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Planning Statement – Roof Top Flues

DEVELOPMENT AT

Sonny Heights West,
London,
N6 6QX.

CLIENT

Swains Lane Ltd

PREPARED BY

Tasou Associates
4 Amwell Street
London
EC1R 1UQ

FOR THE ATTENTION OF

Jonathan McClue
Principle Planning Officer
London Borough of Camden
Planning Services
5 Pancras Square
London
N1C 4AG

1.0 Introduction

On behalf of our client, Swains Lane LTD, please find enclosed a Full Planning Application for the installation of roof top flues on the West Building, associated with the Combined Heat and Power system (CHP), communal boiler system, and MVHR systems.

This application comprises the following documents:

1 Completed application form, Certificate B and Agricultural Declaration
2 CIL- Planning Application Additional Information Requirement Form
3 Site Location Plan
4 Application Drawings (see Appendix 1)
5 Noise Assessment (see Appendix 2)

The Application Fee and Service Charge payment has been nominated by Tasou Associates to Swains Lane LTD.

2.0 Background

The inclusion of a CHP system was a requirement of the original planning approval (2013/6674/P) to reduce the developments annul CO2 emissions. This system requires a flue on the building's roof.

The flue runs vertically from the basement plant room within a vertical service riser that is adjacent to the circulation core for space planning efficiency.

The flue design has been undertaken and installation has been carried out by a Specialist and in accordance with the Clean Air Act 1993, British Standards and the Gas Safe Regulations.

These regulations require the flue to be 1m above the highest part of the roof within 2.5m, which on this building, is the adjacent lift over run.

The flue termination is also to be clear of ventilation ducts and openable roof lights. As such, the MVHR ducts have been positioned so that the CHP flue is set to the minimum height required by the above statutory legislation and regulations.

3.0 Street Views

Figure 1 - Photograph Location Plan

Figure 2 - Photograph A – Minimal view of flue (worst case scenario)

Figure 3 - Photograph B – No view to flue

Figure 4 - Photograph C – No view to flue

4.0 Acoustics

A noise assessment was undertaken by SRL LTD to assess the acoustic impact of the flue against Camden's planning policies.

In summary, the report concludes the noise levels emitted from the 'CHP flue will be largely inaudible at the noise sensitive receptors'

Please refer to Appendix 2 for the full Noise Assessment (ref: 14242-SRL-CO-YA-09-P1)

4.0 Mitigation Measures

In response to comments received by the LPA from neighbours regarding the solar glare emitting from the stainless-steel flue, the flue has been painted a matt bronze colour to match the second-floor bronze cladding (figure 5).

This method and colour were suggested to Planning Officer Jonathan McClue during email pre-application advice (dated 25.06.2020).

Figure 5 - Photograph of the flue painted matt bronze.

5.0 Summary

We trust that you have all the information you require to validate and determine this application.

Given the minimal views from the public realm, largely inaudible noise from the nearest receptors and the mitigating paint colour, we hope this satisfies all concerns and a positive result can be determined.

Appendix 1

COMMUNAL CHP FLUES PAINTED MATT BRONZE
INSTALLED IN ACCORDANCE WITH THE CLEAN AIR
ACT 1993, BS66544 AND GAS SAFE
REGULATIONS.
THE FLUE HEIGHT MUST BE MIN. 1M ABOVE ANY
PART OF THE BUILDING WITHIN 2.5M.

MVHR FLUES

LIFT OVER RUN

MVHR FLUES HIDDEN BENEATH PARAPET WALL

ONLY ROOF TOP FLUES ARE ASSOCIATED WITH THIS APPLCATION

Do not scale off this drawing.

All indicated dimensions to be checked and verified on site by the Main Contractor before commencement of any fabrication drawings or work whatsoever on site.

Report all discrepencies to the Architect immediately.
This drawing is to be read in conjunction with all the related Architect's and Structural Engineer's drawings, details and all relevant information.

rev.	rev. date	rev. description

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project
Swain's Lane
London
N6 6QX

drwg title
Proposed Roof Plan
West Building

date	drwg no.	rev.
September 2020	GA-009	H
scale @ A1	job no.	
1:50	1658	

Appendix 2

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Birmingham, London, Manchester, Sudbury

14242-SRL-CO-YA-09-P1
10 September 2020

Luke Mead
Swain's Lane Ltd.
5 Paper Mill Buildings
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
Tel: 01787 247595
Email: jconaghan@srltsl.com

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.