

The Grand Management Company
The Grand
1 Aytoun Street
Manchester
M1 3DB

July 10, 2024

Our Ref: CSGA-C2182-T1Rev01

FAO: Galley Wu

Emailed to: gwu@hallidaymeecham.com

Dear Galley,

Re: Planning Sound Insulation Review of Façade – The Grand

CSG Acoustics Ltd have been commissioned by The Grand Management Company to provide a sound insulation review of changes to the façade at The Grand, Aytoun Street, Manchester. The Local Authority require sound insulation review of the façade changes to be submitted as part of the Planning submission.

The proposed works are to re-clad the façade and this review therefore assesses the sound insulation of the existing and proposed constructions to allow direct comparison and demonstrate how the sound insulation of the façade is affected by the works. The purpose of this review is to ensure the proposed changes do not reduce the sound insulation performance of the façade.

The original façade acoustic performance requirement and the external noise levels are unknown and therefore absolute noise break-in levels have not been assessed. This assessment reviews the likely difference in acoustic performance due to the changes 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

INSUL Sound insulation software has been used to assess the existing and proposed constructions to allow a direct comparison.

The existing and proposed façade elements have been provided for assessment by Halliday Meecham Architects.

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

Table 1.1: Sound Insulation Assessment

Façade Element		Details	Sound Insulation Prediction
Wall type 1A	Existing	2.5mm Render Coat 40mm EPS Insulating Core 10mm Cement board 100mm Insulation – approx. 200m cavity 12.5mm Plasterboard	R_w 48 dB C_{tr} -6 dB $R_w + C_{tr} = 42\text{dB}$
	Proposed	- Render Finish 80mm Sto Mineral Fibre Board 12.5mm Siniat Sheathing Board 200mm Insulation 200mm cavity 12.5mm Plasterboard	R_w 55dB C_{tr} -6 dB $R_w + C_{tr} = 49\text{ dB}$
Wall Type 1B (Blockwork)	Existing	2.5mm Render Coat 40mm EPS Insulating Core 10mm Cement board 60mm Metal Stud/Cavity 100mm Blockwork (~1500kg/m³)	R_w 48 dB C_{tr} -3 $R_w + C_{tr} = 45\text{ dB}$
	Proposed	- Render Finish 80mm Sto Mineral Fibre Board 12.5mm Siniat Sheathing Board 60mm Metal Stud/Cavity 100mm Blockwork (~1500kg/m³)	R_w 48 dB C_{tr} -3 $R_w + C_{tr} = 45\text{ dB}$
Wall Type 2	Existing	- Timber Skirting Board – Approx 20mm 10mm Cement Board 100mm Insulation – approx. 200m cavity 12.5mm Plasterboard	R_w 50dB C_{tr} -6 dB $R_w + C_{tr} = 44\text{ dB}$
	Proposed	9mm Rockpanel 2 x 12.5mm cement board 200mm Insulation 12.5mm Plasterboard	R_w 54dB C_{tr} -6 dB $R_w + C_{tr} = 48\text{ dB}$

Façade Element		Details	Sound Insulation Prediction
Wall Type 4	Existing	1mm Zinc Cladding 21mm Plywood Board 75mm Cavity 10mm Cement board - Metal stud 10mm Cement board - Metal Stud 12.5mm Plasterboard	Rw 50 dB C _{tr} -10 R_w + C_{tr} = 40 dB
	Proposed	- New seam Zinc Cladding 32mm Metal deck 75mm Cavity 10mm Cement board - Metal stud 10mm Cement board - Metal Stud 12.5mm Plasterboard	Rw 66 dB C _{tr} -10 R_w + C_{tr} = 56 dB
Wall Type 5	Existing	1mm Zinc Cladding 21mm Plywood Board 45mm Cavity - SFS with 200mm Insulation 12.5mm Plasterboard	Rw 48 dB C _{tr} -5 R_w + C_{tr} = 43 dB
	Proposed	- New seam Zinc Cladding 32mm Metal deck 40mm Cavity 12.5mm Siniat Sheathing board - SFS with 200mm insulation 12.5mm Plasterboard	Rw 61 dB C _{tr} -8 R_w + C_{tr} = 53 dB

As seen in the table above, the calculated sound insulation performance of all the elements of the façade, which are to be changed, either show no change or an improvement compared to the existing.

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