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12 May 2023

Ref: 23102.230512.L1

Sue Wheatcroft
Architectural Technologist
Norder

Dear Sue,

23102: HEINEKEN MANCHESTER – BOILER HOUSE FAÇADE REPLACEMENT

Introduction

KP Acoustics has been commissioned to assess and advise on a scheme of acoustic treatment to limit the breakout of noise, relating to the replacement of a façade of the boiler house at Heineken, Denmark Road, Manchester, M15 6LD. This follows a planning permission with conditions, with reference 135912/FO/2023.

Condition 4a of the planning condition states:

"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 together with a timescale for its implementation and submission of a verification report."

Previous Noise Study

A full study of the noise environment was carried out and detailed in KP Acoustics report with reference 23102.PCR.01, dated 23/12/2021. This study included a noise survey with noise measurements of the surrounding area, taken between 18:46 on 27/09/2021 and 14:41 on 28/09/2021. Detailed measurements of many noise sources at the Heineken site were also taken during this time, and a computer model of the noise contribution of the site to the wider environment was created as part of the study.

In this study the noise impact of the site was found to be acceptable, with mitigation measures recommended to bring down the noise levels of some elements which had been complained about or were otherwise found to need noise mitigation. The boiler house was not found to require specific mitigation.

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Assessment of New Façade

A new façade has been proposed for the boiler house, and to ensure that the noise contribution of the boiler house to the environment does not increase, the proposal is assessed below. The existing south elevation is shown in Figure 1.1, and the proposed south elevation is shown in Figure 1.2. There are also lesser changes to the west elevation.

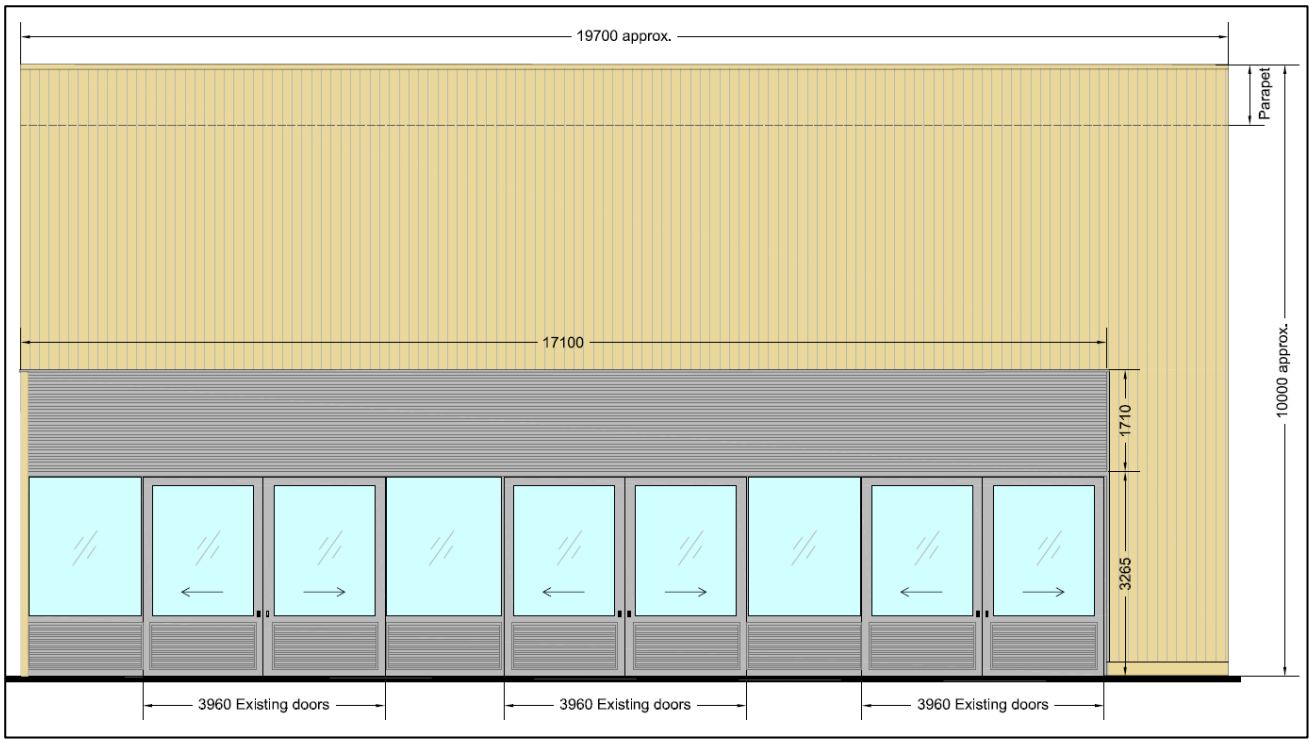

Figure 1.1 Existing south elevation

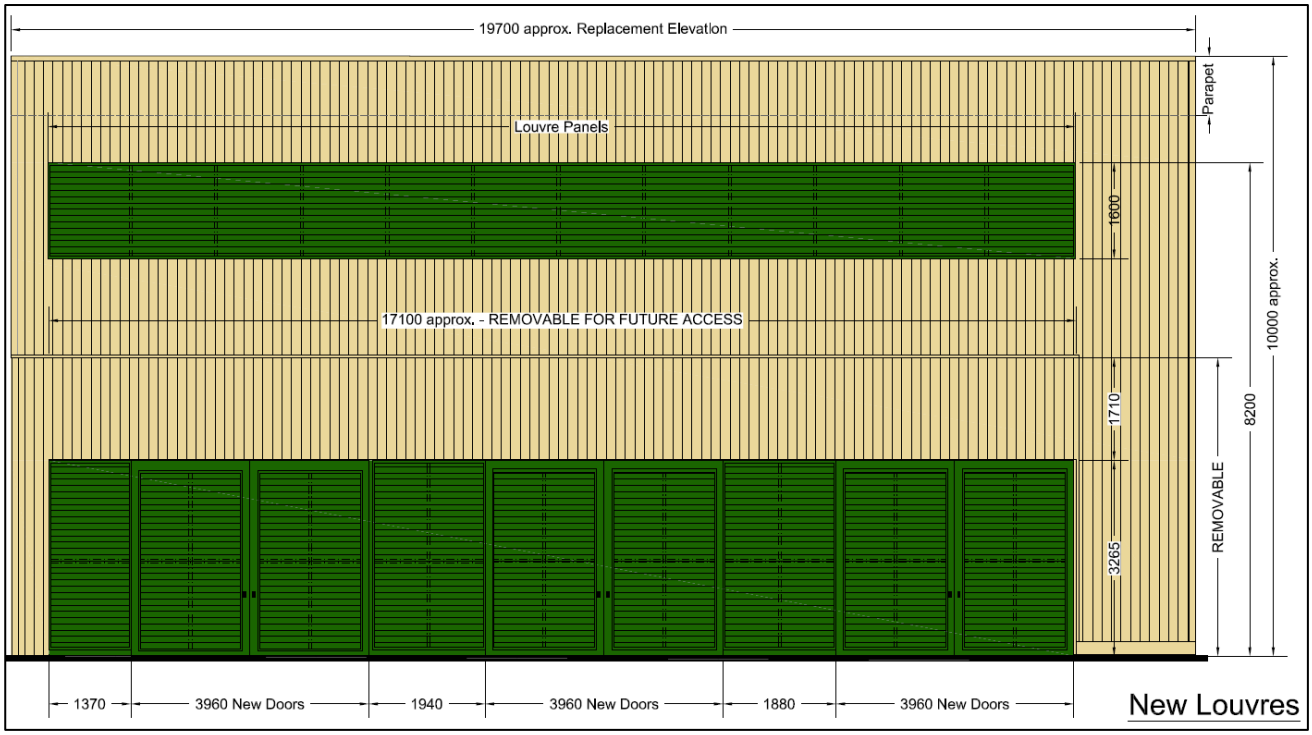

Figure 1.2 Proposed south elevation

The manufacturer-provided insertion loss levels for the proposed louvres highlighted in green in Figure 1.2 are shown in Table 1.1 below. Assumed insertion losses for the existing, non-acoustic, steel louvres highlighted in grey in Figure 1.1 are also shown below in Table 1.1.

Unit	Insertion Loss Levels (dB) in each Octave Frequency Band							
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Existing standard, steel louvres	2	2	3	4	5	6	6	6
Proposed louvres (Gilbert Type ALSH/30 – 300mm)	7	7	10	15	28	30	26	21

Table 1.1 Insertion loss figures to be provided by louvre

Composite Sound Reduction Index (SRI) was calculated for both the existing and proposed facades, taking into account all building elements, and is reported in Table 1.2 below.

Facade	Insertion Loss Levels (dB) in each Octave Frequency Band							
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Existing	7	8	9	10	11	12	12	6
Proposed	9	9	13	18	31	33	29	24

Table 1.2 Predicted, composite insertion loss figures for façade of boiler house

Conclusion

The calculation results shown above show that, following the installation of the proposed new façade/louvres, the sound insulation of the boiler house façade will be significantly improved. Therefore, the boiler house is predicted to contribute less to the noise environment after the works and will not increase noise levels at the nearest noise sensitive receivers.

We trust that the above information is sufficient with regards to answering the key issues raised.

Yours sincerely,

John Cane MSc MIOA

KP Acoustics Ltd