

#### 4.1. Summary of Results

Tables QF/4875/D1 and QF4875/D2 below summarise the noise levels taken over the 23 hour period in both locations in terms of the maximum and minimum Sound Pressure Levels recorded.

Table QF/4875/D1 – Summary of Maximum and Minimum Noise Levels on the 1<sup>st</sup> Floor Roof

	<b>LA1</b>	<b>LA10</b>	<b>LA50</b>	<b>LA90</b>	<b>LA99</b>	<b>Laeq</b>
<b>Min.</b>	48.5dBA	46dBA	45dBA	44dBA	43dBA	45.1dBA
<b>Max.</b>	72.5dBA	64.5dBA	59dBA	58dBA	57.5dBA	62.1dBA

Table QF/4875/D2 – Summary of Maximum and Minimum Noise Levels on the 4<sup>th</sup> Floor Roof

	<b>LA1</b>	<b>LA10</b>	<b>LA50</b>	<b>LA90</b>	<b>LA99</b>	<b>Laeq</b>
<b>Min.</b>	55.1dBA	51.6dBA	49.1dBA	47.1dBA	46.6dBA	50dBA
<b>Max.</b>	72.6dBA	63.6dBA	60.1dBA	58.1dBA	56.6dBA	61.6dBA

#### 5.0. DISCUSSION OF RESULTS

The lowest recorded LA<sub>90</sub> levels recorded on the first floor roof at the rear of the property was 44 dBA which occurred at 2.10am; 2.50am and 3.10am. If 24 hour operation of the air conditioning plant, that may be mounted on this first floor roof is envisaged, then the plant will have to be designed to achieve a noise level 10 dB below this lowest LA<sub>90</sub> level at 1 metre from the nearest residential window. The noise criteria for 24 hour operation of plant on the rear first floor roof would therefore be 34 dBA at 1 metre from the adjacent residential properties.

If the air conditioning plant to be installed on the first floor roof is only to be operated during extended office hours (ie: 8.00am to 10.00pm) then the lowest recorded LA<sub>90</sub> background noise level was measured at 49 dBA and the noise criteria for the operation of the plant could be relaxed to 39 dBA at 1 metre from the adjacent residential properties.

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The lowest recorded  $LA_{90}$  level on the fourth floor roof at the front of the building was 47.1 dBA. This level was recorded at 4.42am. If 24 hour operation of plant is envisaged on the fourth floor roof then the noise criteria should be 10 dB below this lowest  $LA_{90}$  level at 1 metre from the nearest residential property. The only residential property in the vicinity seemed to be a large block of flats to the right hand side of the building at about 50 metres distance from the roof of No. 31-37 Whitfield Street. The flats do overlook the roof of the building but the distance to the façade of this building would probably mean major noise control would not be necessary unless the plant to be installed is particularly noisy.

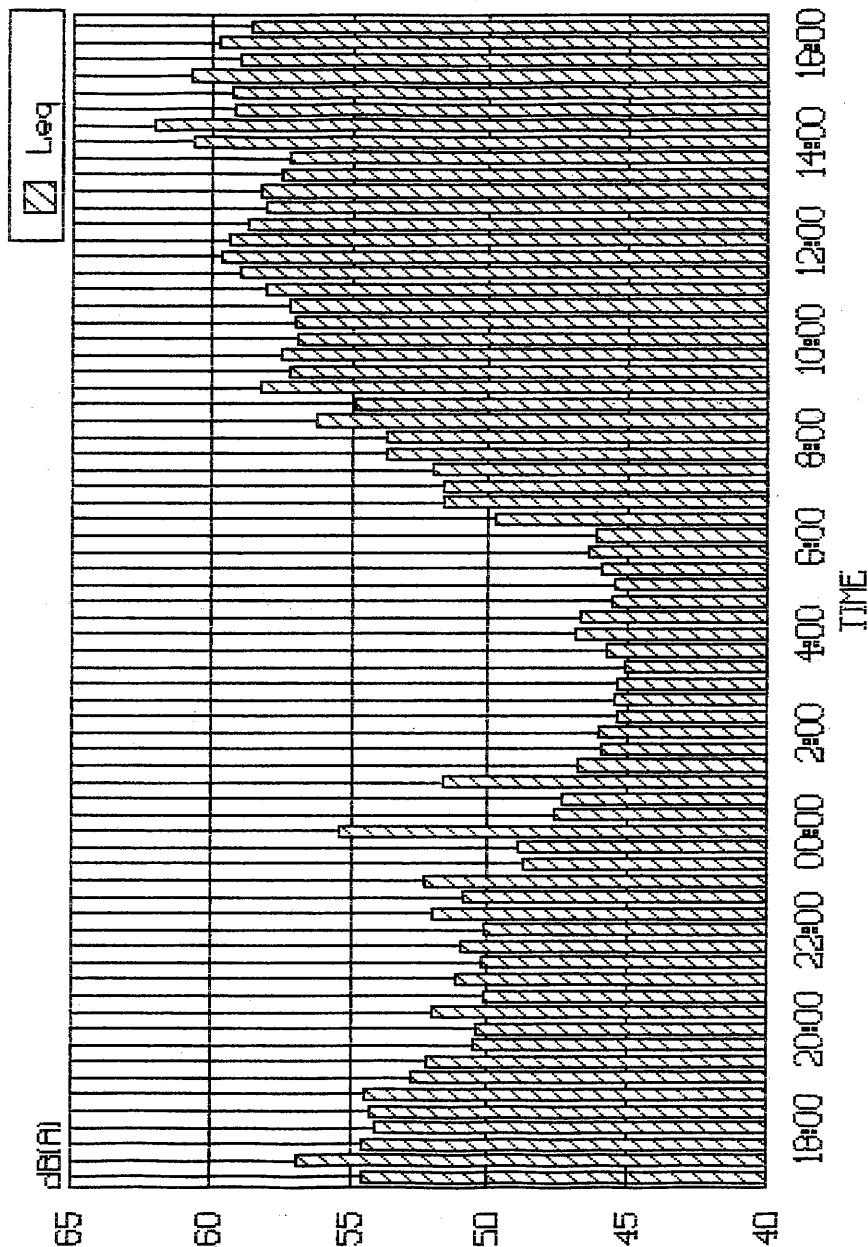
The lowest  $LA_{90}$  level recorded between 8.00am and 10.00pm was 52.6 dBA which was measured at 9.42pm. In order to ensure that the occupants of the adjacent office premises, on the other side of Whitfield Street, are not affected, we would recommend that a noise criteria of 5 dB below this daytime  $LA_{90}$  level be designed for at 1 metre from the façade of these offices. This would necessitate a daytime noise criteria of 48 dBA at 1 metre from the offices which are at approximately 20 metres from the existing plantroom on the roof of No. 31-37 Whitfield Street.

If you could forward details of the plant which is to be installed on the first and fourth floor roofs of the building, and details of any air handling units that may take fresh air or extract air from the building, we would be able to confirm the extent of any acoustic treatment required to meet the noise criteria itemised above. We would also need your confirmation as to whether the building will operate on a 24 hour basis or only during extended office hours.

**Emtec Products Limited**  
**1<sup>st</sup> February 2006**

All dimensions in mm unless stated

1st Floor roof-31-37 Whitfield Street.  
30th to 31st January 2006

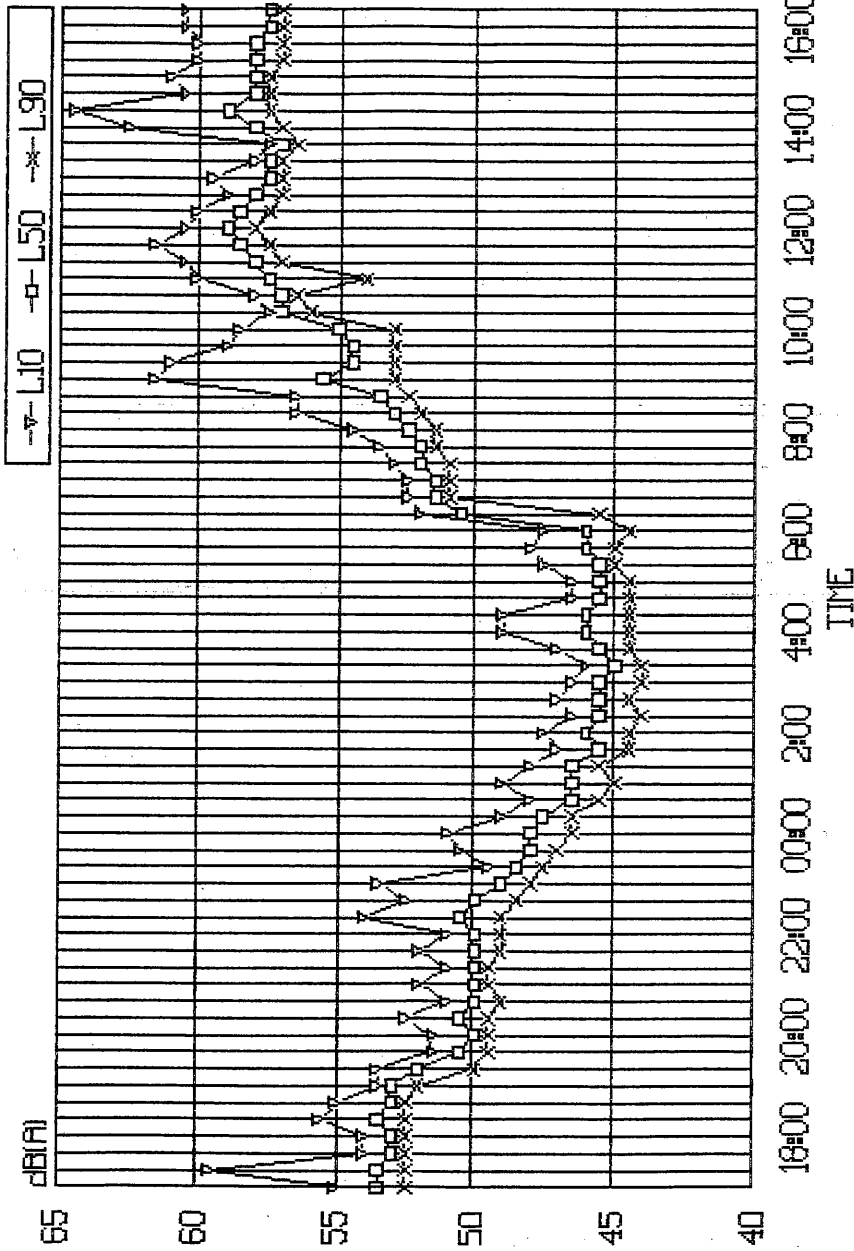


TITLE: 1st Floor - LAeq Levels	ISSUE DATE: 1/2/06	DRAWN BY: MGR	A	B	C	D	E	F	G	H	
CLIENT: Peter Deer & Associates	PF No. 2804	APPROVED BY:	REVISION:								
PROJECT: 31-37 Whitfield Street	STATUS:		SK No.								
	Q	A	M	I	QF/4875/T1						

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All dimensions in mm unless stated

# 1st Floor roof-31-37 Whitfield Street. 30th to 31st January 2006



TITLE: 1st Floor - LA10; LA50 and LA90 Levels

ISSUE DATE:  
1/2/06

DRAWN BY:  
MGR

A B C D E F G H

CUENI: Peter Deer & Associates

PF No. 2804

APPROVED BY:

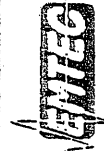
REVISION:

PROJECT: 31-37 Whitfield Street

STATUS:  
Q A M I

DESIGN AUTH:  
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