ARCADIS Design & Consultancy for natural and built assets

LONDON BOROUGH OF HOUNSLOW SMALL SITES SMALL BUILDERS PROGRAMME

GARAGE BLOCK ADJACENT TO 86 BEECH AVENUE, BRENTFORD, TW8 8NH

Noise and Vibration Desk Study

NOVEMBER 2019

Incorporating
EC HARRIS BUILT ASSET CONSULTANCY
Hyder

Garage Block adjacent to 86 Beech Avenue, Brentford, TW8 8NH

Noise and Vibration Desk Study

Author	Jessica Horsewood
Checker	Michael Van Der Merwe
Approver	Peter Tallantyre
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This report dated 18 November 2019 has been prepared for London Borough of Hounslow (the “Client”) in accordance with the terms and conditions of appointment dated 25 October 2019 (the “Appointment”) between the Client and Arcadis Consulting (UK) Limited (“Arcadis”) for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 INTRODUCTION

1.1 Terms of Reference

Arcadis Consulting (UK) Limited (Arcadis) has been commissioned by London Borough of Hounslow (LBoH) 'the Client' to undertake a desk-based noise and vibration assessment for a parcel of land currently occupied by a garage block adjacent to 86 Beech Avenue, Brentford, TW8 8NH. For reference within the scope of the development programme referred to as "Site 19".

Through the programme, LBoH is aiming to divest a number of small sites within the borough to enable positive regeneration primarily for residential development. The objective of this desktop review is to identify potential development constraints due to noise and vibration on Site 19.

The objectives of this review are to:

- Review any existing noise and vibration information regarding the site and its surrounding area; and
- Identify potential development constraints due to noise and vibration conditions on site.

1.2 Technical Standards

As part of this desk study report various sources of information have been referenced, as detailed below: The following documents have been considered in this report, based on the level of information available.

- National Planning Policy Framework, Department for Communities and Local Government (2019) (Ref 1);
- The Noise Policy Statement for England (NPSE) (Ref 2);
- Technical Guidance to the Implementation of the NPPF (PPG Noise) (Department for Communities and Local Government, 2012) (Ref 3);
- London Borough of Hounslow Local Plan. 2015 – 2030 (Adopted 15th September 2015) (Ref 4);
- BS8233: 2014 'Guidance on Sound Insulation and Noise Reduction for Buildings' (Ref 5);
- 'ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development (ProPG Planning & Noise) (Institute of Acoustics, Association of Noise Consultants, and Chartered Institute of Environmental Health (2017) (Ref 6);

The following documents have been referenced, but relate to baseline surveys and quantification of noise and vibration impacts on site, so would only be appropriate should the Site be progressed for residential development and subject to a detailed assessment:

- BS 7445-2:1991, ISO 1996-2:1987 Description and measurement of environmental noise. Guide to the acquisition of data pertinent to land use (Ref 7);
- BS ISO 4866:2010 Mechanical vibration and shock. Vibration of fixed structures. Guidelines for the measurement of vibrations and evaluation of their effects on structures (Ref 8); and,
- BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting (Ref 9);

1.3 Limitations and Expectations

This report has been prepared for the Client in accordance with the terms and conditions of appointment dated 8th March 2019. Arcadis cannot accept any responsibility for any use of or reliance on the contents of

this report by any third party. The copyright of this document, including the electronic format shall remain the property of Arcadis.

This report has been compiled from a number of sources, which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others. The report is based on information available at the time. Consequently, there is a potential for further information to become available, which may change this report's conclusion and for which Arcadis cannot be responsible.

1.4 Scope of Work

The brief requires a desk-based residential feasibility assessment of the setting and a definition of likely requirements in general accordance with BS7445-2: 1991, BS6472-1:2008 & BS ISO 4866:2010. It should be noted that the BS7445-2 and BS ISO 4866 relate to carrying out physical noise and vibration surveys respectively. BS6472 provides guidance on predicting human response to vibration in buildings.

In the absence of quantified noise and vibration levels, the above standards are noted and would be relevant during detailed assessment of the Site should the Site be progressed for residential development. The feasibility assessment has been carried with due consideration of the policy and guidance set out in Section 3 in accordance with the level of information available for the Site.

2 SITE SETTING

2.1 Site Location

Table 1: Details relating to Site Location

Site Location / Address	Garage block adjacent to 86 Beech Avenue, Brentford, TW8 8NH
National Grid Reference	516776, 177359
Description of Site	The site is roughly 0.012ha and is currently in use as a garage block and parking area.
Surrounding Area	The Site lies within a predominantly residential area, surrounded immediately by houses on both Beech Avenue and Almond Grove.

The site location is shown in Figure 1 below.



Figure 1: Site Location Plans

3 LEGISLATION AND POLICY

Within the following section of the report, details will be presented relating to the guidance documents and assessment methodologies appropriate for noise associated with the proposed development of the land for residential purposes.

3.1 National Policy & Guidance

3.1.1 National Planning Policy Framework (NPPF) and Planning Practice Guidance: Noise (PPG)

The National Planning Policy Framework, revised in February 2019, sets out the Government's planning policies for England and how these should be applied. Paragraph 170 of the NPPF states that "*planning policies and decisions should contribute to and enhance the natural and local environment by; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or **noise** pollution or land instability*".

Paragraph 180 of the NPPF states that "*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 impact 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*".

Technical Guidance (Planning Practice Guidance) to the Implementation of the National Planning Policy Framework, published in 2012, and updated in December 2014, indicates that noise should be considered when:

- New developments may create additional noise; and/or,
- New developments would be sensitive to the prevailing acoustic environment.

The guidance indicates that Local Planning Authorities should take account of the acoustic environment and in doing so consider:

- Whether or not a significant adverse effect is occurring or likely to occur;
- Whether or not an adverse effect is occurring or likely to occur; and,
- Whether or not a good stand of amenity can be achieved.

3.1.2 Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) was published in March 2010 and covers all forms of noise other than occupational noise. The document serves to provide policy on the need to avoid and mitigate adverse noise effects on health arising from and impacting on new development.

The NPSE attends to three types of noise;

- 'Environmental noise' which includes noise from transportation sources;
- 'Neighbour noise' which includes noise from inside and outside people's homes; and

- ‘Neighbourhood noise’ which includes noise arising from within the community such as industrial and entertainment premises, trade and business premises, construction sites and noise in the street.

In line with the aims determined in the NPPF (presented above), the NPSE determines 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; and,
- 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.

3.2 Local Planning Policy

The Hounslow Local Plan was adopted on 15th September 2015 by Hounslow Borough Council; and until 2030 will form part of the planning framework of the Borough.

The Local Plan Spatial Strategy acknowledges that the borough has developed along key road and rail routes which now carry heavy volumes of traffic to and from central London, and Heathrow Airport immediately to the west generates significant surface traffic. This is further exacerbated by peak hour commuter traffic and local traffic movements through-out the day and night. This contributes to noise pollution which can disrupt conversation and other activities such as learning, and can increase stress and disturb concentration, rest and sleep.

The Local Plan sets out to protect from, mitigate and seeks to reduce the detrimental effects of noise, poor air quality and general environmental pollution through strong environmental standards.

Policy EQ5 Noise seeks to reduce the impact of noise from aviation, transport and noise-generating uses, and requires the location and design of new development to have considered the impact of noise, and the mitigation of these impacts, on new users and surrounding uses according to their sensitivity.

This is to be achieved this by:

- Assessing the potential noise impacts of development proposals where they are located near to noise-sensitive uses (such as housing) or existing sources of noise;
- Directing noise-sensitive development to locations outside those areas identified where noise exposure is likely to cause adverse effects in terms of public health and well-being, and children’s cognitive learning in schools;
- Ensuring noise-sensitive development is protected against existing and proposed sources of noise through careful design, layout and use of materials, adequate insulation of the building envelope (including both internal/external walls and ceilings), as well as protecting external amenity areas;
- Encouraging the uptake of measures to decrease noise nuisance in the built environment, including working with Heathrow Airport to improve conditions for households and other noise-sensitive uses exposed to high levels of noise, consistent with the Aviation Policy Framework; and
- Considering the designation of Quiet Areas and identifying and protecting areas of tranquillity which have remained relatively undisturbed by noise and are valued for their recreational and amenity value for this reason.

3.3 Specific Acoustic Guidance: Noise

The brief requires consideration of the noise impacts associated with the proposed site in accordance with BS 7445-2:1991. This part of BS 7445 describes methods for the acquisition of data which provide descriptors that enable a description of the environmental noise in a specified area of land to be made in a uniform way so that the compatibility of any land use activity or projected activity to be assessed with respect to existing or predicted noise.

This is however a desktop assessment and does not consider survey data. The Standards as set out below are considered in accordance with the level of detail available for the desktop assessment for the Site. The Standards discussed below will however only be fully applied on the completion of baseline noise and/ or vibration surveys should the Site be progressed for development.

3.3.1 BS8233: 2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'

The Standard is mainly concerned with building design from an acoustic standpoint. It does however contain information relevant to environmental noise, more specifically by stating guidance for desirable internal noise levels for dwellings and other buildings.

With regard to external noise levels, BS8233: 2014 states that "*For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments*". However, it also recognises that these levels are not achievable in all situations and further states that "*In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces but should not be prohibited*".

3.3.2 Institute of Acoustics (IOA) Professional Practice Guidance on Planning and Noise New Residential Development

In June 2017, the '*ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development* (ProPG)' (Institute of Acoustics *et al*., 2017) was formally launched. The document was produced through a Working Group consisting of representatives of the Institute of Acoustics (IOA), Association of Noise Consultants (ANC) and Chartered Institute of Environmental Health (CIEH), together with practitioners from a planning and local authority background.

The ProPG Planning & Noise document sets out advice on establishing a site risk evaluation for new residential development that will be exposed predominantly to airborne noise from existing transport sources. The approach is also considered suitable where some industrial or commercial noise contributes to the acoustic environment, provided that it is not the dominant noise source. Where industrial and/or commercial noise is considered to be the dominant source then ProPG states that the guidance of BS 4142:2014 should be referred to.

The primary goal of the ProPG is to assist the delivery of sustainable development by promoting good health and wellbeing through the effective management of noise. It seeks to do that through encouraging a good acoustic design process in and around proposed new residential development having regard to national policy on planning and noise.

The ProPG has augmented the internal noise guidance provided in BS8233:2014 and advocates the internal noise levels presented in Table 2 below.

Table 2: ProPG Internal Noise Level Guidelines

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35dB $L_{Aeq,(16hour)}$	-
Dining	Dining room /area	40dB $L_{Aeq,(16hour)}$	-
Sleeping (Daytime resting)	Bedroom	35dB $L_{Aeq,(16hour)}$	30dB $L_{Aeq,(8hour)}$ 40dB $L_{AF\ Max,}$ (Note 4)
NOTE 1 The Table provides recommended internal L_{Aeq} target levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Ground-borne noise is assessed separately and is not included as part of these targets, as human response to ground-borne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.			
NOTE 2 The internal L_{Aeq} target levels shown in the Table are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the internal L_{Aeq} target levels recommended in the Table.			
NOTE 3 These internal L_{Aeq} target levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New Year's Eve.			
NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events (see Appendix A of ProPG).			
NOTE 5 Designing the site layout and the dwellings so that the internal target levels can be achieved with open windows in as many properties as possible demonstrates good acoustic design. Where it is not possible to meet internal target levels with windows open, internal noise levels can be assessed with windows closed, however any façade openings used to provide whole dwelling ventilation (e.g. trickle ventilators) should be assessed in the "open" position and, in this scenario, the internal L_{Aeq} target levels should not normally be exceeded, subject to the further advice in Note 7.			
NOTE 6 Attention is drawn to the requirements of the Building Regulations.			
NOTE 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal L_{Aeq} target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved. The more often internal L_{Aeq} levels start to exceed the internal L_{Aeq} target levels by more than 5 dB, the more that most people are likely to regard them as "unreasonable". Where such exceedances are predicted, applicants should be required to show how the relevant number of rooms affected has been kept to a minimum. Once internal L_{Aeq} levels exceed the target levels by more than 10 dB, they are highly likely to be regarded as "unacceptable" by most people, particularly if such levels occur more than occasionally. Every effort should be made to avoid relevant rooms experiencing "unacceptable" noise levels at all and where such levels are likely to occur frequently, the development should be prevented in its proposed form.			

3.4 Specific Acoustic Guidance: Vibration

The brief requires consideration of the vibration impacts associated with the proposed Site in accordance with BS ISO 4866:2010. BS ISO 4866 presents guidelines for the measurement of vibrations and evaluation of their effects on structures.

This is however a desktop assessment and does not consider survey data. BS 6472 - 1 as set out below have been used to consider noise constraints associated with the Site.

3.4.1 BS 6472 - 1: 2008 'Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting'

Structural vibration in buildings can be detected by the occupants and can affect them in many ways; their quality of life can be reduced, as can their working efficiency. BS 6472-1 provides best available information on the application of methods of measuring and evaluating vibration in order to assess the likelihood of adverse comment.

BS 6472-1:2008 describes how to determine the vibration dose value, VDV, from frequency-weighted vibration measurements. The vibration dose value is used to estimate the probability of adverse comment which might be expected from human beings experiencing vibration in buildings. BS 6472 sets out the threshold of vibration for humans together with the levels (below) that are considered acceptable for the time of day and night and for the type of activity or building use.

Table 3: Vibration Dose Value Ranges Which May Result in Various Probabilities of Adverse Comment in Residential Buildings (Source BS6472v- 1: 2008)

Place and Time	Low Probability of Adverse Comment $m.s^{-1.75}$ (1)	Adverse Comment Possible $m.s^{-1.75}$	Adverse Comment Probable $m.s^{-1.75}$ (2)
Residential Buildings 16-hour day	0.2 – 0.4	0.4 – 0.8	0.8 – 1.6
Residential Buildings 8-hour night	0.1 – 0.2	0.2 – 0.4	0.4 – 0.8
NOTE: For offices and workshops, multiplying factors of 2 and 4 respectively should be applied to the above vibration dose value ranges for a 16-hour day.			

4 Residential Feasibility Assessment

4.1 Introduction

It is specifically noted that the following site feasibility consideration is based purely on a desk-based study, and at this point is not supported by any on site monitoring or assessment in accordance with appropriate UK noise guidance.

Should the site be taken to planning, and a potential for noise risk be confirmed, further detailed noise study would be required to be undertaken.

In the absence of site-specific baseline noise data, the road traffic and rail noise maps produced by Defra are not intended for planning purposes or informing planning decisions; but have been consulted to provide an indication of noise contribution from road traffic and the possible constraints to development, particularly noise sensitive development such as residential, educational or health care facilities.

4.2 Potential Receptors

The proposal for the site is to develop for residential end use; however, the site layout and design are currently not concluded. Proposed development of the site would be considered in terms of the existing noise and vibration impacts on the site and the associated constraints.

4.3 Potential Development Constraints

Potential constraints that may impact the development of residential properties on this site include:

- The nearby A4 Great West Road runs approximately 225m to the north of the site and the A315 London Road runs 325m to the south. Potential daytime and night time noise from the A4 and A315 may be shielded by commercial and residential properties between the roads and the site, and hence the noise levels may be reduced slightly.
- The Hounslow Loop Railway Line runs approximately 100m to the north of the site and may contribute to the noise climate at the site, depending on the frequency of the trains and whether they are running through the night.
- There may be additional contributions to the noise climate from the other surrounding roads however the noise climate on these roads is not known.
- There is a potential for general activity noise associated with an area such as this, associated with human activities and natural noises.

4.4 Defra Noise Mapping

The Defra noise maps on this site show estimated levels of road traffic and railway noise according to the strategic noise mapping within agglomerations and along major transport routes. Noise levels were modelled on a 10m grid at a receptor height of 4m above ground. This data is a product of the strategic noise mapping exercise undertaken by Defra in 2019 to meet the requirements of the Environmental Noise Directive (Directive 2002/49/EC) and the Environmental Noise (England) Regulations 2006 (as amended).

The road traffic and rail noise maps produced by Defra are not intended for planning purposes or informing planning decisions; but have been consulted to provide an indication of noise contribution from road traffic and the possible constraints to development, particularly noise sensitive development such as residential.

4.4.1 Road Traffic Noise LAeq, 16 hour (daytime, 07:00 – 23:00)

The daytime $L_{Aeq,\ 16\text{-hour, day}}$ road noise contour produced by Defra indicated high road traffic levels along the A4 Great West Road and A315 London Road. However residential properties may shield some noise from the site, reducing the levels.

During the daytime, road traffic noise has potential to impact on internal noise levels as well as the amenity of garden areas. Residential development could be considered acceptable but further noise assessment would be required.



Figure 2: Defra LAeq 16-hour daytime road noise contour. Site 19 indicated by black marker.

4.4.2 Road Traffic Noise Lnight (23:00 – 07:00)

Night-time road traffic noise maps indicate medium noise levels on the A4 Great West Road and A315 London Road, with road traffic noise presenting a potential constraint to development in the areas immediately surrounding these roads. Night-time road traffic presents the potential for sleep disturbance and would therefore be of concern for residential development.



Figure 3: Defra Lnight road noise contour. Site 19 indicated by black marker.

4.4.3 Rail Noise LAeq, 16-hour (daytime 07:00 – 23:00)

Daytime rail noise maps indicate medium to high levels along the Hounslow Loop railway line and medium levels in the immediate vicinity. Bordering the railway line to the south is a number of residential properties that provide a level of screening, reducing the noise levels on the site (indicated by the black marker in Figure 4 below). Residential development could be considered acceptable but further noise (and potentially vibration) assessment would be required.



Figure 4: Defra LAeq 16-hour daytime rail noise contour. Site 19 indicated by black marker.

4.4.4 Rail Noise Lnight (23:00 – 07:00)

Night-time rail noise maps indicate low levels along the Hounslow Loop railway line and low levels in the immediate vicinity. There is the potential for northern parts of the site to be affected by noise from the railway line during the night which in turn may present the potential for sleep disturbance, especially in the case of residential developments.



Figure 5: Defra Lnight rail noise contour. Site 19 indicated by black marker.

The Defra rail noise maps do not indicate significant high impact associated with this section of the Hounslow Loop Railway line. The noise is confined to a narrow corridor along the line and is likely to be localised. The extent of the noise however would be informed by the completion of a baseline noise and vibration survey at the site.

5 Conclusions and Recommendations

5.1 Limitations

To date the assessment does not include site-based baseline surveys. The assessment only considers desk-based information sources such as the Defra Strategic Noise Maps. The road traffic and rail noise maps produced by Defra are not intended for planning purposes or informing planning decisions. The Defra noise maps consider large urban areas and major airports, roads and railways. A major road is defined in the Environmental Noise (England) Regulations, Regulation 3(8) as a road which the Secretary of State regards as a trunk road, or a motorway that is not a trunk road, or a principal or classified road that has more than three million vehicle passages a year - and he considers to be regional, national or international. The Defra noise maps do not represent all local noise sources.

Defra acknowledges that in England there have been fewer data available for road and rail traffic flow at night to date, meaning that the first set of night time noise maps are less accurate than day time noise maps. Defra therefore indicates that the strategic noise mapping provides no more than an indication of the night noise impact from road traffic.

5.2 Design Considerations

A noise and vibration assessment would need to be carried out in accordance with ProPG and BS 7445-2:1991. The baseline noise surveys would typically be agreed with the Environmental Health Officer (EHO) for the Council. The need for vibration surveys would need to be confirmed during the consultation with the EHO. Vibration surveys would only be required should existing receptor locations along the railway line be experiencing rail generated vibration effects.

The assessment would consider the final site layout and detailed design so as to:

- Confirm whether there is any acoustic mitigation requirement;
- Ensure appropriate façade mitigation measures (glazing specification) to ensure that internal noise climates are acceptable and determine where trickle vents or mechanical ventilation will be required;
- Consider layout to ensure that noise is controlled to avoid locating external sensitive areas in positions exposed to noise sources such as local roads; and
- Provide for acoustic screening where necessary either through optimum placement and design of intervening buildings (layout options) or specific acoustic fencing/screening.

The noise assessment will be informed by baseline noise surveys. The noise surveys are subject to agreement with the local planning authority and will also require suitable weather conditions.

The assessment would inform the layout of the site to ensure internal and external amenity for future residents.

5.3 Construction Considerations

The construction noise and vibration impacts will be temporary in nature, occurring for the duration of works only. The level of noise will depend on the construction method and plant used; the resulting impacts would also be dependent upon the duration of the works, the time of day the works are taking place and the proximity of construction works to receptor locations.

As required by the Control of Pollution Act 1974 (CoPA) (Ref 10.1), “Best Practicable Means” (BPM) will be employed by the Contractor throughout construction in relation to the construction methodologies adopted, the selection of plant and equipment and the employment of suitably trained and qualified personnel.

There are various physical mitigation measures that can be considered to assist in reducing noise impacts. These key measures include:

- Restricting construction works to Core Hours (weekday 0800-1800 and Saturday 0800 – 1300);
- Careful selection of plant and construction methods. Only plant conforming to relevant national, European Union or international standards, directives and recommendations on noise and vibration emissions will be used; and,
- Design and use of acoustic screening measures where practicable and necessary, at the earliest opportunity to meet any noise limits that may be agreed with the Council.

Much of the area surrounding the site is residential and so measures will need to be taken in order to cause the least disruption possible to those surrounding the site.

5.4 General Conclusions

Based upon the desk-based assessment undertaken to date, it is concluded that residential development on the Site would not be out of character with current land use in the area. Further assessment would however be required should the Site be progressed for development.

The assessment would include baseline surveys for noise and possibly vibration. The need for vibration surveys would need to be based on consultation with the EHO and a site assessment to determine whether the nearby railway line presents a source of vibration on site.

The baseline surveys will quantify the prevailing noise climate and ensure any proposed residential development complies with the Professional Practice Guidance on Planning and Noise New Residential Development. The baseline surveys and detailed noise and vibration assessment would inform detailed site layout and design so as to mitigate noise and vibration as and where required.

6 References

1. National Planning Policy Framework, Department for Communities and Local Government (2019)
2. The Noise Policy Statement for England (NPSE) (Ref 2);
3. Technical Guidance to the Implementation of the NPPF (PPG Noise) (Department for Communities and Local Government, 2012).
4. London Borough of Hounslow Local Plan. 2015 – 2030 (Adopted 15th September 2015).
5. BS8233: 2014 'Guidance on Sound Insulation and Noise Reduction for Buildings';
6. 'ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development (ProPG Planning & Noise) (Institute of Acoustics, Association of Noise Consultants, and Chartered Institute of Environmental Health (2017);
7. BS 7445-2:1991, ISO 1996-2:1987 Description and measurement of environmental noise. Guide to the acquisition of data pertinent to land use.
8. BS ISO 4866:2010 Mechanical vibration and shock. Vibration of fixed structures. Guidelines for the measurement of vibrations and evaluation of their effects on structures;
9. BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting;
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Arcadis (UK) Limited

Arcadis House
34 York Way
London
N1 9AB
United Kingdom

T: +44 (0)20 7812 2071

arcadis.com