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# 100 Chalk Farm Road, Block A / Block B / Block C / Block D

Gateway 2 Vibration Isolation Acoustic Strategy Report

CHALF-SOL-XX-XX-RP-Y-XX-0002 P03

29 November 2024

| | |
|---|---|
| **PROJECT** | 100 Chalk Farm Road, Block A / Block B / Block C / Block D<br>Gateway 2 Vibration Isolation Acoustic Strategy Report |
| **CLIENT** | Regal London<br>Regal House<br>4 – 5 Coleridge Gardens<br>London, NW6 3QH |
| **DOCUMENT REFERENCE** | CHALF-SOL-XX-XX-RP-Y-XX-0002 P03 |
| **SIGNED** |  <br>Thomas Leach MIOA |
| **CHECKED** |  <br>Joe Sinker MIOA |
| **DATE** | 29 / 11 / 2024 |



| | |
|---|---|
| **Name of Organisation** | Sol Acoustics Limited |
| **Company Registration Number** | 4218702 |



**Document Status:** Public

# Contents

# 1 Introduction

1.1 Sol Acoustics Limited have been commissioned by Regal London to provide acoustic consultancy services for the 100 Chalk Farm Road development.

1.2 This report provides an overview and specification of the building vibration isolation acoustic strategy for the 100 Chalk Farm Road development. Whilst there are no specific acoustic vibration performance requirements under the Building Regulations, the inclusion of a vibration mitigation strategy has an impact on the design of other elements of the building which fall under the Building Regulations and relevant design codes, and therefore, this document forms part of the BSR 'Golden Thread' of design submission.

1.3 This report relates both to the Purpose Built Student Accommodation (PBSA) buildings, Block A / Block B / Block C, and the purpose built residential accommodation, Block D.

1.4 This report has been produced by suitably qualified and competent professionals with relevant experience as detailed in Table 1:

| Name | Position | Qualifications | Membership of professional bodies | Experience |
|---|---|---|---|---|
| Victoria Abrahams | Graduate Acoustic Consultant | MPhys Physics with Astronomy | | |
| Thomas Leach | Associate Director | MSc Sound & Vibration Studies. BSc(Hons) Sound Technology | Member of the Institute of Acoustics, Association of Noise Consultants registered pre-completion tester | 14 years relevant acoustic consultancy experience including the assessment and design of high-rise and mixed-use residential developments such as the proposed scheme. |

**Table 1**

## 1.1 Basis of Design

1.1.1 The acoustic strategy and assessment presented in this report has been undertaken based on the technical guidance presented in the following documents:

- BS ISO 14837-1, *Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 1: General guidance*
- BS EN ISO 8041-2, *Human response to vibration. Measuring instrumentation - Personal vibration exposure meters*
- BS EN 1337-3, *Structural bearings – Part 3: Elastomeric bearings*
- Crossrail, *Information Paper D10*
- Association of Noise Consultants, *Measurement and Assessment of Groundborne Noise and Vibration*
- Cremer L., Heckl M., Ungar E.E., *Structure-Borne Sound*

## 1.2 Supporting Information

1.2.1 The acoustic strategy and assessment presented in this report should be read in conjunction with the following documents:

- OP26005, Farrat Building Vibration Isolation Technical Report
- CHALF-SOL-XX-XX-RP-Y-XX-0010, Gateway 2 Acoustic Strategy Report (Block D)
- CHALF-SOL-XX-XX-RP-Y-XX-0011, Gateway 2 Acoustic Strategy Report (Block A / B / C)

# 2 Location & Description of Development

## 2.1 Location

2.1.1 The 100 Chalk Farm Road development is located on the south side of Chalk Farm Road (A502), directly to the east of the Roundhouse, a Grade II entertainment venue. To the rear, the site is bounded by a surface level railway line (mainline rail to Euston) with a circa 3 metre retaining wall running along the rear boundary of the site. Beyond that is the Juniper Crescent Housing Estate, which is the subject of future redevelopment proposals.

2.1.2 To the east is the former Morrisons petrol filling station (PFS) which is being redeveloped as part of a wider development known as Camden Goods Yard (CGY). The wider development is currently under construction through a joint venture between St. George and Morrisons. The adjacent site is currently in use as a temporary supermarket but has planning permission for a 6-storey building with replacement PFS and ground floor retail with circa 8,000 sqm of office floorspace on upper floors.

2.1.3 **Figure 1** shows the development in relation to the current existing surrounding area:

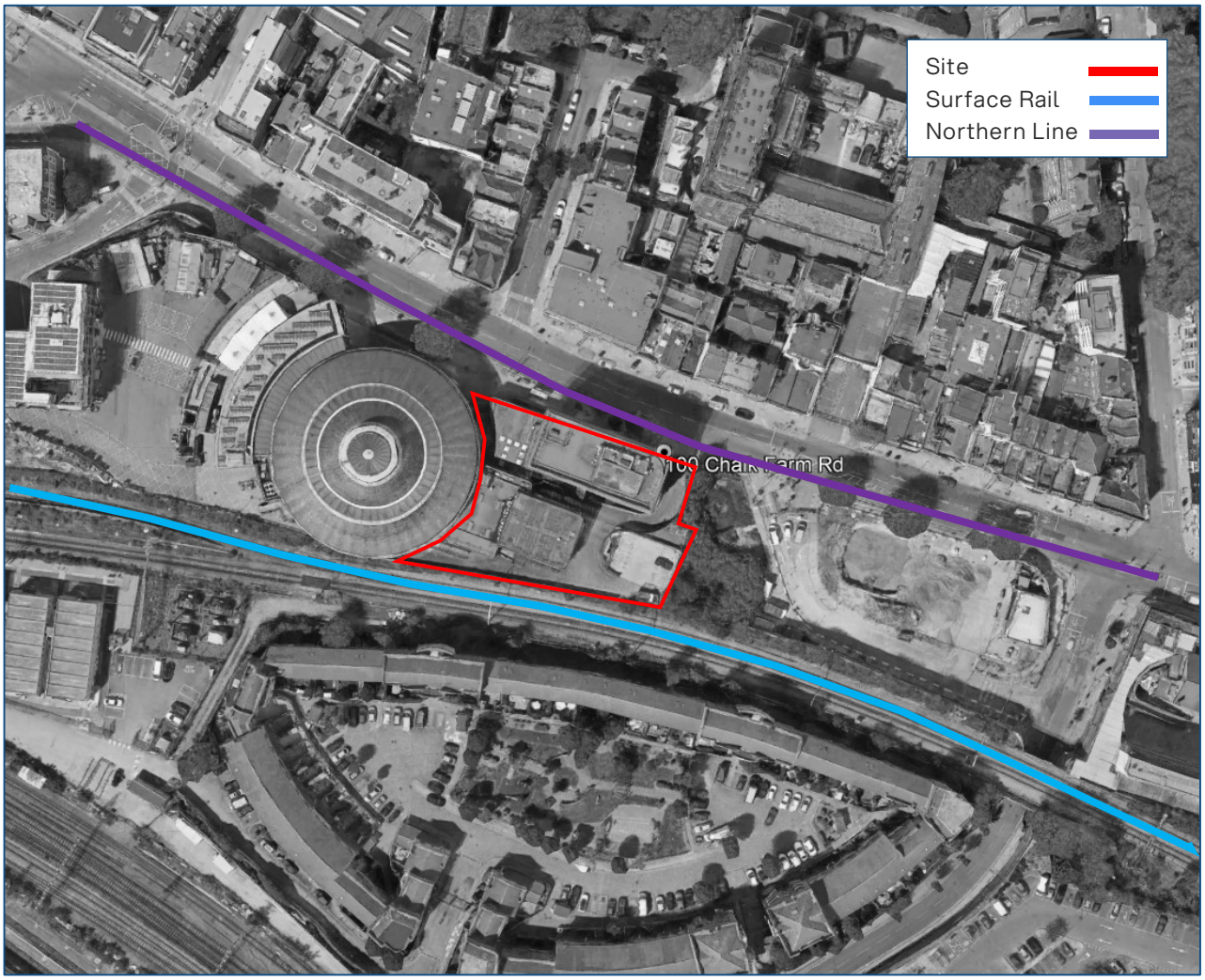


**Figure 1** **Image showing development site boundary in relation to existing surroundings (Google Earth, 2024)**

## 2.2 Description of Development

2.2.1 The description of the development is as follows:

> *'Demolition of existing buildings and redevelopment of the site to provide two new buildings of between 6-12 storeys: one containing affordable homes (Class C3) and one (with three cylindrical volumes) containing purpose-built student accommodation with associated amenity and ancillary space (Sui Generis), a ground floor commercial space (Class E) together with public realm, access, plant installation, and other associated works.'*

2.2.2 The PBSA part of the development provides 264 new purpose-built student apartments arranged over three interconnected circular towers ranging from 6 storeys to 12 storeys in height. The ground floor podium comprises of residential amenity spaces alongside two commercial units.

2.2.3 Block D provides 30 new purpose-built residential apartments arranged over 11 storeys.

2.2.4 The development comprises a reinforced concrete structural frame (Approved Document E - Floor Type 1), with internal walls formed of metal frame drylining (Approved Document E – Wall Type 4).

2.2.5 The existing site will be excavated to provide the new basement level, and that the raft and pile foundations of the existing site will be replaced with piled foundations into the London Clay Formation for the new buildings.

2.2.6 The primary vibration source in the vicinity of the development has been identified as the overground railway line to the rear of the development, and the subterranean TfL Northern Line which runs along the centre of Chalk Farm Road, with the crown of the closest tunnel at a depth of ~20m AOD, approximately 8m below the surface of the road.

2.2.7 The closest residential tower piles to the northern line are understood to be c.4.3m from the line of the face of the closest tunnel (see **Figure 2**), whilst the basement level piles are set back at a distance of c.10.5m. The depth of the piles is limited in areas due to several asset protections zones.

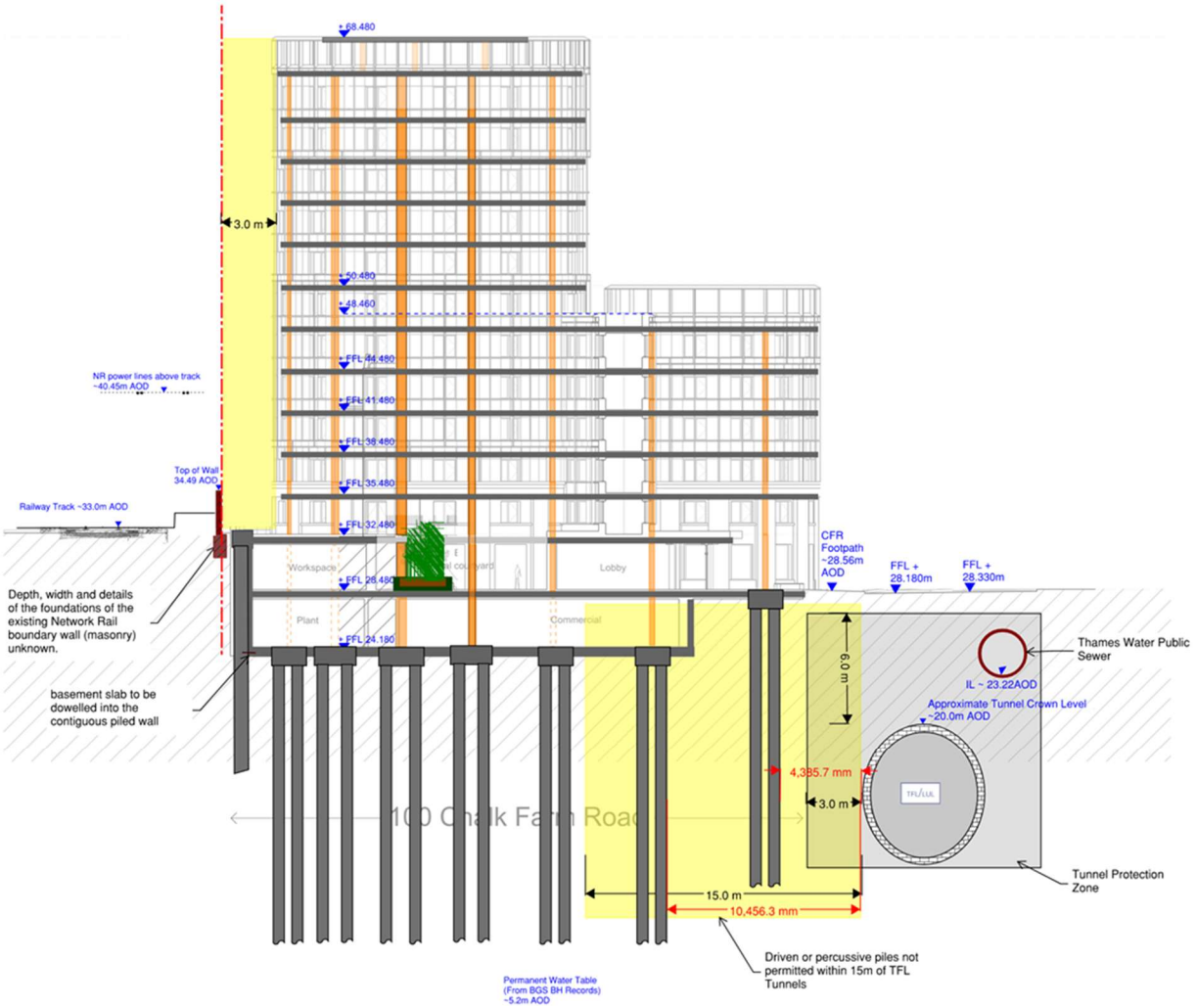


**Figure 2** **Drawing of development piling strategy adjacent to surface rail (left) and TfL Northern Line (right)**

## 2.3 Existing Building

2.3.1 Currently, the site contains two office buildings and an underground car park structure. The larger of the two office buildings is 5-storeys in height and is situated next to Chalk Farm Road. A smaller 3-storey office building is located to the rear closer to the southern boundary next to the railway line. Lower storeys of both buildings lie below made ground.

2.3.2 These structures are to be demolished as part of the development.

2.3.3 The current 5 storey building if founded on concrete piles, as shown in **Figure 3**, and comprises a typical concrete frame construction. Based on the provided historic building information the closest existing pile is c.5.6m horizontal distance from the line of the edge of the closest TfL tunnel (see **Figure 4**).

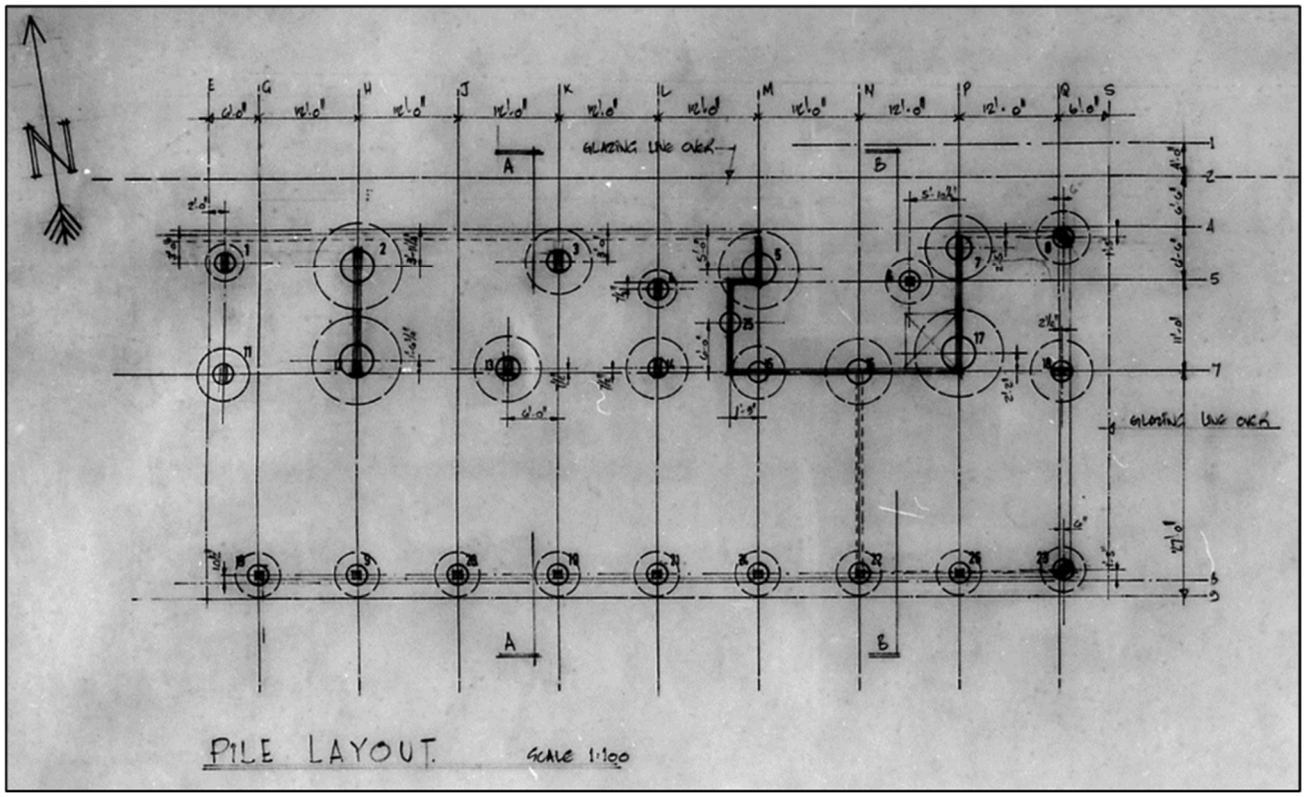


**Figure 3 Image showing historic piling drawing of existing 100 CFR building (Pell Frischmann dwg. 3301/2)**

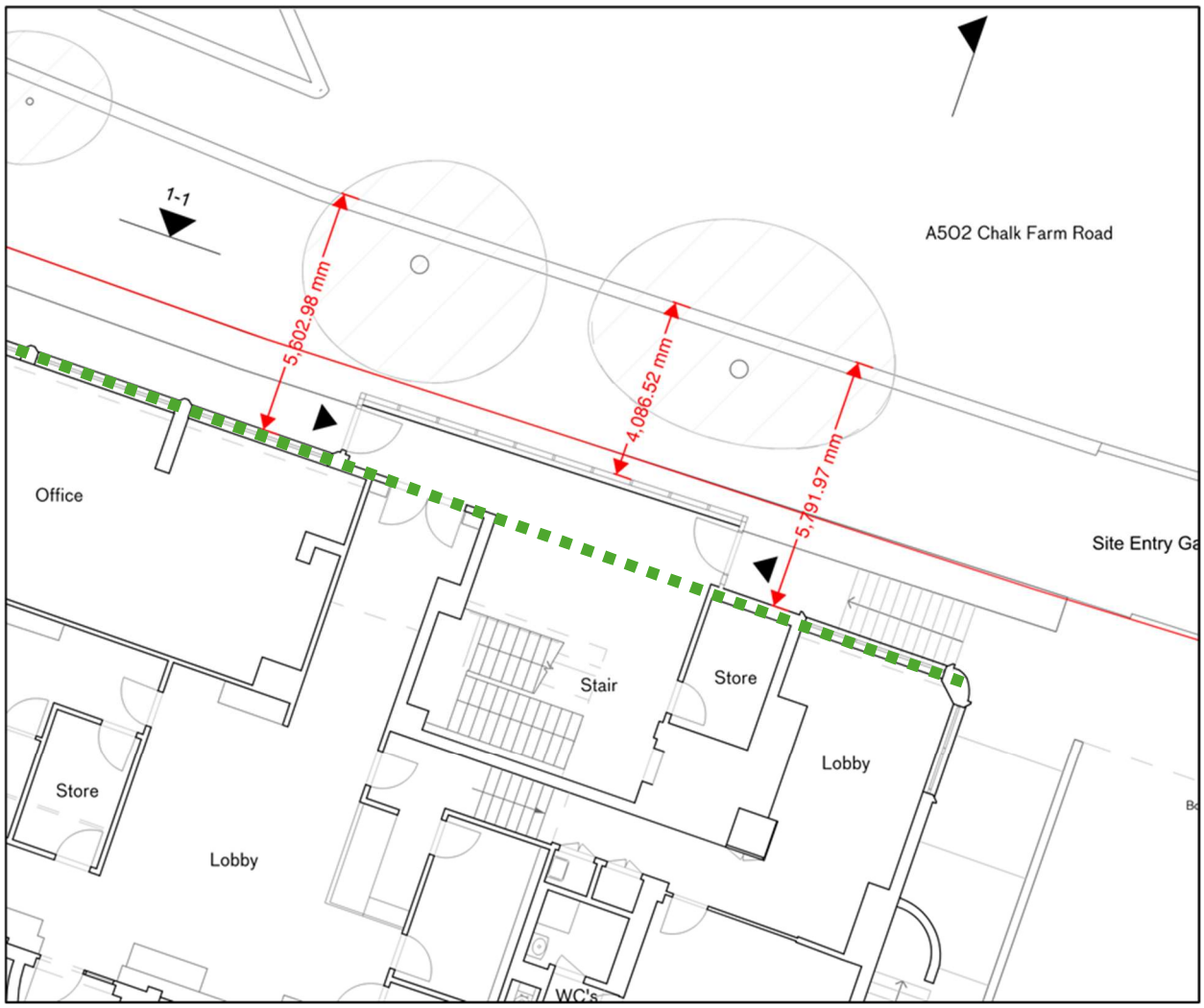


**Figure 4** **Site plan showing approximate distance of existing 100 CFR building piling line (green) to line of TfL external tunnel face**

# 3 Design Criteria

## 3.1 Reradiated Groundborne Noise due to Vibration in Buildings

3.1.1 There are currently no criteria set within UK guidance that define a level at which groundborne noise from railway systems becomes an adverse impact for residential receptors. Therefore, guidance needs to be drawn from previous experience, national infrastructure projects, and other international authoritative guidance.

3.1.2 Guidance from ISO 14837-1:2005 advocates the use of $L_{Amax,slow}$ when assessing groundborne noise.

3.1.3 Information Paper D10 (IPD10) sets out a maximum design criterion of 40dB $L_{Amax,slow}$ for groundborne noise arising from the operation of CrossRail within residential buildings, offices, hotels, schools, colleges, hospitals, laboratories, and libraries. IPD10 also requires that additional mitigation measures should be adopted where the groundborne noise would otherwise equal or exceed 35dB $L_{Amax,slow}$ to further reduce any adverse environmental impacts at residential properties.

3.1.4 These values are consistent with previous Local Authority Guidelines that were published in London in anticipation of the construction of the Channel Tunnel Rail Link where it is stated that groundborne noise inside dwellings should not exceed 35dB $L_{Amax}$.

3.1.5 As referenced in the Association of Noise Consultants' (ANC) guidelines for the *Measurement and Assessment of Groundborne Noise and Vibration*, the American Public Transport Association (APTA) produced design guidance in the 1980s which is still relevant today. These APTA "design goals" are presented in Table 2; however, they do not define either a fast or slow time response:

| Community Area | Maximum sound pressure level ($L_{pAmax}$) | |
|---|---|---|
| | Single family dwelling | Multi-family dwelling |
| Low Density Residential | 30 | 35 |
| Average Density Residential | 35 | 40 |
| High Density Residential | 35 | 40 |
| Commercial | 40 | 45 |
| Industrial | 40 | 45 |

**Table 2**

3.1.6 Research by the Federal Transit Authority (FTA) of the US Department of Transport (DoT) provides additional guidelines based over applying the APTA guidance over many years. As referenced in the ANC publication, it is considered that the threshold for impact in buildings where people sleep is 43dB $L_{Amax}$ for railways lines with less than 70 movements per day (again the time response is not defined). For railway lines with greater than 70 movements per day, a lower criterion may be more appropriate.

3.1.7 The FTA guidelines also state that 35dB $L_{Amax}$ represents the dividing line between barely perceptible and distinctly perceptible.

3.1.8 The development is seeking accreditation under the WELL Building Standard, in addition to the above guidance, it is noted that in order to achieve maximum WELL points internal noise events would need to be controlled to 40 – 45dB $L_{Amax}$ within amenity areas and commercial units proposed for office use.

3.1.9 Considering the guidance presented, the following internal groundborne noise shall be adopted as the basis of design:

| Area | Maximum groundborne noise level limit within centre of room dB $L_{Amax,slow}$ |
|---|---|
| Residential accommodation | 35 |
| Amenity area / office | 40 |

**Table 3**

# 4 Assessment

4.1 This section presents an assessment of the impact of re-radiated groundborne noise from adjacent transportation sources against the identified design criteria to demonstrate suitability.

## 4.1 Baseline Survey

4.1.1 An attended vibration and noise survey was conducted by Sol on 31 May 2024 by Thomas Leach MIOA and Daniel Reeves AMIOA.

4.1.2 Simultaneous tri-axial vibration measurements were taken using a 01dB Orion measurement system at a number of positions within the existing buildings. The measurement positions are shown in Figure 5, Figure 6, and **Figure 7** and described in **Table 4**.

4.1.3 In addition, sound pressure level measurements were undertaken using a Class 1 sound level meter position directly above the accelerometer at a height of 1.5m and positioned at least 1m away from any reflective surfaces.

4.1.4 Subjectively, re-radiated noise from train pass-bys was clearly audible throughout the existing building and tactile vibration was perceivable in the pavement outside the development and within the basement areas.

| Measurement position | Description |
|---|---|
| V_MP1 | Located at basement level of the existing 100 CFR building within the plant room to the front of the building. The 01dB accelerometer and DIN 45669-2 compliant mounting plate was mounted directly onto the concrete slab at grade in the centre of the room. The measurement position was c.7m horizontally from the TfL tunnel and at a similar height relative to the surface of Chalk Farm Road. |
| V_MP2 | Located at ground level of the existing 100 CFR building within the lobby area to the front of the building. The 01dB accelerometer and DIN 45669-2 compliant mounting plate was mounted directly onto the hard floor surface in the centre of the room and mid-span between columns. and elevated c.1.5m relative to the height of the Chalk Farm Road surface. |
| V_MP3 | Located at second floor level of the existing 100 CFR building within the central area of the building. The 01dB accelerometer and DIN 45669-2 compliant mounting plate was mounted directly onto the hard floor surface in the centre of the room and mid-span between columns. |

**Table 4**

4.1.5 Full details of all the instrumentation used, and corresponding traceable calibration records, are retained on file by Sol and available for inspection if required.

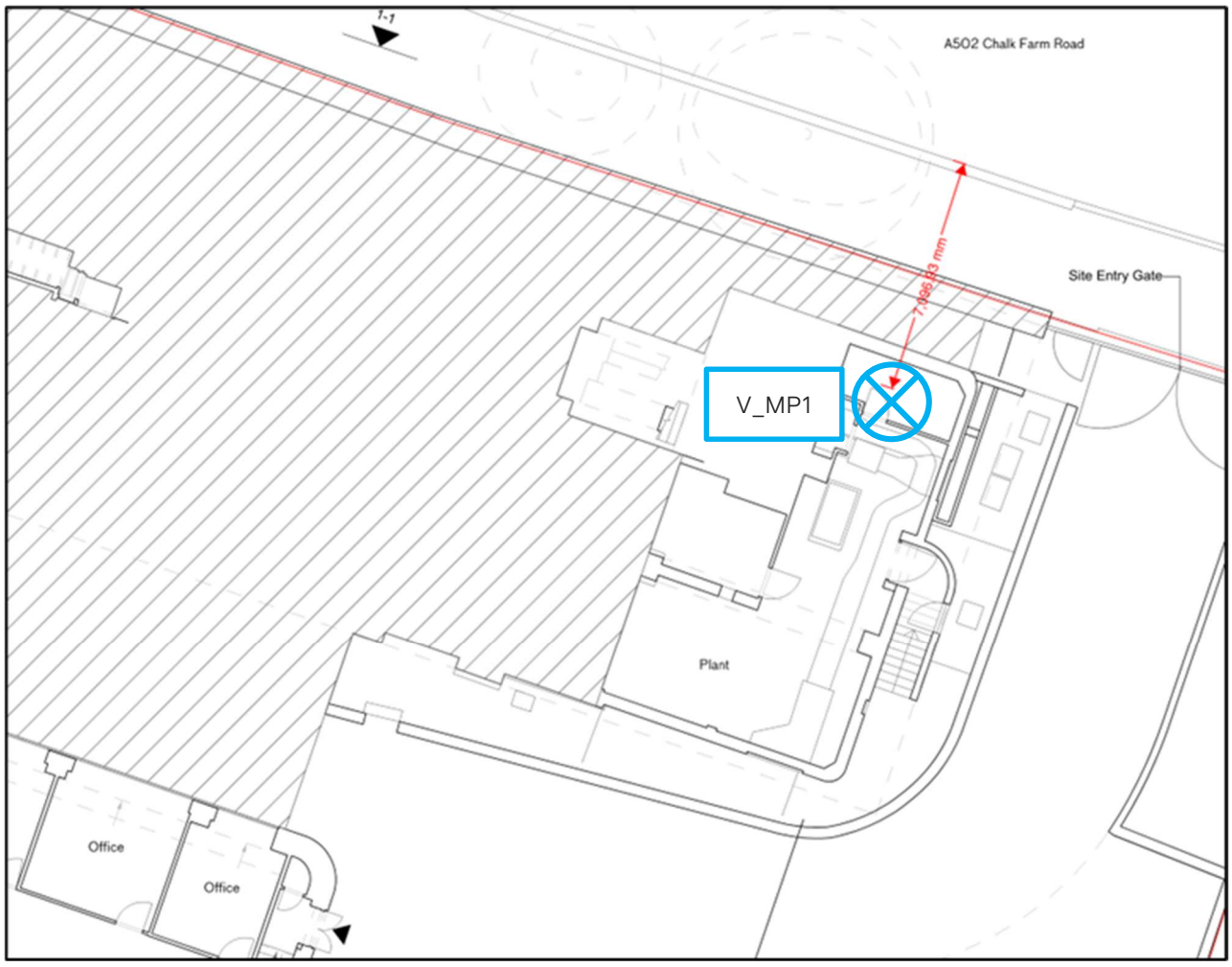


**Figure 5** **Image showing vibration measurement locations, Basement**

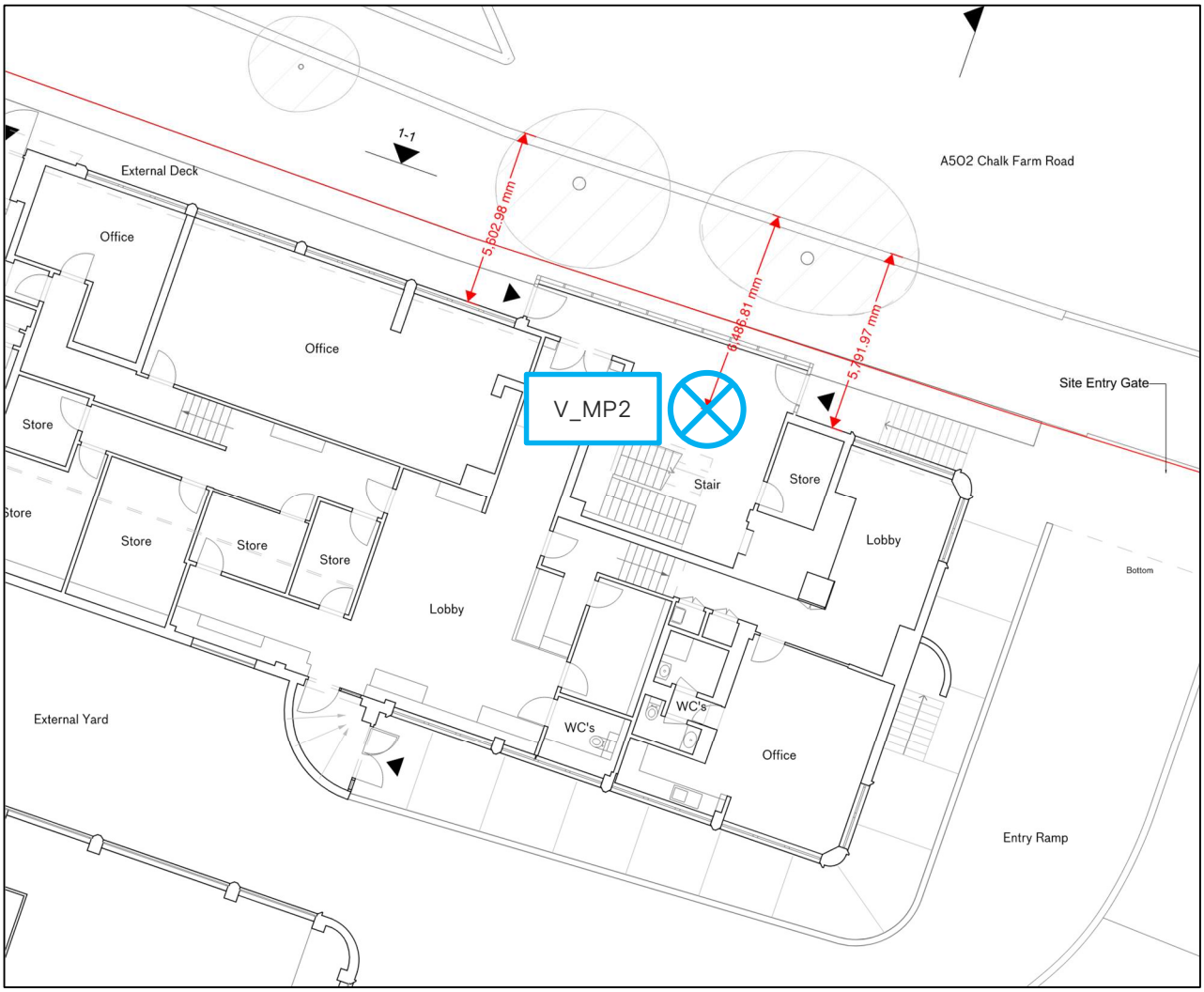


**Figure 6** **Image showing vibration measurement locations, Ground Floor**

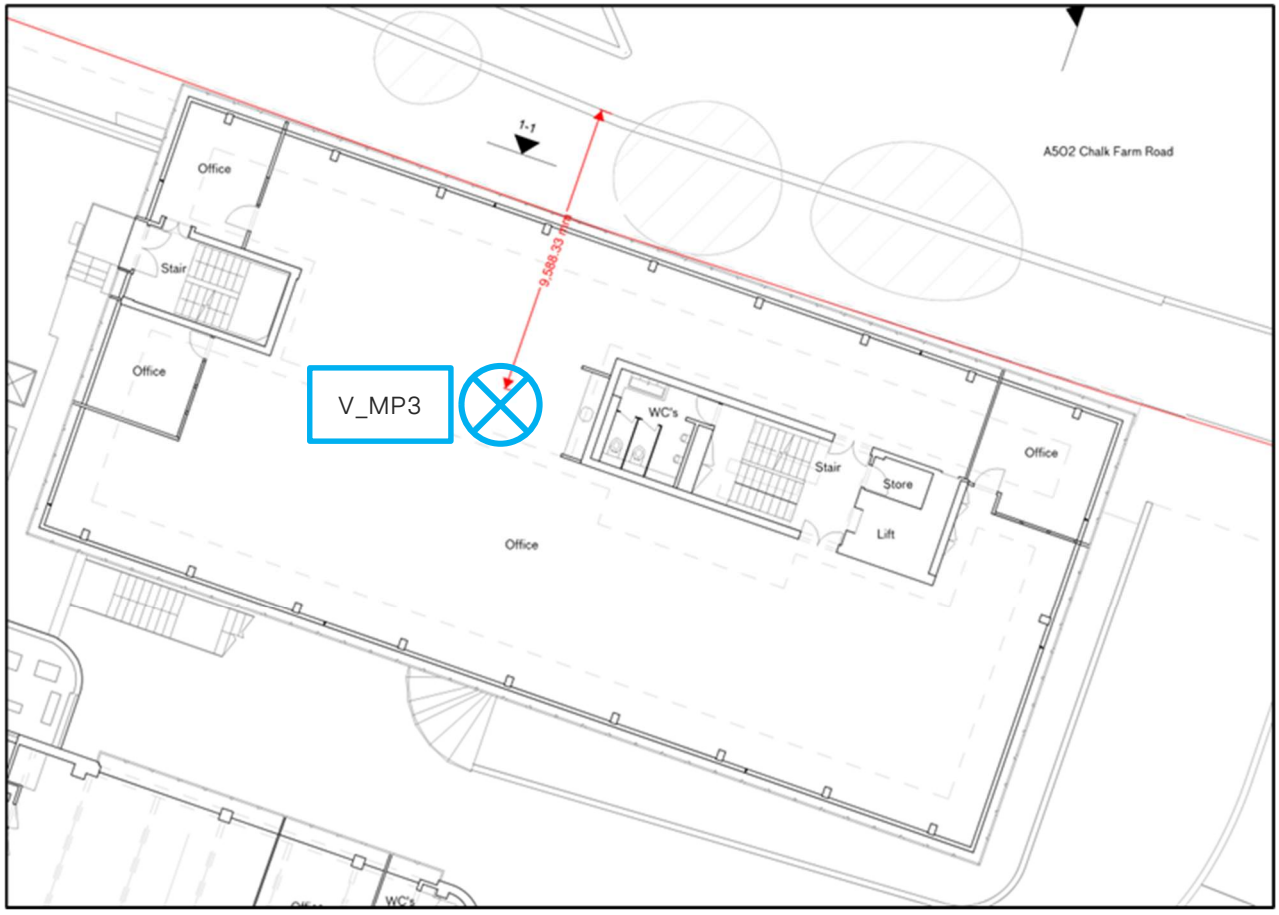


**Figure 7** **Image showing vibration measurement locations, Second Floor**

## 4.2 Summary of Measurement Data

4.2.1 The one-third octave band RMS acceleration (m/s$^2$) measurement data between 1Hz and 315Hz was assessed using 01dB's dBTrait software, Version 6.2.

4.2.2 As per Equation C.2 presented in the ANC book 'Measurement and Assessment of Groundborne Noise and Vibration' the resultant sound pressure level ($L_p$) can be calculated from the measured RMS acceleration (Arms) using the following formula:

$$L_p = 20log10\left[\frac{A_{rms}}{10^{-6}g}\right] - 20log10(f) + 37\ dB$$

4.2.3 Where $g$ is the gravitational constant (9.81 m/s$^2$), and $f$ is the one-third octave band centre frequency (Hz).

4.2.4 Table 5 presents the calculated $L_{Amax,slow}$ between 1Hz and 315Hz from the RMS acceleration ($A_{rms}$), alongside the predicted broadband $L_{Amax,slow}$ from the RMS vibration velocity as measured by the Orion, and the measured airborne $L_{Amax,slow}$ within the room from the sound level meter, for a selection of measured train events:

| Event | Measurement position | Time | RMS acceleration | Vibration velocity | Sound pressure level |
|---|---|---|---|---|---|
| | | | Calculated level dB $L_{Amax,slow}$ | Predicted level dB $L_{Amax,slow}$ | Measured level dB $L_{Amax,slow}$ |
| Train 1 | V_MP1 | 15:41:26 | 47 | 49 | 52 |
| Train 2 | V_MP1 | 15:46:16 | 50 | 49 | 50 |
| Train 3 | V_MP1 | 15:49:33 | 52 | 50 | 53 |
| Train 4 | V_MP2 | 14:07:15 | 53 | 57 | 57 |
| Train 5 | V_MP2 | 14:09:10 | 59 | 58 | 59 |
| Train 6 | V_MP2 | 14:14:22 | 55 | 58 | 56 |
| Train 7 | V_MP3 | 14:53:09 | 47 | 47 | 45 |
| Train 8 | V_MP3 | 14:54:49 | 47 | 48 | 45 |
| Train 9 | V_MP3 | 15:02:47 | 43 | 46 | 46 |

**Table 5**

4.2.5 **It can be seen from Table 5 that currently all areas of the existing building significantly exceed the proposed residential and commercial re-radiated groundborne noise criteria.**

4.2.6 Figure 8 presents the one-third octave band acceleration as measured at Measurement Position V_MP1 in the Z-axis:

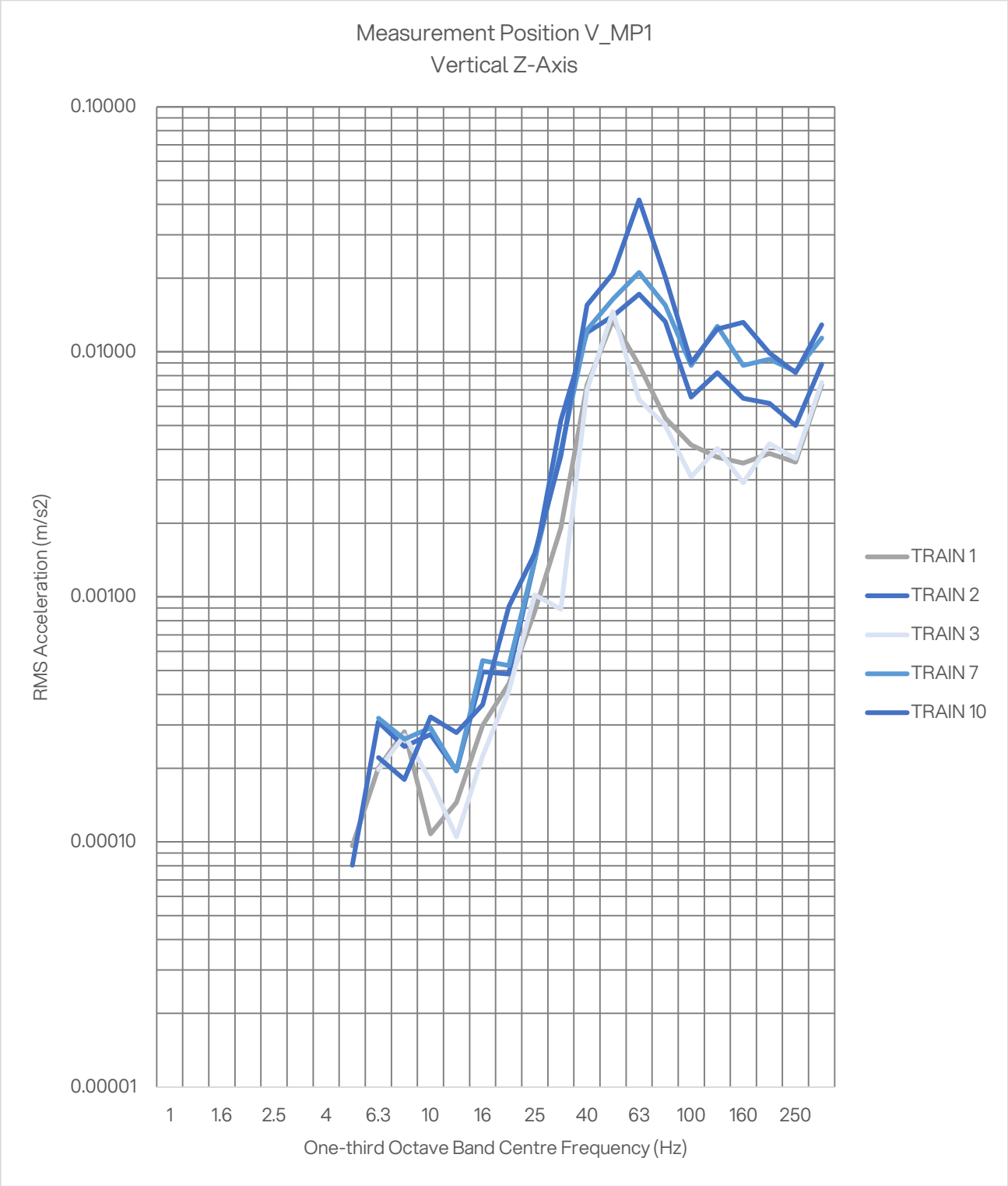


**Figure 8** **One-third octave band acceleration – Measurement Position V_MP1, Z-axis, m/s²**

## 4.3 Assessment of Development

4.3.1 The development features a large masonry construction on piles with an excavated basement level below the current surface level. Whilst the piled construction will be similar to the existing building, the piling arrangement is different, and the mass and area of the building is significantly greater.

### Building Foundation Vibration Transfer Function

4.3.2 Piled foundations can have a significant effect on the levels of vibration received in buildings above underground tunnels. Limited reference to the transmission of vibration into piled foundations founded in earth is available, the ANC *Measurement and Assessment of Groundborne Noise and Vibration* references a coupling loss of up to 10dB relative to 'free-field' conditions, but no reference is made to the size or length of the piles, nor the proximity of the piles to the tunnels.

4.3.3 Chapter 16 of *Structure-Borne Sound*[1] suggests that for basements and slab-on-grade floors there is a coupling loss of 0dB for 'large masonry buildings on piles'. Furthermore, longitudinal modes within the piles typically occur between 63Hz and 125Hz octave bands which coincides with the primary forcing frequency due to underground train events measured during the survey, at which the transmission loss into the pile is greatly reduced and this wave energy is transmitted into the lowest floor slab with little or no loss.

4.3.4 Given the uncertainty of the transmission loss of the piled foundations relative to the existing building structure which will be in closer proximity to the Northern Line tunnels than the vibration measurement positions (both horizontally and potentially vertically depending on the depth of the new piles), and the inclusion of a new basement level which is connected structurally to all of the residential towers, a 0dB coupling loss for the foundations relative to the existing building has been assumed in the assessment.

4.3.5 In accordance with the summary guidance presented in the ANC *Measurement and Assessment of Groundborne Noise and Vibration*, **Table 6** presents the summary outline assessment guidance on the adopted vibration transfer functions within the completed residential development:

| Source factor | Correction | Note |
|---|---|---|
| Coupling to building foundation | 0dB | See above section |
| Floor-to-floor attenuation | -2dB/floor | Basement, amenity of ground floor level, residential apartments on first floor level |

**Table 6**

[1] Cremer L., Heckl M., Ungar E.E., Structure-Borne Sound, 2nd edition, Springer-Verlag, Berlin, 1990

### Predicted Groundborne Noise Levels within the Development

4.3.6 Based on measured groundborne noise levels within the existing building basement and the adopted transfer functions as set out in Table 6, the predicted internal sound levels due to re-radiated groundborne noise within the proposed development are presented in Table 7:

| Level | Criteria dB $L_{Amax,slow}$ | Predicted re-radiated sound level dB $L_{Amax,slow}$ |
|---|---|---|
| Basement (Office) | 40 | 47 - 52 |
| Ground Floor (Office/Amenity) | 40 | 45 - 50 |
| First Floor (Residential) | 35 | 43 - 48 |

**Table 7**

4.3.7 Based on the measured acceleration, the predicted re-radiated groundborne noise level within the building will be above the identified suitable design criteria and will have a significant adverse impact of the occupants of the building, and therefore a suitable vibration mitigation strategy is required.

# 5 Building Vibration Isolation Specification

5.1 To achieve the recommended internal groundborne noise criteria within residential apartments on the first floor and above, and within the basement and ground floor commercial units, it will be necessary to isolate the building structure from the foundations.

5.2 The building vibration isolation is to comprise of discrete rubber bearings with the following acoustic performance requirements:

| | Isolation bearing performance requirement |
|---|---|
| Natural frequency ($f_n$) | c.8Hz |
| Minimum groundborne noise level reduction | 13dB |

**Table 8**

5.3 All acoustic bearings shall be designed in accordance with BS EN 1337-3.

# 6 Proposed Building Vibration Isolation Strategy

6.1 A building vibration isolation strategy for 100 Chalk Farm Road has been developed by Farrat, as the specialist designer, in conjunction with the project design team including Sol Acoustics.

6.2 A clean and unrestricted vibration isolation line has been designed through the building as shown in Figure 9 below, reproduced from the Farrat *Building Vibration Isolation Technical Report*:

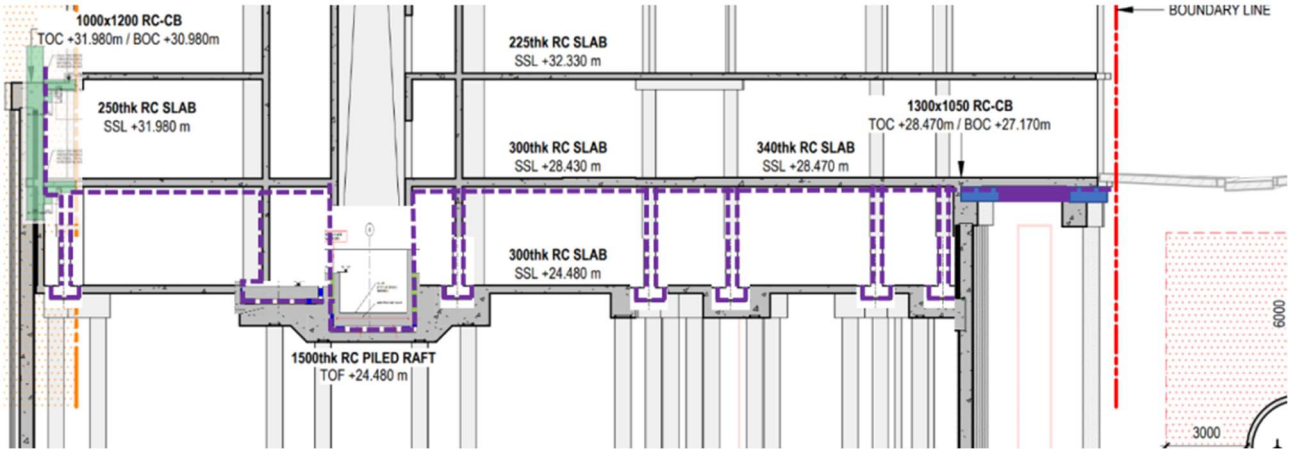


**Figure 9**

6.3 As detailed in the Farrat report, the principal system of vibration isolation is through the use of discreet Farrat LNR bearings in conjunction with full surface bearing ground floor slab isolation. Table 9 sets out the Farrat vibration isolation systems and provides an assessment against the performance specification criteria in Table 8:

| System | Specified natural frequency performance $f_n$ Hz | Compliance |
|---|---|---|
| Farrat LNR bearings [1] | 6.6 - 7.7 | YES |
| Farrat Verlimber Floor Tile (VFT) system [1] | 8.0 – 8.2 | YES |
| Note 1: Refer to Farrat technical report | | |

**Table 9**

# APPENDIX A
# Glossary of Acoustic Terms

| Term | Abbreviation | Description |
|---|---|---|
| Decibel | dB | A scale for comparing the ratios of two quantities, including sound pressure and sound power. |
| A-weighting | dB(A) | The unit of sound level, weighted according to the A-scale, which takes into account the change in sensitivity of the human ear at varying frequencies. |
| Sound Pressure Level | $L_{pA}$ | A measure of the sound pressure at a particular location. Typically expressed in dB(A) referenced to $2x10^{-5}$ Pascals. |
| Equivalent Continuous Sound Level | $L_{Aeq,T}$ | The steady level of sound over a prescribed period of time which would contain the same total sound energy as the actual fluctuating noise under consideration in the same period of time. |
| Statistical Sound Levels | $L_{A10}$ and $L_{A90}$ | The level of noise exceeded for a percentage of the time period being sampled, namely 10% or 90% respectively. |
| Background Sound Level | $L_{A90,T}$ | The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90% of the time period being sampled. |
| Maximum Sound Level | $L_{Amax}$ | The maximum sound or noise level determined with instrumentation set to either a fast time weighting, $L_{AFmax}$, or a slow time weighting, $L_{Asmax}$, as occurring during the time period being sampled. |
| Sound Power Level | $L_{w_A}$ | A measure of the total sound energy radiated from a source. Like sound pressure levels, this is also expressed in dB(A) terms, but it is referenced to 1 x $10^{-12}$ W. |
| Broadband | | Sound sampled over a wide range of frequencies. |
| Narrow band | | Sound sampled over a specific, restricted frequency range. Used to ascertain the amplitude and significant of individual, audible tones, and to assist in identifying particular sources of noise within a complex, multi-source soundscape environment. |
| Ambient Sound | $L_{eq,T}$ | Totally encompassing sound in a given situation at a given time, usually composed of sound from many sources, both near and far. |
| Specific Sound Level | $L_{eq,T}$ | The Equivalent Continuous A-Weighted Sound Level at an assessment position produced by a specific sound over a given reference time interval, $Tr$. |
| Rating Level | $L_{Ar,Tr}$ | The Specific Sound Level plus any adjustment for the acoustic characteristic features of the noise (e.g. intermittency, tones etc.). |
| Residual Noise | $L_{Aeq,T}$ | The ambient sound remaining at given position in a given situation, when the specific sound source is suppressed to such an extent that it no longer contributes to the ambient sound. |
| Sound Reduction Index | *SRI* | The reduction in sound energy when transmitted through a panel or similar planar element, typically used in relation to single octave or one-third octave frequency band values. |
| Weighted Sound Reduction Index | $R_w$ | The Sound Reduction Index expressed as a single figure, as expressed against a reference curve. |
| Dynamic Insertion Loss | *DIL* | Reduction in acoustic energy resulting from the insertion of a noise control element (e.g. an attenuator, acoustic enclosure etc.). |
| Free Field | | Noise measuring location that is free from the presence of sound reflecting objects (except the ground), usually taken to mean being at least 3.5 metres distance from reflective surface(s) or greater. |

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| | |
|---|---|
| **Project** | 100 Chalk Farm Road |
| **Location** | London Borough of Camden |
| **Sol Project Reference** | P2345 |
| **Document Reference** | CHALF-SOL-XX-XX-RP-Y-XX-0014 |
| **Revision** | P01 |
| **Date** | 20/03/2025 |
| **Prepared By** | Thomas Leach MIOA |

# Acoustic Design Note – Planning Condition 6

## 1 Introduction

1.1 Planning Condition 6 of the Chalk Farm Road planning permission (2024/0479/P) states:

> *London Underground Infrastructure Protection*
>
> *No development shall commence (other than demolition, site clearance and preparation), until detailed design and method statements and load calculations (in consultation with TfL Infrastructure Protection), have been submitted to and approved in writing by the local planning authority. The details shall include:*
>
> *a) demolition details;*
>
> *b) Site specific Risk Assessments and Method Statements (RAMS) to be agreed with TfL Engineering for each stage of the development for any activities temporary or permanent (e.g. groundworks, excavations, piling, etc.) The RAMS should be issued a minimum of 6 weeks prior to the individual activity commencing;*
>
> *c) details of any changes in loading to London Underground's infrastructure due to works including temporary works are to be issued to TfL Engineering Infrastructure Protection for review and comment/approval;*
>
> *d) details on the erection and use of tall plant (e.g. tower cranes, mobile cranes and piling rigs) prior to commencement of works accommodate ground movement arising from the construction thereof; and*
>
> *e) mitigation for the effects of noise and vibration arising from the adjoining operations within the structures and tunnels- No claims to be made against TfL or London Underground by the Local Authority, developer or tenants for any noise or vibration resulting from London Underground running, operating and maintaining the adjacent railway.*
>
> *The development shall thereafter be carried out in accordance with the approved design and method statements, and all structures and works shall be completed in accordance with the approved details in their entirety, before any part of the building hereby permitted is occupied.*
>
> *Reason: To ensure that the development does not impact on existing London Underground transport infrastructure, in accordance with policy T3 of the London Borough of Camden Local Plan 2017.*

1.2 This acoustic design note provides a summary assessment in line with Limb E of Condition 6 which is understood to comprise of two parts, as advised by Transport for London, as follows:

- The effects from the development on the London Underground tunnel.
- The effects from the London Underground tunnel on the development.

# 2 Baseline Vibration Assessment

## 2.1 Assessment of Effects from the Development on London Underground

2.1.1 The consented development comprises two new buildings of between 6-12 storeys: one containing affordable homes (Class C3) and one (with three cylindrical volumes) containing purpose-built student accommodation with associated amenity and ancillary space (Sui Generis), a ground floor commercial space (Class E) together with public realm, access, plant installation, and other associated works.

2.1.2 It is considered that there will be no significant vibration inducing operations within the permanent operation of the consented development that would have the potential to result in adverse vibration within the London Underground tunnel network located adjacent to the development.

2.1.3 Any potential vibration sources introduced as part of the development (e.g. fixed plant and equipment) would need to be effectively vibration isolated from the internal vibration sensitive parts of the development, and therefore, would be suitable to protect any London Underground tunnel infrastructure and operations.

## 2.2 Assessment of Effects from London Underground on the Development

2.2.1 An attended baseline vibration survey was conducted by Sol Acoustics in May 2024. The results of the baseline survey and assessment concluded that structure-borne vibration from the operation of the subterranean London Underground Northern Line had the potential to adversely affect the occupants of the consented development.

2.2.2 Therefore, as part of the design development of the consented development a scheme of vibration isolation bearings has been incorporated into the structure of the development.

2.2.3 Full details of the baseline vibration survey, identified suitable design criteria and proposed structural isolation system are presented in the Sol Acoustics Gateway 2 Vibration Isolation Acoustic Strategy Report[1].

2.2 It is considered that with the implementation of the proposed building vibration isolation system, occupants of the building will be suitably protected from noise and vibration associated with the operation of the London Underground.

[1] Gateway 2 Vibration Isolation Acoustic Strategy Report CHALF-SOL-XX-XX-RP-Y-XX-0002 P03, 29 November 2024

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**FAO KRISTINA SMITH**
**London Borough of Camden**
**Camden Council**
**5 Pancras Square**
**London**
**N1 4AG**

Friday 25th April 2025

Dear Kristina,

**RE: DISCHARGE OF CONDITION 6 RELATED TO PLANNING PERMISSION 2024/0479**

On behalf of Regal Chalk Farm Limited (hereafter referred to as 'The Applicant'), this letter accompanies an application to discharge Condition 6 attached to planning permission 2024/0479 (dated 27th November 2024).

## Relevant Planning History

On 27th November 2024, planning permission was approved for the 'Demolition of existing buildings and redevelopment of the site to provide two new buildings of between 6-12 storeys: one containing affordable homes (Class C3) and one (with three cylindrical volumes) containing purpose-built student accommodation with associated amenity and ancillary space (Sui Generis), a ground floor commercial space (Sui Generis), a ground floor commercial space (Class E) together with public realm, access, plant installation, and other associated works' (application reference 2024/0479).

## Condition 6 attached to the decision notice states:

> *No development shall commence (other than demolition, site clearance and preparation), until detailed design and method statements and load calculations (in consultation with TfL Infrastructure Protection), have been submitted to and approved in writing by the local planning authority. The details shall include:*
>
> *a) demolition details;*
>
> *b) Site specific Risk Assessments and Method Statements (RAMS) to be agreed with TfL Engineering for each stage of the development for any activities temporary or permanent (e.g. groundworks, excavations, piling, etc.) The RAMS should be issued a minimum of 6 weeks prior to the individual activity commencing;*
>
> *c) details of any changes in loading to London Underground's infrastructure due to works including temporary works are to be issued to TfL Engineering Infrastructure Protection for review and comment/approval;*
>
> *d) details on the erection and use of tall plant (e.g. tower cranes, mobile cranes and piling rigs) prior to commencement of works accommodate ground movement arising from the construction thereof; and*

*e) mitigation for the effects of noise and vibration arising from the adjoining operations within the structures and tunnels- No claims to be made against TfL or London Underground by the Local Authority, developer or tenants for any noise or vibration resulting from London Underground running, operating and maintaining the adjacent railway.*

*The development shall thereafter be carried out in accordance with the approved design and method statements, and all structures and works shall be completed in accordance with the approved details in their entirety, before any part of the building hereby permitted is occupied.*

*Reason: To ensure that the development does not impact on existing London Underground transport infrastructure, in accordance with policy T3 of the London Borough of Camden Local Plan 2017.*

The Applicant submitted accompanying information to discharge parts a, b and c on 15th March 2025 (planning reference XXX). This included confirmation from the Infrastructure Protection Team at TfL that parts a, b and c can be discharged by Camden Council.

[part d – Farid/Will confirm the status of this]

With regard to part e, the Applicant confirms that no claims will be made against TfL or the London Underground by the developer.

These will be retained and maintained for the duration of the development works and are therefore in full accordance with the requirements of Condition 6.

A payment of £215 (including VAT and the Planning Portal administration fee) has been made via the Planning Portal in respect of the Council's planning application fee.

We trust the above is sufficient to discharge the condition. If you have any queries, please do not hesitate to contact Steve Harrington (steve.harrington@ergal.co.uk) at this office.

Yours sincerely,

*C Wheeler*

Charlotte Wheeler
Senior Planning Manager
For and on behalf of Regal Chalk Farm Limited