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10 September 2020

Luke Mead
Swain's Lane Ltd.
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City Garden Row
London
N11 8DW

Dear Luke

Swain's Lane - CHP Flue Noise Assessment

SRL have been commissioned to assess the noise from the flue of the CHP flue at Swain's Lane, because it was not included in the previous plant noise assessment, SRL document '*14242-T05D - Plant Noise Assessment*' dated 01 November 2019.

As per our previous plant noise assessment, the CHP flue can be assessed against the criteria from Appendix 3 of Camden's Local Area Plan 2017. The noise thresholds for plant noise at the nearest noise sensitive receptors, taken from Table 3 of our previous noise assessment, have been reproduced in Table 1 below. Please note that these thresholds include a 5dB penalty for audible tonal elements.

Table 1 - Noise thresholds for plant noise at nearby noise sensitive receptors

	Typical background noise levels, dB L_{A90}	Green, dB L_{ATr}	Amber, dB L_{ATr}	Red, dB L_{ATr}
Daytime	45	≤ 30	31 - 35	> 35
Night-time	35	≤ 20	21 - 25	> 25

As the CHP unit is installed and operating, I attended site on 03 September 2020 and completed noise measurements to determine the noise levels from the flue. The flue opening is approximately 2m above the roof level, and measurements were taken at that height at 1m away for 5 minutes each, with the CHP turned on and once again with it turned off. The results of these measurements are shown in Table 2 and the survey details can be found in Appendix A.

Table 2 - Noise survey measurement results at 1m from CHP flue

Plant Condition	Measured L_{Aeq} (dB)	Measured L_{A90} (dB)	Comments
On	54	51	Low frequency hum noise from flue just audible over existing ambient noise level
Off	52	49	Traffic noise from surrounding roads

With the CHP in steady operation throughout the first measurement period the noise level from the flue can be represented by the measured L_{A90} value. However, this will also include contributions from the existing ambient noise. By subtracting the L_{A90} measurement result with the plant turned off from the measurement result with the plant turned on, the noise level from the plant can be calculated to be 47dB L_{Aeq} at 1m away from the flue.

Using this result, I have calculated the noise from the CHP flue at the nearest noise sensitive receptors and compared it to Camden's requirements. I have also included the night-time cumulative noise levels calculated at each receptor which was included in our previous plant noise assessment. This is shown in Table 3.

Table 3 - Summary of plant noise to noise sensitive receptors

Receptor	CHP flue calculated specific plant noise at receptor, dB L_{Aeq}	Previous assessment's plant noise at receptor, dB L_{Aeq}	Cumulative specific plant noise at receptor, dB L_{Aeq}	Potential acoustic feature correction, dB	Rating noise level, dB $L_{A,Tr}$	Camden's threshold for noise to be at an acceptable level, dB $L_{A,Tr}$
Brookfield (Day)	11	18	19	3 for intermittency	22	≤ 30
Brookfield (Night)	11	3	12	3 for intermittency	15	≤ 20
New Cottage (Day)	13	15	17	3 for intermittency	20	≤ 30
New Cottage (Night)	13	0.1	13	3 for intermittency	16	≤ 20

As shown in Table 3, the cumulative plant noise at the noise sensitive receptors is within the green threshold. Camden classifies this as "*where noise is considered to be at an acceptable level*".

The existing noise environment around the site is dominated by road traffic noise and measured to be 52 dB L_{Aeq} during the day and 47 dB L_{Aeq} during the night. The noise from the CHP flue will be largely inaudible at the noise sensitive receptors. I therefore consider that in this instance, given the context of the noise environment and that the noise from the cumulative plant results are below Camden's threshold, that the noise from the flue is acoustically acceptable.

Yours sincerely,

Joe Conaghan BSc MIOA
For and on behalf of
SRL Technical Services Limited
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Appendix A - Survey Details

A1. Location of Survey

Swain's Lane, London

A2. Date & Time of Survey

03 September 12:17 - 13:05

A3. Personnel Present During Survey

Joe Conaghan (SRL Technical Services Ltd.)

A4. Weather Conditions during Survey

Overcast, slight breeze, approximately 15°C

A5. Instrumentation

Bruel & Kjaer - Noise Meter HE2

Description	Location	SRL No.	Serial	Make	Model
Sound Level Meter (HE2)	Holbrook	615	2579806	B&K	2250
Pre-amp	Holbrook	616	22126	B&K	ZC0032
Microphone	Holbrook	617	2584598	B&K	4189
Calibrator	Holbrook	618	2583398	B&K	4231

A6. Calibration Procedure

Before and after the survey the measurement apparatus was check calibrated to an accuracy of ±0.3 dB using the type 4231 Sound Level Calibrator. The Calibrator produces a sound pressure level of 93.8 dB re 2 x 10-5 Pa at a frequency of 1 kHz.