

J004287-9089-DH-01

16th September 2025

Biz Assets Ltd
2nd Floor Fairbank House
27 Ashley Road
Altrincham
Cheshire
United Kingdom
WA14 2DP

Rooftop Plant Deck – Noise Assessment – 77-79 Mosley Street, Manchester

Dear James,

It is understood that the decision notice within application number '139183/FO/2024' contains the following condition (10) in regards to external plant noise:

'a scheme for the acoustic insulation of any externally mounted ancillary equipment associated with the development to ensure that it achieves a background noise level of 5dB below the existing background (L_{A90}) in each octave band at the nearest noise sensitive location shall be submitted to and approved in writing by the City Council as local planning authority in order to secure a reduction in the level of noise emanating from the equipment.'

The following report establishes the existing background noise levels from the previous on-site surveys carried out and compares the proposed roof deck plant noise levels with this. It is our understanding that the closest noise sensitive receiver is 'The Alan Hotel' located to the south east of site.

Site Survey and Limits

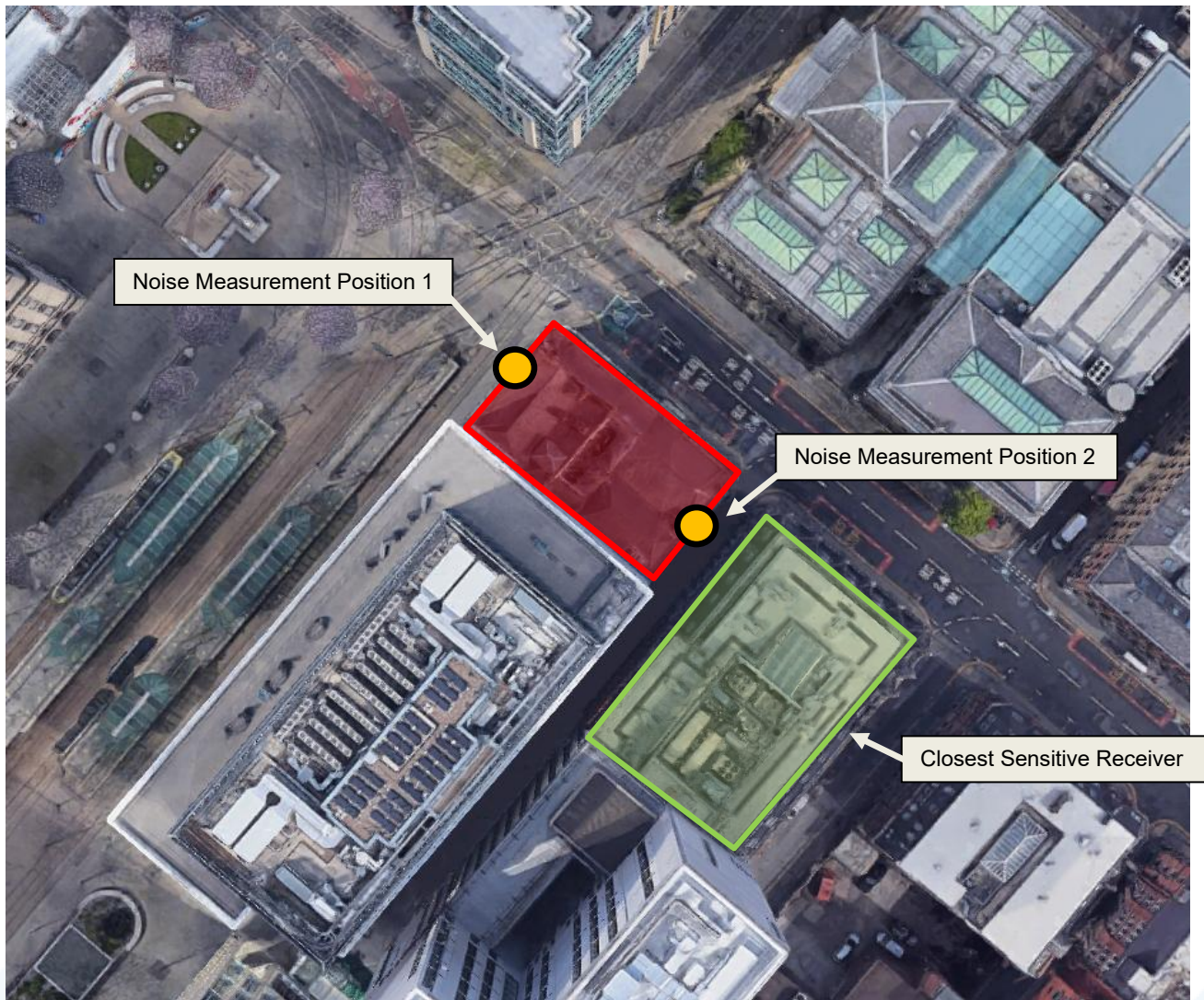
A noise survey has been previously carried out by PDA to establish the existing background noise level prior to the development at site. The details of the survey are provided within report ref: 'J004287-6015-DH-08 NIA – 77-79 Mosley Street, Manchester' dated 7th August 2024.

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Figure 1. 'Figure 2. Noise Surveys Monitoring Positions' – 'J004287-6015-DH-08 NIA – 77-79 Mosley Street, Manchester'



The derived noise limits, in accordance with Manchester City Council (MCC) Condition 10, based on the measurements taken at Measurement Position 2 are summarised in the tables below with Table 1 presenting the typical background sound level spectrum and Table 2 presenting the limiting values. Please note that as the plant is associated with office and café

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use we have utilised the typical background sound levels for the day-time which would be the understood hours of operation.

Table 1. – Typical Background Sound Levels – Day-time – Position 2

Typical Background Sound Level dB(A) Octave band centre frequency (Hz)							Typical Background Sound Level dB(A)
63	125	250	500	1k	2k	4k	
35	39	45	49	50	48	39	55

Table 2. – Noise limit for all external mechanical services at nearest noise sensitive receiver

Cumulative noise limit for all proposed external mechanical services LAeq (dB) at the nearest noise sensitive location							
Typical Background Sound Level dB(A) Octave band centre frequency (Hz)							Typical Background Sound Level dB(A)
63	125	250	500	1k	2k	4k	
30	34	40	44	45	43	34	50

Roof deck – Plant Noise Levels

We have been informed that there is to be 1 no. PUMY-P300YBM2 and 4 no. PURY-P550-YNW Mitsubishi units installed to the plant deck. We have been supplied with the manufacturer's data which provides a sound power ratings. The noise levels are summarised in the following table:

Table 3. Plant Noise Levels

Unit	Sound Power Level dB Octave band centre frequency (Hz)							Sound Power Level dB(A)
	63	125	250	500	1k	2k	4k	
PUMY-P300YBM2	79	74	76	71	72	65	58	75
PURY-P550YNW	93	82	81	77	71	69	65	79*

* Sound Power Level based upon 75% capacity which we have assumed to be the normal operation of the unit.

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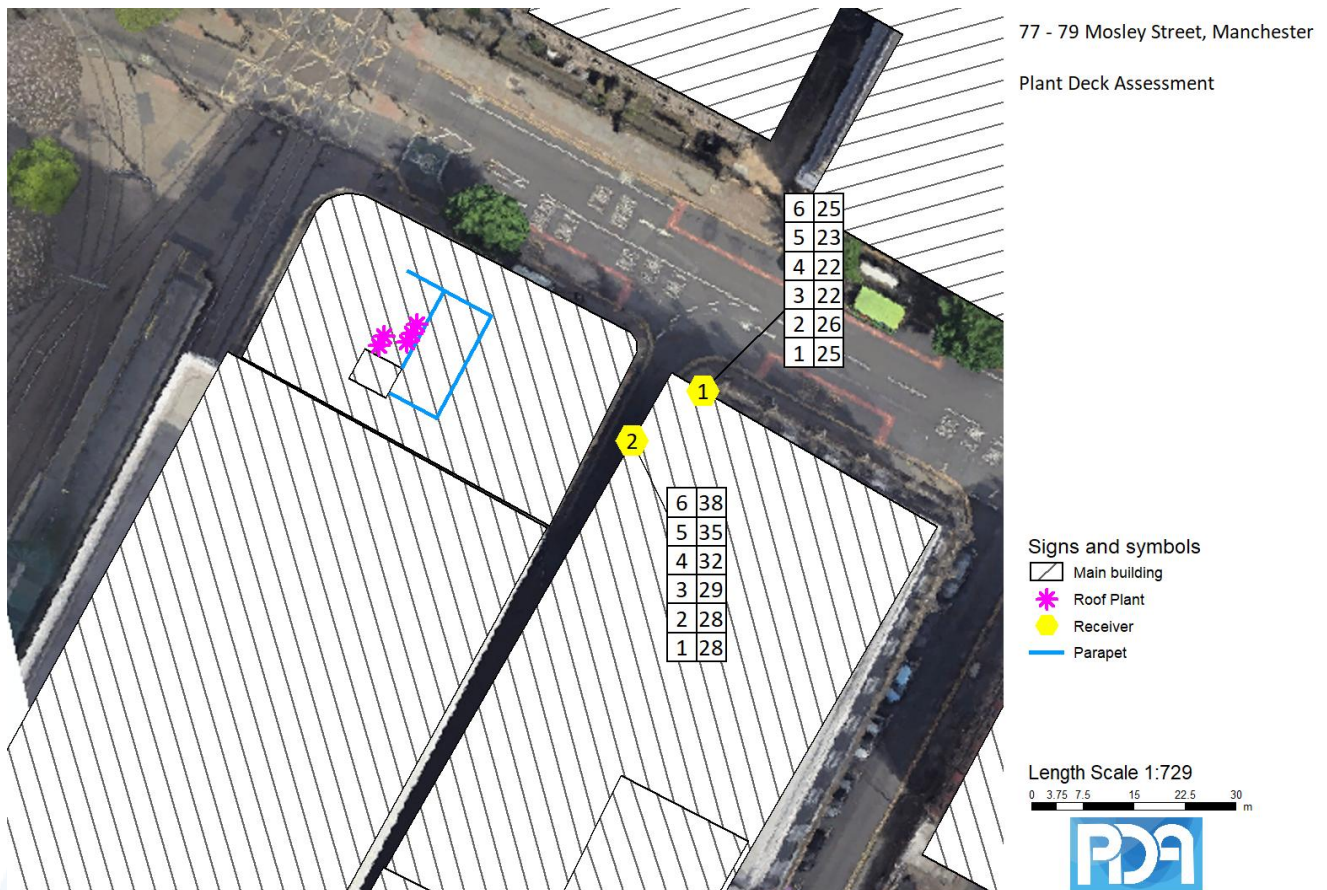
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Predicted Plant Noise Levels at Reciever

In order to predict the resultant noise levels from the plant deck units we have utilised SoundPLAN to generate a 3-dimensional computer noise model. All calculations have followed the methodology contained within ISO 9613-2:2024. The topographical data for the site and surrounding area is taken from Google Maps terrain height data. The noise levels from Table 3 have been used to inform the noise model. The layout of the plant deck is based upon drawing ref: '1995 P(150)GRoof Plan Preliminary' supplied by Atelier MB Urban Architects.

Figure 2. Predicted noise levels from Plantdeck Roof Plant



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Discussion

We would highlight that the highest and therefore 'worst-case' predicted noise level is 38 dB(A) as shown at Receiver 2. In regards to the MCC criteria this broadband level is 12 dB below the derived limit (17 dB below background) and is therefore deemed acceptable.

Furthermore, the following table presents the comparison of the predicted plant noise levels against the limiting values in octave bands:

Table 3. – Comparison of predicted noise levels with the typical background sound limits.

Cumulative noise limit for all proposed external mechanical services LAeq (dB) at the nearest noise sensitive location							
Typical Background Sound Level dB(A) Octave band centre frequency (Hz)							Typical Background Sound Level dB(A)
63	125	250	500	1k	2k	4k	
30	34	40	44	45	43	34	50
Predicted Plant Noise Levels dB LAeq							
28	27	32	32	31	26	18	38

It can be seen from the table above that the predicted noise levels are below the derived limits within each octave band and therefore the MCC criteria is achieved.

Yours Sincerely,



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