SHARPS REDMORE

ACOUSTIC CONSULTANTS • Established 1990

Report

The Warehouse, St Leonards Road, East Sheen SW14 7LY

Noise Assessment, Permitted Development Application Warehouse to Residential Use B8-C3

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1.0 Introduction

1.1 Sharps Redmore has been instructed by James Lloyd Associates with respect to a permitted development of The Warehouse, St Leonards Road, East Sheen, SW14 7LY (The proposal) for residential end use.

1.2 The proposal is currently a single storey warehouse property with existing planning use class B8 consent. Under general permitted development rights, no planning application is necessary in order to change the use of the building between Use Class B8 – and Planning Use Class C3 – Dwelling houses.

1.3 On April 15th 2015, changes to the Town and Country Planning (General Permitted Development) (England) Order 2015 (GPDO) came into force. These amendments included changes to prior approval requirements with respect to the change in use from Class B8 (storage or distribution centre) to Class C3 dwelling houses as follows:

"P.2.—(1) Development under Class P is permitted subject to the condition that before beginning the development, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to —

(i) impacts of air quality on the intended occupiers of the development;

(ii) transport and highways impacts of the development,

(iii) contamination risks on the site,

(iv) flooding risks on the site,

(v) noise impacts <u>of</u> the development;

(vi) impact on the sustainability of the provision of existing storage or distribution services in the area.

and the provisions of paragraph W (prior approval) apply in relation to that application.

1.4 Sharps Redmore have therefore assessed the proposal site and immediate surrounding area for premises where sound from the development may need consideration with respect to the proposed residential end use, and meeting national and local planning policy objectives and acoustic standards.

1.5 This report is supplied with respect to seeking implementation of Class "P" of the GPDO without the need for prior approval by LB Richmond upon Thames for the proposed change of use for the Warehouse to residential end use and specifically with reference to noise impact of the proposed development.

1.6 The relevant assessment criteria for sound sources identified are broadly set out in Section 2, and the site is described in more detail within Section 3, together with observations, assessment and background sound survey details and results. Finally the conclusions are made in Section 4.

2.0 Assessment Criteria

2.1 The legislative context for this assessment is The Town and Country Planning (General Permitted Development) (England) Order 2015. An explanatory memorandum was published by the Department for Communities and Local government which considers the prior approval process with respect to noise impacts of the development. The essence of the GPDO and the creation of new PD rights is to enable businesses to make the best use of their premises which in part may deliver more homes.

2.2 The permitted development and prior approval requirements are set out in the Introduction of this report. Available guidance is limited at this stage as to the requirements for prior approval however the National Planning Practice Guidance (6th March 2014) provides the following advice with respect to the approach and level of details perhaps needed for prior approval:

"The statutory requirements relating to prior approval are much less prescriptive than those relating to planning applications. This is deliberate, as prior approval is a light-touch process which applies where the principle of the development has already been established. Where no specific procedure is provided in the General Permitted Development Order, local planning authorities have discretion on what processes they put in place. It is important that a local planning authority does not impose unnecessarily onerous requirements on developers, and does not seek to replicate the planning application system."

(http://planningguidance.communities.gov.uk/blog/guidance/when-is-permission-required/what-are-permitted-development-rights/)

2.3 In the absence of specific guidance in permitted development cases, then it is considered that the principles of National Planning Policy and particularly specific requirements within Local Planning Policies with respect to noise are relevant.

National Policy

2.4 Though the prior approval system is intended as a light touch process and not to replicate the planning system, the aims of national planning policy with respect to noise are relevant and therefore should be considered for new development.

2.5 The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England and "these policies articulate the Government's vision of sustainable development." In respect of noise, Paragraph 123 of the NPPF states the following:

"Planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts$_{27}$ on health and quality of life as a result of new development;
- mitigate and reduce to a minimum other adverse impacts$_{27}$ on health and quality of life arising from noise from new development, including through the use of conditions;

- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restriction put on them because of changes in nearby land uses since they were established;[28] and

- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

27 See Explanatory Note to the Noise Policy Statement for England (Department for the Environment, Food and Rural Affairs).

28 Subject to the provisions of the Environmental Protection Act 1990 and other relevant law.

2.6 The NPPF reinforces the March 2010 DEFRA publication, "Noise Policy Statement for England" (NPSE), which states three policy aims, as follows:

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

- avoid significant adverse impacts on health and quality of life;

- mitigate and minimise adverse impacts on health and quality of life; and

- where possible, contribute to the improvement of health and quality of life."

2.7 This report assesses the noise impact of the proposed development further to advice within the GPDO and supporting advice memorandum with regard to the above criteria.

2.8 It is possible to apply objective standards to the assessment of noise and the design of new dwellings which should seek to achieve these objective standards. Such guideline values are given in the World Health Organisation (WHO) document "Guidelines for Community Noise" and within British Standard, BS 8233:2014 which is principally intended to assist in the design of new dwellings although the criteria provide a basis for robust assessment of the impact of the proposal .

2.9 The WHO guideline values are appropriate to what are termed "critical health effects". This means that the limits are at the lowest noise level that would result in any psychological, physiological or sociological effect. They are, as defined by NPSE, set at the Lowest Observed Adverse Effect Level (LOAEL), but do not define the level above which effects are significant (the SOAEL). Compliance with the LOAEL should, therefore, be seen as a robust aim.

2.10 The national interpretation of the WHO guidelines is contained in BS 8233:2014 'Sound Insulation & Noise Reduction for Buildings'. BS 8233 recommends the following desirable guideline values for internal ambient noise:

Table 4 **Indoor ambient noise levels for dwellings**

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	—
Dining	Dining room/area	40 dB $L_{Aeq,16hour}$	—
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

2.11 There is no longer a L_{Amax} standard for bedrooms In BS 8233. However, footnote 4 to Table 4 states that "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 this case, it is proposed that the previous BS 8233 internal standard (also referenced in World Health Organisation Guidelines for Community Noise) is applied. This is 45 dB L_{Amax}, inside bedrooms.

2.12 Although prior approval should be a light touch process as described in National Planning Practice Guidance, the national planning policies with respect to noise and relevant standards can still be applied to the consideration of noise impact from the proposed residential pursuant to the spirit of the GPDO.

3.0 Site Description, Survey and Assessment

3.1 The proposal is currently a single storey warehouse property sited to the rear of 1 St Leonards Lane and 48-50 Sheen Lane, East Sheen, SW14 7LY. The proposal is a metal clad structure accessed via a shared vehicle access road between 1 St Leonards Road and 42B Sheen Lane. The proposal is sited within a mixed residential/retail and commercial use area. (Shown as Figure A1, Appendix A)

3.2 The proposal site is located to the rear of a mixed commercial/residential development along Sheen Lane with ground floor commercial/retail and residential flats above, sited to the north of Sheen Health Centre. Residential properties are to the east and north of the site, with Mortlake railway station approximately 150m to the north.

3.3 A survey was carried out at the site of the proposal over a period of approximately 24 hours between Wednesday 3rd and Thursday 4th August 2016.The weather conditions were generally cloudy with a light SW breeze. The temperature was approximately 20^{o}C during the day. The monitoring position was outside the existing warehouse adjacent to the car park serving the Sheen Lane Health Centre as shown below as MP1 to be indicative of levels at the proposed development and existing residential on Sheen Lane.

3.4 A Norsonic 118 type 1 sound level meter was deployed at MP1 for the duration of approximately 24 hours. The meter was calibrated at the start and end of measurements and no significant measurement drift was noted. The meter was set to measure over 15 minute time periods and record the parameters L_{Aeq}, L_{Amax} and L_{A90}.

3.5 Manned visits were carried out at times throughout the survey period and observations noted. The existing sound environment is dominated by noise associated with road traffic on Sheen Lane and local traffic on St Leonards Road. Aircraft noise from Heathrow was evident and commenced at approximately 0500 as can be seen on the graphical summary of results. General town centre noise is evident, with pedestrian footfall, shouting, emergency sirens and other local businesses activities typical of a town centre environment with occasional traffic at the proposal area along the access lane. The nearest existing noise sensitive properties are approximately 20m to the east above the commercial premises on Sheen Lane.

3.6 A summary of results from the sound level meter left in position over the 24 hour period are shown at Appendix B. below in graphical form (full survey results are available if required).

3.7 The log average L_{Aeq} for the daytime survey is 62 dB as measured at MP1. Ambient noise levels are dominated by consistent road traffic noise from Sheen Lane and aircraft flyovers. L_{Amax} levels are determined by passing motorbikes, busses, HGV or emergency vehicle sirens. The log average for night time ambient levels L_{Aeq} is 56dB. Representative background (L_{A90}) levels were 50dB during the day and 41dB at night time.

3.8 In consideration of noise impact **of** the development for the purposes of the permitted development under the GPDO, it is necessary to compare levels at the existing warehouse and activities with that of the predicted levels from a residential end use. The warehouse is currently in use during normal working hours. It is understood that there are currently in the region of 12 vehicle movements a day associated with the current warehouse activity together with around two 7.5 tonne tail lift vehicles per week.

3.9 Changes in noise levels of less than 3 dBA are not perceptible under normal conditions and changes of 10 dB are equivalent to a doubling of loudness. This guidance has been accepted by Inspectors, at Inquiry, to encompass changes in noise levels in the index $L_{Aeq,T.}$ and the following table shows the response to changes in noise level (known as the Semantic Scale).

Change in noise level L_{AeqT} dB	Response	Impact
<3	Imperceptible	None
3 - 5	Perceptible	Slight
6 - 10	Up to a doubling	Significant
11 – 15	More than a doubling	Substantial
> 15	-	Severe

3.10 Given the proposed residential end use for the site the traffic movements outlined in 4.12 above will no longer occur and any vehicle movements relating to the development will be minimal. It is understood from the applicants that there is no reserved parking at the proposal and use will be made available of the parking allocation associated with the site in East Sheen.

3.11 It is considered therefore that there will be an overall reduction in noise levels from the site representing betterment for the nearby residents on Sheen Lane and surrounding area, given the existing ambient and background levels from transport noise in the area as summarised in Appendix B below.

3.12 Although road traffic noise is not considered a factor in the permitted development process, the selection of appropriate acoustic glazing to ensure desirable internal noise guideline values in line with BS8233:2014 as discussed in 2.10 and 2.11 above will also provide adequate attenuation for the transport noise in the area. Exact glazing specification is not required or known at this stage, however this could be provided by a suitably worded planning condition.

3.13 It is considered that given commensurate mitigation to the proposal, the site will be suitable for residential end use in line with similar nearby developments and there will be no adverse impact from noise from the proposal in accordance with the GPDO. A full scheme for glazing specification can be devised at detailed/reserved matters stage, for approval by the local authority. A planning condition on this proposal requiring certain internal design standards to be met as discussed in 2.10 above in accordance with BS 8233:2014 and a glazing scheme to achieve that performance to be submitted for prior approval by the local authority could be appropriate.

4.0 Conclusions

4.1 A sound assessment has been made with respect to the residential proposal at The Warehouse, East Sheen, and a permitted development application to change the use from warehouse to residential under the Town and Country Planning (General Permitted Development) Order 2015.

4.2 The Order requires the developer to apply to the LPA for determination as to whether prior approval is required for (amongst other factors) the noise impacts of the development under Paragraph P2 (b)(v) of the Order. Given the overall reduction in noise levels and existing ambient and background levels in the area, this development will have zero impact on the surrounding area and consequently would not require prior approval for the impacts of noise.

4.3 Residential dwellings already exist in proximity to the proposal. Following an attended and unattended site survey, it is considered that noise from the proposal will not give rise to adverse noise impacts from the use The Warehouse for residential purposes.

4.4 Consideration has been given to a condition requiring an appropriate glazing specification to enable appropriate internal levels to be met to provide a desirable standard as per BS8233:2014. Whilst not part of the PD process, a glazing specification to deal with transport noise in the area to meet these standards is considered appropriate.

4.5 As stated in National Planning Practice Guidance, "*prior approval is a light-touch process which applies where the principle of the development has already been established*". In this case, it is considered that The Warehouse could be permitted to change to residential end use (Planning Use Class C3)and will not cause significant harm from adverse impacts on health and quality of life of future residents in accordance with the policy aims of the National Planning Policy Framework (NPPF paragraph 123), NPSE and local policy.

APPENDIX A

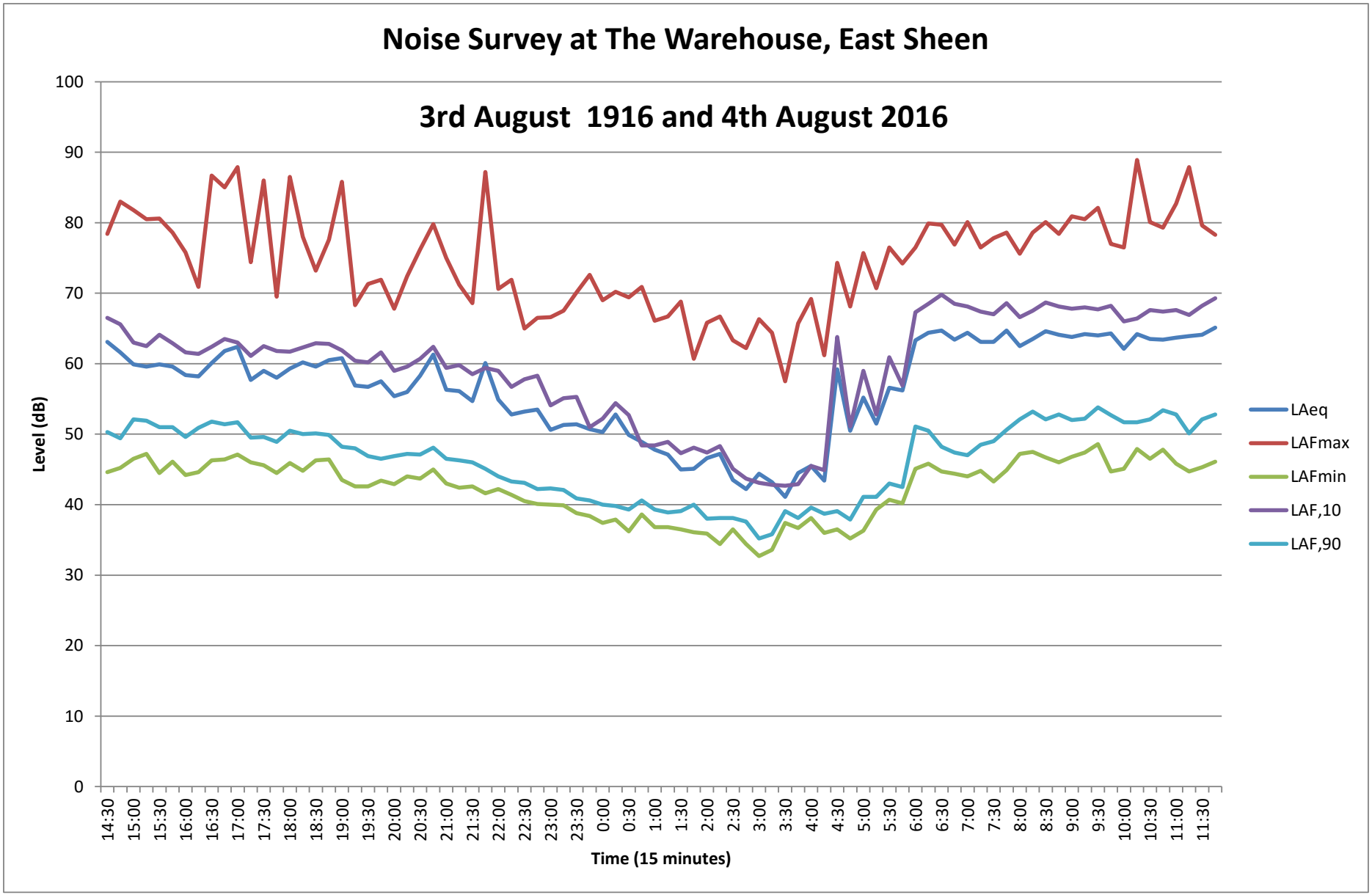
PLANS

Figure A1. Aerial Location plan of The Warehouse site and surroundings:


St Leonards Road
SW14 7LY
Sheen Lane
The Warehouse MP1
Google earth
1945
Imagery Date: 6/4/2015 51°27'59.32" N 0°16'00.55" W elev 23 ft eye alt 979 ft

APPENDIX B

GRAPHICAL SUMMARY OF SITE SURVEY


Noise Survey at The Warehouse, East Sheen
3rd August 1916 and 4th August 2016
Level (dB)
100
90
80
70
60
50
40
30
20
10
0
14:30
15:00
15:30
16:00
16:30
17:00
17:30
18:00
18:30
19:00
19:30
20:00
20:30
21:00
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1:00
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3:00
3:30
4:00
4:30
5:00
5:30
6:00
6:30
7:00
7:30
8:00
8:30
9:00
9:30
10:00
10:30
11:00
11:30
Time (15 minutes)
LAeq
LAFmax
LAFmin
LAF,10
LAF,90

APPENDIX C

ACOUSTIC TERMINOLOGY

Acoustic Terminology

1. Noise, defined as unwanted sound, is measured in units of decibels, dB. The range of audible sound is from 0 dB to 140 dB. Two equal sources of sound, if added together will result in an increase in level of 3 dB, i.e. 50 dB + 50 dB = 53 dB. A 10 dB increase in sound is perceived as a doubling of loudness.

2. Frequency (or pitch) of sound is measured in units of Hertz. 1 Hertz = 1 cycle/second. The range of frequencies audible to the human ear is around 20 Hz to 18000 Hz (or 18 kHz). The capability of a person to hear higher frequencies will reduce with age. The ear is more sensitive to medium frequency than high or low frequencies.

3. To take account of the varying sensitivity of people to different frequencies a weighting scale has been universally adopted called "A-weighting". The measuring equipment has the ability to automatically weight (or filter) a sound to this A scale so that the sound level it measures best correlates to the subjective response of a person. The unit of measurement thus becomes dBA (decibel, A-weighted).

4. The second important characteristic of sound is amplitude or level. Two units are used to express level a) sound power level - Lw, and b) sound pressure level - Lp. Sound power level is an inherent property of a source whilst sound pressure level is dependent on surroundings/distance/directivity etc. The sound level that is measured on a meter is the sound pressure level, Lp.

5. External sound levels are rarely steady but rise or fall in response to the activity in the area - cars, voices, planes, birdsong, etc. A person's subjective response to difference noises has been found to vary dependent on its temporal distribution (i.e. its variation with time). For this reason, a set of statistical indices have been developed.

6. There are four main statistical indices in use in the UK:

   L_{A90} The sound level (in dBA) exceeded for 90% of the time. This unit gives an indication of the sound level during the quieter periods of time in any given sample. It is used to describe the "background noise level" of an area.

   L_{AeqT} The equivalent continuous sound level over a period of time, T. this unit may be described as "the notional steady noise level that would provide, over a period, the same energy as the varying noise in question" (In other words, the energy average level). This unit is now used to measure a wide variety of different types of noise of an industrial or commercial nature, as well as road traffic, aircraft and trains.

   L_{A10} The sound level (in dBA) exceeded for 10% of the time. This level gives an indication of the sound level during the noisier periods of time in any given sample. It has been used over many years to measure and assess road traffic noise.

   L_{AMAX} The maximum level of sound, i.e. the peak level of sound measured in any given period. This unit is used to measure and assess transient noises, i.e. gun shots, individual vehicles, etc.