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TECHNICAL NOTE – COMPLIANCE CHECK

27-29 Trenchard Dr, Wythenshawe, Manchester M22 5LZ

Manchester CC Ref. Condition 6 (Acoustics) attached to planning permission 126435/FO/2020 (amended by 129160/JO/2021)

Date 12th August 2024
Site Visited 6th / 7th August 2024
Ref. 20240812 8765 Trenchard TN-2.docx
Prepared by: M A Kenyon MSc BSc MIOA



1.0 Introduction

Martec previously prepared a noise impact assessment for a residential planning application at the above location [Martec Ref. 26022020 8765 Trenchard ProPG.docx]; recommendations were made for various glazing and ventilation configurations and Martec has now been instructed to confirm that the on-site noise levels comply with the target noise criteria.

2.0 Noise Criteria

The target noise levels were set out in our previous report and are broadly as set out in BS8233:2014 [see below] with additional guidance on nighttime noise events based on World Health Organisation advice.

Loughborough Office:

8 Bayliss Close, Quorn, Loughborough LE12 8PF

Staffordshire / Cheshire Office:

2, Betley Hall Gardens, Betley, Crewe CW3 9BB



Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	35 LAeq,16hr	--
Dining	Dining Room/Area	40 LAeq,16hr	--
Sleeping (daytime resting)	Bedroom	35 LAeq,16hr	30 LAeq,8hr 45 L _{Amax,F} ^[1]

Table 1: ProPG - Target Internal Noise Levels

[1] Added from WHO and applies to 10th highest nighttime event.

Target noise levels for the external garden areas were not set for the reasons set out in our previous report:

1. The 'new' external amenity spaces [gardens] for the development would be formed from the existing gardens, i.e. residents currently would experience the prevailing levels of aircraft noise AND
2. Manchester Airport forms part of the strategic transport network, AND
3. It is generally impracticable to reduce external levels from aircraft in flight,

It is considered that it would be unreasonable to apply the external noise criteria under these circumstances, and only the internal noise criteria will be considered in the remainder of the report

3.0 Noise Measurements

The instrumentation in Table 2 below was set up inside a first-floor bedroom on the rear of No.29; the rear façade being the one more likely to be affected by aircraft noise.

The measurements were made approximately at the centre of the space adjacent to where the bed would probably be located. At the time of the tests the room had been carpeted but contained no other furnishings. Windows were closed and mechanical ventilation appeared to be working which is the intended condition for the dwellings.

The microphone was pole-mounted at an approximately height of 1.2m and was fitted with a RION WS02 windmuff; the instruments field calibrated correctly before and after the measurements and laboratory calibrated as shown in Table 2. The instrumentation was installed on Tuesday 6th and removed on Wednesday 7th August 2024.

Model	Instrument	Serial No.	Lab Cal Certificate	Re-Calibration Due
H Svan 958A	4 channel Sound/Mib Analyser	69027	1507977-1S	27/02/2026
Svan SV12	Preamp	7030	1507977-1S	27/02/2026
B&K 4155	Microphone	1479113	1507977-1S	27/02/2026
B&K 4231	Calibrator	2084928	1504880-1	20/03/2025

Table 2: Instrumentation

The weather conditions as observed on site and from a nearby weather station reporting its results on Wunderground.com [IMANCH90] were no precipitation, and generally light winds from the south, with temperatures ranging from 14 to 19 degrees Centigrade; these conditions should not have directly influenced the results.

4.0 Results

The period results appear in full at Appendix 1 and are summarised in Table 3 below; the nighttime noise events have been plotted in Figure 1 below; the 10th

highest event was 39.9 dB LA_{max,F,1s}.

Period		Measured Levels	
Day	Date	Day LAeq,16hr	Night LAeq,8hr
Tue	06-Aug	23.4	21.6
Wed	07-Aug	22.8	--

Table 3: Internal Noise levels [Reverb dB]

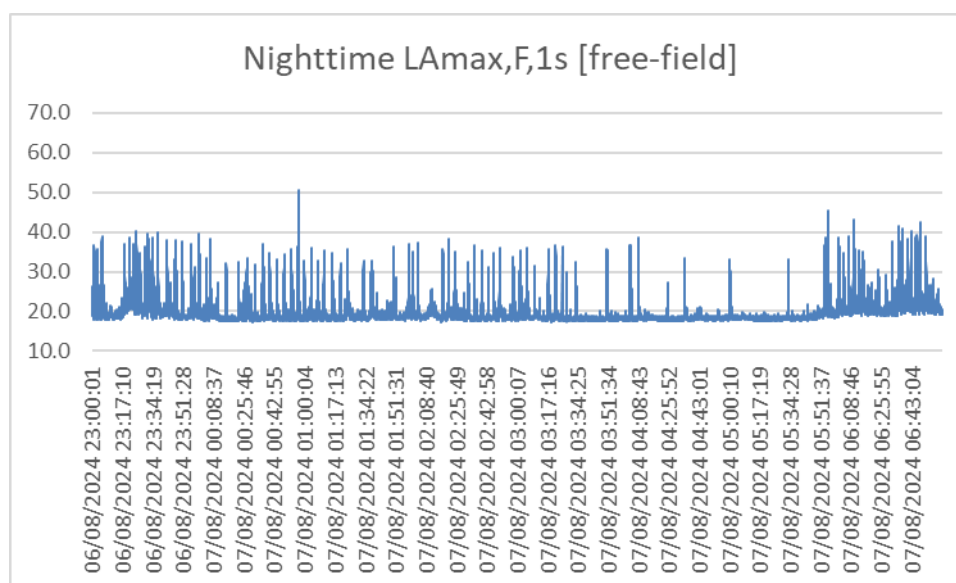


Figure 1: Nighttime Noise Events [Reverb dB]

5.0 Conclusions

The measured levels in Section 4 above meet the noise criteria set out in Section 2 above.

Given that the bedroom was not fully furnished, it would be expected that 'in-use' the reverberation time of the bedroom [echoiness] would decrease as would aircraft noise levels.

APPENDIX 1

DETAILED RESULTS

End Date & time	Duration	LAm _{ax,F}	LAm _{in}	LA _{eq}	LA01	LA10	LA50	LA90
06/08/2024 12:00:00	00:15:00	40.8	16.1	24.2	36.5	25	18.5	17.3
06/08/2024 12:15:00	00:15:00	42.8	16.3	24.2	36.1	26.6	18.5	17.3
06/08/2024 12:30:00	00:15:00	39.6	16.4	24.1	36	26.1	18.6	17.3
06/08/2024 12:45:00	00:15:00	40.1	16.4	24.6	36.9	24.4	18.5	17.3
06/08/2024 13:00:00	00:15:00	40.7	15.9	24.9	36.8	26.6	18.6	17.3
06/08/2024 13:15:00	00:15:00	38.6	16.3	23.5	35.2	24.1	18.7	17.3
06/08/2024 13:30:00	00:15:00	38.4	16.2	22.8	34.5	23.9	18.2	17.2
06/08/2024 13:45:00	00:15:00	39.7	16.4	23.3	35.4	23	18.2	17.2
06/08/2024 14:00:00	00:15:00	38.7	15.8	22.3	34.6	22.3	17.9	17.1
06/08/2024 14:15:00	00:15:00	38.4	16.1	20.5	32.6	19.4	17.8	17.1
06/08/2024 14:30:00	00:15:00	42.2	16.0	23.8	36.1	23.3	17.9	17.1
06/08/2024 14:45:00	00:15:00	40.2	16.2	21.5	34.4	20	17.9	17.1
06/08/2024 15:00:00	00:15:00	39.0	16.1	23.5	35.8	22.6	18.3	17.2
06/08/2024 15:15:00	00:15:00	44.7	16.2	24.0	36	24.5	18.4	17.2
06/08/2024 15:30:00	00:15:00	40.0	16.3	23.9	36	24.4	18.3	17.2
06/08/2024 15:45:00	00:15:00	42.5	16.3	24.0	36.6	23.5	18.3	17.2
06/08/2024 16:00:00	00:15:00	39.7	16.0	23.4	35.8	24.1	18	17.2
06/08/2024 16:15:00	00:15:00	41.3	16.0	23.4	35.9	22.6	17.8	17.1
06/08/2024 16:30:00	00:15:00	40.6	16.2	21.8	35.1	19.8	17.8	17.1
06/08/2024 16:45:00	00:15:00	40.1	16.0	23.0	35.9	21.7	18	17.2
06/08/2024 17:00:00	00:15:00	39.3	16.1	23.5	35.7	23.2	18.1	17.2
06/08/2024 17:15:00	00:15:00	39.1	16.4	23.9	36	24.8	18.3	17.2
06/08/2024 17:30:00	00:15:00	40.6	16.3	24.0	35.8	24.8	18.4	17.2
06/08/2024 17:45:00	00:15:00	41.2	16.2	23.8	36.2	23.8	18.2	17.2
06/08/2024 18:00:00	00:15:00	38.4	16.3	22.1	34.5	21.1	18.1	17.2
06/08/2024 18:15:00	00:15:00	41.0	16.1	23.4	36.5	21.5	17.9	17.1
06/08/2024 18:30:00	00:15:00	38.5	16.0	21.0	33.9	19.5	17.8	17.1
06/08/2024 18:45:00	00:15:00	40.5	16.1	23.2	35.6	22.3	18.1	17.2
06/08/2024 19:00:00	00:15:00	38.8	16.2	23.2	35.7	22.8	17.9	17.1
06/08/2024 19:15:00	00:15:00	45.2	16.0	24.0	36.3	21.5	17.8	17.1
06/08/2024 19:30:00	00:15:00	42.1	16.1	23.0	36.3	21.7	17.8	17.1
06/08/2024 19:45:00	00:15:00	30.3	16.2	18.1	21.7	18.9	17.8	17.1
06/08/2024 20:00:00	00:15:00	43.3	16.2	24.2	36.6	24.9	19.5	17.5
06/08/2024 20:15:00	00:15:00	40.0	16.5	24.3	36	26.2	18.9	17.4
06/08/2024 20:30:00	00:15:00	37.6	16.1	22.3	34.4	23.5	17.9	17.1
06/08/2024 20:45:00	00:15:00	41.0	16.0	21.7	33.4	21.5	17.8	17.1
06/08/2024 21:00:00	00:15:00	39.2	16.1	20.6	31.6	20.6	18	17.2
06/08/2024 21:15:00	00:15:00	41.7	16.4	23.2	35.9	22.8	18.4	17.2
06/08/2024 21:30:00	00:15:00	40.3	16.9	25.0	35.8	28.4	20.1	18.2
06/08/2024 21:45:00	00:15:00	39.7	16.2	23.1	34.6	24.6	19.4	17.6
06/08/2024 22:00:00	00:15:00	37.0	16.2	21.2	32.2	22.8	17.9	17.1
06/08/2024 22:15:00	00:15:00	38.3	16.3	23.6	35.5	24.6	19.6	17.7
06/08/2024 22:30:00	00:15:00	39.6	16.7	23.3	34.7	25.1	18.9	17.4
06/08/2024 22:45:00	00:15:00	39.7	16.2	25.3	36.3	28.8	19	17.4

Glazing Assessment

06/08/2024 23:00:00	00:15:00	39.8	16.3	24.8	36.2	27.7	19.2	17.4
06/08/2024 23:15:00	00:15:00	38.9	16.3	22.0	34.2	22.2	18.2	17.2
06/08/2024 23:30:00	00:15:00	40.1	16.8	25.3	36	28.3	20.7	18.1
06/08/2024 23:45:00	00:15:00	39.9	16.6	25.2	36.6	28	19.3	17.8
07/08/2024 00:00:00	00:15:00	38.0	16.3	22.5	34.6	23.4	18.5	17.3
07/08/2024 00:15:00	00:15:00	39.4	16.0	21.9	35.1	20.6	17.9	17.1
07/08/2024 00:30:00	00:15:00	33.3	16.1	19.3	29.1	19.7	17.7	17.1
07/08/2024 00:45:00	00:15:00	36.8	16.1	21.1	31.9	22.6	17.8	17.1
07/08/2024 01:00:00	00:15:00	50.6	16.0	22.3	32.9	22.4	17.9	17.1
07/08/2024 01:15:00	00:15:00	36.1	16.1	20.5	31.4	21	17.8	17.1
07/08/2024 01:30:00	00:15:00	35.8	16.2	20.4	31	21.3	17.9	17.1
07/08/2024 01:45:00	00:15:00	32.7	16.3	19.8	29.6	20.5	17.9	17.1
07/08/2024 02:00:00	00:15:00	36.9	16.3	20.8	32.4	20.5	18.1	17.2
07/08/2024 02:15:00	00:15:00	37.4	16.5	20.4	31.2	20.8	18.4	17.3
07/08/2024 02:30:00	00:15:00	38.1	16.2	21.1	32.5	21.2	18.1	17.2
07/08/2024 02:45:00	00:15:00	36.6	16.2	21.1	32.2	21.7	17.9	17.1
07/08/2024 03:00:00	00:15:00	35.9	16.1	20.7	31.6	21.2	17.9	17.1
07/08/2024 03:15:00	00:15:00	35.9	16.4	20.6	31.8	20.8	18	17.2
07/08/2024 03:30:00	00:15:00	36.5	16.1	20.3	31.9	19.6	17.7	17.1
07/08/2024 03:45:00	00:15:00	32.3	16.1	18.4	27	18.7	17.6	17.1
07/08/2024 04:00:00	00:15:00	35.6	16.0	19.0	29	18.7	17.6	17.1
07/08/2024 04:15:00	00:15:00	38.5	16.2	20.4	31.8	19	17.7	17.1
07/08/2024 04:30:00	00:15:00	27.4	15.9	17.6	18.9	18.5	17.6	17.1
07/08/2024 04:45:00	00:15:00	33.5	16.0	18.7	27.7	18.8	17.7	17.1
07/08/2024 05:00:00	00:15:00	20.4	16.2	17.7	19.1	18.6	17.6	17.1
07/08/2024 05:15:00	00:15:00	33.1	16.4	18.7	27.4	18.8	17.8	17.1
07/08/2024 05:30:00	00:15:00	19.9	16.2	17.6	18.9	18.5	17.6	17.1
07/08/2024 05:45:00	00:15:00	33.1	16.0	17.7	18.9	18.6	17.6	17.1
07/08/2024 06:00:00	00:15:00	45.5	16.4	21.8	32.7	20.5	18.4	17.3
07/08/2024 06:15:00	00:15:00	43.1	17.1	25.4	36.7	28.6	19.9	18.3
07/08/2024 06:30:00	00:15:00	35.0	17.3	21.0	28.7	22.9	19.6	18.2
07/08/2024 06:45:00	00:15:00	41.5	17.3	25.7	37.6	26.8	20.2	18.5
07/08/2024 07:00:00	00:15:00	42.6	17.5	24.4	36.7	24.4	20.2	18.6
07/08/2024 07:15:00	00:15:00	42.7	17.3	24.5	36.3	24.5	19.9	18.3
07/08/2024 07:30:00	00:15:00	41.0	16.8	23.6	35.8	23.3	19.8	18.4
07/08/2024 07:45:00	00:15:00	39.6	17.0	21.6	31	23	19.6	18.1
07/08/2024 08:00:00	00:15:00	40.2	17.1	22.3	34.2	22.5	19.3	18.1
07/08/2024 08:15:00	00:15:00	40.1	17.0	22.9	34.8	23.3	19.2	18
07/08/2024 08:30:00	00:15:00	44.2	17.2	23.7	35.2	23.2	19.4	18.1
07/08/2024 08:45:00	00:15:00	39.1	16.9	21.3	33.3	20.7	18.8	17.8
07/08/2024 09:00:00	00:15:00	41.3	16.9	23.8	35.7	24	19.1	17.9
07/08/2024 09:15:00	00:15:00	41.3	16.7	23.6	36	22.4	18.8	17.7
07/08/2024 09:30:00	00:15:00	41.1	16.7	22.6	35.3	20.8	18.7	17.5
07/08/2024 09:45:00	00:15:00	37.8	16.7	21.6	33.3	21.4	18.7	17.6
07/08/2024 10:00:00	00:15:00	40.4	17.0	23.8	36.1	22.6	19.3	18
07/08/2024 10:15:00	00:15:00	41.3	16.7	22.8	35.8	20.7	18.5	17.4
07/08/2024 10:30:00	00:15:00	42.1	16.7	23.1	35.5	22.2	18.7	17.5
07/08/2024 10:45:00	00:15:00	26.1	16.6	18.3	20.7	19.2	18.2	17.2
07/08/2024 11:00:00	00:15:00	40.3	16.3	21.7	34.7	20.2	18.4	17.3

Glazing Assessment

07/08/2024 11:15:00	00:15:00	38.9	16.5	21.6	33.1	21.4	18.6	17.5
07/08/2024 11:30:00	00:15:00	40.6	16.8	23.4	36.2	22.9	18.7	17.4