

Client: Blacksheep Design Collective
Project: The Hanover Building, Corporation Street, Manchester
ACA Ref: 230908-R002A
Report date: May 12, 2024
Author: Tommy Burn BSc (Hons) MIOA

The Hanover Building, Corporation Street, Manchester

1. SUMMARY

ACA Acoustics Limited has undertaken acoustic commissioning testing following the installation of mechanical plant at The Hanover Building, Corporation Street, Manchester.

The scheme has been installed in accordance with the requirements of Manchester City Council's criteria, requiring that the rating level of the proposed equipment does not exceed a sound level 5dB below the measured background sound level at the nearest noise-sensitive properties, when assessed in accordance with British Standard BS 4142:2014+A1:2019.

A background sound level survey has previously been carried out during the late night of the 19th September 2023. ACA Acoustics measured a representative night-time background sound level of LA90 50dB overnight (between 21:00 – 00:00 hours), and LA90 56dB during the latest office hours of commercial units nearby, as reported in ACA Acoustics' acoustic design report for the development.

Measured rating level from the installed equipment is significantly below the measured background sound level and achieves the requirements of Manchester City Council and as such Condition 7b of the decision notice for the development may be discharged.

2. ACOUSTIC CRITERIA

Condition 7b of the decision notice as issued by Manchester City Council states:

"Prior to the operation of the scheme a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria. The approved scheme shall remain operational thereafter."

3. ACOUSTIC COMMISSIONING TESTING OF THE INSTALLED EQUIPMENT

Following the installation of the mechanical plant and associated noise mitigation treatments as recommended within ACA Acoustics design report, ACA Acoustics have undertaken measurements of the plant at the nearest noise-affected windows during the late evening of the 1st May 2024. Measurements were taken at a position close to the nearest windows of The New Vic residential apartment block. Additional measurements have been taken between 17:00 – 20:00 hours on the 9th May to assess noise to the nearby offices at the Dantzig building and The Old Bank..

Summary results of the survey are shown in the table below.

Measurement location	Description	Measured sound level
The Old Vic	Mechanical plant on	LAeq 57dB LA90 49dB
	Mechanical plant off	LAeq 57dB LA90 49dB
The Dantzig building	Mechanical plant on	LAeq 62dB LA90 57dB
	Mechanical plant off	LAeq 62dB LA90 56dB
The Old Bank	Mechanical plant on	LAeq 63dB LA90 57dB
	Mechanical plant off	LAeq 65dB* LA90 57dB

Figure 1: Measured sound levels of installed mechanical plant

*Slightly raised from the plant off levels due to minor fluctuations in the acoustic climate

Measured sound levels in the area during both the daytime and into the late-night period consist of road traffic activity, along with noise from trams and train activity associated with the nearby railway station. At night sound levels from the installed mechanical plant was subjectively inaudible at the most sensitive residential receptors over other noise sources in the vicinity.

The acoustic climate is very busy and dominated by cars, trams, pedestrians, and train activity, all of which cause fluctuations in the measured LAeq sound levels and typically have a low impact on the measured LA90 sound levels. The installed mechanical plant is primarily to fans, and these produce consistent noise which would affect the measured LA90. Apart from the Dantzig Building, there is no change to the measured LAeq or LA90 indices with the plant either powered on or off. This suggests that the specific sound level of the installed equipment is at least 10dBA below the measured LA90 level. To the Dantzig Building the LA90 changes by only 1dB, and as such the specific sound level remains significantly below the background sound level.

For the daytime assessment to nearby offices, the mechanical plant specific level at the Dantzic building is LAeq 50dB. To the Old Bank the specific sound level is less than 37dB. Both these sound levels are significantly below the measured background sound level of LA90 56dB

For the night-time assessment, the mechanical plant will be less than 39dBA and is significantly below the measured background sound level of LA90 50dB. In accordance with the requirements of BS 4142:2014+A1:20-19, no rating correction is applicable where no acoustic characteristics are audible.

As such the installed equipment meets the requirements of Manchester City Council, and Condition 7b may be discharged.