

ACOUSTIC DESIGN TECHNOLOGY
Noise and Vibration Consultants

ADT 3139

30 November 2022

Dex Construction Group Ltd
Second Floor
Northern Assurance Building
9-21 Princess Street
MANCHESTER
M2 4DN

ADDINGTON STREET, MANCHESTER
POST COMPLETION TESTING (CONDITION 12)
ACOUSTIC CONSULTANCY REPORT ADT 3139/PCT2

Revision	Date	Issued By	Revision Notes
-	30 November 2022	Chris Middleton	first issue

1.0 SUMMARY

Post completion testing has been undertaken to demonstrate compliance with condition 12 of planning permission 124888/FO/2019, which reads as follows:

12) Notwithstanding the noise and vibration report stamped as received by the City Council, as Local Planning Authority, on the 19 September 2019, (a) Prior to the first occupation of the development hereby approved, details of any externally mounted ancillary plant, equipment and servicing shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt, externally mounted plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5 db (L_{aeq}) below the typical background (L_{a90}) level at the nearest noise sensitive location.

(b) Prior to the first occupation of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ. Reason - To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

There is no externally mounted plant per se, although there are louvres on the north elevation of the building, venting the substations and the plant room.

A post construction survey has been undertaken as required by part b) of the condition, and the BS 4142 rating level determined at the nearest noise sensitive properties is 20 dB below the otherwise prevailing background sound level.

The requirements of planning condition 12 have therefore been fulfilled.

2.0 POST COMPLETION TESTING

2.1 Acoustic Design Criteria

The requirement is to control noise from external plant to a BS 4142 rating level 5 dB below the otherwise prevailing background sound level at the nearest noise sensitive property.

2.2 Methodology

The building is entirely residential, and there is no externally mounted plant per se, although there are ground floor plant rooms for the substations and booster pump room, served by louvres on the north elevation of the building. None of these items of plant have particularly high noise emissions.

Measurements were taken at 1 metre from these louvres over a series of 30 second periods during the evening of 24 November 2022, and extrapolated to the nearest noise sensitive property with a clear line of sight, the new apartment building at the corner of Marshall Street / Chadderton Street, approximately 30 metres away from the plant room louvres. This is illustrated on the attached site plan ADT 3139/SP1.

The instrumentation used and the calibration details before and after the survey are provided in Appendix A.

2.3 Results

The average $L_{Aeq,T}$ at 1 metre from the plant room louvres was 47 dB, with the associated third octave band $L_{eq,T}$ on the attached graph ADT 3139/G1. There is no evidence of tonality in the spectrum, and the plant would not operate intermittently or impulsively.

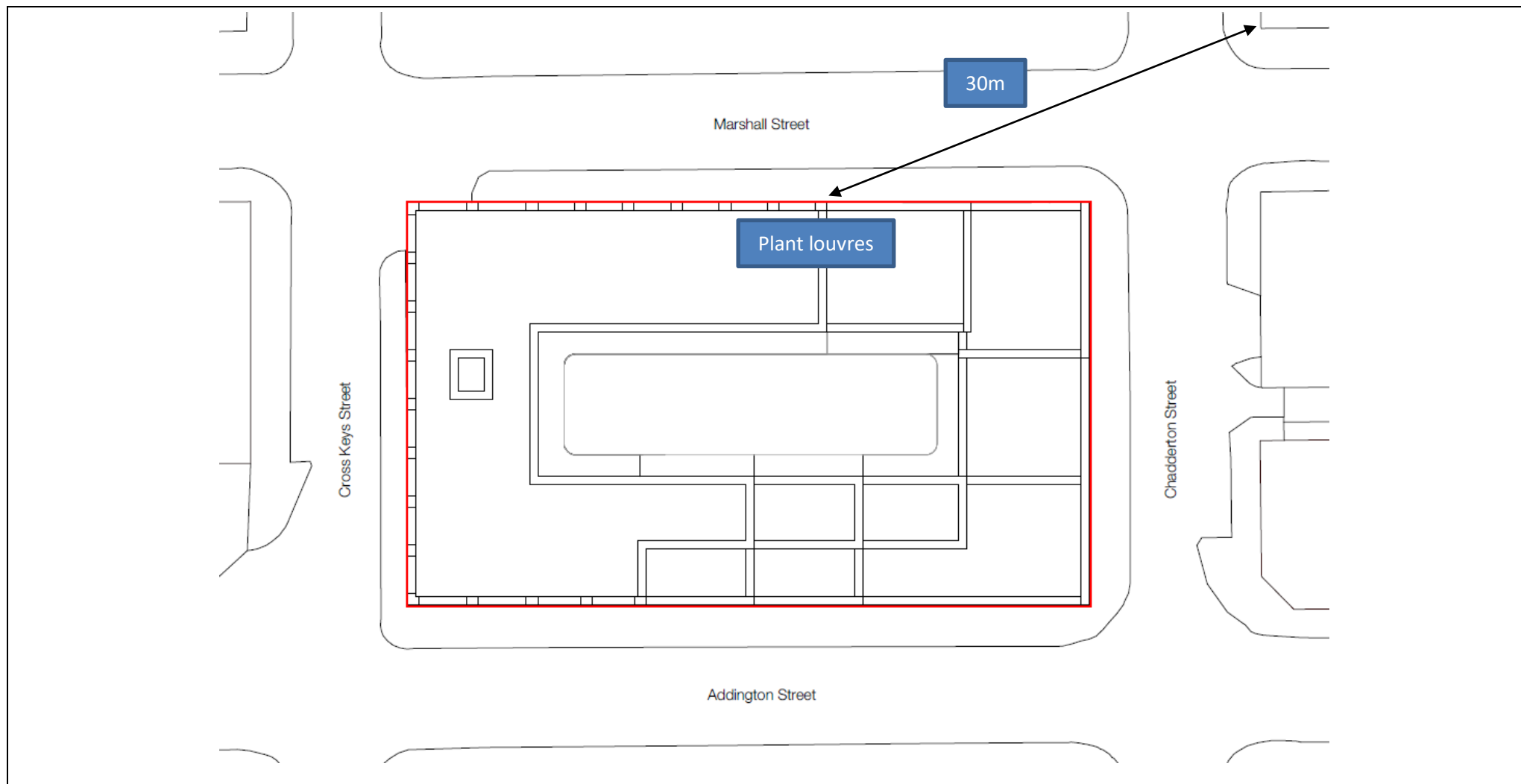
Using a pessimistic line source correction ($10 \log d_1 / d_2$) from the measurement position close to the louvres to the nearest dwellings 30 metres away yields a specific sound level of 32 dB $L_{Aeq, 15 \text{ mins}}$. In practice the resultant noise level will be lower than this, as the radiation will tend towards point source radiation within a few metres of the louvres.

There is no reason to apply a BS 4142 correction for tonality, intermittency or impulsivity at the assessment location, and on that basis the rating level at the assessment location is 32 dB $L_{Ar, 15 \text{ mins}}$.

Background sound levels are provided in the Cundall report 1021864-RPT-AS-001 (Rev B) dated 19 August 2019, submitted in support of the original planning application, with a minimum background sound level of 52 dB L_{A90} .

As the BS 4142 rating level is 20 dB below the otherwise prevailing background level, the requirements of planning condition 12 would be fulfilled.

FOR ACOUSTIC DESIGN TECHNOLOGY



Notes

Description

Site plan showing plant louvre locations and nearest noise sensitive property

Project

Addington Street, Manchester

Date

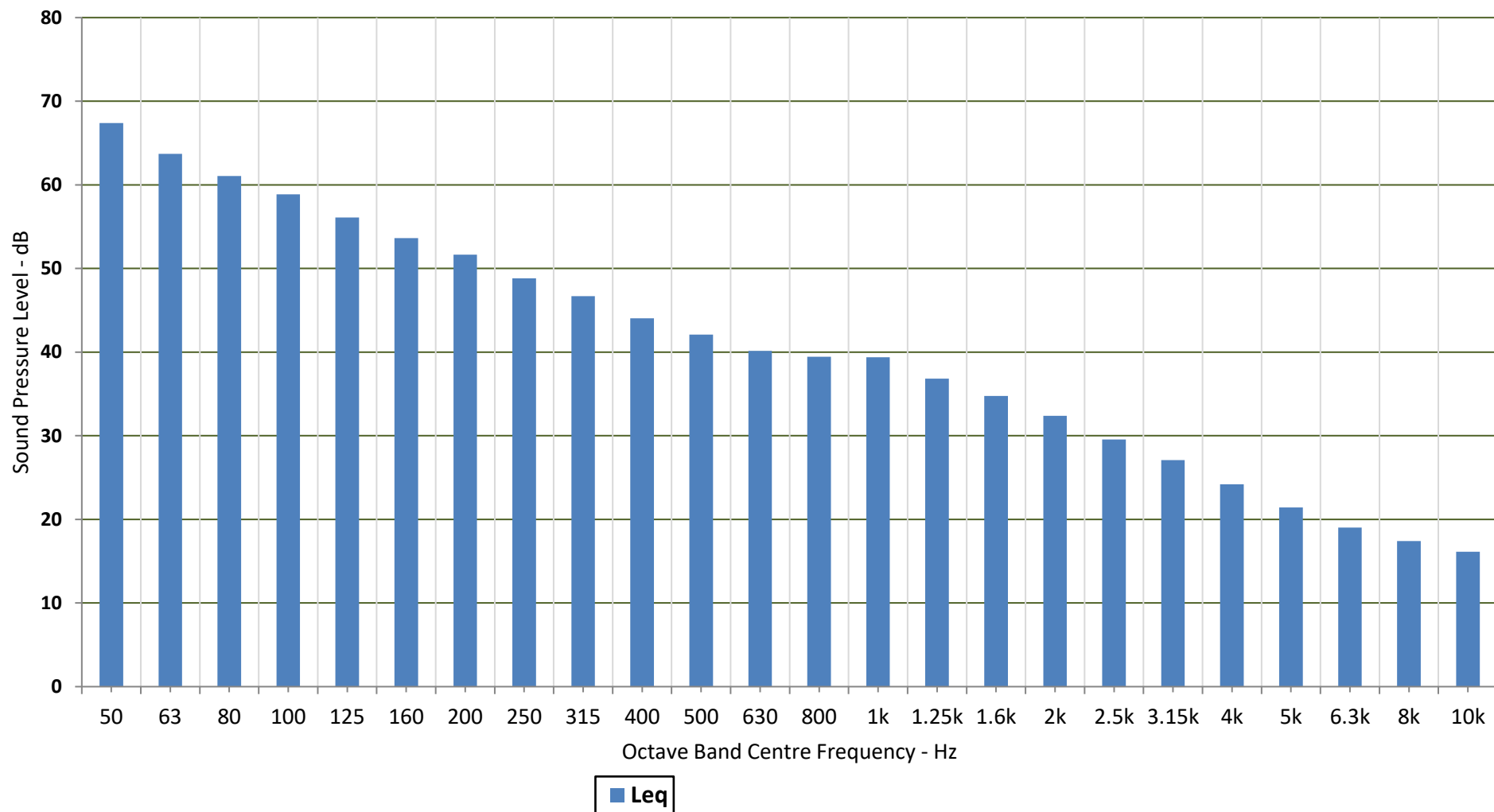
30 November 2022

Drawing No.

3139/SP1



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Notes

$L_{Amax}(F)$ exceeded 45 dB 11 times

Description

1 minute $L_{Amax}(F)$ in Plot 2.09 (Addington Street)

Project

Addington Street, Manchester

Survey Date

12 to 13 August 2022

Drawing No.

3139/G1



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APPENDIX A

Instrumentation

Manufacturer	Type and / or Model	Serial Number	Last Laboratory Calibration	Calibrator Output (dB)	Free Field Correction (dB)	Initial reading (dB)	Final reading (dB)
Norsonic	Nor140 Class 1 Sound Level Meter	1404515			-0.20	113.8	113.8
Norsonic	Nor1225 ½" Microphone	142527	March 2021				
Norsonic	Nor1209 Preamplifier	13885					
Norsonic	Nor1251 Calibrator (Cal 6)	35228	April 2022	114.09			