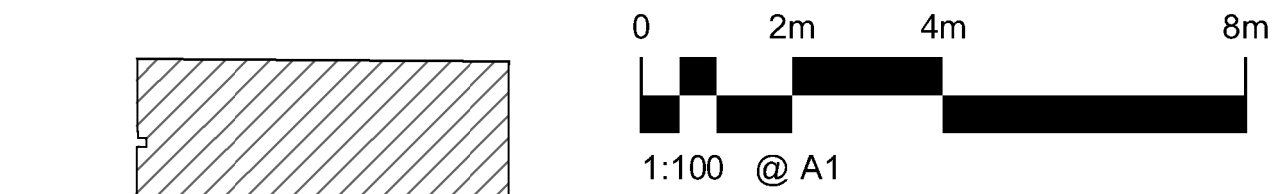


Existing penthouse window

P1	First Issue. For Comment/Approval.	26.04.23	-	-	-
PRELIMINARY					
Revision	Description	Date	Drawn	Checked	
Halliday Meecham Architects Limited					
111 Piccadilly Manchester M1 2HY					
+44 (0)161 661 3566					
4 Devonshire Street London W1W 5DT					
+44 (0)203 440 3175					
hma@hallidaymeecham.com					
www.hallidaymeecham.com					
Client: Wardens					
Project: 56 High Street Re-cadding Project					
Phase: 56 High St, Manchester M4 1ED					
Drawing: External Wall Treatment - Cladding at Roof Level					
Scale @ A1	Scale @ A3	Date	Drawn	Checked	Job No.
1:5	1:10	26.04.23	CB	TF	5540
Drawing No.					21101
Drawing Ref.					5540-HMA-HS-ZZ-DR-A-21101
					Revision P1



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ELEVATION 1

Proposed key

- Brickwork facade**
Facing brickwork Yorkshire Red - Brickwork to be carefully removed (and retained) locally at floor level and vertically to allow for installation of Rockwool SP60 cavity barriers. Retained brickwork to be reinstated once works have been completed.
- Spandrel panel - NBS H43/120**
New powder-coated aluminium spandrel panels glazed into existing curtain wall frame - colour and finish to match existing. Re-instate existing PPC aluminium vent grilles as necessary. Install Rockwool SP60 cavity barriers at floor level only.
- Aluminium cladding - NBS H72 & H92**
New powder-coated A2 rated insulated aluminium cladding system with closed recessed joints. Colour and finish to match existing.
- Stone Facade**
Existing Ashlar faced reconstituted stone facade in standard coursing. Stonework to be carefully removed (and retained) locally at floor level and vertically, to allow for installation of cavity barriers. Retained stonework to be reinstated once works have been completed.
- Windows**
Remove window internally to allow installation of new 0.5mm galv. steel plate at joint/reveal. Reinstall window, brickwork/stonework, backing strip and sealant. Lift cill and fit plate as above.
- Vertical compartment walls**
Vertical cavity barriers to be installed along compartment lines.
- Horizontal cavity barriers**
Install 60 minute fire cavity barriers at floor level.
- Steel Column**
Notional location of steel. Steel to be intumescently treated 200mm to each side of C/B line.
- Roof Facia Trim**
Remove facia trim panel and set aside to allow replacement of adjacent cladding. Reinstall existing trim once remedial works complete.
- Louvered Vent Terminations NBS F30/171**
Carefully remove and retain brickwork locally to allow for the installation of a new steel liner to vent opening. Reinstall existing brickwork and replace louvered vent with new PPC aluminium unit - Colour to match existing.
- Balcony**
Remove balcony wooden decking and masonry brickwork or stonework around fixing points at each floor to allow installation of new 0.5mm galv. steel plate at joint/junction. Close cavity and reinstall balcony with new grate decking.

Revision	Description	Date	Drawn	Checked
Halliday Meecham Architects Limited				
111 Piccadilly Manchester M1 2HY +44 (0)161 661 5566				
4 Devonshire Street London W1W 5DT +44 (0)203 440 5175				
hma@hallidaymeecham.com www.hallidaymeecham.com				
Client: Wardens				
Project: 56 High Street Re-cladding Project				
Phase/Location: 56 High St, Manchester M4 1ED				
Drawing: High Street Elevation				
Scale @ A1	Scale @ A3	Date	Drawn	Checked
1:50	1:100	26.04.23	CB	TF
Job No. 5540				Drawing No. 00210
Drawing Ref. 5540-HMA-HS-ZZ-DR-A-00210				Revision P2

Proposed Elevation (1) - High Street

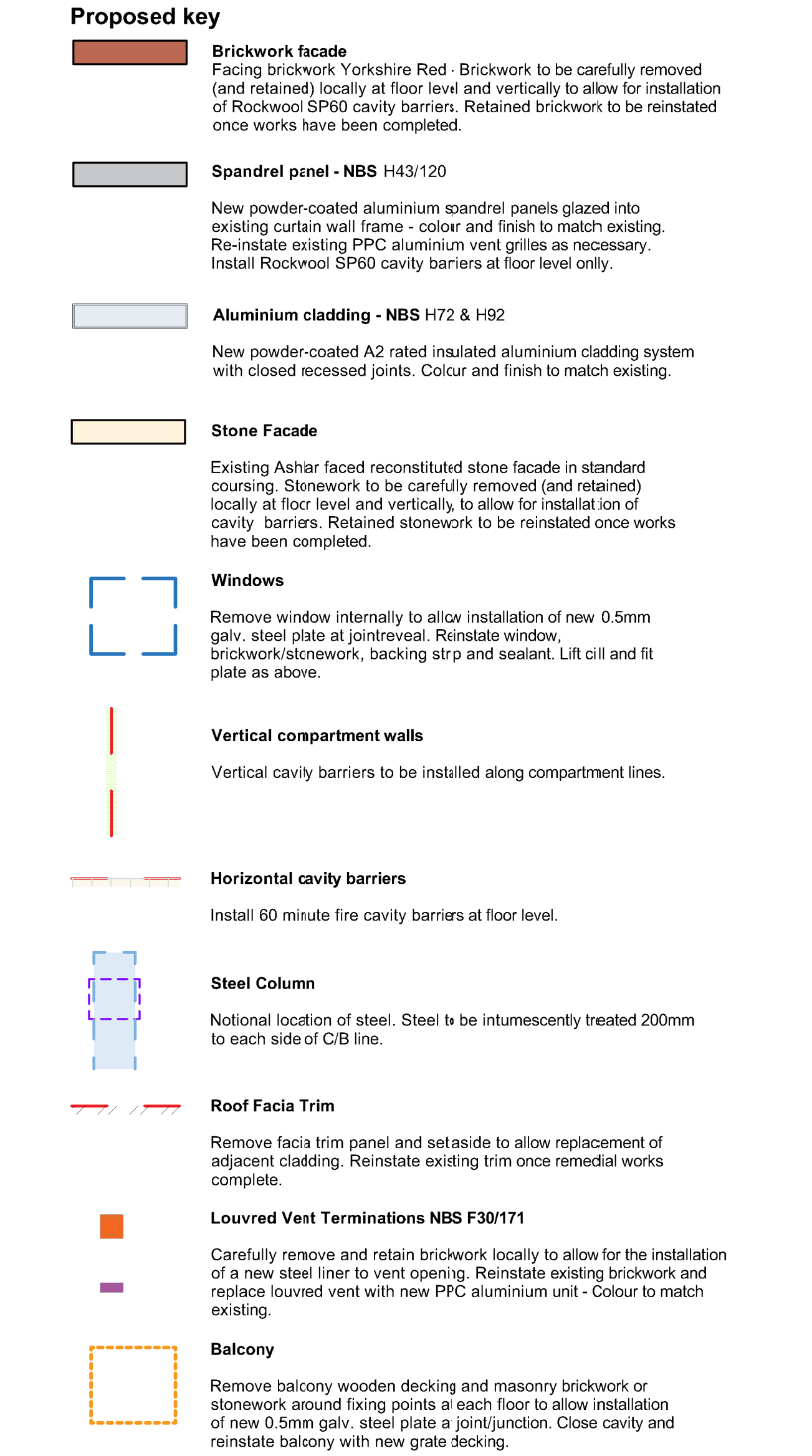
1 : 100 @ A1

P2	Annotations updated and revised on drawing.	12.05.23	CB	TF
P1	First Issue. For Comment/Approval.	26.04.23	-	-
PRELIMINARY				

ELEVATION 2

0 2m 4m 8m

1:100 @ A1



Revision	Description	Date	Drawn	Checked		
Halliday Meecham Architects Limited						
111 Piccadilly Manchester M1 2HY +44 (0)161 661 5566						
4 Devonshire Street London W1W 5DT +44 (0)203 440 5175						
hma@hallidaymeecham.com www.hallidaymeecham.com						
Client: Wardens						
Project: 56 High Street Re-cladding Project						
Phase/ Location: 56 High St, Manchester M4 1ED						
Drawing: Edge Hill Street Elevation						
Scale @ A1	Scale @ A3	Date:	Drawn:	Checked:	Job No.	Drawing No.
1:50	1:100	26.04.23	CB	TF	5540	00211
Drawing Ref.						Revision
5540-HMA-HS-ZZ-DR-A-00211						P2

1 : 100 @ A1