Greenwood Place Resource Centre London

Baseline Environmental Noise Survey Report

22766/BENS1 Rev1

25 May 2016

For:
Kier Construction London
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Hann Tucker Associates

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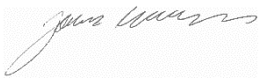
Document Control

Rev	Date	Comment	Prepared by	Authorised by
0	23/05/2016	-	James Mackenzie Assistant Consultant BSc(Hons), MA, AMIOA	John Ridpath Director BSc(Hons), MIOA, MIEnvSc
1	25/05/2016	Position 3 updated		

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Noise Monitoring Report
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Contents

Attachments

1.0 Introduction

A new community resource centre is being developed at Greenwood Place, Kentish Town. A number of noise sensitive neighbouring buildings are located in close proximity to the site. Hann Tucker Associates have therefore been appointed to undertake a baseline environmental noise survey.

This report presents the survey methodology and findings. The survey data may be used as the basis for various acoustic assessment purposes.

2.0 Objectives

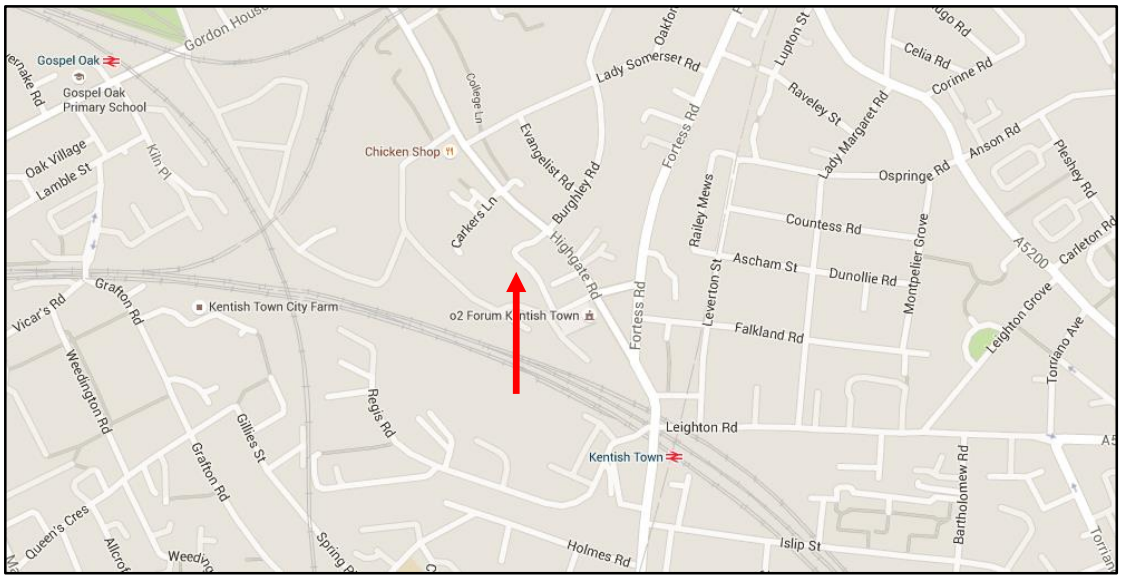
To establish by means of fully computerised unmanned data logging noise monitoring equipment the existing L_{Amax}, L_{A10}, L_{Aeq} and L_{A90} environmental noise levels at up to 4No. secure and accessible on-site positions.

These objectives are as set out in Part 2.0 our letter dated 5 May 2016 and Kier's instructions received 25 April 2016.

3.0 Site Description

3.1 Location

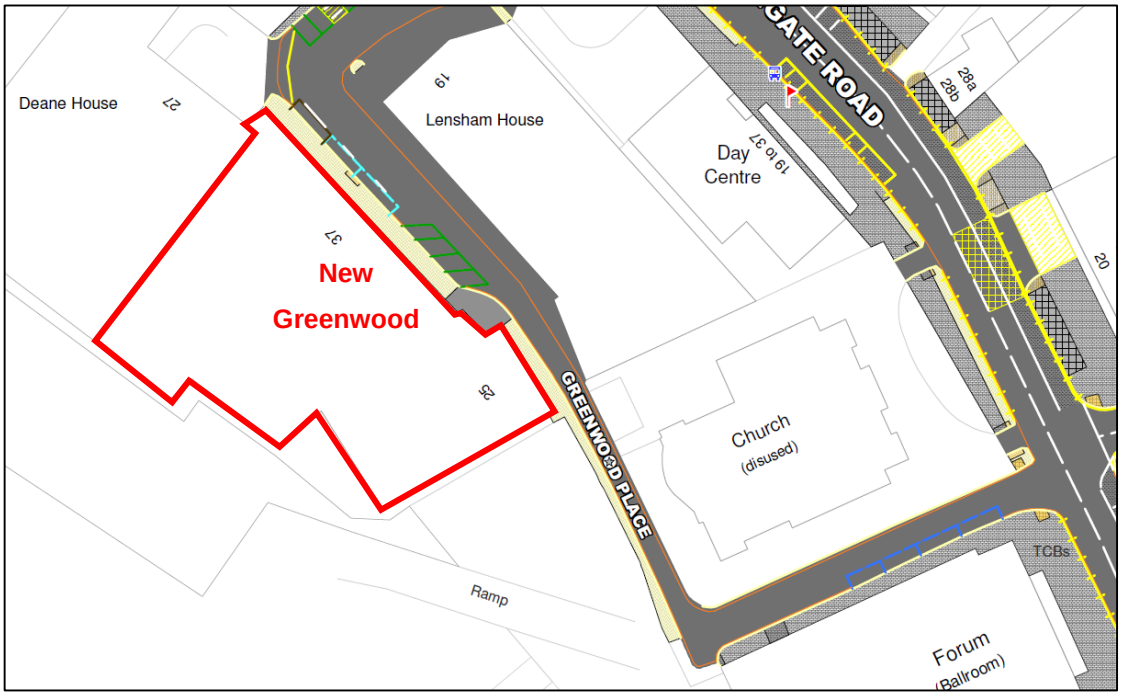
The site is located at 25-37 Greenwood Place, Kentish Town, NW5 1LB and falls within the London Borough of Camden's jurisdiction. See Location Map below.



Location Map (Map Data © 2016 Google)

3.2 Description

The site is located on Greenwood Place, Just off Highgate Road (B518). To the north west of site lies the closest neighbouring building, Deane House, which we understand is home to a number of businesses, and sits directly on the site boundary with multiple windows overlooking site. To the south/southwest of site lies a busy industrial yard which bounds the overground line and has existing site cabins. To the north/north east of site lies Lensham House and other buildings which appear to be industrial-office based premises. To the south east of site lies a disused church and the O2 Forum which we understand has some offices in. See Site Plan below.



Site Plan (Kier Construction)

4.0 Acoustic Terminology

For an explanation of the acoustic terminology used in this report please refer to Appendix B enclosed.

5.0 Methodology

The survey was undertaken by Robin Honey BA(Hons) MIOA AMIEnvSc.

5.1 Procedure

Fully automated noise measurements were undertaken from 13 May 2016 to 20 May 2016.

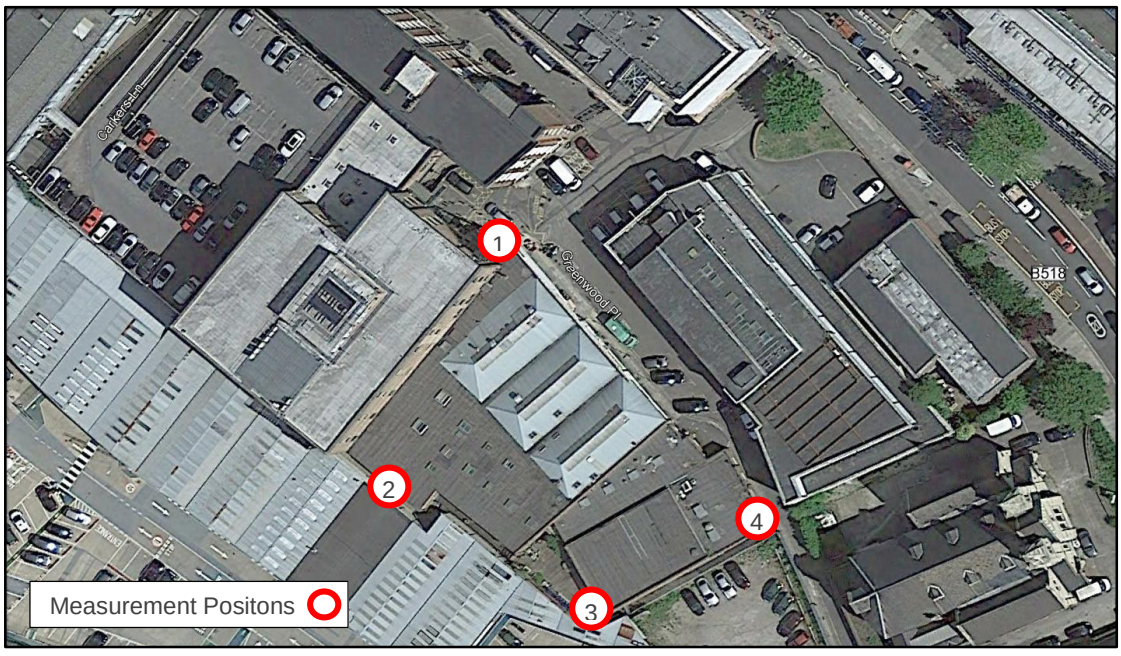
Measurements were taken continuously of the A-weighted (dBA) L_{eq} and L_{max} sound pressure levels over 15 minute periods.

5.2 Measurement Positions

The noise monitors are located at 4No. Positions around the development site.

The measurement positions are described in the table below and shown on the site plan below.

Position No	Description
1	Located on the second floor of fire escape of Deane House in a free field position.
2	Located outside of the rear first floor window of Greenwood Place Resource Centre, approximately 1m from the façade.
3	Positioned approximately 3m above the ground, approximately 1m from the closest reflective surface.
4	Positioned approximately 3m above the ground in a free field positon.



Measurement Positions (© 2015 Google Inc.)

5.3 Instrumentation

The noise instrumentation used during the survey is presented in the Table below:

Description	Manufacturer	Type	Serial Number	Calibration
Position 1 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3443	LD calibration on 21/01/2016
Position 1 Type 1 Calibrator	Larson Davis	CAL200	3082	LD calibration on09/04/2015
Position 2 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3444	LD calibration on 08/07/2014
Position 2 Type 1 Calibrator	Larson Davis	CAL200	3082	LD calibration on 09/04/2015
Position 3 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3541	LD calibration on 06/01/2016
Position 3 Type 1 Calibrator	Larson Davis	CAL200	3082	LD calibration on 09/04/2015
Position 4 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3701	LD calibration on 06/01/2016
Position 4 Type 1 Calibrator	Larson Davis	CAL200	3082	LD calibration on 09/04/2015

Each sound level meter, including the extension cable, was calibrated prior to and on completion of the surveys. No significant changes were found to have occurred (no more than 0.1 dB).

Each sound level meter was located in an environmental case with the microphone connected to the sound level meter via an extension cable. Each microphone was fitted with a Larson Davis windshield.

6.0 Results

The noise results have been plotted on Time History Graphs 22766/TH1 to 22766/TH4 enclosed presenting the 15 minute A-weighted (dBA) L_{90}, L_{eq} and L_{max} levels at each measurement position throughout the duration of the survey.

Due to the nature of the survey, i.e. unmanned, it is not possible to accurately describe the dominant noise sources, or specific noise events throughout the entire survey period. However at all 4 positions at the beginning and end of the survey period the dominant noise sources

were noted to be road traffic noise from the nearby Highgate Road and train noise from the tracks located to the south of the site.

The three tables within Appendix A list the standard working hour (08:00-18:00 Sunday-Friday, 08:00-13:00 Saturday), daytime (07:00-23:00 hours) and night-time (23:00-07:00 hours) L_{Aeq}, L_{Amax} and lowest measured L_{A90} at each of the measurement positions.

7.0 Conclusions

Fully automated environmental noise monitoring has been undertaken at Greenwood Place Resource Centre in order to establish the currently prevailing baseline environmental noise levels around the proposed development site. The results are presented herein.

Appendix A – Greenwood Place, Resource Centre, London

Noise Levels - 13 May 2016 to 20 May 2016

The following table presents L_{Aeq}, L_{max} and L_{90} noise levels around the development site during the period 13 May 2016 to 20 May 2016.

Start Date	Standard Working Hour (08:00-18:00 Sunday-Friday, 08:00-13:00 Saturday) L_{eq} Noise Levels (dBA)				Daytime $L_{eq(07:00-23:00)}$ Noise Level (dBA)				Night-time $L_{eq(23:00-07:00)}$ Noise Level (dBA)			
	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4
Monday 13 May 2016	63	51	57	52	62	51	56	52	54	43	48	46
Tuesday 14 May 2016	59	49	55	51	59	49	54	51	53	42	46	44
Wednesday 15 May 2016	61	52	57	52	60	51	56	51	53	44	49	43
Thursday 16 May 2016	63	54	57	52	62	53	56	52	53	46	50	45
Friday 17 May 2016	65	56	59	54	64	55	59	54	54	49	54	50
Saturday 18 May 2016	63	53	58	53	64	54	57	53	55	47	50	46
Sunday 19 May 2016	63	55	59	54	63	55	59	54	56	48	52	48

Start Date	Standard Working Hour (08:00-18:00 Sunday-Friday, 08:00-13:00 Saturday) L_{max} Noise Levels (dBA)				Daytime $L_{max(07:00-23:00)}$ Noise Level (dBA)				Night-time $L_{max(23:00-07:00)}$ Noise Level (dBA)			
	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4
Monday 13 May 2016	104	76	91	89	104	76	95	89	88	69	74	82
Tuesday 14 May 2016	87	77	81	83	89	79	82	83	82	64	72	80
Wednesday 15 May 2016	91	81	87	86	91	81	87	86	80	64	79	69
Thursday 16 May 2016	95	79	84	87	95	85	84	87	77	77	74	78
Friday 17 May 2016	105	87	85	80	105	87	85	89	80	80	87	87
Saturday 18 May 2016	89	77	88	80	98	79	88	93	89	70	75	81
Sunday 19 May 2016	96	87	86	80	96	87	86	85	88	70	83	84

Start Date	Standard Working Hour (08:00-18:00 Sunday-Friday, 08:00-13:00 Saturday) L_{90} Noise Levels (dBA)				Daytime $L_{90(07:00-23:00)}$ Noise Level (dBA)				Night-time $L_{90(23:00-07:00)}$ Noise Level (dBA)			
	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4	Pos 1	Pos 2	Pos 3	Pos 4
Monday 13 May 2016	50	39	42	41	46	39	42	40	41	37	37	35
Tuesday 14 May 2016	47	38	40	39	44	37	39	37	42	37	37	35
Wednesday 15 May 2016	49	38	41	40	44	37	38	37	40	37	36	34
Thursday 16 May 2016	50	44	45	41	47	39	42	39	41	39	38	34
Friday 17 May 2016	51	47	47	44	46	43	45	42	42	42	41	39
Saturday 18 May 2016	52	44	46	43	44	40	41	39	40	39	38	35
Sunday 19 May 2016	52	47	46	44	47	43	44	42	42	43	40	38

Appendix B

The acoustic terms used in this report are defined as follows:

dB — Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form. The relationships between Decibel levels do not work in the same way that non-logarithmic (linear) numbers work (e.g. 30dB + 30dB = 33dB, not 60dB).

dBA — The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The $_A$ subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted

It should be noted that levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is just perceptible.

$L_{90,T}$ — L_{90} is the noise level exceeded for 90% of the period *T* (i.e. the quietest 10% of the measurement) and is often used to describe the background noise level.

$L_{eq,T}$ — $L_{eq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time period, *T*.

L_{max} — L_{max} is the maximum sound pressure level recorded over the period stated. L_{max} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the L_{eq} noise level.

L_p — Sound Pressure Level (SPL) is the sound pressure relative to a standard reference pressure of 2×10^{-5} Pa. This level varies for a given source according to a number of factors (including but not limited to: distance from the source; positioning; screening and meteorological effects).

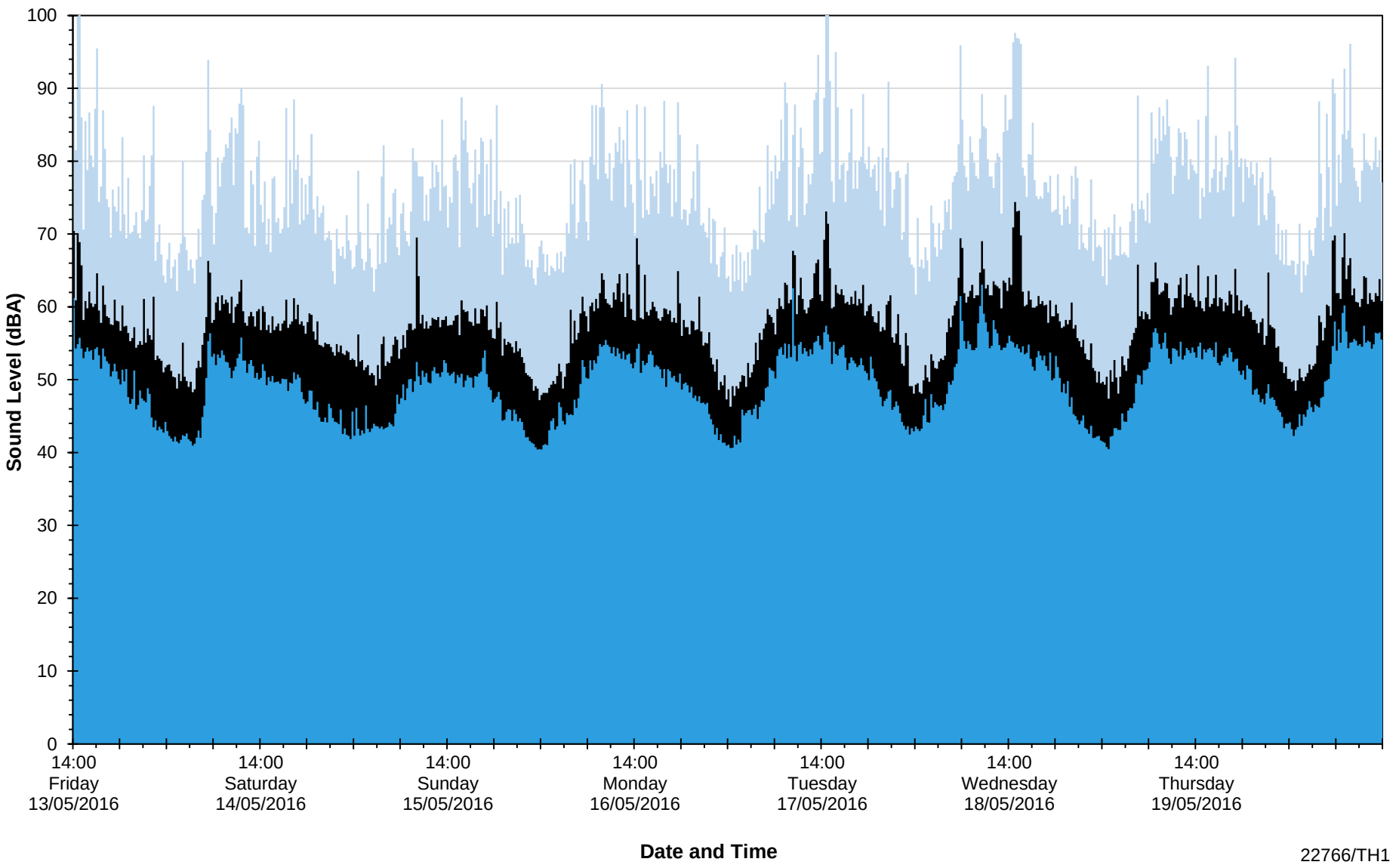
L_w — Sound Power Level (SWL) is the total amount of sound energy inherent in a particular sound source, independent of its environment. It is a logarithmic measure of the sound power in comparison to a specified reference level (usually 10^{-12} W).

Greenwood Place Resource Centre

Position 1

L_{Aeq}, L_{Amax} and L_{A90} Noise Levels

Friday 13 May 2016 to Friday 20 May 2016



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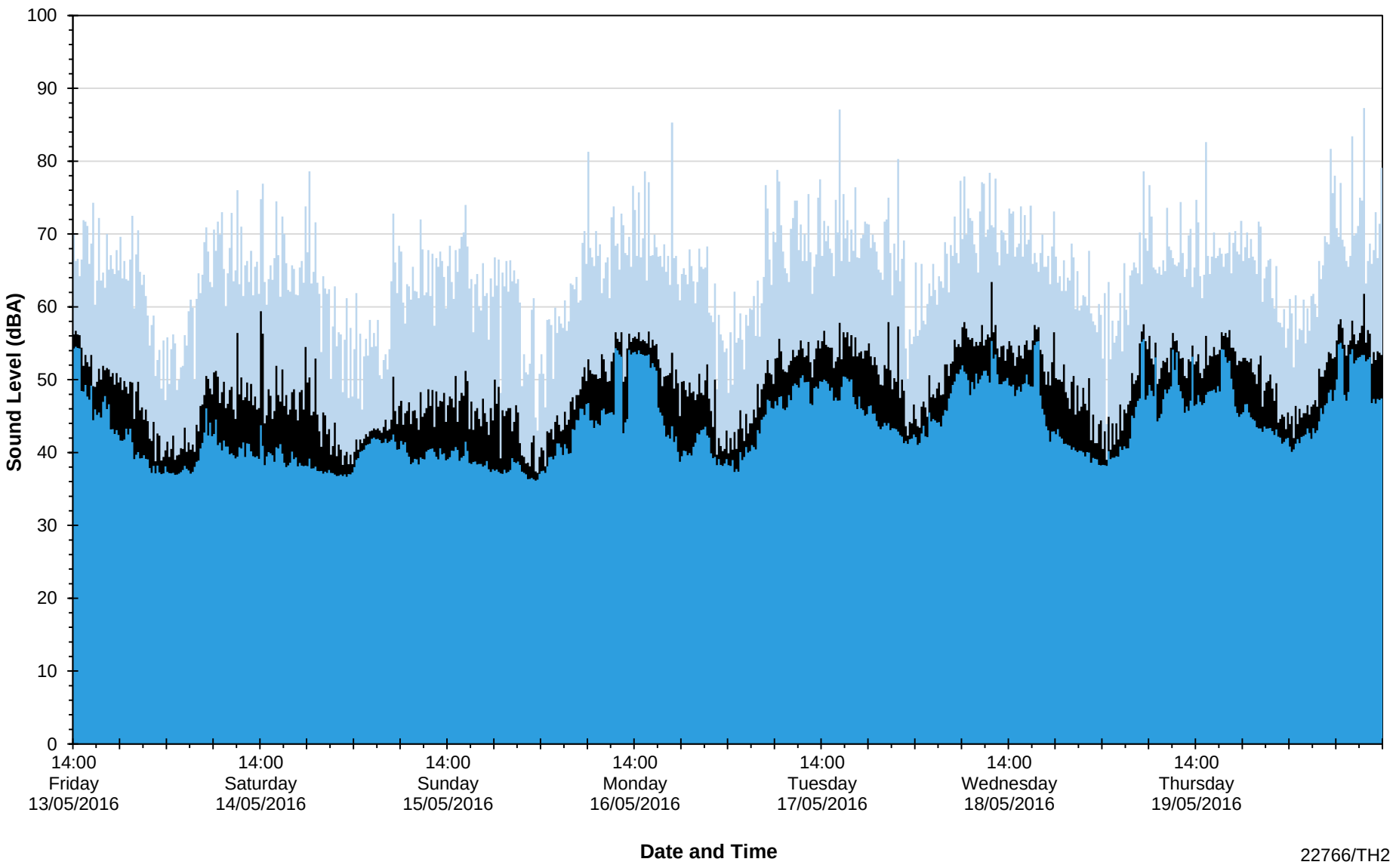
Greenwood Place Resource Centre

Position 2

L_{Aeq}, L_{Amax} and L_{A90} Noise Levels

Friday 13 May 2016 to Friday 20 May 2016



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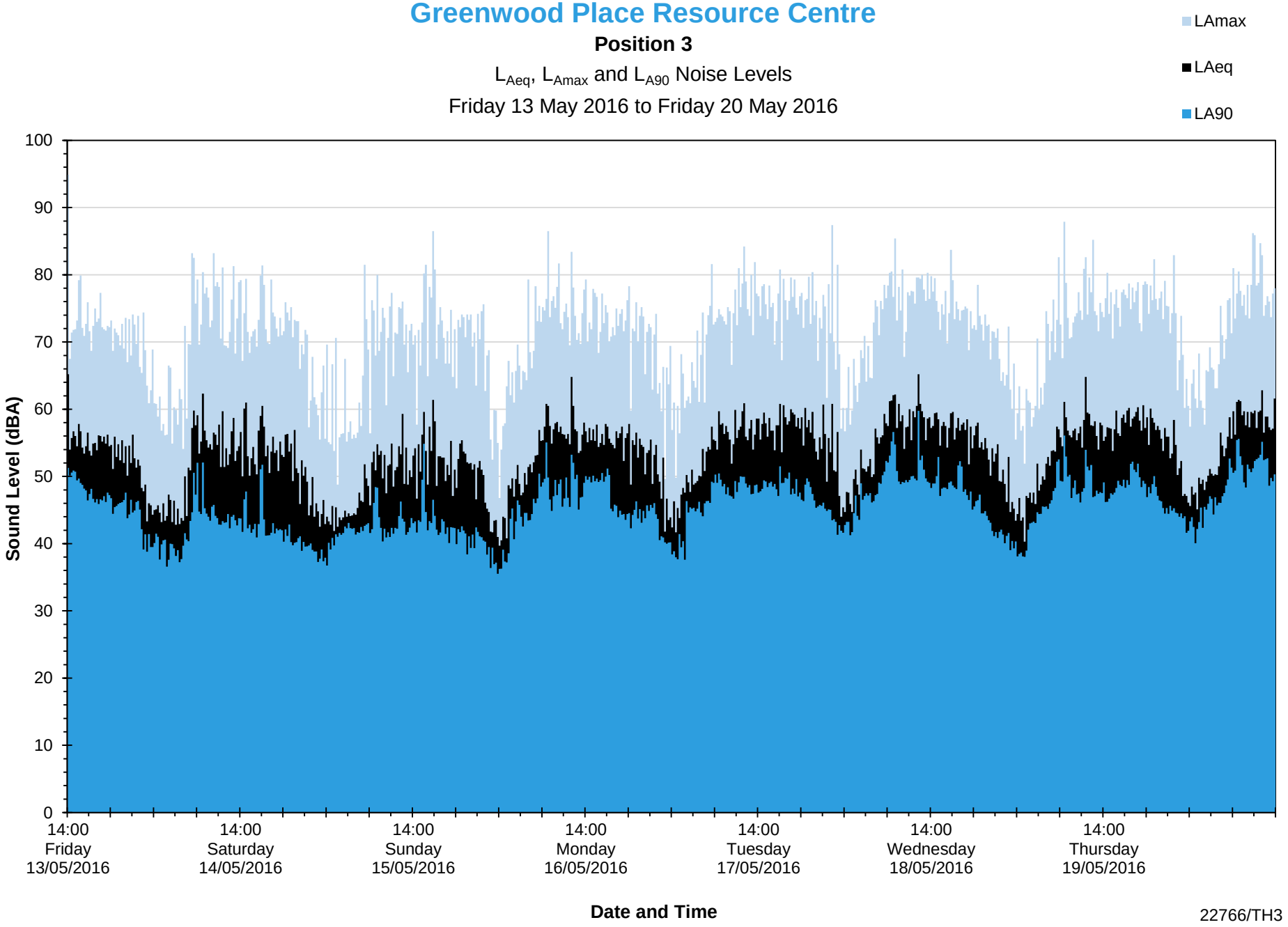
Greenwood Place Resource Centre

Position 3

L_{Aeq}, L_{Amax} and L_{A90} Noise Levels

Friday 13 May 2016 to Friday 20 May 2016



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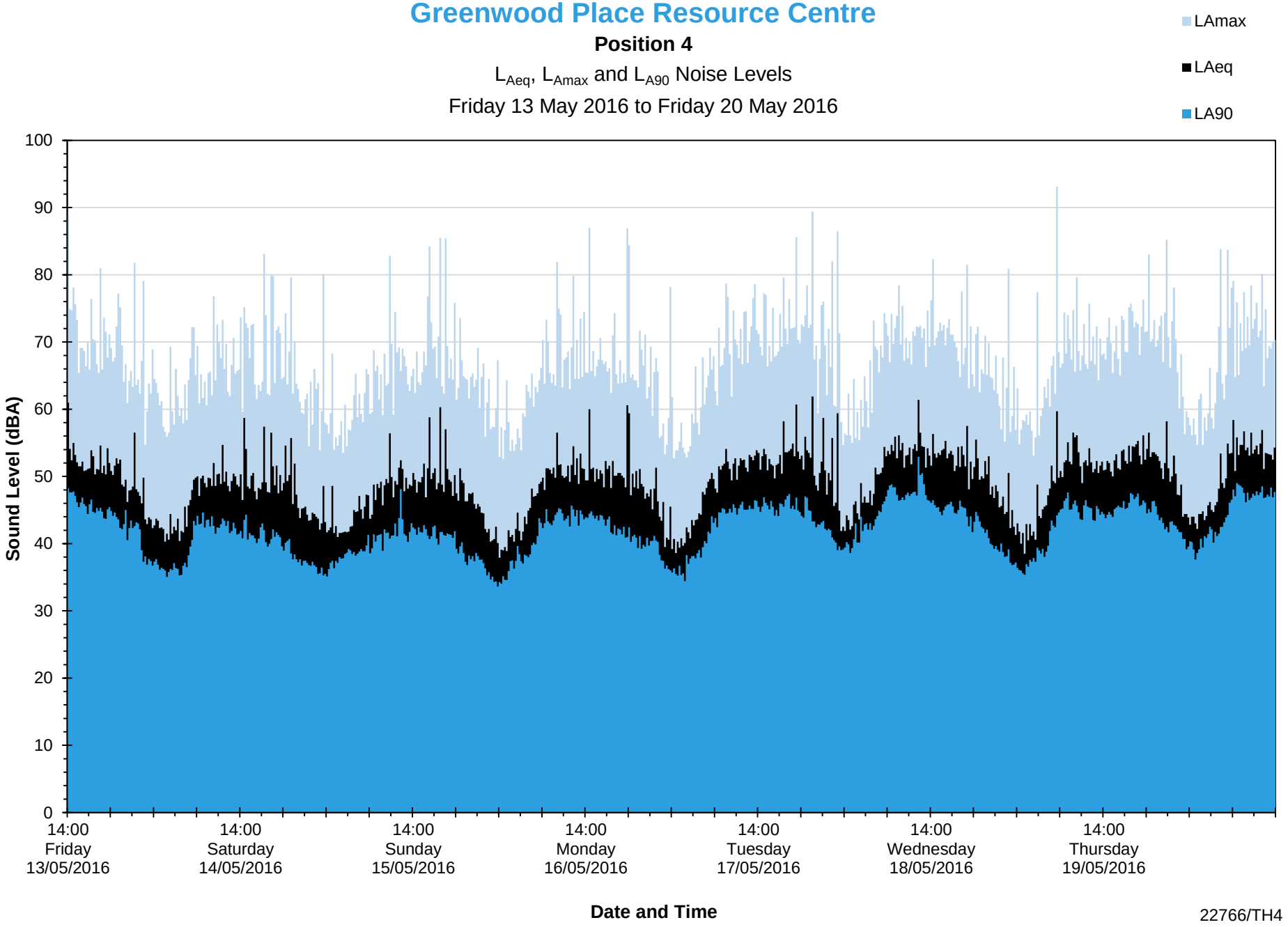
Greenwood Place Resource Centre

Position 4

L_{Aeq}, L_{Amax} and L_{A90} Noise Levels

Friday 13 May 2016 to Friday 20 May 2016



22766/TH4