3-6 Spring Road
Kentish Town

Environmental Noise Survey and Noise Impact Assessment Report

27570/NIA2-Rev5

17 December 2020

For:
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Document Control

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1.0 Introduction

It is proposed to apply for planning consent for Use Class E/B2 and B8 with 24/7 operation at 3-6 Spring Place.

Hann Tucker Associates have therefore been commissioned to undertake a detailed daytime and night-time fully automated environmental noise survey of the site to establish the currently prevailing noise climate.

Based on the results of the survey and in line with appropriate acoustic design criteria a noise impact assessment has been undertake at the nearest noise sensitive residential dwelling. A vibration assessment has also been undertaken to determine any changes in VDV levels from vehicles associated with the proposed site

Our assessment shall also consider the likely typical noise levels in the area to compensate for the potentially artificially low levels currently caused by the Government measures in response to the coronavirus pandemic. This may include review of our measured levels, review of previous surveys in the vicinity and any nationally available noise map data. This would be in accordance with current ANC (Association of Noise Consultants) advice relating to surveys during the COVID-19 societal restrictions.

Our findings and recommendations are presented herein.

2.0 Objectives

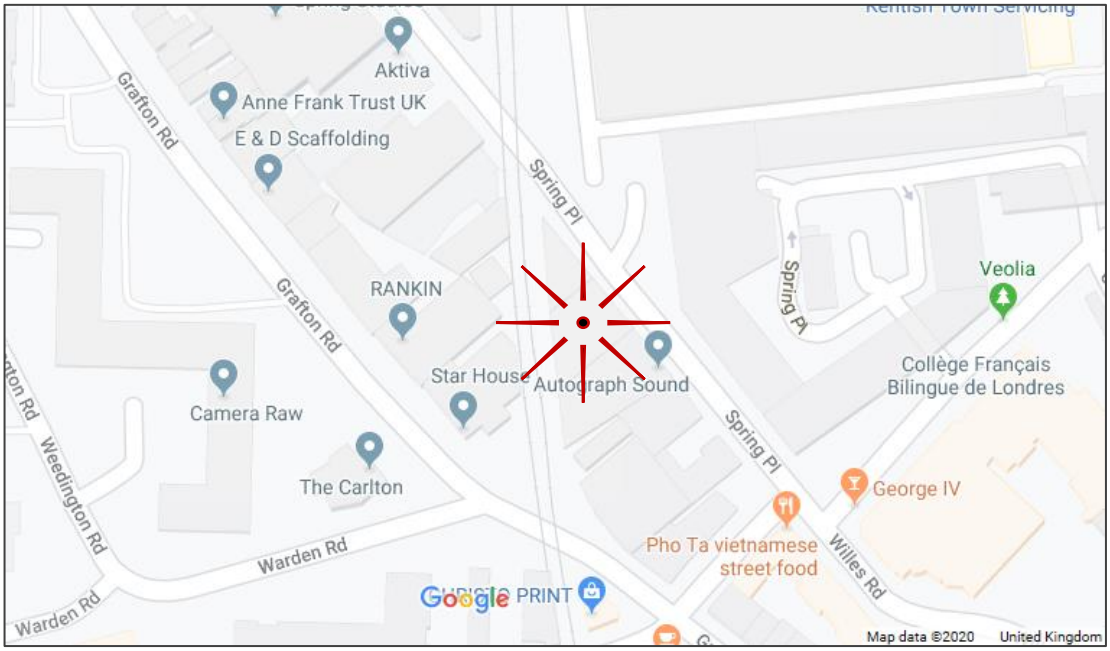
To establish, by means of detailed daytime and night-time fully automated environmental noise monitoring, the existing A-weighted (dBA) L_{90}, L_{eq} and L_{max} environmental noise levels at selected accessible positions, thought to be representative of the nearest affected property.

Based on the results of the noise survey, and with reference appropriate acoustic design criteria, to assess the noise and vibration from Use Class E/B2 and B8 operations at the nearest noise sensitive residential dwelling.

3.0 Site Description

3.1 Location

The Site falls within London Borough of Camden's jurisdiction. The location is shown in the Location Map below.



3.2 Description

The Site is located on the south west side of Spring Place, to the south of Kentish Town Business Park and to the north of Talacre Gardens. Immediately to the north on other side of the London Overground line are residential flats up to seven storeys in height. To the east is Veolia Depot. Autograph Sound Ltd (Visual Audio Equipment Hire) neighbour the Site the south who appear to extend around the corner of Spring Place onto Holmes Road. Bordering the Site to the west are the rear of residential dwellings situated within 'Star House' that fronts onto Grafton Road

4.0 Acoustic Terminology

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

5.0 Methodology

5.1 Procedure

Fully automated environmental noise monitoring was undertaken from approximately 13:00 hours on Thursday 2 July 2020 to approximately 13:00 hours on Tuesday 7 July 2020.

During the periods we were on site the wind conditions were moderate. The sky was generally patchy cloud. We understand that generally throughout the survey period the weather conditions were similar to this with some intermittent rainfall. These conditions are considered suitable for obtaining representative measurement results.

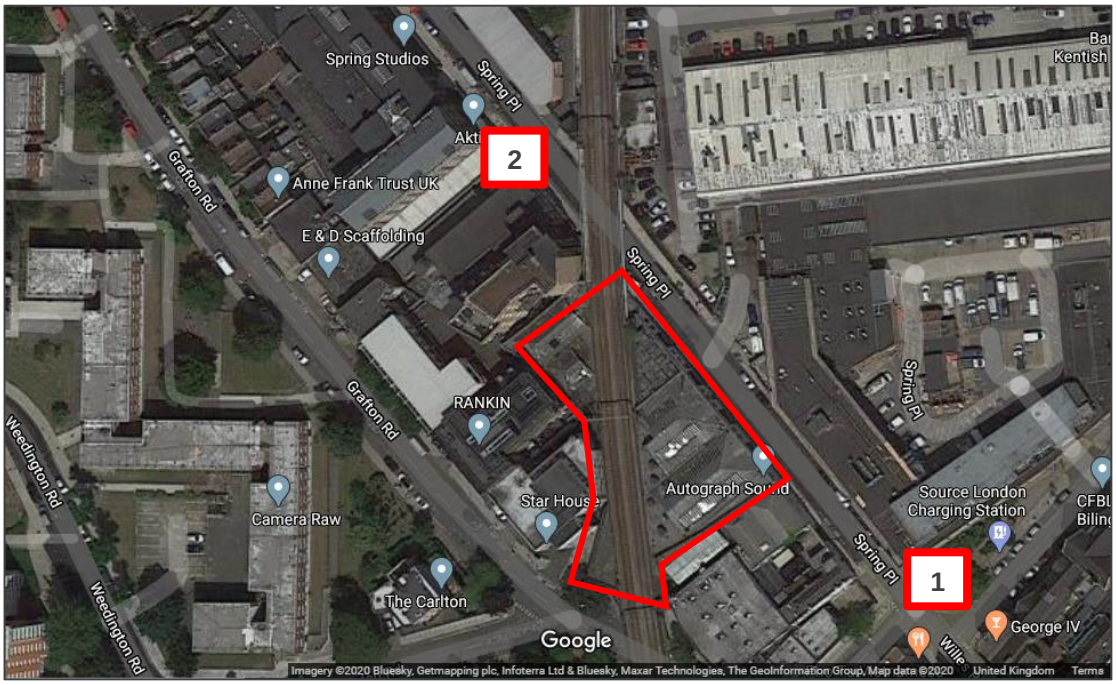
Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq} and L_{max} sound pressure levels over 15 minute periods.

5.2 Measurement Positions

The noise level measurements were undertaken at a 2No. positions at the development site. The measurement position is described in the table below.

Position No	Description
1	The sound level meter was located at street level on the corner of Spring Place and Holmes Road south of the site. The microphone was attached to a pole approximately 2m above ground level and approximately 1m from the façade
2	The sound level meter was located between No7 and No.10 Spring Place. The microphone was attached to a pole approximately 2m above ground level away from any reflecting surfaces

The positions were selected in order to assess the noise levels at the development site for subsequent use and is representative of the nearest noise sensitive residential dwelling. Their approximate positions are shown on the following plan.



Hann Tucker associates has previously undertaken a noise survey around the site in January 2020. To address points raised in London Borough of Camden's Pre-Application letter dated 22 May 2020 (Ref: 2019/6390/PRE) a second noise survey was undertaken around the site.

Position 1 is a repeat of our noise survey undertaken in January 2020. Position 2 takes into account noise levels north of the site representative of residential dwellings at 7 Spring Place. We note due to Covid-19 pandemic, noise levels around the site may be lower than under normal situations. Therefore data from Position 1 was compare with our January 2020 noise survey at the same position with corrections made where applicable.

In addition to the noise survey, a vibration assessment has been undertaken to determine any changes in VDV levels from vehicles associated with the proposed site.

The above methodology has been approved by London Borough of Camden.

5.3 Instrumentation

The instrumentation used during the survey is presented in the table below:

Position	Description	Manufacturer	Type	Serial Number	Calibration
1	Type 1 ½" Condenser Microphone	PCB	377B02	107842	Calibration on 13/09/2019
	Preamp	Larson Davis	PRM902	4199	Calibration on 13/09/2019
	Type 1 Data Logging Sound Level Meter	Larson Davis	824	3541	Calibration on 13/09/2019
2	Type 1 ½" Condenser Microphone	PCB	377B02	107427	Calibration on 09/10/2019
	Preamp	Larson Davis	PRM902	4154	Calibration on 09/10/2019
	Type 1 Data Logging Sound Level Meter	Larson Davis	824	3155	Calibration on 09/10/2019
-	Type 1 Calibrator	Bruel & Kjaer	4231	2610161	Calibration on 19/09/2019

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

The sound level meters were located in environmental cases with the microphones connected to the sound level meters via an extension cables. The microphones were fitted with windshield.

6.0 Results

The results have been plotted on Time History Graphs 27570/TH1.01 and 27570/TH1.02 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.

The lowest $L_{A90\ (15\ min)}$ measurements recorded during the survey are presented in the table below:

Lowest Measured $L_{A90(15min)}$ Background Noise Level (dB re 2 x 10^{-5} Pa)			
Position	**Daytime (07:00 – 23:00) Hours**	**Night-Time (23:00 – 07:00) Hours**	**24 Hours**
1	38 dBA	35 dBA	35 dBA
2	36 dBA	34 dBA	34 dBA

The lowest $L_{Aeq\ (1\ hour)}$ measurements recorded during the survey are presented in the table below:

L_{AeqT} Noise Level (dB re 2 x 10^{-5} Pa)		
Position	**Daytime (07:00 – 23:00) Hours**	**Night-Time (23:00 – 07:00) Hours**
1	50 dBA	45 dBA
2	46 dBA	45 dBA

The daytime $L_{Aeq(16\text{-}hour)}$ and night-time $L_{Aeq(8\text{-}hour)}$ noise levels for each position are presented in the tables below.

L_{AeqT} Noise Level (dB re 2 x 10^{-5} Pa)		
Position	**Daytime (07:00 – 23:00) Hours**	**Night-Time (23:00 – 07:00) Hours**
1	61 dBA	56 dBA
2	61 dBA	57 dBA

7.0 Relevant Planning Policies and Guidance

7.1 Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) was published in March 2010 (i.e. before the NPPF). The NPSE is the overarching statement of noise policy for England and applies to all forms of noise other than occupational noise, setting out the long term vision of Government noise policy which is to:

"Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."

That vision is supported by the following NPSE noise policy aims which are reflected in three of the four aims of planning policies and decisions in paragraph 123 of the NPPF (see paragraph 8.2 (b) below):

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life."*

The Explanatory Note to the NPSE has three concepts for the assessment of noise in this country:

NOEL – No Observed Effect Level
This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

LOAEL – Lowest Observable Adverse Effect Level
This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level
This is the level above which significant adverse effects on health and quality of life occur.

None of these three levels are defined numerically and for the SOAEL the NPSE makes it clear that the noise level is likely to vary depending upon the noise source, the receptor and the time of day/day of the week, etc. The need for more research to investigate what may represent an SOAEL for noise is acknowledged in the NPSE and the NPSE asserts that not stating specific SOAEL levels provides policy flexibility in the period until there is further evidence and guidance.

The NPSE concludes by explaining in a little more detail how the LOAEL and SOAEL relate to the three NPSE noise policy aims listed above. It starts with the aim of avoiding significant adverse effects on health and quality of life, then addresses the situation where the noise impact falls between the LOAEL and the SOAEL when *"all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development."* The final aim envisages pro-active management of noise to improve health and quality of life, again taking into account the guiding

principles of sustainable development which include the need to minimise travel distance between housing and employment uses in an area.

7.2 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) was first published in March 2012. This document replaced the existing Planning Policy Guidance Note 24 (PPG24) "Planning and Noise". A new edition of NPPF was published in July 2018 and revised in February 2019.

Paragraph 170 of the NPPF states that the planning system should contribute to and enhance the natural and local environment by (amongst others) *"preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, water or noise pollution or land stability."*

The following paragraphs are from the NPPF (revised February 2019):

"180. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

182. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed."

Paragraph 180 also references the Noise Policy Statement for England. This document does not refer to specific noise levels but instead sets out three aims:

“Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.”

The NPPF document does not refer to any other documents or British Standards regarding nose other than the NPSE.

Paragraph 2 of the NPPF states that “planning law required that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise.”

Paragraph 12 of the NPPF states that “The presumption in favour of sustainable development does not change the statutory status of the development plan as the starting point for decision making. Where a planning application conflicts with an up-to-date development plan (including any neighbourhood plans that form part of the development plan), permission should not usually be granted. Local planning authorities may take decisions that depart from an up-to-date development plan, but only if material considerations in a particular case indicate that the plan should not be followed.”

7.3 Planning Practice Guidance on Noise

Planning Practice Guidance (PPG) under the NPPF has been published by the Government as a web based resource at http://planningguidance.planningportal.gov.uk/blog/guidance/. This includes specific guidance on Noise although, like the NPPF and NPSE the PPG does not provide any quantitative advice. It seeks to illustrate a range of effect levels in terms of examples of outcomes as set out in the following table:

Perception	Examples of Outcomes	Increasing effect level	Action
Not noticeable	No effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable hard, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

7.4 British Standard (BS) 4142:2014+A1:2019

BS 4142:2014+A1:2019 'Method for Rating industrial noise affecting mixed residential and industrial areas' describes methods for rating and assessing the effects of outdoor sound levels, of an industrial and/or a commercial nature, *"on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident".*

The impact of a specific sound is indicated by subtracting the existing background noise level from the rating level (i.e. noise level from the proposed items of plant/machinery/etc. plus any acoustic feature corrections).

The noise from the new development is expressed in terms of a rating level and given as a $L_{Aeq,T}$ noise level. The existing background noise level is expressed in terms of a $L_{A90,T}$ noise level.

T is the assessment time interval, which is 1-hour for operations during daytime hours (07:00 to 23:00 hours) and 15-minutes for operations during night-time hours (23:00 to 07:00 hours).

A penalty should apply to plant emitting noise of a tonal, irregular or impulsive nature.

The standard states that:

"The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs". An estimation of the impact of the specific noise can be obtained by the difference of the rating noise level and the background noise level and considering the following:

- *"Typically, the greater this difference, the greater the magnitude of the impact."*
- *"A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context."*
- *"A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context."*
- *"The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context."*

7.5 Local Authority Planning Policy

The site comes under the jurisdiction of Camden Borough Council, which outlines its requirements as below in Camden Local Plan 2017: Appendix 3

Appendix 3: Noise thresholds

The significance of noise impact varies dependent on the different noise sources, receptors and times of operation presented for consideration within a planning application. Therefore, Camden's thresholds for noise and vibration evaluate noise impact in terms of various 'effect levels' described in the National Planning Policy Framework and Planning Practice Guidance:

- NOEL – No Observed Effect Level
- LOAEL – Lowest Observed Adverse Effect Level
- SOAEL – Signifcant Observed Adverse Effect Level

Three basic design criteria have been set for proposed developments, these being aimed at guiding applicants as to the degree of detailed consideration needed to be given to noise in any planning application. The design criteria outlined below are defined in the corresponding noise tables. The values will vary depending on the context, type of noise and sensitivity of the receptor:

- Green – where noise is considered to be at an acceptable level.
- Amber – where noise is observed to have an adverse effect level, but which may be considered acceptable when assessed in the context of other merits of the development.
- Red – where noise is observed to have a significant adverse effect.

Vibration

Table A: Vibration levels from uses such as railways, roads, leisure and entertainment premises and/or plant or machinery at which planning permission will not normally be granted.

Vibration description and location of measurement	Period	Time	Vibration Levels (Vibration Dose Values)
Vibration inside critical areas such as a hospital operating theatre	Day, evening and night	00:00-24:00	0.1 VDV ms-1.75
Vibration inside dwellings	Day and evening	07:00-23:00	0.2 to 0.4 VDV ms-1.75
Vibration inside dwellings	Night	23:00-07:00	0.13 VDV ms-1.75
Vibration inside offices	Day, evening and night	00:00-24:00	0.4 VDV ms-1.75
Vibration inside workshops	Day, evening and night	00:00-24:00	0.8 VDV ms-1.75

Proposed Developments likely to be Sensitive to Noise

Special consideration will need to be given to noise sensitive developments that are proposed in areas which are, or expected to become, subject to levels of noise likely to have an adverse effect. The threshold of acceptability of the noise will primarily depend on two factors: the intended use of the noise sensitive development and the source of the noise experienced, or likely to be experienced.

Table B: Noise levels applicable to noise sensitive residential development proposed in areas of existing noise

Dominant Noise Source	Assessment Location	Design Period	LOAEL (Green)	LOAEL to SOAEL (Amber)	SOAEL (Red)
Anonymous noise such as general environmental noise, road traffic and rail traffic ~	Noise at 1 metre from noise sensitive façade/free field	Day	<50dB$L_{Aeq,16hr}$*	50dB to 72dB$L_{Aeq,8hr}$*	>72dB$L_{Aeq,16hr}$*
		Night	<45dB$L_{Aeq,8hr}$* <40 dB$L_{Aeq,8hr}$**	45dB to 62dB$L_{Aeq,8hr}$* >40dBL_{night}**	>62dB$L_{Aeq,8hr}$*
	Inside a bedroom	Day	<35dB$L_{Aeq,16hr}$	35dB to 45dB$L_{Aeq,16hr}$	>45dB$L_{Aeq,16hr}$
		Night	<30dB$L_{Aeq,8hr}$ 42dB$L_{Amax,fast}$	30dB to 40dB$L_{Aeq,16hr}$ 40dB to 73dB$L_{Amax,fast}$	>40dB$L_{Aeq,8hr}$ >73dB$L_{Amax,fast}$
	Outdoor living space (free field)	Day	<50dB$L_{Aeq,16hr}$	50dB to 55dB$L_{Aeq,8hr}$	>55dB$L_{Aeq,16hr}$
Non-anonymous noise	See guidance note on non-anonymous noise				

*LAeq, T values specified for outside a bedroom window are façade levels

**Lnight values specified for outside a bedroom window are free field levels The levels given above are for dwellings, however, levels are use specific and different levels will apply dependent on the use of the premises. The Council will also take into account the likely times of occupation for types of development and will be amended according to the times of operation of the establishment under consideration.

Industrial and Commercial Noise Sources

A relevant standard or guidance document should be referenced when determining values for LOAEL and SOAEL for non-anonymous noise. Where appropriate and within the scope of the document it is expected that British Standard 4142:2014 ‘Methods for rating and assessing industrial and Camden Local Plan | Appendices 347 commercial sound’ (BS 4142) will be used. For such cases a ‘Rating Level’ of 10 dB below background (15dB if tonal components are present) should be considered as the design criterion).

Table C: Noise levels applicable to proposed industrial and commercial developments (including plant and machinery)

Existing Noise sensitive receptor	Assessment Location	Design Period	LOAEL (Green)	LOAEL to SOAEL (Amber)	SOAL (Red)
Dwellings**	Garden used for main amenity (free field) and Outside living or dining or bedroom window (façade)	Day	'Rating level' 10dB* below background	'Rating level' between 9dB below and 5dB above background	'Rating level' greater than 5dB above background
Dwellings**	Outside bedroom window (façade)	Night	'Rating level' 10dB* below background and no events exceeding 57dB L_{Amax}	'Rating level' between 9dB below and 5dB above background or noise events between 57dB and 88dB L_{Amax}	'Rating level' greater than 5dB above background and/or events exceeding 88dB L_{Amax}

*10dB should be increased to 15dB if the noise contains audible tonal elements (day and night). However, if it can be demonstrated that there is no significant difference in the character of the residual background noise and the specific noise from the proposed development then this reduction may not be required. In addition, a frequency analysis (to include, the use of Noise Rating (NR) curves or other criteria curves) for the assessment of tonal or low frequency noise may be required.

**levels given are for dwellings, however, levels are use specific and different levels will apply dependent on the use of the premises.

The periods in Table C correspond to 0700 hours to 2300 hours for the day and 2300 hours to 0700 hours for the night. The Council will take into account the likely times of occupation for types of development and will be amended according to the times of operation of the establishment under consideration.

There are certain smaller pieces of equipment on commercial premises, such as extract ventilation, air conditioning units and condensers, where achievement of the rating levels (ordinarily determined by a BS:4142 assessment) may not afford the necessary protection. In these cases, the Council will generally also require a NR curve specification of NR35 or below, dependant on the room 348 Camden Local Plan | Appendices (based upon measured or predicted $L_{eq,5mins}$ noise levels in octave bands) 1 metre from the façade of affected premises,

where the noise sensitive premise is located in a quiet background area. (based upon measured or predicted $L_{eq,5mins}$ noise levels in octave bands) 1 metre from the façade of affected premises, where the noise sensitive premise is located in a quiet background area.

7.6 Human Response to 'Change in Noise Level'

In 2007, the Institute of Acoustics issued their latest draft version of their 'Draft Guidelines for Noise Impact Assessment'. The document describes a methodology for undertaking a noise impact assessment and a way of rating the significance of an impact based on the change in noise level. The significance can be determined from the Table below, together with the subjective response for an average human.

Noise Level Change (dB)	Subjective Response	Significance
0	No change	No impact
0.1 - 2.9	Barely perceptible	Minor impact
3.0 - 5.9	Noticeable	Moderate impact
6.0 - 9.9	Up to a doubling or halving of loudness	Substantial impact
10.0 or more	More than a doubling or halving of loudness	Major impact

Unless stated, noise impacts are calculated outside the residential properties, although any subjective impacts apply to both internal and external noise levels (it is assumed the difference between the two, due to the sound insulation performance of the external residential façade, is constant).

The noise impact of vehicular movements should be assessed using the time intervals of BS 4142:2014, i.e. 1-hour for daily activities, and 15-minutes for night-time activities.

8.0 Noise Impact Assessment

Our assessment has considered the likely typical noise levels in the area to compensate for the potentially artificially low levels currently caused by the Government measures in response to the coronavirus pandemic. This includes review of our measured levels, review of previous surveys in the vicinity and any nationally available noise map data. This is in accordance with current ANC (Association of Noise Consultants) advice relating to surveys during the COVID-19 societal restrictions.

We have previously undertaken a noise survey at the site in January 2020 at Position 1 (south of the site). The noise levels measured in January 2020 indicate that the Daytime (07:00-23:00) and Night-Time (23:00-07:00) are comparable with current noise levels at Position 1. It is therefore likely that Daytime and Night-Time noise levels at Position 2 (north of the site between 7 Spring Place and 10 Spring Place) are 'normal' noise levels.

However, the Night-time modal background, and lowest Daytime and Night-Time background noise levels are significantly lower than before (between approximately 10dBA and 12 dBA lower). Therefore any noise assessment that requires using background noise levels would need to apply suitable corrections.

8.1 Noise Breakout

We understand majority of operational activities shall be undertaken internally. We understand the external faced is rendered masonry with 4 roller shutter doors. The nearest noise sensitive residential dwellings are flat at 7 Spring Place approximately 25m away from the nearest roller shutter door. We do not have internal noise levels for the proposed loading operations. However Hann Tucker have previously undertaken noise measurements at similar sites whuch has been used in our noise breakout assessment.

We have used the following equation for inside to outside sound reduction to calculate the likely operational noise emissions from the site at the nearest noise sensitive windows.

$L_{p(out)} = L_{p(inside)} – 6 – 8 – R - 20\log_{10}r + 10\log_{10}A$

$L_{p(inside)}$ measured noise level inside the shisha lounge

R sound reduction of glazing (see attached Acoustic Specification for Glazing)

r distance from shisha lounge area to the nearest residential dwelling (metres)

A area of radiating part of building (length x width (m^2))

The following table presents the noise impact assessment based on typical measured noise levels from loading operations and the results of the noise survey. We have assumed roller shutter doors are open.

	Sound Pressure Level (dB 2 x 10^{-5} Pa) @ Octave Band Centre Frequency (Hz)							
	63	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Lp(Inside)	55	54	56	64	62	59	52	56
-6	-6	-6	-6	-6	-6	-6	-6	-6
-8	-8	-8	-8	-8	-8	-8	-8	-8
-R	-33	-40	-43	-47	-54	-54	-54	-54
-20Log10r (25m)	-28	-28	-28	-28	-28	-28	-28	-28
+10Log10A	23	23	23	23	23	23	23	23
Directivity	0	-4	-7	-7	-7	-7	-7	-7
Result	3	-9	-13	-9	-18	-21	-28	-24
Sound Pressure Level at Nearest Residential Window	-10 dBA							

Based on the above table, our calculation indicate the noise breakout to the nearest noise sensitive residential properties is negligible. With reference to Camden's Industrial and Commercial Noise Sources, as activities shall be undertaken internally, it is likely that there would be 'No Observed Effect Level'.

We understand there shall be limited on-street loading. Deliveries and servicing have most recently taken place from the single yellow lines along Spring Place in front of the site. It is evident from the vehicle movements associated with past use at the site that the existing use experienced four daily HGV movements and a number of LGV movements, which indicate the existing servicing arrangement does not have an adverse impact on neighbouring residential dwellings.

As part of the consented development (planning ref: 2016/5181/P) it is noted that an on-street loading bay was proposed on Spring Place adjacent to the site, which was deemed acceptable in principle by the Council. It is therefore considered that loading on-street should not be a material concern to the Council, particularly given past uses at the site.

Notwithstanding this, where possible, on-site loading will take place. For example, LGVs and smaller HGVs (up to 7.5 tonnes) will be accommodated on site. It is proposed that 7.5 tonne

vehicles will reverse into the site from Spring Place, which will be managed by banksmen.

If larger HGVs, (up to 18tonne vehicles) come to the site, then they will utilise the proposed on-street loading bay.

8.2 Noise Impact From Street Loading

We understand that any on-street servicing associated with the development would be controlled and managed. HGVs will typically arrive at the site delivering inward mail/parcels in the morning outside of network peak periods and outside of school times. These vehicles are likely to be typically on-site for 15-20 minutes. The deliveries during this period will be staggered so there is only one vehicle attending the site at a time.

Our assessment has considered the likely typical noise levels in the area to compensate for the potentially artificially low levels currently caused by the Government measures in response to the coronavirus pandemic. This includes review of our measured levels, review of previous surveys in the vicinity and any nationally available noise map data. This is in accordance with current ANC (Association of Noise Consultants) advice relating to surveys during the COVID-19 societal restrictions.

We have previously undertaken a noise survey at the site in January 2020 at Position 1 (south of the site). The lowest Daytime background noise levels was found to have been approximately 10dBA lower. We have therefore used background noise levels from our January 2020 noise survey for our assessment.

The lowest $L_{A90\ (15\ min)}$ measurements recorded during the January 2020 survey are presented in the table below:

Lowest Measured $L_{A90(15min)}$ Background Noise Level (dB re 2 x 10^{-5} Pa)			
Position	**Daytime (07:00 – 23:00) Hours**	**Night-Time (23:00 – 07:00) Hours**	**24 Hours**
1	48 dBA	47 dBA	47 dBA

The nearest noise sensitive residential dwellings are flat at 7 Spring Place approximately 43m away. Whilst we do not have noise levels for the proposed loading operations, Hann Tucker have previously undertaken noise measurements at similar sites. The following table presents the noise impact assessment based on typical measured noise levels from loading operations and the results of the noise survey.

Description	Results
Specific sound level of loading and unloading	$L_{Aeq(T)}$ = 58 dB @ 5m
Acoustic feature correction	+3 dB for intermittent sound
Rating sound level	L_{Aeq} = 61 dB @ 5m
5m to 43m Distance Correction	-19 dB
Resultant rating sound level at nearest receptor	42 dB
Lowest background sound level	$L_{A90(15\ min)}$ = 48 dB
Excess of rating level over background sound level	(42 – 48) dB = -6 dB

With reference to London Borough of Camden Local Plan 2017: Appendix 3, 6dB below the lowest background falls into the 'Amber' category which is perceived as having Lowest Observed Adverse Effect Level (LOAEL). Given the other past industrial use at the site and other industrial uses in the vicinity of the site, including the Veolia site located opposite 3-6 Spring Place, the refurbishment of the building to accommodate flexible industrial (Class B2)/ storage or distribution (Class B8)/ light industrial (Class E) should be considered acceptable when assessed in the context of the area (i.e. mixed use residential and commercial/industrial).

For robustness, the above has been assessed against the lowest daytime background noise level. However, it is likely that background noise levels shall be higher for the majority of the day and thus noise impact at the nearest noise sensitive window would tend toward NOEL.

8.3 Traffic Data

Vectos have provided traffic data. The data has been extracted from the previous application at the site from July 2016 surveys. Whilst authorities normally look to accept traffic data that is 3 years old, given the current Covid-19 situation, we believe this should be acceptable London Borough of Camden.

The following tables presents the traffic data for Spring Place.

Table 1: Two-way Traffic on Spring Place (AM Peak 0800-0900)

Two-Way Traffic on Spring Place				
	Cycle / Motorcycle	Car / LGV	HGV	**Total**
Monday	16	113	13	**142**
Tuesday	4	81	12	**97**
Wednesday	1	61	7	**69**
Thursday	27	97	15	**139**
Friday	13	99	10	**122**
Average	**12**	**90**	**11**	**114**

Table 2: Two-way Traffic on Spring Place (PM Peak 1700-1800)

Two-Way Traffic on Spring Place				
	Cycle / Motorcycle	Car / LGV	HGV	**Total**
Monday	14	95	7	**116**
Tuesday	0	62	10	**72**
Wednesday	2	53	7	**62**
Thursday	29	74	12	**115**
Friday	15	67	7	**89**
Average	**12**	**70**	**9**	**91**

Table 3: Two-way Traffic on Spring Place (Daily 24hrs)

Two-Way Traffic on Spring Place				
	Cycle / Motorcycle	Car / LGV	HGV	**Total**
Monday	182	1460	186	**1828**
Tuesday	62	1276	167	**1505**
Wednesday	8	812	147	**967**
Thursday	249	1285	192	**1726**
Friday	176	1342	187	**1705**
Average	**135**	**1235**	**176**	**1546**

Vectos have also provided Hann Tucker with DfT traffic count data taken on Camden Road, near Camden Road Overground Station on 2013 and 2018. Vectos believe that although this traffic counter is located some distance from the site, it is useful in demonstrating that traffic is not significantly increasing in the area. The data demonstrates that there are only an additional 86 motor vehicles recorded on the network. This supports the use of 2016 data as it suggest traffic will not be materially higher on the network.

The following tables presented in Vectos traffic report, presents the past traffic flow when the site was occupied by Addison Lee, and the predicted traffic flow from the proposed site.

Table 5.10: Summary of Trip Generation

Trip Type	Daily		
	In	Out	Total
Past Use – Addison Lee			
Cars	156	158	314
LGVs	21	19	40
HGVs	6	6	12
Total	**183**	**183**	**366**
TRICS - Class B2/ Class E (light industrial)			
Cars	17	17	34
LGVs	17	17	34
HGVs	9	9	18
Total	**43**	**43**	**86**
B8 Last Mile Depot			
Cars	7	7	14
LGVs	34	34	69
HGVs	5	5	10
Total	**47**	**47**	**92**

Table 5.11: Comparison of Past Use trips against Class B2/Class E (light industrial)

Trip Type	In	Out	Total
Cars	-140	-141	-281
LGVs	-5	-2	-7
HGVs	3	3	6
Total	**-141**	**-141**	**-282**

Table 5.12: Comparison of Past Use trips against B8 Last Mile Use Class

Trip Type	In	Out	Total
Cars	-149	-151	-300
LGVs	13	15	28
HGVs	-1	-1	-2
Total	**-136**	**-136**	**-272**

8.4 Traffic Noise Assessment

The Site is located on the south west side of Spring Place, to the south of Kentish Town Business Park and to the north of Talacre Gardens. The Site is bound to the north by residential flats up to seven storeys in height at number 7 Spring Place, with the Veolia Depot to the east. Autograph Sound Ltd (Visual Audio Equipment Hire) neighbour the Site the south who appear to extend around the corner of Spring Place onto Holmes Road. Bordering the Site to the west are the rear of residential dwellings situated within ‘Star House’ that fronts onto Grafton Road

In order to inform our assessment of noise generated by vehicle movements, we have considered historical noise levels measured from similar delivery vehicle movements

undertaken by Hann Tucker at similar industrial sites. These are considered to be representative of 'worst-case' noise levels.

As all operational activities are taking place internally, for our assessment we only need to consider vehicle pass-by. Noise levels measured for commercial vehicle pass-by is detailed below. Commercial vehicles include HGV and LGV which are similar noise levels.

Event	Duration (seconds)	Specific Sound Level (dB) at 5m*	Sound Exposure Level (SEL dB) at 5m
Commercial HGV and LGV Vehicle Pass-By	5	73 dB	80 dB
Small Cars and Small Vans Vehicle Pass-By	5	70 dB	77 dB

*Corrected for prevailing background noise levels at time of measurement

A calculation of future traffic noise has been undertaken based on the results of the noise survey, current traffic flow and future traffic flow over a typical 24 hours for the three proposed uses.

		Predicted No of Vehicles		Total Traffic Flow		Noise Increase (dB)	
Type of Vehicle	Existing Traffic Flow	E/B2 Use	B8 Last Mile Use	E/B2 Use	Use B8 Last Mile Use	E/B2 Use	Use B8 Last Mile Use
Car/LGV	1235	66	84	1301	1319	0.2 dB	0.3 dB
HGV	176	12	23	188	199	0.3 dB	0.5 dB
Total	1411	78	107	1489	1518	0.2 dB	0.3 dB

Based on the above, our assessment indicates that there would be 'No Observed Effect Level' from the increase traffic flow for any of the above proposed uses.

9.0 Vibration

Hann Tucker associated undertook a vibration survey at the site to measure typical vibration levels from vehicle pass-bys. Using the predicted traffic flow data, we have calculated any increase to the Vibration Dose Value (VDV $ms^{-1.75}$).

		Predicted No of Vehicles		Total Traffic Flow		VDV Increase ($ms^{-1.75}$)	
Type of Vehicle	Existing Traffic Flow	E/B2 Use	B8 Last Mile Use	E/B2 Use	Use B8 Last Mile Use	E/B2 Use	Use B8 Last Mile Use
Car/LGV	1235	66	84	1301	1319	0.0008	0.0010
HGV	176	12	23	188	199	0.0006	0.0012
Total	1411	78	107	1489	1518	0.0009	0.0012

Based on the above, our assessment indicates that there would be no adverse impact from the increase vibration from traffic flow for any of the above proposed uses. We note there is an overground train nearby. It is more likely that vibration from the train line would be observed than any increase to traffic flow.

10.0 Conclusions

An environmental noise survey has been undertaken in order to establish the currently prevailing noise levels.

A noise and vibration impact assessment has been undertaken from the proposed Use Class E/B2 and B8 with 24/7 operation at 3-6 Spring Place on the nearby residential dwellings. For robustness the assessment considers the proposed use and is not compared with previous the previous Class B2 use.

We understand majority of operational activities shall be undertaken internally. Therefore noise breakout to the nearest noise sensitive residential properties is negligible. With reference to Camden's Industrial and Commercial Noise Sources, as activities shall be undertaken internally, it is likely that there would be 'No Observed Effect Level'.

With reference to BS4142:2014+A1:2019, where there is some limited on-street loading in the mornings. Our assessment indicates noise from these activities to be 6dBA below the lowest measured background. With reference to London Borough of Camden's requirements, this is perceived as having Lowest Observed Adverse Effect Level (LOAEL). For robustness, the above has been assessed against the lowest daytime background noise level. However, it is

likely that background noise levels shall be higher for the majority of the day and thus noise impact at the nearest noise sensitive window would tend toward 'No Observed Effect Level' NOEL.

A calculation of traffic noise has been undertaken based current traffic flow and future traffic flow for the three proposed uses. Based on the predicted traffic flow, our assessment indicates that there would be an increase of between 0.2dBA and 0.5dBA. With reference to London Borough of Camden's requirements, this is perceived as having 'No Observed Effect Level' for any of the above proposed uses.

Hann Tucker associated undertook a vibration assessment at the site from vehicle pass-bys. Using the predicted traffic flow data, we have calculated any increase to the Vibration Dose Value (VDV $ms^{-1.75}$). Based on the predicted traffic flow, our assessment indicates that there would be an increase of between 0.0006 VDV $ms^{-1.75}$ and 0.0012 VDV $ms^{-1.75}$. This indicates that there would be no adverse impact from the increase vibration from traffic flow for any of the above proposed uses. We note there is an overground train nearby. It is more likely that vibration from the train line would be observed than any increase to traffic flow.

Given the other past industrial use at the site and other industrial uses in the vicinity of the site, including the Veolia site located opposite 3-6 Spring Place, the refurbishment of the building to accommodate flexible industrial (Class E/B2)/ storage or distribution (Class B8)/ light industrial (Class E) should be considered acceptable when assessed in the context of the area (mixed use residential and commercial/industrial).

Appendix A

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).

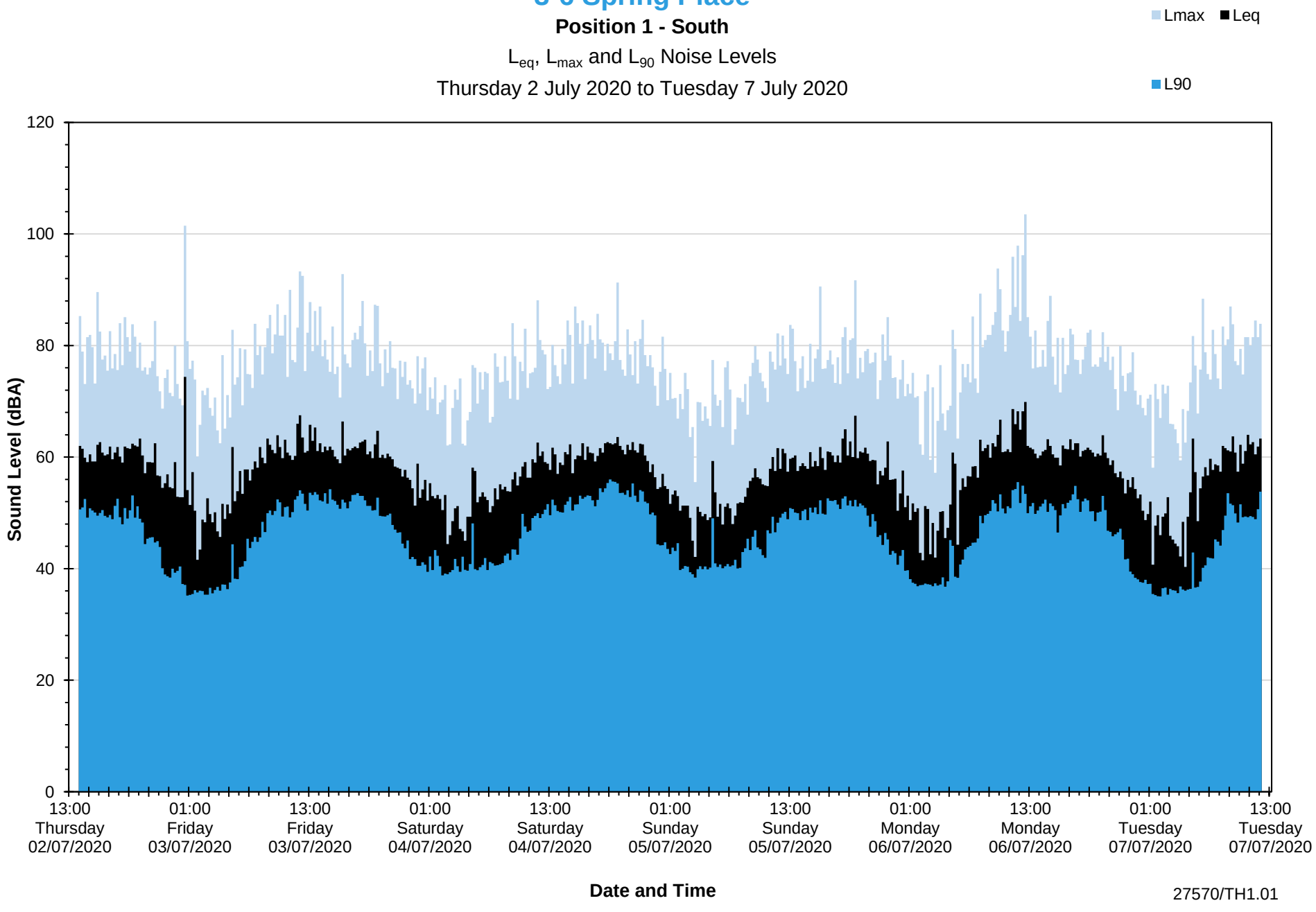
L_w — Sound Power Level (SWL) is the total amount of sound energy inherent in a particular sound source, independent of its environment. It is a logarithmic measure of the sound power in comparison to a specified reference level (usually 10^{-12} W).

3-6 Spring Place

Position 1 - South

L_{eq}, L_{max} and L_{90} Noise Levels

Thursday 2 July 2020 to Tuesday 7 July 2020



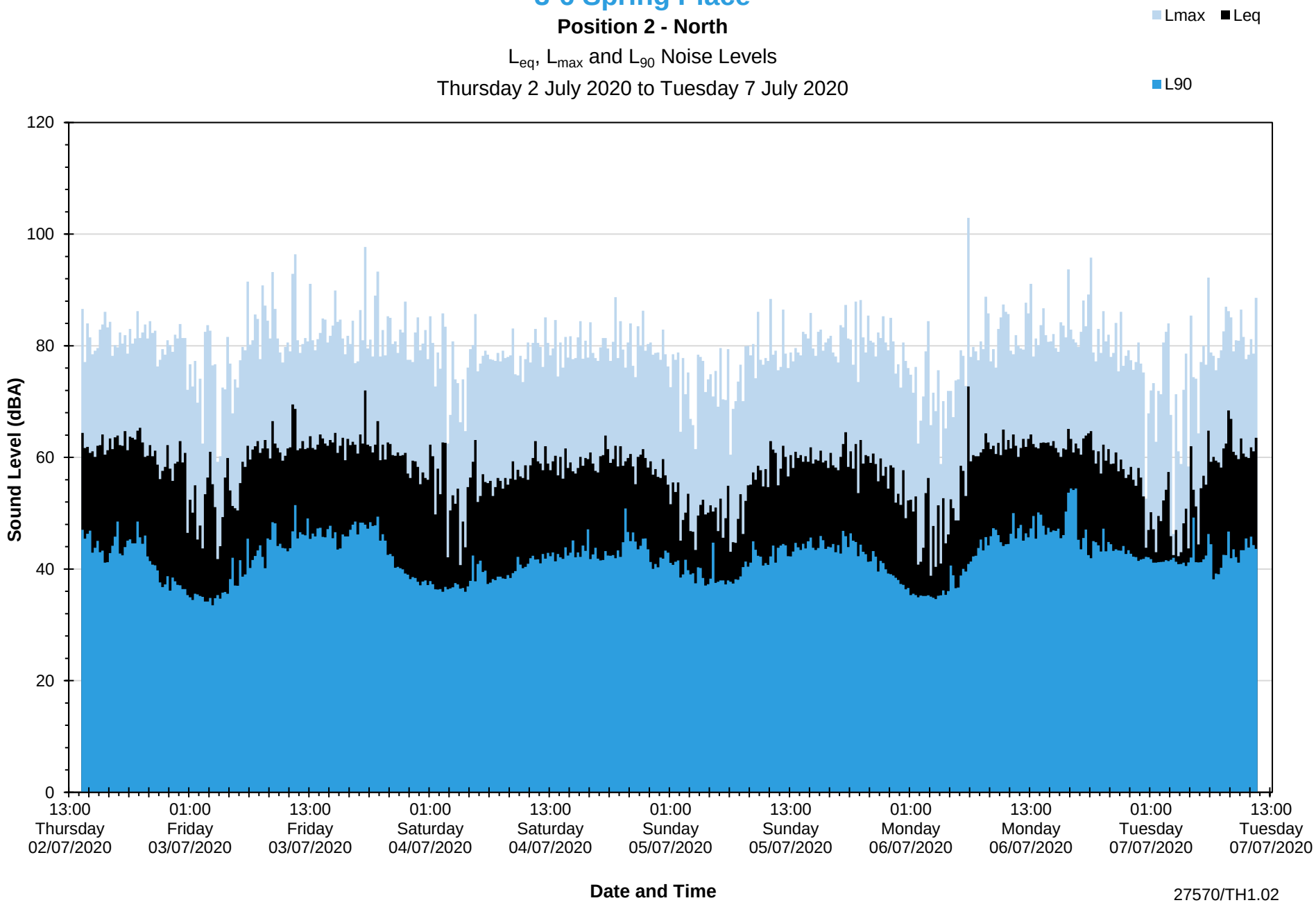
27570/TH1.01

3-6 Spring Place

Position 2 - North

L_{eq}, L_{max} and L_{90} Noise Levels

Thursday 2 July 2020 to Tuesday 7 July 2020



27570/TH1.02