

FIELD HOUSE, OLDFIELD ROAD, HAMPTON
PROPOSED WAITROSE CONVENIENCE STORE

On behalf of: Field House (Hampton) Ltd

Report No. 30934.1v3 March 2011

Report No. 30934.1v3 March 2011

FIELD HOUSE, OLDFIELD ROAD, HAMPTON PROPOSED WAITROSE CONVENIENCE STORE

Report prepared by:
Hepworth Acoustics Ltd
First Floor
Aztec Centre
Aztec West
Almondsbury
Bristol
BS32 4TD

On behalf of: Filed House (Hampton) Ltd 13 Radnor Walk London SW3 4BP

Peter Mexicon th

Report prepared by:

Graham Bowland BSc MIOA - Principal Consultant

Report checked by:

Peter Hepworth BSc FIOA – Managing Director

CONTENTS

		PAGE
1.0	INTRODUCTION	1
2.0	NOISE SURVEY	4
3.0	ASSESSMENT OF NOISE FROM FIXED PLANT	7
4.0	ASSESSMENT OF NOISE FROM CUSTOMER VEHICLES	10
5.0	ASSESSMENT OF NOISE FROM DELIVERY ACTIVITY	13
6.0	SUMMARY AND CONCLUSIONS	14
Figur	e 1 – Site Plan and Noise Measurement Locations	15
Figur	e 2 – Proposed Ground Floor Plan	16
Figur	e 3 – Proposed First Floor Plan	17
Appe	ndix I – Noise Units and Indices	18
Appe	ndix II – Noise Survey Results	20

1.0 INTRODUCTION

- 1.1 Hepworth Acoustics Ltd was commissioned by Field House (Hampton) Ltd to carry out a noise assessment in relation to the proposed change of use of the ground and part first floor of an existing B1 office building at Field House, 72 Oldfield Road, Hampton to A1 use as a Waitrose convenience store and ancillary storage facilities.
- 1.2 The purpose of this assessment is to determine the likely noise impact of the proposed development at neighbouring residential properties and assess whether any additional noise mitigation measures are required. Waitrose Limited has been consulted at all stages in the preparation of this Assessment.
- 1.3 Field House is an existing two-story detached office building located immediately to the north west of the junction of Oldfield Road and Percy Road and immediately to the south of the Shepperton to London Waterloo railway line.
- 1.4 The nearest noise-sensitive premises are the residential properties above a parade of commercial premises to the south (across Oldfield Road), to the western end of Station Road to the east (across Percy Road) and on Linden Road to the north (across the railway line).
- 1.5 It is proposed to develop the ground floor of the building to provide a Waitrose convenience store of 637m² retail sales floor area with a goods-in lobby and ancillary space. The first floor is to provide goods storage areas and further ancillary space, as well as office space of 373m² floor area for potential future sub-let.
- 1.6 There is an existing site entrance on Oldfield Road and an on-site parking provision for approximately 40 cars, both of which are to be retained.
- 1.7 Fixed plant for the proposed store is to be located to the north (rear) side of the building, adjacent to the railway line.

- 1.8 Deliveries are to take place to the south (front) side of the building, with articulated delivery vehicles entering the site from Oldfield Road, and reversing across the front of the building. Goods are to be off-loaded on trolleys and enter the building via what is currently the main entrance. It is understood that there will be typically 2-3 deliveries per day.
- 1.9 Proposed store opening hours are as follow:
 - 0800-2200hrs Monday to Saturday
 - 1000-1600hrs Sunday
- 1.10 Proposed delivery hours are as follow:
 - 0700-2000hrs Monday to Saturday
 - 0900-1300hrs Sunday
- 1.11 A site location plan is provided in Figure 1 and proposed ground and first floor layout plans are provided in Figures 2 and 3 respectively.
- 1.12 The noise assessment has involved the following:
 - Inspecting the site and its surroundings
 - Review of development proposals information and Transport Statement details
 - Consultation with the Environmental Health Officer at the London Borough of Richmondupon-Thames (Chris Hurst)
 - Carrying out ambient/background noise surveys at locations representative of the nearest residential properties to the site
 - Recommendation of acceptable noise limits applicable to proposed fixed plant items
 - Assessment of likely noise impact associated with customer vehicles attributable to the proposed development.
 - Consideration of noise with regard to delivery activity

- Identifying appropriate noise mitigation measures to control noise emissions to within acceptable levels, where required
- 1.13 All referenced noise levels have been rounded to the nearest decibel, as fractions of decibels are imperceptible. A description of noise units and characteristics is provided in Appendix I.

E-mail: bristol@hepworth-acoustics.co.uk Report No: 30934.1v3 Tel: 01454 203 533 Page 3 of 33

Field House, Hampton

2.0 NOISE SURVEY

2.1 A survey of prevailing noise levels was carried out at the site over the period Friday 11th –

Tuesday 15th March 2011.

2.2 An automated noise monitor was deployed within Field House with the measurement

microphone extended 1m laterally from a first floor window, identified as Location 1 on

Figure 1.

2.3 The automated noise monitor was programmed to record noise levels in sequential 10-minute

sample periods over the period 1800hrs on Friday 11th March until 1000hrs on Tuesday 15th

March.

2.4 Noise levels measured at Location 1 will have been affected by reflections from the building

facade and also the overhanging roof. However, for the purpose of this assessment it is not

necessary to apply any corrections to account for these effects as the purpose of the long-term

measurements at Location 1 is to provide an understanding of temporal variations in prevailing

noise levels over the extended measurement period to supplement short-term attended

measurements at key periods as discussed below.

2.5 Further manned noise measurement were undertaken at street level and in free-field conditions

at locations representative of nearby residential properties as identified in Figure 1 and

described as follows:

• Location 2 – representative of 61 Oldfield Road

• Location 3 – representative of 157 Station Road

• Location 4 – representative of 2 Linden Road

Tel: 01454 203 533

Report No: 30934.1v3

Page 4 of 33

Field House, Hampton

Note: Noise measurements at Locations 2-4 were undertaken on the opposite side of the road from the existing residential properties represented. In each case, measurement locations were the same distance from the centre of the carriageway as the residential façades to the opposite side, such that measured noise levels are fully representative of levels at the façades themselves. The reason for this was to obtain 'clean' measurements of noise free of façade reflection effects and to prevent causing obstruction to pedestrians using the pavements.

- 2.6 Manned noise measurements at Locations 2 and 3 were undertaken over the periods 0603-0924hrs on Saturday 12th March and 0600-0849 hrs on Monday 14th March, and at Location 4 over the period 0102-0145hrs on Tuesday 15th March.
- 2.7 All attended daytime (0700-2300hrs) noise measurements were undertaken in 10-minute sample periods, whereas all attended night-time (2300-0700hrs) noise measurements were undertaken in 5-minute sample periods.
- 2.8 Noise measurements were carried out using the following equipment:
 - Location 1 Norsonic 118 Type 1 Integrating Sound Level Meter (Serial no. 31617), calibrated using a Norsonic Type 1443 Acoustic Calibrator (Serial no. 20804).
 - Locations 2 and 3 (12th March) and Location 4 Bruel & Kjaer 2260 Type 1 Integrating Sound Level Meter (Serial no. 2467016), calibrated using a Bruel & Kjaer Type 4231 Acoustic Calibrator (Serial no. 2482589)
 - Locations 2 and 3 (14th March) Bruel & Kjaer 2260 Type 1 Integrating Sound Level Meter (Serial no 2413555), calibrated using a Bruel & Kjaer Type 4231 Acoustic Calibrator (Serial no. 2412667)
- 2.9 Calibration checks were carried out before and after each survey period and no variation in level was observed
- 2.10 Windshields were fitted to the microphones for all noise measurements.

Field House, Hampton

2.11 The weather during all attended periods was dry and calm, with wind speeds typically below 3m/s.

- 2.12 Measured noise levels were due to road traffic noise including buses and night-buses, aircraft, railway noise and general neighbourhood noise sources, including sources associated with existing commercial premises in the area surrounding the site.
- 2.13 The results of the noise survey are detailed in Appendix II and are summarised as appropriate in the following sections.

E-mail: bristol@hepworth-acoustics.co.uk Report No: 30934.1v3 Tel: 01454 203 533 Page 6 of 33 3.0

ASSESSMENT OF NOISE FROM FIXED PLANT

- 3.1 The Environmental Health Officer (EHO) at the London Borough of Richmond-upon-Thames has stated that noise emissions from fixed plant items should be assessed by reference to BS 4142: 1997 'Method for rating industrial noise affecting mixed residential and industrial areas'.
- 3.2 BS 4142 requires the noise from the equipment (in L_{Aeq}) to be compared with the background noise level (L_{A90}) in the absence of the equipment noise. A +5dB 'acoustic feature' penalty is added for any plant which gives rise to intermittent, tonal or impulsive noise to obtain the 'noise rating level'.
- 3.3 BS 4142 states that if the noise rating level exceeds the L_{A90} background noise level by 10dB or more then complaints would be likely. An excess of 5dB over the background noise level is viewed as being 'of marginal significance'. A noise rating level of 10dB below the background noise is a positive indication that complaints will be unlikely.
- 3.4 BS 4142 stipulates that noise impacts should be assessed over a reference time interval of 1-hour during the daytime (0700-2300hrs) and 5-minutes during the night-time (2300-0700hrs). Given that fixed plant at the proposed development will be required to operate on a 24-hour/day basis, it is considered appropriate to focus the assessment of noise on the night-time period.
- 3.5 The EHO has stated that a noise rating level not exceeding the lowest prevailing background noise level at nearby residential properties should be taken as being desirable, but has indicated that a noise rating level of up to 5dB(A) above the background noise level will be acceptable.
- 3.6 Prevailing noise levels measured at Location 4 in the early hours of Tuesday 15th March 2010 are summarised in Table 1.

Table 1: Summary of Measured Noise Levels at Location 4

Time Period	Noise Level				
	dB L _{Aeq,5min}	dB L _{A90,5min}			
0102-0145hrs	32-45	27-30			

Tel: 01454 203 533

- 3.7 It is noted that the very lowest L_{A90} background noise levels recorded by the automated noise monitor at Location 1 occurred over the period 0130-0140hrs on Tuesday 15th March 2011, hence coinciding with the lowest measured noise levels at Location 4. This provides a positive indication that the lowest measured L_{A90.5min} background noise level of 27dB at Location 4 is representative and typical of the lowest prevailing background noise levels around the site.
- 3.8 It should be noted that BS4142 states that the noise assessment method it provides is not suitable for assessing the noise measured inside buildings or when the background and rating noise levels are both very low (i.e. background noise levels below about 30 dB and rating levels below about 35 dB are considered to be very low). Due to the very low night-time background noise levels recorded at residential properties neighbouring the site, the limitations of using BS4142 should be recognised.
- 3.9 BS4142 is referenced in Planning Policy Guidance: PPG24, which provides guidance in determining planning applications in these instances. Further guidance is available from BS 8233: 1999: 'Sound insulation and noise reduction for buildings'. This recommends that for good resting and sleeping conditions, LAeq noise levels should be within the range of 30-35 dB for bedrooms and 30-40 dB for living rooms. It further states that an open window typically provides between 10-15 dB attenuation.
- 3.10 It is our opinion that an overall noise rating limit of 30dB at the nearest residential premises for all new equipment will be sufficient so as not to give rise to complaints at these properties, although people might still notice it when background noise levels are at their lowest. Based on the lowest attenuation provided by an open window as stated in BS8233, i.e. 10dB, the noise rating level inside the nearest habitable room would not exceed 20dB, which is 10dB below the lower limit suggest for good sleeping conditions within bedrooms of 30dB.

Report No: 30934.1v3 Tel: 01454 203 533 Page 8 of 33

- 3.11 Accounting for a potential +5dB(A) 'acoustic feature' penalty that may be applicable, noise emissions complying with the recommended noise rating limit will not give rise to rating levels greater than 3dB(A) above the lowest measured background noise levels. As such, notwithstanding the limitations of BS4142 in situations where background noise levels are very low, plant noise will be controlled to within levels suggested by the EHO.
- 3.12 It is understood that the main item of external plant is currently proposed to be Geoclima GFC R290 packaged chiller unit. Based on manufacturer's data, it is understood from our discussions with Waitrose that this unit generates a sound pressure level of 44dB(A) at 10m. Accordingly, at the nearest residential property to the proposed plant, directly to the east on Station Road at a distance of approximately 25m from the proposed chiller unit, a noise level of 36dB(A) is predicted. It will therefore be necessary to provide additional attenuation to the packaged chiller unit, potentially by way of directly fitted noise control apparatus (i.e. attenuators) and/or use of purpose built acoustic barriers.
- 3.13 There will also be a number of roof outlets for internally mounted ventilation units. At this stage the design has not been started but it is understood that Waitrose will ensure the units will be complete with appropriately specified in-line attenuators to control noise emissions.

4.0

Field House, Hampton

ASSESSMENT OF NOISE FROM CUSTOMER VEHICLES

4.1 The Environmental Health Officer at the London Borough of Richmond-upon-Thames has

requested an assessment of the potential increases in noise levels at nearby residential properties

attributable to the vehicles of customers of the proposed development.

4.2 Noise from customer vehicles has been assessed in three parts: a) noise generated on the local

roads by cars moving towards and away from the proposed development; b) noise generated by

cars manoeuvering within the proposed car park; and c) noise from car door and boot slams

within the car park. The predicted noise from each of the above elements has been combined to

derive the overall noise levels generated by vehicle movements and this has been compared to

the prevailing ambient noise level at nearby residential properties.

4.3 Raw data used to inform the Transport Statement for the proposed development has been

supplied to us by Glanville Consultants Ltd, from which the hourly trip rates have been derived

for each of the proposed opening hours on weekdays, Saturdays and Sundays.

4.4 It is considered adequate to limit the assessment of noise from customer vehicles to

consideration of residential properties directly opposite the site on Oldfield Road. Other nearby

residential properties, including those in Station Road are located at greater distance from the

site, adjacent to busier roads and/or will experience noise from less of the vehicular activity

attributable to the proposed development.

4.5 Vehicle noise calculations have been based on Hepworth Acoustics' library data for slow

moving vehicles and car door/boot slams as follows:

Slow-moving car pass – 71dB SEL_A at a distance of 3m

Car door/boot slam – 71dB SEL_A at a distance of 1m.

Report No: 30934.1v3 Tel: 01454 203 533 Page 10 of 33

- 4.6 For each predicted vehicle movement, noise calculations account for two slow moving car passes: one at 8m to represent movement on Oldfield Road and one at 24m to represent manoeuvring with the car park, and 3 door / boot slams, taken to all occur at a distance of 20m based, for simplicity of the assessment, on all cars parking at the closest available bay to the nearest residential property. In reality, it is clear that a great proportion of this activity will take place at a greater distance such that the above represents a highly robust worst-case approach.
- 4.7 Prevailing noise levels measured at Location 2 and Location 3 during the early daytime opening hours (i.e. from 0800hrs) of Monday 14th and Saturday 12th March 2010 are summarised in Table 2.

Table 2: Summary of Measured Noise Levels at Locations 2 and 3

Location	Time Period	Noise Level		
Location	Time Period	$ m dB~L_{Aeq,5min}$	dB L _{A90,5min}	
2	Monday 0806-0838hrs	62	51-55	
2	Saturday 0808-0924hrs	57-59	44-49	
3	Monday 0755-0849hrs	68-69	58-60	
3	Saturday 0819-0912hrs	65-66	47-52	

4.8 The lowest prevailing L_{Aeq,10min} ambient noise level recorded during the early daytime opening hours was therefore 57dB at Location 2, measured over the period 0808-0818hrs on the Saturday morning. It is noted that the lowest L_{Aeq,10min} ambient noise level recorded by the automated noise monitor at Location 1 during the early daytime opening hours occurred over the period 0810-0820hrs on Saturday 12th March 2011, hence coinciding with the lowest measured noise levels at Location 2. This provides a positive indication that the lowest measured L_{Aeq,10min} ambient noise level of 57dB at Location 2 is representative and typical of the location. It may be taken that the lowest ambient hourly level will be no less than 57dB L_{Aeq,1hr} at the same location, and in reality the hourly level is likely to be slightly higher.

- 4.9 Based on Transport Statement data, 24 car movements are expected over the 0800-0900hrs period, giving rise to a predicted noise level of 46dB L_{Aeq,1hr}. Over this period a zero increase in prevailing ambient noise levels would therefore be expected.
- 4.10 Based on the worst-case predicted trip rate of 104 car movements over the period 1100-1200hrs on a Saturday morning and the calculation basis described above, the worst-case hourly noise level attributable to customer vehicles is predicted to be 53dB $L_{Aeq,1hr}$.
- 4.11 A prevailing ambient noise level of approximately 60dB L_{Aeq,1hr} would be expected between 1100 1200hrs based on extrapolation of noise survey data. As such, an increase in the ambient noise level at the nearest residential property of less than 1dB(A) would be expected during this period. To put such an increase into context, PPG 24 'Planning and Noise' states in its glossary that "A 3dB(A) change is the minimum perceptible under normal conditions". An increase of less than 1dB(A) would therefore be considered to represent an imperceptible impact.

5.0

Field House, Hampton

ASSESSMENT OF NOISE FROM DELIVERY ACTIVITY

5.1 The Environmental Health Officer at the London Borough of Richmond-upon-Thames has

stated that he has no opposition to deliveries over the proposed hours and that no

recommendation will be made for conditioning noise levels generated by such activity where

this does not occur before 0700hrs.

5.2 It is therefore not necessary to provide a quantitative assessment of delivery noise.

5.3 Based on the results of the noise survey at the site, it is noted that ambient noise levels are

higher after 0700hrs and from that time are typical of levels recorded throughout the daytime

period. Accordingly, any impact of delivery noise generated after 0700hrs would be reduced,

compared with the situation of deliveries before 0700hrs

5.4 Any such impact may be offset by certain existing noise sources occurring in the area, notably

the opening of roller shutters at Hampton Supermarket, located directly opposite the site on

Oldfield Road, which occurs typically before 0700hrs and generates comparatively high noise

levels.

5.5 However, it is our opinion that the proposed approach, and that encouraged by the EHO, of

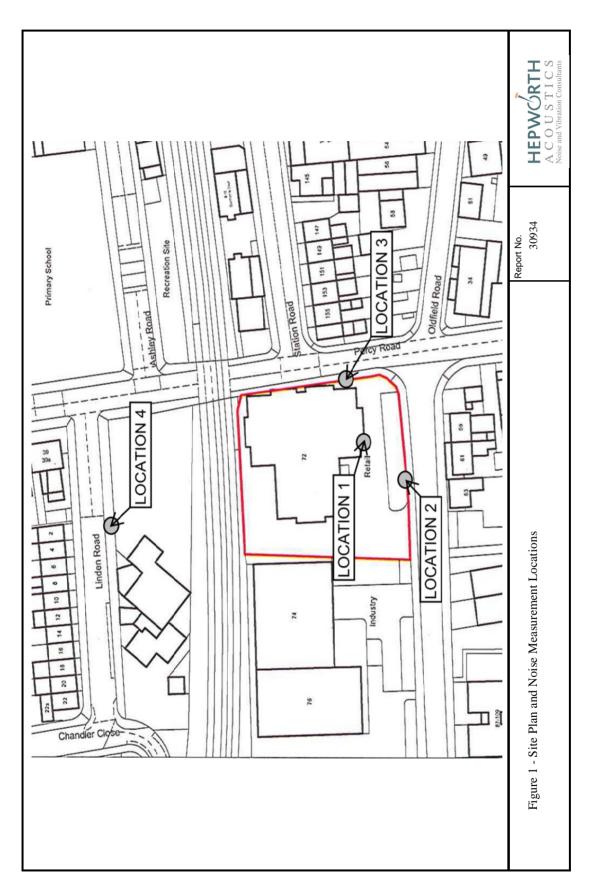
deliveries occurring only from 0700hrs means that there is no requirement to provide mitigation

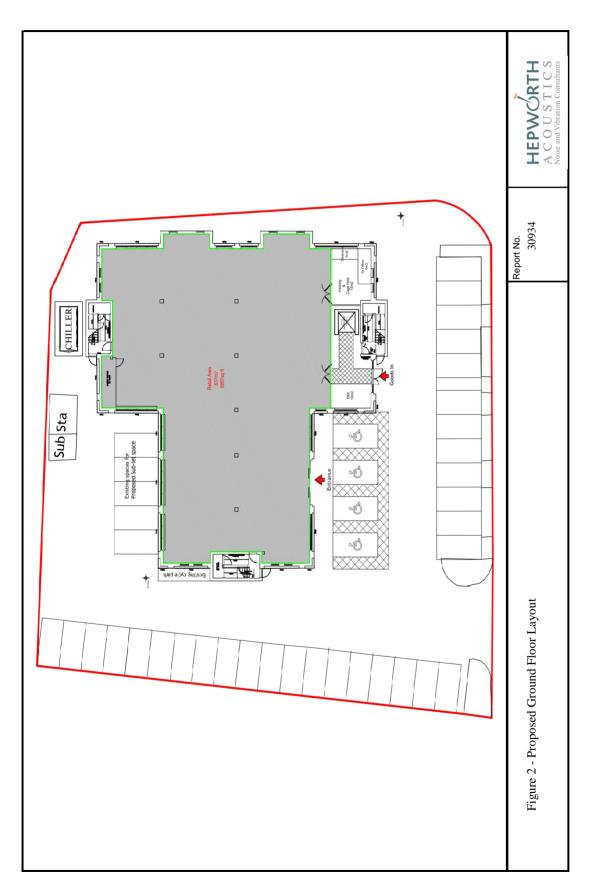
of noise from delivery activities.

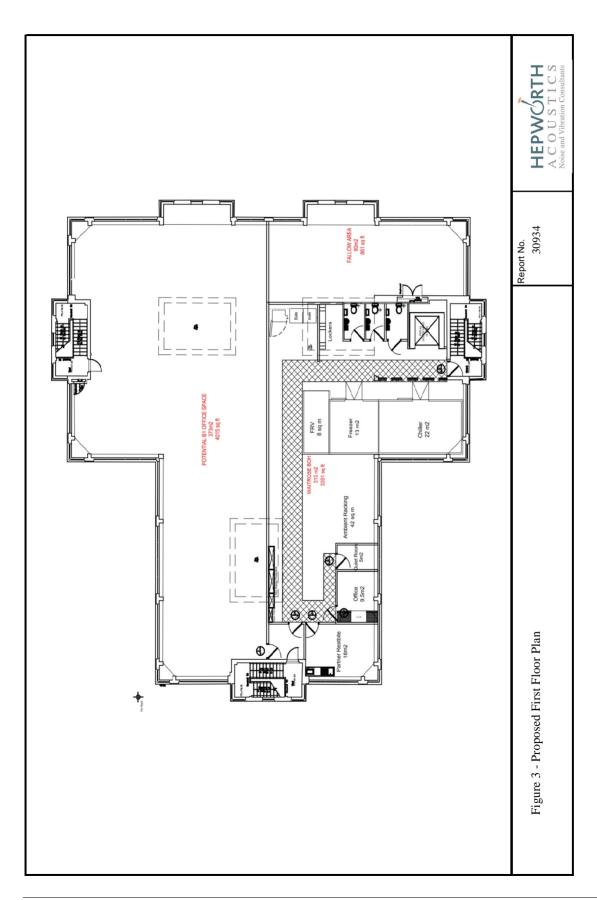
Tel: 01454 203 533

6.0 SUMMARY AND CONCLUSIONS

- 6.1 Hepworth Acoustics Ltd has undertaken an assessment of the potential noise impact in relation to the proposed change of use of an existing B1 office building at Field House, 72 Oldfield Road, Hampton to A1 use as a Waitrose convenience store
- 6.2 The assessment has been based on a survey of the prevailing noise levels at locations representative of the nearest residential properties to the site.
- 6.3 It has been concluded that the proposed development will not result in any unacceptable noise impact to residential amenity by way of noise attributable to customer vehicles or delivery activities.
- 6.4 Appropriate plant noise limits have been recommended in paragraph 3.10 to assist with mechanical services systems design.







Field House, Hampton

Appendix I – Noise Units and Indices

a) Sound Pressure Level and the decibel (dB)

A sound wave is a small fluctuation of atmospheric pressure. The human ear responds to these

variations in pressure, producing the sensation of hearing. The ear can detect a very wide range

of pressure variations. In order to cope with this wide range of pressure variations, a logarithmic

scale is used to convert the values into manageable numbers. Although it might seem unusual to

use a logarithmic scale to measure a physical phenomenon, it has been found that human hearing

also responds to sound in an approximately logarithmic fashion. The dB (decibel) is the

logarithmic unit used to describe sound (or noise) levels. The usual range of sound pressure

levels is from 0 dB (threshold of hearing) to 120 dB (threshold of pain).

b) Frequency and hertz (Hz)

As well as the loudness of a sound, the frequency content of a sound is also very important.

Frequency is a measure of the rate of fluctuation of a sound wave. The unit used is cycles per

second, or hertz (Hz). Sometimes large frequency values are written as kilohertz (kHz), where 1

kHz = 1000 Hz.

Young people with normal hearing can hear frequencies in the range 20 Hz to 20,000 Hz.

However, the upper frequency limit gradually reduces as a person gets older.

c) Glossary of Terms

When a noise level is constant and does not fluctuate, it can be described adequately by

measuring the dB level. However, when the noise level varies with time, the measured dB level

will vary as well. In this case it is therefore not possible to represent the noise climate with a

simple dB value. In order to describe noise where the level is continuously varying, a number of

other indices can be used. The index used in this report is described below together with a

glossary of terms.

Tel: 01454 203 533

Report No: 30934.1v3

Page 18 of 33

- L_{Aeq} This is the A-weighted 'equivalent continuous noise level' which is an average of the total sound energy measured over a specified time period. In other words, L_{Aeq} is the level of a continuous noise which has the same total energy as the real fluctuating noise, measured over the same time period.
- L_{Amax} This is the maximum A-weighted noise level that was recorded during the monitoring period.
- L_{A10} This the A-weighted noise level exceeded for 10% of the time period. L_{A10} is used as a measure of traffic noise.
- L_{A90} This is the A-weighted noise level exceeded for 90% of the time period. L_{A90} is used as a measure of background noise.
- SEL_A This is the total A-weighted sound energy produced by an event and is effectively the L_{Aeq} of an event normalised to a duration of 1 second in length. SEL's can be scaled according to the number of events and can be further manipulated to provide an average noise level $L_{Aeq,T}$.

Appendix II - Noise Survey Results

Dates: Friday 11th - Tuesday 15th March 2011

Equipment: Norsonic 116 Type 1 integrating sound level meter (S/N 31270)

Bruel & Kjaer 2260 Investigator Type I integrating sound level meter (S/N 2467016) Bruel & Kjaer 2260 Investigator Type I integrating sound level meter (S/N 2413555)

Location 1

Data	Ti	me		Noise L	evel dB	
Date	Start	End	L_{Aeq}	$\mathbf{L}_{\mathbf{Amax}}$	L_{A10}	L_{A90}
11/03/2011	18:00	18:10	62	86	64	53
11/03/2011	18:10	18:20	60	76	63	54
11/03/2011	18:20	18:30	61	76	64	55
11/03/2011	18:30	18:40	65	92	64	52
11/03/2011	18:40	18:50	63	86	62	53
11/03/2011	18:50	19:00	58	71	62	52
11/03/2011	19:00	19:10	60	72	63	53
11/03/2011	19:10	19:20	60	82	62	54
11/03/2011	19:20	19:30	59	70	62	52
11/03/2011	19:30	19:40	59	71	63	52
11/03/2011	19:40	19:50	60	80	64	52
11/03/2011	19:50	20:00	59	73	62	52
11/03/2011	20:00	20:10	58	74	62	51
11/03/2011	20:10	20:20	58	73	62	51
11/03/2011	20:20	20:30	58	71	62	51
11/03/2011	20:30	20:40	58	76	61	51
11/03/2011	20:40	20:50	57	68	61	50
11/03/2011	20:50	21:00	62	88	62	50
11/03/2011	21:00	21:10	58	71	62	49
11/03/2011	21:10	21:20	57	71	61	50
11/03/2011	21:20	21:30	57	82	59	49
11/03/2011	21:30	21:40	56	69	60	49
11/03/2011	21:40	21:50	57	69	61	49
11/03/2011	21:50	22:00	56	71	60	49
11/03/2011	22:00	22:10	56	71	60	49
11/03/2011	22:10	22:20	57	72	62	49
11/03/2011	22:20	22:30	57	72	62	49
11/03/2011	22:30	22:40	59	82	61	48
11/03/2011	22:40	22:50	57	75	60	48
11/03/2011	22:50	23:00	55	69	59	48
11/03/2011	23:00	23:10	54	72	58	47
11/03/2011	23:10	23:20	54	66	58	47
11/03/2011	23:20	23:30	54	70	58	48

D 4	Time			Noise Level dB			
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L _{A90}	
11/03/2011	23:30	23:40	55	71	58	46	
11/03/2011	23:40	23:50	53	69	55	45	
11/03/2011	23:50	00:00	55	73	59	46	
12/03/2011	00:00	00:10	54	71	57	45	
12/03/2011	00:10	00:20	54	72	57	43	
12/03/2011	00:20	00:30	53	71	58	43	
12/03/2011	00:30	00:40	52	68	54	43	
12/03/2011	00:40	00:50	54	72	56	43	
12/03/2011	00:50	01:00	52	70	53	42	
12/03/2011	01:00	01:10	52	67	55	43	
12/03/2011	01:10	01:20	53	75	49	42	
12/03/2011	01:20	01:30	45	65	44	41	
12/03/2011	01:30	01:40	42	48	43	41	
12/03/2011	01:40	01:50	51	69	48	41	
12/03/2011	01:50	02:00	51	70	48	42	
12/03/2011	02:00	02:10	48	68	46	42	
12/03/2011	02:10	02:20	51	68	52	42	
12/03/2011	02:20	02:30	49	72	49	41	
12/03/2011	02:30	02:40	53	80	55	40	
12/03/2011	02:40	02:50	46	69	43	39	
12/03/2011	02:50	03:00	49	68	47	39	
12/03/2011	03:00	03:10	50	67	53	40	
12/03/2011	03:10	03:20	49	66	51	40	
12/03/2011	03:20	03:30	46	59	51	40	
12/03/2011	03:30	03:40	44	63	44	38	
12/03/2011	03:40	03:50	50	67	52	38	
12/03/2011	03:50	04:00	45	61	47	38	
12/03/2011	04:00	04:10	48	64	51	40	
12/03/2011	04:10	04:20	48	61	52	41	
12/03/2011	04:20	04:30	48	65	52	40	
12/03/2011	04:30	04:40	51	70	54	41	
12/03/2011	04:40	04:50	47	62	49	42	
12/03/2011	04:50	05:00	49	71	45	41	
12/03/2011	05:00	05:10	51	67	53	41	
12/03/2011	05:10	05:20	49	66	49	40	
12/03/2011	05:20	05:30	51	68	54	42	
12/03/2011	05:30	05:40	50	67	52	42	
12/03/2011	05:40	05:50	53	66	57	43	
12/03/2011	05:50	06:00	57	74	59	42	
12/03/2011	06:00	06:10	54	68	58	42	
12/03/2011	06:10	06:20	52	68	54	42	
12/03/2011	06:20	06:30	55	73	59	44	
12/03/2011	06:30	06:40	54	73	58	44	
12/03/2011	06:40	06:50	53	69	56	44	

Data	Ti	me	Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L_{A90}	
12/03/2011	06:50	07:00	54	72	57	45	
12/03/2011	07:00	07:10	57	77	60	45	
12/03/2011	07:10	07:20	55	67	60	45	
12/03/2011	07:20	07:30	54	69	58	45	
12/03/2011	07:30	07:40	57	70	61	46	
12/03/2011	07:40	07:50	58	78	62	46	
12/03/2011	07:50	08:00	57	70	62	47	
12/03/2011	08:00	08:10	59	78	63	48	
12/03/2011	08:10	08:20	57	72	61	46	
12/03/2011	08:20	08:30	57	71	62	47	
12/03/2011	08:30	08:40	60	73	64	50	
12/03/2011	08:40	08:50	58	71	63	48	
12/03/2011	08:50	09:00	59	73	63	50	
12/03/2011	09:00	09:10	58	70	63	47	
12/03/2011	09:10	09:20	60	78	63	50	
12/03/2011	09:20	09:30	59	70	63	50	
12/03/2011	09:30	09:40	59	69	63	51	
12/03/2011	09:40	09:50	60	73	64	51	
12/03/2011	09:50	10:00	60	72	64	49	
12/03/2011	10:00	10:10	60	75	63	52	
12/03/2011	10:10	10:20	60	86	63	52	
12/03/2011	10:20	10:30	59	74	63	49	
12/03/2011	10:30	10:40	59	71	63	50	
12/03/2011	10:40	10:50	60	76	63	50	
12/03/2011	10:50	11:00	58	70	62	49	
12/03/2011	11:00	11:10	61	80	64	52	
12/03/2011	11:10	11:20	59	69	63	51	
12/03/2011	11:20	11:30	60	77	63	53	
12/03/2011	11:30	11:40	60	74	64	52	
12/03/2011	11:40	11:50	60	72	63	52	
12/03/2011	11:50	12:00	59	72	63	51	
12/03/2011	12:00	12:10	60	72	64	51	
12/03/2011	12:10	12:20	61	75	64	51	
12/03/2011	12:20	12:30	59	69	63	52	
12/03/2011	12:30	12:40	61	74	64	52	
12/03/2011	12:40	12:50	60	68	63	53	
12/03/2011	12:50	13:00	61	82	63	52	
12/03/2011	13:00	13:10	60	74	64	49	
12/03/2011	13:10	13:20	61	79	65	52	
12/03/2011	13:20	13:30	60	72	64	51	
12/03/2011	13:30	13:40	63	82	64	51	
12/03/2011	13:40	13:50	60	75	63	49	
12/03/2011	13:50	14:00	59	72	63	50	
12/03/2011	14:00	14:10	64	81	65	50	

D. (Time		Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L _{A10}	L _{A90}	
12/03/2011	14:10	14:20	59	74	62	51	
12/03/2011	14:20	14:30	59	68	63	52	
12/03/2011	14:30	14:40	60	71	63	50	
12/03/2011	14:40	14:50	60	81	63	52	
12/03/2011	14:50	15:00	60	77	62	51	
12/03/2011	15:00	15:10	61	81	65	53	
12/03/2011	15:10	15:20	60	75	63	51	
12/03/2011	15:20	15:30	59	68	63	51	
12/03/2011	15:30	15:40	60	75	64	52	
12/03/2011	15:40	15:50	58	67	62	52	
12/03/2011	15:50	16:00	60	71	63	52	
12/03/2011	16:00	16:10	61	80	64	51	
12/03/2011	16:10	16:20	60	74	63	51	
12/03/2011	16:20	16:30	60	74	63	51	
12/03/2011	16:30	16:40	59	73	63	51	
12/03/2011	16:40	16:50	57	69	61	51	
12/03/2011	16:50	17:00	59	71	63	51	
12/03/2011	17:00	17:10	60	76	63	52	
12/03/2011	17:10	17:20	60	74	63	52	
12/03/2011	17:20	17:30	59	76	62	52	
12/03/2011	17:30	17:40	61	76	64	52	
12/03/2011	17:40	17:50	58	67	61	52	
12/03/2011	17:50	18:00	60	78	63	54	
12/03/2011	18:00	18:10	60	73	64	52	
12/03/2011	18:10	18:20	59	74	63	51	
12/03/2011	18:20	18:30	63	79	65	51	
12/03/2011	18:30	18:40	60	76	64	51	
12/03/2011	18:40	18:50	59	72	63	51	
12/03/2011	18:50	19:00	59	72	63	50	
12/03/2011	19:00	19:10	64	87	63	50	
12/03/2011	19:10	19:20	60	76	63	51	
12/03/2011	19:20	19:30	61	76	64	51	
12/03/2011	19:30	19:40	60	71	63	51	
12/03/2011	19:40	19:50	61	74	65	51	
12/03/2011	19:50	20:00	59	71	64	50	
12/03/2011	20:00	20:10	60	79	64	49	
12/03/2011	20:10	20:20	60	79	64	49	
12/03/2011	20:20	20:30	64	81	64	49	
12/03/2011	20:30	20:40	65	84	65	50	
12/03/2011	20:40	20:50	58	72	61	49	
12/03/2011	20:50	21:00	58	69	62	49	
12/03/2011	21:00	21:10	56	68	60	47	
12/03/2011	21:10	21:20	56	70	61	47	
12/03/2011	21:20	21:30	56	71	59	46	

D. (Ti	me		Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L _{A10}	L _{A90}		
12/03/2011	21:30	21:40	60	80	62	46		
12/03/2011	21:40	21:50	55	70	58	45		
12/03/2011	21:50	22:00	55	68	59	46		
12/03/2011	22:00	22:10	58	77	62	45		
12/03/2011	22:10	22:20	60	77	63	48		
12/03/2011	22:20	22:30	55	70	60	44		
12/03/2011	22:30	22:40	55	70	60	44		
12/03/2011	22:40	22:50	57	73	61	45		
12/03/2011	22:50	23:00	59	80	62	46		
12/03/2011	23:00	23:10	56	71	61	43		
12/03/2011	23:10	23:20	56	70	61	43		
12/03/2011	23:20	23:30	57	73	61	42		
12/03/2011	23:30	23:40	58	81	63	41		
12/03/2011	23:40	23:50	56	70	60	42		
12/03/2011	23:50	00:00	54	69	59	42		
13/03/2011	00:00	00:10	53	70	55	40		
13/03/2011	00:10	00:20	55	69	60	41		
13/03/2011	00:20	00:30	54	70	59	40		
13/03/2011	00:30	00:40	54	69	60	40		
13/03/2011	00:40	00:50	55	70	59	40		
13/03/2011	00:50	01:00	51	72	53	40		
13/03/2011	01:00	01:10	62	82	63	41		
13/03/2011	01:10	01:20	52	70	53	40		
13/03/2011	01:20	01:30	67	90	63	43		
13/03/2011	01:30	01:40	51	69	52	39		
13/03/2011	01:40	01:50	50	66	53	38		
13/03/2011	01:50	02:00	53	69	56	39		
13/03/2011	02:00	02:10	47	67	45	39		
13/03/2011	02:10	02:20	50	66	47	39		
13/03/2011	02:20	02:30	50	68	50	40		
13/03/2011	02:30	02:40	48	63	50	41		
13/03/2011	02:40	02:50	55	76	58	44		
13/03/2011	02:50	03:00	57	77	60	45		
13/03/2011	03:00	03:10	54	73	53	44		
13/03/2011	03:10	03:20	51	66	52	44		
13/03/2011	03:20	03:30	48	60	50	44		
13/03/2011	03:30	03:40	50	65	52	43		
13/03/2011	03:40	03:50	50	68	53	43		
13/03/2011	03:50	04:00	51	69	52	40		
13/03/2011	04:00	04:10	55	79	54	40		
13/03/2011	04:10	04:20	47	69	51	39		
13/03/2011	04:20	04:30	49	67	52	41		
13/03/2011	04:30	04:40	49	67	51	42		
13/03/2011	04:40	04:50	47	64	49	42		

Doto	Ti	me	Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	$\mathbf{L}_{\mathbf{Amax}}$	L_{A10}	L _{A90}	
13/03/2011	04:50	05:00	49	65	50	43	
13/03/2011	05:00	05:10	49	68	50	43	
13/03/2011	05:10	05:20	49	66	49	43	
13/03/2011	05:20	05:30	49	66	50	43	
13/03/2011	05:30	05:40	45	58	47	43	
13/03/2011	05:40	05:50	53	68	56	44	
13/03/2011	05:50	06:00	49	65	51	44	
13/03/2011	06:00	06:10	52	69	55	45	
13/03/2011	06:10	06:20	50	66	51	44	
13/03/2011	06:20	06:30	51	69	53	44	
13/03/2011	06:30	06:40	52	67	55	44	
13/03/2011	06:40	06:50	53	68	56	44	
13/03/2011	06:50	07:00	53	68	56	45	
13/03/2011	07:00	07:10	54	68	58	44	
13/03/2011	07:10	07:20	53	68	56	44	
13/03/2011	07:20	07:30	57	78	61	45	
13/03/2011	07:30	07:40	54	71	58	44	
13/03/2011	07:40	07:50	56	71	61	45	
13/03/2011	07:50	08:00	55	69	60	43	
13/03/2011	08:00	08:10	56	73	60	42	
13/03/2011	08:10	08:20	54	71	59	42	
13/03/2011	08:20	08:30	58	78	61	44	
13/03/2011	08:30	08:40	56	69	61	46	
13/03/2011	08:40	08:50	57	69	61	46	
13/03/2011	08:50	09:00	57	71	62	46	
13/03/2011	09:00	09:10	57	74	62	46	
13/03/2011	09:10	09:20	57	69	62	47	
13/03/2011	09:20	09:30	58	67	62	49	
13/03/2011	09:30	09:40	60	73	64	49	
13/03/2011	09:40	09:50	59	71	63	48	
13/03/2011	09:50	10:00	60	72	64	48	
13/03/2011	10:00	10:10	60	72	64	50	
13/03/2011	10:10	10:20	60	71	64	49	
13/03/2011	10:20	10:30	58	69	62	49	
13/03/2011	10:30	10:40	59	69	63	51	
13/03/2011	10:40	10:50	60	73	64	50	
13/03/2011	10:50	11:00	61	72	64	51	
13/03/2011	11:00	11:10	59	71	64	47	
13/03/2011	11:10	11:20	59	70	63	50	
13/03/2011	11:20	11:30	59	71	63	49	
13/03/2011	11:30	11:40	60	74	64	48	
13/03/2011	11:40	11:50	60	72	64	50	
13/03/2011	11:50	12:00	59	69	63	48	
13/03/2011	12:00	12:10	60	75	64	48	

D (Ti	me	Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L_{A90}	
13/03/2011	12:10	12:20	59	70	63	49	
13/03/2011	12:20	12:30	60	75	64	50	
13/03/2011	12:30	12:40	60	69	64	49	
13/03/2011	12:40	12:50	63	83	64	50	
13/03/2011	12:50	13:00	59	69	63	50	
13/03/2011	13:00	13:10	62	83	64	48	
13/03/2011	13:10	13:20	59	75	63	50	
13/03/2011	13:20	13:30	60	73	64	52	
13/03/2011	13:30	13:40	59	72	63	49	
13/03/2011	13:40	13:50	60	80	64	49	
13/03/2011	13:50	14:00	59	76	64	49	
13/03/2011	14:00	14:10	60	68	64	50	
13/03/2011	14:10	14:20	58	69	62	50	
13/03/2011	14:20	14:30	58	77	62	47	
13/03/2011	14:30	14:40	57	75	61	47	
13/03/2011	14:40	14:50	58	70	63	50	
13/03/2011	14:50	15:00	58	71	62	46	
13/03/2011	15:00	15:10	62	82	63	47	
13/03/2011	15:10	15:20	57	74	61	46	
13/03/2011	15:20	15:30	62	85	62	46	
13/03/2011	15:30	15:40	57	72	61	46	
13/03/2011	15:40	15:50	57	68	61	47	
13/03/2011	15:50	16:00	58	73	63	45	
13/03/2011	16:00	16:10	58	72	63	46	
13/03/2011	16:10	16:20	58	70	63	46	
13/03/2011	16:20	16:30	57	66	62	46	
13/03/2011	16:30	16:40	57	68	61	46	
13/03/2011	16:40	16:50	57	70	62	46	
13/03/2011	16:50	17:00	57	69	62	47	
13/03/2011	17:00	17:10	59	75	63	50	
13/03/2011	17:10	17:20	57	69	62	46	
13/03/2011	17:20	17:30	60	76	63	49	
13/03/2011	17:30	17:40	61	75	64	48	
13/03/2011	17:40	17:50	59	74	63	46	
13/03/2011	17:50	18:00	59	69	63	49	
13/03/2011	18:00	18:10	60	79	63	48	
13/03/2011	18:10	18:20	58	69	62	48	
13/03/2011	18:20	18:30	57	72	61	47	
13/03/2011	18:30	18:40	57	70	61	46	
13/03/2011	18:40	18:50	58	69	62	47	
13/03/2011	18:50	19:00	57	69	61	45	
13/03/2011	19:00	19:10	57	71	61	48	
13/03/2011	19:10	19:20	66	91	62	46	
13/03/2011	19:20	19:30	56	67	60	45	

D. (Ti	me	Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L _{A10}	L _{A90}	
13/03/2011	19:30	19:40	57	76	60	45	
13/03/2011	19:40	19:50	57	70	61	45	
13/03/2011	19:50	20:00	58	70	63	45	
13/03/2011	20:00	20:10	58	76	61	45	
13/03/2011	20:10	20:20	56	68	60	44	
13/03/2011	20:20	20:30	57	71	61	45	
13/03/2011	20:30	20:40	59	76	63	45	
13/03/2011	20:40	20:50	57	71	61	44	
13/03/2011	20:50	21:00	55	71	59	43	
13/03/2011	21:00	21:10	57	70	61	43	
13/03/2011	21:10	21:20	55	68	60	42	
13/03/2011	21:20	21:30	55	68	59	43	
13/03/2011	21:30	21:40	55	69	59	44	
13/03/2011	21:40	21:50	56	78	59	44	
13/03/2011	21:50	22:00	62	88	60	43	
13/03/2011	22:00	22:10	54	71	58	39	
13/03/2011	22:10	22:20	54	69	59	40	
13/03/2011	22:20	22:30	54	79	56	43	
13/03/2011	22:30	22:40	56	75	59	46	
13/03/2011	22:40	22:50	58	85	61	47	
13/03/2011	22:50	23:00	52	69	55	45	
13/03/2011	23:00	23:10	54	70	59	45	
13/03/2011	23:10	23:20	53	68	55	48	
13/03/2011	23:20	23:30	52	65	54	48	
13/03/2011	23:30	23:40	52	66	55	44	
13/03/2011	23:40	23:50	53	70	51	42	
13/03/2011	23:50	00:00	53	68	54	44	
14/03/2011	00:00	00:10	49	66	49	42	
14/03/2011	00:10	00:20	48	68	45	40	
14/03/2011	00:20	00:30	50	70	44	38	
14/03/2011	00:30	00:40	49	68	44	36	
14/03/2011	00:40	00:50	47	68	42	37	
14/03/2011	00:50	01:00	45	66	40	36	
14/03/2011	01:00	01:10	44	65	40	36	
14/03/2011	01:10	01:20	42	60	40	38	
14/03/2011	01:20	01:30	41	54	42	38	
14/03/2011	01:30	01:40	42	61	40	37	
14/03/2011	01:40	01:50	46	68	42	34	
14/03/2011	01:50	02:00	47	67	45	35	
14/03/2011	02:00	02:10	37	52	39	35	
14/03/2011	02:10	02:20	46	64	45	36	
14/03/2011	02:10	02:30	43	65	42	35	
14/03/2011	02:30	02:40	45	61	49	38	
14/03/2011	02:40	02:50	47	67	49	39	

D .	Time			Noise Level dB				
Date	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L _{A90}		
14/03/2011	02:50	03:00	48	64	50	42		
14/03/2011	03:00	03:10	45	57	46	42		
14/03/2011	03:10	03:20	46	58	48	43		
14/03/2011	03:20	03:30	48	58	52	44		
14/03/2011	03:30	03:40	46	58	50	39		
14/03/2011	03:40	03:50	48	65	52	37		
14/03/2011	03:50	04:00	46	65	49	39		
14/03/2011	04:00	04:10	46	57	50	41		
14/03/2011	04:10	04:20	43	57	45	39		
14/03/2011	04:20	04:30	48	65	49	40		
14/03/2011	04:30	04:40	45	58	49	39		
14/03/2011	04:40	04:50	54	72	54	42		
14/03/2011	04:50	05:00	51	65	55	42		
14/03/2011	05:00	05:10	49	62	50	42		
14/03/2011	05:10	05:20	52	66	54	44		
14/03/2011	05:20	05:30	52	67	54	45		
14/03/2011	05:30	05:40	52	67	52	45		
14/03/2011	05:40	05:50	56	71	61	47		
14/03/2011	05:50	06:00	55	71	59	46		
14/03/2011	06:00	06:10	56	72	60	46		
14/03/2011	06:10	06:20	55	74	58	46		
14/03/2011	06:20	06:30	56	70	61	46		
14/03/2011	06:30	06:40	58	70	62	50		
14/03/2011	06:40	06:50	58	82	62	47		
14/03/2011	06:50	07:00	62	85	65	51		
14/03/2011	07:00	07:10	60	74	64	50		
14/03/2011	07:10	07:20	60	75	64	51		
14/03/2011	07:20	07:30	61	74	65	52		
14/03/2011	07:30	07:40	61	72	65	52		
14/03/2011	07:40	07:50	61	76	64	53		
14/03/2011	07:50	08:00	61	72	65	54		
14/03/2011	08:00	08:10	62	75	65	54		
14/03/2011	08:10	08:20	62	74	65	53		
14/03/2011	08:20	08:30	60	72	64	53		
14/03/2011	08:30	08:40	62	78	64	52		
14/03/2011	08:40	08:50	60	73	64	49		
14/03/2011	08:50	09:00	61	81	63	51		
14/03/2011	09:00	09:10	61	76	64	51		
14/03/2011	09:10	09:20	60	72	64	49		
14/03/2011	09:20	09:30	59	73	63	47		
14/03/2011	09:30	09:40	59	70	63	51		
14/03/2011	09:40	09:50	59	69	63	49		
14/03/2011	09:50	10:00	60	72	65	50		
14/03/2011	10:00	10:10	59	69	63	51		

D-4-	Time		Noise Level dB			
Date	Start	End	L_{Aeq}	L _{Amax}	L_{A10}	L _{A90}
14/03/2011	10:10	10:20	59	79	63	47
14/03/2011	10:20	10:30	58	70	62	50
14/03/2011	10:30	10:40	59	74	63	50
14/03/2011	10:40	10:50	61	78	63	48
14/03/2011	10:50	11:00	60	77	63	47
14/03/2011	11:00	11:10	58	71	62	46
14/03/2011	11:10	11:20	58	69	62	45
14/03/2011	11:20	11:30	60	76	64	47
14/03/2011	11:30	11:40	59	77	62	49
14/03/2011	11:40	11:50	60	72	64	49
14/03/2011	11:50	12:00	59	73	62	48
14/03/2011	12:00	12:10	60	70	64	48
14/03/2011	12:10	12:20	60	74	63	49
14/03/2011	12:20	12:30	60	75	63	51
14/03/2011	12:30	12:40	60	74	63	52
14/03/2011	12:40	12:50	61	76	63	51
14/03/2011	12:50	13:00	62	81	65	51
14/03/2011	13:00	13:10	60	81	64	49
14/03/2011	13:10	13:20	58	73	62	47
14/03/2011	13:20	13:30	61	81	64	47
14/03/2011	13:30	13:40	64	78	66	49
14/03/2011	13:40	13:50	63	78	64	51
14/03/2011	13:50	14:00	61	77	64	53
14/03/2011	14:00	14:10	61	79	65	53
14/03/2011	14:10	14:20	61	72	64	53
14/03/2011	14:20	14:30	59	69	63	53
14/03/2011	14:30	14:40	60	74	63	53
14/03/2011	14:40	14:50	61	73	64	53
14/03/2011	14:50	15:00	61	82	64	53
14/03/2011	15:00	15:10	62	72	65	52
14/03/2011	15:10	15:20	61	76	65	55
14/03/2011	15:20	15:30	61	75	64	52
14/03/2011	15:30	15:40	59	73	63	48
14/03/2011	15:40	15:50	60	75	64	52
14/03/2011	15:50	16:00	62	81	63	51
14/03/2011	16:00	16:10	59	71	62	51
14/03/2011	16:10	16:20	60	70	64	50
14/03/2011	16:20	16:30	61	74	64	52
14/03/2011	16:30	16:40	60	73	64	50
14/03/2011	16:40	16:50	60	72	63	48
14/03/2011	16:50	17:00	59	74	62	51
14/03/2011	17:00	17:10	60	79	64	52
14/03/2011	17:10	17:20	63	78	65	49
14/03/2011	17:20	17:30	61	76	64	53

Date	Time		Noise Level dB			
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L _{A90}
14/03/2011	17:30	17:40	61	76	64	52
14/03/2011	17:40	17:50	61	75	64	52
14/03/2011	17:50	18:00	61	83	63	50
14/03/2011	18:00	18:10	61	75	64	53
14/03/2011	18:10	18:20	62	85	63	49
14/03/2011	18:20	18:30	60	82	63	51
14/03/2011	18:30	18:40	61	81	63	49
14/03/2011	18:40	18:50	59	82	62	47
14/03/2011	18:50	19:00	59	77	63	47
14/03/2011	19:00	19:10	60	77	63	48
14/03/2011	19:10	19:20	60	82	62	47
14/03/2011	19:20	19:30	57	68	62	45
14/03/2011	19:30	19:40	58	71	63	46
14/03/2011	19:40	19:50	58	70	62	47
14/03/2011	19:50	20:00	59	76	62	48
14/03/2011	20:00	20:10	60	76	63	46
14/03/2011	20:10	20:20	58	75	63	46
14/03/2011	20:20	20:30	55	67	60	45
14/03/2011	20:30	20:40	57	73	61	44
14/03/2011	20:40	20:50	57	72	61	42
14/03/2011	20:50	21:00	55	69	60	45
14/03/2011	21:00	21:10	59	78	62	44
14/03/2011	21:10	21:20	64	86	63	44
14/03/2011	21:20	21:30	55	71	59	46
14/03/2011	21:30	21:40	58	76	61	44
14/03/2011	21:40	21:50	55	68	59	43
14/03/2011	21:50	22:00	57	72	61	44
14/03/2011	22:00	22:10	56	70	60	41
14/03/2011	22:10	22:20	57	74	61	45
14/03/2011	22:20	22:30	56	69	59	43
14/03/2011	22:30	22:40	55	74	59	42
14/03/2011	22:40	22:50	56	78	59	43
14/03/2011	22:50	23:00	56	73	60	41
14/03/2011	23:00	23:10	51	67	54	36
14/03/2011	23:10	23:20	52	71	56	36
14/03/2011	23:20	23:30	52	71	56	36
14/03/2011	23:30	23:40	48	68	51	35
14/03/2011	23:40	23:50	53	69	56	34
14/03/2011	23:50	00:00	46	65	46	35
15/03/2011	00:00	00:10	47	65	46	33
15/03/2011	00:10	00:10	52	69	53	32
15/03/2011	00:10	00:20	47	63	47	32
15/03/2011	00:20	00:40	44	62	42	32
15/03/2011	00:40	00:40	49	70	46	32

Date	Time		Noise Level dB			
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L _{A90}
15/03/2011	00:50	01:00	49	69	47	32
15/03/2011	01:00	01:10	42	64	38	33
15/03/2011	01:10	01:20	41	62	38	31
15/03/2011	01:20	01:30	35	51	36	31
15/03/2011	01:30	01:40	41	61	37	31
15/03/2011	01:40	01:50	43	63	39	31
15/03/2011	01:50	02:00	46	67	45	33
15/03/2011	02:00	02:10	44	62	39	31
15/03/2011	02:10	02:20	37	57	37	31
15/03/2011	02:20	02:30	46	63	50	33
15/03/2011	02:30	02:40	41	58	45	32
15/03/2011	02:40	02:50	42	57	47	32
15/03/2011	02:50	03:00	44	58	49	32
15/03/2011	03:00	03:10	45	64	49	32
15/03/2011	03:10	03:20	51	72	49	33
15/03/2011	03:20	03:30	51	71	52	32
15/03/2011	03:30	03:40	44	65	42	32
15/03/2011	03:40	03:50	42	60	45	31
15/03/2011	03:50	04:00	47	70	51	32
15/03/2011	04:00	04:10	44	63	46	32
15/03/2011	04:10	04:20	47	66	49	35
15/03/2011	04:20	04:30	46	63	49	36
15/03/2011	04:30	04:40	45	67	45	36
15/03/2011	04:40	04:50	44	59	48	37
15/03/2011	04:50	05:00	51	67	54	38
15/03/2011	05:00	05:10	54	73	58	39
15/03/2011	05:10	05:20	50	76	52	38
15/03/2011	05:20	05:30	51	67	55	40
15/03/2011	05:30	05:40	54	67	58	39
15/03/2011	05:40	05:50	53	72	56	40
15/03/2011	05:50	06:00	52	67	56	39
15/03/2011	06:00	06:10	57	77	61	41
15/03/2011	06:10	06:20	55	69	60	41
15/03/2011	06:20	06:30	54	69	57	42
15/03/2011	06:30	06:40	56	71	60	44
15/03/2011	06:40	06:50	56	71	61	46
15/03/2011	06:50	07:00	59	78	62	46
15/03/2011	07:00	07:10	60	76	63	50
15/03/2011	07:10	07:10	61	74	65	48
15/03/2011	07:20	07:30	62	78	64	47
15/03/2011	07:30	07:40	60	71	64	50
15/03/2011	07:40	07:50	60	71	64	49
15/03/2011	07:50	08:00	62	80	64	53
15/03/2011	08:00	08:10	61	71	65	53

Date	Tiı	me	Noise Level dB				
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	$\mathbf{L}_{\mathbf{Amax}}$	L_{A10}	L_{A90}	
15/03/2011	08:10	08:20	61	77	64	51	
15/03/2011	08:20	08:30	62	78	65	51	
15/03/2011	08:30	08:40	61	75	65	50	
15/03/2011	08:40	08:50	62	78	65	53	
15/03/2011	08:50	09:00	61	77	64	52	
15/03/2011	09:00	09:10	61	74	65	52	
15/03/2011	09:10	09:20	59	71	63	49	
15/03/2011	09:20	09:30	60	76	64	52	
15/03/2011	09:30	09:40	61	76	65	50	
15/03/2011	09:40	09:50	60	81	64	49	
15/03/2011	09:50	10:00	62	80	65	50	

Location 2

Date	Tiı	ne	Noise Level dB				
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	L _{Amax}	L_{A10}	L _{A90}	
12/03/2011	06:03	06:08	54	68	57	41	
12/03/2011	06:17	06:22	56	73	59	41	
12/03/2011	06:29	06:34	52	68	56	42	
12/03/2011	06:41	06:46	50	66	52	41	
12/03/2011	06:53	06:58	52	69	53	43	
12/03/2011	07:12	07:22	54	72	58	43	
12/03/2011	07:35	07:45	55	74	59	44	
12/03/2011	08:08	08:18	57	74	61	44	
12/03/2011	08:30	08:40	59	75	63	49	
12/03/2011	08:51	09:01	59	71	62	48	
12/03/2011	09:14	09:24	58	76	62	49	
14/03/2011	06:00	06:05	56	71	60	45	
14/03/2011	06:11	06:16	57	74	62	45	
14/03/2011	06:23	06:28	55	68	60	44	
14/03/2011	06:35	06:40	59	72	63	51	
14/03/2011	06:46	06:51	56	72	60	45	
14/03/2011	07:01	07:11	59	73	64	49	
14/03/2011	07:22	07:32	61	75	66	51	
14/03/2011	07:44	07:54	62	72	65	55	
14/03/2011	08:06	08:16	62	74	66	52	
14/03/2011	08:28	08:38	62	86	64	51	

Location 3

Date	Tiı	me	Noise Level dB			
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	\mathbf{L}_{Amax}	$\mathbf{L}_{\mathbf{A}10}$	L_{A90}
12/03/2011	06:10	06:15	50	68	49	40
12/03/2011	06:23	06:28	60	72	64	42
12/03/2011	06:35	06:40	56	73	54	41
12/03/2011	06:47	06:52	61	81	63	43
12/03/2011	07:01	07:11	62	80	65	43
12/03/2011	07:24	07:34	60	77	63	45
12/03/2011	08:19	08:29	65	78	69	47
12/03/2011	08:40	08:50	66	83	69	52
12/03/2011	09:02	09:12	66	80	71	51
14/03/2011	06:05	06:10	63	77	65	44
14/03/2011	06:17	06:22	63	82	63	46
14/03/2011	06:29	06:34	62	75	64	47
14/03/2011	06:41	06:46	65	79	68	49
14/03/2011	06:55	07:00	71	89	72	52
14/03/2011	07:11	07:21	68	81	72	55
14/03/2011	07:33	07:43	69	82	72	56
14/03/2011	07:55	08:05	69	82	73	60
14/03/2011	08:17	08:27	69	88	71	60
14/03/2011	08:39	08:49	68	83	71	58

Location 4

Date	Time		Noise Level dB				
	Start	End	$\mathbf{L}_{\mathbf{Aeq}}$	$\mathbf{L}_{\mathbf{Amax}}$	L_{A10}	L_{A90}	
15/03/2011	01:02	01:07	34	45	36	30	
15/03/2011	01:08	01:13	33	47	35	29	
15/03/2011	01:13	01:18	39	56	40	27	
15/03/2011	01:18	01:23	32	52	33	29	
15/03/2011	01:23	01:28	39	58	38	30	
15/03/2011	01:30	01:35	34	51	36	28	
15/03/2011	01:35	01:40	33	46	34	27	
15/03/2011	01:40	01:45	45	64	46	29	