MEMO

hepworth acoustics

21 Little Peter Street, Manchester M15 4PS
manchester@hepworth-acoustics.co.uk
0161 242 7900
hepworth-acoustics.co.uk

Ref: P25-234-M02v1

Project: IKC, York Street, Manchester

Date: 14 May 2026

To: Keith Russell, Mitchells & Butlers

From: Donald Quinn BSc FIOA – Managing Director

Subject: **Approved Innkeeper's Collection Hotel, 1 York Street, Manchester**
New Plant/Equipment Noise Assessment re Planning Condition P6a

1. This memo sets out the noise assessment in connection with condition P6a of planning consent for the approved conversion of the upper floors of 1 York Street to a new Innkeeper's Collection hotel.

Planning Condition

2. We understand that condition P6a of Manchester City Council planning consent 134736/FO/2022 dated 28 March 2024, as varied by 144430/JO/2025 dated 9 February 2026 is as follows:

> *P6a) Prior to any above ground works, either a scheme that demonstrates that any plant equipment will achieve a rating level of 5dB (LAeq) below the typical background (LA90) level in each octave band at the nearest noise sensitive location, or a scheme showing a method to acoustically treat/insulate any plant equipment so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level in each octave band at the nearest noise sensitive location, shall be submitted to and approved in writing by the Local Planning Authority. The development shall then be carried out in accordance with the approved details.*

Background Noise Levels & Noise Limits

3. The approved development includes the formation of hotel guest bedrooms and hence these have been assumed to be the nearest/potentially most-exposed noise sensitive locations.

4. A baseline noise survey was carried out as part of noise assessment for the development between lunchtime on Friday 11 July 2025 and the morning of Monday 14 July 2025 and hence covered both daytime and night-time periods during the week and at the weekend.

5. Noise measurements were carried out with sound analyser microphones mounted on poles protruding through partially open windows approximately 1m from the façade at three locations as shown in Figure 1 and described below:

   a) On the York Street elevation;

   b) On the Spring Gardens elevation; and

   c) On the rear/courtyard elevation.

6. Third floor rooms were used for the noise survey as these were the only rooms not occupied by 'guardian' tenants.

7. Noise measurements were taken as a series of consecutive 5-minute periods over the course of the whole survey period. Weather conditions during the survey were dry, warm/hot and calm. Calibration checks were carried out both before and after the survey with no variance in levels noted. Frequency analysis and audio recording was also carried out to assist in the identification of significant noise sources.

8. Full results of the noise measurements are shown in the attached charts with the background noise levels summarised as follows (with the mean and modal values being the lowest for each of the day/night periods over the course of the whole survey):

Table 1: Summary of measured background noise levels (dB L_{A90})

Location	Daytime (07:00 – 23:00)			Night-time (07:00 – 23:00)		
	Range	Mean	Mode	Range	Mean	Mode
a) York Street elevation	45 – 62	51	53	43 – 56	47	44
b) Spring Gardens elevation	44 – 58	49	52	41 – 60	46	42
c) Rear/courtyard elevation	44 – 56	49	50	52 – 57	44	43

9. For the purposes of this assessment, we have focussed on the background noise levels for Location C (rear/courtyard elevation) as this is most representative of the guest bedroom windows that could potentially be exposed to the new plant/equipment noise.

10. Since the new equipment (which is described below) will operate on demand throughout 24-hours, the lower night-time background noise level has been adopted for assessment purposes. The corresponding adopted octave band noise limits have been derived, equating to 5 dB below the relevant representative octave band L_{90} value from the lowest of the mean/mode as follows:

Table 3: Adopted noise rating limits for new external plant/equipment (dB L_{rTr})

Location	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
Outside rear/courtyard elevation guest bedroom windows	41	42	42	35	31	26	19	38

New Plant/Equipment

11. Proposed new plant/equipment items with the potential to result in significant noise emissions to the exterior are limited to eight new identical 'outdoor' condenser units that, rather than being located externally, will instead be located within the fully covered rear service yard area. The only noise sensitive receptors that could conceivably be impacted by noise from these condensers are the hotel bedrooms above.

12. This covered service yard has an original decorative glass roof and additional, more recent, tiled roof over. The space will be ventilated via existing louvres and a new perforated roller shutter door to the Milk Street elevation, well away from proposed bedroom windows. The indicative layout drawing (as attached as Figure 2) shows the condensers being located at the western side of the service area, away from the Milk Street elevation.

13. This means that condenser unit noise must first pass through the two roofs, or break-out through the louvres/roller shutter door on the Milk Street elevation before propagating to the upper floor guest bedroom windows.

14. We understand from the project MEP consultants (BMT) that the proposed condensers are to be Mitsubishi MMY-SUG0801-1401MT8P-E models each with a worst-case manufacturer's source sound pressure level of 56 dBA at 1m. The combined source noise from all eight units operating simultaneously is 65 dBA at 1m, with the following octave band noise levels:

Table 4: Source noise levels for all equipment operating simultaneously (dB L_{eq} at 1m)

Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
8 no. MMY-SUG0801-1401MT8P-E	72	71	66	64	59	53	46	65

Assessment

15. Taking into account attenuation of sound over distance to the underside of the roof of the covered service yard area (and/or the distance from the proposed location of the units to the louvres/roller shutter on the Milk Street elevation), plus an allowance for reverberant build-up of sound within the covered service yard area, we estimate overall noise levels of around 60 dBA from the condensers at the underside of the roof and at the inner face of the louvres/roller shutter.

16. The combination of the original decorative roof and new pitched roof would be expected to provide an overall airborne sound insulation performance in excess of 30 - 35 dB R_w. Assuming only a nominal correction for attenuation of sound over distance from the middle of the roof to the nearest windows, noise break-out through the roof to outside hotel guest bedroom windows will be no more than around 22 dB L_{Aeq}. The corresponding octave band noise levels are calculated as follows:

Table 5: Break-out of condenser noise via roofs (dB L_{eq})

Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
Adopted internal reverberant noise	67	66	61	59	54	48	41	60
Adopted SRI of both roofs combined	20	24	29	34	37	33	38	
Nominal distance attenuation (2.5m)	8	8	8	8	8	8	8	
Calculated break-out through roofs	39	34	24	17	9	7	0	22

17. There is no view of the Milk Street elevation from any proposed hotel bedroom windows. Taking account of this lack of line of sight, plus the distance from the Milk Street elevation to hotel bedroom windows on the rear elevation (at least around 10m), we predict condenser noise breaking out via this path will be no more than around 30 dB L_{Aeq}. The corresponding octave band noise levels are calculated as follows:

Table 6: Break-out of condenser noise via Milk Street elevation (dB L_{eq})

Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
Adopted internal reverberant noise	67	66	61	59	54	48	41	60
Screening (no line of sight)	10	10	10	10	10	10	10	
Nominal distance attenuation (10m)	20	20	20	20	20	20	20	
Calculated break-out via Milk Street	37	36	31	29	24	18	11	30

18. The combined noise break-out via the roofs and via the Milk Street elevation can be calculated as follows:

Table 7: Calculated condenser noise outside nearest/most-exposed guest rooms (dB L_{eq})

Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
Calculated break-out through roofs	39	34	24	17	9	7	0	22
Calculated break-out via Milk Street	37	36	31	29	24	18	11	30
Overall condenser noise	41	38	32	29	24	18	11	31

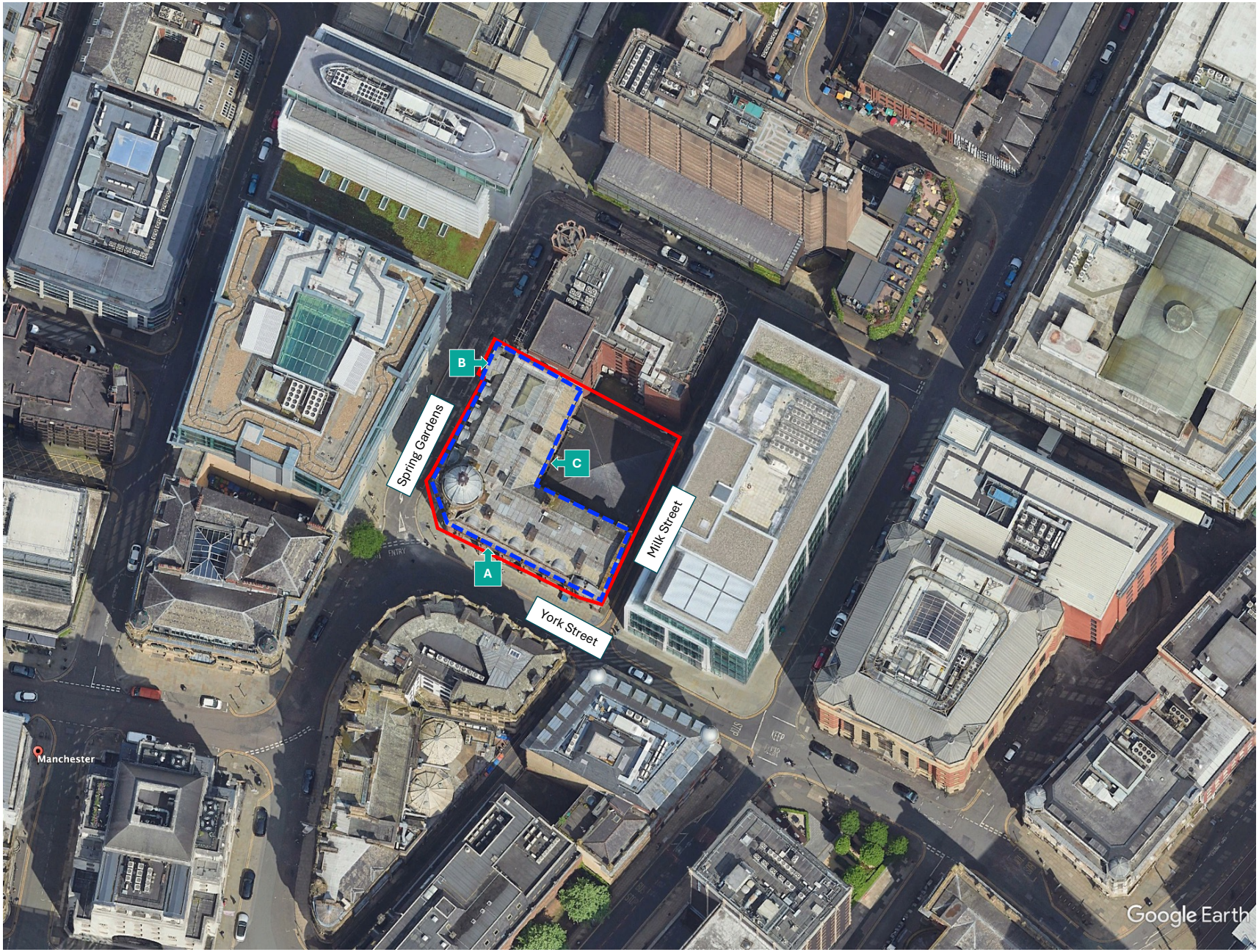
19. The equipment will produce steady broadband noise when operating. As such, no character correction for tonality is warranted as per the methodology in BS 4142:2014+A1:2019. Whilst each unit will operate upon demand, they will do so independently. Since there are to be eight identical units, the switch on/off of each individual unit will not result in a step change in noise that would attract a character correction for intermittency, especially at the very low calculated noise levels. Finally, the city centre location with numerous similar noise sources in the vicinity means that the equipment noise will not be readily distinctive in the context of the background noise climate. As such, the calculated overall condenser L_{eq} noise levels in Table 7 can be adopted as the $L_{r,Tr}$ rating levels. On this basis, the condenser rating noise levels are as follows in comparison to the noise limits required by the planning condition:

Table 8: Comparison of condenser rating noise levels with adopted noise limits (dB)

Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
Condensers rating noise levels ($L_{r,Tr}$)	41	38	32	29	24	18	11	31
Adopted noise limits (L_{90} – 5 dB)	41	42	42	35	31	26	19	38
Comparison	0	-4	-10	-6	-7	-8	-8	-7

20. The combined worst-case condenser noise levels will therefore be within the adopted noise limits and no specific noise mitigation measures are warranted.

Do not scale from this figure



Key:

- Site location
- Footprint of upper floors
- X - Noise measurement position

N

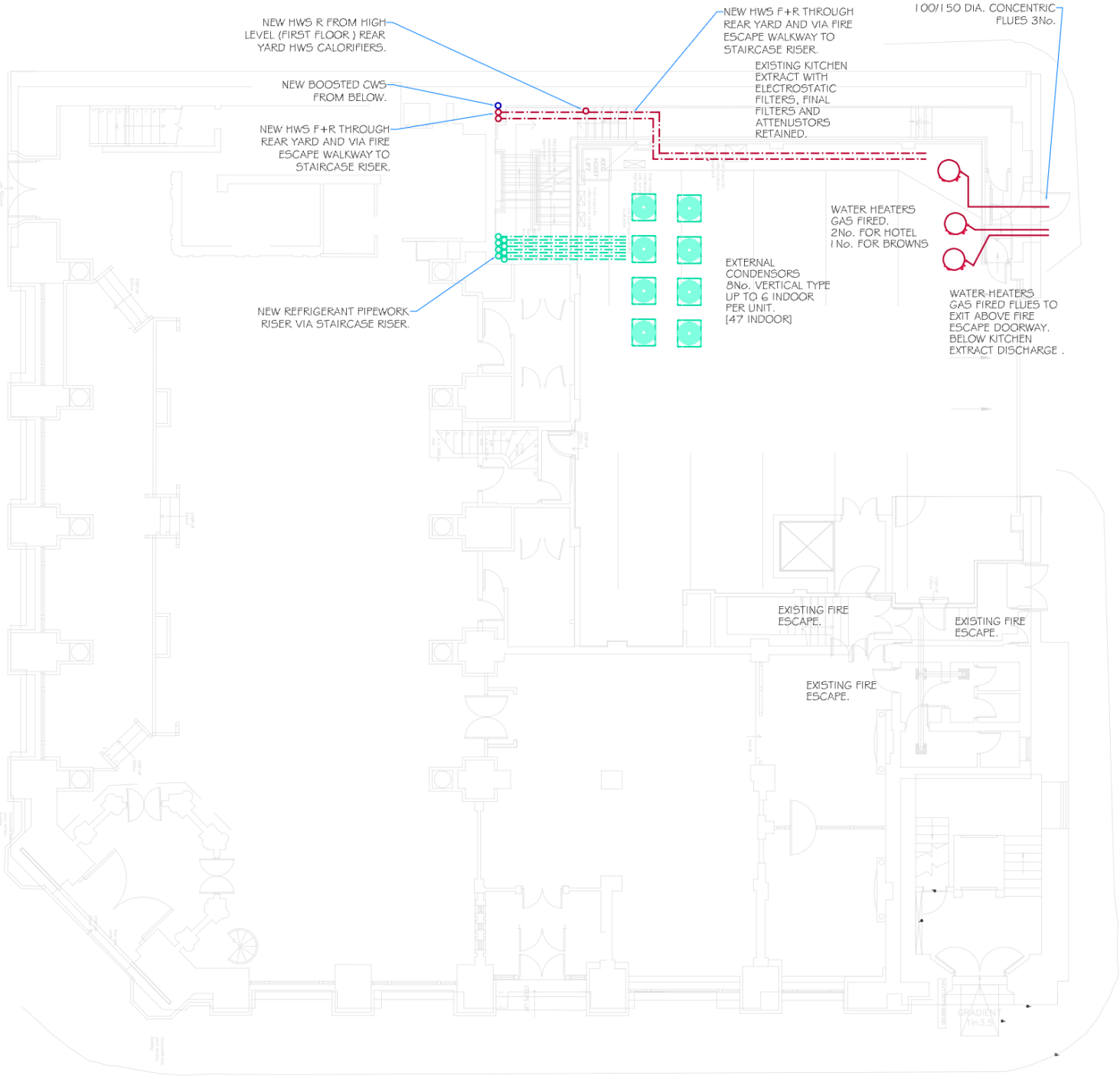
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Ref: **M02-Figure 1**

Title: Site location & noise measurement positions

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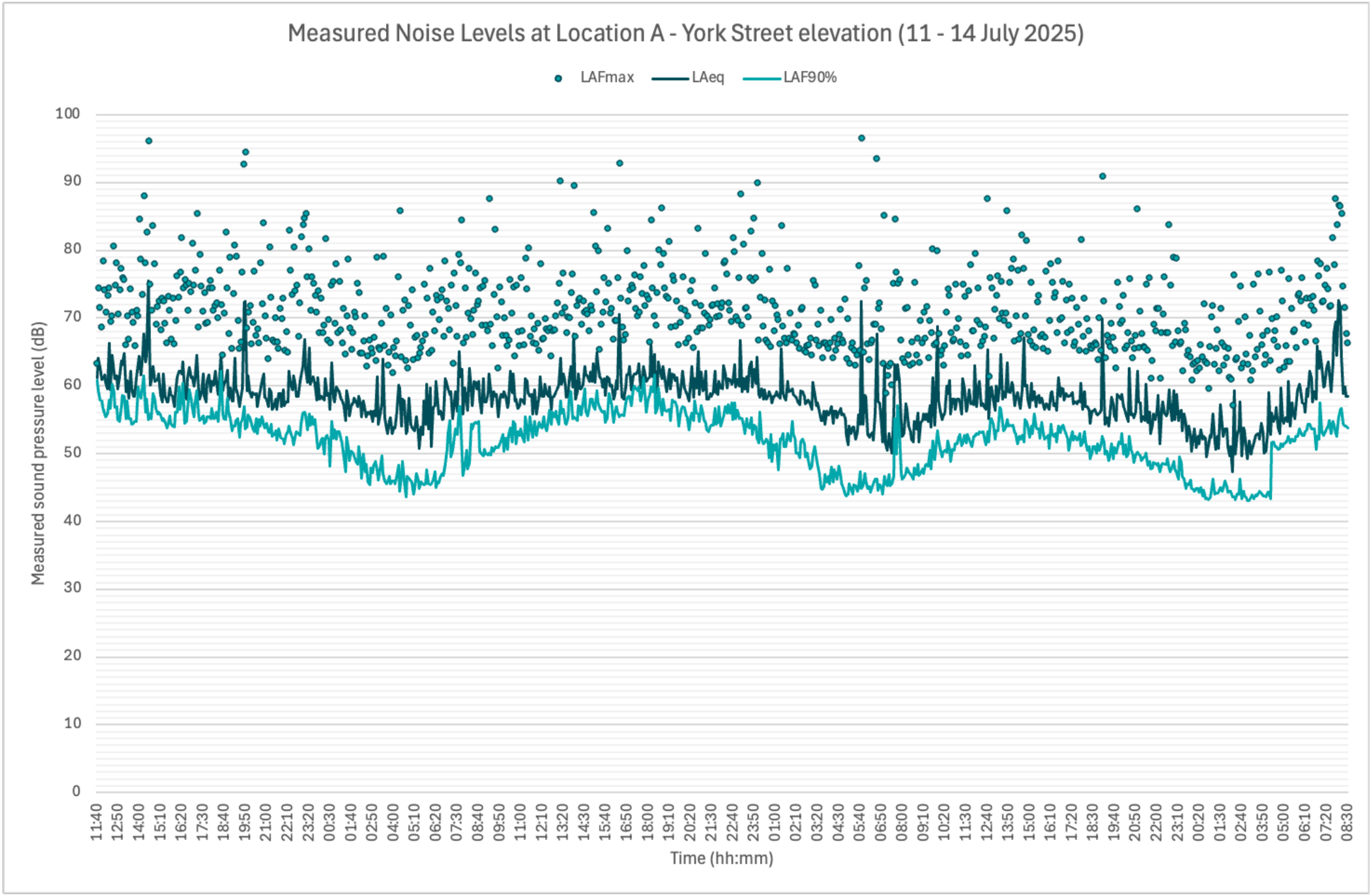


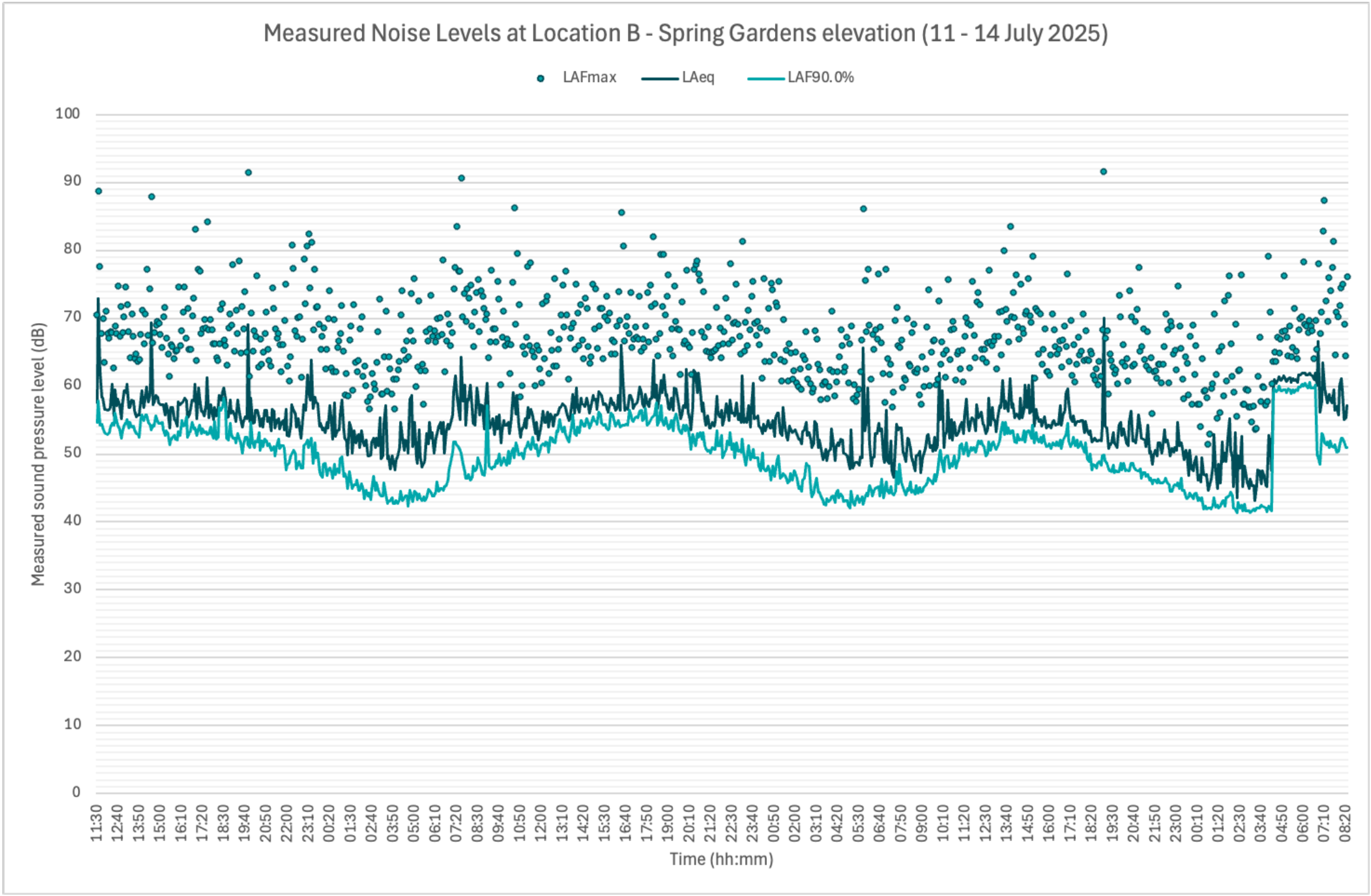
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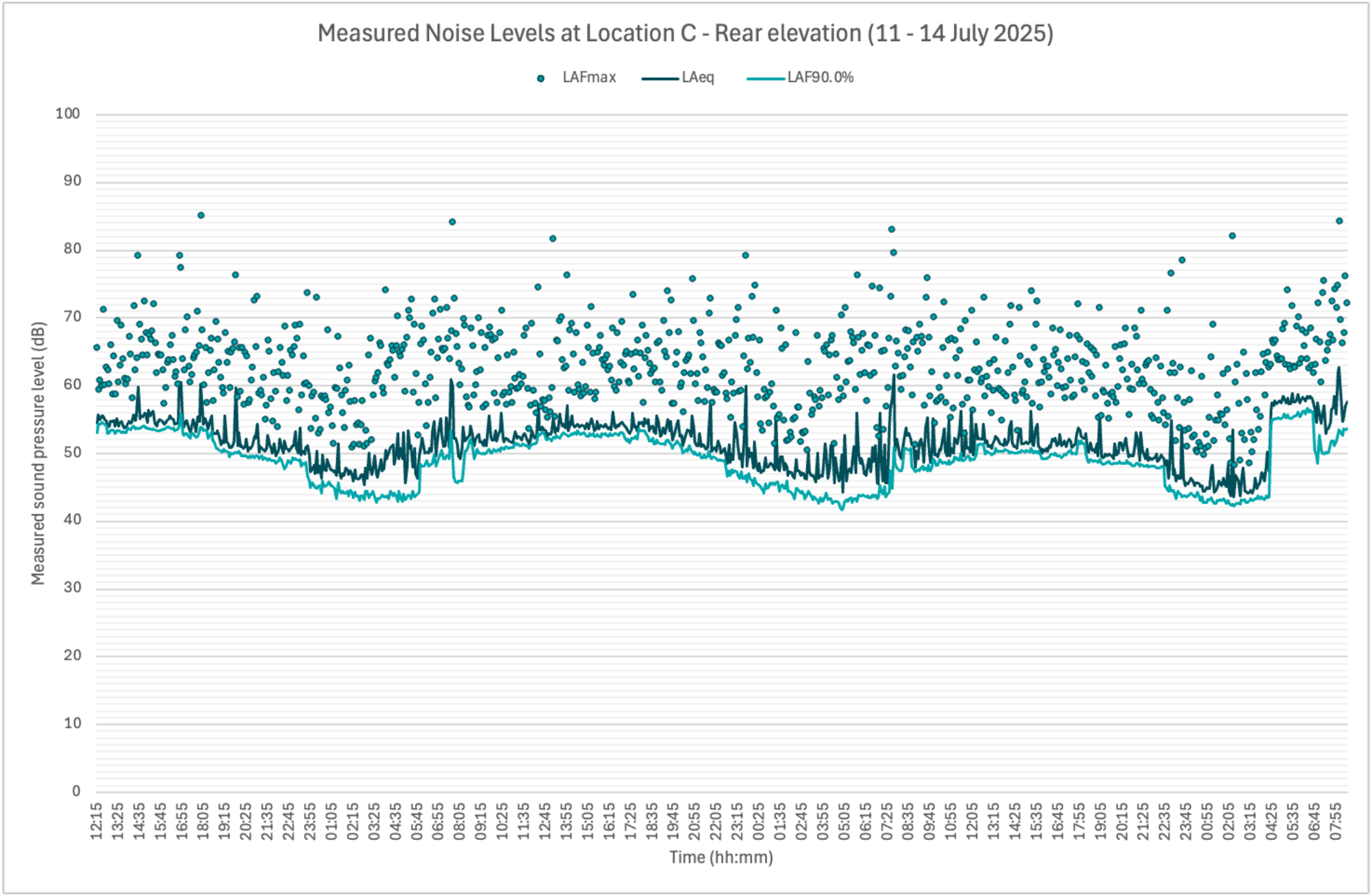
Ref: **M02-Figure 2**

Title: Indicative plant layout

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Measured Noise Levels at Location A - York Street elevation (11 - 14 July 2025)
LAFmax
LAeq
LAF90%
Measured sound pressure level (dB)
100
90
80
70
60
50
40
30
20
10
0
11:40
12:50
14:00
15:10
16:20
17:30
18:40
19:50
21:00
22:10
23:20
00:30
01:40
02:50
04:00
05:10
06:20
07:30
08:40
09:50
11:00
12:10
13:20
14:30
15:40
16:50
18:00
19:10
20:20
21:30
22:40
23:50
01:00
02:10
03:20
04:30
05:40
06:50
08:00
09:10
10:20
11:30
12:40
13:50
15:00
16:10
17:20
18:30
19:40
20:50
22:00
23:10
00:20
01:30
02:40
03:50
05:00
06:10
07:20
08:30
Time (hh:mm)


Measured Noise Levels at Location B - Spring Gardens elevation (11 - 14 July 2025)
LAFmax
LAeq
LAF90.0%
Measured sound pressure level (dB)
100
90
80
70
60
50
40
30
20
10
0
11:30
12:40
13:50
15:00
16:10
17:20
18:30
19:40
20:50
22:00
23:10
00:20
01:30
02:40
03:50
05:00
06:10
07:20
08:30
09:40
10:50
12:00
13:10
14:20
15:30
16:40
17:50
19:00
20:10
21:20
22:30
23:40
00:50
02:00
03:10
04:20
05:30
06:40
07:50
09:00
10:10
11:20
12:30
13:40
14:50
16:00
17:10
18:20
19:30
20:40
21:50
23:00
00:10
01:20
02:30
03:40
04:50
06:00
07:10
08:20
Time (hh:mm)


Measured Noise Levels at Location C - Rear elevation (11 - 14 July 2025)
LAFmax
LAeq
LAF90.0%
Measured sound pressure level (dB)
100
90
80
70
60
50
40
30
20
10
0
12:15
13:25
14:35
15:45
16:55
18:05
19:15
20:25
21:35
22:45
23:55
01:05
02:15
03:25
04:35
05:45
06:55
08:05
09:15
10:25
11:35
12:45
13:55
15:05
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18:35
19:45
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22:05
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10:55
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06:45
07:55
Time (hh:mm)