NOISE SURVEY REPORT

On behalf of:	**Barrack Holdings Ltd** **283 High Road Leyton** **London** **E10 5QN**
Undertaken by:	**Envirosound Ltd** **Unit 8** **Murrell Green Business Park** **London Road** **Hook** **Hampshire** **RG27 9GR** **Tel: 01256 760775** **Fax: 01256 760754**
Site address:	**KFC Restaurant** **237-239 High Street** **Camden** **London** **NW1 7BU**
Survey Date	**09.09.2014 to 12.09.2014**
File ref	**P5169**
Report	**Issued 06.10.14**
Compiled by:	**P R Hartnell**
Checked by:	**D Brown MIOA.AMIMechE.Grad Dip Mech**

Contents

1.0 Reason for survey

2.0 Equipment used

3.0 Observations

4.0 Method

5.0 Weather Conditions

6.0 Measurements

7.0 Summary of measurements

8.0 Assessment of plant noise

9.0 Plant Details

10.0 Noise Mitigation Measures

11.0 Conclusions

12.0 Photographs

13.0 Survey results

1.00 Reasons for Survey

1.01 In advance of plans to redevelop the premises and replace the existing mechanical services, a noise survey has been commissioned to establish by measurement the background noise level in the vicinity of the premises, number 237-239 High Street, Camden.

The findings of the survey have subsequently been used to provide a BS4142 Plant Noise Assessment in regard to the proposed installation of replacement mechanical services, comprising ventilation plant, and refrigeration condensers

2.00 Equipment Used

2.01 A Cirrus Research PLC CR171B sound level meter serial number G056549 used in conjunction with a Cirrus CR:515 acoustic calibrator serial number 57252. This is an integrating instrument for parallel real-time measurement of octave bands and 1/3 octave bands between 12.5 Hz to 20 kHz, including weighted measurements and statistical time averaged and percentile measurements. This instrument also provides the option for audio recording where called for. The instrument was checked for calibration prior to and after the survey.

2.02 The above equipment was used in conjunction with A Cirus CK:670 Outdoor Kit comprising Ck601 weatherproof enclosure MK:170 Outdoor Microphone Unit and ZE:100 Battery Pack.

Copies of the Calibration Certificates for the above equipment are available on request.

3.00 Observations

3.01 The current opening times for the KFC Restaurant are listed in the table below. The planned opening hrs will remain as those shown following the planned redevelopment. It is assumed that existing ventilation and air conditioning units may be in operation approximately 30 minutes prior to the restaurant opening. Similarly it is assumed that the two existing refrigeration condensers operate

intermittently throughout the day and may also do so overnight. The replacement plant is assumed to operate at the same time.

KFC Camden, Opening Times	
Monday	11:00-23:00
Tuesday	11:00-23:00
Wednesday	11:00-23:00
Thursday	11:00-23:00
Friday	11:00-00:00
Saturday	11:00-00:00
Sunday	11:00-23:00
Note, the ventilation and air conditioning plant serving the restaurant is likely to be in operation approximately 30 minutes prior to the restaurant being open.	

3.03 To the rear of the KFC restaurant is Arlington Conference Centre. Part of this centre is residential, although it is not known which part. In view of this we suggest that contact is made with the conference centre management. The closest window to the North and South facing facades of the conference centre are in excess of 10m from the rear of the KFC restaurant.

3.04 The adjoining property to the South, number 235 Camden High Street appears to include residential flats at second floor level with access being via a balcony. The rooms that face on to the balcony are possibly to kitchens and therefore less noise sensitive, this has yet to be established.

3.05 The adjoining property to the North 241 Camden High Street appears to be commercial throughout, whilst 243 Camden High Street further to the North is considered to be residential at first and second floor level.

3.06 Subjectively the existing refrigeration units create a noise level that is tonal in nature and the dominant source of noise.

4.00 Method

4.01 The Cirrus Research PLC CR171B sound level meter and all weather protection system was located on the first floor roof of 237 High Street, Camden, in a position furthest from the existing plant.

4.02 The equipment was configured to record the statistical L_{A90} background noise levels and corresponding equivalent continuous L_{Aeq} noise levels over consecutive 15 minute periods commencing Tuesday 9th September until Friday day 12th September.

4.03 The instrument was checked for calibration prior to and after the survey. Copies of the Calibration Certificates for the above equipment are available on request.

5.00 Weather Conditions

5.01 The weather conditions during the survey period were calm and dry with night time temperatures falling to approximately 14^0c.

6.00 Measurements

6.01 Measurements are shown in spread sheets and graphs provided in section 13.00**.** Period measurements are shown with the location and times. The listings show the equivalent continuous sound level Leq and the level exceeded 90% of the time (LN 90%).

7.00 Summary of Measurements

7.01 The lowest recorded $L_{A90\ 15min}$ background noise level corresponding to the existing permitted opening hours are listed in the table below.

Summary of lowest boundary noise levels during permitted opening hours		
	L_{Aeq}	L_{A90}
Tuesday 09.09.2014	55.8	54.2
Wednesday 10.09.2014	55.2	53.6
Thursday 11.09.2014	54.4	53.0
Friday 12.09.2014	55.2	53.6
Lowest L_{A90}		53

7.02 In regard to the refrigeration plant and its operation during the night time period (23:00hrs to 00:70hrs) the lowest $L_{A90\ 15min}$ background level recorded during the survey period was 42dB L_{A90}

Summary of lowest site boundary night time LA90 background noise levels (23:00hrs to 07:00hrs)	
	L_{A90}
Wednesday 10.09.2014	40.7
Thursday 11.09.2014	44.0
Friday 12.09.2014	42.0

8.00 Assessment of Plant Noise

8.01 Noise from mechanical services plant associated with the development should be controlled to minimise impact upon residential properties. Typically this is best achieved by ensuring plant noise arising at residential properties is below the existing background level. Planning consents issued by London Borough of Camden (LBC) generally include several conditions which relate to noise and vibration. The standard condition that is likely to apply to this development is as follows:

"Noise levels at a point 1m external to sensitive facades shall be at least 5dBA less than the existing background level (L_{A90}) expressed in dBA when ALL plant/equipment are in operation. Where it is anticipated that any plant/equipment will have a noise that has a distinguishable, discrete continuous note (wine, hiss, screech, hum) and/or if there are distinct impulses (bangs, clicks, clatters, thumps) special attenuation should be given to reducing the noise levels from that piece of equipment at any sensitive façade to at least 10dBA below the L_{A90}, expressed in dBA. The applicant is therefore required to undertake a full acoustic background noise assessment, the full details of which shall be submitted to the Council, in order that the design criteria for the acoustic enclosure of plant/equipment can be properly assessed.

For each of the octave bands of centre frequencies 63Hz-8kHz inclusive, noise levels from ALL plant/equipment (measured in L_{Aeq})

When in operation shall at all times add not more than 1 decibel to the existing background level L_{A90}, expressed in dBA in the same octave band as measured 1 metre external to sensitive facades"

8.02 Summary of the predicted mitigated plant noise levels.

Summary of the specific plant noise levels and corresponding BS4142 Noise rating levels					
Location		Day time	Night time	Day time	Night time
		L_{Aeq}	L_{Aeq}	BS4142 Noise Rating levels	
A	Rear façade of 235 Camden High Street	42.7	27.7	43	33
B	North Facing façade of Arlington Conference Centre *	41.2	28.8	42	34
C	Rear façade of 243 Camden High Street	43.1	28	43	33
D	South facing Façade of Arlington Conference Centre*	34	23	35	28
Please Notes. The predicted noise levels 1m from the North and South facing facades of Arlington Conference Centre are calculated for positions up to 4m above the plant location. It has yet to be established if these locations are noise sensitive. In regard to the refrigeration condensers the rating levels shown above include a 5dB character correction in regard to there intermittent operation .					

8.03 BS4142 Plant Noise Assessment based on the existing permitted opening hrs and lowest $L_{A90\ 15min}$ background noise level recorded during this period.

Accumulative plant noise rating level at location A & C* 43dB
Existing lowest $L_{A90\ 15min}$ background noise level 53dB

Assessment Level -10dB

Conclusion, complaints are unlikely.

8.04 BS4142 Plant Noise Assessment for the night time period

Accumulative plant noise rating level at location A & C* 43dB
Existing lowest $L_{A90\ 15min}$ background noise level 42dB

Assessment Level -9dB

Conclusion, complaints are unlikely

9.00 Plant Details

9.01 Ventilation

Propose Ventilation Plant											
System	Manufacturer	Model	Air Volume m^3/sec	Octave Band Sound Power levels dB							
				63	125	250	1k	2k	4k	8k	
Kitchen Extract Fan, 0utlet SWL	Helios	GBD 560/4/4 T120	3.4	92.1	85.6	82.2	79	75.8	71	65.1	dB
Toilet Extract Fan, Outlet SWL	Helios	SB160B	0.1	71.1	62.6	57.2	57	51.8	49	44.1	dB
Fresh air Inlet Fan, Inlet SWL	Helios	GBD 560/6/6	2.4	67.1	61.6	66.2	64	59.8	52	44.1	dB

9.02 Refrigeration

Refrigeration Plant						
System	Manufacturer	Condenser Model	Dimensions mm			Noise level dB(A)
			Width	Depth	Height	
Veg Chiller	Trenton	TPCU30	900	300	560	51dB(A)@1m
Freezer	Trenton	TPCU HLT50	1000	350	660	33dB(A)@10m
Chicken Chiller	Trenton	TPCU 30	900	300	560	51dB(A)@1m

10.00 Noise Mitigation Measures

10.01 Ventilation Systems

The following attenuator selections have been made to control duct borne noise to atmosphere.

Proposed Attenuator Selections & Required Dynamic Insertion Losses														
System	Model	Dimensions mm			Air Volume m^3/sec	PA	Octave Band Centre Frequencies Hz							
		Width	Height	Length			125	250	500	1k	2k	4k	8k	
Kitchen Extract Discharge	EVS-5-1500-ME	700	900	1500	3.4	40	10	18	27	31	26	17	11	dB
Kitchen Fresh Air Inlet	EVS-5-900	1000	600	900	2.4	27	7	9	17	18	22	21	16	dB
Toilet Exhaust	EVS C100	160ØID	260ØOD	600	0.1	Neg	3	8	20	35	27	16	10	dB

10.02 Refrigeration Plant.

The refrigeration condensers have the potential to operate overnight subject to demand. In view of this the refrigeration plant may occur at the quietest time of night. Their operation is intermittent and on this basis the noise is assumed to attract a 5dB character correction in accordance with BS 4142.

In view of the above, based on the lowest LA90 15min night time background level, acoustic screening is proposed to protect the nearest residential properties 243 and 235 Camden High Street.

Based on the plant layout provided, the acoustic screen dimensions are provisionally 5.2m long x 1.7m wide x 1.5m high. The acoustic screen should be formed from sound absorbent acoustic panel work having an Rw30 sound insulation index. The acoustic screen should be in close contact with the roof and include a hinged access section.

11.00 Conclusions

11.01 Calculations undertaken to predict the plant noise rating levels at the nearest residential property result in predicted noise rating levels that are 9dB below the lowest recorded night time $L_{A90\ 15\ min}$ background

level and 10dB below the lowest recorded $L_{A90\ 15\ min}$ background level occurring during the existing opening hrs 11:00hrs to 24:00hrs . The rating levels are based on the recommended noise mitigation measures which include acoustic screening and the use of duct mounted attenuators for the ventilation systems.

11.02 The conclusions drawn from the BS 4142 plant noise assessment concludes that complaints are unlikely; these proposals should therefore be considered acceptable and approved.

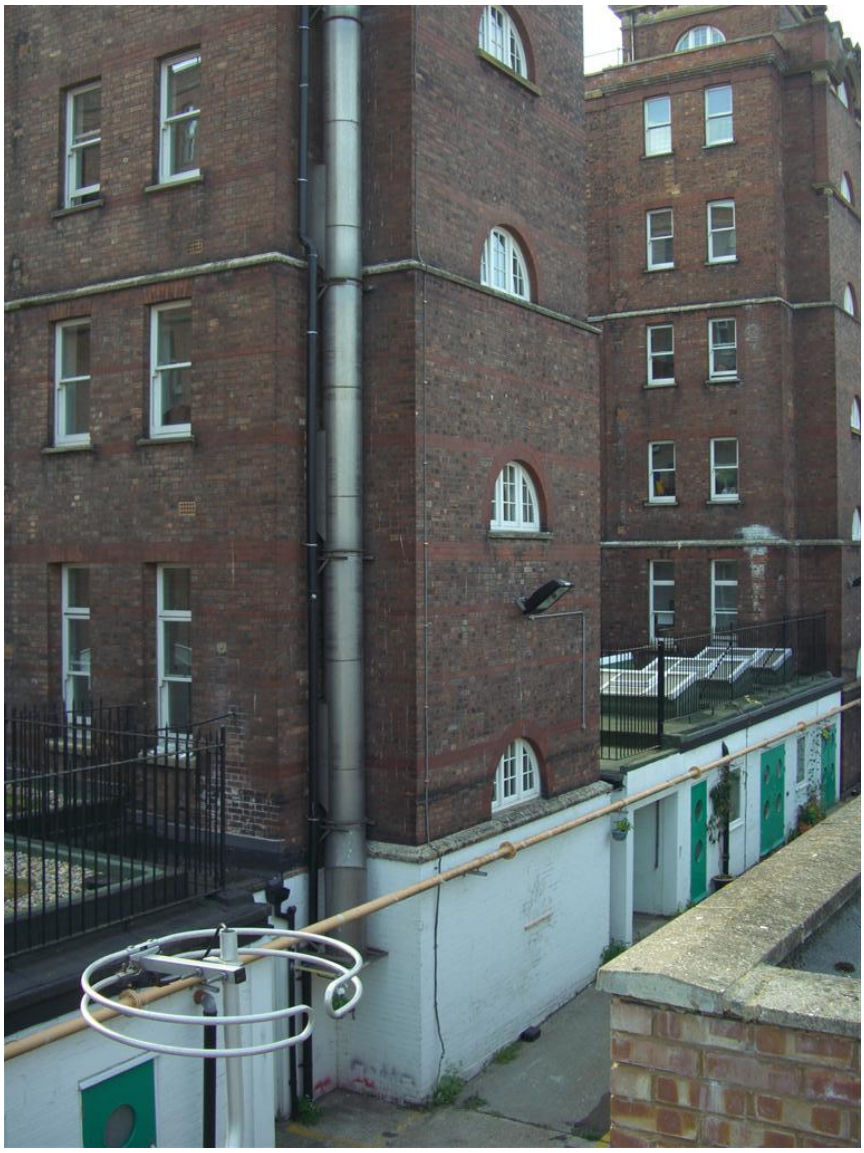
12.00 Photographs & Site Plan

View of the existing fresh air ventilation system and AC condensers on the first floor roof of 239 Camden High Street. The nearest AC unit is redundant; the two AC condensers furthest to the right are on the roof of 237 Camden High Street.

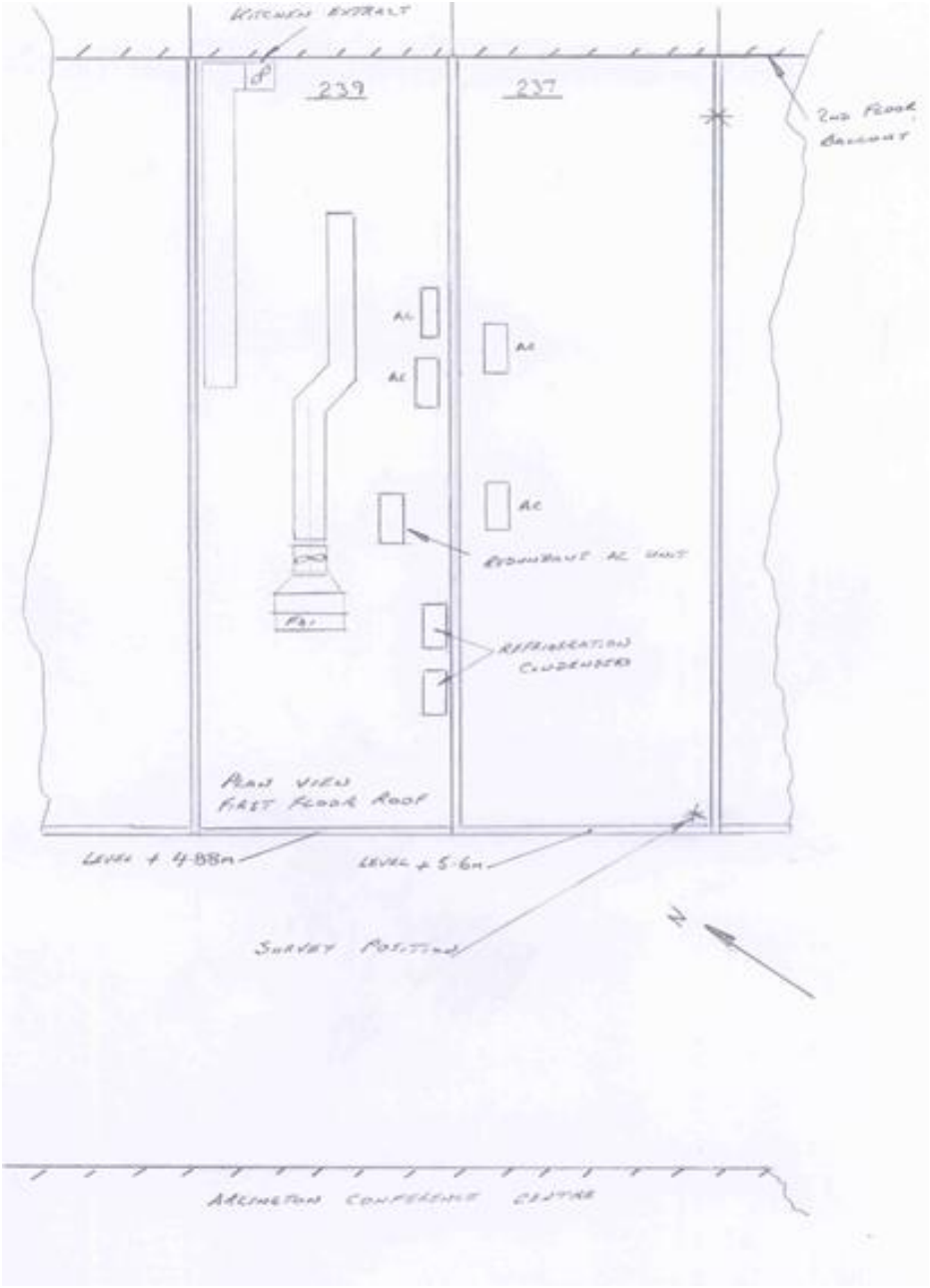
View of the existing supply and extract ventilation systems on the first floor roof of 239 Camden High Street. The duct riser seen to the right is redundant.

Refrigeration condensers in the vicinity of the fresh air inlet. In the background an access balcony to flats can be seen.

A view looking North East across the adjoining commercial premises. The properties seen beyond are assumed to be residential.



A view looking in a Westerly direction towards Arlington Conference Centre from the first floor roof of 239 Camden High Street. Part of Arlington Conference Centre is residential



Existing 1st Floor Roof Plan. For details of the proposed plant layout please refer to Hone Edwards drawings

13.00 Survey Results

Chart. Tuesday 09.09.2014

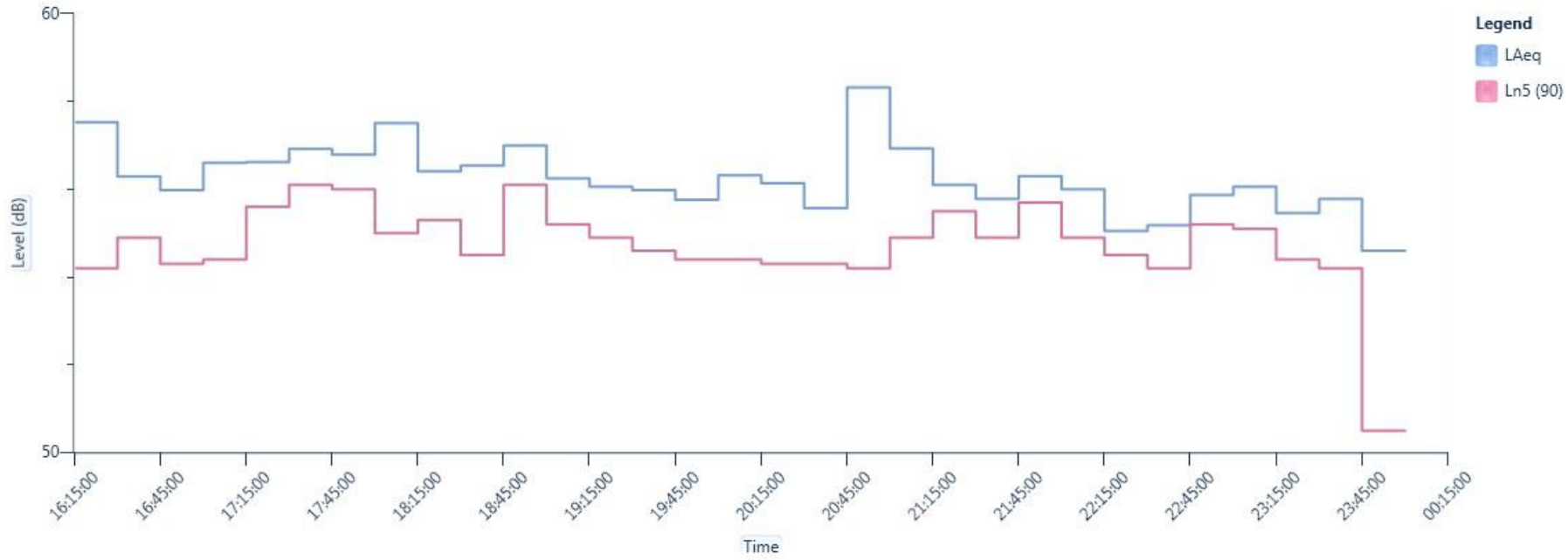


Chart. Wednesday 10.09.2014

Chart. Thursday 11.09.2014

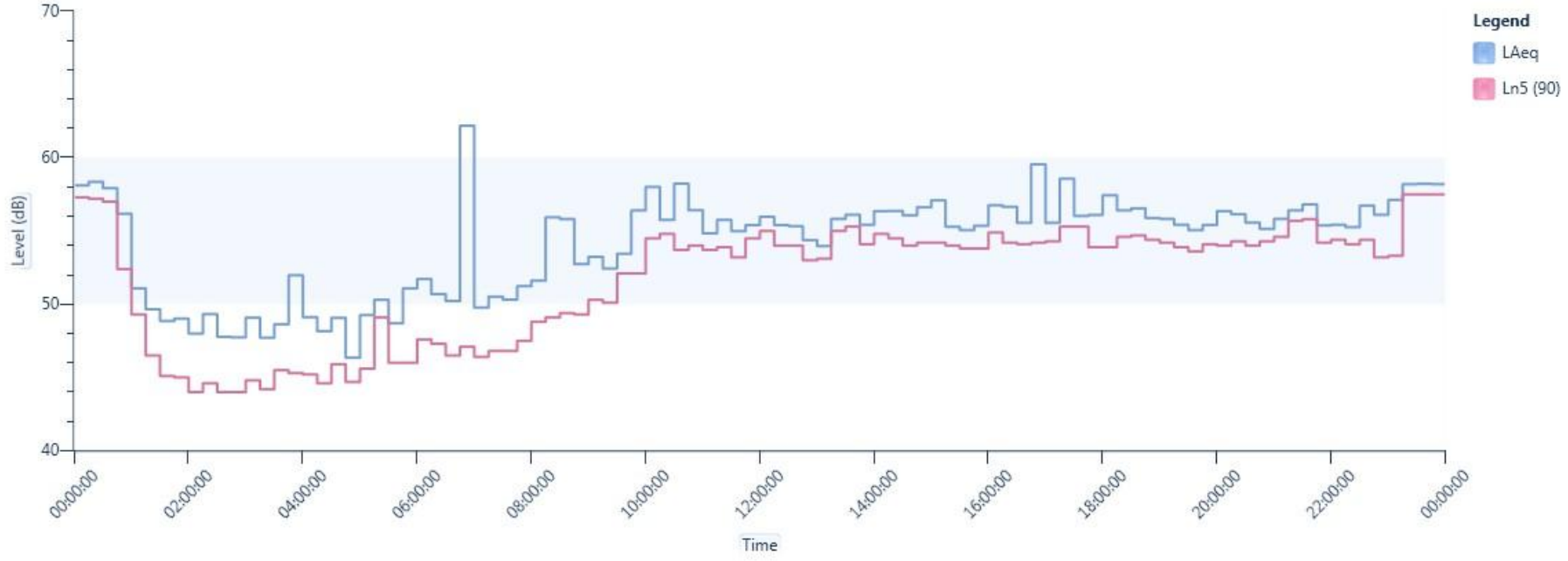
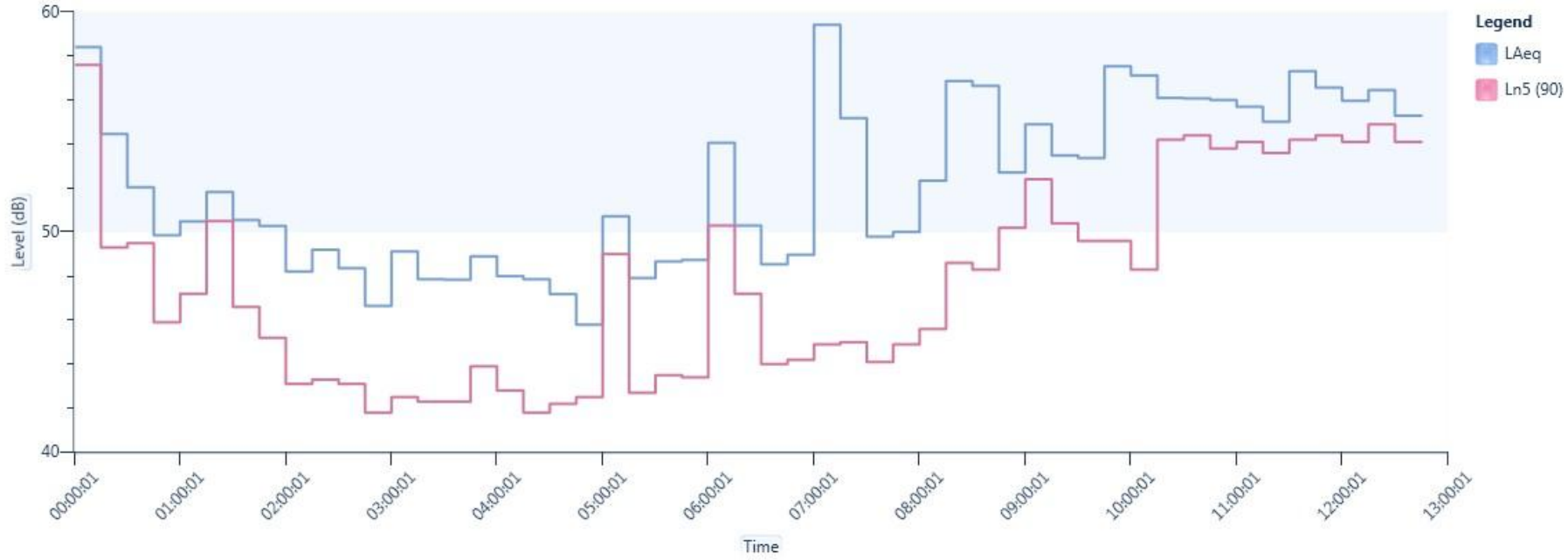


Chart. Friday 12.09.2014



ENVIROSOUND

Project :	**237-239 High Street Camden**
File :	**P5169**
Survey Date:	**09.09.2014**

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
09/09/2014 16:15:00	00:15:00	54.2	69.5	57.5	61.4	66.5	59.6	58.5	54.1	52.8	48.5	44.1	47.4	25	54
09/09/2014 16:30:01	00:15:00	54.9	69.9	56.3	61.1	66.6	61.5	58.6	53.1	51.1	47.3	40.5	31.6	24	51
09/09/2014 16:45:00	00:15:00	54.3	70.2	56.0	61.7	66.7	62.0	56.3	54.1	51.1	46.6	41.1	34.0	24	51
09/09/2014 17:00:01	00:15:00	54.4	71.0	56.6	61.9	68.0	62.6	57.4	53.2	51.3	48.9	43.0	32.8	24	52
09/09/2014 17:15:00	00:15:00	55.6	70.5	56.6	61.4	66.6	62.2	59.9	53.4	51.0	46.5	39.6	28.7	23	51
09/09/2014 17:30:01	00:15:00	56.1	70.9	56.9	62.2	66.8	62.3	60.9	53.2	50.8	46.0	39.7	28.5	23	53
09/09/2014 17:45:01	00:15:00	56.0	71.3	56.8	61.3	66.7	62.1	60.5	53.2	50.8	46.1	39.2	28.4	22	52
09/09/2014 18:00:00	00:15:00	55.0	70.6	57.5	60.7	66.8	63.3	60.2	54.9	52.0	47.0	40.5	30.6	22	52
09/09/2014 18:15:01	00:15:00	55.3	71.2	56.4	60.2	66.6	62.1	59.3	53.4	50.9	46.4	40.2	30.0	21	51
09/09/2014 18:30:00	00:15:00	54.5	71.7	56.5	61.0	67.0	62.1	58.7	53.8	51.6	46.6	39.8	29.6	21	52
09/09/2014 18:45:00	00:15:00	56.1	71.1	57.0	61.9	66.8	61.8	60.4	53.6	51.4	46.7	40.1	28.9	20	52
09/09/2014 19:00:00	00:15:00	55.2	71.0	56.3	62.8	67.0	61.9	59.1	53.3	50.8	46.0	39.2	28.1	20	51
09/09/2014 19:15:00	00:15:00	54.9	70.5	56.1	62.6	66.7	61.9	58.8	53.3	50.5	45.8	39.4	28.6	19	50
09/09/2014 19:30:01	00:15:00	54.6	71.2	56.0	62.9	66.8	62.1	58.3	53.1	50.6	46.6	38.9	28.4	19	51
09/09/2014 19:45:00	00:15:00	54.4	69.6	55.8	60.8	66.8	62.9	58.5	52.9	50.1	45.5	39.1	27.9	19	50
09/09/2014 20:00:01	00:15:00	54.4	69.8	56.3	61.0	66.7	61.7	58.5	54.4	50.8	46.2	39.5	28.2	19	51
09/09/2014 20:15:00	00:15:00	54.3	69.3	56.1	60.2	66.5	61.7	58.5	53.1	51.1	46.5	38.4	27.8	18	51
09/09/2014 20:30:01	00:15:00	54.3	69.0	55.6	60.1	66.4	61.0	58.3	53.2	49.7	45.2	38.6	27.6	18	50
09/09/2014 20:45:00	00:15:00	54.2	71.4	58.3	65.6	67.8	61.9	58.9	56.7	53.7	49.0	40.8	27.7	18	54
09/09/2014 21:00:01	00:15:00	54.9	70.4	56.9	60.2	66.5	61.5	59.5	54.5	51.7	46.7	38.5	27.4	18	52
09/09/2014 21:15:00	00:15:00	55.5	70.3	56.1	60.5	66.3	61.4	59.7	53.6	49.9	44.7	36.9	27.0	18	51
09/09/2014 21:30:00	00:15:00	54.9	70.6	55.8	59.9	66.3	61.5	58.6	53.3	49.9	45.2	38.3	27.6	18	50
09/09/2014 21:45:00	00:15:00	55.7	70.2	56.3	59.7	66.4	61.3	59.5	53.6	50.4	45.9	38.9	27.8	17	51
09/09/2014 22:00:01	00:15:00	54.9	71.1	56.0	59.9	66.4	61.3	58.6	53.5	50.2	46.1	39.1	28.0	17	50

ENVIROSOUND

Project : 237-239 High Street Camden
File : P5169
Survey Date: 09.09.2014

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	Duration	L_{A90}	L_{Zeq}	L_{Aeq}	32	63	125	250	500	1k	2k	4k	8k	Temp ^{0}c	NR
09/09/2014 22:15:00	00:15:00	54.5	70.9	55.1	59.4	66.3	60.7	56.3	53.1	49.8	45.2	38.6	27.5	17	50
09/09/2014 22:30:01	00:15:00	54.2	69.6	55.2	59.3	66.3	61.0	57.3	52.8	49.7	45.3	38.4	27.5	17	50
09/09/2014 22:45:00	00:15:00	55.2	69.9	55.9	59.8	66.3	60.7	59.1	53.3	49.8	45.6	38.8	27.4	17	51
09/09/2014 23:00:01	00:15:00	55.1	69.6	56.1	59.9	66.8	62.2	58.8	53.8	49.9	45.8	39.2	27.8	17	50
09/09/2014 23:15:00	00:15:00	54.4	69.5	55.5	61.0	66.6	60.8	58.2	53.3	49.3	45.1	38.7	27.3	17	50
09/09/2014 23:30:01	00:15:00	54.2	69.0	55.8	58.5	65.9	60.1	57.1	53.3	50.9	46.5	39.4	28.4	17	51
09/09/2014 23:45:00	00:15:00	50.5	68.8	54.6	59.4	65.9	59.6	57.3	52.1	48.5	44.4	37.9	26.4	17	49

ENVIROSOUND

Project :	**237-239 High Street Camden**															
File :	**P5169**															
Survey Date:	**10.09.2014**															
					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
10/09/2014 00:00:00	00:15:00	50.9	73.2	57.2	61.4	70.7	68.9	57.6	53.7	50.9	47.8	42.2	30.5	17	54
10/09/2014 00:15:01	00:15:00	56.5	74.0	57.5	62.0	71.3	69.7	57.9	54.3	51.1	47.1	41.3	30.7	16	55
10/09/2014 00:30:00	00:15:00	56.8	73.9	57.6	61.6	71.2	69.6	58.6	54.1	50.9	47.5	41.8	30.9	16	55
10/09/2014 00:45:01	00:15:00	50.5	69.9	54.9	58.4	67.1	65.3	57.9	50.8	47.7	44.6	39.4	27.8	16	50
10/09/2014 01:00:00	00:15:00	47.3	62.6	50.3	55.1	56.1	52.2	54.2	45.5	44.1	41.5	37.0	23.7	16	45
10/09/2014 01:15:01	00:15:00	42.5	61.2	48.8	55.0	55.1	51.7	53.6	44.2	41.9	38.4	31.6	22.2	16	45
10/09/2014 01:30:00	00:15:00	42.3	60.7	48.5	54.5	54.4	52.2	53.2	44.3	41.9	38.0	30.9	22.7	16	44
10/09/2014 01:45:01	00:15:00	45.8	61.9	50.0	55.8	57.6	52.2	54.1	45.4	43.4	41.3	36.6	23.7	16	45
10/09/2014 02:00:00	00:15:00	40.8	60.5	45.8	54.7	55.4	49.9	50.0	42.2	39.9	34.9	26.9	21.6	16	41
10/09/2014 02:15:01	00:15:00	40.7	59.0	42.2	54.3	54.2	48.1	44.8	38.7	37.6	32.2	24.6	21.2	16	38
10/09/2014 02:30:00	00:15:00	46.4	61.3	49.6	56.4	55.2	51.8	53.0	45.0	43.6	41.5	36.0	24.2	16	44
10/09/2014 02:45:00	00:15:00	49.4	61.2	50.9	54.1	54.0	52.7	57.0	45.0	42.1	38.0	29.9	22.4	15	48
10/09/2014 03:00:00	00:15:00	41.8	60.6	48.4	53.9	55.3	51.7	53.2	44.2	41.8	37.8	30.2	22.5	15	44
10/09/2014 03:15:00	00:15:00	41.0	60.5	48.4	53.4	55.9	51.6	52.9	44.4	41.9	38.6	31.9	22.9	15	44
10/09/2014 03:30:01	00:15:00	40.8	60.2	48.1	54.2	53.7	51.6	52.8	43.8	41.6	38.3	30.6	22.5	15	44
10/09/2014 03:45:00	00:15:00	41.1	59.7	47.8	53.1	53.7	51.6	52.4	43.8	41.4	37.9	30.5	22.4	15	43
10/09/2014 04:00:01	00:15:00	41.6	60.6	48.4	54.8	53.8	51.9	52.5	44.3	42.4	39.0	32.3	23.0	14	44
10/09/2014 04:15:00	00:15:00	41.0	60.4	48.7	54.3	55.3	52.4	52.6	46.0	42.9	37.4	28.7	22.1	14	44
10/09/2014 04:30:01	00:15:00	41.8	62.4	50.4	57.6	56.6	53.5	53.4	47.7	45.1	41.0	32.2	23.0	14	45
10/09/2014 04:45:00	00:15:00	41.2	59.7	47.3	53.7	53.8	51.0	52.5	42.7	40.5	35.9	27.6	21.8	14	44
10/09/2014 05:00:01	00:15:00	41.6	60.3	48.4	54.8	54.2	51.4	52.9	43.8	42.2	38.4	31.6	22.8	14	44
10/09/2014 05:15:00	00:15:00	41.7	60.3	46.9	53.9	55.0	51.6	51.2	43.4	40.8	36.2	27.8	21.9	14	42
10/09/2014 05:30:00	00:15:00	41.4	62.5	49.3	56.5	57.8	53.8	52.8	46.5	43.4	39.0	31.5	22.8	14	44
10/09/2014 05:45:00	00:15:00	43.7	62.1	48.7	56.6	56.2	52.1	52.4	45.5	43.0	39.1	31.7	23.1	14	43

ENVIROSOUND

Project :	**237-239 High Street Camden**
File :	**P5169**
Survey Date:	**10.09.2014**

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
10/09/2014 06:00:00	00:15:00	47.2	63.5	54.7	59.1	57.0	53.2	54.1	49.8	46.6	51.2	41.8	34.0	14	54
10/09/2014 06:15:01	00:15:00	43.5	62.3	48.4	57.0	56.9	51.5	50.6	44.8	43.3	40.4	35.3	24.0	14	43
10/09/2014 06:30:00	00:15:00	49.1	64.7	52.3	60.3	58.8	55.0	56.2	50.0	46.6	40.3	31.3	23.0	13	48
10/09/2014 06:45:01	00:15:00	44.3	63.5	51.2	57.8	58.4	54.3	52.9	46.4	45.9	44.6	38.0	26.7	14	47
10/09/2014 07:00:00	00:15:00	44.3	64.0	49.7	58.7	59.2	54.2	53.7	46.2	43.8	39.6	31.5	23.0	14	45
10/09/2014 07:15:01	00:15:00	45.2	65.4	52.5	61.0	59.8	54.9	54.7	50.2	47.2	44.1	35.6	25.2	14	47
10/09/2014 07:30:00	00:15:00	44.9	64.6	50.3	59.4	60.0	55.1	54.1	46.9	44.4	40.4	32.5	23.3	15	45
10/09/2014 07:45:01	00:15:00	44.5	64.5	49.9	59.4	59.8	54.6	53.5	46.2	44.2	40.4	32.7	24.2	18	45
10/09/2014 08:00:00	00:15:00	44.7	64.0	49.2	58.9	59.1	53.3	53.0	45.2	43.3	39.8	32.5	23.9	21	44
10/09/2014 08:15:00	00:15:00	48.8	68.5	57.7	61.2	62.9	62.2	62.0	55.5	50.6	47.9	41.3	33.3	23	54
10/09/2014 08:30:01	00:15:00	45.5	66.5	53.1	61.2	61.7	58.7	54.8	48.8	49.0	44.6	37.0	28.1	24	49
10/09/2014 08:45:00	00:15:00	45.5	64.3	51.6	58.6	59.6	54.1	54.6	48.6	46.0	42.3	35.8	26.1	25	46
10/09/2014 09:00:01	00:15:00	48.8	66.2	52.3	60.7	62.0	56.1	55.1	48.3	46.5	44.2	37.7	28.4	26	47
10/09/2014 09:15:00	00:15:00	51.4	68.2	54.7	60.1	65.9	58.8	56.9	50.2	48.6	47.3	42.5	37.0	27	50
10/09/2014 09:30:01	00:15:00	51.4	69.5	56.9	61.6	66.9	59.7	59.1	55.1	51.4	47.0	40.8	37.6	27	52
10/09/2014 09:45:00	00:15:00	50.9	69.6	57.0	60.8	66.4	62.4	59.2	54.7	50.8	48.3	42.5	34.8	28	51
10/09/2014 10:00:01	00:15:00	53.0	69.2	55.4	60.4	66.3	58.3	54.9	51.9	50.1	49.7	40.5	32.1	28	52
10/09/2014 10:15:00	00:15:00	52.2	68.8	54.1	60.7	66.0	58.0	54.8	51.0	49.5	45.8	39.3	29.7	28	49
10/09/2014 10:30:01	00:15:00	54.1	69.0	57.0	60.4	66.3	59.3	58.7	52.0	50.3	51.1	45.2	37.5	29	54
10/09/2014 10:45:00	00:15:00	53.1	69.7	55.8	62.6	66.4	60.0	57.7	52.8	50.4	47.3	41.6	33.3	24	50
10/09/2014 11:00:00	00:15:00	52.7	69.2	55.2	62.1	66.4	59.2	57.9	52.3	49.7	45.8	39.0	30.8	26	50
10/09/2014 11:15:01	00:15:00	57.8	70.7	58.5	62.6	66.6	63.1	62.6	56.3	51.8	46.6	39.4	28.1	29	54
10/09/2014 11:30:00	00:15:00	58.0	71.2	58.7	61.3	67.0	63.7	62.7	56.6	52.0	46.3	38.9	27.7	26	55
10/09/2014 11:45:01	00:15:00	57.4	70.7	58.3	62.2	66.8	63.3	62.2	56.3	51.7	46.1	38.7	28.5	24	54

ENVIROSOUND

Project :	**237-239 High Street Camden**
File :	**P5169**
Survey Date:	**10.09.2014**

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
10/09/2014 12:00:00	00:15:00	57.6	70.5	58.2	61.3	66.7	63.5	62.4	55.9	51.6	45.8	37.5	28.6	24	54
10/09/2014 12:15:01	00:15:00	57.2	70.6	58.3	61.0	66.8	63.6	62.0	56.3	52.1	46.4	39.1	30.4	23	54
10/09/2014 12:30:00	00:15:00	57.6	70.5	58.2	61.5	66.7	63.0	61.7	56.0	51.9	47.3	40.8	33.5	23	53
10/09/2014 12:45:01	00:15:00	57.3	70.6	58.3	61.6	66.5	63.5	61.8	56.2	52.3	47.2	39.4	28.8	23	54
10/09/2014 13:00:00	00:15:00	57.4	70.4	58.2	61.7	66.5	62.7	61.7	56.1	52.0	46.6	40.3	30.8	24	53
10/09/2014 13:15:00	00:15:00	57.5	72.0	58.3	64.0	66.6	63.3	61.8	56.3	51.9	46.6	39.0	28.4	24	54
10/09/2014 13:30:00	00:15:00	57.2	71.8	57.9	61.8	66.8	62.5	61.6	55.9	51.8	45.8	38.7	27.5	25	53
10/09/2014 13:45:00	00:15:00	57.5	71.3	58.3	60.4	66.4	62.8	61.9	56.0	52.5	46.8	39.4	29.0	24	54
10/09/2014 14:00:01	00:15:00	56.9	70.9	57.8	60.8	66.6	62.2	61.3	55.8	51.7	46.2	38.9	27.7	25	53
10/09/2014 14:15:00	00:15:00	56.8	71.6	57.6	62.5	66.6	62.7	61.1	55.6	51.6	46.2	38.2	28.8	26	53
10/09/2014 14:30:01	00:15:00	57.8	71.6	58.7	63.0	66.7	62.6	62.2	56.2	52.7	47.9	40.4	31.8	26	54
10/09/2014 14:45:00	00:15:00	58.1	72.0	58.8	60.9	66.3	63.1	62.7	56.1	52.8	47.0	40.2	30.9	25	55
10/09/2014 15:00:01	00:15:00	58.2	72.3	59.5	61.9	66.5	63.1	62.8	57.3	53.5	48.8	41.4	30.6	24	55
10/09/2014 15:15:00	00:15:00	58.0	72.1	58.8	62.2	67.1	63.3	62.6	56.2	52.6	47.5	41.8	32.6	23	54
10/09/2014 15:30:01	00:15:00	58.0	71.8	58.8	62.9	66.7	63.3	62.6	56.4	52.7	47.4	41.2	33.4	24	54
10/09/2014 15:45:00	00:15:00	57.9	71.8	59.0	62.3	67.1	64.1	62.6	56.1	52.7	48.5	41.8	33.1	23	54
10/09/2014 16:00:00	00:15:00	54.0	71.1	55.7	61.9	66.9	61.6	57.7	53.2	50.5	45.9	39.2	30.1	23	51
10/09/2014 16:15:01	00:15:00	53.6	69.9	55.2	62.2	66.5	59.7	57.0	51.9	50.3	46.1	40.7	32.1	23	50
10/09/2014 16:30:00	00:15:00	54.8	71.7	55.8	63.3	66.5	62.0	58.7	52.4	50.4	45.8	39.6	30.6	22	50
10/09/2014 16:45:01	00:15:00	54.9	71.7	56.6	62.3	69.1	61.7	58.9	53.1	51.1	47.6	42.2	35.1	23	51
10/09/2014 17:00:00	00:15:00	55.1	72.4	57.4	62.0	70.2	62.6	59.7	53.0	51.8	48.8	42.1	32.1	22	52
10/09/2014 17:15:01	00:15:00	55.3	70.9	56.2	61.5	66.6	61.5	59.1	52.9	50.7	46.4	39.3	28.7	22	51
10/09/2014 17:30:00	00:15:00	54.3	72.0	55.9	62.1	67.1	61.8	57.9	52.9	50.8	46.1	39.3	28.5	22	51
10/09/2014 17:45:01	00:15:00	54.0	71.2	55.5	63.1	67.1	62.3	57.2	52.4	50.4	45.9	39.1	28.6	21	50

ENVIROSOUND

Project : 237-239 High Street Camden
File : P5169
Survey Date: 10.09.2014

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	Duration	L_{A90}	L_{Zeq}	L_{Aeq}	32	63	125	250	500	1k	2k	4k	8k	Temp ^{0}c	NR
10/09/2014 18:00:00	00:15:00	54.1	71.1	58.4	63.1	67.3	63.0	60.2	55.9	52.8	50.0	45.8	40.2	21	53
10/09/2014 18:15:01	00:15:00	54.4	72.5	55.6	62.1	66.8	61.5	55.3	53.7	50.6	46.6	40.2	29.8	21	51
10/09/2014 18:30:00	00:15:00	55.4	71.0	56.3	62.8	66.8	62.7	58.7	53.4	50.8	46.2	39.4	28.6	20	51
10/09/2014 18:45:00	00:15:00	55.8	73.3	57.4	62.8	66.9	62.2	60.0	54.8	51.8	47.4	40.8	30.3	19	52
10/09/2014 19:00:01	00:15:00	58.0	74.2	60.1	62.6	67.2	64.0	62.6	59.4	53.8	48.1	41.0	34.5	19	56
10/09/2014 19:15:00	00:15:00	57.7	75.5	69.6	63.8	67.0	65.7	66.4	70.2	62.8	58.7	55.7	58.0	19	67
10/09/2014 19:30:01	00:15:00	56.9	72.4	61.7	61.6	66.7	64.1	62.2	61.1	55.5	51.2	48.2	46.8	18	58
10/09/2014 19:45:00	00:15:00	57.2	71.0	58.1	61.1	67.0	63.5	61.3	56.4	51.9	46.5	39.7	28.5	18	53
10/09/2014 20:00:01	00:15:00	57.4	73.0	58.4	62.4	66.7	63.2	61.6	56.9	52.1	47.0	39.4	28.7	18	53
10/09/2014 20:15:00	00:15:00	57.6	71.3	58.3	61.9	66.6	63.6	62.2	56.1	51.6	46.5	39.3	28.1	18	54
10/09/2014 20:30:01	00:15:00	57.6	71.2	58.2	61.0	66.6	63.2	62.0	55.8	51.5	46.5	39.4	28.2	18	54
10/09/2014 20:45:00	00:15:00	57.4	70.2	59.3	59.5	66.7	63.2	62.4	57.4	53.6	48.2	40.9	29.0	17	54
10/09/2014 21:00:01	00:15:00	57.2	70.4	57.9	60.4	66.6	62.7	61.5	55.9	51.6	45.9	38.9	28.3	17	53
10/09/2014 21:15:00	00:15:00	56.5	69.9	57.8	60.7	66.6	62.8	61.1	55.9	51.8	45.9	38.0	27.4	17	53
10/09/2014 21:30:00	00:15:00	56.8	69.5	57.7	59.1	66.4	62.4	61.2	55.9	51.6	46.1	38.3	27.6	17	53
10/09/2014 21:45:01	00:15:00	56.7	69.6	57.4	59.4	66.4	62.0	60.9	55.4	51.5	45.9	38.5	27.4	16	53
10/09/2014 22:00:00	00:15:00	56.3	69.6	57.0	59.5	66.4	62.1	60.6	55.0	51.1	45.1	36.8	26.8	16	52
10/09/2014 22:15:01	00:15:00	57.2	71.6	58.4	60.3	68.3	65.9	61.3	55.9	52.5	47.5	40.8	29.3	16	53
10/09/2014 22:30:00	00:15:00	56.5	70.1	58.3	60.2	66.7	62.5	61.0	55.4	53.5	48.9	37.8	27.3	16	53
10/09/2014 22:45:01	00:15:00	56.9	69.7	57.7	59.5	66.5	62.4	61.1	55.2	52.1	46.7	38.8	27.7	16	53
10/09/2014 23:00:00	00:15:00	53.9	68.8	54.6	59.4	66.4	60.5	56.2	52.1	49.7	45.0	37.4	26.7	15	50
10/09/2014 23:15:01	00:15:00	54.6	73.0	57.7	61.4	70.4	68.2	58.3	54.7	52.1	47.9	41.4	30.6	15	53
10/09/2014 23:30:00	00:15:00	57.8	74.1	58.5	61.9	71.5	69.7	58.1	55.4	52.9	49.0	42.9	32.2	15	55
10/09/2014 23:45:01	00:15:00	57.6	74.1	58.5	62.0	71.6	69.6	58.4	55.4	52.8	49.0	42.3	31.5	15	55

ENVIROSOUND

Project :	**237-239 High Street Camden**															
File :	**P5169**															
Survey Date:	**11.09.2014**															
		Y2		AB	**dB at Octave Band Centre Frequencies, Hz**											
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
11/09/2014 06:00:00	00:15:00	47.6	63.7	51.7	57.4	58.3	53.2	54.3	50.0	46.5	42.1	35.1	24.0	14	47
11/09/2014 06:15:01	00:15:00	47.3	63.8	50.7	57.5	57.4	53.6	53.0	47.9	46.2	41.7	34.3	23.8	14	46
11/09/2014 06:30:00	00:15:00	46.5	64.0	50.2	58.0	57.8	53.6	52.6	46.3	45.2	42.9	35.7	27.5	14	46
11/09/2014 06:45:01	00:15:00	47.1	71.9	62.2	69.1	63.5	62.0	62.5	58.6	58.6	54.1	49.0	40.9	14	59
11/09/2014 07:00:00	00:15:00	46.4	64.3	49.8	58.6	59.2	53.7	53.1	46.0	45.0	40.4	32.3	22.8	14	45
11/09/2014 07:15:01	00:15:00	46.8	64.4	50.5	58.3	58.8	54.8	53.3	47.1	45.8	41.9	33.9	23.7	14	46
11/09/2014 07:30:00	00:15:00	46.8	65.9	50.3	60.2	60.3	54.9	53.4	46.6	45.6	40.7	34.3	23.5	15	46
11/09/2014 07:45:01	00:15:00	47.5	66.1	51.2	60.5	60.5	55.1	54.0	47.7	46.7	42.3	34.9	24.4	15	47
11/09/2014 08:00:00	00:15:00	48.8	67.4	51.6	61.6	64.1	57.3	53.8	48.0	46.8	43.0	35.4	25.3	15	47
11/09/2014 08:15:00	00:15:00	49.1	69.5	55.9	60.4	66.6	62.1	58.1	53.3	50.6	47.3	38.6	30.5	15	51
11/09/2014 08:30:00	00:15:00	49.4	70.0	55.8	61.2	67.2	62.5	60.2	52.6	49.2	45.7	40.0	31.8	16	52
11/09/2014 08:45:00	00:15:00	49.3	69.3	52.7	61.5	67.0	60.6	54.9	49.3	47.2	43.1	37.2	26.8	16	47
11/09/2014 09:00:01	00:15:00	50.3	69.1	53.2	61.0	67.0	58.2	54.4	49.4	48.0	45.6	39.6	31.0	16	48
11/09/2014 09:15:00	00:15:00	50.1	69.1	52.4	60.8	66.4	58.6	53.9	48.6	47.4	44.2	37.8	26.3	16	47
11/09/2014 09:30:01	00:15:00	52.1	68.8	53.5	60.4	66.2	58.5	56.7	49.2	47.3	44.9	38.7	27.2	17	48
11/09/2014 09:45:00	00:15:00	52.1	70.5	56.4	61.2	66.6	61.5	57.8	53.8	51.1	48.1	41.9	33.2	17	51
11/09/2014 10:00:01	00:15:00	54.5	70.7	58.0	61.1	67.4	64.2	60.1	55.8	52.1	48.8	42.4	33.7	18	52
11/09/2014 10:15:00	00:15:00	54.8	71.0	55.8	67.0	66.5	61.1	58.6	52.9	50.0	46.3	39.3	28.5	18	50
11/09/2014 10:30:01	00:15:00	53.7	71.3	58.2	64.7	67.8	62.7	59.6	56.5	53.4	47.9	39.4	27.6	19	53
11/09/2014 10:45:00	00:15:00	54.0	69.6	56.4	60.9	66.5	60.8	58.2	53.1	51.8	47.9	38.8	27.6	19	52
11/09/2014 11:00:01	00:15:00	53.7	70.0	54.8	61.3	66.6	60.5	57.8	51.9	49.1	44.7	37.0	26.9	20	49
11/09/2014 11:15:00	00:15:00	53.9	69.6	55.8	61.2	66.6	61.3	57.1	52.0	51.6	47.0	38.1	27.3	21	52
11/09/2014 11:30:01	00:15:00	53.2	69.4	55.0	62.1	66.3	60.6	57.1	52.5	49.6	45.2	38.0	28.1	21	50
11/09/2014 11:45:00	00:15:00	54.5	70.4	55.4	62.4	67.0	61.6	58.6	52.1	49.4	45.4	38.3	27.8	22	50

ENVIROSOUND

Project :	**237-239 High Street Camden**														
File :	**P5169**														
Survey Date:	**11.09.2014**														
		Y2		AB	**dB at Octave Band Centre Frequencies, Hz**										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
11/09/2014 12:00:00	00:15:00	55.0	70.0	56.0	62.4	66.7	61.0	59.2	52.4	50.1	46.3	39.6	28.2	22	51
11/09/2014 12:15:01	00:15:00	54.0	71.3	55.4	62.1	66.7	62.2	57.8	52.3	49.6	46.1	39.0	29.0	23	50
11/09/2014 12:30:00	00:15:00	54.0	69.9	55.3	61.0	66.5	60.8	58.1	52.4	49.7	45.3	38.2	27.1	22	50
11/09/2014 12:45:01	00:15:00	53.0	69.8	54.4	61.0	66.4	60.9	55.3	52.1	49.5	44.8	36.6	26.9	22	50
11/09/2014 13:00:00	00:15:00	53.1	69.6	54.0	63.0	66.6	60.9	54.6	51.7	48.9	44.4	36.8	26.6	22	49
11/09/2014 13:15:01	00:15:00	55.0	70.1	55.8	62.9	66.8	61.2	59.1	52.8	49.7	45.7	39.0	27.8	21	51
11/09/2014 13:30:00	00:15:00	55.3	71.7	56.1	62.2	66.7	62.3	59.0	53.2	50.2	46.1	39.0	30.5	21	51
11/09/2014 13:45:01	00:15:00	54.1	70.1	55.4	61.3	66.7	62.5	57.7	52.5	49.8	45.7	39.0	28.2	21	50
11/09/2014 14:00:00	00:15:00	54.8	70.6	56.4	63.0	67.0	61.7	58.9	53.6	50.6	46.9	40.0	28.8	21	51
11/09/2014 14:15:00	00:15:00	54.5	70.8	56.4	61.2	66.6	61.8	57.7	53.2	51.3	48.2	41.6	29.7	21	51
11/09/2014 14:30:01	00:15:00	54.0	70.6	56.1	63.3	66.5	61.5	57.6	53.9	51.1	46.3	38.9	27.7	21	51
11/09/2014 14:45:00	00:15:00	54.2	70.4	56.6	62.6	66.9	61.9	57.9	53.8	52.1	47.2	39.6	28.9	21	52
11/09/2014 15:00:01	00:15:00	54.2	70.9	57.1	63.6	66.9	61.9	58.4	53.4	53.1	47.9	39.8	29.7	21	53
11/09/2014 15:15:00	00:15:00	54.0	71.0	55.3	62.0	66.5	61.4	58.1	52.2	49.4	45.5	38.6	27.6	21	50
11/09/2014 15:30:01	00:15:00	53.8	69.4	55.1	60.5	66.5	62.0	56.9	52.1	49.7	45.8	39.3	29.4	21	50
11/09/2014 15:45:00	00:15:00	53.8	70.4	55.4	63.3	66.7	61.6	57.4	52.0	50.1	46.3	39.9	28.3	21	50
11/09/2014 16:00:01	00:15:00	54.9	70.5	56.8	61.5	66.5	61.1	59.2	52.5	51.6	48.6	39.8	30.0	21	52
11/09/2014 16:15:00	00:15:00	54.2	70.6	56.7	63.1	66.7	60.7	58.0	53.8	52.1	47.7	39.8	29.7	21	52
11/09/2014 16:30:01	00:15:00	54.1	70.3	55.6	63.0	66.8	61.4	57.6	52.6	49.8	47.4	38.6	27.5	21	50
11/09/2014 16:45:00	00:15:00	54.2	77.2	59.6	63.3	76.1	69.8	60.8	55.5	52.8	49.2	43.0	33.6	21	55
11/09/2014 17:00:00	00:15:00	54.3	71.2	55.6	63.2	67.2	61.8	56.4	53.3	50.4	46.3	40.0	30.0	20	50
11/09/2014 17:15:01	00:15:00	55.3	71.5	58.6	64.5	67.8	63.6	60.8	55.9	53.3	48.8	40.6	28.2	20	53
11/09/2014 17:30:00	00:15:00	55.3	70.5	56.0	62.4	67.0	62.2	59.7	53.2	49.5	44.8	37.4	27.4	20	51
11/09/2014 17:45:01	00:15:00	53.9	70.1	56.1	61.7	67.0	62.1	58.4	53.5	50.8	45.9	37.9	28.0	21	51

ENVIROSOUND

Project :	**237-239 High Street Camden**														
File :	**P5169**														
Survey Date:	**11.09.2014**														
		Y2		AB	**dB at Octave Band Centre Frequencies, Hz**										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
11/09/2014 18:00:00	00:15:00	53.9	70.3	57.4	61.9	67.2	62.8	60.7	55.2	51.1	47.3	41.3	33.1	20	52
11/09/2014 18:15:01	00:15:00	54.6	70.2	56.4	61.9	66.9	61.0	58.4	53.7	51.3	47.1	39.7	28.6	20	51
11/09/2014 18:30:00	00:15:00	54.7	69.7	56.5	62.4	66.7	61.7	58.6	53.6	51.2	47.5	40.8	29.1	20	51
11/09/2014 18:45:01	00:15:00	54.4	69.8	55.9	62.3	66.6	62.1	58.6	53.1	50.1	45.9	39.3	32.3	20	50
11/09/2014 19:00:01	00:15:00	54.2	69.8	55.8	63.3	66.6	61.4	58.0	52.9	50.2	46.7	40.7	31.0	19	50
11/09/2014 19:15:00	00:15:00	53.9	69.5	55.4	62.3	66.6	61.8	58.0	53.0	49.7	45.4	38.3	27.9	19	50
11/09/2014 19:30:00	00:15:00	53.6	69.3	55.1	60.6	66.6	61.8	57.6	52.7	49.3	44.8	37.3	27.5	19	49
11/09/2014 19:45:01	00:15:00	54.1	69.0	55.4	60.2	66.4	60.9	57.4	52.8	49.9	46.2	39.4	28.6	19	50
11/09/2014 20:00:00	00:15:00	54.0	69.5	56.4	62.3	66.7	61.0	59.0	54.9	50.2	45.1	37.5	27.6	19	51
11/09/2014 20:15:01	00:15:00	54.3	69.4	56.1	61.0	66.7	61.2	58.5	54.4	50.5	45.4	38.3	27.7	19	51
11/09/2014 20:30:00	00:15:00	54.0	69.2	55.6	60.1	66.6	62.0	58.3	52.8	50.0	45.5	37.8	27.2	19	50
11/09/2014 20:45:01	00:15:00	54.3	69.6	55.1	59.8	66.6	61.0	56.0	52.7	50.4	45.8	39.0	27.4	19	50
11/09/2014 21:00:00	00:15:00	54.6	70.1	55.8	59.3	66.4	60.9	58.4	53.1	50.2	46.1	38.9	27.9	18	50
11/09/2014 21:15:01	00:15:00	55.7	69.6	56.4	60.5	66.4	61.0	59.8	53.5	50.4	46.1	39.0	27.8	18	51
11/09/2014 21:30:00	00:15:00	55.8	70.0	56.8	59.5	66.5	61.2	59.8	53.4	51.3	47.5	40.5	28.5	18	51
11/09/2014 21:45:01	00:15:00	54.2	69.0	55.4	59.5	66.4	60.8	57.6	52.7	49.8	45.9	38.6	27.4	17	50
11/09/2014 22:00:00	00:15:00	54.4	69.2	55.4	59.7	66.5	60.5	58.0	52.7	49.8	45.7	38.6	27.5	17	50
11/09/2014 22:15:00	00:15:00	54.1	69.7	55.3	59.8	66.6	60.4	57.6	52.4	50.0	45.7	38.6	27.6	17	50
11/09/2014 22:30:01	00:15:00	54.4	71.8	56.7	61.2	68.8	66.2	58.9	53.7	50.7	46.6	39.9	29.3	17	51
11/09/2014 22:45:00	00:15:00	53.2	72.2	56.1	60.8	69.2	66.6	56.5	53.2	50.6	46.5	39.5	29.4	17	51
11/09/2014 23:00:01	00:15:00	53.3	72.8	57.1	62.0	69.9	67.9	57.3	54.1	51.5	47.5	41.6	30.6	17	53
11/09/2014 23:15:00	00:15:00	57.5	74.3	58.2	62.4	71.4	70.0	57.6	55.0	52.4	48.8	42.8	31.9	17	55
11/09/2014 23:30:01	00:15:00	57.5	74.2	58.2	62.4	71.4	69.9	57.5	55.1	52.4	48.8	42.7	31.8	17	55
11/09/2014 23:45:00	00:15:00	57.5	74.1	58.2	62.5	71.4	69.7	57.9	55.1	52.3	48.7	42.6	31.8	17	55

ENVIROSOUND

Project :	**237-239 High Street Camden**
File :	**P5169**
Survey Date:	**12.09.2014**

					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
12/09/2014 00:00:01	00:15:00	57.6	74.2	58.4	62.7	71.6	69.8	58.4	55.3	52.6	48.8	42.6	32.0	17	55
12/09/2014 00:15:00	00:15:00	49.3	70.0	54.5	60.5	67.7	63.9	55.7	51.6	48.6	45.0	38.1	27.7	17	49
12/09/2014 00:30:00	00:15:00	49.5	67.1	52.0	60.0	64.7	57.2	55.2	48.9	45.8	43.0	35.9	24.8	17	46
12/09/2014 00:45:00	00:15:00	45.9	63.5	49.9	57.1	58.2	51.8	49.5	45.5	46.2	43.1	32.4	22.8	17	46
12/09/2014 01:00:00	00:15:00	47.2	63.7	50.5	56.5	57.5	52.6	53.4	47.2	44.9	42.4	34.3	24.4	16	45
12/09/2014 01:15:01	00:15:00	50.5	64.4	51.8	56.3	57.1	54.5	56.4	47.9	45.0	42.3	34.0	24.1	16	48
12/09/2014 01:30:00	00:15:00	46.6	63.4	50.6	56.8	57.2	53.2	54.7	46.8	44.3	41.4	32.2	23.3	16	46
12/09/2014 01:45:01	00:15:00	45.2	63.7	50.3	56.8	58.2	53.2	54.2	46.5	44.3	41.4	33.9	23.9	16	45
12/09/2014 02:00:00	00:15:00	43.1	61.5	48.2	56.3	55.5	51.5	52.6	44.4	42.2	37.6	29.0	22.1	16	44
12/09/2014 02:15:01	00:15:00	43.3	61.3	49.2	55.1	55.8	51.6	53.6	44.9	42.9	39.7	32.9	23.1	16	45
12/09/2014 02:30:00	00:15:00	43.1	61.9	48.4	55.2	56.1	51.5	52.1	44.6	42.5	39.4	32.4	22.9	16	43
12/09/2014 02:45:01	00:15:00	41.8	59.7	46.7	53.4	54.4	50.3	51.2	42.8	40.6	36.1	28.6	21.8	15	42
12/09/2014 03:00:00	00:15:00	42.5	60.6	49.1	53.6	54.5	51.9	53.8	44.4	42.6	39.5	33.0	23.4	15	45
12/09/2014 03:15:00	00:15:00	42.3	60.8	47.9	54.1	55.6	51.4	52.5	43.9	41.7	37.3	29.3	22.2	15	44
12/09/2014 03:30:01	00:15:00	42.3	61.0	47.8	54.0	55.6	50.9	51.7	43.9	42.3	38.4	31.8	22.8	15	43
12/09/2014 03:45:00	00:15:00	43.9	60.7	48.9	53.8	56.0	51.4	52.2	44.9	43.5	40.4	33.8	23.4	15	44
12/09/2014 04:00:01	00:15:00	42.8	61.2	48.0	55.0	55.3	51.8	52.9	44.0	41.6	37.0	28.6	22.0	15	44
12/09/2014 04:15:00	00:15:00	41.8	60.7	47.9	53.5	55.3	51.0	51.7	43.5	42.0	39.4	31.8	22.8	15	43
12/09/2014 04:30:01	00:15:00	42.2	63.2	47.2	55.4	55.7	51.1	51.8	43.0	41.1	36.3	27.6	21.8	15	43
12/09/2014 04:45:00	00:15:00	42.5	61.0	45.8	54.5	55.4	49.4	46.9	42.4	41.7	37.5	31.0	22.7	15	42
12/09/2014 05:00:01	00:15:00	49.0	62.4	50.7	55.5	55.7	53.4	55.8	46.0	43.9	40.3	32.7	23.5	15	47
12/09/2014 05:15:00	00:15:00	42.7	61.6	47.9	54.5	55.0	51.6	52.6	44.2	41.8	37.1	28.4	22.0	15	44
12/09/2014 05:30:01	00:15:00	43.5	62.1	48.7	55.7	56.1	51.5	52.8	44.6	42.9	39.2	32.0	22.9	15	44
12/09/2014 05:45:00	00:15:00	43.4	61.9	48.7	55.4	56.5	51.3	52.4	45.2	43.2	39.5	31.9	23.0	15	43

ENVIROSOUND

Project :	**237-239 High Street Camden**														
File :	**P5169**														
Survey Date:	**12.09.2014**														
					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
12/09/2014 06:00:00	00:15:00	50.3	64.7	54.1	58.5	58.3	54.0	56.7	53.7	47.1	43.6	36.8	25.0	15	50
12/09/2014 06:15:01	00:15:00	47.2	63.1	50.3	57.0	57.6	53.7	53.9	47.3	44.4	40.8	33.6	23.9	15	45
12/09/2014 06:30:00	00:15:00	44.0	63.4	48.5	58.1	58.0	52.1	52.3	45.5	43.0	38.1	29.7	22.4	15	43
12/09/2014 06:45:01	00:15:00	44.2	63.3	49.0	57.4	57.6	52.3	51.6	45.1	43.9	40.8	33.0	24.0	15	44
12/09/2014 07:00:00	00:15:00	44.9	79.4	59.4	79.6	62.6	61.8	60.5	55.6	54.5	51.8	47.9	38.8	15	55
12/09/2014 07:15:01	00:15:00	45.0	65.5	55.2	58.3	59.1	55.2	56.2	51.2	51.4	47.3	41.3	30.6	15	51
12/09/2014 07:30:00	00:15:00	44.1	63.8	49.8	58.1	58.5	54.2	53.3	47.1	44.2	39.3	32.4	22.9	16	44
12/09/2014 07:45:01	00:15:00	44.9	65.1	50.0	59.2	59.5	53.6	53.8	46.5	44.6	39.9	33.3	24.4	16	45
12/09/2014 08:00:00	00:15:00	45.6	65.8	52.3	59.4	60.5	56.7	55.9	48.8	46.7	42.7	35.6	27.3	17	47
12/09/2014 08:15:01	00:15:00	48.6	71.2	56.9	63.3	67.1	64.6	61.0	53.1	50.2	46.1	40.6	32.5	17	53
12/09/2014 08:30:00	00:15:00	48.3	71.6	56.7	61.7	68.3	65.8	61.2	54.1	48.5	45.7	39.9	32.6	20	53
12/09/2014 08:45:00	00:15:00	50.2	70.0	52.7	62.6	66.6	57.9	54.0	49.8	47.2	44.2	38.6	28.2	20	47
12/09/2014 09:00:01	00:15:00	52.4	70.0	54.9	61.7	66.6	59.1	58.6	52.6	48.0	44.4	38.4	28.3	22	50
12/09/2014 09:15:00	00:15:00	50.4	69.6	53.5	62.0	66.6	58.0	56.5	50.7	46.7	44.2	37.6	27.8	21	48
12/09/2014 09:30:01	00:15:00	49.6	68.4	53.4	59.8	66.1	57.4	56.4	50.6	46.6	44.3	38.0	28.0	20	48
12/09/2014 09:45:00	00:15:00	49.6	69.4	57.5	60.8	66.3	60.8	59.1	55.2	52.6	49.1	41.9	32.4	21	53
12/09/2014 10:00:01	00:15:00	48.3	71.1	57.1	65.5	68.1	61.1	57.7	55.0	52.9	47.7	38.5	27.5	21	53
12/09/2014 10:15:00	00:15:00	54.2	69.2	56.1	62.0	66.5	60.2	59.0	53.0	50.5	46.8	39.1	28.3	22	51
12/09/2014 10:30:01	00:15:00	54.4	69.2	56.1	61.7	66.2	60.7	58.9	52.9	50.3	47.1	40.6	32.3	23	50
12/09/2014 10:45:00	00:15:00	53.8	70.4	56.0	61.3	66.2	59.4	58.9	52.8	51.0	46.3	37.9	28.2	25	51
12/09/2014 11:00:01	00:15:00	54.1	69.6	55.7	62.1	66.3	59.6	59.8	52.2	49.3	45.3	37.6	27.6	26	51
12/09/2014 11:15:00	00:15:00	53.6	69.8	55.0	61.6	66.3	59.4	58.1	52.2	49.4	44.9	37.0	26.9	28	50
12/09/2014 11:30:00	00:15:00	54.2	70.2	57.3	60.1	66.4	59.7	58.2	54.5	53.1	48.6	40.9	31.3	28	53
12/09/2014 11:45:01	00:15:00	54.4	71.2	56.6	61.6	66.4	60.6	58.7	55.0	50.9	46.1	38.6	27.9	30	52

Project :	**237-239 High Street Camden**														
File :	**P5169**														
Survey Date:	**12.09.2014**														
					dB at Octave Band Centre Frequencies, Hz										
Date & Time	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
12/09/2014 12:00:00	00:15:00	54.1	71.5	56.0	61.1	66.4	61.2	59.0	53.6	50.1	45.7	37.5	28.7	29	51
12/09/2014 12:15:01	00:15:00	54.9	71.0	56.5	63.0	66.5	62.6	60.6	53.1	49.9	45.5	38.6	27.7	29	52
12/09/2014 12:30:00	00:15:00	54.1	70.7	55.3	61.5	66.6	60.7	58.2	52.7	49.5	45.1	38.1	31.0	28	50

ENVIROSOUND

Additional Measurements

Project :	**237-239 High Street Camden**														
File :	**P5169**														
Survey Date:	**12.09.2014. (Additional Measurements)**														
					dB at Octave Band Centre Frequencies, Hz										
Location	**Duration**	L_{A90}	L_{Zeq}	L_{Aeq}	**32**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Temp ^{0}c**	**NR**
1.5m from the fresh air inlet & refrigeration condenser. 14:09hrs	00:05:00	68.5	76.5	69.0	65.1	68.1	69.4	73.1	65.6	62.5	58.9	54.7	39.7	29	66
1m from the rear 1st floor façade of 239 Camden High Street alongside the extract riser. 14:16hrs	00:05:00	63.2	76.4	63.7	67.9	70.1	73.3	64.2	62.9	56.4	50.9	46.7	34.9	31	60
Nominally 1m from the adjoining properties 1st floor rear façade. 13:30hrs	00:15:00	54.5	70.5	56.5	63.9	63.9	64.6	56.9	53.4	51.6	48.9	39.5	27.5	29	52
Nominally 1m from the adjoining properties 1st floor rear façade. 13:15hrs	00:15:00	53.5	69.1	54.5	63.3	63.8	63.7	56.0	52.4	48.9	44.2	36.3	26.7	33	49

Appendix A

Contents Acoustic Calculations

1 Casing radiated noise from the kitchen extract fan to position A.
2 Casing radiated noise from the fresh air inlet fan to position A.
3 Casing radiated noise from the toilet extract fan to position A.
4 Kitchen extract, attenuated discharge noise to position A.
5 Toilet extract, attenuated discharge noise to position A.
6 Fresh air fan, attenuated inlet noise to position A.
7 Refrigeration condenser (TPCU-20) noise to position A excluding screening.
8 Refrigeration condenser (TPCU-HLT 50) noise to position A excluding screening.
9 Refrigeration condenser (TPCU-20) noise to position A excluding screening.
10 Summary of predicted plant noise level at position A including acoustic screening losses.
11 Casing radiated noise from the kitchen extract fan to position B.
12 Casing radiated noise from the fresh air inlet fan to position B.
13 Casing radiated noise from the toilet extract fan to position B.
14 Kitchen extract, attenuated discharge noise to position B.
15 Toilet extract, attenuated discharge noise to position B.
16 Fresh air fan, attenuated inlet noise to position B.
17 Refrigeration condenser (TPCU-20) noise to position B excluding screening.
18 Refrigeration condenser (TPCU-HLT 50) noise to position B excluding screening.
19 Refrigeration condenser (TPCU-20) noise to position B excluding screening.
20 Summary of predicted plant noise level at position B including acoustic screening losses.
21 Casing radiated noise from the kitchen extract fan to position C.
22 Casing radiated noise from the fresh air inlet fan to position C.
23 Casing radiated noise from the toilet extract fan to position C.
24 Kitchen extract, attenuated discharge noise to position C.
25 Toilet extract, attenuated discharge noise to position C.
26 Fresh air fan, attenuated inlet noise to position C.
27 Refrigeration condenser (TPCU-20) noise to position C excluding screening.
28 Refrigeration condenser (TPCU-HLT 50) noise to position C excluding screening.
29 Refrigeration condenser (TPCU-20) noise to position C excluding screening.
30 Summary of predicted plant noise level at position C including acoustic screening losses.
31 Casing radiated noise from the kitchen extract fan to position D.
32 Casing radiated noise from the fresh air inlet fan to position D.
33 Casing radiated noise from the toilet extract fan to position D.
34 Kitchen extract, attenuated discharge noise to position D.
35 Toilet extract, attenuated discharge noise to position D.
36 Fresh air fan, attenuated inlet noise to position D.
37 Refrigeration condenser (TPCU-20) noise to position D excluding screening.
38 Refrigeration condenser (TPCU-HLT 50) noise to position D excluding screening.
39 Refrigeration condenser (TPCU-20) noise to position D excluding screening.
40 Summary of predicted plant noise level at position D including acoustic screening losses.

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/4/4 TI20 Extract Fan									
A weighted Fan Sound Power Levels									
Extract		76	77	79	79	77	72	64	83.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
In duct SWL dB		92.1	85.6	82.2	79	75.8	71	65.1	85.0
A weighted Breakout SWL		61	62	60	60	60	56	50	
Breakout SWL dB		77.1	70.6	63.2	60	58.8	55	51.1	
Distance to position (C) 8.8m									
Distance loss 20log r-8		-26.9	-26.9	-27	-27	-26.9	-26.9	-27	
SPL at position A		50.2	43.7	36.3	33.1	31.9	28.1	24.2	41.1
Sheet 1									

CALCULATION SHEET

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

Client: Barrack Holdings Ltd

Project: 239 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
HELIOS GBD 560/6/6 Supply Fan									
A weighted Fan Sound Power Levels									
Inlet		51	53	63	64	61	53	43	67.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
In Duct SWL dB		67.1	61.6	66.2	64	59.8	52	44.1	68.0
A weighted Breakout SWL		52	51	42	40	37	32	25	
Breakout SWL dB		68.1	59.6	45.2	40	35.8	31	26.1	
Distance to position (D) 20m									
Distance loss 20log r-8		-34	-34	-34	-34	-34	-34	-34	
SPL at position A		34.1	25.6	11.2	6.0	1.8	0.0	0.0	
Sheet 2									

CALCULATION SHEET

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

Client: Barrack Holdings Ltd

Project: 239 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
HELIOS SB160B Toilet Extract Fan									
A weighted Fan Sound Power Levels									
Extract		55	54	54	57	53	50	43	60.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
In duct SWL dB		71.1	62.6	57.2	57	51.8	49	44.1	62.1
A weighted Breakout SWL		40	39	34	32	28	27	27	
Breakout SWL dB		56.1	47.6	37.2	32	26.8	26	28.1	
Distance to position (C) 8.4m									
Distance loss 20log r-8		-26.5	-26.5	-26	-26	-26.5	-26.5	-26	
BreakoutSPL at position A		29.6	21.1	10.7	5.51	0.31	0	1.61	
Sheet 3									

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	03/10/2014			NOISE UNTREATED:			33	NR				
SYSTEM:	ATTENUATED KITCHEN EXHAUST TO POSITION A						37	dB'A'				
VOLUME:	3.40											
ATTR REF:												
CALC:	4											
			ATMOSPHERE SIDE ANALYSIS									
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**92**	**86**	**82**	**79**	**76**	**71**	**65**			
BENDS		0	0	1	2	3	3	3	3	**560**	**1**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		2	1	1	0	0	0	0	0	**560**	**2**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
		0	10	18	27	31	26	17	11			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**11**	**16**	**22**	**29**	**34**	**29**	**20**	**14**	**0.00**		OMNI
SWL AT GRILLE		**-11**	**76**	**64**	**53**	**45**	**47**	**51**	**51**	**0.00**		JUNC 2
DIRECTIVITY		4	4	5	5	5	6	6	6	**0.00**		JUNC 3
DISTANCE TO LISTENER		31	31	31	31	31	31	31	31	**9.50**		METERS
SPL AT LISTENER		**-38**	**49**	**38**	**27**	**19**	**22**	**26**	**26**	**40**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	03/10/2014			NOISE UNTREATED:			20	NR				
SYSTEM:	ATTENUATED TOILET EXHAUST TO POSITION A						25	dB'A'				
VOLUME:	0.10											
ATTR REF:												
CALC:	5											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**71**	**63**	**57**	**57**	**52**	**49**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
C1OO		0	3	8	20	35	27	16	10			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		0	0	0	0	0	0	0	0	**160.00**		CENTRE
SYSTEM ATTENUATION		**0**	**3**	**8**	**20**	**35**	**27**	**16**	**10**	**0.00**		OMNI
SWL AT GRILLE		**0**	**68**	**55**	**37**	**22**	**25**	**33**	**34**	**0.00**		JUNC 2
DIRECTIVITY		2	2	2	0	0	0	0	0	**0.00**		JUNC 3
DISTANCE TO LISTENER		30	30	30	30	30	30	30	30	**9.40**		METERS
SPL AT LISTENER		**-28**	**40**	**27**	**7**	**-8**	**-5**	**3**	**4**	**60**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	03/10/2014			NOISE UNTREATED:			4	NR				
SYSTEM:	ATTENUATED KITCHEN FAI TO POSITION A						11	dB'A'				
VOLUME:	2.40											
ATTR REF:												
CALC:	6											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**67**	**62**	**66**	**64**	**60**	**52**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
attenuator		0	7	9	17	18	22	21	16			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**9**	**12**	**11**	**17**	**18**	**22**	**21**	**16**	**0.00**		OMNI
SWL AT GRILLE		**-9**	**55**	**51**	**49**	**46**	**38**	**31**	**28**	**0.00**		JUNC 2
DIRECTIVITY		0	0	-9	-9	-15	-15	-15	-15	**0.00**		JUNC 3
DISTANCE TO LISTENER		32	32	32	32	32	32	32	32	**10.60**		METERS
SPL AT LISTENER		**-41**	**23**	**10**	**8**	**-1**	**-9**	**-16**	**-19**	**135**		ANGLE

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754				Project:	237 Camden High Street							
Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-20												
Noise to Location A												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TCPU 20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		12.7	m									
Reference surface envelope		24.634										
Reference surface envelope		2070.73										
Noise level at distance of interest												31.8
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location A)												31.8
Sheet 7												

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

CALCULATION SHEET

Client: Barrack Holdings Ltd

Project: 237 Camden High Street

Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-HLT 50												
Noise to Location A												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-HLT 50	1	0.35	0.66									
Noise level at stated distance of		10	m									33.0
Distance to point of intrest		13.5	m									
Reference surface envelope		1322.582										
Reference surface envelope		2351.512										
Noise level at distance of interest												30.5
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location A)												30.5
Sheet 8												

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-20												
Noise to Location A												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		14.7	m									
Reference surface envelope		24.634										
Reference surface envelope		2749.29										
Noise level at distance of interest												30.5
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location A)												30.5
Sheet 9												

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET	
	Client:	Barrack Holdings Ltd
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	237 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
Predicted Noise to location A									
Trenton TPCU-20 acoustically screened									23.8
Trenton TPCU-HLT 50 acoustically screened									22.5
Trenton TPCU-20 acoustically screened									22.5
Attenuated Toilet Extract discharge noise		40.0	27.0	7.0	0.0	0.0	3.0	4.0	25.1
Attenuated Kitchen Extract discharge noise		49.4	38.4	27.4	19.4	22.4	26.4	26.4	36.6
Attenuated Fresh air inlet noise		23.0	10.0	8.0	0.0	0.0	0.0	0.0	11.4
Toilet extract radiated casing noise		29.6	21.1	10.7	5.51	0.31	0.0	1.6	17.3
Fresh air inlet fan, radiated casing noise		34.1	25.6	11.2	5.98	1.78	0.0	0.0	21.0
Kitchen extract radiated casing noise		50.2	43.7	36.3	33.1	31.9	28.1	24.2	41.1
Accumulative noise level									42.7
Summary A									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	1.8	1.5	10.8	1.5	12.358	1.749	10.804	12.553	0.195
Trenton 1 to location A									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.7	1.8	1.6	11.8	1.5	13.448	1.807	11.804	13.611	0.163
Trenton 2 to location A									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	1.8	1.8	12.6	1.5	14.450	2.012	12.604	14.616	0.166
Trenton 3 to location A									

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/4/4 TI20 Extract Fan									
A weighted Fan Sound Power Levels									
Extract		76	77	79	79	77	72	64	83.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		92.1	85.6	82.2	79	75.8	71	65.1	85.0
A weighted Breakout SWL		61	62	60	60	60	56	50	
Breakout SWL dB		77.1	70.6	63.2	60	58.8	55	51.1	68.0
Distance to position (B) 20.7m									
Distance loss 20log r-8		-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	
SPL at position B		42.8	36.3	28.9	25.7	24.5	20.7	16.8	33.7
Sheet 11									

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/6/6 Supply Fan									
A weighted Fan Sound Power Levels									
Inlet		51	53	63	64	61	53	43	67.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		67.1	61.6	66.2	64	59.8	52	44.1	68.0
A weighted Breakout SWL		52	51	42	40	37	32	25	
Breakout SWL dB		68.1	59.6	45.2	40	35.8	31	26.1	
Distance to position (B) 17.3m									
Distance loss 20log r-8		-32.8	-32.8	-33	-33	-32.8	-32.8	-33	
SPL at position B		35.3	26.8	12.4	7.2	3.0	0	0	22.3
Sheet 12									

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS SB160B Toilet Extract Fan									
A weighted Fan Sound Power Levels									
Extract		55	54	54	57	53	50	43	60.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		71.1	62.6	57.2	57	51.8	49	44.1	62.1
A weighted Breakout SWL		40	39	34	32	28	27	27	
Breakout SWL dB		56.1	47.6	37.2	32	26.8	26	28.1	43.7
Distance to position (D) 23m									
Distance loss 20log r-8		-35.2	-35.2	-35	-35	-35.2	-35.2	-35	
SPL at position B		20.9	12.4	1.97	0	0	0	0	10.2
Sheet 1of 1									

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			19	NR				
SYSTEM:	ATTENUATED KITCHEN EXHAUST TO POSITION B						23	dB'A'				
VOLUME:	3.40											
ATTR REF:												
CALC:	14											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**92**	**86**	**82**	**79**	**76**	**71**	**65**			
BENDS		0	0	1	2	3	3	3	3	**560**	**1**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		2	1	1	0	0	0	0	0	**560**	**2**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
attenuator		0	10	18	27	31	26	17	11			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**11**	**16**	**22**	**29**	**34**	**29**	**20**	**14**	**0.00**		OMNI
SWL AT GRILLE		**-11**	**76**	**64**	**53**	**45**	**47**	**51**	**51**	**0.00**		JUNC 2
DIRECTIVITY		0	0	-9	-9	-15	-15	-15	-15	**0.00**		JUNC 3
DISTANCE TO LISTENER		37	37	37	37	37	37	37	37	**20.70**		METERS
SPL AT LISTENER		**-48**	**39**	**18**	**7**	**-7**	**-5**	**-1**	**-1**	**135**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			4	NR				
SYSTEM:	ATTENUATED TOILET EXHAUST TO LOCATION B						11	dB'A'				
VOLUME:	0.10											
ATTR REF:												
CALC:	15											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**71**	**63**	**57**	**57**	**52**	**49**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
attenuator		0	3	8	20	35	27	16	10			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		0	0	0	0	0	0	0	0	**160.00**		CENTRE
SYSTEM ATTENUATION		**0**	**3**	**8**	**20**	**35**	**27**	**16**	**10**	**0.00**		OMNI
SWL AT GRILLE		**0**	**68**	**55**	**37**	**22**	**25**	**33**	**34**	**0.00**		JUNC 2
DIRECTIVITY		-4	-4	-4	-10	-10	-10	-10	-10	**0.00**		JUNC 3
DISTANCE TO LISTENER		38	38	38	38	38	38	38	38	**23.00**		METERS
SPL AT LISTENER		**-42**	**26**	**13**	**-11**	**-26**	**-23**	**-15**	**-14**	**90**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			18	NR				
SYSTEM:	ATTENUATED KITCHEN FAI TO POSITION B						22	dB'A'				
VOLUME:	2.40											
ATTR REF:												
CALC:	16											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**67**	**62**	**66**	**64**	**60**	**52**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
attenuator		0	7	9	17	18	22	21	16			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**9**	**12**	**11**	**17**	**18**	**22**	**21**	**16**	**0.00**		OMNI
SWL AT GRILLE		**-9**	**55**	**51**	**49**	**46**	**38**	**31**	**28**	**0.00**		JUNC 2
DIRECTIVITY		5	5	7	7	8	9	9	9	**0.00**		JUNC 3
DISTANCE TO LISTENER		36	36	36	36	36	36	36	36	**17.40**		METERS
SPL AT LISTENER		**-40**	**24**	**22**	**20**	**18**	**11**	**4**	**1**	**0**		ANGLE

Unit 8, Murrell Green Business Park,				**Project:**	237 Camden High Street						
London Road, Hook, Hampshire, RG27 9GR											
Tel. 01256 760775 Fax 01256 760754											
Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-20												
Noise to Location B												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TCPU 20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		16.4	m									
Reference surface envelope		24.634										
Reference surface envelope		3401.546										
Noise level at distance of interest												29.6
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location B)												29.6
Sheet 17												

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-HLT 50												
Noise to Location B												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-HLT 50	1	0.35	0.66									
Noise level at stated distance of		10	m									33.0
Distance to point of intrest		14.8	m									
Reference surface envelope		1322.582										
Reference surface envelope		2808.566										
Noise level at distance of interest												29.7
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location B)												29.7
Sheet 18												

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

CALCULATION SHEET

Client: Barrack Holdings Ltd

Project: 237 Camden High Street

Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-20												
Noise to Location B												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		13.2	m									
Reference surface envelope		24.634										
Reference surface envelope		2231.37										
Noise level at distance of interest												31.4
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location B)												31.4
Sheet 19												

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET	
	Client:	Barrack Holdings Ltd
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street

Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Predicted Noise to location B									
Trenton TPCU-20 acoustically screened									24.6
Trenton TPCU-HLT 50 acoustically screened									24.7
Trenton TPCU-20 acoustically screened									22.4
Toilet Extract discharge noise (attenuated)		26.0	13.0	0.0	0.0	0.0	0.0	0.0	12.4
Kitchen Extract discharge noise (attenuated)		38.7	17.7	6.7	0.0	0.0	0.0	0.0	22.9
Fresh air inlet noise (attenuated)		24.2	22.2	20.2	18.2	11.2	4.19	1.19	22.2
Toilet extract radiated casing noise		20.9	12.4	1.97	0	0	0	0	10.2
Fresh air inlet fan, radiated casing noise		35.3	26.8	12.4	7.24	3.04	0	0	22.3
Kitchen extract radiated casing noise		42.8	36.3	28.9	25.7	24.5	20.7	16.8	33.7
KFC Accumulative noise level									35.6
Summary B									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Overall Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	3.0	4.0	13.0	1.5	17.169	4.100	13.086	17.186	0.018

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.7	3.0	2.6	13.2	1.5	15.972	2.732	13.285	16.017	0.045

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	3.0	0.9	13.1	1.5	14.204	1.273	13.186	14.458	0.254

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/6/6 Supply Fan									
A weighted Fan Sound Power Levels									
Inlet		51	53	63	64	61	53	43	67.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		67.1	61.6	66.2	64	59.8	52	44.1	68.0
A weighted Breakout SWL		52	51	42	40	37	32	25	
Breakout SWL dB		68.1	59.6	45.2	40	35.8	31	26.1	
Distance to position (D) 20m									
Distance loss 20log r-8		-34	-34	-34	-34	-34	-34	-34	
SPL at position C		34.1	25.6	11.2	6.0	1.8	0.0	0.0	
Sheet 21									

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/4/4 TI20 Extract Fan									
A weighted Fan Sound Power Levels									
Extract		76	77	79	79	77	72	64	83.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		92.1	85.6	82.2	79	75.8	71	65.1	85.0
A weighted Breakout SWL		61	62	60	60	60	56	50	
Breakout SWL dB		77.1	70.6	63.2	60	58.8	55	51.1	
Distance to position (C) 8.8m									
Distance loss 20log r-8		-26.9	-26.9	-27	-27	-26.9	-26.9	-27	
SPL at position C		50.2	43.7	36.3	33.1	31.9	28.1	24.2	41.1
Sheet 22									

ENVIROSOUND LTD	CALCULATION SHEET	
	Client:	Barrack Holdings Ltd
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	Project:	239 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
HELIOS SB160B Toilet Extract Fan									
A weighted Fan Sound Power Levels									
Extract		55	54	54	57	53	50	43	60.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		71.1	62.6	57.2	57	51.8	49	44.1	62.1
A weighted Breakout SWL		40	39	34	32	28	27	27	
Breakout SWL dB		56.1	47.6	37.2	32	26.8	26	28.1	
Distance to position (C) 8.4m									
Distance loss 20log r-8		-26.5	-26.5	-26	-26	-26.5	-26.5	-26	
SPL at position of intrest		29.6	21.1	10.7	5.51	0.31	0	1.61	
Sheet 23									

PROJECT:	**KFC 239 CAMDEN HIGH STREET**										
FILE No:	**P5169**										
DATE:	06/10/2014			NOISE UNTREATED:		34	NR				
SYSTEM:	ATTENUATED KITCHEN EXHAUST TO POSITION C					37	dB'A'				
VOLUME:	3.40										
ATTR REF:											
CALC:	24										
			ATMOSPHERE SIDE ANALYSIS								
			OCTAVE BAND CENTRE FREQ								
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**		
SWL		**0**	**92**	**86**	**82**	**79**	**76**	**71**	**65**		
BENDS		0	0	1	2	3	3	3	3	**560**	**1** BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0** BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0** BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0** BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0** BEND W/QTY
RECTANGULAR DUCTS		2	1	1	0	0	0	0	0	**560**	**2** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0** DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0		
EVS-5-1500-ME		0	10	18	27	31	26	17	11		
		0	0	0	0	0	0	0	0	**M2**	
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**	CENTRE
SYSTEM ATTENUATION		**11**	**16**	**22**	**29**	**34**	**29**	**20**	**14**	**0.00**	OMNI
SWL AT GRILLE		**-11**	**76**	**64**	**53**	**45**	**47**	**51**	**51**	**0.00**	JUNC 2
DIRECTIVITY		4	4	5	5	5	6	6	6	**0.00**	JUNC 3
DISTANCE TO LISTENER		30	30	30	30	30	30	30	30	**8.90**	METERS
SPL AT LISTENER		**-37**	**50**	**39**	**28**	**20**	**23**	**27**	**27**	**40**	ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			27	NR				
SYSTEM:	ATENUATED TOILET EXHAUST						31	dB'A'				
VOLUME:	0.10											
ATTR REF:												
CALC:	25											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**71**	**63**	**57**	**57**	**52**	**49**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
C100 160Ø x600		0	3	8	20	35	27	16	10			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		0	0	0	0	0	0	0	0	**160.00**		CENTRE
SYSTEM ATTENUATION		**0**	**3**	**8**	**20**	**35**	**27**	**16**	**10**	**0.00**		OMNI
SWL AT GRILLE		**0**	**68**	**55**	**37**	**22**	**25**	**33**	**34**	**0.00**		JUNC 2
DIRECTIVITY		7	7	7	8	8	8	8	8	**0.00**		JUNC 3
DISTANCE TO LISTENER		30	30	30	30	30	30	30	30	**8.50**		METERS
SPL AT LISTENER		**-23**	**45**	**32**	**15**	**0**	**3**	**11**	**12**	**30**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**												
FILE No:	**P5169**												
DATE:	06/10/2014				NOISE UNTREATED:			3	NR				
SYSTEM:	ATTENUATED KITCHEN FAI TO POSITION C							10	dB'A'				
VOLUME:	2.40												
ATTR REF:													
CALC:	26												
				ATMOSPHERE		**SIDE**		**ANALYSIS**					
				OCTAVE BAND CENTRE FREQ									
			63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL			**0**	**67**	**62**	**66**	**64**	**60**	**52**	**44**			
BENDS			0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
			0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
			0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
			0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
			0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
			0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS		0	0	0	0	0	0	0	0			
EVS-4-900			0	7	9	17	18	22	21	16			
			0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION			9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION			**9**	**12**	**11**	**17**	**18**	**22**	**21**	**16**	**0.00**		OMNI
SWL AT GRILLE			**-9**	**55**	**51**	**49**	**46**	**38**	**31**	**28**	**0.00**		JUNC 2
DIRECTIVITY			0	0	-9	-9	-15	-15	-15	-15	**0.00**		JUNC 3
DISTANCE TO LISTENER			32	32	32	32	32	32	32	32	**11.10**		METERS
SPL AT LISTENER			**-41**	**23**	**10**	**8**	**-1**	**-9**	**-16**	**-19**	**135**		ANGLE

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-20												
Noise to Location C												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TCPU 20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		9.1	m									
Reference surface envelope		24.634										
Reference surface envelope		1091.242										
Noise level at distance of interest												34.5
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location C)												34.5
Sheet 27												

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR				Project:	237 Camden High Street							
Tel. 01256 760775 Fax 01256 760754												
Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-HLT 50												
Noise to Location C												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-HLT 50	1	0.35	0.66									
Noise level at stated distance of		10	m									33.0
Distance to point of intrest		10.4	m									
Reference surface envelope		1322.582										
Reference surface envelope		1425.294										
Noise level at distance of interest												32.7
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location C)												32.7
Sheet 28												

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	237 Camden High Street							

Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-20												
Noise to Location C												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		12.3	m									
Reference surface envelope		24.634										
Reference surface envelope		1946.538										
Noise level at distance of interest												32.0
Based on the Parallepipped Surface Method												
Façade effect												0.0
Location Correction												0.0
Predicted noise level (location C)												32.0
Sheet 29												

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET	
	Client:	Barrack Holdings Ltd
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	237 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
Predicted Noise to location C									
Trenton TPCU-20 acoustically screened									24.5
Trenton TPCU-HLT 50 acoustically screened									22.7
Trenton TPCU-20 acoustically screened									22.0
Attenuated Toilet Extract discharge noise		45	32	15	0	3	11	12	30.2
Atenuated Kitchen Extract discharge noise		50	39	28	20	23	27	27	37.2
Fresh air inlet noise		30.1	19.1	25.1	17.1	13.1	5.1	0	24.4
Toilet extract radiated casing noise		29.6	21.1	10.7	5.51	0.31	0	1.61	17.3
Fresh air inlet fan, radiated casing noise		34.1	25.6	11.2	5.98	1.78	0	0	21.0
Kitchen extract radiated casing noise		50.2	43.7	36.3	33.1	31.9	28.1	24.2	41.1
Accumulative noise level									43.1
Summary C									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	1.8	0.5	9.0	1.5	9.575	1.030	9.005	10.035	0.459
Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.7	1.8	0.5	10.2	1.5	10.761	0.978	10.204	11.182	0.421
Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	1.8	0.5	11.5	1.5	12.060	1.030	11.504	12.533	0.474

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET								
	Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street							
Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
HELIOS GBD 560/6/6 Supply Fan									
A weighted Fan Sound Power Levels									
Inlet		51	53	63	64	61	53	43	67.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
SWL		67.1	61.6	66.2	64	59.8	52	44.1	68.0
A weighted Breakout SWL		52	51	42	40	37	32	25	
Breakout SWL dB		68.1	59.6	45.2	40	35.8	31	26.1	
Distance to position (D) 20m									
Distance loss 20log r-8		-34	-34	-34	-34	-34	-34	-34	
SPL at position D		34.1	25.6	11.2	6.0	1.8	0	0	21.0
DIL		6.8	10.2	17.4	19.6	22.1	17.0	11.4	
Sheet 31									

CALCULATION SHEET

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

Client: Barrack Holdings Ltd

Project: 239 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
HELIOS GBD 560/4/4 TI20 Extract Fan									
A weighted Fan Sound Power Levels									
Extract		76	77	79	79	77	72	64	83.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		92.1	85.6	82.2	79	75.8	71	65.1	85.0
A weighted Breakout SWL		61	62	60	60	60	56	50	
Breakout SWL dB		77.1	70.6	63.2	60	58.8	55	51.1	68.0
Distance to position (D) 22.7m									
Distance loss 20log r-8		-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	
SPL at position of intrest		42	35.5	28.1	24.9	23.7	19.9	16	32.9
Sheet 32									

CALCULATION SHEET

ENVIROSOUND LTD
Unit 8, Murrell Green Business Park,
London Road, Hook, Hampshire, RG27 9GR
Tel. 01256 760775 Fax 01256 760754

Client: Barrack Holdings Ltd

Project: 239 Camden High Street

Subject	63	125	250	500	1 K	2 K	4 K	8 K	dBA
HELIOS SB160B Toilet Extract Fan									
A weighted Fan Sound Power Levels									
Extract		55	54	54	57	53	50	43	60.3
A Weighting	26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1	
		71.1	62.6	57.2	57	51.8	49	44.1	62.1
A weighted Breakout SWL		40	39	34	32	28	27	27	
Breakout SWL dB		56.1	47.6	37.2	32	26.8	26	28.1	43.7
Distance to position (D) 25m									
Distance loss 20log r-8		-36	-36	-36	-36	-36	-36	-36	
SPL at position of intrest		20.1	11.6	1.24	0	0	0	0	9.8
Sheet 34									

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			18	NR				
SYSTEM:	ATTENUATED KITCHEN EXHAUST TO POSITION D						22	dB'A'				
VOLUME:	3.40											
ATTR REF:												
CALC:	34											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**92**	**86**	**82**	**79**	**76**	**71**	**65**			
BENDS		0	0	1	2	3	3	3	3	**560**	**1**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		2	1	1	0	0	0	0	0	**560**	**2**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
Attenuator		0	10	18	27	31	26	17	11			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**11**	**16**	**22**	**29**	**34**	**29**	**20**	**14**	**0.00**		OMNI
SWL AT GRILLE		**-11**	**76**	**64**	**53**	**45**	**47**	**51**	**51**	**0.00**		JUNC 2
DIRECTIVITY		0	0	-9	-9	-15	-15	-15	-15	**0.00**		JUNC 3
DISTANCE TO LISTENER		38	38	38	38	38	38	38	38	**22.70**		METERS
SPL AT LISTENER		**-49**	**38**	**17**	**6**	**-8**	**-6**	**-2**	**-2**	**135**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			10	NR				
SYSTEM:	ATTENUATED TOILET EXHAUST TO LOCATION D						16	dB'A'				
VOLUME:	0.10											
ATTR REF:												
CALC:	35											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**71**	**63**	**57**	**57**	**52**	**49**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
C100		0	3	8	20	35	27	16	10			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		0	0	0	0	0	0	0	0	**160.00**		CENTRE
SYSTEM ATTENUATION		**0**	**3**	**8**	**20**	**35**	**27**	**16**	**10**	**0.00**		OMNI
SWL AT GRILLE		**0**	**68**	**55**	**37**	**22**	**25**	**33**	**34**	**0.00**		JUNC 2
DIRECTIVITY		2	2	2	0	0	0	0	0	**0.00**		JUNC 3
DISTANCE TO LISTENER		39	39	39	39	39	39	39	39	**25.00**		METERS
SPL AT LISTENER		**-37**	**31**	**18**	**-2**	**-17**	**-14**	**-6**	**-5**	**60**		ANGLE

PROJECT:	**KFC 239 CAMDEN HIGH STREET**											
FILE No:	**P5169**											
DATE:	06/10/2014			NOISE UNTREATED:			14	NR				
SYSTEM:	ATTENUATED KITCHEN FAI TO POSITION D						19	dB'A'				
VOLUME:	2.40											
ATTR REF:												
CALC:	36											
			ATMOSPHERE		**SIDE**		**ANALYSIS**					
			OCTAVE BAND CENTRE FREQ									
		63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**			
SWL		**0**	**67**	**62**	**66**	**64**	**60**	**52**	**44**			
BENDS		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
		0	0	0	0	0	0	0	0	**0**	**0**	BEND W/QTY
RECTANGULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
CIRCULAR DUCTS		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
		0	0	0	0	0	0	0	0	**0**	**0**	DUCT W/L
NONE	EQUIP LOSS	0	0	0	0	0	0	0	0			
EVS-5-900		0	7	10	17	20	22	17	11			
		0	0	0	0	0	0	0	0	**M2**		
GRILLE END REFLECTION		9	5	2	0	0	0	0	0	**0.25**		CENTRE
SYSTEM ATTENUATION		**9**	**12**	**12**	**17**	**20**	**22**	**17**	**11**	**0.00**		OMNI
SWL AT GRILLE		**-9**	**55**	**50**	**49**	**44**	**38**	**35**	**33**	**0.00**		JUNC 2
DIRECTIVITY		5	5	6	6	7	8	8	8	**0.00**		JUNC 3
DISTANCE TO LISTENER		37	37	37	37	37	37	37	37	**20.00**		METERS
SPL AT LISTENER		**-41**	**23**	**19**	**18**	**14**	**9**	**6**	**4**	**30**		ANGLE

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				63	125	250	500	1 K	2 K	4 K	8 K	dBA
Refrigeration Condensers TPCU-20												
Noise to Location D												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TCPU 20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									51.0
Distance to point of intrest		17.5	m									
Reference surface envelope		24.634										
Reference surface envelope		3860.554										
Noise level at distance of interest												29.0
Based on the Parallepipped Surface Method												
Façade effect												0.0
Screening loss												-10.0
Predicted noise level (location D+4m)												19.0
Sheet 37												

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-HLT 50												
Noise to Location D+4												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-HLT 50	1	0.35	0.66									
Noise level at stated distance of		10	m									33.0
Distance to point of intrest		16	m									
Reference surface envelope		1322.582										
Reference surface envelope		3266.462										
Noise level at distance of interest												29.1
Based on the Parallepipped Surface Method												
Façade effect												0.0
Screening Loss												-10.0
Predicted noise level (location D +4)												19.1
Sheet 38												

ENVIROSOUND

ENVIROSOUND LTD				CALCULATION SHEET								
				Client:	Barrack Holdings Ltd							
Unit 8, Murrell Green Business Park,				Project:	237 Camden High Street							
London Road, Hook, Hampshire, RG27 9GR												
Tel. 01256 760775 Fax 01256 760754												
Subject				**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Refrigeration Condensers TPCU-20												
Noise to Location D +4												
Plant Details												
Model	Dimensions											
	Width m	Depth m	Height m									
TPCU-20	0.9	0.3	0.56									
Noise level at stated distance of		1	m									46.0
Distance to point of intrest		14.6	m									
Reference surface envelope		24.634										
Reference surface envelope		2713.082										
Noise level at distance of interest												25.6
Based on the Parallepipped Surface Method												
Façade effect												0.0
Screening loss												-10.0
Predicted noise level (location D)												15.6
Sheet 29												

ENVIROSOUND

ENVIROSOUND LTD	CALCULATION SHEET	
	Client:	Barrack Holdings Ltd
Unit 8, Murrell Green Business Park, London Road, Hook, Hampshire, RG27 9GR Tel. 01256 760775 Fax 01256 760754	**Project:**	239 Camden High Street

Subject	**63**	**125**	**250**	**500**	**1 K**	**2 K**	**4 K**	**8 K**	**dBA**
Predicted mitigated plant noise to location D+4m									
Trenton TPCU-20 (1.5m high acoustic screen)									19.0
Trenton TPCU-HLT 50 (1.5m high acoustic screen)									19.1
Trenton TPCU-20 (1.5m high acoustic screen)									15.6
Toilet Extract discharge noise (Attenuated)		31	18	0	0	0	0	0	16.5
Kitchen Extract discharge noise (Attenuated)		38	17	6	0	0	0	0	22.3
Fresh air inlet noise (Attenuated)		23	19	18	14	9	6	4	19.5
Toilet extract radiated casing noise		20.1	11.6	1.24	0	0	0	0	9.8
Fresh air inlet fan, radiated casing noise		34.1	25.6	11.2	5.98	1.78	0	0	21.0
Kitchen extract radiated casing noise		42	35.5	28.1	24.9	23.7	19.9	16	32.9
KFC Accumulative noise level									34.1
Summary D									

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Overall Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	4.0	0.5	17.5	1.5	18.318	1.030	17.678	18.707	0.389

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.7	4.0	0.5	16.3	1.5	17.129	0.978	16.491	17.468	0.339

Attenuation due to screens after Maekawa									
Height at Source m	Height at receptor m	Distance plant to Screen m	Distance Screen to receptor m	Screen Height m	Straight line distance m	To screen distance m	From screen distance m	Path Length m	Path difference m
0.6	4.0	0.5	14.7	1.5	15.576	1.030	14.911	15.941	0.365

Location Key

Position A. 235 Camden High Street (Residential)
Position B. Arlington Conference Centre (South facing façade)
Position C. 243 Camden High Street (Residential)
Position D. Arlington Conference Centre (North facing façade)

Appendix B

Acoustic Terminology

Decibel, dB	A unit of level derived from the logarithm of the ratio between the value of a quantity and a reference value. For sound pressure level (Lp) the reference quantity is 2 x 10^{-5} N/m^2. The sound pressure level existing when the microphone measured pressure is 2x10^{-5} n/m^2 is 0dB, the threshold of hearing.
dB(A):	The human ear perceives mid frequency sound more efficiently than low or high frequency sounds. The dB(A) weighting curve is a frequency response curve that resembles the normal frequency hearing curve for most people. A sound level metre using this weighting network will produce measurements that correspond roughly to the overall level of noise discerned by the average human. It is also possible to calculate the overall dB(A) level from an un-weighted sound spectrum by applying the weighting curve corrections.
$L_{Aeq,T}$	Equivalent continuous A-weighted sound pressure level over a time period T. This is defined as a notional steady sound level which over a stated period of time, would contain the same amount of acoustic energy as the fluctuating sound measured over that period.
L_{nT}	The sound pressure level Lp that is exceeded n% of the time.
L_{n10} & L_{n90}	In considering a non-steady noise Ln indices are used to describe the level and degree of fluctuation in terms of the level exceeded n% of the time, hence L_{N10} is the noise level exceeded 10% of the time, this can be regarded as the average maximum level and is often used to describe road traffic noise, whereas $L_{n\ 90}$ is the average minimum level, and is often used to describe the background level.
Specific Noise	The noise source under investigation for assessing the likelihood of complaints.
Rating Level $L_{Ar,Tr}$	The specific noise level plus any adjustments for the characteristic features of the noise as defined in BS 4142:1997
Residual Noise Level $L_{Aeq,T}$	The equivalent continuous A-weighted sound pressure level of the residual noise level in the absence of any contribution made by a specific noise under investigation