



WATERSIDE HOUSE,
UXBRIDGE

Noise Impact Assessment

Reference: 14457.RP02.NIA.0

Prepared: 27 May 2025

Revision Number: 0

Elmwin Gate Ltd

Unit 9

Ravensdale Industrial Estate

Timberwharf Road

London

N16 6DB

Noise Impact Assessment



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Revision	Comment	Date	Prepared By	Approved By
0	First issue of report	27 May 2025	Martin Raisborough	Torben Andersen

Terms of contract:

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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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1.0 INTRODUCTION

RBA Acoustics has been appointed to provide a noise impact assessment for the proposed two storey vertical extension to the existing building to provide residential accommodation (Use Class C3). The existing office accommodation will remain across ground to 2nd floor levels.

The provision of an addition two stories is permitted under Schedule 2, Part 20 Class AA of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) ('the GPDO') without the need for a full planning application process. Notwithstanding this, the Applicant needs to consider the "impacts of noise from commercial premises on the intended occupiers of the development".

This report seeks to provide a review and assessment of the impacts of noise from commercial premises in the vicinity of the site as well as general commentary on other noise sources and likely internal noise levels.

This report occasionally employs technical acoustic terminology. In order to assist the reader, a brief description of the acoustic parameters used in this report is included within Appendix A.

2.0 SITE DESCRIPTION

Waterside House is an existing ground plus three storey office building located along the eastern outskirts of the town of Uxbridge, London Borough of Hillingdon. The building is located on a parcel of land within a predominately commercial area that lies between the Grand Union Canal (to the east) and the River Colne (to the west).

Beyond the Grand Union Canal to the east of the parcel of land are a number of commercial properties, including Prospect House (a 5 storey office building), Regus House (a 3 storey office building) and a sound stage known as ARRI Stage London which is approximately 100 metres south east of the application site.

The immediate east of the application site is a two storey multi-storey car park, to the north of which lies Papermill House, a 5 storey residential building, with associated grade level parking to the south of the buildings. The A4020, Uxbridge Road, passes approximately 90 metres to the north of the site. To the south of the site is Riverview House, a commercial office building identical in form and height to Waterside House

To the immediate west of the site is greenfield land, with the River Colne approximately 20 metres distant. Beyond the river is another parcel of greenfield land with One Oxford Road passing beyond, approximately 50 metres from the site. To the west of One Oxford Road is a site with a number of light industrial units and storage areas. The uses of this site are relatively varied and mixed. This site is considered to have the most potential to adversely impact the application site from a noise perspective.

The location of the site is shown in the plan in Figure A of Appendix B.

3.0 APPLICABLE STANDARDS

3.1 Town and Country Planning (General Permitted Development) (England) Order 2015 (As Amended)

Development) (England) Order 2015 (GPDO) is a statutory instrument, applying in England, that grants planning permission for certain types of development (such development is then referred to as permitted development). Schedule 2 of the GPDO 2015 specifies the classes of development for which prior approval is granted, and specifies the exceptions, limitations, and conditions that apply to some of these classes.

The GPDO 2015 did not require any consideration or assessment of environmental noise impacts on the future residential occupants of commercial office developments.

The 2021 Amendment to this Order, however, came into force on 1st August 2021 and placed an additional requirement allowing the local planning authority to consider noise impacts on the intended occupants of the development from nearby premises in commercial use, as reproduced below:

Conditions

AA.2.—(1) Where any development under Class AA is proposed, development is permitted subject to the condition that before beginning the development, the developer must apply to the local planning authority for prior approval of the authority as to—

- (a) transport and highways impacts of the development;*
- (b) air traffic and defence asset impacts of the development;*
- (c) contamination risks in relation to the building;*
- (d) flooding risks in relation to the building;*
- (e) the external appearance of the building, including—*
 - (i) the design and architectural features of—*
 - (aa) the principal elevation; and*
 - (bb) any side elevation that fronts a highway; and*
 - (ii) the impact of any works under sub-paragraph (1)(c) or (d) of Class AA;*
- (f) the provision of adequate natural light in all habitable rooms of the new dwellinghouses;*
- (g) impact on the amenity of the existing building and neighbouring premises including overlooking, privacy and the loss of light;*
- (h) impacts of noise from any commercial premises on the intended occupiers of the new dwellinghouses;***
 - (i) impacts of the introduction of, or an increase in, a residential use of premises in the area on the carrying on of any trade, business or other use of land in the area;*
 - (j) whether, because of the siting of the building, the development will impact on a protected view identified in the Directions Relating to Protected Vistas dated 15th March 2012 issued by the Secretary of State, F2...*
 - (k) where the existing building is 18 metres or more in height, the fire safety of the external wall construction of the existing building, and*
 - (l) where the development meets the fire risk condition (see paragraph C(3) of this Part), the fire safety impacts on the intended occupants of the building]*

The condition relative to this assessment has been highlighted in the above.

Given the above, the purpose of this report is to address the requirements of the 2021 amendment to the Town and Country Planning (General Permitted Development) (England) Order 2015 in relation to the likely impacts of commercial noise upon the future residential occupants of the building.

Noise from general environmental sources (e.g. transportation noise) does not require consideration or assessment for this application.

3.2 British Standard 8233:2014

BS 8233:2014 *Guidance on Sound insulation and noise reduction for buildings* draws on the results of research and experience to provide information on achieving internal acoustic environments appropriate to their functions.

The noise level values given are in terms of an average (L_{Aeq}) level.

The standard advises internal ambient noise levels for achieving suitable resting and sleeping conditions within residential properties as set out in Table 1. A brief explanation of the acoustic terminology used in this report is shown in Appendix A attached.

Table 1– BS 8233:2014 Residential Criteria

Room	Time Period	
	07:00 to 23:00	23:00 to 07:00
Living Rooms	35 dB $L_{Aeq,16hour}$	--
Dining Room/area	40 dB $L_{Aeq,16hour}$	--
Bedrooms	35dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

With regards to individual noise events, BS 8233 states that:

‘A guideline value may be set in terms of SEL or $L_{Amax,fast}$, depending on the character and number of events per night. Sporadic noise events could require separate values.’

The superseded version of the standard (1999 version) suggested a night time level of 45dB $L_{Amax, fast}$ which should not ‘normally’ be exceeded, which concurs with current World Health Organisation guidelines. As such, this level will be considered in the subsequent assessments of noise impact during the night for the typically highest occurring $L_{Amax, fast}$ noise events.

It is recognised within the standard that where development is desirable ‘these criteria may be relaxed by up to 5dB and reasonable internal conditions still achieved’.

With respect to external amenity space such as gardens and patios, it is stated that it is desirable that the noise level does not exceed 50 dB $L_{Aeq,16h}$, with an upper guideline value of 55 dB $L_{Aeq,16h}$, which would be acceptable in noisier environments. It is then confirmed that higher external noise criteria may be appropriate under certain circumstances, such as within city centres, urban areas, and locations adjoining the strategic transportation network, where it may be necessary to compromise between elevated noise levels and other factors such as convenience of living, and efficient use of land resource.

4.0 REVIEW OF COMMERCIAL SOUND SOURCES

In order to review the nature and impact of any commercial sound sources affecting the application site, a site walkover was undertaken on Thursday 8th May 2025 by Robert Gurney of RBA Acoustics. Over the period of the walkover the dominant source of sound was noted to be typical ambience, with distant traffic noise the predominant source of sound across the site.

There was not noted to be any significant noise from the office and commercial uses to the east of the site and no noise from the ARRI Stage London was noted to be audible throughout the site walkover on the application site. No noise from mechanical services from these buildings was audible at the application site.

The light industrial units and storage areas to the west of One Oxford Road was considered to have the most potential to adversely impact on the future residential use of the application site from a noise perspective. While there was minimum activity witnessed on the site during our site visit, it was considered that there was potential for noise from this site to impact on the application site at other times.

Based on the above, an environmental noise survey was undertaken at the western elevation of the Waterside House building over a 24 hours period to understand the levels of noise expected to the site boundary. Monitoring of the prevailing noise levels was undertaken between Thursday 8th and Friday 9th May 2025. Measurements commenced at approximately 12:30 on Thursday 8th and concluded at around 12:30 on Friday 9th. The equipment was installed and collected by Robert Gurney of RBA Acoustics.

4.1 Measurement Location

In order to determine the impact of environmental noise along the western elevation of the building, the equipment was installed at the boundary of the building, overlooking the light industrial units and storage areas to the west of One Oxford Road.

The sound level meter was installed at 2nd floor level of the building, which has been stripped back to its concrete frame, with the connecting microphone mounted on an extension pole such that it was approximately 8 metres above the ground. The microphone was in free field conditions. The prevailing noise climate at this location was considered representative of the background noise climate at the rear windows of nearest noise sensitive receptors Station Road

Continuous measurements of the L_{A90} , L_{Amax} and L_{Aeq} noise levels were made over sample periods of 15 minutes duration throughout the survey period.

The measurement location is illustrated on the site plan in site plan in Figure A.

4.2 Instrumentation

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

The sound level meter was calibrated both prior to and on completion of the survey with no calibration drifts observed. The sound level meter and field calibrator have been laboratory calibrated within the last 2 years, while the field calibrator has undergone an additional in-house calibration check within the past year.

4.3 Weather Conditions

Weather conditions throughout the survey were considered to be conducive to the measurement of environmental sound. Wind speeds measured during the beginning of the survey were measured to be an average of 4m/s with a temperature of 16 degrees. At the end of the survey, the wind speed was measured to be an average of 5m/s with a temperature of 20 degrees.

As the survey was unattended, detailed records of weather conditions throughout the survey were not able to be recorded, however, it is understood from weather reports from nearby stations that weather conditions remained dry and still throughout the survey.

4.4 Results

The full results of the measured sound levels are shown as time-histories on the Graphs presented in Appendix D, with a summary shown in the table below.

Table 2 – Measured Sound Levels

Measurement Period	L_{eq} (dBA)
Daytime (12:30 – 23:00) Thursday 8th	48
Daytime (07:00 – 12:30) Friday 9th	47
Night-time (23:00 – 07:00)	42

4.1 Assessment

Based on the results of noise monitoring, daytime noise levels at the western boundary of the site are typically around 48dBA, with night time noise levels being around 42dBA.

To put these measured levels into context, British Standard 8233 states that internal noise levels within habitable rooms during the daytime should ideally be up to 35dBA. The document also states that it is reasonable to assume that a partially open window provides a reduction in sound of approximately 13 dBA.

Based on the above, therefore, and considering the measured external noise level of 48dBA, internal noise levels within the habitable rooms of the proposed dwellings would be around 35dBA during the daytime, in accordance with the guidance within BS 8233.

5.0 CONCLUSIONS

RBA Acoustics has been appointed to provide a noise impact assessment for the proposed two storey vertical extension to the existing building to provide residential accommodation (Use Class C3). The existing office accommodation will remain across ground to 2nd floor levels.

The provision of an addition two stories is permitted under Schedule 2, Part 20 Class AA of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) ('the GPDO') without the need for a full planning application process. Notwithstanding this, the Applicant needs to consider the "impacts of noise from commercial premises on the intended occupiers of the development".

In order to review the nature and impact of commercial sound sources affecting the application site, a site walkover was undertaken. From our observations close to the application site, there are no commercial sources close to the site with noise emissions significant enough to have been measured by survey or objectively measured/assessed.

Notwithstanding the above, however, the light industrial units and storage areas to the west of One Oxford Road was considered to have the most potential to adversely impact on the future residential use of the application site from a noise perspective. As such, environmental noise monitoring survey was undertaken on the western elevation of the building over a 24 hour period to quality noise levels from this potential source of commercial noise. It has been determined from the survey that, with the future residential windows partially open, internal noise levels within dwellings will be in accordance with guidance criteria within BS 8233 for residential occupation.

Based on the above reviews and assessments, it is our opinion that the suitability of the application site for residential occupation under Class AA of the Town and Country Planning (General Permitted Development) (England) Order 2015 (As Amended) may be determined relative to the impact of noise.

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.
$L_{eq,T}$	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.
Octave band	A frequency band in which the upper limit of the band is twice the frequency of the lower limit.
1/3 Octave band	A frequency band which is one-third of an octave band.
R_w	A single number quantity which characterises the airborne sound insulation of a material or building element in a laboratory test.

Appendix B – Site Plans



Waterside House, Uxbridge
 Site Plan
 Project 14457

Figure A
 27 May 2025
 Not to Scale



Appendix C – Instrumentation

Manufacturer	Model Type	Serial No.	Calibration	
			Certificate No.	Valid Until
Norsonic Type 1 Sound Level Meter	Nor140	1403226	UCRT25/1108	16 January 2027
Norsonic Pre Amplifier	1209A	12066		
Norsonic ½" Microphone	1225	168180		16 January 2027
Norsonic Sound Calibrator	1251	31988	UCRT25/1104	16 January 2027

Appendix D – Measurement Results

Waterside & Riverview House Uxbridge

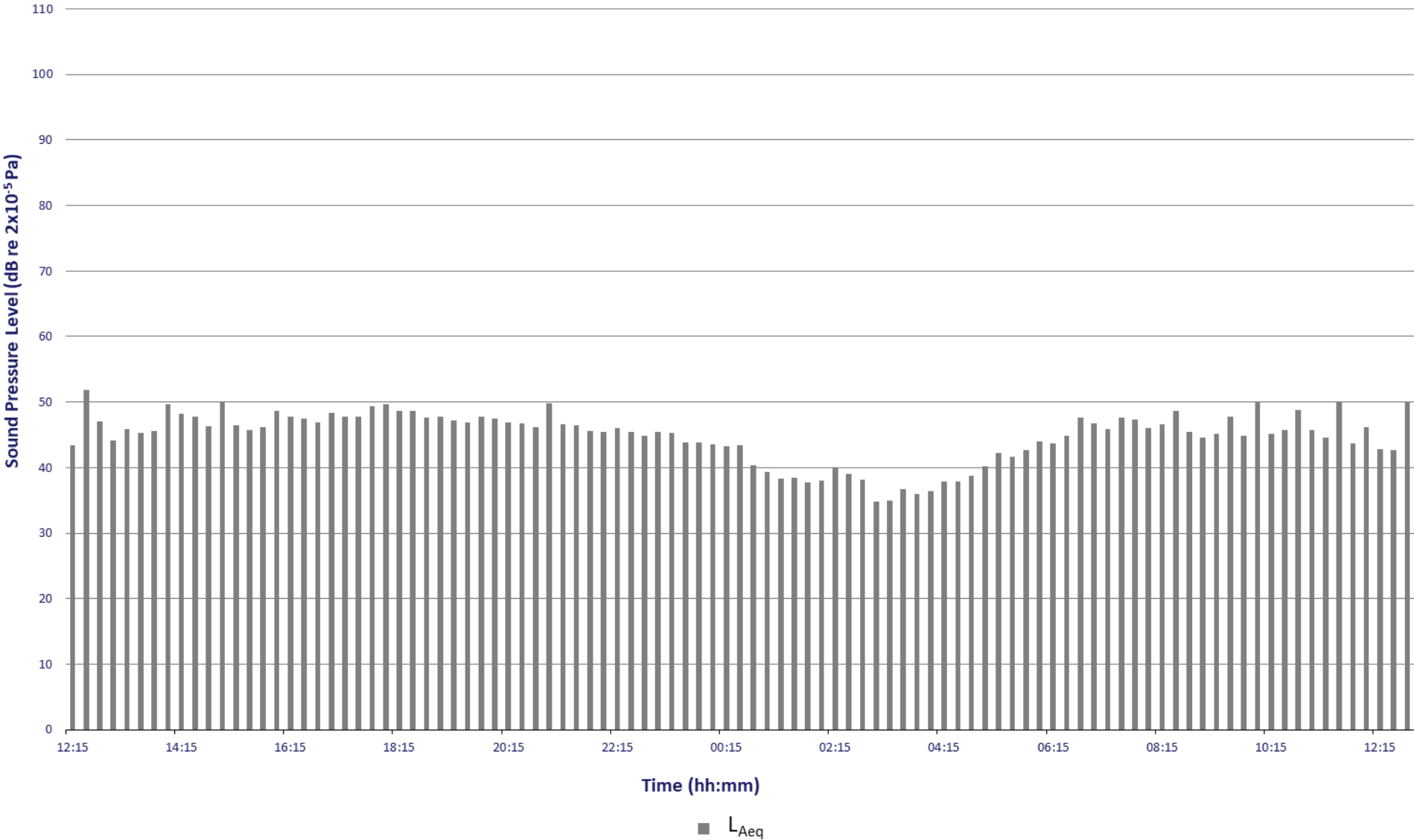
L_{Aeq} Time History

Roof



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Graph 1



Waterside & Riverview House Uxbridge

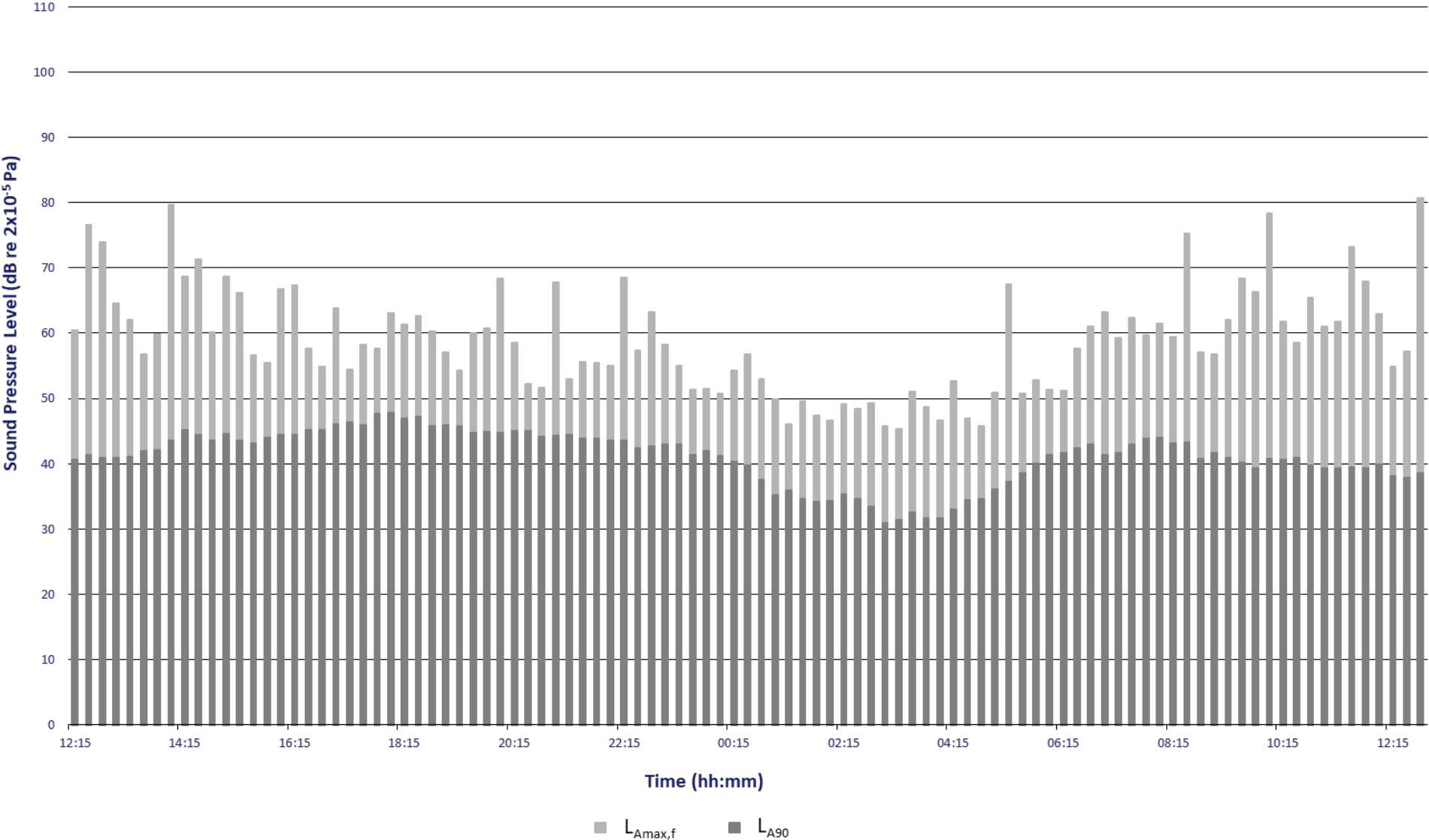
$L_{Amax,f}$ and L_{A90} Time History

Roof



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Graph 2



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