



Acoustic Consultancy Report

Environmental Noise Survey

Report Prepared For

Thurgood Design Ltd

71 Kingsway

Date

23 March 2007

Report Reference

52730/3/1/2

Prepared By

Lee Cunningham Partnership

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Checked R King CSci CPhys MIOA

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1. Introduction

The Lee Cunningham Partnership has been commissioned to conduct an environmental survey in order to obtain statistical noise data and establish the local background noise levels at 71 Kingsway, London. This information will be used in accordance with relevant British Standards and codes of good design practice to set noise rating levels at the nearest affected premises.

The guidance contained within this report is given on the basis that the operational period of the mechanical plant may potentially be continuous over the 24 hour period.

2. Site description

The site layout together with measurement position is shown in the drawing contained in Appendix A.

3. Local Noise Climate

The predominant noise source was traffic from Kingsway. There was also plant noise from roof top plant on surrounding buildings.

4. Measurements

The continuous noise monitoring began on 19/03/07 and was completed on 21/03/07. The measurement period was considered sufficient to establish the lowest background noise levels corresponding to the operational period of the plant.

The weather conditions during the survey were dry and calm.

A photographic record of the development site and surrounding areas was obtained for future reference as necessary.

5. Results

The measured statistical spectral and broad-band sound pressure levels are shown within Appendix B. The lowest representative background noise levels obtained being as follows:

Table 1: Lowest Measured Background Noise Levels (dB re 2×10^{-5} Pa)

Measurement Position	Daytime	Night
	$L_{A90(07:00-23:00)}$	$L_{A90(23:00-07:00)}$
MP1	55	50

6. Evaluation of Design Criteria

6.1. Residential Design Criteria

Consideration must be given to any policy requirements of the Local Authority. In this instance the local authority is Camden Council. Camden have stipulated a requirement whereby:

Where existing external background noise levels do not exceed L_{A90} 60dB and where noise from the proposed plant will not contain tones or distinct impulses, the maximum emission level should not exceed 5dB below the background noise (L_{A90}) at the nearest noise sensitive properties.

The rating level shall therefore be: -

$\text{Rating Level} = L_{A90} - 5 \text{ dB}$
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6.2. Commercial Design Criteria (BS 8233:1999)

Design criteria for non-residential buildings have been derived from BS8233:1999.

For typical office environments, the rating level is 55 dB(A) at 1m from the façade of the receiver premises.

Rating level = 55 dB(A)

6.3. Design Rating Levels

The design rating levels to be adopted for this project are set out in the table below.

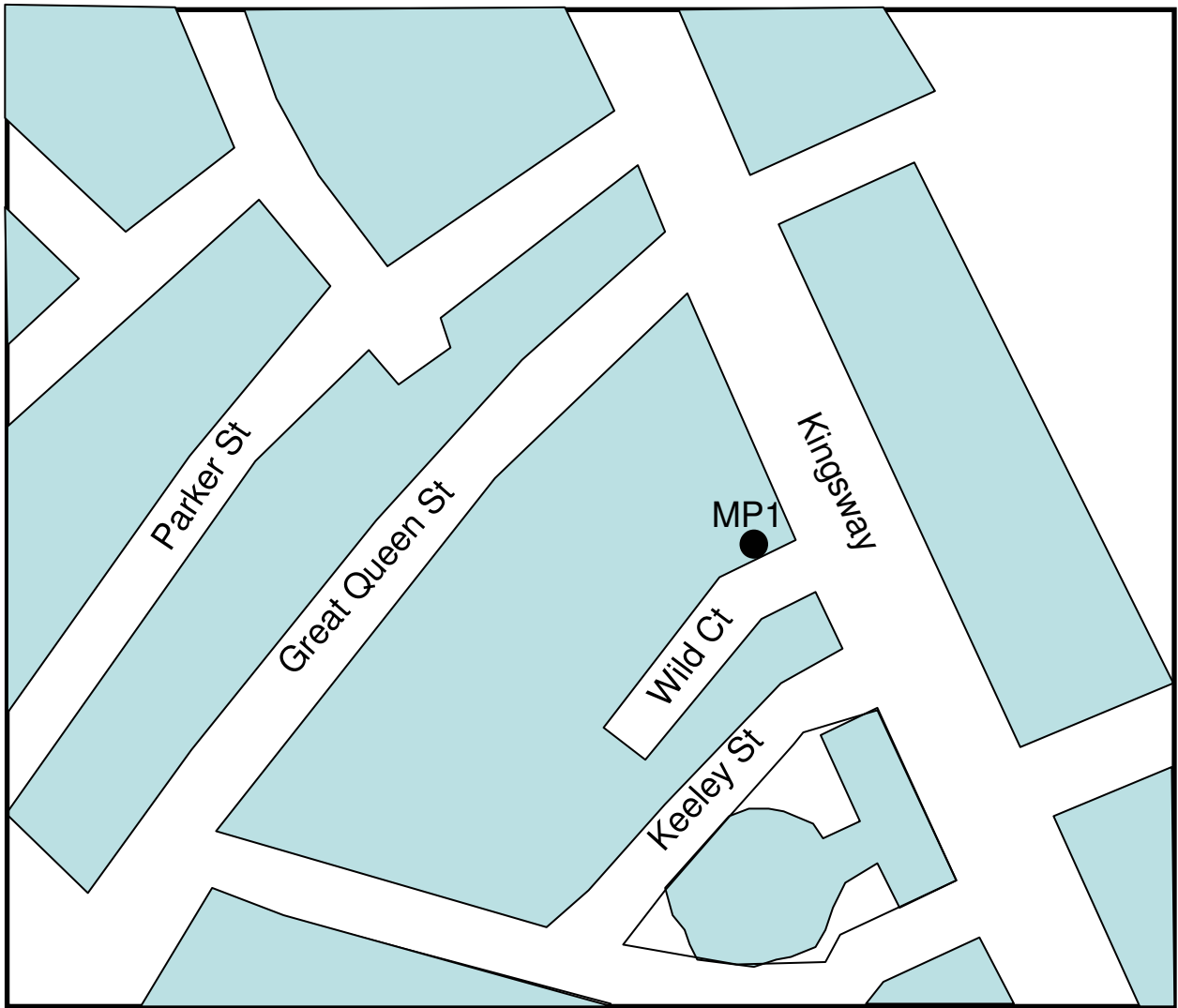
Table 2: Design Rating Levels (dB re 2×10^{-5} Pa)

Receiver premises	Approximate distance	Rating Level (Day)	Rating Level (Night)
		$L_{Ar,T} (07:00-23:00)$	$L_{Ar,T} (23:00 - 07:00)$
Nearest Residential, Hotel on Kingsway	70m	50	45
Nearest Commercial, Offices on Kingsway	15m	55	-

7. Conclusion

An environmental noise survey has been undertaken in order to establish the existing background noise levels local to the site generally in accordance with the method contained within BS4142: 1997. Design rating levels have been provided, which should be applied to ensure any new mechanical plant complies with the relevant guidelines.

Appendix A: Site Plan



Appendix B: Measured Data

Date	Time	63	125	250	500	1000	2000	4000	8000	L _{A90}
19-03-07	16:26'18	60	51	48	56	55	49	37	24	59
19-03-07	16:36'18	64	62	58	56	55	50	39	24	59
19-03-07	16:46'18	65	62	57	56	55	50	38	23	59
19-03-07	16:56'18	65	63	58	57	56	51	39	25	60
19-03-07	17:06'18	63	61	57	56	55	49	38	23	59
19-03-07	17:16'18	64	62	57	57	56	51	39	24	60
19-03-07	17:26'18	65	62	57	56	56	51	41	27	60
19-03-07	17:36'18	65	62	58	57	56	52	42	28	60
19-03-07	17:46'18	64	62	58	56	56	52	43	30	60
19-03-07	17:56'18	65	62	58	57	56	53	44	31	60
19-03-07	18:06'18	64	61	57	56	56	52	43	29	60
19-03-07	18:16'18	64	61	57	56	56	52	42	28	60
19-03-07	18:26'18	64	61	56	56	56	52	41	28	60
19-03-07	18:36'18	63	61	57	55	55	51	41	28	59
19-03-07	18:46'18	63	61	56	56	55	51	42	29	59
19-03-07	18:56'18	63	60	57	56	56	52	43	29	60
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19-03-07	19:26'18	63	61	56	56	55	52	42	28	59
19-03-07	19:36'18	62	61	56	56	55	51	40	26	59
19-03-07	19:46'18	62	58	55	55	55	50	38	24	58
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19-03-07	20:06'18	61	58	55	54	52	47	36	22	56
19-03-07	20:16'18	61	57	55	54	53	48	37	22	57
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20-03-07	00:46'16	57	56	52	49	49	43	31	21	53
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Date	Time	63	125	250	500	1000	2000	4000	8000	L _{A90}
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20-03-07	01:46'16	57	56	50	49	48	42	30	21	52
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21-03-07	05:16'14	60	55	53	51	50	45	32	21	54
21-03-07	05:26'14	60	56	52	50	50	44	32	21	53
21-03-07	05:36'14	61	57	54	53	53	48	35	21	56
21-03-07	05:46'14	61	58	56	54	54	49	38	22	58
21-03-07	05:56'14	62	58	55	54	54	49	36	22	58
21-03-07	06:06'14	62	58	56	55	54	50	39	23	59
21-03-07	06:16'14	63	60	58	56	55	50	39	22	59
21-03-07	06:26'14	63	59	56	54	55	50	38	22	58
21-03-07	06:36'14	64	60	57	55	55	51	39	23	59
21-03-07	06:46'14	63	60	56	55	55	50	38	23	59
21-03-07	06:56'14	63	59	57	55	55	49	38	22	58
21-03-07	07:06'14	64	60	57	56	55	50	38	23	59
21-03-07	07:16'14	65	61	58	56	55	50	38	23	59
21-03-07	07:26'14	64	62	57	56	55	51	40	26	59
21-03-07	07:36'14	65	62	58	57	56	51	41	26	60
21-03-07	07:46'14	65	62	57	56	55	50	39	25	59
21-03-07	07:56'14	65	61	58	57	55	50	40	24	59
21-03-07	08:06'14	65	61	58	57	55	50	40	24	59
21-03-07	08:16'14	67	63	59	58	57	53	43	28	61
21-03-07	08:26'14	66	63	58	57	56	52	42	27	60
21-03-07	08:36'14	67	63	59	58	57	53	42	28	61
21-03-07	08:46'14	65	63	59	57	56	52	42	28	61
21-03-07	08:56'14	66	63	59	57	56	53	42	27	61
21-03-07	09:06'14	66	63	59	58	58	53	43	28	62
21-03-07	09:16'14	66	62	58	57	56	52	42	28	60
21-03-07	09:26'14	65	62	58	58	56	52	42	27	61
21-03-07	09:36'14	67	63	60	60	59	55	45	29	63
21-03-07	09:46'14	66	62	58	57	56	52	42	27	60
21-03-07	09:56'14	66	62	59	58	57	53	42	27	61
21-03-07	10:06'14	66	62	58	57	57	52	42	27	61
21-03-07	10:16'14	65	63	59	57	56	51	40	26	60
21-03-07	10:26'12	65	63	58	57	56	51	40	25	60
21-03-07	10:36'12	65	63	59	58	56	51	40	25	60
21-03-07	10:46'12	66	63	59	58	58	53	41	26	62
21-03-07	10:56'12	66	63	60	58	57	52	41	26	61
21-03-07	11:06'12	66	63	58	58	56	52	41	26	60
21-03-07	11:16'12	65	63	59	57	56	51	40	25	60
21-03-07	11:26'12	65	62	58	57	55	50	39	24	60
21-03-07	11:36'12	67	63	59	58	58	54	43	28	62
21-03-07	11:46'12	65	63	59	58	57	52	41	25	61
21-03-07	11:56'12	65	62	58	57	56	52	40	26	60
21-03-07	12:06'12	66	63	59	57	57	52	40	25	61
21-03-07	12:16'12	65	62	58	57	55	51	40	24	60
21-03-07	12:26'12	65	63	59	57	56	51	39	24	60
21-03-07	12:36'12	64	62	58	57	56	51	40	24	60
21-03-07	12:46'12	65	62	58	57	56	51	39	25	60
21-03-07	12:56'12	64	62	58	58	57	52	40	25	60