Central Somers Town CIP

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Plot 1 Community Facilities - Noise Impact Assessment

Revision E

DECEMBER 2015

Somers Town Community Investment Programme

Camden

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ISSUE HISTORY

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A	12/10/2015	Draft issue - Revision A
B	2/11/2015	Planning submission
C	3/11/2015	Planning submission – re-issue
D	10/11/2015	Planning submission – re-issue
E	12/11/2015	Planning submission – re-issue

MAX FORDHAM LLP TEAM CONTRIBUTORS

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CONTENTS

1.0 INTRODUCTION

Max Fordham LLP (MFLLP) has been appointed to provide advice in relation to acoustic matters at a proposed Central Somers Town Plot 1, Community Hub and Housing development, at Chalton Street, London NW1. The proposed development includes a Nursery (on the Chalton Street façade) and Community Hub at ground floor level, with 5 storeys of residential flats above the Nursery facilities.

The objectives of this report are to assess:

- The likely impact of the proposed development on nearby noise sensitive premises; and
- The likely impact of the existing noise environment on the development.

The following statement has been prepared on behalf of the London Borough of Camden in support of a planning application for the redevelopment of Central Somers Town.

Project Background and Masterplan
The redevelopment of Central Somers Town is led by the Department for Children, Schools and Families and will be delivered as part of an approved regeneration strategy to deliver significant improvements to the public realm, provide a replacement primary school, nursery, play facilities and community hall. The development will also provide 136 housing units as well as maximising the amount of affordable housing which can be delivered by the scheme. Central to the development is the provision of public open space across the site. This space will be greatly improved as a result of the proposals and there will be no net loss of area following completion of the scheme.

The Central Somers Town project is self-funding, with the receipts from the private sale housing used to cross subsidise the delivery of the public realm, Edith Neville Primary School, nursery, community play facilities and community hall, in line with the wider vision for the Central Somers Town area.

This development is coming forward as part of the Community Investment Programme (CIP) which is a strategic programme focussed on ensuring the best use of the Council's assets to improve, shape and transform key places and services within Camden, whilst simultaneously addressing a critical capital funding gap. The programme includes a significant number of regeneration schemes across the Borough and involves the disposal of property assets that are surplus to requirements in order to unlock funding that will be reinvested in schools, the Better Homes programme and other supporting community infrastructure.

The reduction in government funding, including the money no longer available for schools, means that the Council has to be more innovative in how they make the best use of buildings and land to improve facilities. Working across the Council a borough-wide strategy has been initiated called 'The Community Investment Programme' (CIP) with the purpose of addressing this funding shortfall. The programme is making an important contribution to the delivery of objectives within the Camden Plan, particularly through harnessing the benefits of economic growth, tackling inequality, investing in communities to secure sustainable neighbourhoods and delivering value for money.

Under the CIP there are a number of objectives which need to be achieved:

- *High quality schemes achieving high sustainability standards, including minimum BREEAM 'Excellent' ratings;*
- *Deliver 'fit for purpose' community facilities;*
- *Reduce revenue and capital costs through the efficient use of land and buildings;*
- *Increase revenue and capital value;*
- *Deliver affordable and private homes;*
- *Deliver improved public realm*

Central Somers Town CIP

The Council has a significant property portfolio in the Somers Town area. Primarily this is made up of residential stock but also includes schools, a play project, children's centres and nurseries. These facilities provide an important service to children and their families and form an important part of bringing the wider community together. The area also contains two distinctive areas of public open space, these being Polygon Open Space and Purchese Open Space, which are maintained by the Council and provide a key component in how Somers Town functions as a place to live and work.

Central to the CIP is the Edith Neville Primary School and Children's Centre which were constructed as buildings with a short life expectancy. Remedial works have been necessary (both planned and unplanned) to keep it in service but the pressing need for replacement has been widely agreed for a considerable period of time.

Central Somers Town area is being addressed strategically as part of the CIP to tackle the significant need for investment. The scheme is intended to be self-funding, with the provision of residential development being utilised to pay for the redevelopment of the primary school and community facilities. It will also be possible to provide wider benefits through the delivery of an element of new affordable housing as well as public realm and public open space improvements.

2.0 THE SITE

The site is located at the junction of Chalton Street and Polygon Road in Somers Town, London NW1. The noise environment is relatively benign, being a largely residential area, with low levels of traffic on Chalton Street. The existing facilities are shown in Figure 2. The locations of the noise surveys are also shown (discussed below). The Plot 1 proposed buildings will have a façade to Chalton Street. See Figure 3 for indicative ground floor and upper floor plans.

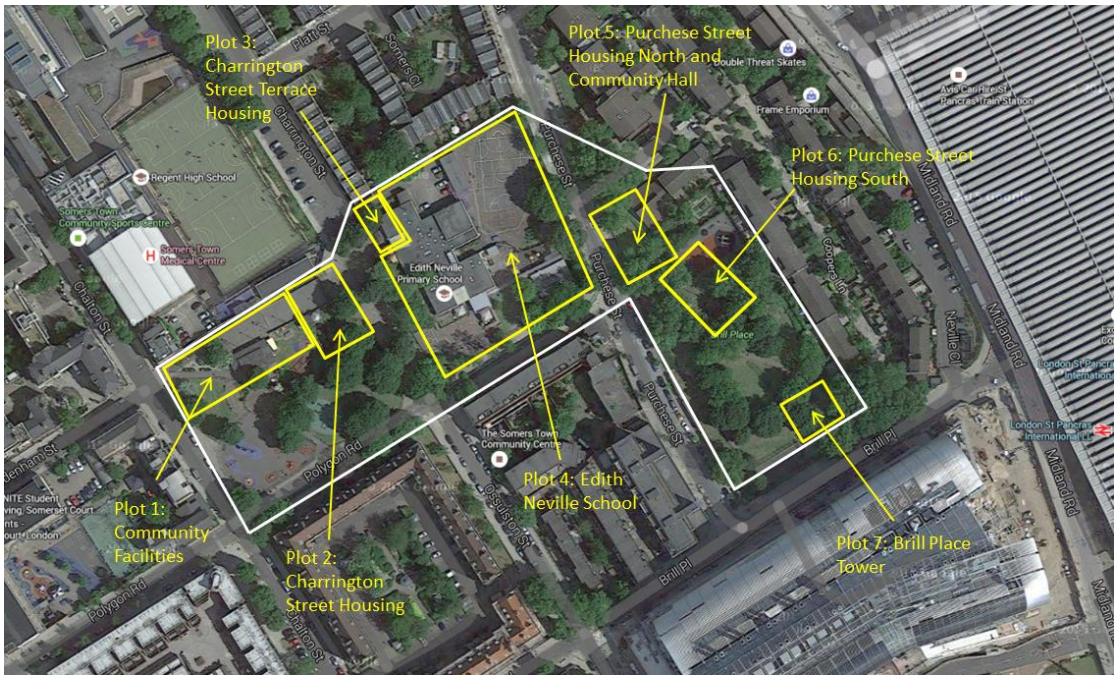

Figure 1: An aerial image of the existing site of the CIP identifying individual plots

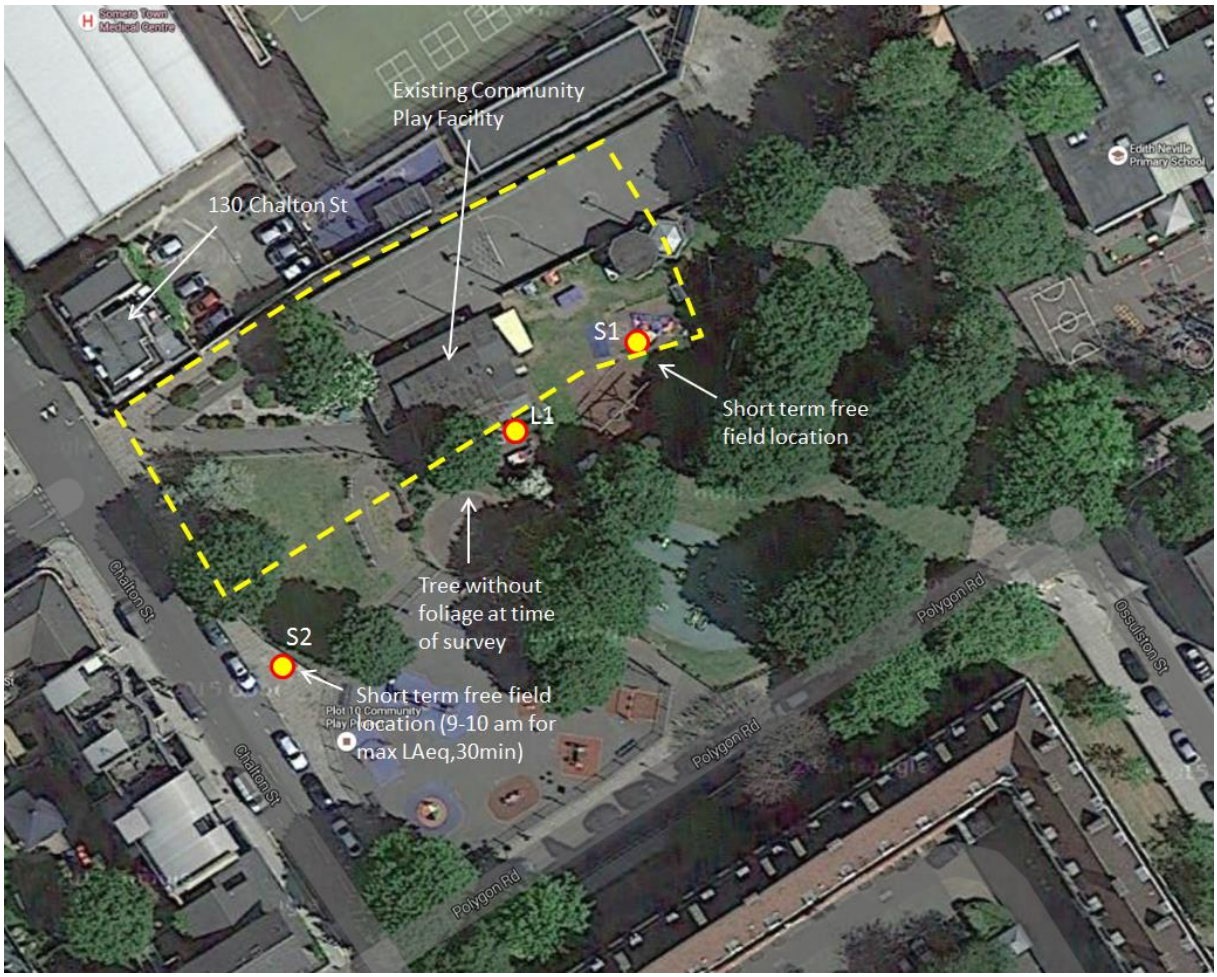

Figure 2: Aerial image of site (Courtesy Googlemaps) and noise survey locations (see Appendix A for photo of L1 location)

Figure 3: Footprint of proposed development. Top: ground floor. Bottom: upper floors showing indicative residential footprint (5 storeys) above Nursery, and MUGA area above Community Play Facility. Drawing as submitted for planning, 30/04/2015

3.0 ASSESSMENT CRITERIA

3.1 Local Authority Requirements

The site is located within the London Borough of Camden. The Camden Council Local Development Framework (LDF) sets out the planning criteria for noise and vibration used to determine applications for planning permission in the borough. An extract of the sections relevant to this development is provided below.

Table A: Noise levels on residential sites adjoining railways and roads at which planning permission will not be granted

Noise description and location of measurement	Period	Time	Sites adjoining railways	Sites adjoining roads
Noise at 1 metre external to a sensitive façade	Day	0700-1900	74 dB L_{Aeq},12h	72 dB L_{Aeq},12h
Noise at 1 metre external to a sensitive façade	Evening	1900-2300	74 dB L_{Aeq},4h	72 dB L_{Aeq},4h
Noise at 1 metre external to a sensitive façade	Night	2300-0700	66 dB L_{Aeq},8h	66 dB L_{Aeq},8h

Table B: Noise levels on residential streets adjoining railways and roads at and above which attenuation measures will be required

Noise description and location of measurement	Period	Time	Sites adjoining railways	Sites adjoining roads
Noise at 1 metre external to a sensitive façade	Day	0700-1900	65 dB L_{Aeq},12h	62 dB L_{Aeq},12h
Noise at 1 metre external to a sensitive façade	Evening	1900-2300	60 dB L_{Aeq},4h	57 dB L_{Aeq},4h
Noise at 1 metre external to a sensitive façade	Night	2300-0700	55 dB L_{Aeq},1h	52 dB L_{Aeq},1h
Individual noise events several times an hour	Night	2300-0700	>82 dB L_{Amax} (S time weighting)	>82 dB L_{AMAX} (S time weighting)

Table E: Noise levels from plant and machinery at which planning permission will not be granted

Noise description and location of measurement	Period	Time	Noise level
Noise at 1 metre external to a sensitive façade	Day, evening and night	0000-2400	5dB(A) <LA90
Noise that has a distinguishable discrete continuous note (whine, hiss, screech, hum) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise that has distinct impulses (bangs, clicks, clatters, thumps) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise at 1 metre external to sensitive façade where LA90>60dB	Day, evening and night	0000-2400	55dBL_{Aeq},

Note, for the site under consideration, the Table B limits of 62 dB $L_{Aeq,12hr}$ (day), 57 dB $L_{Aeq,4hr}$ (evening) and 52 dB $L_{Aeq,8hr}$ (night), and no more than 82 dB L_{ASmax} (night), represent the noise levels below which standard construction techniques and normal natural ventilation strategies would be expected.

3.2 BS 8233:2014

BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings sets out desirable limits for internal ambient noise levels for dwellings from steady external noise sources (see Table 1).

Activity	Location	07:00-23:00	23:00-07:00
Resting	Living room	35 dB $L_{Aeq,16h}$	–
Dining	Dining room / area	40 dB $L_{Aeq,16hr}$	–
Sleeping	Bedrooms	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$

Table 1: Proposed indoor ambient noise limits (from BS 8233:2014 Table 4)

It is proposed that the levels in BS 8233:2014 are adopted as the basis for assessing the façade sound insulation requirements.

Note, the key noise limit of night time bedroom noise level agrees with the Mayor's preferred standard set out in the Mayor's Sustainable Design and Construction SPG (2006), which aligned with the now superseded BS 8233:1999 'good' standards.

3.3 Building Regulations

The Building Regulations Approved Document E 2003 (incorporating 2004, 2010, 2013 and 2015 amendments) applies to the residential element of the Plot 1 development. Key requirements of Approved Document E detail the minimum acceptable airborne sound insulation and maximum impact noise performance standards.

It is proposed that a performance uplift of 5 dB with respect to the airborne sound insulation and impact noise performance is targeted for the residential flats in the Plot 1 development.

Note, the 5 dB uplift over Approved Document E standards also aligns with the Mayor's preferred standards set out in the Mayor's Sustainable Design and Construction SPG (2006).

3.4 BB93 (2014)

The design of a primary or secondary school falls under requirement E4 of the Building Regulations Approved Document E 2003 (incorporating 2004, 2010, 2013 and 2015 amendments) which states "*E4. (1) Each room or other space in a school building shall be designed and constructed in such a way that it has the acoustic conditions and the insulation against disturbance by noise appropriate to its intended use.*" The Secretary of State's recommended way of satisfying this requirement is by designing the school's acoustics to the guidance in Building Bulletin 93 (BB93). A revised BB93 document, *Acoustic design of schools: performance standards*, was published in December 2014 (most recent version of the document available at time of writing, version V17 February 2015).

A nursery facility is exempt from requirement E4 of the Building Regulations Approved Document E, and thus BB93. However, the performance standards outlined in BB93 (which does make reference to 'nursery school rooms') are potentially useful and appropriate for design purposes, and are requirements under the Hea 05 *Acoustic Performance* credit of BREEAM New Construction Non-Domestic Buildings 2014.

3.5 BS 4142 (2014)

BS 4142:2014 *Methods for rating and assessing industrial and commercial sound*, has now replaced BS 4142:1997. In BS 4142:1997 plant noise ratings were compared with the existing local background noise levels, and if the rating level was more than 10 dB below the measured background noise level then this would be a positive indication that complaints are unlikely.

In BS 4142:2014, a noise rating is still determined and compared with the existing local background sound level (i.e. as before) although several more cumulative acoustic feature corrections to the noise rating are available to apply where appropriate. For example if the noise includes a distinguishable tone, impulse, intermittency or other readily distinguishable sound characteristic, then additional *cumulative* penalties individually ranging from 0 to 9 dB may be applied depending on the type of noise.

BS 4142:2014 seeks to determine a "representative" background sound level, stating that "…*the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods*".

The assessment of the impact depends upon the margin by which the rating level of the specific sound source exceeds the background sound level (i.e. as before) but also promotes a consideration of the context in which the sound occurs when making an assessment. BS 4142:2014 states that an initial estimate of the impact of the specific sound is made by subtracting the measured background sound level from the rating level, while considering the following points:

a) Typically, the greater this difference, the greater the magnitude of the impact.
b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

Note then, a BS 4142:2014 assessment may deduce a low impact where the specific sound level is approaching the background sound level, and thus may conclude that the specific noise is acceptable.

4.0 NOISE SURVEY

4.1 Procedure

A long term unattended noise survey (approx. 64 hours) was conducted at the site of the existing Community Facilities building on 23-26 April 2015 by Max Fordham LLP Acoustics Team (survey undertaken by Neil McBride MIOA) in order to determine typical mean (L_{Aeq}) and background (L_{A90}) sound levels in the vicinity of the proposed buildings.

Additionally, a short term attended survey was also carried out on Chalton St on 11 May 2015 between 9-10 am, at the location of the proposed Chalton Street nursery/residential façade, in order to determine the likely worst case nursery-hours ambient noise incident on the Chalton Street façade, and inform a transfer function between the L1 and S2 locations.

All noise measurements were made with a Norsonic 118 precision sound level analyser with a Norsonic weather protection kit. This equipment complies with BS EN IEC 61672 class 1. The meter uses a Nor 1225 free-field response microphone and NOR 1206 microphone pre-amplifier. The sound level meter was field-calibrated at the beginning and end of measurements with a Nor 1251 sound calibrator, complying with BS EN IEC 60942 class 1. No significant calibration deviation occurred. Details of the equipment are given in Appendix A. The survey procedures were consistent with BS 7445.

Ideally, a microphone position at the location of the proposed Chalton Street façade would have been most appropriate for a direct measurement of the worst case noise environment. However, such a location was considered too exposed for leaving equipment unattended over several days.

Fortunately, the perimeter fencing around the existing Community building is slatted, with 1-3 cm openings, resulting in the fence providing some visual security when viewed from a distance, but being essentially acoustically transparent. Thus the location L1 (see Figure 2 and the photo in Appendix A) was selected as the reasonable location for the long term survey location.

A check was undertaken as to whether the location L1, which was fairly close to the existing single storey building, was representative of a free field measurement. To do this, a second sound level meter was located at S1 (Figure 2) which was far enough from any facades/fences to be considered as a free field location. Comparison of a set of consecutive simultaneous $L_{Aeq,30s}$ measurements showed that the mean sound pressure levels detected at L1 and S1 were the same to the nearest dB. (It is possible that at L1, any slight shielding effect from the nearby building was offset by modest increased reflections.) Thus the L1 data is considered adequate for representing free field conditions for the long term survey, and the location is appropriate for determination of the representative background sound levels for consideration of plant noise limits.

For the duration of the long term survey the weather was generally dry (a rain shower occurred at the very end of the recording period) with light winds. The weather conditions are not considered to have had a significant impact on the noise survey results.

4.2 Results

The time history of the results from the long term survey (at location L1) is shown in Figure 4. Derived mean values from the data are presented in Table 2. Mean noise levels of 54 dBA $L_{Aeq,16hr}$ (day) and 46 dBA $L_{Aeq,8hr}$ (night) are derived. The night time 90th percentile $L_{Amax,15mins}$ level is also reported.

The Chalton Street survey (location S2) yielded an ambient noise level of 54 dBA $L_{Aeq,1hr}$ with derived worst case $L_{Aeq,30min}$ value likely being up to 56 dBA (this value being an appropriate level to adopt for the design of the Nursery Flexible Space during school hours).

Representative L_{A90} background sound levels are discussed below in Section 4.4.

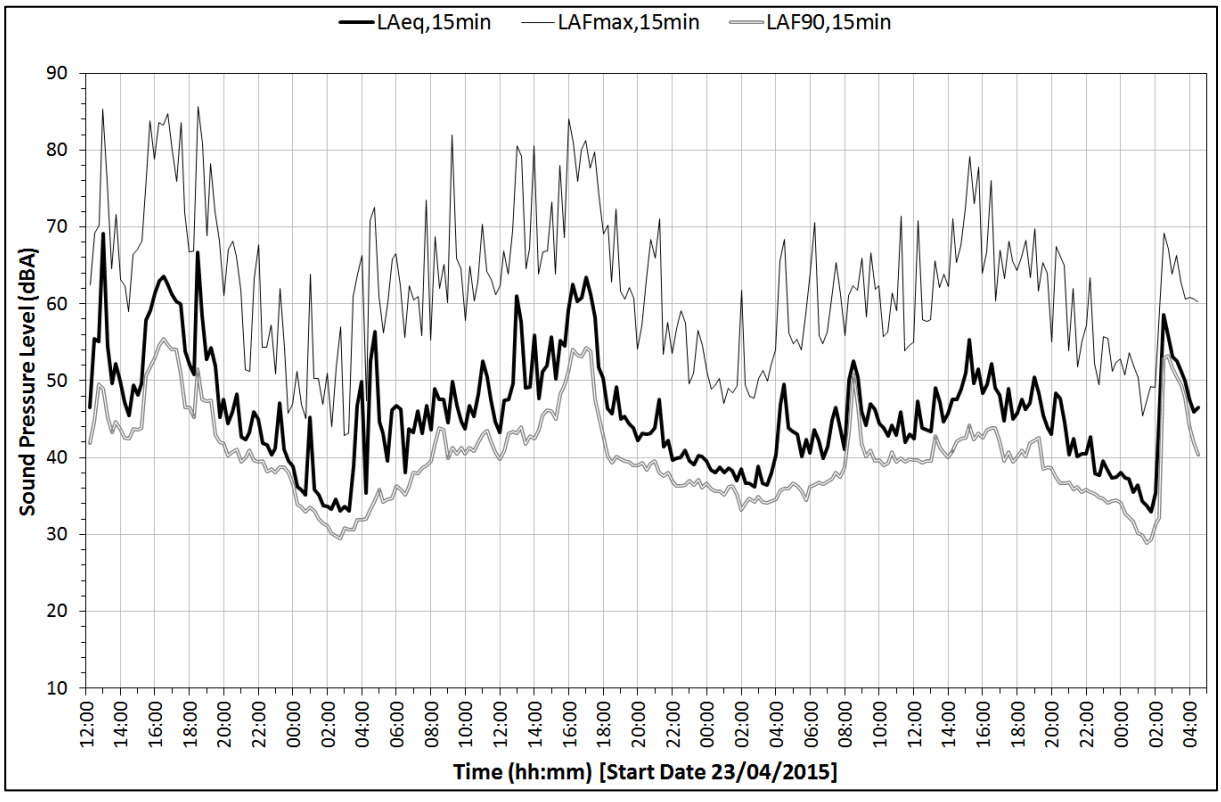

Figure 4: Long term noise survey (Location L1) results (free-field)

Date	Period	$L_{Aeq,T}$ dB (average)	$L_{ASmax,15mins}$ dB (90^{th} percentile)	$L_{AF90,15mins}$ dB (40^{th} percentile)
23-26^{th} April 2015	Day 16 hours (07:00-23:00)	54	N/A	N/A
	Day 12 hours (07:00-19:00)	56	N/A	42
	Evening 4 hours (19:00-23:00)	46	N/A	38
	Night 8 hours (23:00-07:00)	46	61	34

Table 2: Summary of long term noise survey at location L1 (free-field)

The approach for determining $L_{AF90,15mins}$ can be found in section 4.4.

Due to the consistency of the time profile across the measured days, it is considered appropriate to report average noise levels.

4.3 Residential Noise Exposure

As the Chalton Street survey at location S2 ($L_{Aeq,1hr}$ ambient noise level of 54 dBA) suggests that the transfer function between S2 and L1 is not significant, the L1 long term data can be used to indicate expected noise levels at the proposed flats' facades.

While there is some uncertainty (possibly up to 3 dB, estimated), it is clear that the 56 $L_{Aeq,12hr}$ (day), 46 dB $L_{Aeq,4hr}$ (evening), 46 dB $L_{Aeq,8hr}$ (night) and 61 dB L_{ASmax} (night) determined at L1, indicates that the residential facades will be below the noise limits set out in Section 3.1, i.e. noise levels to be no more than 62 dB $L_{Aeq,12hr}$ (day), 57 dB $L_{Aeq,4hr}$ (evening) and 52 dB $L_{Aeq,8hr}$ (night), and no more than 82 dB L_{ASmax} (night). Thus no specific noise mitigation to the residential facades is required, other than normal building solutions.

4.4 Background Sound Level Assessment

BS 4142:2014 seeks to determine a "representative" background sound level, stating that "…*the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods*". A definitive method of selecting a representative background sound level is not prescribed in BS 4142:2014, although an example is presented where the modal value is selected from a statistical analysis.

In our experience, a reasonable approach is to adopt the repeatable method of selecting the 40^{th} percentile value of the L_{AF90} data periods. This generally accounts for potentially unrepresentative high values and untypical events, while usually representing values near the median of the remaining 'valid' distribution.

The day, evening and night period analyses are shown in Figures 5-7 and the summary is presented in Table 3. These values are used to consider plant noise limits (see below).

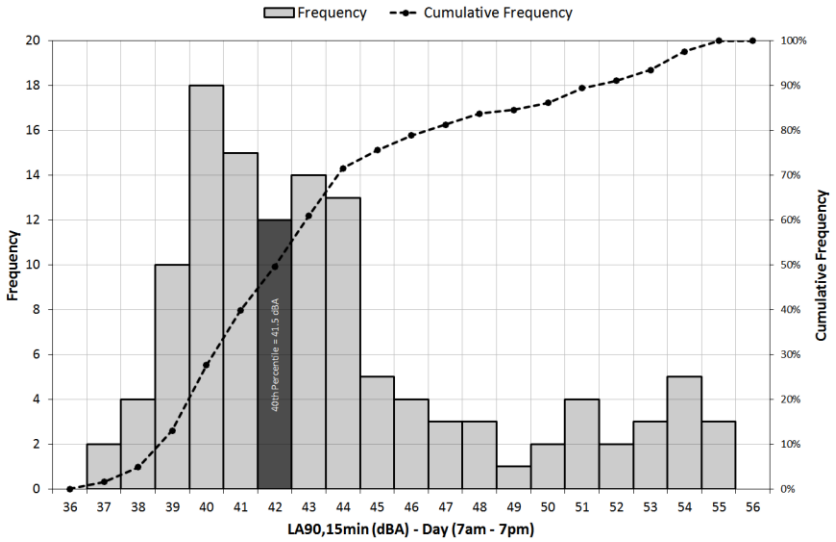

Figure 5: Histogram showing the frequency of occurrence distribution of LAF90,15min data for the day time periods of the long term noise survey (i.e. approx. 31 hours of day time data accumulated).

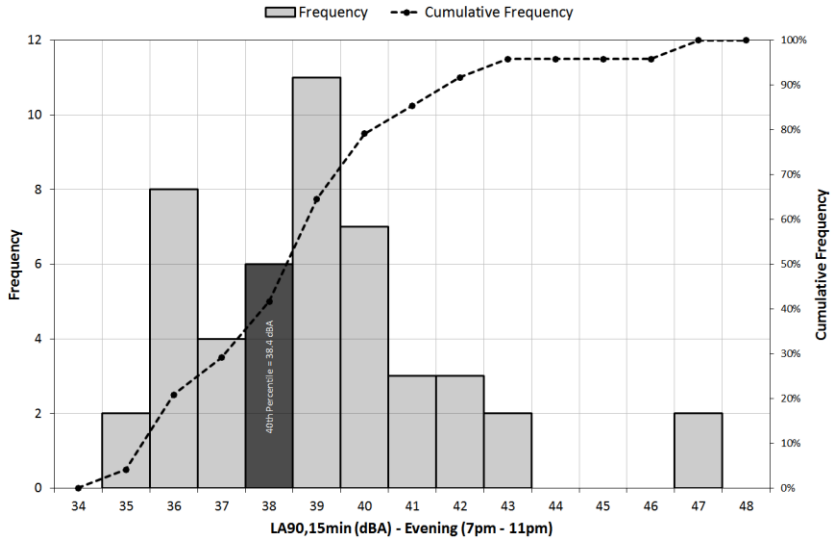

Figure 6: Histogram showing the frequency of occurrence distribution of LAF90,15min data for the evening periods of the long term noise survey (i.e. 12 hours of night time data accumulated).

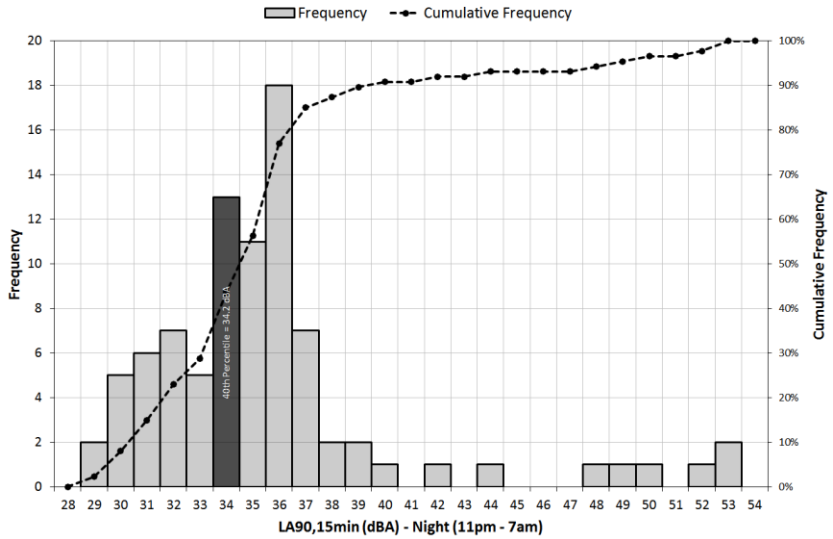

Figure 7: Histogram showing the frequency of occurrence distribution of LAF90,15min data for the night periods of the long term noise survey (i.e. approx. 21 hours of night time data accumulated).

5.0 FAÇADE SOUND INSULATION

5.1 Residential Façade Sound Insulation Requirements

Overall Requirements
Considering the external noise results, it is recommended that the residential façade constructions should provide an overall sound level difference of at least 24 dB outside to inside in order to meet all of the internal noise criteria given above, including a 3 dB safety margin.

This requirement is based on a typical façade construction with no specific acoustic attenuation measures – a light-weight wall construction and standard double or triple glazing. With this type of construction, internal noise levels are well within the guideline indoor ambient noise level limits in BS 8233:2014.

Ventilation
Background ventilation to the flats will be provided with whole house MVHR systems (supply and extract), and thus there is no requirement for window trickle vents. Windows will be openable for purge and over-heating ventilation. The sound transmission from outside to inside through MVHR systems is negligible and will not compromise the acoustic performance of the facades.

5.2 Nursery Façade Sound Insulation Requirements

Overall Requirements
Considering the expected worst case $L_{Aeq,30min}$ value of 56 dBA at the Flexible Nursery Space, it is recommended that the nursery façade construction should provide an overall sound level difference of at least 24 dB outside to inside in order to meet target ambient noise levels, including a 3 dB safety margin.

This requirement is based on a typical façade construction with no specific acoustic attenuation measures – a light-weight wall construction and standard double or triple glazing. With this type of construction, internal noise levels are well within the guideline indoor ambient noise level limits in BB93:2014.

Ventilation
The Nursery Flexible Space will be naturally ventilated by openable vents. It is proposed that at least two vents are provided with built-in 150 mm deep acoustic louvres, such that when the vents are partly open to provide normal cross ventilation, the internal noise limits will be achieved. Additional non-attenuated vents will be provided for purge and over-heating control conditions.

6.0 EXTERNAL PLANT NOISE EMISSIONS

6.1 Noise Emission Limits

The Camden Council policy (Section 3.1) requires that plant noise does not exceed a level that is 5 dB below the external background noise or 10dB below if the noise has a 'distinguishable, discrete, continuous note' or 'distinct impulses'.

The representative background sound levels determined by a methodology consistent with BS 4142 (2014) were presented in Table 2, and these levels are adopted as the baseline "background noise" levels.

Plant noise emission limits at a point 1 m outside any window of any noise sensitive façade are as set out in Table 3.

Period	Plant noise emission limit – broadband noise ($L_{Aeq,T}$)	Plant noise emission limit – tonal / impulsive noise ($L_{Aeq,T}$)
Day 12 hours (07:00-19:00)	37	32
Evening 4 hours (19:00-23:00)	33	28
Night 8 hours (23:00-07:00)	29	24

Table 3: Plant noise emission limits for broadband and tonal/impulsive noise

6.2 Proposed Fixed Plant

The residential element is expected to employ continuously running MVHR units to provide ventilation and heat recovery.

In the Community Hub building, MVHR units will be provided to the Nursery WCs, with intermittent day time use only. Some WCs and/or showers are expected to use domestic sized through wall extract fans, i.e. typically no more than 30 l/s extract, with intermittent day time use only.

Small scale, domestic-sized externally venting kitchen extract fans may be fitted in both the residential and Community Hub elements.

The noise levels emitted externally by these units would normally be comfortably within the limits set out in the previous section at the nearest noise sensitive receiver. Once ventilation strategy has advanced further, additional consideration will be given to any requirements for attenuation e.g. duct attenuators. However it is not anticipated at this stage that these will be necessary.

It is understood that noise emitted by all other plant equipment is negligible.

7.0 OTHER CONSIDERATIONS

7.1 Community Hub Outdoor Play Areas

In assessing acceptable noise levels for external areas used for amenity space, two documents frequently referred to are the World Health Organisation's (WHO) *Guidelines for Community Noise* (1999) and BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings* (replacing BS 8233:1999). The WHO document advises that noise for outdoor school playgrounds during the day should not normally exceed 55 dB ($L_{Aeq,T}$). For comparison, BS 8233:2014 gives an upper guideline value for external areas such as gardens and patios of 55 dB ($L_{Aeq,T}$) also, although recognizes that the guideline values are not achievable in all circumstances where development might be desirable.

Considering the noise survey data described above, the external play areas in the development are likely to be within the guideline 55 dB $L_{Aeq,T}$ noise value.

7.2 The MUGA Facility

The proposed development will include a MUGA on the roof of the Community Play Facility. This is to replace a MUGA at the existing facility, which is used by both children and adults to play football, up till around 9.30pm. The proposed MUGA is therefore expected to result in similar levels of activity noise to those currently experienced on site.

The MUGA will be closely managed to ensure that its use will not cause undue nuisance to neighbouring dwellings and appropriate hours of operation will be secured in order to minimise potential amenity impacts.

For information, noise levels of adults, robustly playing 5-a-side football could give rise to a mean noise level of approximately 55 dB(A) at 20 m.

8.0 SUMMARY

The external noise environment at the proposed Plot 1 Community Hub and Housing site is characterised by the long term noise survey measurements, which determined representative levels of56 $L_{Aeq,12hr}$ (day), 46 dB $L_{Aeq,4hr}$ (evening), 46 dB $L_{Aeq,8hr}$ (night) and 61 dB L_{ASmax} (night).

With respect to the proposed residential element, the determined noise levels are below the planning thresholds set in the Camden Council Local Development Framework (LDF), above which attenuation measures would be required.

Internal residential noise levels are expected to comply with BS 8233:2014.

The nursery facility (Nursery Flexible Space) within the Community Hub buildings will be able to deliver internal noise levels compliant with education best practise, represented by BB93 (2014).

External noise levels at the nursery outdoor play areas are likely to within BS 8233:2014and WHO recommended guidelines.

Representative background sound levels have been determined by the long term noise survey. Assuming broadband plant noise emissions, this sets a plant noise emission limit of 32-37 dBA during the day (07:00-19:00), 28-33 dBA during the evening (19:00-23:00), and 24-29 dBA during the night (23:00-07:00) at a point 1 m outside any window of any noise sensitive façade.

Activity levels at a MUGA on the roof of the proposed Community Play Facility are expected to be similar to a MUGA at the existing site. The noise levels are therefore also expected to be similar. In addition, the new MUGA will be closely managed and its hours of operation secured so as to minimise any impact on neighbouring dwellings.

9.0 APPENDIX A – NOISE MONITORING EQUIPMENT DETAILS

The measurements were made with a Norsonic 118 precision sound level analyser. This equipment complies with BS EN IEC 61672 class 1. The meter uses a Nor 1225 free field response microphone and NOR 1206 microphone pre-amplifier.

This equipment, summarised in the table below, has been calibrated by a UKAS accredited laboratory in accordance with the laboratory requirements of the United Kingdom Accreditation Service (UKAS) on the dates indicated.

Item	Make	Type	Serial no.	Calibration Intervals	Last Calibrated	Next Due Calibration	Calibration Certificate Number
Class 1 sound level meter	Norsonic	118	31419	2 years	14/07/14	14/07/16	U16587
Microphone	Norsonic	1225	51319	2 years	14/07/14	14/07/16	16586
Microphone preamplifier	Norsonic	1206	30457	2 years	14/07/14	14/07/16	U16589
Calibrator	Norsonic	1251	30895	1 year	07/11/14	07/11/15	U14606

Due to equipment security, the survey equipment was located in garden area of the existing Community Facilities, where a slatted fence meant that the fencing was essentially acoustically transparent. Photo taken looking towards Chalton Street direction, with 130 Chalton Street marked: