Our Ref: 6571/AH

11 November 2015

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Dear Matt

SOMERS TOWN ENERGY CENTRE
ACOUSTIC COMMISSIONING

RBA Acoustics previously undertook measurements of the prevailing noise conditions at Somers Town Energy Centre in order to determine the atmospheric emissions in accordance with London Borough of Camden's requirements. The methodology, measurements and associated limits are summarised in RBA Acoustics report number 6571/PNA dated 27 January 2015.

The energy centre is now operational and RBA Acoustics has returned to the site in order to commission the noise and vibration levels generated by the energy centre. A comparison of measured levels in line with the previously established criteria are outlined herein.

Measurements were taken in the same locations as previously as described below. Details of the equipment used for the survey is provided at the end of this letter.

Position 1 – Purchese Street

A microphone was positioned on a tripod on Purchese Street approximately 1 metre away from the facade of the energy centre at approximately 1.2 metres above ground level. This position is considered as being representative of the noise climate as experienced at the most affected residential windows overlooking Purchese Street.

Position 2 – Brill Place

A microphone was positioned on a tripod on Brill Place approximately 1 metre away from the facade of the proposed energy centre at approximately 1.2 metres above ground level. This position is considered as being representative of the noise climate as experienced at the most affected residential windows overlooking Brill Place.

Noise limits

The requirements of the Local Authority with regards to plant noise emissions are stated in Planning Condition 2 which states:

> *"Noise levels at a point 1 metre external to sensitive facades shall be at least 5dB(A) less than the existing background measurement (LA90), expressed in dB(A) when all plant/equipment (or any part of it) is in operation unless the plant/equipment hereby permitted will have a noise that has a distinguishable, discrete continuous note (white, hiss, screech, hum) and/or if there are distinct impulses (bangs, clicks, clatters, thumps), then the noise levels from that piece of plant/equipment at any sensitive façade shall be at least 10dB(A) below the LA90, expressed in dB(A)."*

The relevant background noise (L90) levels measured previously at the site are as follows:

Position 1 – Purchese Street – 43 dBA
Position 2 – Brill Place – 46 dBA

In line with the above, plant noise emission limits have been established as 38 dBA on Purchese Street and 41 dBA on Brill Place. In order to demonstrate compliance with these limits, measured noise levels should not exceed the following values which are derived from a logarithmic addition of the plant noise limit and the background noise level.

Position 1 – Purchese Street – 44 dBA
Position 2 – Brill Place – 47 dBA

Commissioning Noise Survey

Noise levels were measured at the site between 02:00 and 03:30 hours on 11 November 2015 at the locations described above. These were the quietest hours noted during our original noise survey and as such are considered times of lowest ambient noise at the site. We understand the Energy Centre was operating at normal operating duty during this time.

Results

The measurement results at each location are outlined in Table 6571/T1.

Table 6571/T1 – Measured Noise Levels

Position 1- Purchese Street	Position 2- Brill Place
L_{90} (dBA)	L_{90} (dBA)
39	42
40	45

As can be seen, noise levels are below the limits outlined above and should therefore be considered compliant with Planning Condition 2.

Subjectively no discrete tones, or impulses were noted from the Energy Centre.

Vibration Limits

In addition to the noise limits outlined above the following vibration limits are also proposed for the site as per the requirements outlined in Schedule 17D.

Table 6571/T2 - Vibration Limits

Vibration description and location of measurement	Period	Time	Vibration levels
Vibration inside dwellings	Day and evening	0700 – 2300	0.2 to 0.4 VDV $ms^{-1.75}$
Vibration inside dwellings	Night	2300 - 0700	0.13 VDV $ms^{-1.75}$
Vibration inside offices	Day, evening and night	0000 - 2400	0.4 VDV $ms^{-1.75}$

Measured Vibration Levels

Measured vibration levels were undertaken within the office areas directly above the Energy Centre between 12:00 and 12:30 hours on 9 November 2015 and are considered to represent worst case vibration levels within the office space but also representative of vibration levels within the adjacent residences.

Measurements were undertaken on a steel fixing block bonded to the bare screed floor at the western side of the first floor office. Horizontal and vertical axis measurements were recorded. Details of the equipment used for the survey is provided at the end of this letter.

From the measurements recorded, the following vibration levels have been calculated assuming 24 hour operation of all plant.

Table 6571/T3 - Vibration Levels

Period	Time	Vibration levels
Day and evening	0700 – 2300	0.013 VDV $ms^{-1.75}$
Night	2300 - 0700	0.011 VDV $ms^{-1.75}$

Vibration levels are considerably below the limits outlined in Table 6571/T2 and should therefore be considered acceptable.

Conclusion

RBA Acoustics have commissioned noise and vibration levels associated with the Somers Town Energy Centre. All measured levels are within the required limits and should therefore be considered appropriate.

We hope the above is clear and of use. Should there be any questions, please do not hesitate to contact the undersigned.

Yours sincerely,
For RBA Acoustics

Andrew Heath

Measurement Equipment

The sound level meter used for the commissioning measurements is detailed below.

Table 6571/T4 – Noise Instrumentation

Manufacturer	Model Type	Serial No.	Calibration	
			Certificate No.	Valid Until
Norsonic Type 1 Sound Level Meter	Nor140	1406007	473728419	10 June 2016
Norsonic Pre Amplifier	1209	20043		
Norsonic ½" Microphone	1225	208146		
Norsonic Sound Calibrator	1251	34127	CAL 022-2014-4647	1 July 2016

The equipment used to measure vibration consisted of two uniaxial accelerometers, which are connected via a 01dB Symphonie system to a laptop PC as outlined in the following table.

Table 6571/T5 – Vibration Instrumentation

Equipment	Type	Serial Number	Calibration date	Calibration Certificate
01dB Symphonie data acquisition unit	-	01743	-	-
DJB accelerometers	Type A/121/V	1213 & 1264	1 August 2012	138883 & 138884
Vibration Calibrator	Type AT01	2003	20 July 2012	1207316

All equipment was calibrated both prior to and on completion of the surveys and no calibration drifts were observed.