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REPORT No. 461014/2

GETTY IMAGES  
101 BAYHAM STREET  
LONDON  
NW1 0AG

ENVIRONMENTAL NOISE  
SURVEY REPORT

PREPARED: 2<sup>nd</sup> NOVEMBER 2006

Presented By: Fred Blyth MIOA

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## 1.0 Introduction

1.1 Noico Limited has been instructed to undertake an environmental noise survey at Getty Images, 101 Bayham Street, London NW1 0AG.

1.2 The purpose of the survey is to determine, in line with the requirements of the local authority (Camden Council), the maximum noise levels for building services plant.

## 2.0 Instrumentation

2.1 A precision grade Norsonic 118 'Type 1' Integrating Sound Level Meter was used for the survey. This was equipped with an environmental microphone and extension cable. The instrument was powered by an external battery and stored in a weatherproof case.

2.2 The instrument was calibrated prior and subsequent to use with no calibration drift recorded.

## 3.0 Survey Details

3.1 Location: The environmental noise analyser was located externally on a first floor roof to the rear of the building overlooking the loading yard area. The distance between the analyser and the nearest known residential window was approximately 5.5 metres. There is a closer office window at 3 metres.

The monitoring position was chosen as it was considered to be representative of the background noise environment which exists at the nearest adjacent properties.

3.2 Period: Monitoring was carried out continuously from Tuesday 10th – Wednesday 11th October 2006. The instrument was set up to monitor noise levels continuously and store data in 5-minute intervals.

3.3 Weather: The prevailing weather condition throughout the majority of the survey period was satisfactory for noise monitoring, being mainly dry with little to moderate breeze. Windspeed, although not recorded, was considered to be less than 5 m/s throughout the survey period, based upon the prevailing weather conditions in the general area.

3.4 Site Noise Characteristics: The general ambient noise level was characterised by other wall mounted plant in the adjacent unloading area, road traffic noise, overflying aircraft and general activities in the area. It is thought that no unusual events occurred during the survey period and the data are considered to be a true representation of ambient noise levels in the area.

#### 4.0 Survey Results

- 4.1 The results of the environmental survey are presented in graphical and numerical format in the attached appendices, showing the recorded values of  $L_{Aeq}(5min)$  and  $L_{A90}(5min)$ .
- 4.2 See Appendix 1 for a glossary of terms.
- 4.3 With reference to the measured data, the following minimum background noise levels was measured, based on the unit being able to operate on and off over a 24 hour period:

24 hour plant

49dB  $L_{A90}$

#### 5.0 Environmental Noise Level Criteria

- 5.1 Camden Council has advised that noise arising from fixed plant should, during hours of operation, be designed to be 5 dB below the existing lowest background noise level when assessed at 1m from the nearest residential window. This would increase to 10dB below should the plant exhibit a tonal quality.
- 5.2 Based upon the above requirements, noise from the plant shall not exceed the following value as measured at 1 metre from the windows of the nearest affected residential property:

24 hour plant

44 dB  $L_{A90}$

Nb, Should the plant be tonal the level above would have to be reduced by a further 5 dB to 39dBA.

#### 6.0 Plant Noise Assessment

- 6.1 The existing unit in place is a Daikin VRV condensing unit model REYQ16M.
- 6.2 The manufacturer's measured sound data for the unit has been given at a maximum of 60dB(A) @ 1 metre.
- 6.3 Using the above data, the predicted noise level at 1 metre from the nearest known residential window has been calculated to be 50dBA with the unit running at it's maximum and it can be seen that this level exceeds the lowest background level by 6dB(A). Noise control treatment in the form of an acoustic enclosure and attenuators would be required to reduce the noise level to 5dB below the minimum background level as required by the Local Authority.

**7.0 Conclusion**

- 7.1 A background noise level survey has been carried out at Getty Images, 101 Bayham Street, London NW1 0AG**
- 7.2 Based upon the survey results and discussions with the local planning authority, limiting criteria applicable to noise from the mechanical services plant have been established.**
- 7.3 With the measures recommended in this report, noise arising from the plant would meet the planning requirement of the Local Authority**

## Appendix 1 - Glossary of Terms

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 ( $L_p$ ) the reference quantity is $2 \times 10^{-5} \text{ N/m}^2$ . The sound pressure level existing when microphone measured pressure is $2 \times 10^{-5} \text{ N/m}^2$ is 0 dB, the threshold of hearing.
L	Instantaneous value of Sound Pressure Level ( $L_p$ ).
Frequency	Is related to sound pitch; frequency equals the ratio between velocity of sound and wavelength.
A weighting	Arithmetic corrections applied to values of $L_p$ according to frequency. When logarithmically summed for all frequencies, the resulting single "A weighted value" becomes comparable with other such values from which a comparative loudness judgement can be made, then, without knowledge of frequency content of the source.
$L_{eq,T}$	Equivalent continuous level of sound pressure which, if it actually existed for the integration time period T of the measurement, would possess the same energy as the constantly varying values of $L_p$ actually measured.
$L_{Aeq,T}$	Equivalent continuous level of A weighted sound pressure which, if it actually existed for the integration time period, T, of the measurement would possess the same energy as the constantly varying values of $L_p$ actually measured.
$L_{n,T}$	$L_p$ which was exceeded for n% of time, T.
$L_{An,T}$	Level in dBA which was exceeded for n% of time, T.
$L_{max,T}$	The instantaneous maximum sound pressure level which occurred during time, T.
$L_{Amax,T}$	The instantaneous maximum A weighted sound pressure level which occurred during time, T.
Background Noise Level	The value of $L_{A90,T}$ , ref. BS4142:1997.
Traffic Noise Level	The value of $L_{A10,T}$ .
Specific Noise Level	The value of $L_{Aeq,T}$ at the assessment position produced by the specific noise source, ref. BS4142:1997.
Rating Level	The specific noise level, corrected to account for any characteristic features of the noise, by adding a 5 dBA penalty for any tonal, impulsive or irregular qualities, ref. BS4142:1997.
Specific Noise Source	The noise source under consideration when assessing the likelihood of complaint.
Assessment Position	Unless otherwise noted, is a point at 1 m from the façade of the nearest affected sensitive property.



## Appendix 2

### ENVIRONMENTAL NOISE MONITORING DATA

10<sup>th</sup> to 11th October 2006

<u>Date &amp; Time</u>	<u>LAeq</u>	<u>LA90</u>
(2006/10/10 10:34:28.00)	63.7	59.7
(2006/10/10 10:39:30.00)	62.1	60.1
(2006/10/10 10:44:32.00)	62.6	60.9
(2006/10/10 10:49:34.00)	62.1	60.7
(2006/10/10 10:54:36.00)	61.7	60.3
(2006/10/10 10:59:37.00)	62.2	60.3
(2006/10/10 11:04:39.00)	64.4	60.4
(2006/10/10 11:09:41.00)	63.8	59.9
(2006/10/10 11:14:43.00)	60.9	58.9
(2006/10/10 11:19:44.00)	61.6	60.4
(2006/10/10 11:24:46.00)	63	61
(2006/10/10 11:29:48.00)	63.8	62.6
(2006/10/10 11:34:50.00)	64	62.1
(2006/10/10 11:39:51.00)	62.9	61.8
(2006/10/10 11:44:53.00)	65.1	62.6
(2006/10/10 11:49:55.00)	63.6	62.7
(2006/10/10 11:54:57.00)	64.4	61.1
(2006/10/10 11:59:59.00)	62	59
(2006/10/10 12:05:00.00)	59.7	56.9
(2006/10/10 12:10:02.00)	58.5	56.4
(2006/10/10 12:15:04.00)	59.8	57.1
(2006/10/10 12:20:06.00)	59.3	57.5
(2006/10/10 12:25:08.00)	61.3	57.4
(2006/10/10 12:30:09.00)	62.6	60.8
(2006/10/10 12:35:11.00)	62.2	60.1
(2006/10/10 12:40:13.00)	61.5	60.1
(2006/10/10 12:45:15.00)	66.7	60.3
(2006/10/10 12:50:16.00)	58.9	55.3
(2006/10/10 12:55:18.00)	58.2	54.7
(2006/10/10 13:00:20.00)	68	59.8
(2006/10/10 13:05:22.00)	69.5	68.2
(2006/10/10 13:10:24.00)	70.4	69.5
(2006/10/10 13:15:26.00)	69	68.6
(2006/10/10 13:20:27.00)	68.9	68.5
(2006/10/10 13:25:29.00)	69.2	68.6
(2006/10/10 13:30:31.00)	70	69.1
(2006/10/10 13:35:33.00)	74.9	69.5
(2006/10/10 13:40:34.00)	73.7	68.7
(2006/10/10 13:45:36.00)	73.1	69.2
(2006/10/10 13:50:38.00)	74.6	69.2
(2006/10/10 13:55:40.00)	73.8	68.6
(2006/10/10 14:00:42.00)	68.9	68.3
(2006/10/10 14:05:43.00)	68.6	68
(2006/10/10 14:10:45.00)	69	68.4

(2006/10/10 14:15:47.00)	68.7	68.3
(2006/10/10 14:20:49.00)	68.8	68.3
(2006/10/10 14:25:50.00)	74.4	68.6
(2006/10/10 14:30:52.00)	73.7	68.9
(2006/10/10 14:35:54.00)	73.3	69.5
(2006/10/10 14:40:56.00)	75.9	69.1
(2006/10/10 14:45:58.00)	74.1	69.4
(2006/10/10 14:50:59.00)	72.1	68.9
(2006/10/10 14:56:01.00)	68.3	56.9
(2006/10/10 15:01:03.00)	66.8	60.8
(2006/10/10 15:06:05.00)	68	61.7
(2006/10/10 15:11:07.00)	69.1	68.5
(2006/10/10 15:16:08.00)	69.1	68.6
(2006/10/10 15:21:10.00)	72.6	68.3
(2006/10/10 15:26:12.00)	74.1	70.5
(2006/10/10 15:31:14.00)	74.5	69
(2006/10/10 15:36:16.00)	73.7	69.2
(2006/10/10 15:41:17.00)	73.3	68.4
(2006/10/10 15:46:19.00)	70.6	68.5
(2006/10/10 15:51:21.00)	69.4	68.8
(2006/10/10 15:56:23.00)	69	68.3
(2006/10/10 16:01:24.00)	69.1	68.4
(2006/10/10 16:06:26.00)	68.9	68.5
(2006/10/10 16:11:28.00)	69.6	68.9
(2006/10/10 16:16:30.00)	68.8	68.1
(2006/10/10 16:21:31.00)	68.8	68.4
(2006/10/10 16:26:33.00)	69.1	68.7
(2006/10/10 16:31:35.00)	68.1	61.2
(2006/10/10 16:36:37.00)	62.4	59.5
(2006/10/10 16:41:39.00)	61	58.8
(2006/10/10 16:46:40.00)	62.3	59.5
(2006/10/10 16:51:42.00)	62.9	60.5
(2006/10/10 16:56:44.00)	61.7	58.6
(2006/10/10 17:01:46.00)	60.6	58.2
(2006/10/10 17:06:48.00)	59.9	58.2
(2006/10/10 17:11:49.00)	62	58.3
(2006/10/10 17:16:51.00)	61.6	60.1
(2006/10/10 17:21:53.00)	63.6	62.8
(2006/10/10 17:26:55.00)	62.9	60.9
(2006/10/10 17:31:56.00)	61.5	58.7
(2006/10/10 17:36:58.00)	61.3	56.1
(2006/10/10 17:42:00.00)	58.1	56.1
(2006/10/10 17:47:02.00)	59.1	56.1
(2006/10/10 17:52:04.00)	58.8	56.3
(2006/10/10 17:57:05.00)	59.5	56.6
(2006/10/10 18:02:07.00)	61.9	56.9
(2006/10/10 18:07:09.00)	61.4	59.1
(2006/10/10 18:12:11.00)	65.6	59.2
(2006/10/10 18:17:12.00)	69.2	68.6
(2006/10/10 18:22:14.00)	70.5	68.8
(2006/10/10 18:27:16.00)	70.5	68.7
(2006/10/10 18:32:18.00)	66	53.3



(2006/10/10 18:37:19.00)	56.4	52.8
(2006/10/10 18:42:21.00)	58.6	53.8
(2006/10/10 18:47:23.00)	57.3	54.4
(2006/10/10 18:52:25.00)	57.9	53.6
(2006/10/10 18:57:27.00)	69.3	68.4
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(2006/10/10 19:07:30.00)	65.3	52.7
(2006/10/10 19:12:32.00)	57.1	51.7
(2006/10/10 19:17:34.00)	60.5	52.7
(2006/10/10 19:22:35.00)	59.9	58.1
(2006/10/10 19:27:37.00)	62.4	61.4
(2006/10/10 19:32:39.00)	65.5	61.9
(2006/10/10 19:37:41.00)	62.2	61.3
(2006/10/10 19:42:43.00)	63	61.2
(2006/10/10 19:47:44.00)	62.1	61.3
(2006/10/10 19:52:46.00)	62.1	61.2
(2006/10/10 19:57:48.00)	62.1	61.3
(2006/10/10 20:02:50.00)	63.3	61.3
(2006/10/10 20:07:52.00)	69.6	69.1
(2006/10/10 20:12:53.00)	70.3	69.4
(2006/10/10 20:17:55.00)	66.8	58.5
(2006/10/10 20:22:57.00)	58.2	51.2
(2006/10/10 20:27:59.00)	55.7	50.8
(2006/10/10 20:33:01.00)	56	51.1
(2006/10/10 20:38:02.00)	57.5	52.2
(2006/10/10 20:43:04.00)	60.1	52.3
(2006/10/10 20:48:06.00)	60.5	58.2
(2006/10/10 20:53:08.00)	61.1	58.8
(2006/10/10 20:58:09.00)	60.4	58.8
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(2006/10/10 21:08:13.00)	62.6	59.8
(2006/10/10 21:13:15.00)	65	59.7
(2006/10/10 21:18:16.00)	69.4	68.9
(2006/10/10 21:23:18.00)	70.8	69.4
(2006/10/10 21:28:20.00)	65.5	59.9
(2006/10/10 21:33:22.00)	60.9	59.7
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(2006/10/10 21:48:27.00)	55.6	50
(2006/10/10 21:53:29.00)	56	51.2
(2006/10/10 21:58:31.00)	62	52.1
(2006/10/10 22:03:33.00)	69.5	69
(2006/10/10 22:08:34.00)	69.9	69.3
(2006/10/10 22:13:36.00)	66.9	61.8
(2006/10/10 22:18:38.00)	62.3	61.2
(2006/10/10 22:23:40.00)	62.2	61.1
(2006/10/10 22:28:42.00)	60.6	58.1
(2006/10/10 22:33:43.00)	63.5	50.8
(2006/10/10 22:38:45.00)	69.8	68.6
(2006/10/10 22:43:47.00)	70.7	68.9
(2006/10/10 22:48:49.00)	69.7	69
(2006/10/10 22:53:51.00)	69.6	68.9

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(2006/10/10 23:03:54.00)	70.2	69.5
(2006/10/10 23:08:56.00)	69.9	69.1
(2006/10/10 23:13:58.00)	70.7	69
(2006/10/10 23:18:59.00)	70.4	69
(2006/10/10 23:24:01.00)	69.1	68.7
(2006/10/10 23:29:03.00)	69.5	68.9
(2006/10/10 23:34:05.00)	69.5	69.1
(2006/10/10 23:39:07.00)	70.2	69.6
(2006/10/10 23:44:08.00)	69.8	69.4
(2006/10/10 23:49:10.00)	67.4	61.8
(2006/10/10 23:54:12.00)	66.3	62.1
(2006/10/10 23:59:14.00)	70.1	68.9
(2006/10/11 00:04:15.00)	69.6	69.2
(2006/10/11 00:09:17.00)	68.2	61.4
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(2006/10/11 00:19:21.00)	57.8	52.8
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(2006/10/11 00:29:24.00)	59.6	58.1
(2006/10/11 00:34:26.00)	59.6	58
(2006/10/11 00:39:28.00)	59.9	58.1
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(2006/10/11 00:59:35.00)	60.6	59.2
(2006/10/11 01:04:37.00)	60.6	59.4
(2006/10/11 01:09:39.00)	60.7	59.3
(2006/10/11 01:14:40.00)	60.6	59.2
(2006/10/11 01:19:42.00)	60.8	58
(2006/10/11 01:24:44.00)	59.3	57
(2006/10/11 01:29:46.00)	59.4	57.3
(2006/10/11 01:34:47.00)	60.1	56.7
(2006/10/11 01:39:49.00)	55.8	48.9
(2006/10/11 01:44:51.00)	55.8	48.9
(2006/10/11 01:49:53.00)	61.4	57.5
(2006/10/11 01:54:55.00)	59.7	57.6
(2006/10/11 01:59:56.00)	60.2	58.7
(2006/10/11 02:04:58.00)	60.5	59.1
(2006/10/11 02:10:00.00)	60.6	59.2
(2006/10/11 02:15:02.00)	60.6	59.3
(2006/10/11 02:20:03.00)	60.7	59.3
(2006/10/11 02:25:05.00)	60.7	59.3
(2006/10/11 02:30:07.00)	60.7	59.3
(2006/10/11 02:35:09.00)	59.9	57.1
(2006/10/11 02:40:11.00)	59.1	57.1
(2006/10/11 02:45:13.00)	59.1	57.1
(2006/10/11 02:50:14.00)	59.2	57.3
(2006/10/11 02:55:16.00)	60.1	58
(2006/10/11 03:00:18.00)	60.7	59.2
(2006/10/11 03:05:20.00)	60.7	59.3
(2006/10/11 03:10:21.00)	60.8	59.4
(2006/10/11 03:15:23.00)	61	59.6

(2006/10/11 03:20:25.00)	60.7	59.5
(2006/10/11 03:25:27.00)	60.7	58.6
(2006/10/11 03:30:28.00)	59.2	57.2
(2006/10/11 03:35:30.00)	59.1	57.1
(2006/10/11 03:40:32.00)	59.3	57.3
(2006/10/11 03:45:34.00)	59.4	57.3
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(2006/10/11 03:55:38.00)	60.6	59.2
(2006/10/11 04:00:39.00)	60.7	59.4
(2006/10/11 04:05:41.00)	60.6	59.3
(2006/10/11 04:10:43.00)	60.7	59.4
(2006/10/11 04:15:45.00)	60.7	59.3
(2006/10/11 04:20:47.00)	60.8	59.5
(2006/10/11 04:25:48.00)	60	57.5
(2006/10/11 04:30:50.00)	59.1	57
(2006/10/11 04:35:52.00)	58.9	57
(2006/10/11 04:40:54.00)	58.9	56.9
(2006/10/11 04:45:56.00)	59.8	57.5
(2006/10/11 04:50:57.00)	58.1	52
(2006/10/11 04:55:59.00)	58.9	52.4
(2006/10/11 05:01:01.00)	59.7	58
(2006/10/11 05:06:03.00)	59.7	58
(2006/10/11 05:11:05.00)	61.4	58.2
(2006/10/11 05:16:06.00)	61.8	60.8
(2006/10/11 05:21:08.00)	62.1	61
(2006/10/11 05:26:10.00)	62	60.9
(2006/10/11 05:31:12.00)	62	61
(2006/10/11 05:36:13.00)	61.6	58.7
(2006/10/11 05:41:15.00)	59.6	57.8
(2006/10/11 05:46:17.00)	59.4	57.6
(2006/10/11 05:51:19.00)	60.5	57.7
(2006/10/11 05:56:21.00)	56	50.7
(2006/10/11 06:01:23.00)	56	50.9
(2006/10/11 06:06:24.00)	59.4	52.2
(2006/10/11 06:11:26.00)	61.1	58
(2006/10/11 06:16:28.00)	62	58.1
(2006/10/11 06:21:30.00)	62.6	61.5
(2006/10/11 06:26:31.00)	62.5	61.3
(2006/10/11 06:31:33.00)	62.5	61.3
(2006/10/11 06:36:35.00)	62.5	61.3
(2006/10/11 06:41:37.00)	62.7	61.5
(2006/10/11 06:46:38.00)	62.7	61.6
(2006/10/11 06:51:40.00)	60.7	58.5
(2006/10/11 06:56:42.00)	60.2	58.3
(2006/10/11 07:01:44.00)	60.3	58.2
(2006/10/11 07:06:46.00)	59.3	52.8
(2006/10/11 07:11:47.00)	57	52.1
(2006/10/11 07:16:49.00)	57.8	53
(2006/10/11 07:21:51.00)	61.9	58.3
(2006/10/11 07:26:53.00)	61.1	58.1
(2006/10/11 07:31:55.00)	62.8	61.8
(2006/10/11 07:36:56.00)	62.9	61.9

(2006/10/11 07:41:58.00)	63	62.1
(2006/10/11 07:47:00.00)	62.7	61.8
(2006/10/11 07:52:02.00)	63.1	62
(2006/10/11 07:57:04.00)	65	61.9
(2006/10/11 08:02:05.00)	64.8	59.4
(2006/10/11 08:07:07.00)	65.1	59.9
(2006/10/11 08:12:09.00)	60.4	55.6
(2006/10/11 08:17:11.00)	58.6	53.8
(2006/10/11 08:22:12.00)	57.9	54
(2006/10/11 08:27:14.00)	57.6	53.3
(2006/10/11 08:32:16.00)	61.3	55.3
(2006/10/11 08:37:18.00)	60.1	58.2
(2006/10/11 08:42:20.00)	60.7	59.5
(2006/10/11 08:47:21.00)	61.2	60.1
(2006/10/11 08:52:23.00)	60.9	59.9
(2006/10/11 08:57:25.00)	60.9	59.8
(2006/10/11 09:02:27.00)	61.7	60.1
(2006/10/11 09:07:29.00)	61.5	60.6
(2006/10/11 09:12:30.00)	61.4	59.1
(2006/10/11 09:17:32.00)	61.3	59.2
(2006/10/11 09:22:34.00)	61.7	59.1
(2006/10/11 09:27:36.00)	59.2	56.1
(2006/10/11 09:32:37.00)	59.2	55.8
(2006/10/11 09:37:39.00)	61.1	56.3
(2006/10/11 09:42:41.00)	63.2	56.1
(2006/10/11 09:47:43.00)	62	56.5
(2006/10/11 09:52:44.00)	62.7	59.4
(2006/10/11 09:57:46.00)	61.7	59.8
(2006/10/11 10:02:48.00)	61.4	60.1
(2006/10/11 10:07:50.00)	63.1	60.3
(2006/10/11 10:12:52.00)	63.2	59.3
(2006/10/11 10:17:53.00)	59.4	55.5
(2006/10/11 10:22:55.00)	58.9	55.5
(2006/10/11 10:27:57.00)	59.2	54.6
(2006/10/11 10:32:59.00)	59.3	54.1
(2006/10/11 10:38:00.00)	61.1	55.6
(2006/10/11 10:43:02.00)	60.9	58.7
(2006/10/11 10:48:04.00)	63.6	59.5
(2006/10/11 10:53:06.00)	67.3	59.8
(2006/10/11 10:58:07.00)	62.4	58.6
(2006/10/11 11:03:09.00)	60.1	54.4
(2006/10/11 11:08:11.00)	57.2	53.5
(2006/10/11 11:13:13.00)	59.9	54.2
(2006/10/11 11:18:14.00)	57.4	53.6
(2006/10/11 11:23:16.00)	61.2	53



Figure 1: Measured Noise Levels - Getty Images: 10th - 11th October 2006

