RBA ACOUSTICS

9 PARKWAY

Environmental Noise Survey

Reference: 12386.RP01.PNA.0
Prepared: 22 March 2023
Revision Number: 0

Groupwork
15a Clerkenwell Close
London
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Environmental Noise Survey

9 PARKWAY

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Revision	Comment	Date	Prepared By	Approved By
0	First issue of report	22 March 2023	Rubén Vazquez Amos	Torben Andersen

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The recommendations within this report relate to acoustics performance only and will need to be integrated within the overall design by the lead designer to incorporate all other design disciplines such as fire, structural integrity, setting-out, etc. Similarly, any sketches appended to this report illustrate acoustic principles only and will need to be developed into full working drawings by the lead designer to incorporate all other design disciplines.

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Contents

1. INTRODUCTION

It is proposed to locate new items of plant at 9 Parkway, Camden NW1 7PG. As part of the planning application for proposed apartment hotel (15 service apartment units), Camden Council requires consideration be given to atmospheric noise emissions from the proposed equipment to the nearest noise-sensitive receptors.

RBA Acoustics have been commissioned to undertake measurements of the prevailing noise conditions at the site and to determine the atmospheric noise emission limits in accordance with Camden Council's requirements. This report presents the results of the noise measurements and determination of the associated criteria.

At this stage, no specific details regarding the proposed plant is available and hence no assessment of the required attenuation can be made. As a result, the purpose of this report is to determine the prevailing noise climate and hence the corresponding noise limits to be achieved by future plant items. A subsequent detailed assessment of the specific plant selections (including specification of attenuation requirements) will be undertaken in due course.

A summary of acoustic terminology is included in Appendix A.

2. SITE DESCRIPTION

The site is shown in relation to its surroundings in the site plan in Figure 1 (Appendix C).

The development is located at 9 Parkway, Camden. The area is mixed-use, typically with commercial units at ground level and residential properties above. 11-13 Parkway, to the West, will be the closest residential neighbours. The proposed location of the plant is on a garden roof at the rear of the building, proximate to the rear of buildings on Camden High street (East) and Arlington road (West).

3. ENVIRONMENTAL NOISE SURVEY

3.1 Survey Methodology

Monitoring of the prevailing background noise was undertaken over the following 4 day period:

17:00 Friday 10th March to 11:45 Tuesday 14th March 2023.

As the survey was unattended it is not possible to comment with certainty regarding meteorological conditions throughout the entire survey period. However, based on observations during the site visits and weather reports for the area, conditions were generally considered suitable for obtaining representative noise measurements, being predominantly dry with little wind.

Measurements were made of the L_{A90}, L_{Amax} and L_{Aeq} noise levels over sample periods of 15 minutes.

3.2 Measurement Location

To determine the existing noise climate around the site measurements were undertaken at the following location:

Measurement Position – 2nd Floor window Position was situated on the southern building elevation. Microphone was placed on an A-frame, protruding from the window 1m away from the façade. This measurement position was considered as being representative of the noise climate as experienced at the closest residential receptors to the proposed plant to the rear of the building.

The measurement position is also illustrated on the site plan attached in Figure 2 (Appendix E).

3.3 Instrumentation

For information regarding the equipment used for the measurements please refer to Appendix B.

The sound level meter(s) were/was calibrated both prior to and on completion of the survey with no significant calibration drift(s) observed.

3.4 Results

The noise levels measured are shown as time-histories on the attached Graphs 1-2 (Appendix E).

The lowest L_{A90} and the period averaged L_{Aeq} noise levels measured are summarised in Table 1.

Table 1 – Measured Levels

Measurement Period	Position 1 – Name	
	Lowest $L_{A90,15min}$ (dB)	L_{Aeq} (dB)
Daytime (07:00 – 23:00)	52	56
Night-time (23:00 – 07:00)	52	55

Measurements were taken over a weekend period in order to obtain a representative ambient noise profile, as it understood that building works are still ongoing at the site. The lowest $L_{A90,15min}$ was used as the basis for the calculation of the plant noise criteria.

4. PLANT NOISE CRITERIA

The requirements of the London Borough of Camden Environmental Health Department regarding new building services plant are outlined in the 2017 Camden Local Plan as summarised below.

Policy A1 states:

> *Where uses sensitive to noise are proposed close to an existing source of noise or when development that is likely to generate noise is proposed, the Council will require an acoustic report to accompany the application.*

Policy A4 states:

> *Development should have regard to Camden's Noise and Vibration Thresholds (Appendix 3). We will not grant planning permission for:*
>
> *a. development likely to generate unacceptable noise and vibration impacts; or*
> *b. development sensitive to noise in locations which experience high levels of noise, unless appropriate attenuation measures can be provided and will not harm the continued operation of existing uses.*
>
> *We will only grant permission for noise generating development, including any plant and machinery, if it can be operated without causing harm to amenity. We will also seek to minimise the impact on local amenity from deliveries and from the demolition and construction phases of development.*

Appendix 3 of the plan outlines the appropriate assessment methods as follows:

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 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 of Appendix 3 is reproduced below:

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 57dBL_{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 88dBL_{Amax}

5. PLANT NOISE LIMITS

In line with the above requirements we would propose items of mechanical services be designed so that noise emissions from the plant do not exceed the following LOAEL levels when assessed at the nearest noise sensitive location:

- Daytime 42 dB
- Night-time 42 dB

6. FUTURE ANALYSIS

To undertake a full plant noise assessment, we would require the following information:

- The location of the nearest noise sensitive premises to the proposed locations of the plant and the distance from the plant location to the nearest noise sensitive window.
- The proposed operational hours of the plant, plant type, number of plant and location of plant.
- Manufacturer's specifications of plant and/or proposed noise levels of internal activity in octave or 1/3 octave band format.

At the time of writing, details regarding the specific plant items, their proposed locations, noise levels and operating hours required for mechanically servicing the property are not available, as plant details are yet to be confirmed. Therefore predictions are currently unable to be undertaken to satisfy the above requirements.

However, noise emissions can be controlled by the requirement to achieve the plant noise emission criteria detailed in Section 4.0 being stated as part of the planning conditions for the development. Methods for appropriately controlling plant noise emissions may include acoustic screens, attenuators, anti-vibration mounts and enclosures.

A full report detailing plant selections and predicted noise levels will be prepared once such details are available.

7. CONCLUSION

Measurements of the existing background noise levels at 9 Parkway have been undertaken. The results of the measurements have been used in order to determine atmospheric noise emission limits for building services plant at the premises in accordance with the requirements of Camden Council.

At this stage, no information is available regarding the proposed plant installation. A detailed assessment will be carried out once full details are available.

Appendix A – Acoustic Terminology

A-weighting (e.g. dB(A))	A correction applied across the frequency bands to take into account the response of the human ear, and therefore considered to be more representative of the sound levels people hear.
DeciBel (dB)	Unit used for many different acoustic parameters. It is the logarithmic ratio of the level being assessed to a standard reference level.
L_{eq}	The level of a notional steady sound which, over a stated period of time, *T*, would have the same acoustic energy as the fluctuating noise measured over that period. Typically used to represent the average or ambient noise level.
$L_{Aeq,T}$	The A-weighted level of a notional steady sound which, over a stated period of time, *T*, would have the same acoustic energy as the fluctuating noise measured over that period. Typically used to represent the average or ambient noise level.
L_{An} (e.g. L_{A10}, L_{A90})	The sound level exceeded for n% of the time. E.g. L_{A10} is the A-weighted level exceeded for 10% of the time and as such can be used to represent a typical maximum level. Similarly, L_{A90} is the level exceeded for 90% of the measurement period, and is often used to describe the underlying background noise.
$L_{Amax,T}$	The instantaneous maximum A-weighted sound pressure level which occurred during the measurement period, *T*. It is commonly used to measure the effect of very short duration bursts of noise, e.g. sudden bangs, shouts, car horns, emergency sirens etc. which audibly stand out from the ambient level.
NR	Noise Rating – A single figure term to describe a measured noise level which considers the frequency content of the noise, generally used for internal noise level measurements (particularly mechanical services plant).

Appendix B – Instrumentation

The following equipment was used for the measurements.

Table B1– Equipment Calibration Details

Manufacturer	Model Type	Serial No.	Calibration	
			Certificate No.	Valid Until
Norsonic Type 1 Sound Level Meter	Nor140	1403127	U43500	28 February 2025
Norsonic Pre Amplifier1	1209A	12071		
Norsonic ½“ Microphone	1225	41473	43499	28 February 2025
Norsonic Sound Calibrator	1251	31986	U43498	28 February 2025

Appendix C – Graphs and Site Plans

9 Parkway

L_{Aeq} Time History

2nd floor window A frame

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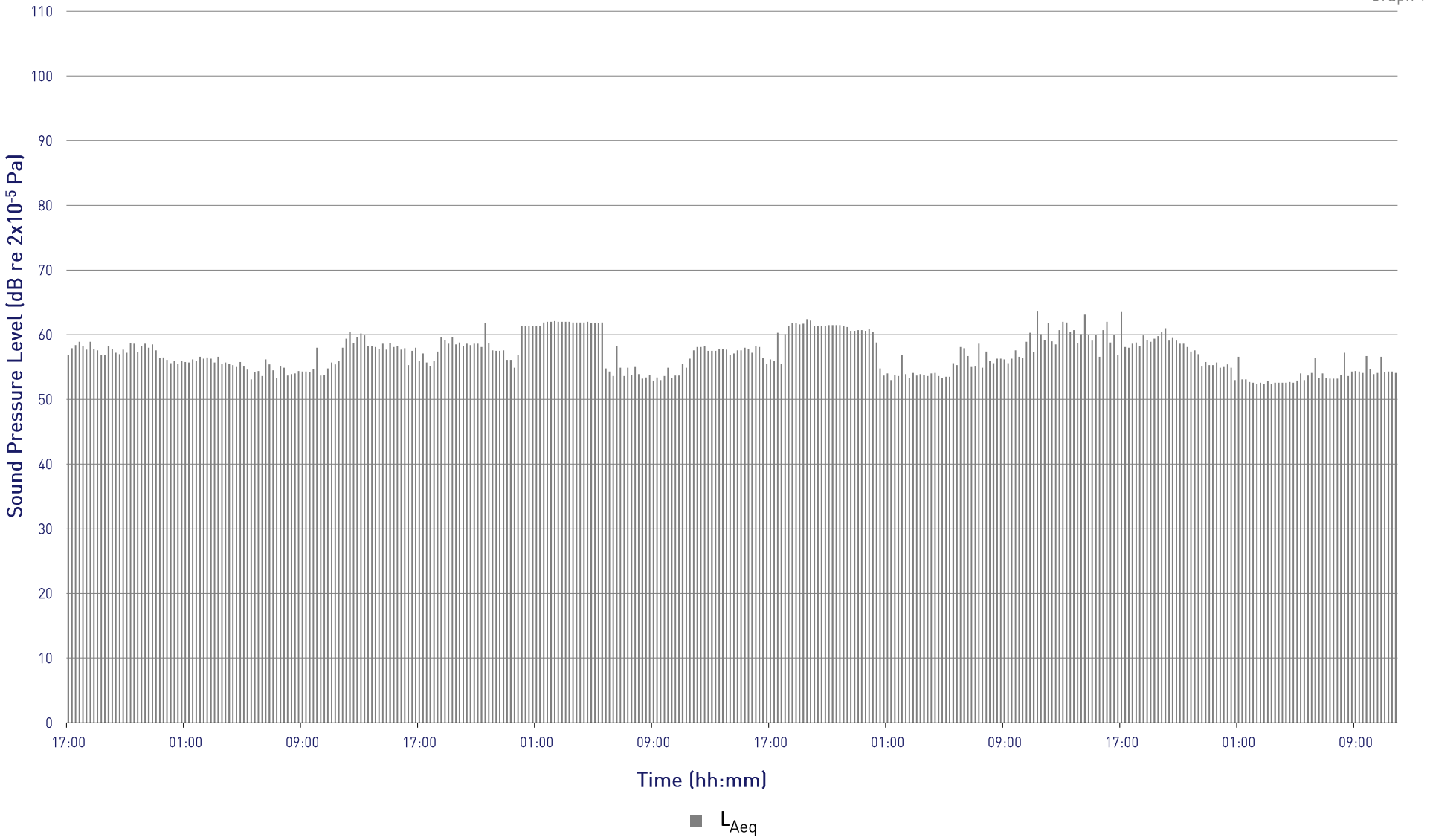
Graph 1



9 Parkway

$L_{Amax,f}$ and L_{A90} Time History

2nd floor window A frame

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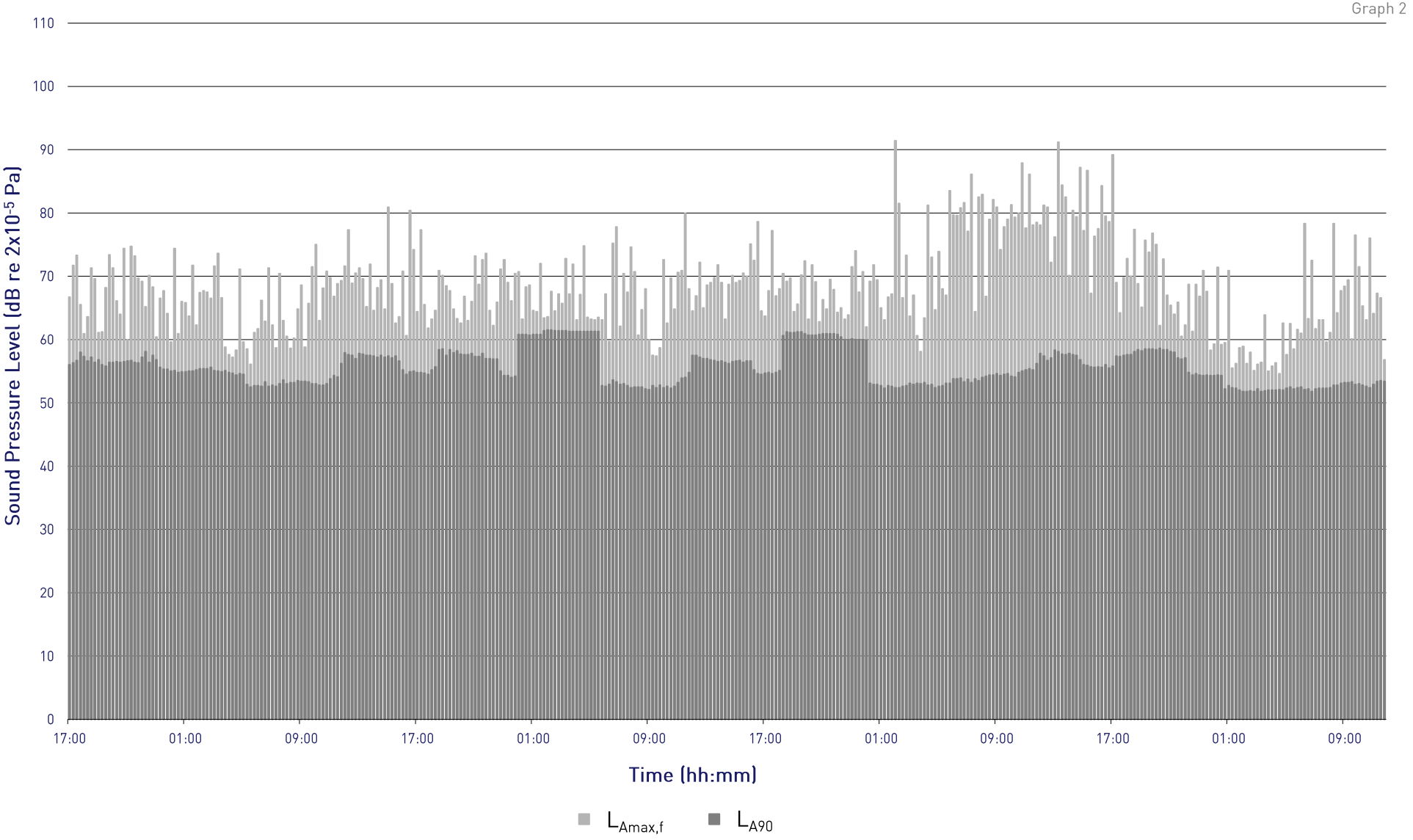
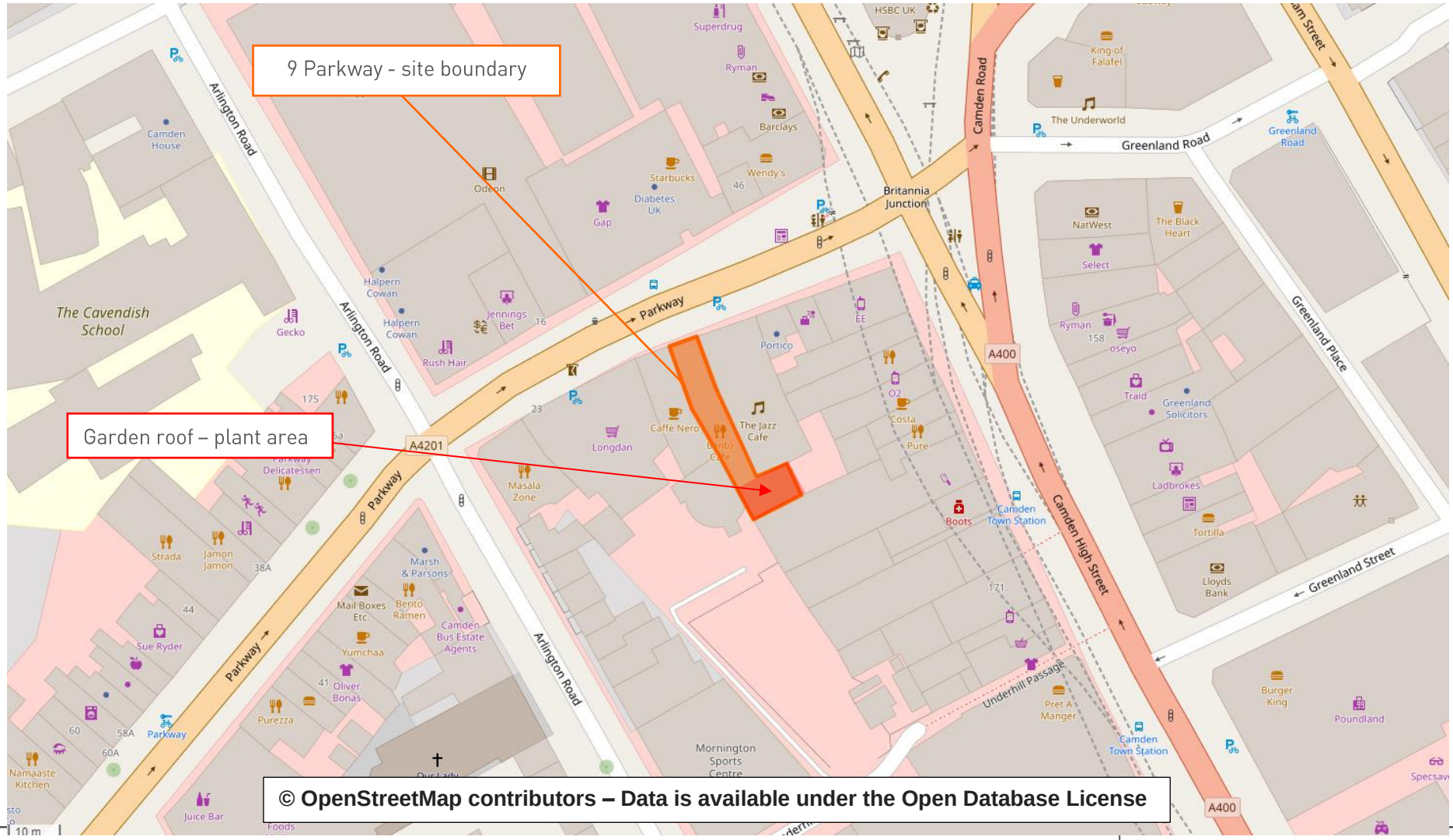
Graph 2





9 Parkway

Site in relation to surroundings

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Figure 1

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Not to Scale

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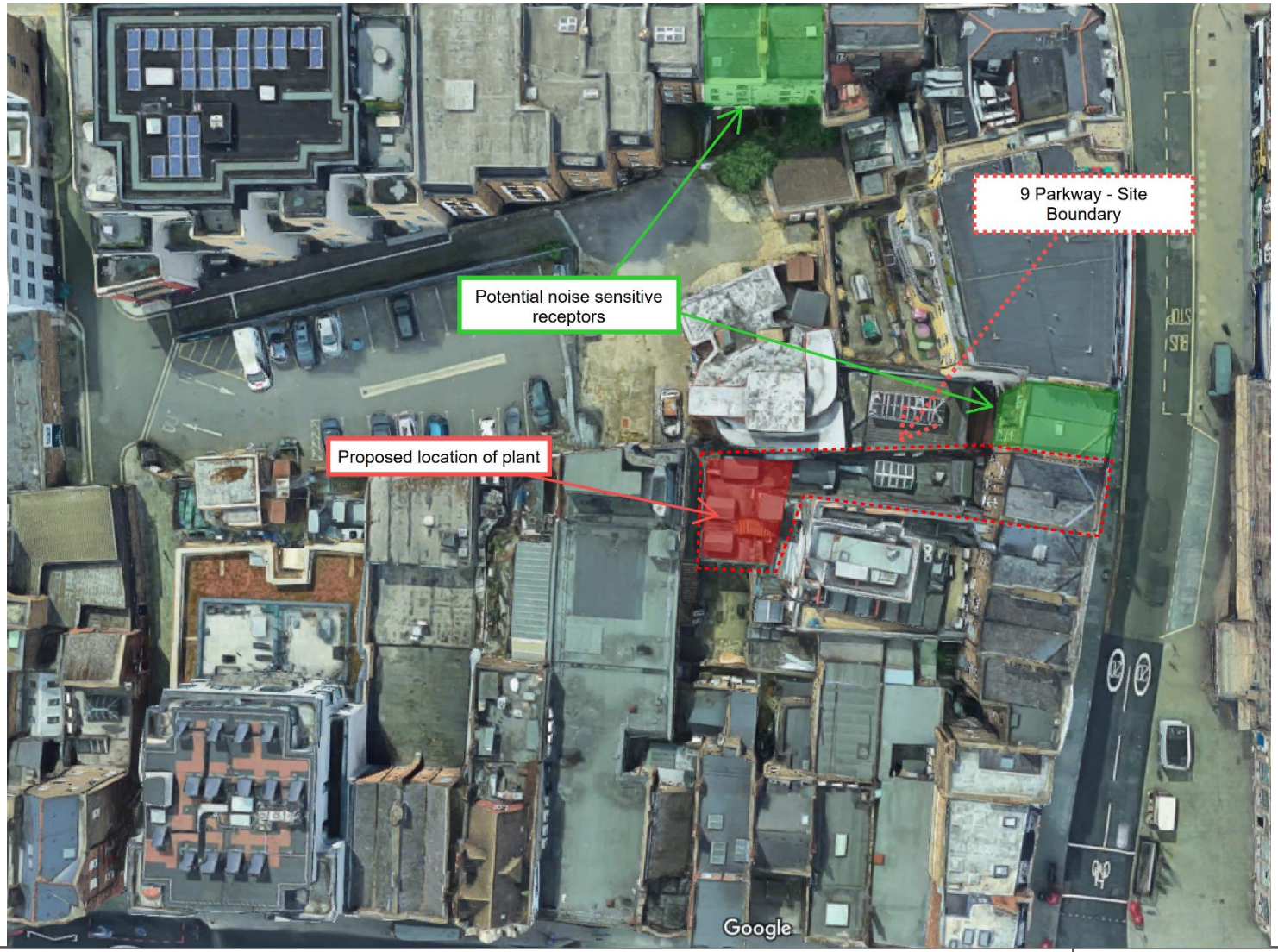

9 Parkway

Site Plan

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Figure 2

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Not to Scale

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