

MPF/PR0569/L04

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Brian Coleridge
Russell WBHO
Alliance House
Westpoint Enterprise Park
Clarence Avenue
Trafford Park
MANCHESTER
M17 1QS

Flint Glass Works
64 Jersey Street
Manchester M4 6JW

0161 605 0905 📞
info@fisheracoustics.co.uk 📧
www.fisheracoustics.co.uk 🌐

Dear Brian

MOTEL ONE & STAYCITY, 3 ST PETER'S SQUARE, MANCHESTER – PLANNING CONDITION 12

We write in relation to condition 12 of the planning approval for 3 St Peters Square.

INTRODUCTION

Fisher Acoustics Ltd has been commissioned by Russell WBHO to determine the allowable noise levels within the front of house areas of Motel One and Staycity maximum to ensure compliance with the requirements of planning condition 12 of the planning approval for the development.

Motel One is to occupy Levels 0 to 8 of 3 St Peters Square. Staycity is occupy Levels 9 to 20 of 3 St Peters Square.

PLANNING CONDITION

Planning condition 12 of the planning approval for 3 St Peters Square, planning reference: 116189/FO/2017 - 3 St Peters Square (formerly Peterloo House), Manchester, states:

12) The premises shall be acoustically insulated and treated to limit the break out of noise in accordance with a noise study of the premises and a scheme of acoustic treatment that has been submitted to and approved in writing by the City Council as local planning authority. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

Where entertainment noise is proposed the LAeq (entertainment noise) shall be controlled to 10dB below the LA90 (without entertainment noise) in each octave band at the facade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63HZ and 125Hz octave frequency bands shall be controlled so as not to exceed (in habitable rooms) 47dB and 41dB, respectively.

Reason - To safeguard the amenities of the occupiers of the building and occupiers of nearby properties, pursuant to policy DM1 of the Core Strategy

ENVIRONMENTAL NOISE CRITERIA

Planning condition 12 requires that noise egress from the development is controlled to appropriate levels so as to avoid noise nuisance to existing sensitive receptors. In particular, the 'LAeq' noise level external to the nearest noise-sensitive properties due to music noise egress from the development must be at least 10dB lower than the 'LA90' background noise level external to those properties in each octave band.

The environmental noise study that was conducted as part of the planning submission for 3 St Peters Square included a background noise survey at the site. The noise survey has allowed the establishment of the maximum allowable noise levels at noise sensitive receptors around the development due to operational activity noise at the development. The environmental noise study of the development issued as part of the planning submission for the development identified the results of the noise survey (report reference PR0569-REP01C-MPF).

The closest noise sensitive properties to 3 St Peters Square are the apartments within Tuscany House on George Street. Achievement of the applicable noise limits at these apartments would ensure that compliance with the noise limits at more distant noise-sensitive properties such as Princess Street Hotel is also achieved.

Table 1 identifies the recommended maximum allowable Leq noise levels external to Tuscany House due to cumulative music noise breakout from 3 St Peters Square.

Period	Sound Pressure Level (dB Leq) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
07:00 to 23:00	55	51	50	48	48	43	33
23:00 to 07:00	51	51	48	46	43	39	32

Table 1: Maximum allowable external noise levels at Tuscany House due to music noise egress from 3 St Peters Square

NOISE EGRESS CALCULATIONS

The only areas of the development that may give rise to non-domestic levels of noise egress are the front of house areas of Motel One and of Staycity. An assessment of potential noise egress from the ground floor reception lounge and bar of Motel One and the Lounge of Staycity on the 9th floor of the building has therefore been carried out.

Figure 1 shows the location of Motel One's reception lounge and bar.

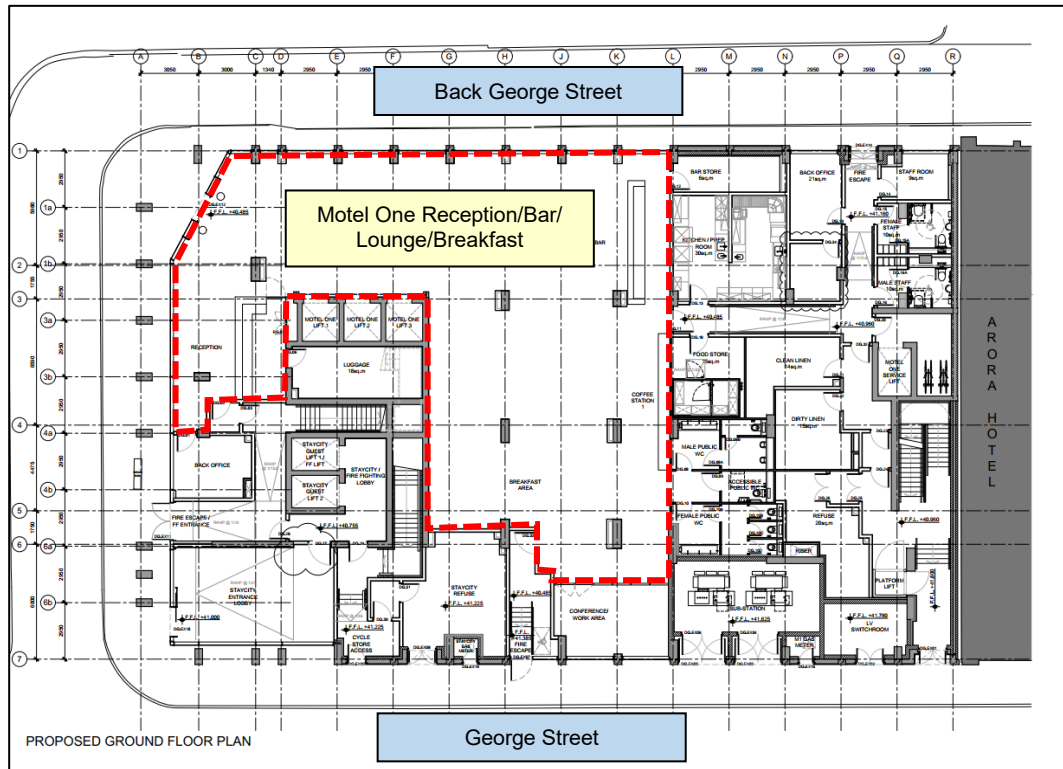


Figure 1: Motel One reception lounge and bar

Figure 2 shows the location of Staycity's lounge at level 9 of the building.

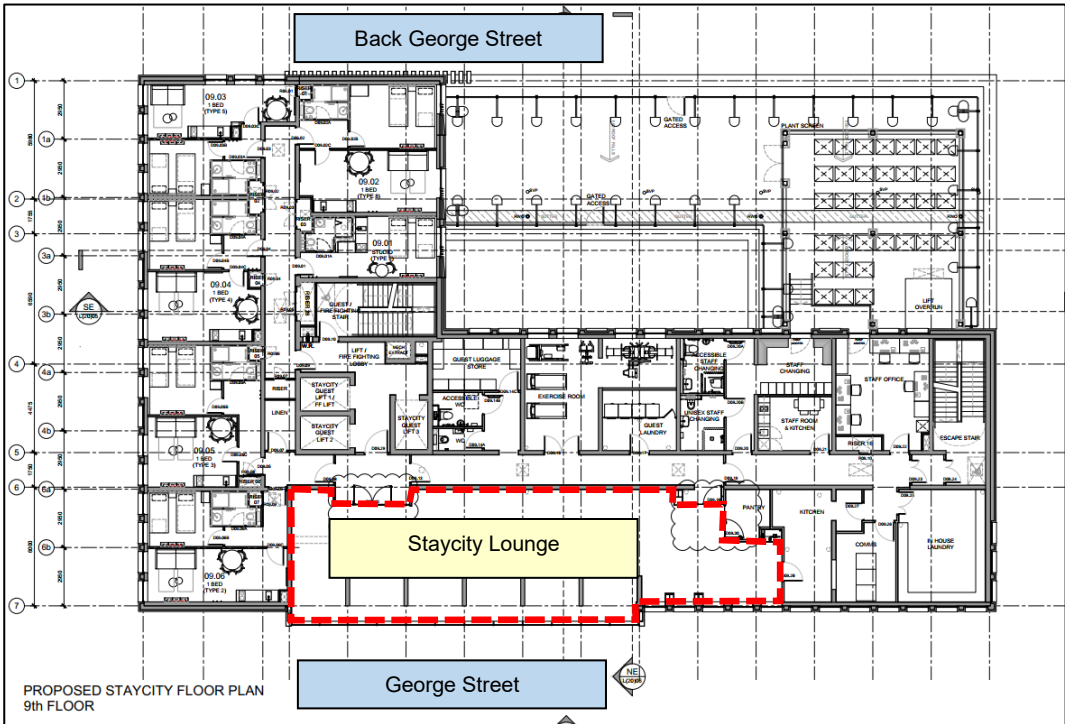


Figure 2: Staycity lounge

Noise egress calculations have been carried out to determine the expected noise level at the closest residential properties due to noise egress from the front of house areas of 3 St Peters Square. Calculations of noise egress from a building requires the following information:

1. Dimensions of radiating surfaces (e.g. external wall)
2. Distance of radiating surfaces to sensitive receptor
3. Sound reduction index of radiating surfaces
4. Orientation of radiating surface to sensitive receptor

The principal noise radiating surface of the Motel One front of house area is the glazed curtain wall. There is an entrance door within the curtain wall and therefore the principal determinant of the sound insulation performance of the external envelope will be the installed glazing and the access door.

As no door lobby is to be installed to the Motel One front of house area, there could be intermittent increases of external noise during the movement of patrons in and out of the building. Therefore, the assessment has included a worst-case scenario of open doors to the Motel One front of house area.

The external façade to the Staycity front of house area includes only sealed glazing units within a curtain wall.

The glazing specification to the front of house areas, installed as part of the main construction contract for 3 St Peters Square, is as follows:

- 10.8 mm laminate / 16 mm cavity/ 10mm float glass

The expected minimum weighted sound reduction index of the above glazing specification and the Motel One entrance doors when closed are given in Table 2:

Building element	Sound Reduction Index (dB) @ Octave Band Centre Frequency (Hz)						
	63 Hz	125 Hz	250 Hz	500 Hz	1kHz	2kHz	4kHz
Curtain wall: 10.8 mm laminate / 16 mm cavity/ 10 mm float glass	26	27	31	35	37	37	42
Entrance Doors (closed)	18	20	22	23	23	23	25

Table 2: Expected sound reduction index of curtain wall elements

Calculations have been carried out to determine the allowable contribution of the front of house areas at 3 St Peters Square to the external noise level at the closest residential receptors to ensure that the external noise limits identified in Table 1 are not exceeded.

Table 3 identifies the calculated noise levels that could be generated within the Motel One and Staycity front of house areas with the entrance doors to Motel One fully open, without exceeding the daytime and night time external noise limits given in Table 1.

Location	Sound Pressure Level (dB Leq) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Motel One front of house Daytime (0700 hrs to 2300 hrs)	86	82	81	79	79	74	64
Motel One front of house Night time (2300 hrs to 0700 hrs)	82	82	80	77	74	71	63
Staycity front of house Daytime (0700 hrs to 2300 hrs)	80	77	81	83	84	80	83
Staycity front of house Night time (2300 hrs to 0700 hrs)	76	77	79	81	80	76	82

Table 3: Maximum allowable internal activity noise levels – daytime and night time, doors open

The noise levels detailed in Table 3 would allow music replay to be accommodated within the areas in question.

CONCLUSION

The maximum allowable noise levels in the front of house areas of Motel One and Staycity at 3 St Peters Square, Manchester have been calculated such that the identified external noise limits at the closest residential receptors are not exceeded.

The calculated allowable noise levels within the front of house areas are fully commensurate with music replay within the areas in question.

Compliance with the requirements of condition 12 of the planning approval is therefore fully expected.

If there are any aspects that you would like to discuss, please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matt Fisher', is written over a light blue rectangular background.

MATT FISHER BEng(Hons) CEng MIOA
For and on behalf of Fisher Acoustics Limited