

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001



Project:	Former Cox and Wyman Premises, Cardiff Road, Reading RG1 8EX			
Client:	Thames Properties Ltd			
Report Title:	Environmental Noise Assessment			
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Revision:	A			
Report Status:	Issue			
Reference:	20170928/3948/ENA 001			

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1.0 Introduction

It is proposed that a parcel of land known formerly occupied by Cox and Wyman located at Cardiff Road, Reading RG1 8EX, be redeveloped to provide new residential accommodation.

This assessment covers environmental noise considerations associated with the development in the context of national and applicable planning policy and guidance and is based on the principles and recommendations contained within the following documents.

- National Policy Statement for England (NPSE) March 2010;
- National Planning Practice Guidance “Noise” August 2013;
- World Health Organisation: 1999: *“Guidelines for Community Noise”*;
- BS 8233:2014 *“Guidance on sound insulation and noise reduction for buildings”*.

2.0 Site Description

The site lies in an area that would be classified as mixed industrial residential is illustrated by Plan in Figure 1. The proposed layout of the scheme is illustrated by Figure 2.

The northern boundary of the site is delineated by Meadow Road, with the principle interest in this aspect being Manrose Manufacturing Limited who occupy a number of commercial units directly opposite the site. It is understood that Manrose have exercised break clauses and the leases will end 12/2017 with subsequent vacation of the premises.

Immediately to the south of site is Cardiff Road, which is characterised by a mix of terraced residential properties and various commercial and light industrial uses to the west of the site. Beyond Cardiff Road to the south, is a series of elevated railway sidings that are used for overnight stabling of passenger rolling stock. The boundary of the sidings features a four-metre-high acoustic fence that has been installed following complaints from residents of Cardiff Road regarding low frequency noise from idling rolling stock during the night period.

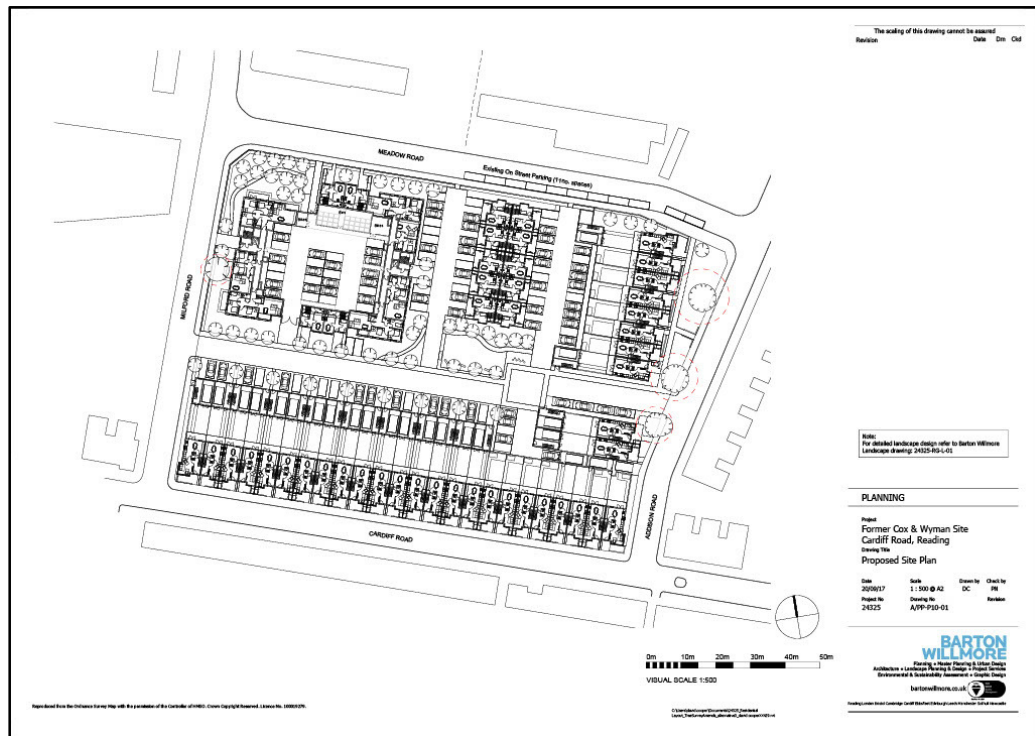
Figure 1: Site Location



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Figure 2: Proposed site layout



3.0 Planning Policy Guidance

3.1 Noise Policy Statement for England (NPSE) March 2010

The Government published the Noise Policy Statement for England (NPSE) in March 2010 with the aim of providing clarity regarding current policies and practices to enable noise management decisions to be made within the wider context, at the most appropriate level. The aims of the Government's noise policy are:

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

1. Avoid significant adverse impacts on health and quality of life;
2. Mitigate and minimise adverse impacts on health and quality of life; and
3. Where possible, contribute to the improvement of health and quality of life.

In its aims the Policy uses the key phrases "Significant adverse" and "adverse". In clarifying what these mean the Policy notes that "...there are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the WHO. They are:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected."

The Policy extends these concepts to include:

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur."

It is further noted that NPSE should apply to all forms of noise including environmental noise, neighbour noise and neighbourhood noise.

The Policy notes that it is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is for a project to identify relevant SOAELs taking account the different sources of exposure and different receptors.

It can be seen that the test of significance in relation to government policy is a question of degree and that a significant noise level will be somewhere above a level where the onset of adverse effect might be expected - i.e. SOAELs will always be greater in magnitude than LOAELs and LOAELs are greater than NOELs. In other words, as exposure to a sound source increases there will start to be some level of effect on a receptor, and, as the exposure increases, the severity of the effect or effects increase with further increase in exposure to the level where the effect becomes significant.

It is also worth noting that the second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. The aim is that "all reasonable steps

should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development. This does not mean that such adverse effects cannot occur.”

3.2 National Planning Practice Guidance – Noise (March 2014)

Noise needs to be considered when new developments would be sensitive to the prevailing acoustic environment. When determining impact, Local Authorities’ plan making and decision taking should account for the acoustic environment and in doing so consider:

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

The subjective nature of noise means that there is not a simple relationship between noise levels and the impact of those affected. This will depend on how factors combine in any particular situation, including:

- The source and absolute level of the noise together with the time of day it occurs;
- For non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise;
- The spectral content of the noise and its general character (whether the noise contains particular tonal characteristics or other particular features).

More specific factors to consider, when relevant, include:

- Where applicable, the cumulative effect of more than one noise source should be taken into account along with the extent to which the source of noise is intermittent and of limited duration;
- Consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases, a suitable alternative means of ventilation is likely to be necessary.

In respect of mitigating noise, the approach to be adopted will depend on the nature of the development and the character of the location. For noise sensitive developments measures can include designing the development to reduce the impact of the noise from the local environment and optimising the sound insulation provided by the building envelope.

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

4.0 General Guidance on the Assessment of Noise

4.1 World Health Organisation

The World Health Organisation (WHO) document “Guidelines for Community Noise” provided a review of the effects of noise and a description of the principles of health criteria.

Table 1 of the document presents guideline values arranged according to specific environments and critical health effects. Noise indices to be adopted and the accompanying time base to be used for the assessment are also presented.

The guideline values consider all health effects for a specific environment. An adverse health effect refers to any temporary or long-term impairment of physical, psychological or social functioning associated with noise exposure. The specific noise limits were set for each health “using the lowest noise level that produces an adverse health effect”

Table 1: WHO Guideline values for community noise in specific environments

Specific environment	Critical health effect(s)	L_{Aeq} [dB]	Time base [hours]	L_{Amax} fast [dB]
Outdoor living area	Serious annoyance, daytime and evening	50	16	
	Moderate annoyance, daytime and evening	55	16	
Dwelling, indoors	Speech intelligibility & moderate annoyance daytime & evening	35	16	45
	Sleep disturbance, night time	30	8	

For the daytime level, the WHO Guidelines for Community Noise identifies guideline values to assess typical community annoyance with 50 or 55 dB L_{Aeq} [outdoor noise level] representing “daytime levels below which a majority of the adult population will be protected from becoming moderately or seriously annoyed, respectively.” On this last matter, page 144 of the Community Noise guidelines states that “Available data indicate that daytime sound pressure levels of less than 50 dB L_{Aeq} cause little or no serious annoyance in the community”. The dose response curves on page 100 of the document suggest about 5% of the population is annoyed at 55 dB - i.e., the majority referred to in the annoyance guideline value is about 95% of the population.

For noise events, the guideline value was set at 45 dB L_{Amax} , with research cited in the text advising that this value should not be exceeded by more than 10 to 15 times per night to ensure “good sleep”.

The Guidelines make a number of references to low frequency noise, including:

- It should be noted that low frequency noise, for example, from ventilation systems can disturb rest and sleep even at low sound levels;
- For noise with a large proportion of low frequency sounds a still lower guideline (than 30dBA) is recommended;
- When prominent low frequency components are present, noise measures based on A-weighting are inappropriate;

- Since A-weighting underestimates the sound pressure level of noise with low frequency components, a better assessment of health effects would be to use C-weighting;
- It should be noted that a large proportion of low frequency components in a noise may increase considerably the adverse effects on health;
- The evidence on low frequency noise is sufficiently strong to warrant immediate concern.

4.2 **BS 8233:2014: “Guidance on sound insulation and noise reduction for buildings”**

This British Standard came into effect on 28 February 2014 and supersedes BS 8233:1999, which is withdrawn.

The standard draws on the results of research and experience to provide information on the design of buildings that have internal acoustic environments appropriate to their functions. It deals with control of noise from outside the building, noise from plant and services within it, and room acoustics for non-critical situations. It is applicable to the design of new buildings, or refurbished buildings undergoing a change of use, but does not provide guidance on assessing the effects of changes in the external noise levels to occupants of an existing building.

4.2.1 **Dwellings**

Indoor ambient noise levels for dwellings are set out at Section 7.7.2, Table 4, reproduced below.

Table 2: Indoor ambient noise levels for dwellings (from BS 8233:2014, Table 4)

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 $L_{Aeq,8hour}$

A series of notes provide context to the guideline values of Table 4. Note 1 advises that the indoor ambient noise levels are *“the sum total of structure-borne and airborne noise sources. Groundborne noise is assessed separately and is not included as part of these targets, as human response to groundborne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.”*

Note 3 states *“These 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 deals with individual events and advises 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”*.

Note 5 states that if relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation arrangement that does not compromise the façade insulation or the resulting noise level.

Note 7 provides a rider to the guideline values of Table 4, *“Where development is considered necessary or desirable, despite external noise levels above WHO guidelines,*

the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved”.

4.2.2 Design criteria for external areas

Section 7.7.3.2 of the standard deals with design criteria for external noise and advises 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 goes on to say that:

“...it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. 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.”

Guidance is also given for various types of amenity space:

“Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses. However, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space.”

4.3 BS 4142:2014 “Methods for rating and assessing industrial and commercial sound”

A revision of British Standard BS 4142 was published at the end of October 2014 and replaces the previous 1997 edition.

The main aim of the standard is to provide an assessment and rating method that is proportionate, sufficiently flexible and suitable for use by practitioners to inform professional judgement.

Like the 1997 edition, the standard provides a method for correcting the specific sound levels so as to account for acoustic features that are present at the assessment location. The approach in the 1997 edition was purely subjective and allowed for a +5 dB correction irrespective of how prominent the feature was or whether there was one feature only or a combination of tones, impulses or other features irregular enough to attract attention. The

2014 edition provides for scaled corrections for tones and impulses, depending upon their prominence, as well as a correction for other sound characteristics.

The 2014 edition no longer assesses the likelihood of complaints. Instead, it can be used to assess adverse impacts. This change was introduced because the likelihood of complaints is not a particularly appropriate benchmark, especially when it is used in a planning context, and it also aligns the standard more closely with the type of language and benchmarks that are suitable for the assessment of sound at the planning stage for new proposed development. It continues to use the difference between the rating level and the background sound level, though it also introduces the requirement to consider the context and states that:

- 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."

The context includes consideration of pertinent factors, such as:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound;
- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

It can also be seen that the range of assessment outcomes has been reduced and it is now suggested that rating levels equal to the background would indicate a low impact. This is in contrast to the earlier edition which gave indications of the likelihood of complaints based upon differences ranging between +10 and -10 dB.

BS4142:2014 additionally states that:

"Where a new noise-sensitive receptor is introduced and there is extant industrial and/or commercial sound, it ought to be recognized that the industrial and/or commercial sound forms a component of the acoustic environment. In such circumstances other guidance and criteria in addition to or alternative to this standard can also inform the appropriateness of both introducing a new noise-sensitive receptor and the extent of required noise mitigation."

5.0 Low Frequency Noise

As noted at Section 2.0, complaints have been made by certain residents of Cardiff Road regarding low frequency noise from idling rolling stock during the night period. Given the proximity of the site to the sidings, it will be necessary to gauge any potential impacts that may subsequently occur against available sources of guidance.

5.1 Current low frequency noise (LFN) assessment guidelines and their use in environmental noise impact assessment

Penton *et al*¹ published a review of low frequency noise (LFN) assessment rating schemes and accompanying key issues.

LFN was defined as noise in frequencies below 100 to 150 Hz, with infrasound being below 20 Hz. LFN annoyance research was cited as giving rise to a 4 to 5 dB doubling rate of perceived loudness vs 10 dB at 1.0 kHz.

Table 1 and Figure 1 of the paper summarized the (then) most widely used LFN guidelines, most of which emphasised the importance of spectral balance.

Table 3: LFN Impact Assessment Criteria (source: Penton *et al*, Table 1)

Criteria	Reference	Spectrum	Assessed Location
Overall sound level	ANSI B133.8	75 dBC Overall Limit	Outdoor
Vibration in light-weight structures	ANSI S12.2	1/1 Octave for 16, 31.5, 63 Hz bands	Indoor/Outdoor
NCB "balanced" noise criteria curves	ANSI S12.2 (Beranek)	1/1 Octave	Indoor
RC room criteria curves	ASHRAE 1995 and ANSI S12.2	1/1 Octave	Indoor
RC Mark II room criteria curves	ASHRAE 1999 Blazier	1/1 Octave	Indoor
RNC room criteria curves	Schemer	1/1 Octave	Indoor
LFNR low frequency noise rating curves	Broner and Leventhall	1/3 Octave	Indoor
LFRC low frequency room criteria curves	ASHRAE (Broner)	1/3 Octave	Indoor

Penton Figure 1, reproduced below, noted that huge discrepancies were evident amongst the curves, with a range of over 30 dB between RC Mark II and NCB at 16 Hz, for example.

Section 3 of the paper set out proposals for estimating LFN. It was considered that LFN impacts are best assessed indoors, but noted that two criteria could be used to limit outdoor impacts. In summary:

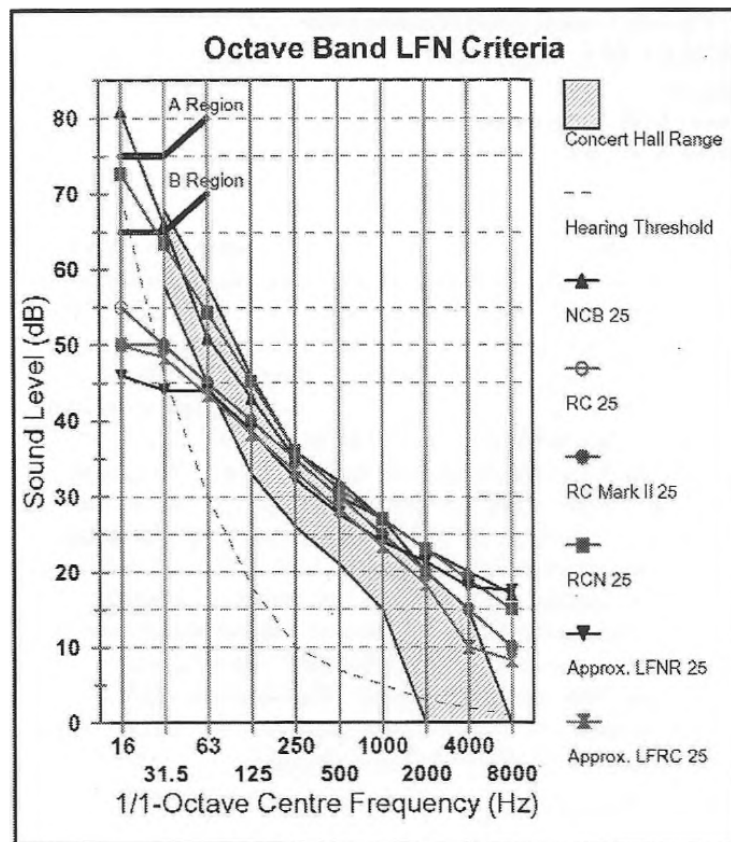
- ANSI B133.8: limits outdoor sound levels to 75 dBC at residential receptors;
- ANSI S12.2: Ideally restricts LFN to "moderately noticeable" Region B (see Figure 3 below), but in no case should they extend past the "clearly noticeable" Region A.

¹ Canadian Acoustics, Vol. 30 No. 3 (2002)

Predicting LFN indoors impacts was considered as generally more complex and Penton proposed the following compromises:

- The criteria should consider the existing ambient environment. Receptors in urban areas or near existing industry are likely to have relatively “high” existing LFN in their ambient sound environment. LFN from new factories, may be readily more tolerated since the change from existing conditions would be smaller. Use of NCB or RNC criteria in these locales seems reasonable. In rural areas with “flat” ambient spectra, and little LFN content, RC or RC Mark II curves would be appropriate;
- Base assessments on total levels (e.g. plant + ambient), requiring representative 1/1 octave band levels and overall dBA measured ambient noise levels. Where possible, maintain a balanced frequency spectrum (dBL – dBA 20 dB);
- Indoor levels can be estimated using typical building reduction characteristics. Where LFN impacts are likely, consider examining specific construction at worst-case receptors, and existing indoor noise levels;
- Limit LFN levels to the NCB 25 curve at low frequencies (at or below 31.5 Hz), using a “tangency” approach and where economically and technically feasible, mitigate as close to the target RC Mark II value as possible.

Figure 3: LFN Criteria Curves Compared (source: Penton *et al*, Figure 1)



5.2 A Review of Published Research on Low Frequency Noise and its Effects (DEFRA contract ref: EPG 1/2/50, 2003)

This study undertaken on behalf of DEFRA considered some properties of low frequency sounds, their perception, effects on people and the criteria which have been developed for assessment of their effects. Proposals were made for further research, to help to solve the continuing problems of low frequency environmental noise.

Section 15 of the document provides a review of limits and criteria and notes that in setting limits it is implicit that these are at levels which protect a certain percentage of the population. Noise levels at which protection is offered typically leave 10-20% of the population annoyed by a noise, since the desire to improve the environment is moderated by technical and economic factors. It goes on to say that as there is a weak relation between the annoyance of low frequency noise in the home and its level, there may be an argument for more protective criteria for low frequency noise than those which are recommended for other noises. Some of the criteria and limits are summarised below.

5.1.1 Low Frequency Noise Rating Curves (LFNR)

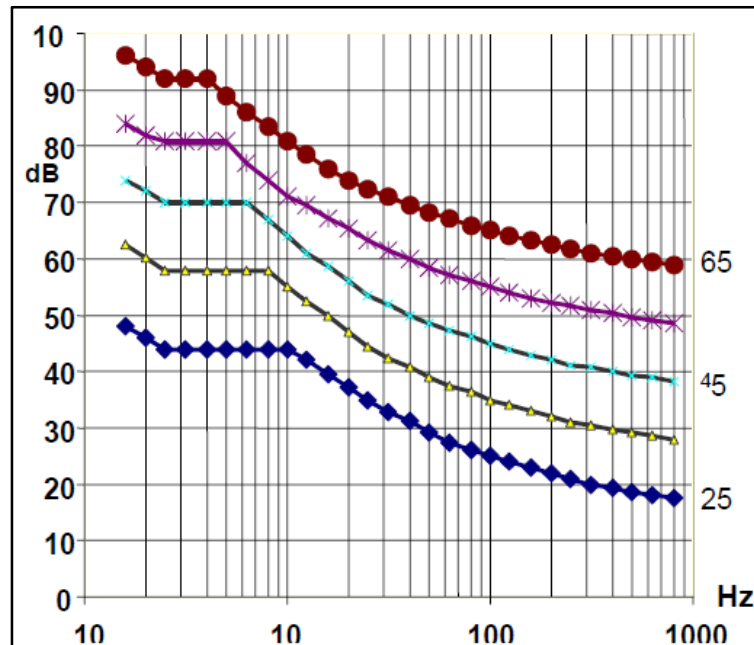
LFNR Curves² were derived from experiments with subjects judging annoyance of 10Hz wide bands of low frequency noise from 25 Hz to 85Hz centre frequencies. It was found that there was a peak in annoyance in the bands with centre frequencies 35Hz and 45 Hz, showing that these bands were more annoying than the lower or higher frequency bands. A similar result was reported by (Kraemer, 1973) and the results were used to modify the NR curves in the low frequency region, leading to the LFNR curves. The curves are similar to NR curves down to 125 Hz, but are more restrictive at lower frequencies, Figure 3 below illustrates.

The curves are used by plotting the noise spectrum and, for frequencies above 125Hz the NR is determined in the normal way. If the spectrum of frequencies below 125Hz exceeds this rating curve, there is the potential for a low frequency problem.

The curves assess not only the level of the noise, but also its spectrum balance. A penalty of 3dB was suggested for a noise which was fluctuating. The LFNR curves have not been widely adopted, but it is known that they have been used by some UK local authorities.

² Broner and Leventhall (1983)

Figure 4: Low frequency noise rating curves LFNR.
Each point is at a third octave frequency



5.1.2 Criterion curves

Section 15.5.6 of the DEFRA document reviews various national assessment criteria. Generally, the methods compare the low frequency hearing threshold, or a function related to it, with the problem noise. Where A-weighting is used, there is an assumption that this weighting reflects hearing sensitivity at low frequencies.

The reference curves are compared in Table 3 below. Poland requires the lowest levels and is 10 dB lower than Denmark, since one is based on 10 dB(A) and the other on 20 dB(A). The Netherlands and Germany use an assumed hearing threshold as their reference. Sweden describes a limiting noise curve, which should not be exceeded in any band. This curve is similar to ISO 226 between 31.5 Hz and 50 Hz, beyond which it tends towards 20 dB(A).

Table 4: Comparison of reference curves

	Poland	Germany	Netherlands	Denmark Night	Sweden	ISO 226
Frequency Hz	LA10 dB	DIN 45680 dB	NSG dB	20dBA	dB	dB
8		103				
10	80.4	95		90.4		
12.5	83.4	87		93.4		
16	66.7	79		76.7		
20	60.5	71	74	70.5		74.3
25	54.7	63	64	64.7		65.0
31.5	49.3	55.5	55	59.4	56	56.3
40	44.6	48	46	54.6	49	48.4
50	40.2	40.5	39	50.2	43	41.7
63	36.2	33.5	33	46.2	41.5	35.5
80	32.5	28	27	42.5	40	29.8
100	29.1	23.5	22	39.1	38	25.1
125	26.1			36.1	36	20.7
160	23.4			33.4	34	16.8
200	20.9				32	13.8
250	18.6					11.2

None of the methods assesses fluctuations, although Denmark imposes a penalty for impulses³. The methods are generally designed for assessment of steady tones, but will understate the subjective consequences of fluctuations, which are the main complaint of many sufferers.

A-weighted levels for assessment of environmental noise are normally taken outside a residential property. The complexities of low frequency noise, including uncertainties in the transmission loss of the structure and resonances within rooms, require low frequency noise to be assessed by internal measurements. This is recognised in the assessment procedures.

There is a measurement uncertainty, which is inversely proportional to both the bandwidth of the analysis and to the duration of the measurement (i.e. the integration time). As a result, the measurement period using a given third octave filter is related to the required accuracy. If the standard deviation of repeated measurements shall be less than 0.2 dB

³ The term "impulses" is not fully described in the DEFRA document and it is not therefore clear if they would exhibit characteristics that define an impulse as per Annex E of BS 4142:2014, for example.

an integration time of almost five minutes is needed at 10 Hz. At 40 Hz a one-minute integration time is necessary and at 1000 Hz two seconds are needed. The noise signal is assumed to be stable over the measurement time, but this is not always so in practice.

Section 17 of the document outlines areas of further research and identifies two main areas that need to be addressed, personal coping strategies and the assessment of the noise.

In respect of the former, the document identified that enhanced coping strategies are required:

- During the time delay between occurrence of a noise and its control;
- If the noise cannot be located;
- If the noise cannot be measured.

It seems reasonable to assume that the coping strategies would be more applicable to existing complaint situations, rather than for land development purposes.

For the latter, the document noted that it is not an uncommon occurrence that there is low frequency noise present at a complaint location but that existing UK assessment methods are not able to determine its nuisance value, leading to the conclusion of "Not a Statutory Nuisance". A number of noises, which are known to be causing low frequency problems, could be analysed and assessed by existing low frequency noise assessment methods and an attempt would also be made to determine an "annoyance rating" for the complainant. The interdependence of spectra, fluctuations and complainant characteristics would be used to develop an assessment method that is more reliable than existing methods. Whilst Section 15 of the document outlines the assessment methods of other countries that would draw positive conclusions on noises that would fail an A-weighting test, it is nevertheless acknowledged that further work should be carried out on assessment of low frequency noises, building on what is already known.

5.3 Procedure for the assessment of low frequency noise complaints (DEFRA Contract no NANR45, February 2005)

The objective of this document was to assist Environmental Health practitioners to deal with complaints of low frequency noise as efficiently and correctly as possible. In particular, it aimed to assist them to distinguish cases where an environmental sound that could account for the disturbance was present, in which case some remedial action could be possible within their remit, from those where no such action would be feasible. The guidance therefore provides a procedure to determine whether low frequency sound that might be expected to cause disturbance is present in a complainant's premises.

Crucially, the document stated that

"The procedure is intended to assist in the evaluation of existing problems. It is not intended as a means of predicting when disturbance might occur, for example in a planning situation, and would not be reliable to use as such"

The reason given for the exclusion of its use in a planning situation was that:

"...disturbance by LFN depends on a number of factors, such as the character of the sound, whose effects are neither well understood, nor readily predictable. Levels of sound above criteria based on the average threshold of hearing are frequently found to be acceptable and levels falling marginally

below can occasionally cause disturbance, so no generic approach to prediction of disturbance appears to be possible"

A criterion curve is given which may be used for assessment of (existing) LFN:

Table 5: Proposed reference curve (source: NANR 45, Table 2)

Hz	10	12.5	16	20	25	31.5	40	50	63	80	100	125	160
dB, Leq	92	87	83	74	64	56	49	43	42	40	38	36	34

If the noise occurs only during the day then 5dB relaxation may be applied to all third octave bands.

Section 4.3 provides observations on the assessment of nuisance and states that whilst it is intended to provide a procedure to help determine whether a low frequency environmental noise exists that could be the cause of complaints, it does not provide a prescriptive indicator of nuisance since there are other factors that may need to be considered in reaching this decision.

In forming a decision, it should be borne in mind that low frequency noise only slightly above threshold of audibility can cause considerable disturbance and appears to be more difficult to shut out or get used to than other types of noise. This may be counter intuitive when compared with the annoyance caused in other (not low frequency) situations where the level needs to be significantly higher than threshold before the noise could be considered a nuisance.

5.4 A Simple Outdoor Criterion for Assessment of Low Frequency Noise Emission

Broner *et al*⁴ published a simple outdoor criterion for assessment of LFN. It was stated that ideally, LFN criteria should be set for indoors where the LFN complaints normally occur, however for the purpose of planning, it is much easier to set criteria for outside residences. Based on a review of many case histories and the literature, the author recommended the following criteria:

Table 6: Criteria for assessment of LFN (source: Broner *et al*, Table 3)

Sensitive Receiver		Range	Criteria L _{eq} (dBC)
Residential	Night time or plant operation 24/7	Desirable	60
		Maximum	65
	Daytime or Intermittent (1-2 hours)	Desirable	65
		Maximum	70
Commercial/ Office/ Industrial	Night time or plant operation 24/7	Desirable	70
		Maximum	75
	Daytime or Intermittent (1-2 hours)	Desirable	75
		Maximum	80

⁴ Broner *et al*, Acoustics Australia, Vol. 39, April 2011

If the measured LFN SPL is fluctuating at least +/- 5 dBC, then a 'penalty' of 5 dBC to the proposed criterion (i.e., a reduction in the proposed limit) is recommended. When measuring the noise, all energy down to 10 Hz should be considered (the weightings are not defined for frequencies less than the 10 Hz one-third-octave- band and, in addition, do not generally contribute significantly to the overall SPL). Further, a minimum sampling duration of 3-5 minutes should be used so as not to average out the LFN fluctuations which are characteristic of many LFN problems. This is further to ensure that the low frequency sound level is sampled accurately.

The noise levels to be recorded are the maximum and minimum C-weighted SPLs using the Fast time weighting, the L_{C10} and L_{C90} levels (the C weighted SPL's exceeded for 10% and 90% of the recording time) for the purpose of providing an indication of the level fluctuation of the LFN. The same metrics are to be recorded using the A-weighting instead of the C-weighting.

6.0 Pre-application Guidelines

Pre-application advice for redevelopment of the site has been provided by Reading Borough Council in their memorandum EP /576003 dated 21 February 2017.

At the section entitled “Noise impact on development”, the following is provided:

“A noise assessment should be submitted in support of applications for new residential proposed in noisy areas.

The proposed development is near to a railway and railway depot. I have concerns about the impact of idling trains on future residents. Trains are known to idle at the depot from 02:00hrs throughout the night causing a very low frequency hum that can affect nearby residential properties.

In order to address this concern as well as the usual requirements for a noise assessment carried out in accordance with BS8233:2014, an additional assessment of the low frequency noise must be submitted with the application. To avoid any confusion I would advise the acoustic consultant charged with carrying out the assessment to contact the environmental protection & nuisance team to agree the specific requirements of the assessment.

The report should identify any mitigation measures that are necessary to protect future occupants.

Where appropriate, the noise assessment data should also include noise events ($L_{A_{Max}}$) and the design should aim to prevent noise levels from noise events exceeding 45dB within bedrooms at night. Noise levels above 45dB are linked with sleep disturbance.

Room	Design criteria	Upper limit
Bedrooms (23:00 to 07:00)	<30dB LAeq,8hour	
Living rooms (07:00 – 23:00)	<35dB LAeq,16hour	
Gardens & Balconies	<50dB LAeq,T	<55dB LAeq,T

It may be possible though clever design to reduce the need for additional noise mitigation measures, for example, ensuring that noise sensitive rooms are located on the quieter façades and bathrooms, kitchens, hallways and cupboards etc on the noisiest facades.

Noise mitigation is likely to focus on the weak point in the structure; glazing. Where opening window will lead to an internal noise level increase above BS 8233:2014 recommended internal levels, the developer must provide alternative mechanical ventilation such as mechanical heat recovery (MVHR) system with cool air bypass as an alternative means of cooling and ventilation. Passive trickle ventilation is not considered an adequate solution.

Noise from the system should not result in BS8233 internal levels being exceeded.”

7.0 Proposed Design Criteria

As noted in the preceding Section, the LPA require achievement of the target values given in BS 8233:2014 Table 4 to be achieved, in the context of controlling general environmental noise. The following would therefore result:

Table 7: Design criteria for broadband noise sources without character

Location	Lower Limit	Upper Limit
Bedrooms (23:00 to 07:00)		30 dB LAeq,8hour
Living rooms (07:00 – 23:00)		35 dB LAeq,16hour
Gardens and Balconies	50 dB LAeq,T	55 dB LAeq,T

In respect of low frequency noise, as discussed in Section 5, there is currently no widely accepted design criteria. Based on the available guidance, it is suggested that the LFN criteria should be set for indoors and it is therefore proposed that internal sound levels within new build dwellings be controlled such that compliance with the ISO 226 threshold be achieved. An additional 3 dB penalty⁵ is proposed to account for noise fluctuations which have been described as being present in noise emissions from idling trains. The LFN is not however considered to exhibit impulsive characteristics and a penalty for this type of feature is not therefore considered necessary.

Table 8: Design criteria for train idling LFN

Location	Term	1/3 octave band sound pressure level, Leq dB re:20µPa						
		20	25	31.5	40	50	63	80
All categories of Internal occupied space within dwellings	ISO 226 Threshold	74.3	65.0	56.3	48.4	41.7	35.5	29.8
	Penalty for noise fluctuations	3	3	3	3	3	3	3
	Internal Design spectrum	71	62	53	45	39	33	27

It is suggested that the design spectrum set out in Table 8 be applicable to all categories of Internal occupied space within dwellings and would therefore include living rooms, dining rooms, kitchens and bedrooms.

⁵ See Section 5.1.1 above.

8.0 Noise Surveys

Detailed noise surveys have been carried out at various locations around the site to determine the extant noise climate in the area. Measurements were made at the locations described below, Figure 5 also illustrates. The general survey approach has been discussed with the LPA prior to site attendance.

- **MPS1:** Roof of existing Cox and Wyman building, Cardiff Road, READING, Berkshire, RG1 8EX. Measurement position approximately 68m north of the railway sidings and circa 10m above local ground level;
- **MPS2:** Roof of existing Reading Deaf Centre building, 31-133 Cardiff Rd, Reading RG1 8JF. Measurement position approximately 38m north of the railway sidings and circa 10m above local ground level;
- **MPR1:** Meadow Road, approximately 3m north of the existing Cox and Wyman building and 19m distant from the south façade of Manrose Manufacturing premises. Measurement position 1.5m above local ground level;
- **MPR2:** Meadow Road, approximately 3m north of the existing Cox and Wyman building and 22m distant from the south façade of Manrose Manufacturing premises. Measurement position 1.5m above local ground level;
- **MPR3:** Meadow Road, approximately 3m north of the existing Cox and Wyman building and 12m distant from the south façade of Manrose Manufacturing premises. Measurement position 1.5m above local ground level;
- **MPR4:** Addison Road site boundary, approximately 20m from the east façade of the existing Cox and Wyman building. Measurement position 1.5m above local ground level;
- **MPR5:** Cardiff Road site boundary, approximately 3m from the south façade of the existing Cox and Wyman building. Measurement position 1.5m above local ground level;
- **MPR6:** Cardiff Road site boundary, approximately 9m from the south façade of the existing Cox and Wyman building. Measurement position 1.5m above local ground level;
- **MPR7:** Southwest corner of site at junction of Cardiff Road and Milford Road. Measurement position 1.5m above local ground level;
- **MPR8:** Mid-point of Milford Road site boundary, approximately 6m from the west façade of the existing Cox and Wyman building.
- **MPR9:** Northwest corner of site at junction of Cardiff Road and Meadow Road. Measurement position 1.5m above local ground level.
- **MPR10:** Northeast corner of site at junction of Meadow Road and Addison Road. Measurement position 1.5m above local ground level.

Figure 5: Measurement Positions



Survey durations and instrumentation details are set out in Table 9.

Table 9: Survey dates and schedule of instrumentation

Measurement Position	Survey Dates	Instrumentation	Calibration Due Date
MPS1	30/03/17 to 05/04/17	NOR 118 Sound Level Analyser (s/n 31990)	2018-08-25
		NOR 1225 Microphone (s/n 29831)	
		NOR 1251 Calibrator (s/n 30867)	2017-08-24
		NOR 1201 Preamplifier (s/n 30867)	2018-08-25
MPS2	30/03/17 to 04/04/17	SVAN 971 Sound Level Analyser (s/n 52614)	2018-10-10
		ACO 7052E Microphone (s/n 65484)	
		SVAN SV18 Preamplifier (s/n 57317)	2018-10-25
MPR1-MPR10	03/04/17	SVAN 33A Sound Level Calibrator (s/n 58011)	
		NOR 118 Sound Level Analyser (s/n 31990)	2018-08-25
		NOR 1225 Microphone (s/n 29831)	
		NOR 1251 Calibrator (s/n 30867)	2017-08-24
		NOR 1201 Preamplifier (s/n 30867)	2018-08-25

All instrumentation used meets the Type 1 specification of IEC 60651 and IEC 60804 and the Class 1 specification of IEC 61260 and IEC 61672 and carries current certificates of calibration.

Field calibration checks were made using a calibrator meeting Class 1 of IEC 60942 at the beginning and end of the measurement session. No significant drift was encountered, calibration level $114.0 \text{ dB} \pm 0.2 \text{ dB}$ @ $1000 \text{ Hz} \pm 0.2\%$, observed drift 0.1 dB.

Various statistical broad-band and spectral sound pressure level measurements were obtained during the survey including:

- $L_{Aeq,T}$: the equivalent continuous A-weighted sound pressure level over a measurement period, T;
- L_{AFmax} : the maximum A-weighted sound pressure level over a measurement period, T;
- $L_{AF90\%,T}$: the A-weighted sound pressure level exceeded for 90% of the measurement period, T;
- $L_{eq,T}$: the equivalent continuous linear sound pressure level in 1/3 octave bands over a measurement period, T;
- L_{Fmax} : the maximum linear sound pressure level in 1/3 octave bands over a measurement period, T.

9.0 Results and Data Analysis

9.1 Position MPS1 (Cox and Wyman Building)

The measurement data for position MPS1 is illustrated as a time series in Figure 6 and summarised in terms of broadband quantities in Table 10

Figure 6: MPS1 time series measurement data

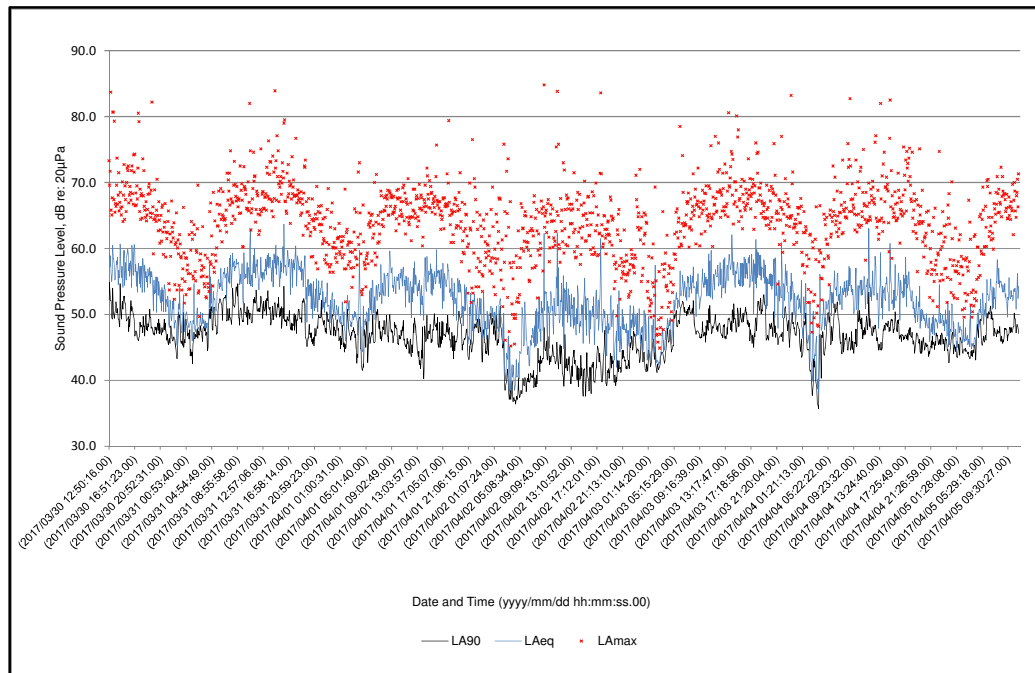
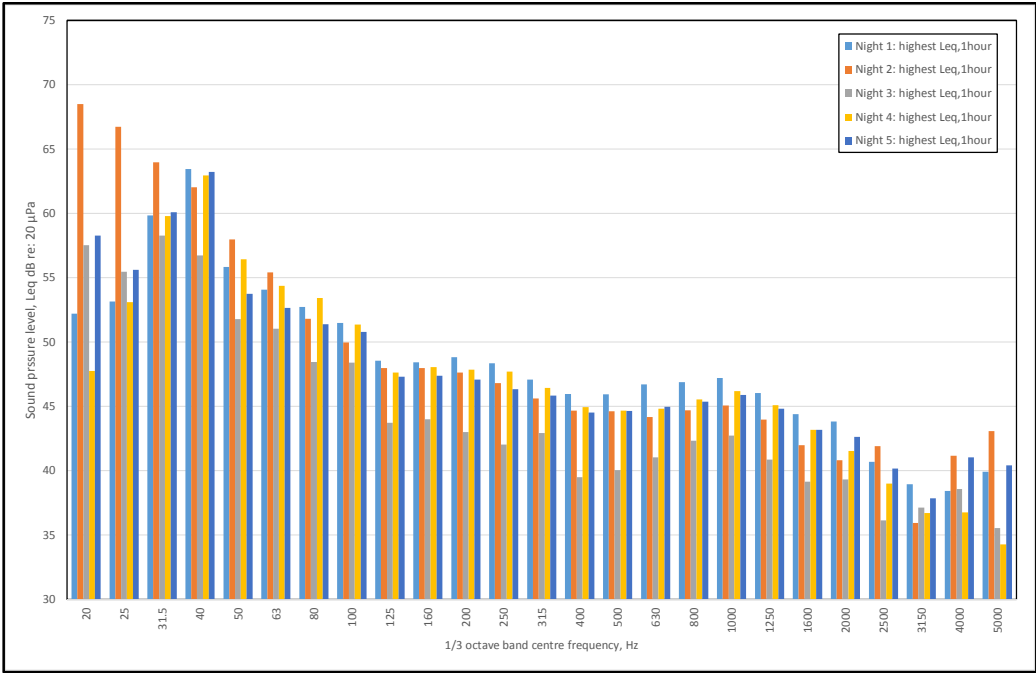


Table 10: MPS1 summary data

Period	Time (hh:mm)	Sound pressure level dB re:20µPa		
		LAeq,T	Min LAF90	LAFmax
Period 1 Daytime	(07.00- 23.00)	56	45	84
Period 1 Night-time	(23.00-07.00)	52	43	70
Period 2 Daytime	(07.00- 23.00)	57	45	84
Period 2 Night-time	(23.00-07.00)	51	42	73
Period 3 Daytime	(07.00- 23.00)	55	40	79
Period 3 Night-time	(23.00-07.00)	48	36	76
Period 4 Daytime	(07.00- 23.00)	51	38	85
Period 4 Night-time	(23.00-07.00)	50	41	79
Period 5 Daytime	(07.00- 23.00)	56	45	81
Period 5 Night-time	(23.00-07.00)	52	36	83
Period 6 Daytime	(07.00- 23.00)	53	44	83
Period 6 Night-time	(23.00-07.00)	50	43	71
Period 7 Daytime	(07.00- 23.00)	54	46	72

The spectral measurement data has been processed to establish the presence of train idling LFN by determining the worst hourly L_{eq} values for each night period over the duration of the survey.

Figure 7: MPS1 night spectral noise data



9.2 Position MPS2 (Reading Deaf Centre Building)

The measurement data for position MPS2 is illustrated as a time series in Figure 8 and summarised in terms of broadband quantities in Table 11

Figure 8: MPS1 time series measurement data

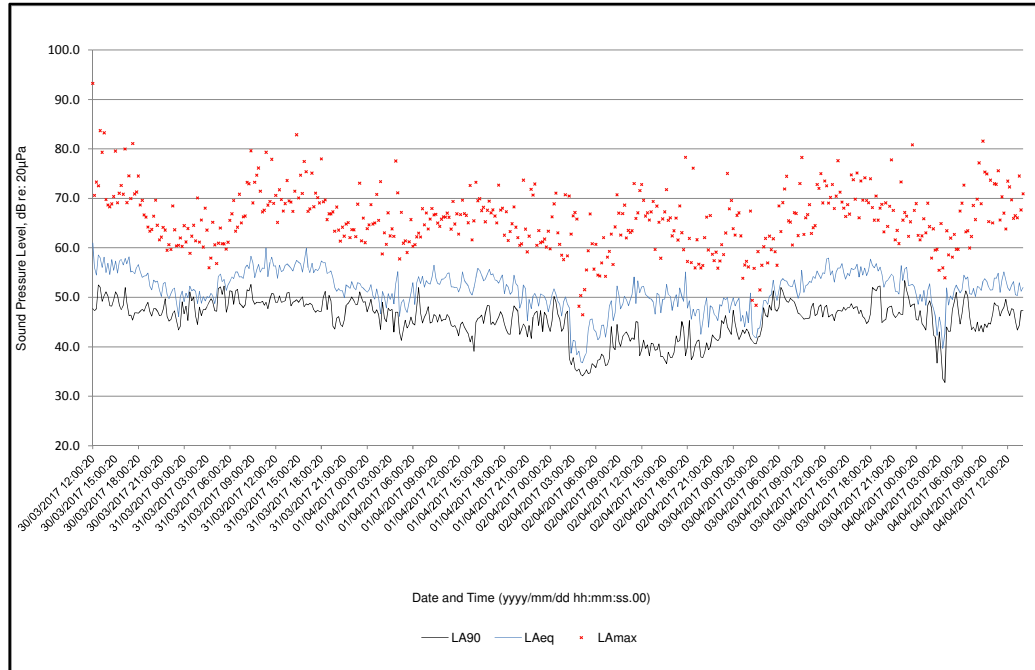
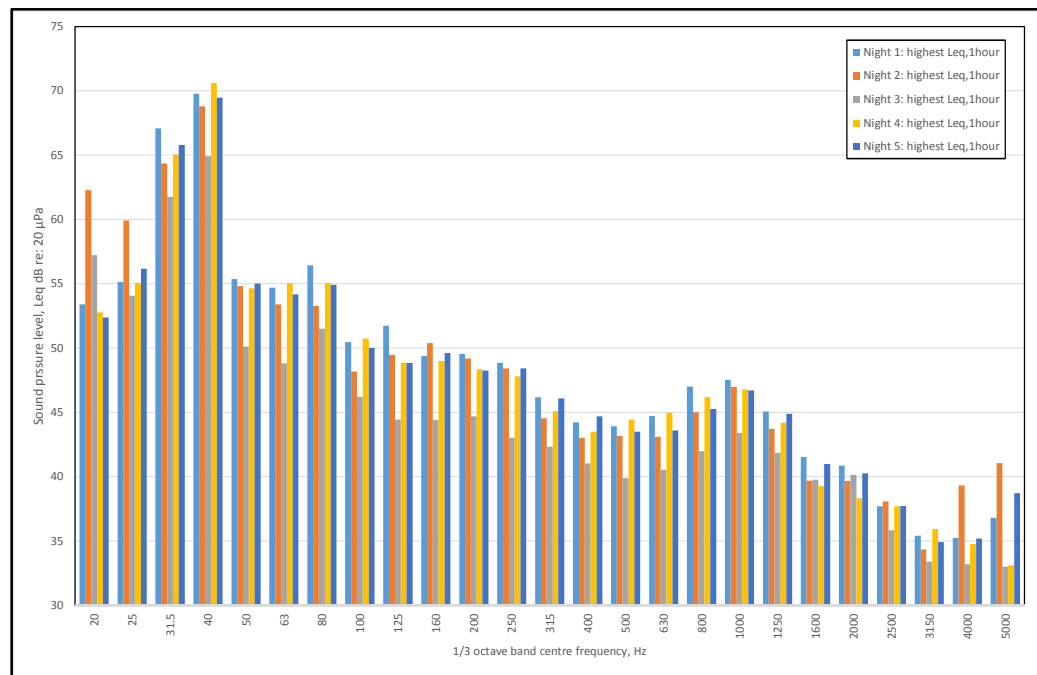


Table 11: MPS2 summary data

Period	Time (hh:mm)	Sound pressure level dB re:20µPa		
		L _{Aeq,T}	Min L _{AF90}	L _{AFmax}
Period 1 Daytime	(07.00- 23.00)	56	45	59
Period 1 Night-time	(23.00-07.00)	52	43	70
Period 2 Daytime	(07.00- 23.00)	56	44	83
Period 2 Night-time	(23.00-07.00)	51	41	78
Period 3 Daytime	(07.00- 23.00)	53	39	74
Period 3 Night-time	(23.00-07.00)	47	34	71
Period 4 Daytime	(07.00- 23.00)	49	36	78
Period 4 Night-time	(23.00-07.00)	49	41	75
Period 5 Daytime	(07.00- 23.00)	55	45	78
Period 5 Night-time	(23.00-07.00)	51	33	81
Period 6 Daytime	(07.00- 23.00)	52	43	82

The spectral measurement data has been processed to establish the presence of train idling LFN by determining the worst hourly L_{eq} values for each night period over the duration of the survey.

Figure 9: MPS2 night spectral noise data



9.3 Positions MPR1 to MPR10

The measurement data for positions MPR1 to MPR10 are summarised as broadband quantities in Table 12.

Table 12: Summary data positions MPR1 to MPR10

Date and Time	Position	Sound pressure level dB re:20µPa			Commentary
		L _{Aeq}	L _A F _{max}	L _A F ₉₀	
(2017/04/03 13:33:14.00)	MP1	66	84	56	Manrose Manufacturing, forklift movements and goods transfer, HGV activity
(2017/04/03 13:38:42.00)	MP1	68	87	54	
(2017/04/03 15:08:55.00)	MP1	63	79	52	
(2017/04/03 16:56:15.00)	MP1	68	87	56	
(2017/04/03 13:44:27.00)	MP2	65	81	58	Manrose Manufacturing activity noise, forklift movements and goods transfer, HGV activity
(2017/04/03 13:53:20.00)	MP2	64	82	58	
(2017/04/03 15:12:32.00)	MP2	61	79	57	
(2017/04/03 13:58:51.00)	MP3	61	79	52	Manrose Manufacturing activity noise, forklift movements and goods transfer, HGV activity
(2017/04/03 14:04:47.00)	MP3	61	80	52	
(2017/04/03 15:15:29.00)	MP3	59	72	53	
(2017/04/03 14:12:43.00)	MP4	79	112	43	Manrose Manufacturing activity noise, passing traffic, train noise, aircraft overflights
(2017/04/03 15:34:06.00)	MP4	58	86	42	
(2017/04/03 16:05:22.00)	MP4	56	74	45	
(2017/04/03 14:36:12.00)	MP5	56	73	46	Passing traffic, train noise
(2017/04/03 15:37:47.00)	MP5	60	80	46	

Date and Time	Position	Sound pressure level dB re:20µPa			Commentary
		L _{Aeq}	L _{AFmax}	L _{AF90}	
(2017/04/03 16:10:11.00)	MP5	51	66	45	Passing traffic, train noise
(2017/04/03 14:45:18.00)	MP6	50	69	44	train noise, aircraft overflights
(2017/04/03 14:50:26.00)	MP7	53	67	44	Passing traffic, train noise, aircraft overflights, HGVs, some industrial noise
(2017/04/03 15:43:51.00)	MP7	58	71	46	
(2017/04/03 16:15:56.00)	MP7	56	69	45	
(2017/04/03 14:56:28.00)	MP8	58	72	46	Passing traffic, train noise
(2017/04/03 15:50:57.00)	MP8	54	70	45	
(2017/04/03 16:48:50.00)	MP8	54	72	46	
(2017/04/03 15:03:24.00)	MP9	65	79	51	Industrial noise, HGVs, passing traffic
(2017/04/03 15:54:09.00)	MP9	61	76	51	
(2017/04/03 16:51:31.00)	MP9	63	79	49	
(2017/04/03 15:59:26.00)	MP10	63	81	45	HGVs, train noise

9.4 With-scheme Noise Levels

To determine noise levels across the application site, a detailed three dimensional computer model of the locality has been constructed using CADNA A software, which implements the procedures contained in a number of pertinent documents including Calculation of Road Traffic Noise (CRTN), Calculation of Railway Noise (CRN) and ISO 9613-2: Acoustics to Abatement of sound propagation outdoors, Part 2: General method of calculation, etc..

The measurement data obtained during the surveys has been used to calibrate the model for the existing situation and subsequently to assess how noise will propagate across the proposed scheme for the various noise sources under evaluation.

Grid noise levels at heights corresponding to ground floor and upper floor levels of the proposed scheme have been plotted together with building evaluation, the latter illustrating worst case day and night L_{Aeq} noise levels on a facade-by-facade basis. The model output is illustrated in Figures 10 to 21.

In respect of commercial/industrial noise, the model output has included the contribution from Manrose Manufacturing Limited, however as noted previously, they have exercised break clauses and will vacate during 2017. The present approach therefore errs on the side of pessimism and is considered to represent a reasonably foreseeable worst case approach.

Figure 10: Day L_{Aeq} Building Evaluation (Commercial/Industrial Sources)

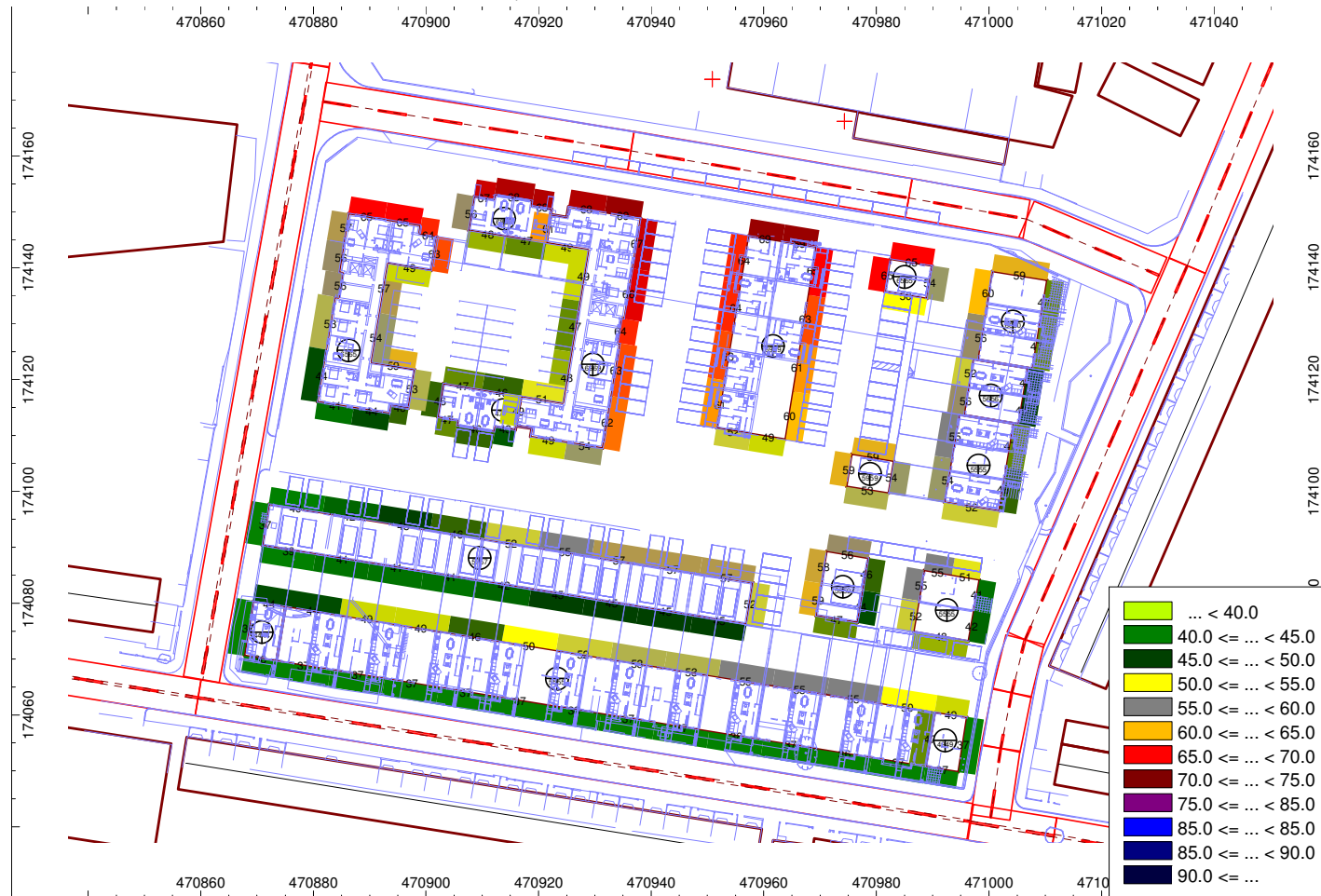


Figure 11: Day L_{Aeq} GF Level Grid (Commercial/Industrial Sources)

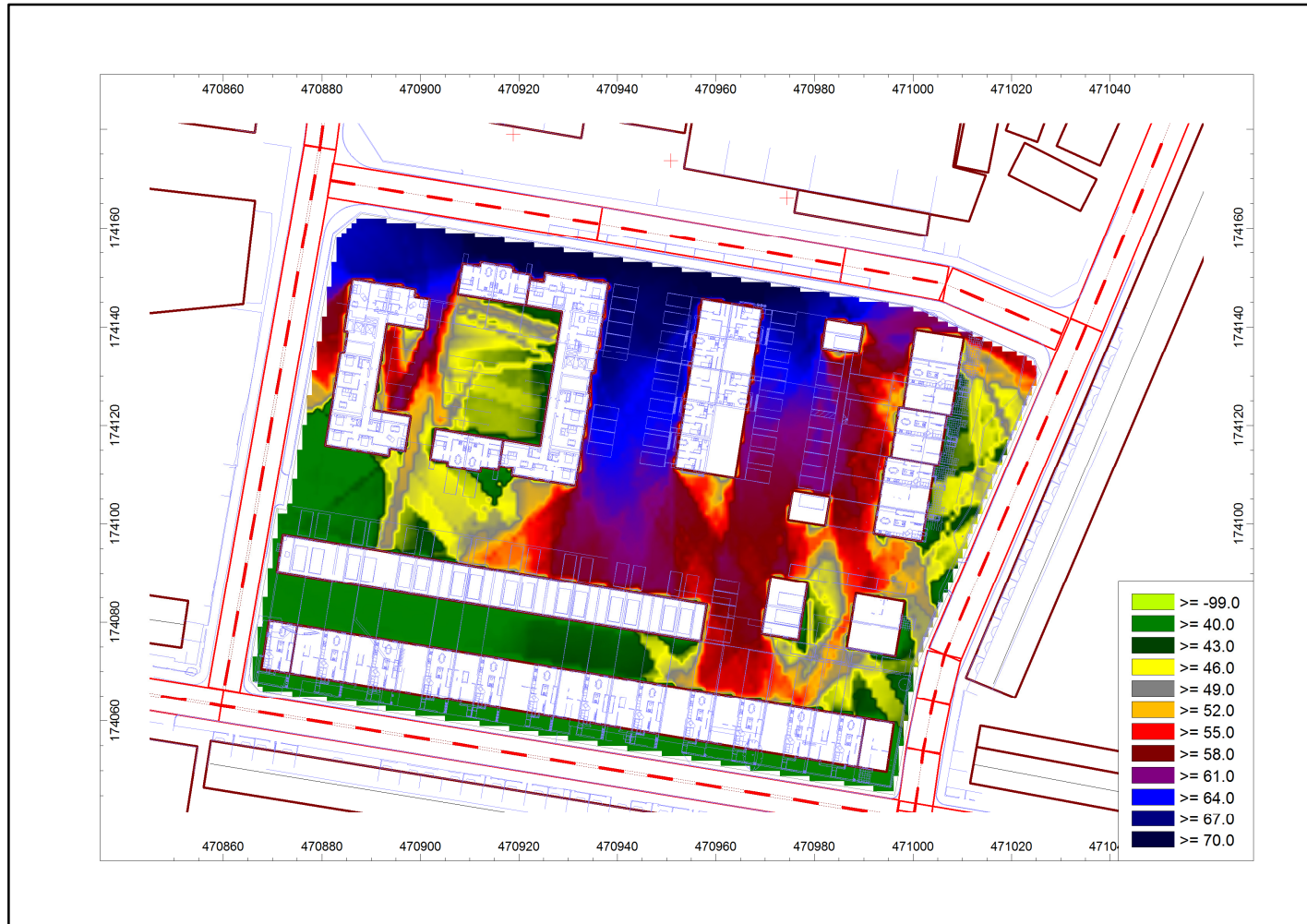


Figure 12: Day L_{Aeq} 2F Level Grid (Commercial/Industrial Sources)

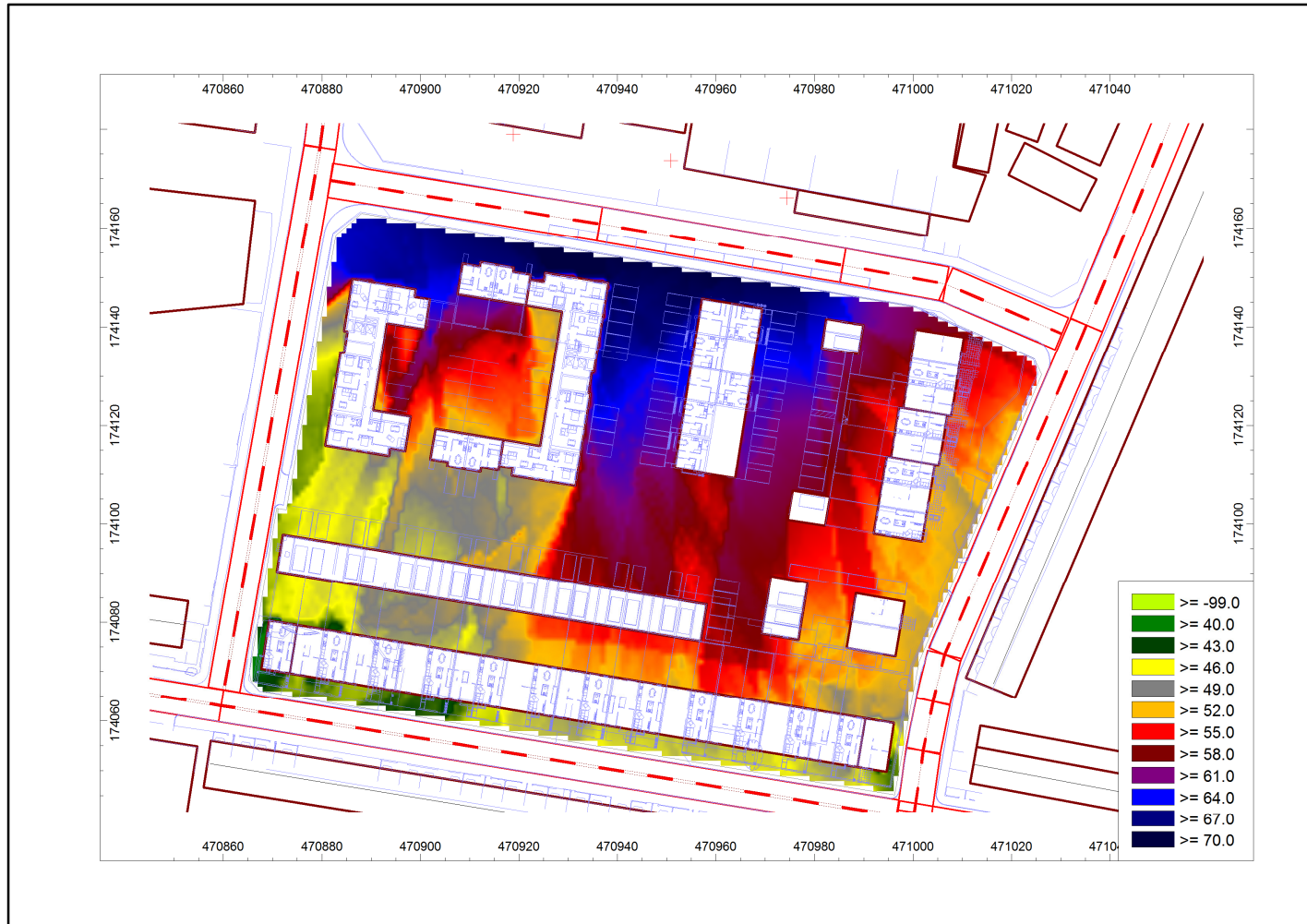


Figure 13: Night L_{Aeq} Building Evaluation (Commercial/Industrial Sources)

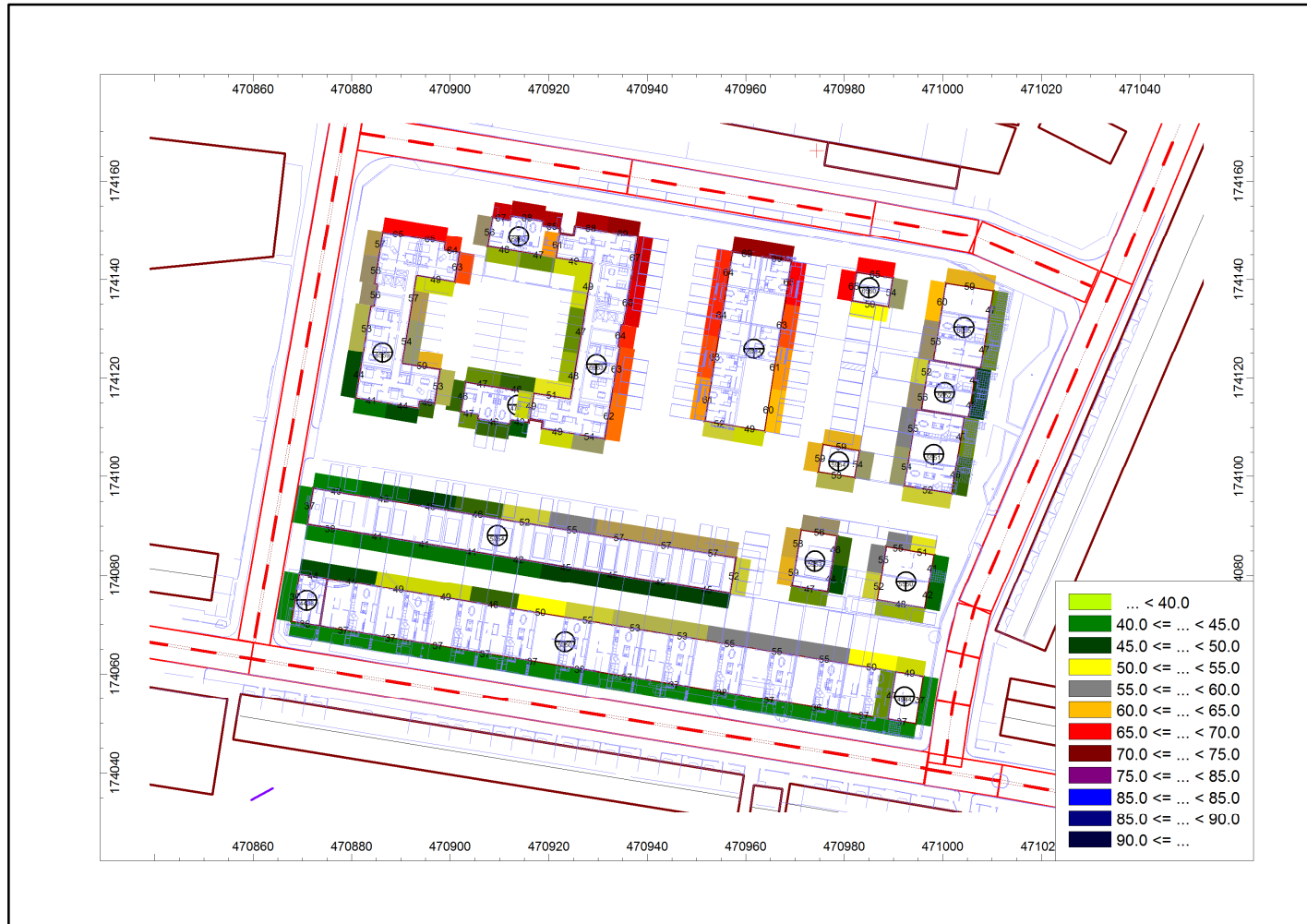


Figure 14: Night L_{AFmax} GF Grid (Commercial/Industrial Sources)

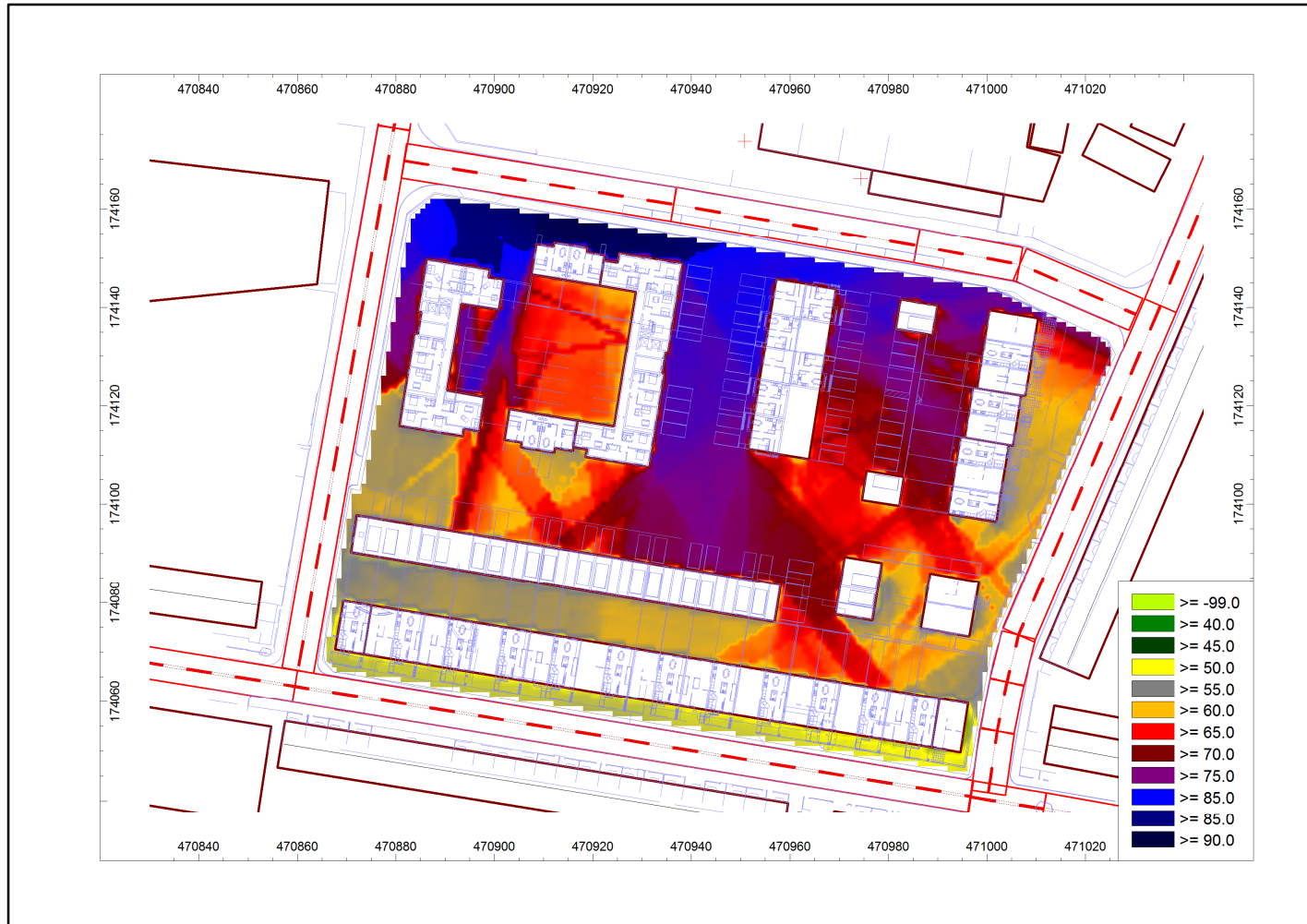


Figure 15: Night L_{AFmax} 2F Grid (Commercial/Industrial Sources)

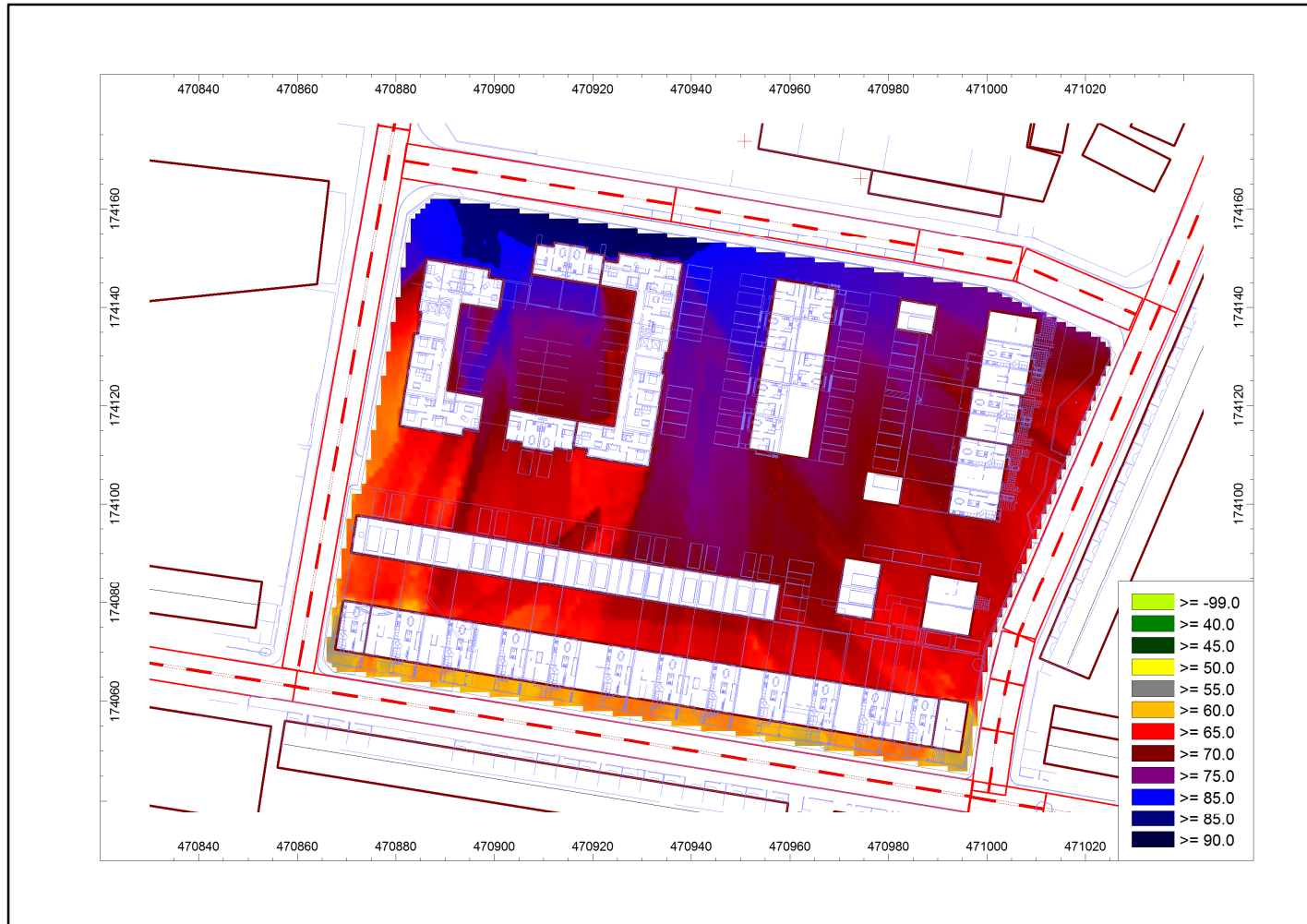


Figure 16: Night L_{AFmax} Building Evaluation (Commercial/Industrial Sources)

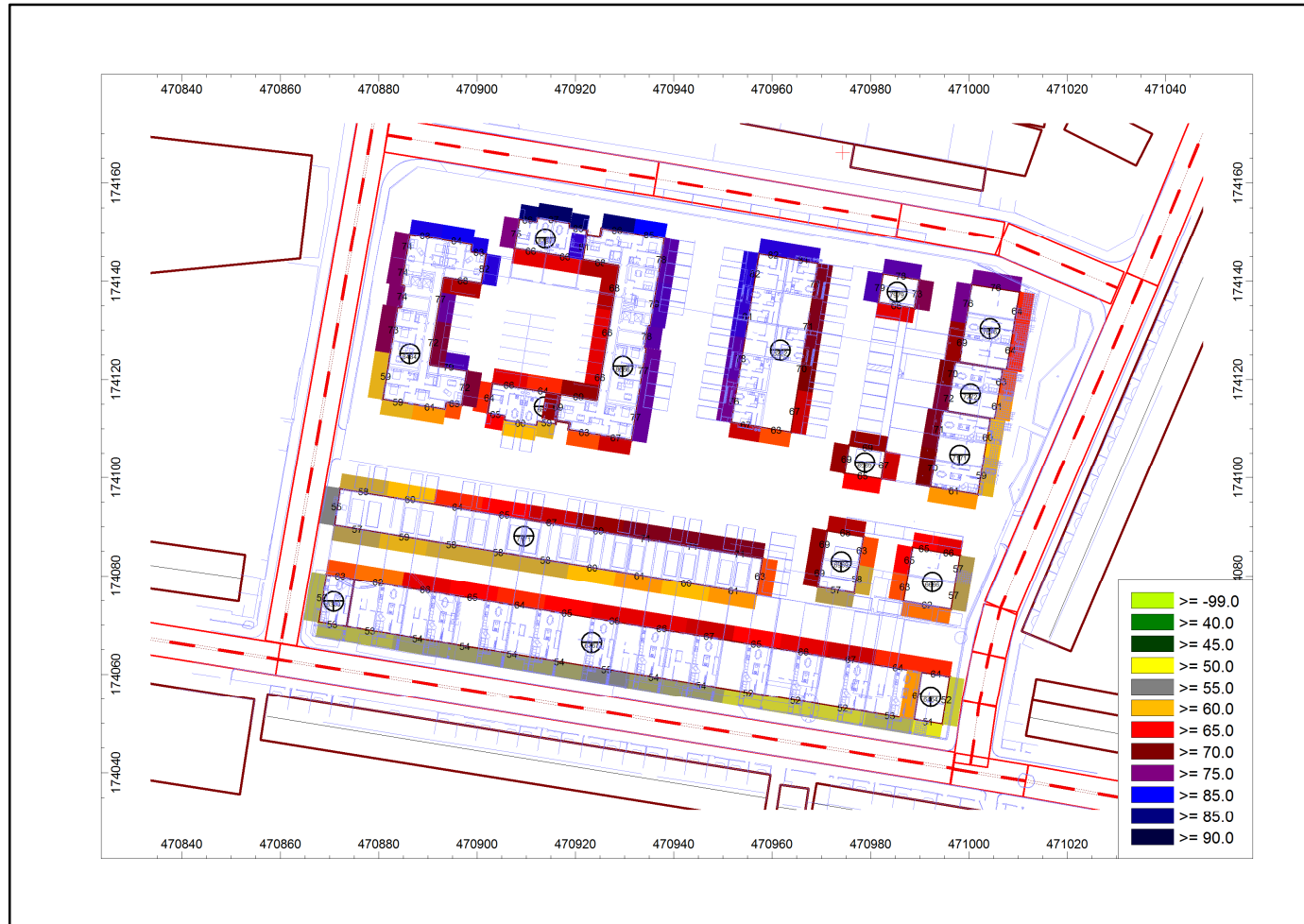


Figure 17: Day L_{Aeq} Building Evaluation (Rail Sources)



Figure 18: Day L_{Aeq} GF Grid (Rail Sources)

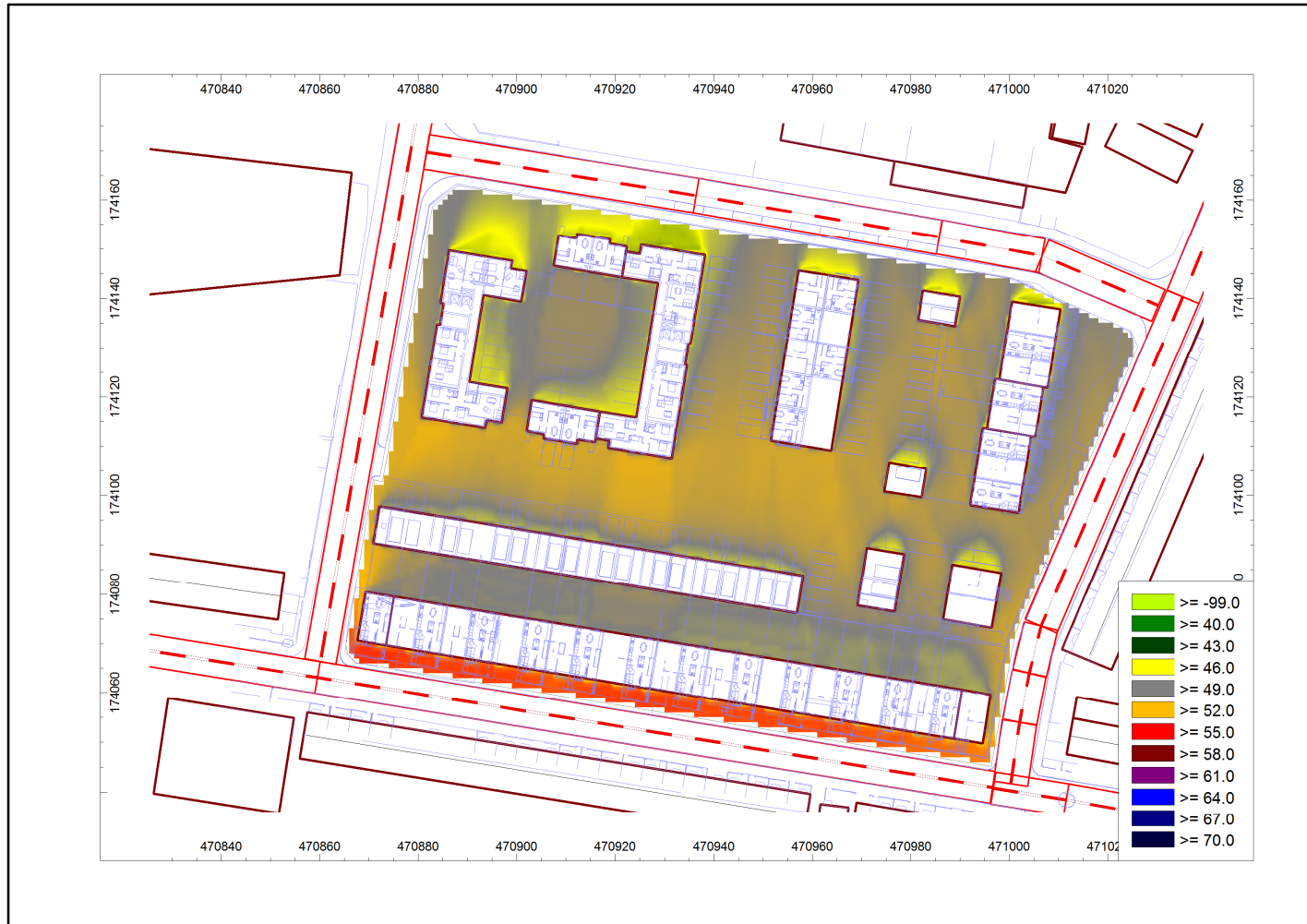


Figure 19: Day L_{Aeq} 2F Grid (Rail Sources)

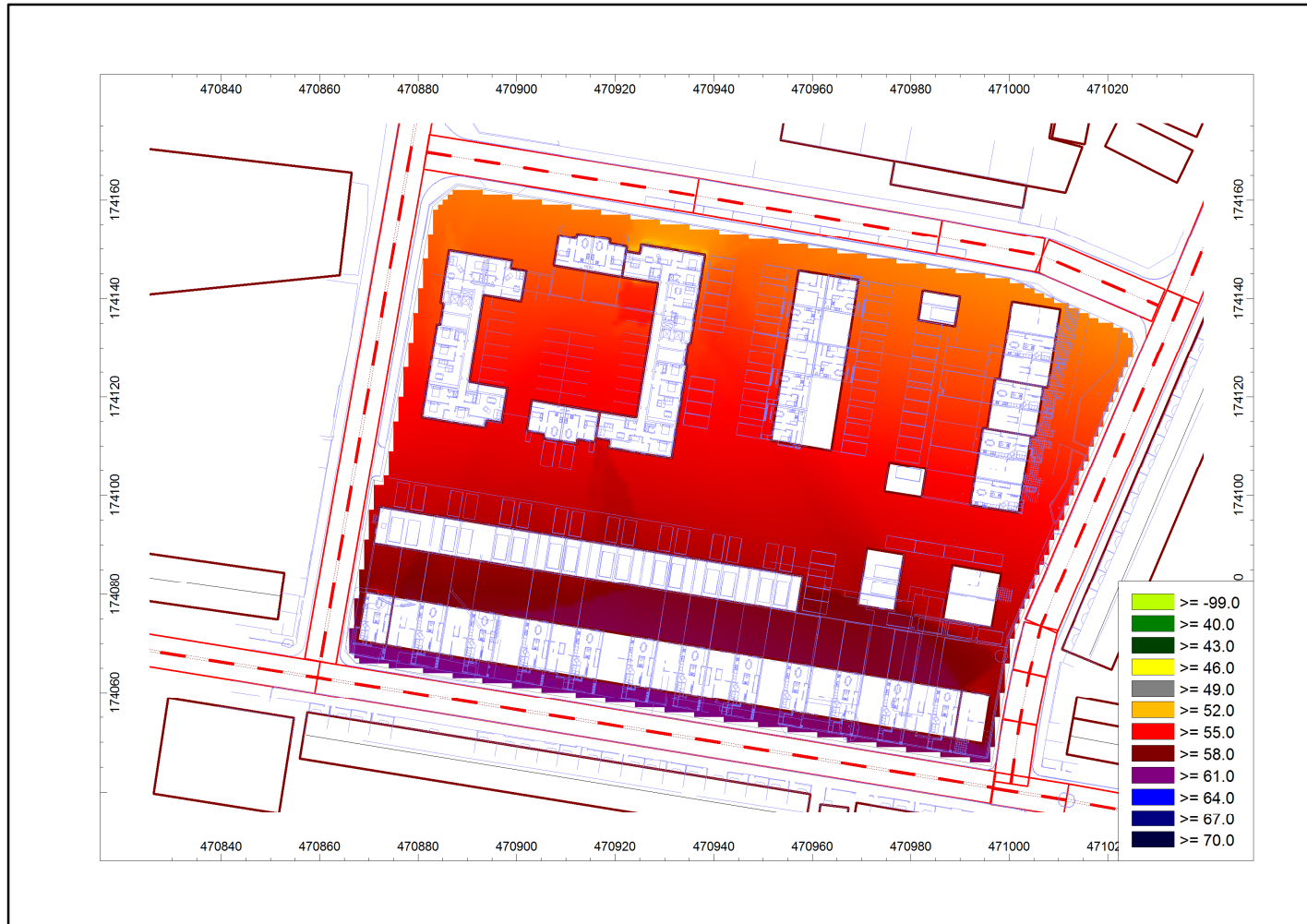


Figure 20: Night L_{Aeq} Building Evaluation (Rail Sources)

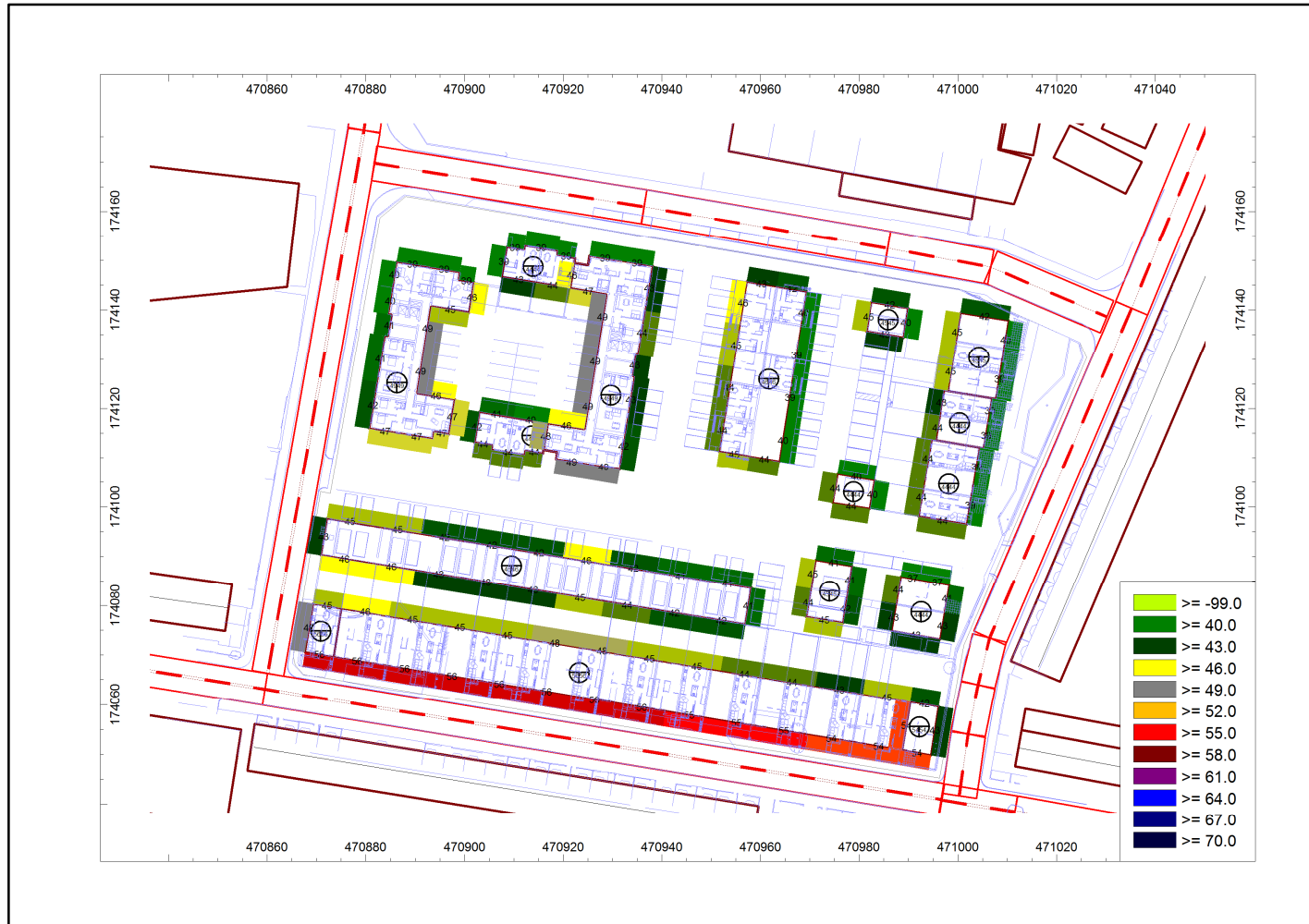


Figure 21: Night L_{Aeq} GF Grid (Rail Sources)

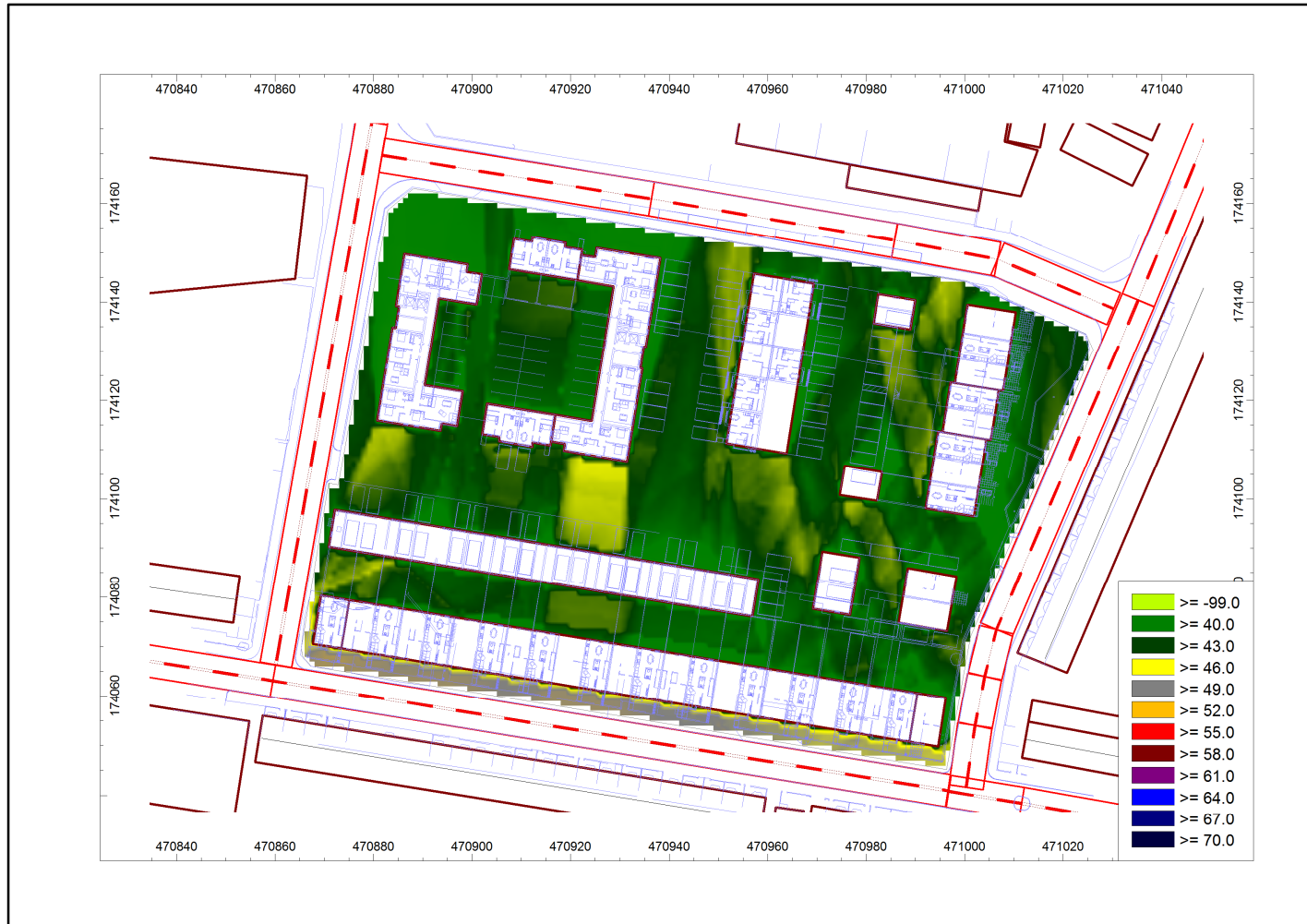


Figure 22: Night L_{Aeq} 2F Grid (Rail Sources)

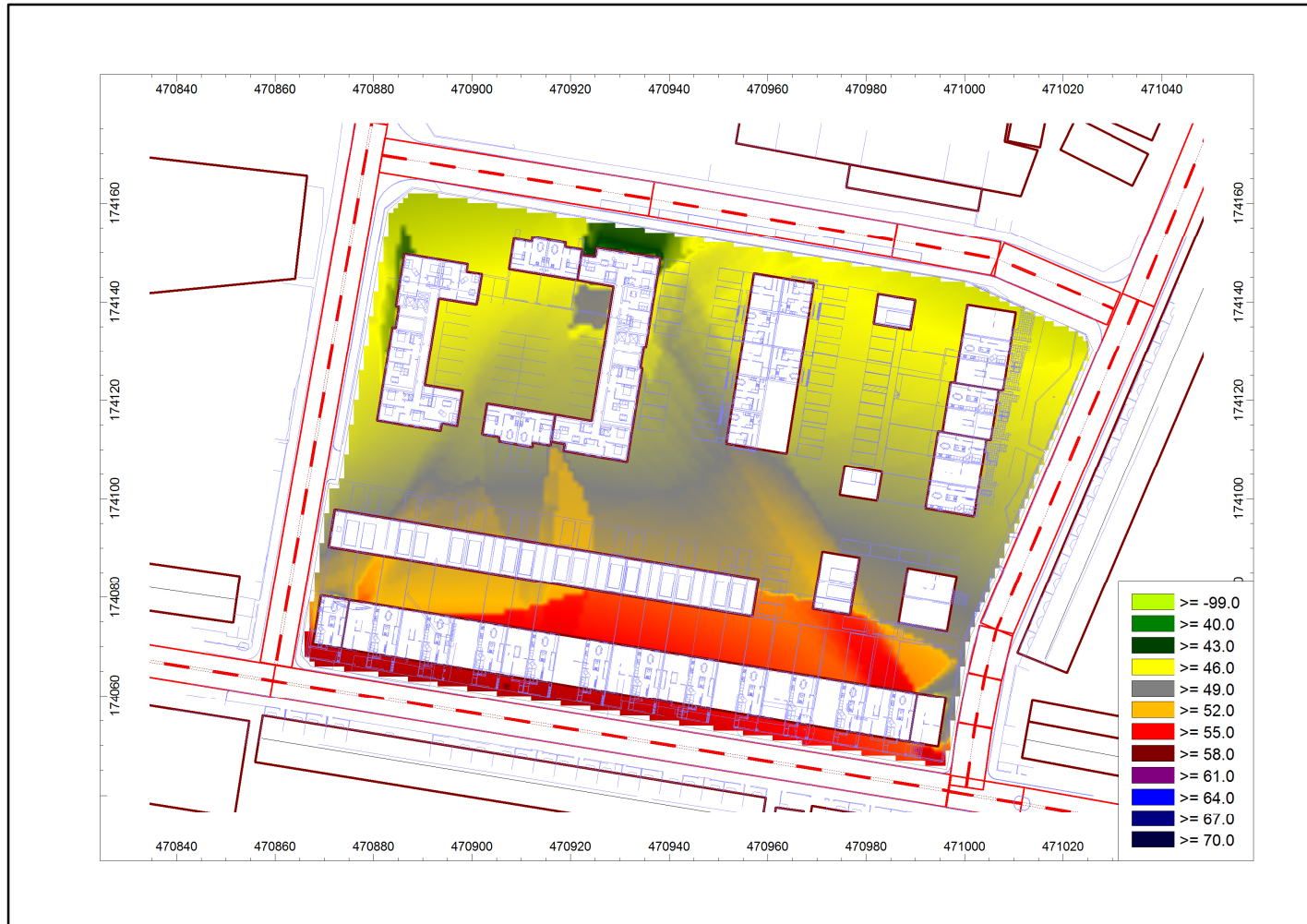


Figure 23: Day L_{Aeq} Building Evaluation (All Sources)

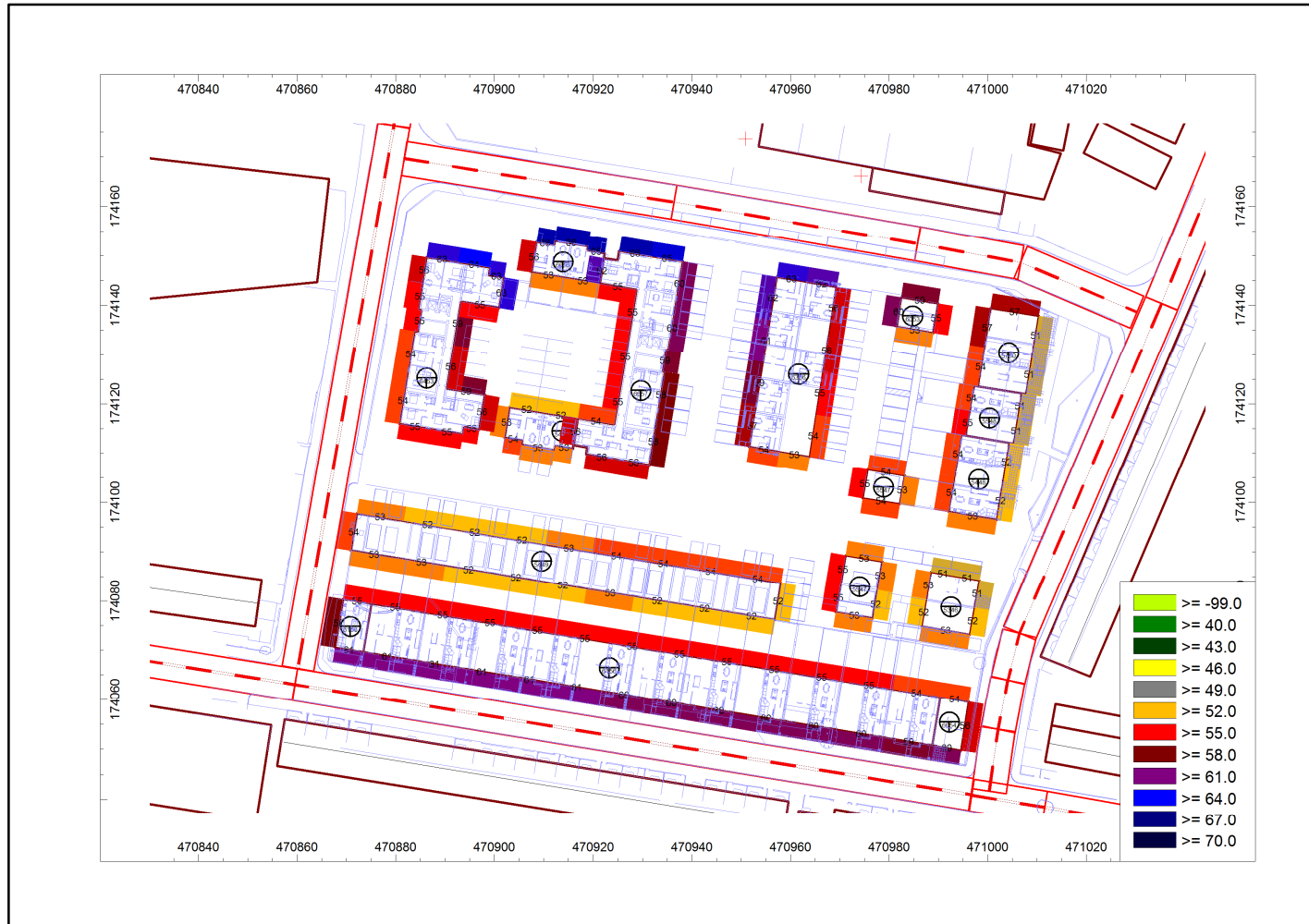


Figure 24: Day L_{Aeq} GF Grid (All Sources)

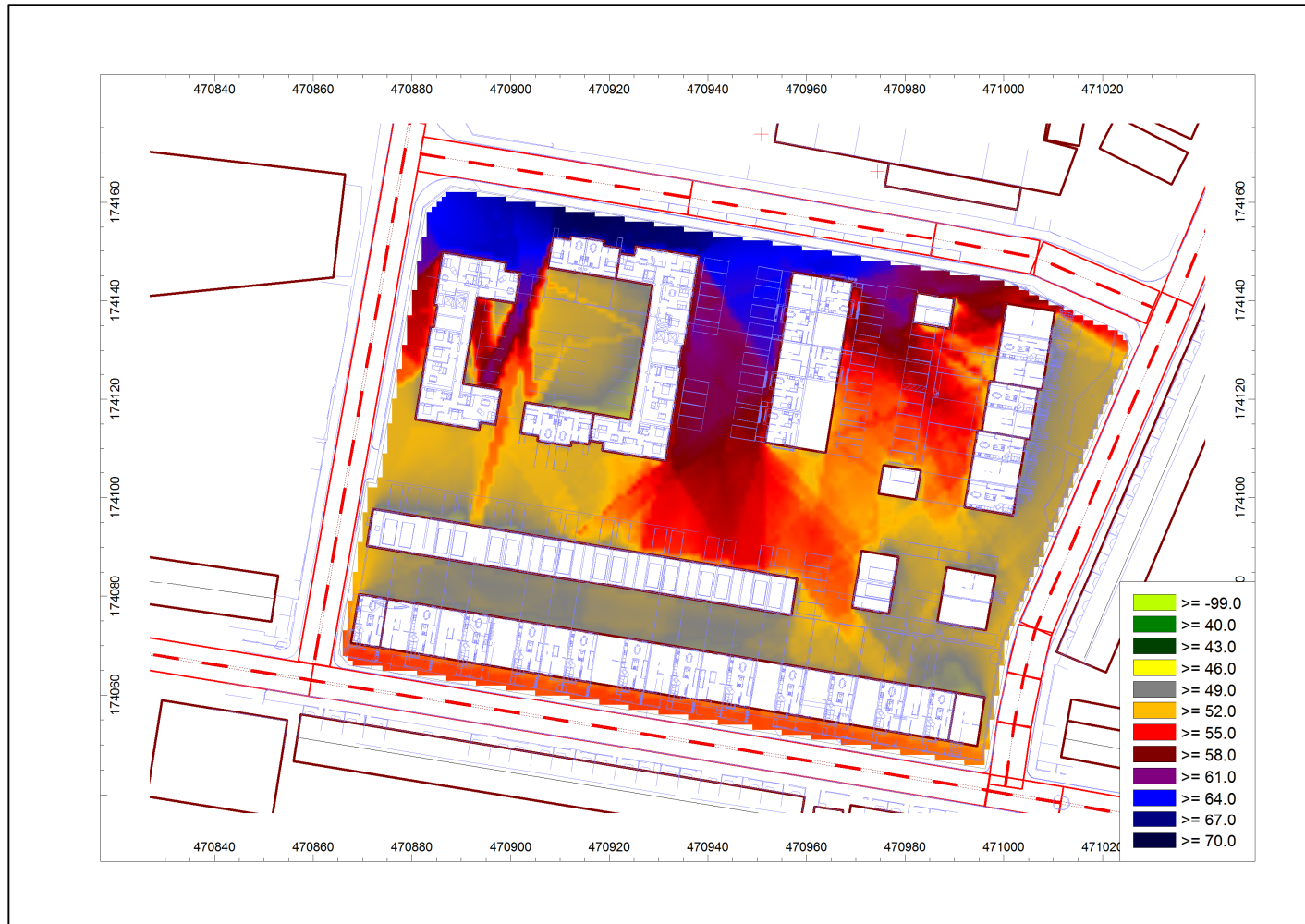


Figure 25: Day L_{Aeq} 2F Grid (All Sources)

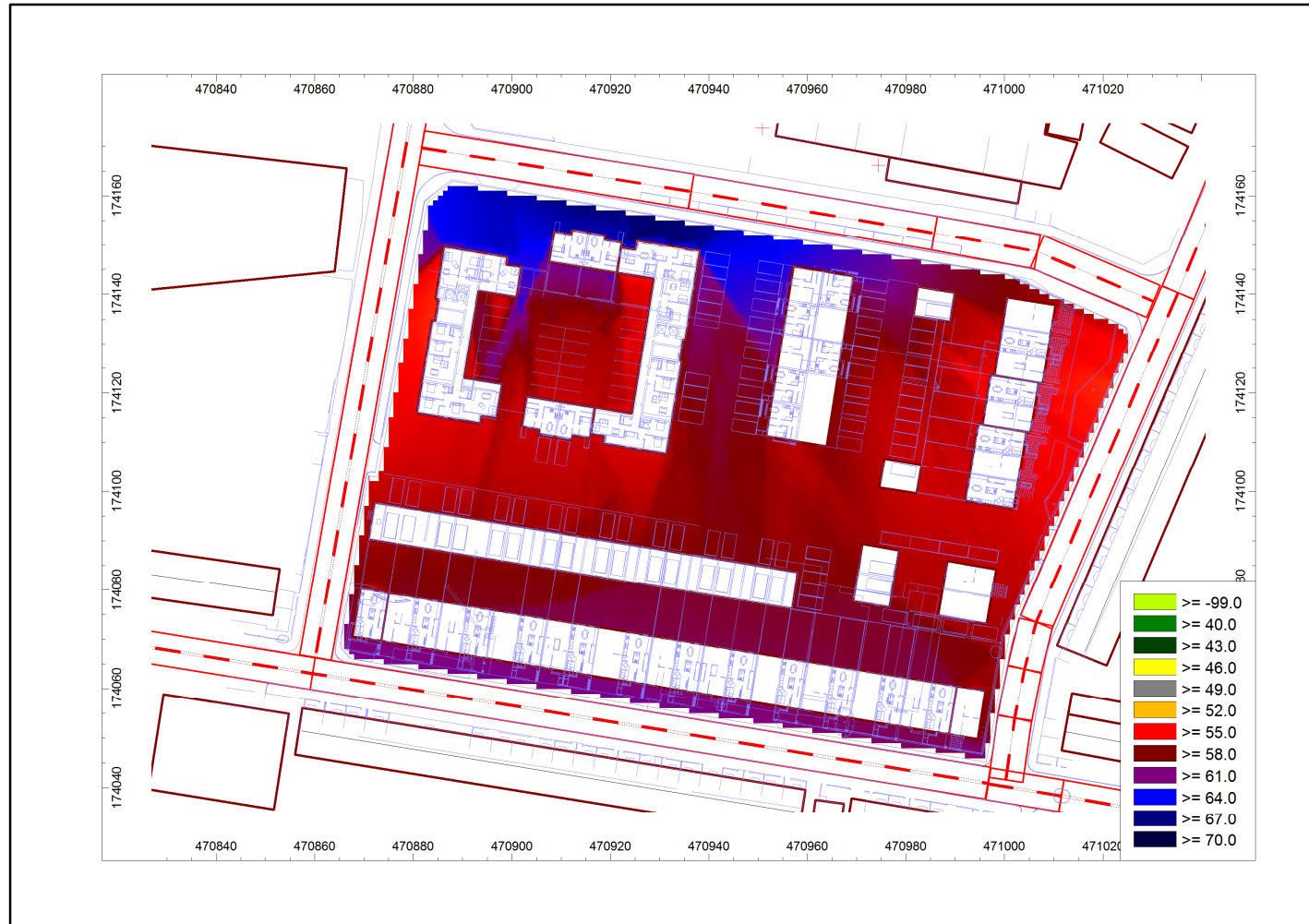


Figure 26: Night L_{Aeq} Building Evaluation (All Sources)

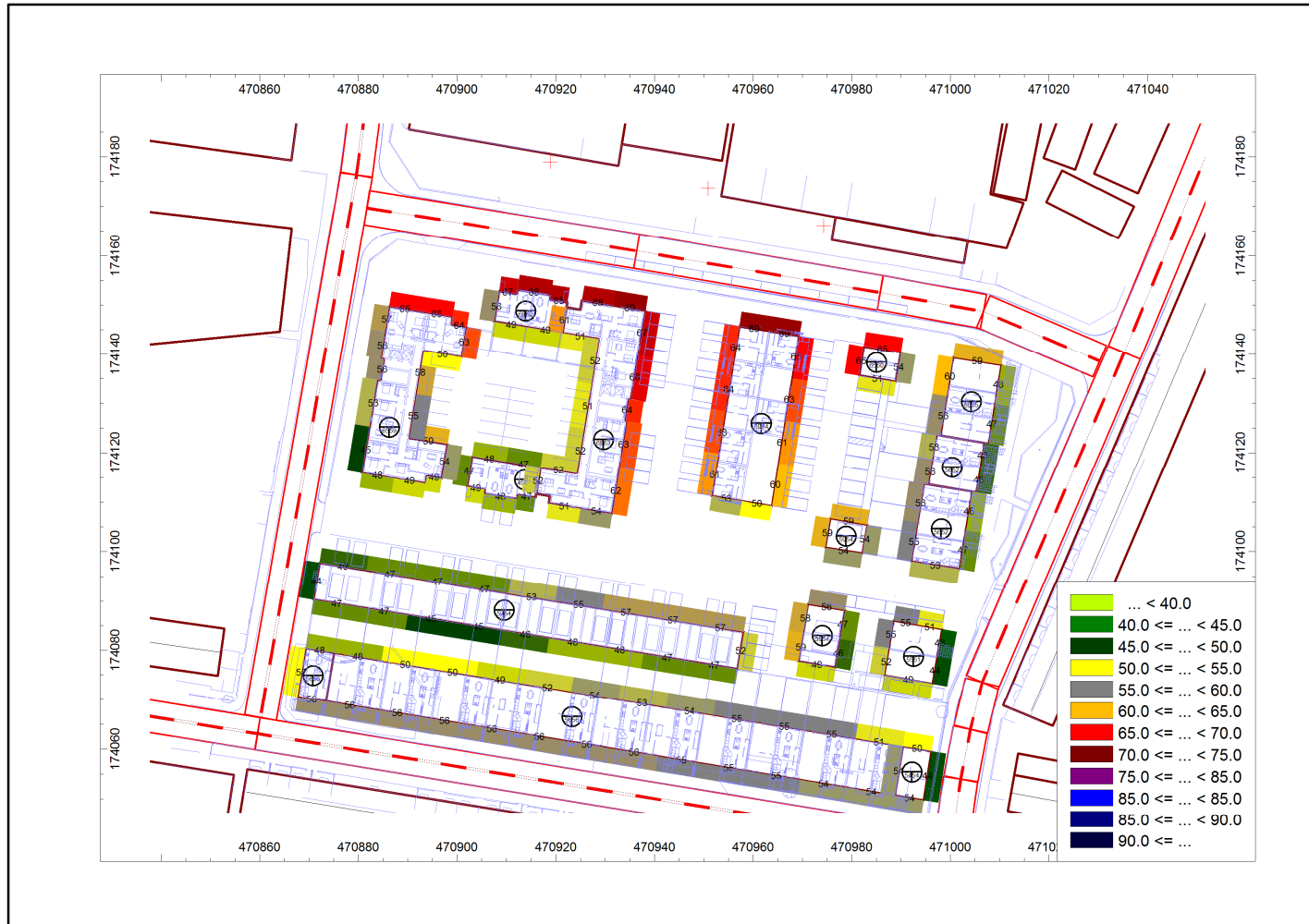


Figure 27: Night L_{Aeq} GF Grid (All Sources)

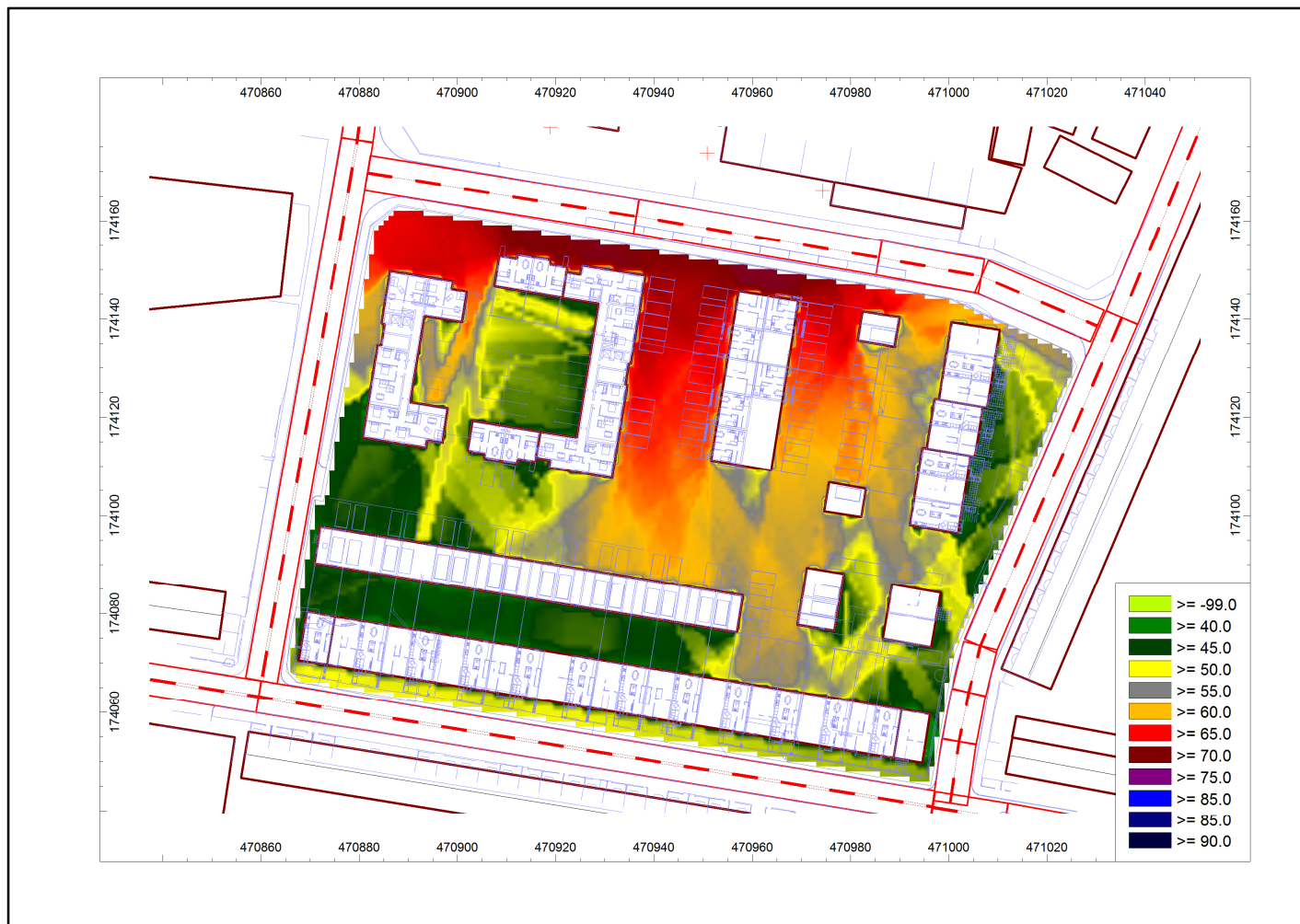
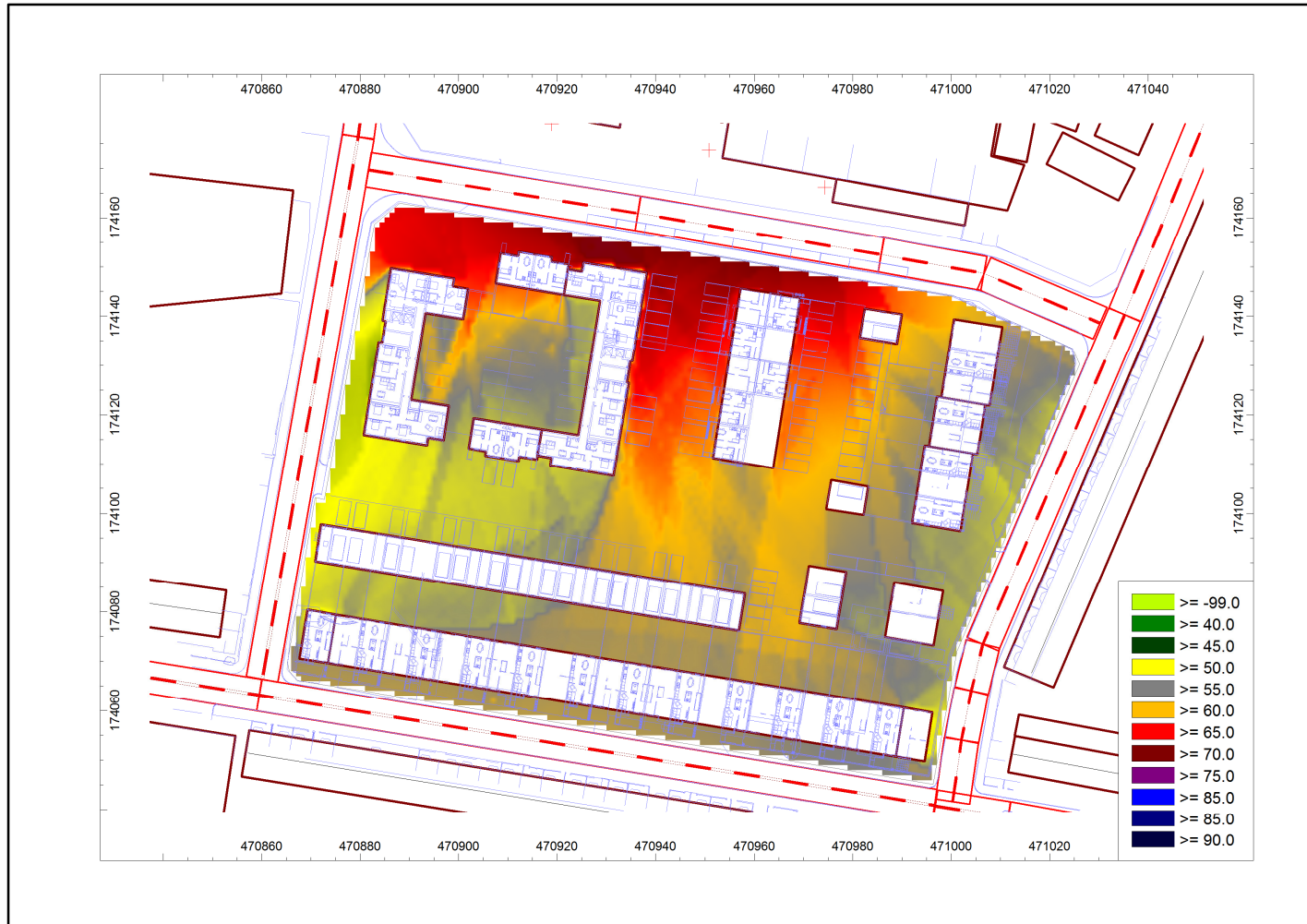


Figure 28: Night L_{Aeq} 2F Grid (All Sources)



10.0 Facade Sound Insulation

The overall building envelope sound insulation requirements may be quantified using appropriate single figure quantities such as those described below.

Table 13: Sound insulation descriptors

Quantity	Definition	Description
R	Sound reduction index	The sound reduction index R is a property of the building element, independent of its surface area and absorption within the receiving room. R is obtained from the results of Laboratory tests
R_w	Weighted sound reduction index	Single figure sound insulation value derived from the measured sound reduction index R .
$D_{2m,nT}$	Standardised level difference	The difference between the outdoor sound pressure level at 2m and the sound level in the receiving room, corresponding to a reference value of the reverberation time.
$D_{2m,nT,w}$	Weighted, standardised level difference	Single figure sound insulation value derived from the Standardised level difference
C, C_{tr}	Spectrum adaptation terms 1 and 2. Used with single figure ratings as defined by ISO 717-1:1996	C - calculated with spectrum No. 1 (A-weighted pink noise); C_{tr} - calculated with spectrum No. 2 (A-weighted urban traffic noise).

10.1 Global Building Envelope Sound Insulation Performance

To determine the sound insulation requirements of the constituent facade elements detailed calculations to BS EN 12354-3 (or alternatively as per BS 8233:2014) will be need to be undertaken at an appropriate stage of the project.

However, to demonstrate that general external noise ingress may be adequately attenuated, the overall facade sound insulation requirement has been determined using single figure quantities. In this case $R_w + C_{tr(100-5000)}$ has been used where R_w is the Weighted Sound Reduction Index and C_{tr} is the spectrum adaptation term relevant to noise sources that have a low frequency bias, e.g., urban traffic, determined over the frequency range 100 Hz to 5.0 kHz.

The outline facade sound insulation performance for the scheme is graphically represented by Figures 29 and 30 below for the day and night periods. In respect of the latter, façade performance requirements are dictated by the need to control L_{Amax} rather than L_{Aeq} noise levels

Figure 29: Day Facade $R_w + C_{tr(100-5000)}$ requirements (all sources)

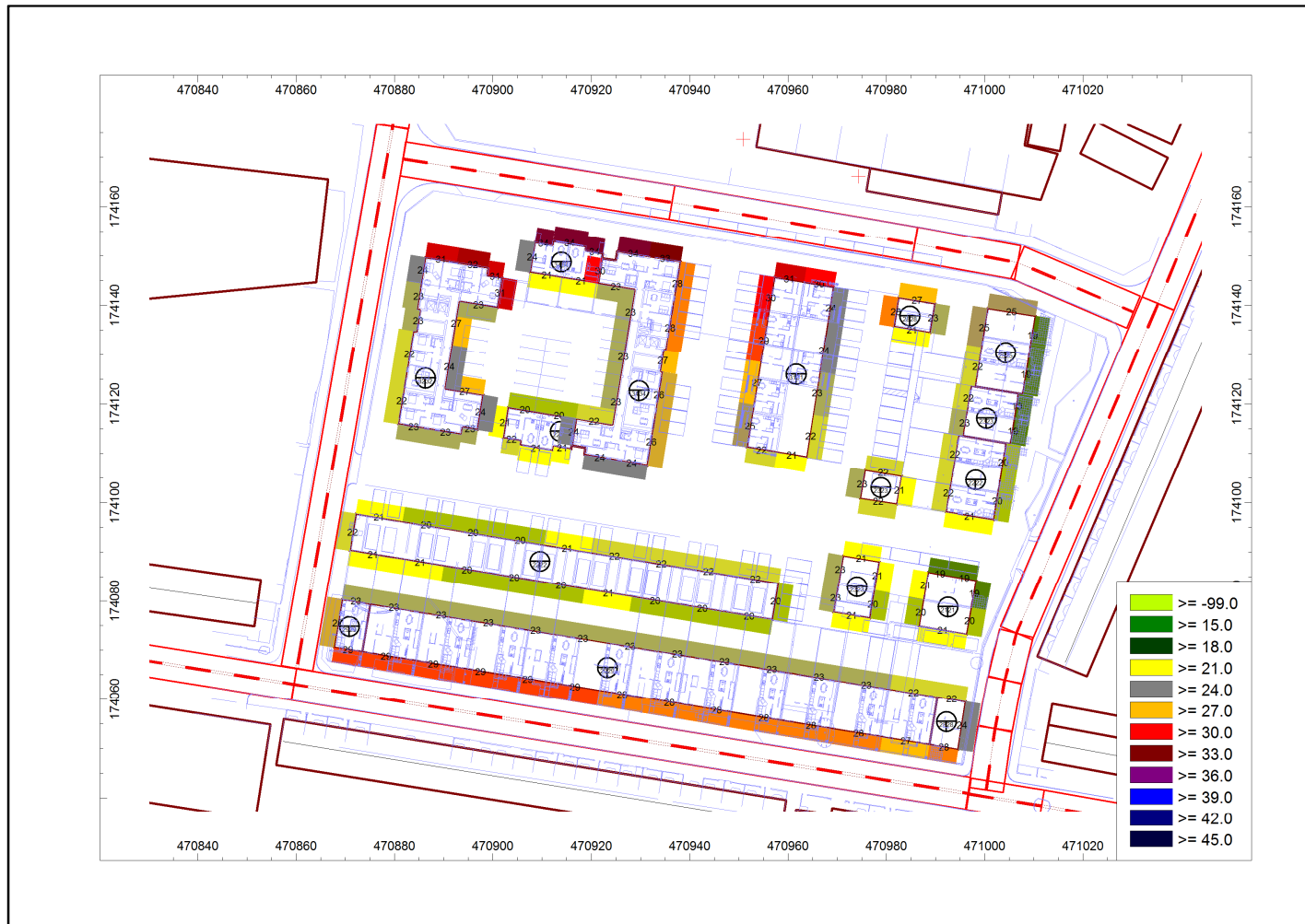
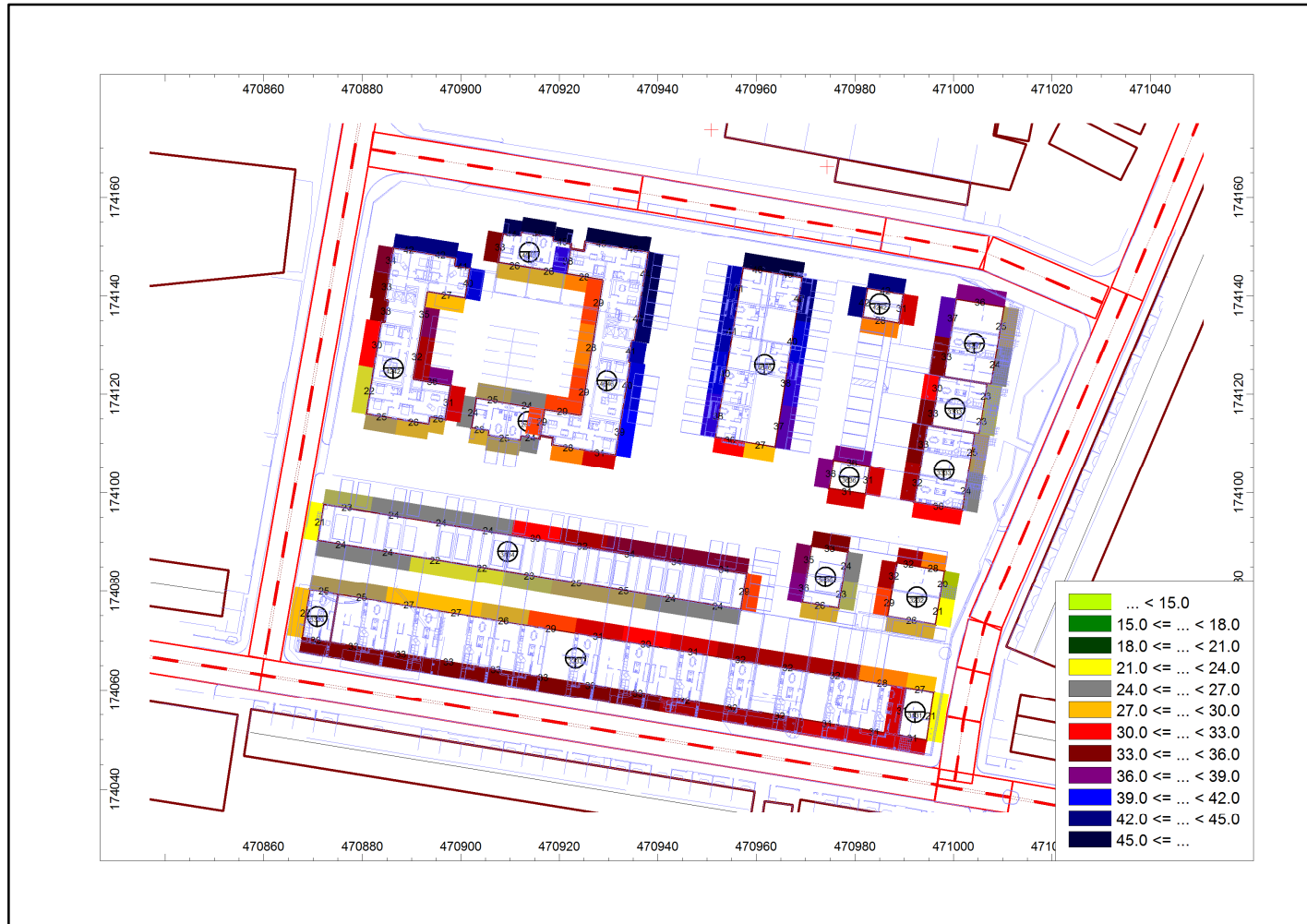


Figure 30: Night Facade $R_w + C_{tr(100-5000)}$ requirements (all sources)



Examination of Figure 29 shows a **worst case** daytime target sound insulation value of 34 dB $R_w + C_{tr(100-5000)}$, applicable to the most exposed facades overlooking Meadow Road.

For general illustrative purposes, based on published data from proprietary glass manufacturers, the following glazing configuration in the closed position would be capable in principle of achieving the foregoing target sound insulation value:

- Saint Gobain 6(16)8.4A double glazed unit - $R_w (C; C_{tr})$ 40 (-2;-6) dB.

Figure 30 shows a **worst case** night target sound insulation value of 45 dB $R_w + C_{tr(100-5000)}$, again applicable to the most exposed facades overlooking Meadow Road.

For general illustrative purposes, based on published data from proprietary glass manufacturers, the following glazing configuration in the closed position would be capable in principle of achieving the foregoing target sound insulation value:

- Saint Gobain 8.8A(24)12.8A double glazed unit - $R_w (C; C_{tr})$ 50 (-2;-5) dB.

The worst-case night target ostensibly requires use of high performing double glazed units. However, as discussed above, Manrose Manufacturing Limited are to vacate their Meadow Road premises during 2017 and, as a consequence, significant reductions in night noise exposure will occur. It is therefore considered prudent that the façade specification detailed herein be reviewed at an appropriate point in the project's development.

Moving towards the middle of the scheme, noise levels reduce due to increasing source-receiver distance and screening effects from intervening buildings. and hence façade sound insulation requirements reduce pro-rata. Worst-case façade sound insulation requirements for blocks in the middle of the proposed scheme are $R_w + C_{tr(100-5000)}$ 36 dB. Modest glazing configurations may be considered here, typically a Saint Gobain 4(12)6 double glazed unit.

As noted above, detailed façade sound insulation calculations to BS EN 12354-3 (or alternatively as per BS 8233:2014) will be needed to be undertaken at an appropriate stage of the project.

The foregoing glazing configurations are illustrative and may be subject to revision. Consequently, they should not be taken as forming either a performance/design statement or be included in any tender documentation. In addition, it is emphasised that defined low frequency sound insulation targets will also need to be attained by façade elements and this is discussed in the following section.

10.2 Building Sound Insulation Requirements for LFN

As noted at Section 7.0, it is proposed that LFN within dwellings be controlled to values as per the ISO 226 threshold with an additional allowance (penalty) to account for level fluctuations.

Based on predicted computer model output, the façade sound reduction index R necessary to meet the suggested specification is set out below, this requirement to be met in addition to the target sets set out in the foregoing sections.

At this stage, to err on the side of caution, the building sound insulation requirements for LFN is set on a site wide basis, however the extent of the mitigation may potentially be subject to review, if detailed measurements are possible during the project's progression.

Table 14: Building Sound Insulation Requirements for LFN

Location	Term	1/3 octave band centre frequency, Hz						
		20	25	31.5	40	50	63	80
All categories of Internal occupied space within dwellings	External noise level L_{eq} dB	70	68	65	65	59	56	54
	Internal design spectrum dB	71	62	53	45	39	33	27
	PSM dB [1]	-3	-3	-3	-3	-3	-3	-3
	Façade SRI R dB	2	9	15	23	23	26	30

[1] Practical safety margin to be applied to internal design spectrum

For brevity, it has been taken in the first instance that the area $S \text{ m}^2$ of the acoustically weakest façade element, i.e., glazing, will be numerically comparable to the room absorption area $A \text{ m}^2$.

Masonry elements are likely to provide higher sound insulation performance as compared with glazing and the former will need to be specified and detailed at an appropriate point of the project.

The relevant specialist trade contractors shall provide test data to demonstrate that the performance values identified in Table 14 will be achieved. This is applicable to all types of façade element, including glazing, masonry elements, roof constructions etc.

For frequencies below 100 Hz, to minimise measurement uncertainty as far as is practicable, it is recommended that tests be carried out in accordance with ISO 15186-1:2000, Acoustics -- Measurement of sound insulation in buildings and of building elements using sound intensity -- Part 1: Laboratory measurements.

For frequencies at and above 100 Hz, measurements may be undertaken in accordance with BS EN ISO 10140 Parts 1, 2, 4 and 5:2010 (Acoustics-Laboratory measurement of sound insulation of building elements – Part 1: Application rules for specific products. Part 2: Measurement of airborne sound insulation. Part 4: Measurement procedures and requirements. Part 5: Requirements for test facilities and equipment) or an equivalent series of standards.

11.0 Ventilation to Dwellings

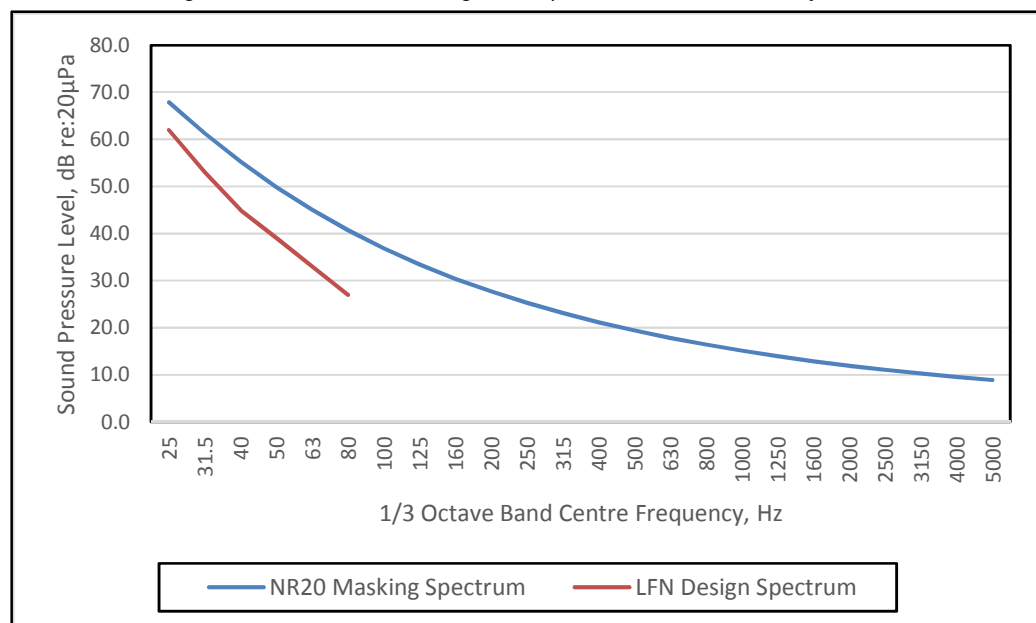
Ventilation to dwellings will need to comprise a ducted whole house arrangement, i.e., continuous mechanical supply and extract with heat recovery (MVHR). Given that windows will need to remain shut to achieve the proposed target indoor ambient noise levels, consideration will need to be given to thermal comfort within dwellings particularly during summer months. A detailed review of ventilation arrangements will need to be undertaken at an appropriate stage of the projects development, however it is considered prudent to allow for in-line duct attenuation for air inlet and exhaust paths.

As part of the façade mitigation package, it is considered prudent to provision for masking of LFN to be provided by the ventilation arrangement. The approach of providing masking by ventilation equipment is consistent with the guidance given in Clause B.4, u), of ISO 14837-1:2005 Mechanical vibration - Ground-borne noise and vibration arising from rail systems -- Part 1: General guidance which states

“Increase background noise levels to mask intrusive noise (with care to avoid adverse effect on speech intelligibility and maintain a spectral balance)”

In the first instance, the masking spectrum could follow NR 20 in 1/3 octave bands, and this is plotted against the LFN criteria from Table 14 in Figure 31 below:

Figure 31: Provisional masking noise spectrum from ventilation systems



12.0 Amenity Areas

As discussed previously, the LPA has set target values for outdoor amenity areas to lie in the range given in BS 8233:2014, i.e., 50 to 55 dB $L_{Aeq,16h}$.

Noise at the proposed amenity areas has been predicted assuming all sources are operating as per Figure 32 below. This shows significant excesses above the applicable BS 8233:2014 range, with the predominantly cause being industrial/commercial activity from the extant units located along Meadow Road. An assessment undertaken in accordance with BS 4142:2014 would also show a significant adverse impact.

However the foregoing must be placed into context with the cessation of the industrial/commercial activity along Meadow Road prior to the end of 2017. When this source is removed, amenity area noise levels are in line with BS 8233:2014, as illustrated by Figure 33.

Figure 32: Amenity area LAeq Noise Levels (All Sources)

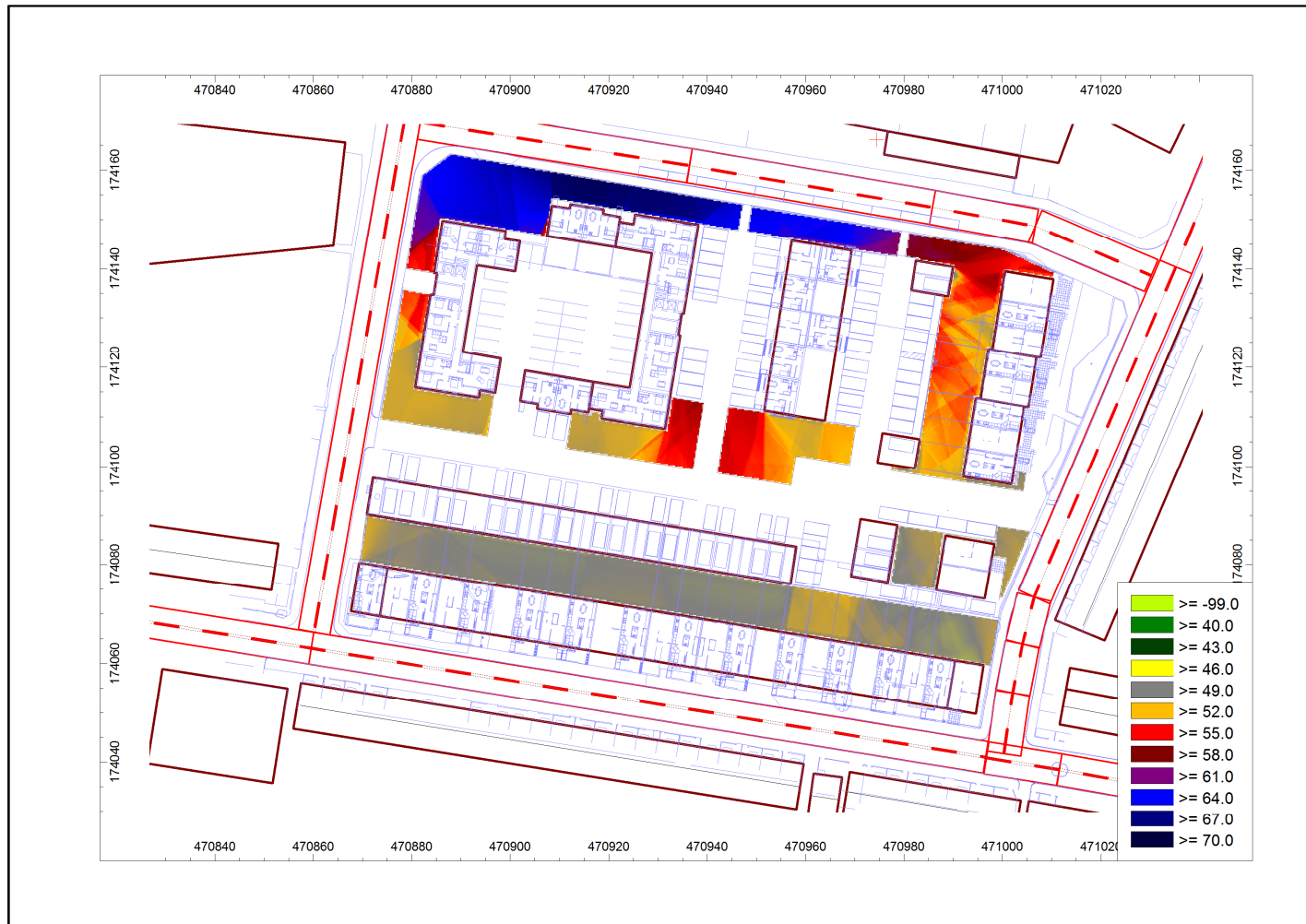


Figure 33: Amenity area LAeq Noise Levels (Commercial/Industrial Activity Excluded)



13.0 Conclusions

A detailed appraisal has been undertaken to determine noise exposure due to the sources affecting the proposed development site.

Internal noise level criteria for LFN have been proposed based on available guidance and outline façade sound insulation requirements have been assessed scheme-wide accordingly.

Ventilation to the most noise exposed dwellings will need to be provided via a whole house type arrangement, with acoustically treated air inlet and exhaust paths.

It is considered that the recommendations should be sufficient, in principle, to mitigate and minimise potential adverse effects on health and quality of life, while also taking into account the guiding principles of sustainable development. The approach adopted is in line with the second aim of NPSE as the development can be designed to achieve acceptable standards for future residents.

Appendix A: Measurement Data

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

1st day	LAeq	LA(Fmax)	LA10	LA90
2017/03/15 00:50:33.00	54.1	64.1	57.1	50.8
2017/03/15 00:55:44.00	57.1	68.1	60.6	52.0
2017/03/15 10:50:55.00	59.7	72.7	63.7	52.8
2017/03/15 15:57:57.00	54.4	64.4	56.5	52.1
2017/03/15 20:58:58.00	56.6	69.5	60.1	51.6
2017/03/15 26:00:00.00	57.9	67.4	61.9	51.6
2017/03/15 31:01:01.00	55.2	65.6	58.7	49.5
2017/03/15 36:02:02.00	58.6	70.0	63.3	49.0
2017/03/15 41:04:04.00	59.3	72.2	64.0	49.2
2017/03/15 46:05:05.00	59.9	71.8	63.8	49.3
2017/03/15 51:07:07.00	59.2	72.5	62.3	49.7
2017/03/15 56:08:08.00	56.6	66.9	61.9	47.4
2017/03/16 01:09:09.00	57.8	68.1	62.5	49.3
2017/03/16 06:11:11.00	55.8	69.4	59.9	48.1
2017/03/16 11:12:12.00	58.1	68.5	61.4	50.9
2017/03/16 16:14:14.00	57.5	67.3	61.0	52.1
2017/03/16 21:15:15.00	54.1	71.8	55.8	50.5
2017/03/16 26:16:16.00	60.5	72.5	65.3	51.2
2017/03/16 31:18:18.00	58.1	68.3	61.9	50.7
2017/03/16 36:19:19.00	55.9	66.7	59.5	50.1
2017/03/16 46:22:22.00	60.6	71.6	65.7	49.3
2017/03/16 51:23:23.00	59.9	74.3	63.8	46.7
2017/03/16 56:25:25.00	56.5	66.5	61.7	46.8
2017/03/17 01:26:26.00	57.6	68.4	62.5	47.5
2017/03/17 06:28:28.00	54.3	66.6	58.9	47.4
2017/03/17 11:29:29.00	56.5	69.5	61.8	47.0
2017/03/17 16:30:30.00	53.4	67.5	55.9	46.3
2017/03/17 21:32:32.00	56.7	72.2	59.6	46.2
2017/03/17 26:33:33.00	57.8	80.5	61.4	46.0
2017/03/17 31:35:35.00	56.5	79.2	59.0	46.5
2017/03/17 36:36:36.00	54.7	65.6	59.8	46.7
2017/03/17 41:38:38.00	57.3	69.0	61.5	48.8
2017/03/17 46:39:39.00	54.1	64.4	57.6	48.1
2017/03/17 51:41:41.00	56.9	68.0	60.9	48.4
2017/03/17 56:42:42.00	57.3	68.3	62.1	48.2
2017/03/18 01:43:43.00	53.3	64.6	57.2	48.1
2017/03/18 06:45:45.00	58.5	73.6	60.4	47.2
2017/03/18 11:46:46.00	57.2	68.0	60.8	49.7
2017/03/18 16:48:48.00	56.2	71.8	60.1	48.2
2017/03/18 21:49:49.00	53.4	66.4	56.6	48.3
2017/03/18 26:51:51.00	57.5	65.8	61.9	46.7
2017/03/18 31:52:52.00	55.6	64.7	59.8	48.9
2017/03/18 36:53:53.00	56.5	67.1	60.6	50.0
2017/03/18 41:55:55.00	55.0	64.2	59.4	47.7
2017/03/18 46:56:56.00	55.8	65.1	59.3	48.2
2017/03/18 51:58:58.00	54.1	65.9	57.7	47.5
2017/03/18 56:59:59.00	56.9	68.2	62.0	48.6
2017/03/19 01:02:02.00	55.8	69.3	60.6	48.1
2017/03/19 07:02:02.00	56.1	69.8	59.8	49.3
2017/03/19 12:03:03.00	57.1	68.3	60.8	50.8
2017/03/19 17:05:05.00	54.7	65.4	58.0	49.6
2017/03/19 22:06:06.00	56.5	64.7	60.6	49.5
2017/03/19 27:07:07.00	55.7	68.8	61.4	47.9
2017/03/19 32:09:09.00	56.5	82.2	56.3	48.1
2017/03/19 37:10:10.00	55.0	65.3	59.1	47.9
2017/03/19 42:12:12.00	54.2	66.3	59.2	47.5
2017/03/19 47:13:13.00	50.5	59.2	53.1	47.0
2017/03/19 52:14:14.00	55.2	64.4	60.0	47.2
2017/03/19 57:15:16.00	53.1	68.9	57.3	46.9
2017/03/20 02:17:17.00	53.7	64.5	57.3	48.1
2017/03/20 07:19:19.00	53.3	65.0	56.0	47.7
2017/03/20 12:20:20.00	55.7	64.1	60.4	48.0
2017/03/20 17:22:22.00	50.3	65.8	52.8	47.1
2017/03/20 22:23:23.00	55.4	70.5	59.9	48.1
2017/03/20 27:24:24.00	55.6	65.0	60.2	48.7
2017/03/20 32:26:26.00	52.9	62.7	56.9	47.6
2017/03/20 37:27:27.00	55.0	67.1	58.3	49.3
2017/03/20 42:29:29.00	54.1	64.3	59.5	47.1
2017/03/20 47:30:30.00	52.8	60.8	55.9	48.6
2017/03/20 52:31:31.00	51.8	62.8	53.6	47.5
2017/03/20 57:33:33.00	53.7	65.0	58.0	47.2
2017/03/21 02:34:34.00	50.5	61.1	52.4	46.9
2017/03/21 07:36:36.00	54.1	66.2	57.4	48.0
2017/03/21 12:37:37.00	52.0	66.6	54.9	47.3
2017/03/21 17:39:39.00	53.7	62.5	57.4	47.4
2017/03/21 22:40:40.00	50.4	59.1	52.4	47.9
2017/03/21 27:41:41.00	54.5	63.2	57.5	49.3
2017/03/21 32:43:43.00	53.9	64.0	58.6	47.7
2017/03/21 37:44:44.00	53.9	66.8	57.1	48.7
2017/03/21 42:46:46.00	50.4	58.7	53.2	47.6
2017/03/21 47:47:47.00	52.3	62.5	56.4	47.1
2017/03/21 52:49:49.00	52.0	61.5	56.0	46.1
2017/03/21 57:50:50.00	51.2	62.4	52.9	47.0
2017/03/22 02:51:51.00	52.8	64.1	58.2	45.9
2017/03/22 07:53:53.00	51.9	65.7	55.1	45.4
2017/03/22 12:54:54.00	48.5	54.7	51.2	46.2
2017/03/22 17:56:56.00	48.0	53.7	49.5	46.4
2017/03/22 22:57:57.00	52.2	62.2	56.8	45.6
2017/03/23 07:59:59.00	51.7	58.8	54.9	48.2
2017/03/23 12:33:00.00	49.5	61.0	50.5	48.3
2017/03/23 17:38:02.00	49.0	67.2	50.3	47.5
2017/03/23 22:43:03.00	50.2	63.2	51.4	46.3
2017/03/24 07:44:04.00	52.0	62.5	54.8	46.0
2017/03/24 12:53:06.00	50.8	61.6	54.8	46.1
2017/03/24 17:58:07.00	52.3	63.9	55.5	46.6

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

1st day	LAeq	LAF(max)	LA10	LA90
(2017/03/30 23:03:09.00)	47.9	52.3	49.5	46.4
(2017/03/30 23:08:10.00)	48.7	54.5	50.8	46.3
(2017/03/30 23:13:11.00)	49.1	60.6	51.1	45.5
(2017/03/30 23:18:13.00)	48.6	60.9	50.8	44.6
(2017/03/30 23:23:14.00)	47.6	65.4	46.0	43.8
(2017/03/30 23:28:16.00)	45.3	53.7	46.3	43.3
(2017/03/30 23:33:17.00)	49.7	60.1	54.0	43.9
(2017/03/30 23:38:18.00)	48.8	61.3	50.6	46.5
(2017/03/30 23:43:20.00)	51.6	59.2	53.1	50.3
(2017/03/30 23:48:21.00)	50.8	54.4	52.2	49.6
(2017/03/30 23:53:23.00)	54.2	62.1	57.2	49.9
(2017/03/30 23:58:24.00)	49.8	60.7	50.9	48.3
(2017/03/31 00:03:26.00)	49.5	58.8	51.6	46.0
(2017/03/31 00:08:27.00)	48.5	58.6	51.4	45.6
(2017/03/31 00:13:29.00)	47.2	53.7	48.1	46.0
(2017/03/31 00:18:30.00)	47.6	55.4	49.6	45.3
(2017/03/31 00:23:31.00)	50.3	56.9	52.1	46.9
(2017/03/31 00:28:33.00)	53.0	66.2	55.4	50.3
(2017/03/31 00:33:34.00)	50.8	59.3	55.2	45.0
(2017/03/31 00:38:36.00)	47.4	51.7	48.4	46.2
(2017/03/31 00:43:37.00)	49.1	55.0	51.4	45.7
(2017/03/31 00:48:39.00)	50.0	58.6	50.6	49.1
(2017/03/31 00:53:40.00)	50.1	53.0	50.8	49.3
(2017/03/31 00:58:41.00)	50.4	58.5	52.1	48.4
(2017/03/31 01:03:43.00)	49.9	56.7	52.1	48.3
(2017/03/31 01:08:44.00)	49.2	57.5	51.0	46.7
(2017/03/31 01:13:46.00)	48.6	56.2	49.6	47.2
(2017/03/31 01:18:47.00)	48.0	53.8	49.1	46.3
(2017/03/31 01:23:49.00)	48.2	62.1	49.6	46.3
(2017/03/31 01:28:50.00)	48.5	53.9	49.1	47.7
(2017/03/31 01:33:52.00)	48.9	56.2	52.4	43.7
(2017/03/31 01:38:53.00)	49.0	59.7	52.2	44.7
(2017/03/31 01:43:55.00)	48.2	64.1	51.9	43.7
(2017/03/31 01:48:56.00)	46.0	62.4	46.7	44.3
(2017/03/31 01:53:58.00)	46.0	61.4	48.4	42.5
(2017/03/31 01:58:59.00)	49.1	55.8	53.0	45.7
(2017/03/31 02:04:00.00)	48.6	55.4	51.1	45.8
(2017/03/31 02:09:02.00)	54.7	63.6	60.5	47.3
(2017/03/31 02:14:03.00)	47.9	62.1	48.8	46.3
(2017/03/31 02:19:05.00)	47.4	56.5	48.2	46.4
(2017/03/31 02:24:06.00)	48.1	55.1	48.7	47.0
(2017/03/31 02:29:08.00)	48.5	59.7	51.3	46.6
(2017/03/31 02:34:09.00)	49.4	59.4	51.2	47.3
(2017/03/31 02:39:11.00)	51.0	63.0	54.8	47.8
(2017/03/31 02:44:12.00)	47.8	69.6	47.8	46.4
(2017/03/31 02:49:13.00)	48.0	53.2	48.5	47.5
(2017/03/31 02:54:15.00)	47.8	53.6	48.4	47.0
(2017/03/31 02:59:16.00)	47.6	49.7	48.2	46.9
(2017/03/31 03:04:18.00)	48.5	58.2	49.4	47.3
(2017/03/31 03:09:19.00)	50.3	59.2	52.6	48.3
(2017/03/31 03:14:20.00)	48.8	55.7	49.9	47.5
(2017/03/31 03:19:22.00)	48.3	56.7	49.2	47.4
(2017/03/31 03:24:23.00)	48.8	57.4	50.8	46.6
(2017/03/31 03:29:25.00)	50.2	63.3	52.7	45.9
(2017/03/31 03:34:26.00)	48.6	55.8	49.1	47.8
(2017/03/31 03:39:28.00)	49.2	57.1	50.3	48.2
(2017/03/31 03:44:29.00)	48.6	54.7	49.2	47.9
(2017/03/31 03:49:31.00)	48.0	54.2	48.4	47.5
(2017/03/31 03:54:32.00)	49.0	59.0	49.8	48.2
(2017/03/31 03:59:33.00)	47.9	52.7	49.4	46.8
(2017/03/31 04:04:35.00)	48.0	52.5	48.7	47.3
(2017/03/31 04:09:36.00)	48.7	55.7	50.3	47.3
(2017/03/31 04:14:38.00)	47.2	58.5	50.1	44.5
(2017/03/31 04:19:39.00)	46.5	54.7	47.7	45.0
(2017/03/31 04:24:41.00)	49.8	54.1	50.7	48.2
(2017/03/31 04:29:42.00)	50.3	53.5	50.8	49.7
(2017/03/31 04:34:43.00)	57.7	65.6	63.0	50.8
(2017/03/31 04:39:45.00)	51.0	58.0	52.0	49.4
(2017/03/31 04:44:46.00)	55.7	66.9	58.4	50.9
(2017/03/31 04:49:48.00)	51.7	57.6	52.7	50.6
(2017/03/31 04:54:49.00)	54.6	61.9	58.9	51.2
(2017/03/31 04:59:51.00)	50.4	59.1	52.6	47.8
(2017/03/31 05:04:52.00)	50.2	54.3	51.7	47.6
(2017/03/31 05:09:53.00)	53.5	68.5	53.5	51.0
(2017/03/31 05:14:55.00)	52.5	57.1	53.8	51.1
(2017/03/31 05:19:56.00)	52.2	56.4	53.3	51.1
(2017/03/31 05:24:58.00)	52.4	64.2	52.9	50.6
(2017/03/31 05:29:59.00)	50.8	59.0	52.0	48.3
(2017/03/31 05:35:01.00)	50.5	58.1	52.3	48.3
(2017/03/31 05:40:02.00)	51.0	60.1	53.6	47.0
(2017/03/31 05:45:03.00)	53.4	66.7	57.2	47.2
(2017/03/31 05:50:05.00)	53.5	63.4	57.0	47.2
(2017/03/31 05:55:06.00)	55.1	63.4	59.0	50.5
(2017/03/31 06:00:08.00)	55.3	68.7	56.8	51.6
(2017/03/31 06:05:09.00)	53.9	65.2	55.2	51.8
(2017/03/31 06:10:10.00)	54.8	66.6	57.4	52.4
(2017/03/31 06:15:12.00)	54.2	62.7	55.5	52.3
(2017/03/31 06:20:13.00)	57.0	69.1	58.7	51.9
(2017/03/31 06:25:15.00)	55.2	64.4	58.7	51.7
(2017/03/31 06:30:16.00)	53.8	61.0	56.8	51.4
(2017/03/31 06:35:18.00)	53.6	65.1	56.8	49.1
(2017/03/31 06:40:19.00)	56.1	68.6	58.2	52.1
(2017/03/31 06:45:20.00)	56.4	64.8	60.4	52.4
(2017/03/31 06:50:22.00)	56.2	64.4	60.1	52.4
(2017/03/31 06:55:23.00)	57.0	64.3	60.9	52.6
(2017/03/31 07:00:25.00)	55.5	64.5	58.5	52.5

2nd day	LAeq	LAF(max)	LA10	LA90
(2017/03/31 07:05:26.00)	56.0	63.5	59.3	52.9
(2017/03/31 07:10:28.00)	56.2	65.8	58.9	51.8
(2017/03/31 07:15:29.00)	52.0	62.5	53.2	49.0
(2017/03/31 07:20:30.00)	57.2	71.4	59.4	49.1
(2017/03/31 07:25:32.00)	56.3	67.3	60.1	50.9
(2017/03/31 07:30:33.00)	55.5	70.4	59.1	49.9
(2017/03/31 07:35:35.00)	54.9	68.7	58.0	49.1
(2017/03/31 07:40:36.00)	58.5	71.4	62.0	50.9
(2017/03/31 07:45:38.00)	54.7	66.6	57.8	49.5
(2017/03/31 07:50:39.00)	59.0	74.8	62.7	49.5
(2017/03/31 07:55:40.00)	56.5	67.5	60.6	48.9
(2017/03/31 08:00:42.00)	54.1	63.8	58.1	48.5
(2017/03/31 08:05:43.00)	56.7	67.1	60.3	49.9
(2017/03/31 08:10:45.00)	59.3	66.9	63.0	54.0
(2017/03/31 08:15:46.00)	57.2	64.9	61.1	52.9
(2017/03/31 08:20:48.00)	57.8	69.6	62.3	51.3
(2017/03/31 08:25:49.00)	58.1	73.2	62.1	51.3
(2017/03/31 08:30:51.00)	56.6	64.4	61.1	51.1
(2017/03/31 08:35:52.00)	57.3	69.7	61.4	51.8
(2017/03/31 08:40:53.00)	57.1	67.9	59.2	54.0
(2017/03/31 08:45:55.00)	58.4	67.2	61.6	54.2
(2017/03/31 08:50:56.00)	57.6	69.4	60.8	53.5
(2017/03/31 08:55:58.00)	57.8	67.7	61.2	52.8
(2017/03/31 09:00:59.00)	57.7	66.3	60.0	54.7
(2017/03/31 09:06:01.00)	57.9	67.3	62.1	49.6
(2017/03/31 09:11:02.00)	56.6	67.5	61.2	49.4
(2017/03/31 09:16:03.00)	54.5	65.3	57.1	48.4
(2017/03/31 09:21:05.00)	55.2	72.5	58.7	50.6
(2017/03/31 09:26:06.00)	56.1	65.4	60.2	51.0
(2017/03/31 09:31:08.00)	54.6	68.8	56.5	50.8
(2017/03/31 09:36:09.00)	57.7	69.8	61.2	50.0
(2017/03/31 09:41:11.00)	57.7	67.3	62.2	48.9
(2017/03/31 09:46:12.00)	52.5	60.3	55.2	49.1
(2017/03/31 09:51:13.00)	51.5	60.2	53.6	48.9
(2017/03/31 09:56:15.00)	59.4	72.4	62.2	51.7
(2017/03/31 10:01:16.00)	56.4	69.4	59.7	51.6
(2017/03/31 10:06:18.00)	55.4	69.2	58.7	50.2
(2017/03/31 10:11:19.00)	56.1	68.9	60.0	50.2
(2017/03/31 10:16:21.00)	55.6	68.2	59.8	50.3
(2017/03/31 10:21:22.00)	55.7	66.1	59.4	49.6
(2017/03/31 10:26:23.00)	57.9	66.0	61.5	51.2
(2017/03/31 10:31:25.00)	54.6	66.0	58.6	48.5
(2017/03/31 10:36:26.00)	57.0	70.1	60.9	50.1
(2017/03/31 10:41:28.00)	57.1	65.7	61.7	50.7
(2017/03/31 10:46:29.00)	54.6	67.0	57.3	49.3
(2017/03/31 10:51:30.00)	59.9	82.0	63.0	50.2
(2017/03/31 10:56:32.00)	63.0	74.8	67.9	50.1
(2017/03/31 11:01:33.00)	54.3	62.8	57.4	50.1
(2017/03/31 11:06:35.00)	55.4	65.4	59.8	48.9
(2017/03/31 11:11:36.00)	56.0	66.0	60.2	48.7
(2017/03/31 11:16:37.00)	54.2	67.5	56.2	49.1
(2017/03/31 11:21:39.00)	57.2	69.1	61.2	50.4
(2017/03/31 11:26:40.00)	59.0	74.6	63.2	52.3
(2017/03/31 11:31:42.00)	56.3	70.2	59.0	51.8
(2017/03/31 11:36:43.00)	60.0	70.9	63.8	52.6
(2017/03/31 11:41:45.00)	57.6	71.0	61.9	51.7
(2017/03/31 11:46:46.00)	55.5	64.0	58.3	52.0
(2017/03/31 11:51:47.00)	57.6	65.9	60.6	53.7
(2017/03/31 11:56:49.00)	57.3	68.7	60.6	52.0
(2017/03/31 12:01:50.00)	58.3	68.3	63.1	50.5
(2017/03/31 12:06:52.00)	56.5	68.0	60.7	50.5
(2017/03/31 12:11:53.00)	55.2	65.2	58.4	50.9
(2017/03/31 12:16:54.00)	53.7	62.1	56.5	50.4
(2017/03/31 12:21:56.00)	55.2	62.7	58.7	51.0
(2017/03/31 12:26:57.00)	55.5	65.1	58.7	50.4
(2017/03/31 12:31:59.00)	56.3	65.9	59.4	51.4
(2017/03/31 12:37:00.00)	58.7	75.1	62.2	52.8
(2017/03/31 12:42:02.00)	55.5	65.6	58.8	51.9
(2017/03/31 12:47:03.00)	56.4	68.2	59.4	51.5
(2017/03/31 12:52:04.00)	55.0	68.6	58.2	49.4
(2017/03/31 12:57:06.00)	56.4	68.6	60.2	50.7
(2017/03/31 13:02:07.00)	56.3	66.1	59.7	52.0
(2017/03/31 13:07:09.00)	55.3	66.0	58.7	50.7
(2017/03/31 13:12:10.00)	56.8	67.8	61.3	50.5
(2017/03/31 13:17:11.00)	56.6	67.8	59.8	51.2
(2017/03/31 13:22:13.00)	58.4	68.3	61.9	52.1
(2017/03/31 13:27:14.00)	56.0	65.8	60.2	49.9
(2017/03/31 13:32:16.00)	58.1	72.3	61.0	52.4
(2017/03/31 13:37:17.00)	59.0	71.4	63.4	52.1
(2017/03/31 13:42:19.00)	57.2	67.9	60.0	53.6
(2017/03/31 13:47:20.00)	59.3	76.3	60.8	51.2
(2017/03/31 13:52:22.00)	57.0	67.5	61.0	50.9
(2017/03/31 13:57:23.00)	57.7	71.2	61.2	50.8
(2017/03/31 14:02:24.00)	58.7	73.2	62.4	51.1
(2017/03/31 14:07:26.00)	57.1	73.1	60.9	48.4
(2017				

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

2nd day	LAeq	LAF(max)	LA10	LA90
(2017/03/31 15:07:43.00)	58.9	77.1	61.4	51.1
(2017/03/31 15:12:44.00)	58.8	70.9	62.4	51.6
(2017/03/31 15:17:46.00)	57.5	74.8	61.2	51.1
(2017/03/31 15:22:47.00)	58.7	69.8	62.6	52.6
(2017/03/31 15:27:49.00)	55.7	67.1	59.5	50.7
(2017/03/31 15:32:50.00)	54.2	69.3	57.0	49.6
(2017/03/31 15:37:52.00)	58.1	70.2	61.7	50.9
(2017/03/31 15:42:53.00)	55.5	70.9	58.4	49.8
(2017/03/31 15:47:54.00)	57.8	68.2	61.7	51.2
(2017/03/31 15:52:56.00)	56.5	69.9	60.2	47.9
(2017/03/31 15:57:57.00)	58.9	73.0	61.1	49.6
(2017/03/31 16:02:59.00)	60.3	71.7	64.6	51.0
(2017/03/31 16:08:00.00)	56.3	70.7	59.8	49.4
(2017/03/31 16:13:02.00)	63.7	79.0	66.7	54.3
(2017/03/31 16:18:03.00)	57.8	79.5	60.8	49.0
(2017/03/31 16:23:04.00)	57.2	67.2	62.3	49.2
(2017/03/31 16:28:06.00)	57.5	67.1	63.0	48.9
(2017/03/31 16:33:07.00)	55.9	65.7	60.2	49.2
(2017/03/31 16:38:09.00)	56.2	65.3	61.3	48.3
(2017/03/31 16:43:10.00)	58.4	71.4	61.9	49.7
(2017/03/31 16:48:12.00)	59.7	67.8	64.5	49.2
(2017/03/31 16:53:13.00)	58.9	72.7	62.1	49.2
(2017/03/31 16:58:14.00)	57.2	68.3	61.0	49.0
(2017/03/31 17:03:16.00)	58.4	70.2	62.2	50.6
(2017/03/31 17:08:17.00)	57.4	69.5	62.1	48.6
(2017/03/31 17:13:19.00)	53.0	63.8	57.3	48.0
(2017/03/31 17:18:20.00)	56.5	69.7	59.4	47.7
(2017/03/31 17:23:22.00)	58.4	67.5	62.6	48.7
(2017/03/31 17:28:23.00)	57.7	73.9	61.8	47.6
(2017/03/31 17:33:24.00)	54.1	68.3	56.1	48.6
(2017/03/31 17:38:26.00)	58.3	69.3	63.0	48.3
(2017/03/31 17:43:27.00)	57.1	70.4	61.0	49.2
(2017/03/31 17:48:29.00)	57.7	67.9	62.2	50.1
(2017/03/31 17:53:30.00)	56.8	68.0	60.6	47.6
(2017/03/31 17:58:31.00)	59.2	68.1	63.7	49.8
(2017/03/31 18:03:33.00)	60.4	76.7	61.4	49.9
(2017/03/31 18:08:34.00)	57.0	68.0	62.8	47.1
(2017/03/31 18:13:36.00)	54.3	66.9	57.0	49.2
(2017/03/31 18:18:37.00)	58.9	68.1	63.4	49.1
(2017/03/31 18:23:39.00)	58.7	68.9	64.2	49.4
(2017/03/31 18:28:40.00)	57.8	67.3	61.9	50.8
(2017/03/31 18:33:42.00)	56.7	68.4	60.7	50.8
(2017/03/31 18:38:43.00)	57.3	67.6	62.0	50.1
(2017/03/31 18:43:44.00)	57.1	67.0	61.4	49.3
(2017/03/31 18:48:46.00)	56.5	65.0	61.6	49.5
(2017/03/31 18:53:47.00)	58.1	68.6	62.2	49.5
(2017/03/31 18:58:49.00)	55.2	65.4	58.9	48.8
(2017/03/31 19:03:50.00)	56.8	67.5	59.7	51.7
(2017/03/31 19:08:52.00)	56.9	66.7	60.9	52.1
(2017/03/31 19:13:53.00)	54.2	62.0	56.6	51.8
(2017/03/31 19:18:54.00)	56.7	68.4	60.3	52.4
(2017/03/31 19:23:56.00)	57.5	72.5	61.3	52.0
(2017/03/31 19:28:57.00)	58.9	72.3	62.6	51.5
(2017/03/31 19:33:59.00)	55.6	73.4	59.6	46.6
(2017/03/31 19:39:00.00)	52.3	63.4	56.9	46.3
(2017/03/31 19:44:02.00)	54.1	67.1	58.4	46.1
(2017/03/31 19:49:03.00)	48.8	65.5	51.9	45.1
(2017/03/31 19:54:05.00)	54.4	63.0	59.3	45.8
(2017/03/31 19:59:06.00)	55.3	65.6	61.1	46.4
(2017/03/31 20:04:08.00)	52.8	67.6	57.0	46.7
(2017/03/31 20:09:09.00)	54.5	63.8	58.1	48.5
(2017/03/31 20:14:10.00)	53.7	65.0	57.2	47.0
(2017/03/31 20:19:12.00)	52.8	61.9	57.5	47.2
(2017/03/31 20:24:13.00)	54.8	62.5	59.8	46.5
(2017/03/31 20:29:15.00)	50.9	58.7	53.8	47.2
(2017/03/31 20:34:16.00)	54.6	64.4	58.4	45.9
(2017/03/31 20:39:17.00)	52.0	67.5	55.5	46.3
(2017/03/31 20:44:19.00)	49.4	58.8	52.2	45.5
(2017/03/31 20:49:20.00)	55.0	64.2	60.4	46.5
(2017/03/31 20:54:22.00)	51.3	63.2	54.6	45.2
(2017/03/31 20:59:23.00)	50.6	64.5	53.1	46.4
(2017/03/31 21:04:25.00)	52.4	62.9	55.9	47.9
(2017/03/31 21:09:26.00)	53.9	65.2	58.0	46.9
(2017/03/31 21:14:27.00)	51.0	57.8	53.7	46.7
(2017/03/31 21:19:29.00)	55.4	69.4	56.9	47.6
(2017/03/31 21:24:30.00)	52.3	64.5	54.7	48.2
(2017/03/31 21:29:32.00)	50.4	56.9	52.9	47.9
(2017/03/31 21:34:33.00)	52.7	65.6	56.0	49.4
(2017/03/31 21:39:34.00)	55.1	66.4	58.7	49.9
(2017/03/31 21:44:36.00)	52.2	63.6	54.8	49.5
(2017/03/31 21:49:37.00)	53.2	65.4	54.8	49.6
(2017/03/31 21:54:39.00)	53.0	63.7	54.2	49.5
(2017/03/31 21:59:40.00)	54.0	62.6	56.3	49.6
(2017/03/31 22:04:41.00)	54.0	66.5	55.5	52.2
(2017/03/31 22:09:43.00)	55.1	63.6	59.9	49.4
(2017/03/31 22:14:44.00)	50.8	60.7	51.5	49.3
(2017/03/31 22:19:46.00)	53.5	64.5	56.2	49.0
(2017/03/31 22:24:47.00)	51.1	61.5	52.2	48.4
(2017/03/31 22:29:49.00)	51.8	61.1	54.2	49.1
(2017/03/31 22:34:50.00)	50.3	58.3	51.5	48.8
(2017/03/31 22:39:51.00)	52.6	64.7	55.8	47.4
(2017/03/31 22:44:53.00)	51.7	57.8	54.6	47.9
(2017/03/31 22:49:54.00)	51.8	59.0	54.4	47.1
(2017/03/31 22:54:56.00)	53.0	60.9	55.3	50.4
(2017/03/31 22:59:57.00)	54.8	65.9	58.4	50.0
(2017/03/31 23:04:59.00)	51.2	57.6	54.1	49.0

2nd day	LAeq	LAF(max)	LA10	LA90
(2017/03/31 23:10:00.00)	51.4	69.1	51.9	48.9
(2017/03/31 23:15:02.00)	51.4	60.6	53.5	49.3
(2017/03/31 23:20:03.00)	50.3	57.2	52.1	48.5
(2017/03/31 23:25:05.00)	48.7	56.4	49.5	47.7
(2017/03/31 23:30:06.00)	52.1	63.2	55.1	47.2
(2017/03/31 23:35:07.00)	49.4	57.6	51.2	46.9
(2017/03/31 23:40:09.00)	52.3	65.5	53.8	49.6
(2017/03/31 23:45:10.00)	53.3	66.9	55.5	50.0
(2017/03/31 23:50:12.00)	51.3	60.2	52.8	49.7
(2017/03/31 23:55:13.00)	50.3	56.4	51.4	49.2
(2017/04/01 00:00:14.00)	49.8	60.1	52.7	46.8
(2017/04/01 00:05:16.00)	52.3	60.9	55.5	48.1
(2017/04/01 00:10:17.00)	50.7	63.0	52.5	47.6
(2017/04/01 00:15:19.00)	49.3	58.6	50.0	47.6
(2017/04/01 00:20:20.00)	49.2	60.1	51.1	46.7
(2017/04/01 00:25:21.00)	51.4	59.2	54.2	48.3
(2017/04/01 00:30:23.00)	50.7	57.9	52.1	49.2
(2017/04/01 00:35:24.00)	50.7	61.5	51.9	49.2
(2017/04/01 00:40:26.00)	49.9	61.6	51.3	47.6
(2017/04/01 00:45:27.00)	51.2	61.7	53.9	47.9
(2017/04/01 00:50:29.00)	49.4	63.8	51.5	46.0
(2017/04/01 00:55:30.00)	48.8	59.5	50.5	46.3
(2017/04/01 01:00:31.00)	49.8	59.1	52.1	46.7
(2017/04/01 01:05:33.00)	48.6	61.8	50.6	44.8
(2017/04/01 01:10:34.00)	48.8	61.0	50.5	46.4
(2017/04/01 01:15:36.00)	48.2	60.2	49.8	45.4
(2017/04/01 01:20:37.00)	51.9	58.6	55.4	48.4
(2017/04/01 01:25:39.00)	50.7	61.2	52.7	47.6
(2017/04/01 01:30:40.00)	48.3	61.8	51.3	45.1
(2017/04/01 01:35:41.00)	50.4	59.1	54.9	45.7
(2017/04/01 01:40:43.00)	47.7	56.9	49.6	44.3
(2017/04/01 01:45:44.00)	47.4	69.0	48.1	45.5
(2017/04/01 01:50:46.00)	46.0	51.9	47.3	44.8
(2017/04/01 01:55:47.00)	46.1	56.9	47.1	44.9
(2017/04/01 02:00:49.00)	51.1	62.4	52.0	47.1
(2017/04/01 02:05:50.00)	52.0	62.9	53.2	50.6
(2017/04/01 02:10:51.00)	52.9	60.5	55.5	50.8
(2017/04/01 02:15:53.00)	50.6	57.5	52.1	48.7
(2017/04/01 02:20:54.00)	51.6	60.9	54.5	48.0
(2017/04/01 02:25:56.00)	52.1	61.0	55.8	47.2
(2017/04/01 02:30:57.00)	49.0	58.0	50.6	46.8
(2017/04/01 02:35:59.00)	49.0	59.5	50.2	46.7
(2017/04/01 02:41:00.00)	48.2	57.0	49.6	46.1
(2017/04/01 02:46:01.00)	48.8	60.9	50.8	47.3
(2017/04/01 02:51:03.00)	48.1	54.1	49.4	46.8
(2017/04/01 02:56:04.00)	50.0	59.4	52.1	47.6
(2017/04/01 03:01:06.00)	49.6	55.7	51.5	47.5
(2017/04/01 03:06:07.00)	49.2	57.1	50.3	48.0
(2017/04/01 03:11:09.00)	49.9	62.5	50.9	47.3
(2017/04/01 03:16:10.00)	50.5	66.0	52.3	47.4
(2017/04/01 03:21:12.00)	49.6	59.8	51.1	46.5
(2017/04/01 03:26:13.00)	50.3	58.7	52.9	47.0
(2017/04/01 03:31:15.00)	49.6	65.5	52.5	44.8
(2017/04/01 03:36:16.00)	49.1	58.4	52.4	42.6
(2017/04/01 03:41:17.00)	48.7	57.5	51.6	44.0
(2017/04/01 03:46:19.00)	46.8	61.7	48.9	43.5
(2017/04/01 03:51:20.00)	50.6	71.6	51.1	47.3
(2017/04/01 03:56:22.00)	51.8	60.6	53.9	49.3
(2017/04/01 04:01:23.00)	59.7	73.0	61.0	49.6
(2017/04/01 04:06:25.00)	52.2	65.4	53.8	49.4
(2017/04/01 04:11:26.00)	47.9	62.2	49.6	44.8
(2017/04/01 04:16:28.00)	48.1	59.2	49.8	44.8
(2017/04/01 04:21:29.00)	45.5	53.5	48.3	42.5
(2017/04/01 04:26:30.00)	44.5	53.0	46.7	41.7
(2017/04/01 04:31:32.00)	44.4	53.8	46.6	41.5
(2017/04/01 04:36:33.00)	51.3	66.6	55.1	42.5
(2017/04/01 04:41:35.00)	46.8	61.0	49.4	42.0
(2017/04/01 04:46:36.00)	48.9	57.9	50.1	47.3
(2017/04/01 04:51:37.00)	48.9	57.5	50.0	47.7
(2017/04/01 04:56:39.00)	49.3	56.9	52.4	46.6
(2017/04/01 05:01:40.00)	48.4	54.2	50.3	45.0
(2017/04/01 05:06:42.00)	50.4	58.4	51.1	48.9
(2017/04/01 05:11:43.00)	50.0	58.9	50.9	48.8
(2017/04/01 05:16:44.00)	50.1	59.3	51.9	46.2
(2017/04/01 05:21:46.00)	45.6	57.7	47.1	42.7
(2017/04/01 05:26:47.00)	50.9	63.6	54.5	46.3
(2017/04/01 05:31:49.00)	49.0	65.4	49.3	46.8
(2017/04/01 05:36:50.00)	53.6	63.9	58.9	47.2
(2017/04/01 05:41:52.00)	52.0	63.2	56.0	45.6
(2017/04/01 05:46:53.00)	50.7	64.2	53.8	46.3
(2017/04/01 05:51:55.00)	54.0	65.0	57.4	46.6
(2017/04/01 05:56:56.00)	50.1	58.1	52.4	47.3
(2017/04/01 06:01:58.00)	55.2	65.2	58.9	47.0
(2017/04/01 06:06:59.00)	55.0	61.6	59.2	50.0
(2017/04/01 06:12:01.00)	52.3	63.5	55.4	46.3
(2017/04/01 06:17:02.00)	50.1	62.2	53.1	45.7
(2017/04/01 06:22:03.00)	52.7	70.0	56.5	45.7
(2017/04/01 06:27:05.00)	49.2	59.3	50.1	45.9
(2017/04/01 06:32:06.00)	50.8	57.5	53.7	47.9
(2017/04/01 06:37:08.00)	54.3	64.0	57.1	49.3
(2017/04/01 06:42:09.00)	54.4	71.2	56.8	50.4
(2017/04/01 06:47:11.00)	52.1	58.7	54.0	50.0
(2017/04/01 06:52:12.00)	53.7	60.8	56.6	50.8
(2017/04/01 06:57:13.00)	54.6	65.0	57.6	48.7
(2017/04/01 07:02:15.00)	54.4	63.7	59.4	48.1
(2017/04/01 07:07:16.00)	52.7	61.0	56.6	47.8

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

3rd day	LAeq	LAF(max)	LA10	LA90
(2017/04/01 07:12-18.00)	53.3	62.2	57.1	49.0
(2017/04/01 07:17-19.00)	53.0	65.5	56.4	46.3
(2017/04/01 07:22-20.00)	57.6	68.7	62.5	47.4
(2017/04/01 07:27-22.00)	54.5	68.0	58.0	46.0
(2017/04/01 07:32-23.00)	51.6	63.6	55.2	46.5
(2017/04/01 07:37-25.00)	54.8	65.6	59.6	47.1
(2017/04/01 07:42-26.00)	53.6	64.4	56.9	48.1
(2017/04/01 07:47-28.00)	52.9	63.3	56.0	47.7
(2017/04/01 07:52-29.00)	56.3	65.8	60.8	49.1
(2017/04/01 07:57-30.00)	55.2	67.7	60.0	47.2
(2017/04/01 08:02-32.00)	52.8	65.7	56.3	47.0
(2017/04/01 08:07-33.00)	55.0	67.9	58.8	47.8
(2017/04/01 08:12-35.00)	55.9	66.4	60.3	48.6
(2017/04/01 08:17-36.00)	55.9	68.1	59.3	49.9
(2017/04/01 08:22-38.00)	55.9	67.5	60.8	46.7
(2017/04/01 08:27-39.00)	56.3	68.8	61.0	46.7
(2017/04/01 08:32-40.00)	52.7	65.0	55.7	45.8
(2017/04/01 08:37-42.00)	54.3	65.1	57.5	47.6
(2017/04/01 08:42-43.00)	57.4	68.7	62.0	49.3
(2017/04/01 08:47-45.00)	59.6	68.4	63.3	50.0
(2017/04/01 08:52-46.00)	57.8	66.4	62.6	48.2
(2017/04/01 08:57-47.00)	56.3	67.8	61.0	47.4
(2017/04/01 09:02-49.00)	56.6	68.1	60.5	47.7
(2017/04/01 09:07-50.00)	57.1	67.7	63.2	47.2
(2017/04/01 09:12-52.00)	54.1	65.2	57.8	47.5
(2017/04/01 09:17-53.00)	54.4	65.5	58.8	45.7
(2017/04/01 09:22-54.00)	53.5	67.9	56.1	46.7
(2017/04/01 09:27-56.00)	55.5	65.5	59.9	46.9
(2017/04/01 09:32-57.00)	55.7	66.0	59.7	48.8
(2017/04/01 09:37-59.00)	54.0	66.4	58.1	48.0
(2017/04/01 09:43-00.00)	53.1	62.7	56.0	48.4
(2017/04/01 09:48-01.00)	55.1	64.5	60.0	47.8
(2017/04/01 09:53-03.00)	55.7	68.8	58.7	47.9
(2017/04/01 09:58-04.00)	55.5	67.7	60.3	45.6
(2017/04/01 10:03-06.00)	55.1	67.5	59.1	45.6
(2017/04/01 10:08-07.00)	56.1	69.0	60.4	45.4
(2017/04/01 10:13-09.00)	53.8	63.7	57.5	46.9
(2017/04/01 10:18-10.00)	53.9	64.9	58.0	46.3
(2017/04/01 10:23-12.00)	56.3	67.7	61.1	46.6
(2017/04/01 10:28-13.00)	55.5	65.8	60.4	46.3
(2017/04/01 10:33-14.00)	56.9	67.1	61.4	47.6
(2017/04/01 10:38-16.00)	55.9	65.2	60.6	46.8
(2017/04/01 10:43-17.00)	54.3	64.8	57.5	48.1
(2017/04/01 10:48-19.00)	56.7	69.2	61.8	47.5
(2017/04/01 10:53-20.00)	57.2	67.1	60.9	49.1
(2017/04/01 10:58-22.00)	55.6	69.6	59.5	46.1
(2017/04/01 11:03-23.00)	54.4	64.2	59.1	46.3
(2017/04/01 11:08-24.00)	55.2	68.4	60.9	45.4
(2017/04/01 11:13-26.00)	51.1	62.2	54.1	45.1
(2017/04/01 11:18-27.00)	55.8	67.5	60.0	45.4
(2017/04/01 11:23-29.00)	55.4	67.0	61.3	44.8
(2017/04/01 11:28-30.00)	53.6	64.7	58.0	46.4
(2017/04/01 11:33-31.00)	54.3	66.7	58.4	45.5
(2017/04/01 11:38-33.00)	55.6	70.6	59.5	45.9
(2017/04/01 11:43-35.00)	53.0	64.0	56.4	45.0
(2017/04/01 11:48-36.00)	51.8	63.6	56.6	44.1
(2017/04/01 11:53-37.00)	54.1	64.6	57.9	45.2
(2017/04/01 11:58-39.00)	54.9	64.8	59.8	46.3
(2017/04/01 12:03-40.00)	55.0	66.9	60.6	44.1
(2017/04/01 12:08-42.00)	49.5	61.2	53.3	43.6
(2017/04/01 12:13-43.00)	54.2	64.7	59.7	45.4
(2017/04/01 12:18-45.00)	51.9	64.8	55.9	44.2
(2017/04/01 12:23-46.00)	54.7	65.8	59.2	45.5
(2017/04/01 12:28-47.00)	57.0	69.0	60.7	48.6
(2017/04/01 12:33-49.00)	53.2	65.7	57.2	47.2
(2017/04/01 12:38-50.00)	58.0	69.0	62.5	49.5
(2017/04/01 12:43-52.00)	54.5	65.3	58.1	48.6
(2017/04/01 12:48-53.00)	56.0	64.6	60.5	48.1
(2017/04/01 12:53-55.00)	55.8	67.5	60.0	47.0
(2017/04/01 12:58-56.00)	54.8	68.0	59.2	46.2
(2017/04/01 13:03-57.00)	52.8	63.3	57.3	44.3
(2017/04/01 13:08-59.00)	54.1	64.8	59.3	44.2
(2017/04/01 13:14-00.00)	54.7	67.6	58.2	43.6
(2017/04/01 13:19-02.00)	53.6	64.2	58.3	44.4
(2017/04/01 13:24-03.00)	55.2	69.7	60.0	42.4
(2017/04/01 13:29-04.00)	53.7	66.1	58.0	43.0
(2017/04/01 13:34-06.00)	49.9	66.0	52.9	41.8
(2017/04/01 13:39-07.00)	53.2	68.1	57.6	42.4
(2017/04/01 13:44-09.00)	54.4	67.7	58.5	44.6
(2017/04/01 13:49-10.00)	51.5	65.8	55.4	43.4
(2017/04/01 13:54-12.00)	52.8	60.4	56.0	48.1
(2017/04/01 13:59-13.00)	50.5	61.7	53.9	42.2
(2017/04/01 14:04-14.00)	49.1	66.3	51.3	40.2
(2017/04/01 14:09-16.00)	55.6	67.4	61.3	41.5
(2017/04/01 14:14-17.00)	56.2	66.9	60.2	48.3
(2017/04/01 14:19-19.00)	58.6	69.6	62.5	47.1
(2017/04/01 14:24-20.00)	54.2	65.5	58.1	45.9
(2017/04/01 14:29-22.00)	53.5	66.4	57.2	46.0
(2017/04/01 14:34-23.00)	58.8	72.2	62.6	49.9
(2017/04/01 14:39-25.00)	57.6	71.0	62.4	47.0
(2017/04/01 14:44-26.00)	54.9	68.2	58.7	46.3
(2017/04/01 14:49-28.00)	55.7	67.5	59.2	47.4
(2017/04/01 14:54-29.00)	56.6	66.2	62.1	47.5
(2017/04/01 14:59-31.00)	56.0	70.3	60.8	47.1
(2017/04/01 15:04-32.00)	56.2	66.1	61.8	48.5
(2017/04/01 15:09-33.00)	57.7	69.4	62.5	48.3

3rd day	LAeq	LAF(max)	LA10	LA90
(2017/04/01 15:14:35.00)	53.1	68.3	57.5	45.7
(2017/04/01 15:19:36.00)	56.9	68.5	61.6	46.2
(2017/04/01 15:24:38.00)	52.9	65.5	55.7	45.9
(2017/04/01 15:29:39.00)	56.2	66.8	61.4	47.7
(2017/04/01 15:34:40.00)	53.8	67.5	57.2	47.6
(2017/04/01 15:39:42.00)	55.3	67.1	60.0	48.7
(2017/04/01 15:44:43.00)	56.5	66.2	60.6	50.1
(2017/04/01 15:49:45.00)	55.7	67.9	60.2	48.6
(2017/04/01 15:54:46.00)	54.6	65.2	58.8	48.2
(2017/04/01 15:59:48.00)	54.9	70.9	58.3	48.3
(2017/04/01 16:04:49.00)	59.8	75.7	63.9	48.6
(2017/04/01 16:09:50.00)	55.7	67.3	60.2	47.6
(2017/04/01 16:14:52.00)	56.6	66.6	60.5	49.6
(2017/04/01 16:19:53.00)	56.3	67.1	60.9	45.5
(2017/04/01 16:24:55.00)	56.7	67.1	61.3	45.0
(2017/04/01 16:29:56.00)	54.7	66.1	58.2	45.7
(2017/04/01 16:34:58.00)	56.6	67.1	60.6	48.8
(2017/04/01 16:39:59.00)	55.5	65.1	60.2	45.0
(2017/04/01 16:45:01.00)	54.0	62.9	57.8	46.6
(2017/04/01 16:50:02.00)	56.8	65.7	61.7	45.6
(2017/04/01 16:55:04.00)	55.1	64.4	59.0	49.0
(2017/04/01 17:00:05.00)	50.9	64.9	54.3	46.2
(2017/04/01 17:05:07.00)	57.8	67.5	62.3	48.8
(2017/04/01 17:10:08.00)	56.0	67.7	60.5	47.2
(2017/04/01 17:15:09.00)	52.0	63.0	55.6	46.8
(2017/04/01 17:20:11.00)	56.2	67.7	60.0	47.0
(2017/04/01 17:25:12.00)	55.4	66.4	60.6	46.8
(2017/04/01 17:30:14.00)	54.9	66.7	59.6	46.6
(2017/04/01 17:35:15.00)	54.2	66.3	57.4	47.4
(2017/04/01 17:40:17.00)	55.2	66.8	58.7	48.6
(2017/04/01 17:45:18.00)	55.3	71.3	59.5	47.3
(2017/04/01 17:50:19.00)	57.7	66.5	61.7	49.9
(2017/04/01 17:55:21.00)	56.6	69.9	61.6	47.0
(2017/04/01 18:00:22.00)	56.7	79.4	59.1	47.4
(2017/04/01 18:05:24.00)	53.9	67.0	57.5	48.0
(2017/04/01 18:10:25.00)	53.3	65.0	58.2	46.1
(2017/04/01 18:15:26.00)	53.9	63.6	58.4	46.2
(2017/04/01 18:20:28.00)	52.7	60.9	56.9	45.0
(2017/04/01 18:25:29.00)	53.5	65.8	57.8	45.4
(2017/04/01 18:30:31.00)	55.5	65.2	59.4	47.3
(2017/04/01 18:35:32.00)	52.2	65.5	55.9	44.5
(2017/04/01 18:40:33.00)	53.4	62.1	58.4	46.7
(2017/04/01 18:45:35.00)	49.8	60.9	53.1	43.3
(2017/04/01 18:50:36.00)	54.8	66.7	58.9	46.8
(2017/04/01 18:55:38.00)	51.7	65.6	55.8	44.5
(2017/04/01 19:00:39.00)	51.6	67.7	55.3	45.2
(2017/04/01 19:05:40.00)	52.5	67.4	55.5	46.0
(2017/04/01 19:10:42.00)	52.5	63.1	57.0	45.8
(2017/04/01 19:15:43.00)	49.1	63.5	50.9	46.0
(2017/04/01 19:20:45.00)	55.3	66.5	59.4	46.8
(2017/04/01 19:25:46.00)	55.5	65.7	60.1	48.8
(2017/04/01 19:30:48.00)	53.4	63.4	57.8	49.2
(2017/04/01 19:35:49.00)	55.0	68.5	58.5	50.5
(2017/04/01 19:40:51.00)	55.2	65.9	58.7	49.9
(2017/04/01 19:45:52.00)	53.4	71.5	56.4	49.5
(2017/04/01 19:50:53.00)	54.6	63.1	59.2	48.7
(2017/04/01 19:55:55.00)	53.3	64.1	56.0	48.6
(2017/04/01 20:00:56.00)	49.5	58.0	50.9	47.9
(2017/04/01 20:05:58.00)	49.8	67.0	51.5	44.6
(2017/04/01 20:10:59.00)	51.3	61.2	55.8	45.4
(2017/04/01 20:16:01.00)	48.3	59.4	51.2	45.4
(2017/04/01 20:21:02.00)	51.2	62.6	55.3	46.0
(2017/04/01 20:26:04.00)	50.5	59.2	53.3	46.4
(2017/04/01 20:31:05.00)	54.5	66.7	59.6	46.2
(2017/04/01 20:36:06.00)	50.6	63.0	54.2	46.4
(2017/04/01 20:41:08.00)	53.7	65.2	58.2	46.6
(2017/04/01 20:46:09.00)	54.1	65.1	58.6	47.8
(2017/04/01 20:51:11.00)	51.6	61.9	54.4	47.8
(2017/04/01 20:56:12.00)	50.5	60.2	54.2	45.0
(2017/04/01 21:01:14.00)	45.5	53.2	47.3	43.7
(2017/04/01 21:06:15.00)	46.6	60.7	48.1	43.2
(2017/04/01 21:11:17.00)	46.2	56.6	48.5	43.2
(2017/04/01 21:16:18.00)	51.1	69.9	54.4	45.2
(2017/04/01 21:21:19.00)	49.9	63.1	53.0	45.4
(2017/04/01 21:26:21.00)	53.2	62.8	56.6	46.2
(2017/04/01 21:31:22.00)	45.5	51.8	46.0	44.8
(2017/04/01 21:36:24.00)	46.6	54.0	48.6	44.3
(2017/04/01 21:41:25.00)	52.2	76.5	55.9	45.2
(2017/04/01 21:46:27.00)	47.5	53.2	49.3	45.6
(2017/04/01 21:51:28.00)	52.2	64.1	56.8	46.1
(2017/04/01 21:56:30.00)	51.9	59.3	56.0	48.1
(2017/04/01 22:01:31.00)	53.1	70.6	56.9	47.9
(2017/04/01 22:06:32.00)	51.4	69.3	53.1	48.6
(2017/04/01 22:11:34.00)	51.3	67.4	51.7	48.3
(2017/04/01 22:16:35.00)	49.1	54.2	50.8	48.0
(2017/04/01 22:21:37.00)	50.7	57.1	52.5	48.7
(2017/04/01 22:26:38.00)	51.8	65.5	52.3	49.0
(2017/04/01 22:31:39.00)	52.4	62.9	55.1	49.3
(2017/04/01 22:36:41.00)	49.9	58.5	52.0	47.4
(2017/04/01 22:41:42.00)	48.3	54.2	49.3	47.2
(2017/04/01 22:46:44.00)	50.7	56.5	52.3	48.9
(2017/04/01 22:51:45.00)	52.5	65.1	55.3	49.3
(2017/04/01 22:56:47.00)	50.0	58.0	51.7	47.4
(2017/04/01 23:01:48.00)	52.4	63.4	56.3	48.0
(2017/04/01 23:06:50.00)	52.3	61.8	56.1	46.7
(2017/04/01 23:11:51.00)	47.7	56.1	50.7	42.8

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

3rd day	LAeq	LAF(max)	LA10	LA90
(2017/04/01 23:16:53.00)	46.5	53.5	47.8	42.8
(2017/04/01 23:21:54.00)	47.8	55.8	48.5	46.7
(2017/04/01 23:26:56.00)	53.4	64.3	57.2	47.7
(2017/04/01 23:31:57.00)	51.6	63.0	55.2	47.6
(2017/04/01 23:36:58.00)	46.8	57.4	47.7	45.7
(2017/04/01 23:42:00.00)	49.0	61.0	50.8	45.7
(2017/04/01 23:47:01.00)	47.8	59.4	51.1	44.1
(2017/04/01 23:52:03.00)	47.9	58.6	50.1	44.4
(2017/04/01 23:57:04.00)	46.3	65.2	48.3	44.0
(2017/04/02 00:02:06.00)	50.5	60.7	54.9	46.9
(2017/04/02 00:07:07.00)	47.8	60.5	50.1	44.8
(2017/04/02 00:12:08.00)	47.9	58.9	50.1	43.8
(2017/04/02 00:17:10.00)	49.9	59.6	52.9	46.2
(2017/04/02 00:22:11.00)	49.8	61.9	51.3	47.6
(2017/04/02 00:27:13.00)	50.4	56.6	51.5	49.2
(2017/04/02 00:32:14.00)	50.8	58.1	51.9	49.5
(2017/04/02 00:37:16.00)	51.3	65.9	52.1	50.2
(2017/04/02 00:42:17.00)	50.2	58.6	51.0	48.5
(2017/04/02 00:47:19.00)	49.7	56.2	50.6	48.8
(2017/04/02 00:52:20.00)	51.0	69.3	51.8	49.4
(2017/04/02 00:57:21.00)	49.8	63.3	50.5	48.5
(2017/04/02 01:02:23.00)	48.3	54.2	49.5	47.0
(2017/04/02 01:07:24.00)	50.3	58.5	51.2	49.1
(2017/04/02 01:12:26.00)	50.3	59.9	52.6	47.9
(2017/04/02 01:17:27.00)	47.6	53.0	49.1	46.1
(2017/04/02 01:22:29.00)	49.8	57.8	51.0	48.3
(2017/04/02 01:27:30.00)	51.3	65.2	52.4	49.9
(2017/04/02 01:32:32.00)	49.1	64.0	51.7	45.3
(2017/04/02 01:37:33.00)	47.9	58.4	50.5	45.5
(2017/04/02 01:42:34.00)	48.1	60.8	49.0	46.2
(2017/04/02 01:47:36.00)	47.4	62.6	48.1	45.7
(2017/04/02 01:52:37.00)	51.4	67.7	54.1	47.0
(2017/04/02 01:57:39.00)	51.8	67.5	53.9	49.9
(2017/04/02 02:02:40.00)	52.4	67.5	53.4	51.3
(2017/04/02 02:07:42.00)	50.1	56.7	51.5	48.2
(2017/04/02 02:12:43.00)	49.5	55.2	50.7	47.9
(2017/04/02 02:17:44.00)	48.7	59.9	50.2	46.6
(2017/04/02 02:22:46.00)	48.5	61.3	48.4	46.2
(2017/04/02 02:27:47.00)	45.6	51.2	46.2	44.9
(2017/04/02 02:32:49.00)	46.4	53.9	47.1	45.7
(2017/04/02 02:37:50.00)	50.2	75.8	48.8	46.0
(2017/04/02 02:42:52.00)	43.1	57.9	46.3	39.6
(2017/04/02 02:47:53.00)	40.8	65.6	40.5	38.5
(2017/04/02 02:52:55.00)	40.0	46.1	40.9	39.0
(2017/04/02 02:57:56.00)	41.1	61.9	41.6	39.5
(2017/04/02 03:02:58.00)	44.1	71.7	42.3	39.8
(2017/04/02 03:07:59.00)	43.6	65.3	43.6	40.9
(2017/04/02 03:13:01.00)	43.2	52.6	44.5	41.7
(2017/04/02 03:18:02.00)	46.7	73.6	43.2	39.7
(2017/04/02 03:23:03.00)	40.9	63.2	41.6	38.4
(2017/04/02 03:28:05.00)	38.3	47.4	39.2	37.1
(2017/04/02 03:33:06.00)	45.1	57.8	48.5	37.9
(2017/04/02 03:38:08.00)	41.8	67.1	42.2	38.6
(2017/04/02 03:43:09.00)	38.5	45.2	39.7	37.1
(2017/04/02 03:48:11.00)	41.2	57.1	43.2	38.1
(2017/04/02 03:53:12.00)	42.4	51.6	43.8	39.9
(2017/04/02 03:58:13.00)	40.5	50.0	42.2	38.2
(2017/04/02 04:03:15.00)	41.0	55.4	43.8	36.8
(2017/04/02 04:08:16.00)	42.3	57.9	41.7	37.3
(2017/04/02 04:13:18.00)	39.9	49.4	41.9	37.4
(2017/04/02 04:18:19.00)	38.5	45.5	40.0	36.9
(2017/04/02 04:23:21.00)	39.3	50.0	41.1	37.0
(2017/04/02 04:28:22.00)	40.0	49.4	43.3	36.4
(2017/04/02 04:33:24.00)	43.2	58.9	42.8	37.1
(2017/04/02 04:38:25.00)	40.5	51.9	43.1	37.6
(2017/04/02 04:43:27.00)	40.6	57.1	43.0	37.1
(2017/04/02 04:48:28.00)	40.6	52.5	42.7	37.8
(2017/04/02 04:53:29.00)	42.7	62.7	44.2	40.4
(2017/04/02 04:58:31.00)	40.2	51.8	41.4	38.6
(2017/04/02 05:03:32.00)	40.2	53.0	42.2	37.4
(2017/04/02 05:08:34.00)	44.4	58.6	48.4	37.5
(2017/04/02 05:13:35.00)	44.1	57.1	47.8	38.0
(2017/04/02 05:18:37.00)	44.1	66.8	45.1	38.5
(2017/04/02 05:23:38.00)	46.0	60.0	49.5	38.0
(2017/04/02 05:28:40.00)	51.1	66.2	55.9	38.0
(2017/04/02 05:33:41.00)	50.2	63.0	54.8	39.2
(2017/04/02 05:38:42.00)	49.7	63.1	54.0	40.3
(2017/04/02 05:43:44.00)	45.2	59.6	48.2	39.4
(2017/04/02 05:48:45.00)	45.4	61.1	48.5	39.2
(2017/04/02 05:53:47.00)	51.9	65.0	57.0	40.4
(2017/04/02 05:58:48.00)	50.3	65.6	55.0	40.3
(2017/04/02 06:03:50.00)	48.9	64.9	52.6	39.9
(2017/04/02 06:08:51.00)	46.2	61.0	49.1	38.3
(2017/04/02 06:13:53.00)	46.0	60.2	48.8	39.7
(2017/04/02 06:18:54.00)	43.9	62.4	43.7	40.3
(2017/04/02 06:23:56.00)	45.1	60.9	43.8	39.8
(2017/04/02 06:28:57.00)	45.1	59.7	45.5	41.0
(2017/04/02 06:33:58.00)	42.2	55.2	44.1	39.8
(2017/04/02 06:39:00.00)	42.3	55.0	43.7	39.7
(2017/04/02 06:44:01.00)	44.9	62.7	45.1	39.9
(2017/04/02 06:49:03.00)	46.1	58.9	48.2	41.1
(2017/04/02 06:54:04.00)	45.3	64.8	47.6	40.7
(2017/04/02 06:59:06.00)	46.8	63.0	49.7	40.5
(2017/04/02 07:04:07.00)	46.5	57.0	50.7	40.7
(2017/04/02 07:09:09.00)	47.9	62.7	50.2	40.4
(2017/04/02 07:14:10.00)	47.4	61.9	48.7	41.5

4th day	LAeq	LAF(max)	LA10	LA90
(2017/04/02 07:19:11.00)	45.7	67.0	46.6	38.9
(2017/04/02 07:24:13.00)	48.3	68.0	45.5	39.4
(2017/04/02 07:29:14.00)	45.0	57.1	47.4	40.4
(2017/04/02 07:34:16.00)	50.5	64.6	54.4	40.1
(2017/04/02 07:39:17.00)	45.2	57.4	48.9	39.0
(2017/04/02 07:44:19.00)	50.9	65.9	54.2	40.8
(2017/04/02 07:49:20.00)	47.3	62.7	51.0	39.5
(2017/04/02 07:54:21.00)	45.6	52.5	47.2	43.7
(2017/04/02 07:59:23.00)	50.4	59.7	54.0	44.9
(2017/04/02 08:04:24.00)	47.9	62.2	50.4	42.7
(2017/04/02 08:09:26.00)	52.7	65.5	57.7	43.0
(2017/04/02 08:14:27.00)	47.4	59.0	50.7	41.3
(2017/04/02 08:19:29.00)	47.8	60.8	50.3	43.7
(2017/04/02 08:24:30.00)	45.9	60.0	47.7	42.5
(2017/04/02 08:29:32.00)	52.0	67.2	56.2	43.0
(2017/04/02 08:34:33.00)	50.2	66.0	53.9	42.7
(2017/04/02 08:39:34.00)	51.0	65.3	55.1	43.4
(2017/04/02 08:44:36.00)	47.5	56.6	51.5	43.3
(2017/04/02 08:49:37.00)	49.5	66.3	51.6	43.3
(2017/04/02 08:54:39.00)	62.3	84.8	59.9	48.0
(2017/04/02 08:59:40.00)	50.6	63.2	53.6	45.3
(2017/04/02 09:04:42.00)	53.5	64.9	57.1	44.7
(2017/04/02 09:09:43.00)	53.2	65.4	56.8	44.5
(2017/04/02 09:14:44.00)	53.4	65.8	56.5	46.0
(2017/04/02 09:19:46.00)	50.0	62.4	53.3	44.2
(2017/04/02 09:24:47.00)	46.1	64.0	47.2	43.1
(2017/04/02 09:29:49.00)	52.0	66.8	55.8	46.7
(2017/04/02 09:34:50.00)	50.3	67.4	52.8	46.6
(2017/04/02 09:39:51.00)	51.2	61.7	55.6	43.7
(2017/04/02 09:44:53.00)	44.9	58.0	46.4	42.4
(2017/04/02 09:49:54.00)	50.3	60.1	53.2	43.7
(2017/04/02 09:54:56.00)	50.4	65.2	52.7	43.5
(2017/04/02 09:59:57.00)	53.5	66.6	58.4	42.8
(2017/04/02 10:04:59.00)	52.6	64.1	57.2	43.7
(2017/04/02 10:10:00.00)	50.6	64.2	52.5	43.7
(2017/04/02 10:15:01.00)	51.3	66.0	53.5	45.4
(2017/04/02 10:20:03.00)	48.3	60.2	51.1	44.5
(2017/04/02 10:25:04.00)	47.0	61.6	49.3	43.6
(2017/04/02 10:30:06.00)	52.5	64.2	57.5	43.6
(2017/04/02 10:35:07.00)	50.5	61.1	54.6	43.6
(2017/04/02 10:40:09.00)	49.8	60.5	53.7	42.5
(2017/04/02 10:45:10.00)	50.0	62.6	53.8	42.8
(2017/04/02 10:50:11.00)	55.7	75.4	56.7	42.9
(2017/04/02 10:55:13.00)	54.0	65.6	57.6	45.8
(2017/04/02 11:00:14.00)	62.3	83.8	61.6	44.9
(2017/04/02 11:05:16.00)	51.3	65.0	55.1	43.0
(2017/04/02 11:10:17.00)	57.1	75.8	58.2	41.7
(2017/04/02 11:15:19.00)	49.1	60.6	52.5	43.6
(2017/04/02 11:20:20.00)	48.7	60.0	51.2	44.5
(2017/04/02 11:25:21.00)	49.3	57.9	52.2	45.4
(2017/04/02 11:30:23.00)	52.1	67.6	55.5	42.5
(2017/04/02 11:35:24.00)	51.9	64.1	55.1	45.2
(2017/04/02 11:40:26.00)	54.8	65.8	59.1	44.6
(2017/04/02 11:45:27.00)	49.6	62.7	53.2	41.1
(2017/04/02 11:50:29.00)	48.2	61.0	51.6	41.1
(2017/04/02 11:55:30.00)	55.9	73.0	58.1	40.5
(2017/04/02 12:00:31.00)	44.8	59.3	48.2	39.1
(2017/04/02 12:05:33.00)	53.9	71.9	57.9	41.0
(2017/04/02 12:10:34.00)	53.4	63.0	56.3	47.0
(2017/04/02 12:15:36.00)	53.7	65.9	58.1	43.8
(2017/04/02 12:20:37.00)	50.5	60.6	54.8	41.9
(2017/04/02 12:25:39.00)	54.9	68.1	59.5	43.3
(2017/04/02 12:30:40.00)	50.4	67.5	51.2	41.5
(2017/04/02 12:35:42.00)	48.8	60.4	53.7	41.5
(2017/04/02 12:40:43.00)	53.9	67.7	57.9	43.3
(2017/04/02 12:45:44.00)	53.8	66.0	58.1	42.4
(2017/04/02 12:50:46.00)	49.9	61.7	53.1	43.6
(2017/04/02 12:55:47.00)	52.9	66.7	56.8	41.7
(2017/04/02 13:00:49.00)	49.0	63.8	53.8	40.6
(2017/04/02 13:05:50.00)	48.2	63.7	52.3	39.5
(2017/04/02 13:10:52.00)	53.1	65.8	56.9	40.2
(2017/04/02 13:15:53.00)	50.9	66.7	55.0	42.2
(2017/04/02 13:20:55.00)	51.4	63.8	56.0	40.6
(2017/04/02 13:25:56.00)	49.5	66.0	49.1	43.5
(2017/04/02 13:30:57.00)	47.9	62.4	50.4	43.7
(2017/04/02 13:35:59.00)	52.6	71.5	55.4	44.6
(2017/04/02 13:41:00.00)	48.4	59.5	51.7	42.5
(2017/04/02 13:46:02.00)	49.6	62.9	53.1	43.1
(2017/04/02 13:51:03.00)	48.5	58.6	52.1	42.5
(2017/04/02 13:56:05.00)	46.9	58.7	50.3	42.2
(2017/04/02 14:01:06.00)	50.9	67.3	55.5	40.6
(2017/04/02 14:06:08.00)	48.6	60.3	52.6	40.1
(2017/04/02 14:11:09.00)	54.4	68.5	58.3	42.2
(2017/04/02 14:16:10.00)	52.9	65.9	57.5	39.0
(2017/04/02 14:21:12.00)	52.2	62.5	56.9	41.9
(2017/04/02 14:26:13.00)	47.2	68.2	50.1	41.7
(2017/04/02 14:31:15.00)	48.6	63.1	52.8	40.1
(2017/04/02 14:36:16.00)	48.9	57.6	53.7	40.6
(2017/04/02 14:41:17.00)	48.2	59.1	50.8	43.8
(2017/04/02 14:46:19.00)	51.5	66.6	53.8	40.7
(2017/04/02 14:51:20.00)	50.0	61.6	53.6	41.9
(2017/04/02 14:56:22.00)	51.4	63.3	55.8	39.5
(2017/04/02 15:01:23.00)	45.6	65.0	48.4	37.6
(2017/04/02 15:06:25.00)	51.3	65.1	55.6	41.6
(2017/04/02 15:11:26.00)	53.0	66.9	57.6	41.6
(2017/04/02 15:16:27.00)	55.5	70.2	60.4	41.6

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

4th day	LAeq	LAF(max)	LA10	LA90
(2017/04/02 15:21:29.00)	49.2	61.1	53.8	38.6
(2017/04/02 15:26:30.00)	52.7	65.3	57.3	37.6
(2017/04/02 15:31:32.00)	46.8	61.2	49.5	40.6
(2017/04/02 15:36:33.00)	52.4	64.4	56.2	44.2
(2017/04/02 15:41:35.00)	52.2	63.5	56.8	41.2
(2017/04/02 15:46:36.00)	52.5	67.8	56.3	40.5
(2017/04/02 15:51:38.00)	51.7	67.9	55.8	40.1
(2017/04/02 15:56:39.00)	47.5	61.9	52.3	38.4
(2017/04/02 16:01:41.00)	45.6	62.0	46.1	38.6
(2017/04/02 16:06:42.00)	50.6	65.4	53.0	42.0
(2017/04/02 16:11:44.00)	47.8	59.8	51.5	40.0
(2017/04/02 16:16:45.00)	49.7	63.6	54.5	38.0
(2017/04/02 16:21:46.00)	50.1	59.1	53.9	42.3
(2017/04/02 16:26:48.00)	50.4	68.6	53.6	42.4
(2017/04/02 16:31:49.00)	51.3	65.4	55.3	42.0
(2017/04/02 16:36:51.00)	49.7	60.1	53.1	42.8
(2017/04/02 16:41:52.00)	52.7	68.0	57.6	39.9
(2017/04/02 16:46:54.00)	45.4	59.1	46.9	39.8
(2017/04/02 16:51:55.00)	47.6	59.4	51.4	39.7
(2017/04/02 16:56:57.00)	50.4	62.7	55.2	40.6
(2017/04/02 17:01:58.00)	53.2	69.9	56.0	41.8
(2017/04/02 17:06:59.00)	53.7	66.3	57.7	41.9
(2017/04/02 17:12:01.00)	49.3	63.5	52.1	43.8
(2017/04/02 17:17:02.00)	49.6	58.9	52.4	45.2
(2017/04/02 17:22:04.00)	52.2	65.1	56.1	44.8
(2017/04/02 17:27:05.00)	47.6	59.1	49.8	44.3
(2017/04/02 17:32:07.00)	48.8	62.2	50.9	42.8
(2017/04/02 17:37:08.00)	51.7	62.3	55.1	44.1
(2017/04/02 17:42:10.00)	53.1	71.4	54.6	42.9
(2017/04/02 17:47:11.00)	61.5	83.6	55.5	42.5
(2017/04/02 17:52:12.00)	53.0	71.3	54.2	40.0
(2017/04/02 17:57:14.00)	49.3	63.6	52.1	39.8
(2017/04/02 18:02:15.00)	47.3	61.9	51.5	39.8
(2017/04/02 18:07:17.00)	48.5	60.2	53.4	41.1
(2017/04/02 18:12:18.00)	50.2	60.7	53.7	43.3
(2017/04/02 18:17:20.00)	50.8	65.0	53.8	44.2
(2017/04/02 18:22:21.00)	49.5	64.9	51.3	46.1
(2017/04/02 18:27:22.00)	50.5	62.9	53.3	47.6
(2017/04/02 18:32:24.00)	47.0	61.6	48.8	42.6
(2017/04/02 18:37:25.00)	48.2	59.2	52.4	39.5
(2017/04/02 18:42:27.00)	43.7	62.1	43.6	39.2
(2017/04/02 18:47:28.00)	48.7	62.9	53.7	39.6
(2017/04/02 18:52:30.00)	50.0	64.0	54.4	41.5
(2017/04/02 18:57:31.00)	47.1	64.2	50.0	41.2
(2017/04/02 19:02:33.00)	48.6	62.2	52.4	41.8
(2017/04/02 19:07:34.00)	47.7	62.0	51.4	40.3
(2017/04/02 19:12:35.00)	47.7	61.0	51.5	41.8
(2017/04/02 19:17:37.00)	51.3	67.8	54.9	44.1
(2017/04/02 19:22:38.00)	52.9	67.3	56.4	43.4
(2017/04/02 19:27:40.00)	50.0	64.9	54.1	41.9
(2017/04/02 19:32:41.00)	48.1	60.5	50.7	43.7
(2017/04/02 19:37:43.00)	49.9	64.3	53.0	42.5
(2017/04/02 19:42:44.00)	50.7	64.6	54.4	43.0
(2017/04/02 19:47:46.00)	44.9	58.9	47.6	40.8
(2017/04/02 19:52:47.00)	43.1	53.9	45.7	39.7
(2017/04/02 19:57:49.00)	44.0	57.6	46.2	40.8
(2017/04/02 20:02:50.00)	45.8	55.0	48.8	40.8
(2017/04/02 20:07:52.00)	46.2	57.9	51.0	39.2
(2017/04/02 20:12:53.00)	47.5	56.9	52.7	40.5
(2017/04/02 20:17:55.00)	42.0	49.8	44.8	39.8
(2017/04/02 20:22:56.00)	51.5	62.8	57.1	41.7
(2017/04/02 20:27:57.00)	50.9	62.1	54.3	43.0
(2017/04/02 20:32:59.00)	46.0	65.2	47.4	41.3
(2017/04/02 20:38:00.00)	53.6	65.9	56.9	43.0
(2017/04/02 20:43:02.00)	47.4	57.4	51.3	41.8
(2017/04/02 20:48:03.00)	44.3	52.3	47.1	41.8
(2017/04/02 20:53:05.00)	48.2	61.2	52.0	42.0
(2017/04/02 20:58:06.00)	45.9	58.5	48.6	41.2
(2017/04/02 21:03:07.00)	44.8	55.5	47.3	41.6
(2017/04/02 21:08:09.00)	50.8	57.9	55.1	44.6
(2017/04/02 21:13:10.00)	47.8	56.5	51.5	43.3
(2017/04/02 21:18:12.00)	49.7	56.1	53.0	44.6
(2017/04/02 21:23:13.00)	47.7	57.3	51.7	43.5
(2017/04/02 21:28:15.00)	48.5	62.8	50.3	43.6
(2017/04/02 21:33:16.00)	47.7	58.0	51.2	42.9
(2017/04/02 21:38:18.00)	47.8	56.1	51.8	43.1
(2017/04/02 21:43:19.00)	47.2	55.1	52.3	41.8
(2017/04/02 21:48:20.00)	48.6	59.0	52.4	42.2
(2017/04/02 21:53:22.00)	46.9	58.1	48.7	41.7
(2017/04/02 21:58:23.00)	43.1	56.0	43.8	42.0
(2017/04/02 22:03:25.00)	47.6	56.3	51.0	42.2
(2017/04/02 22:08:26.00)	45.8	52.6	48.4	43.1
(2017/04/02 22:13:28.00)	45.1	53.0	49.1	41.8
(2017/04/02 22:18:29.00)	48.5	56.7	52.9	43.2
(2017/04/02 22:23:31.00)	51.4	57.6	55.5	45.7
(2017/04/02 22:28:32.00)	46.3	53.5	47.8	45.0
(2017/04/02 22:33:34.00)	49.2	59.8	52.0	45.8
(2017/04/02 22:38:35.00)	48.0	59.1	49.5	46.7
(2017/04/02 22:43:36.00)	48.9	58.5	51.6	45.9
(2017/04/02 22:48:38.00)	50.1	57.5	55.0	44.6
(2017/04/02 22:53:39.00)	47.7	57.3	50.2	45.4
(2017/04/02 22:58:41.00)	51.3	57.1	53.4	47.5
(2017/04/02 23:03:42.00)	48.2	56.3	49.6	46.7
(2017/04/02 23:08:44.00)	48.5	59.0	49.6	47.0
(2017/04/02 23:13:45.00)	48.8	58.5	52.0	46.1
(2017/04/02 23:18:46.00)	49.9	71.1	52.4	45.4

4th day	LAeq	LA(Fmax)	LA10	LA90
(2017/04/02 23:23:48.00)	46.7	67.4	47.7	44.1
(2017/04/02 23:28:49.00)	50.2	66.3	54.7	44.6
(2017/04/02 23:33:51.00)	47.0	63.2	48.6	44.8
(2017/04/02 23:38:52.00)	46.9	64.8	48.6	44.6
(2017/04/02 23:43:54.00)	48.3	65.4	51.2	44.5
(2017/04/02 23:48:55.00)	50.9	62.8	55.8	43.7
(2017/04/02 23:53:57.00)	47.8	72.0	46.0	42.7
(2017/04/02 23:58:58.00)	45.5	61.3	46.8	43.5
(2017/04/03 00:04:00.00)	46.8	63.1	47.4	45.0
(2017/04/03 00:09:01.00)	48.0	55.0	49.2	46.9
(2017/04/03 00:14:02.00)	47.3	64.8	47.5	46.3
(2017/04/03 00:19:04.00)	48.2	55.9	50.3	45.6
(2017/04/03 00:24:05.00)	44.5	57.0	45.8	42.8
(2017/04/03 00:29:07.00)	46.1	60.7	47.3	44.1
(2017/04/03 00:34:08.00)	50.6	65.4	53.9	44.3
(2017/04/03 00:39:10.00)	49.8	62.0	51.7	42.8
(2017/04/03 00:44:11.00)	46.0	62.3	45.8	41.6
(2017/04/03 00:49:13.00)	50.1	65.1	51.9	41.6
(2017/04/03 00:54:14.00)	48.3	64.0	45.9	41.3
(2017/04/03 00:59:15.00)	45.8	63.8	45.2	42.5
(2017/04/03 01:04:17.00)	43.1	53.5	44.2	41.7
(2017/04/03 01:09:18.00)	43.8	55.0	45.3	41.4
(2017/04/03 01:14:20.00)	44.1	52.5	44.9	43.3
(2017/04/03 01:19:21.00)	49.7	58.8	53.9	44.6
(2017/04/03 01:24:23.00)	44.7	50.5	45.3	43.9
(2017/04/03 01:29:24.00)	44.3	51.3	45.3	43.3
(2017/04/03 01:34:26.00)	43.4	52.2	44.9	42.1
(2017/04/03 01:39:27.00)	43.1	49.6	43.8	42.4
(2017/04/03 01:44:28.00)	43.9	51.7	45.0	42.8
(2017/04/03 01:49:30.00)	48.4	58.6	52.4	44.4
(2017/04/03 01:54:31.00)	46.2	54.8	46.8	45.4
(2017/04/03 01:59:33.00)	49.3	60.7	50.3	46.3
(2017/04/03 02:04:34.00)	45.8	54.2	46.5	44.9
(2017/04/03 02:09:36.00)	44.4	49.8	45.0	43.7
(2017/04/03 02:14:37.00)	44.3	52.9	45.0	43.2
(2017/04/03 02:19:38.00)	57.5	69.3	61.2	45.1
(2017/04/03 02:24:40.00)	44.2	55.1	45.6	42.4
(2017/04/03 02:29:41.00)	42.7	46.8	43.6	41.7
(2017/04/03 02:34:43.00)	43.0	47.8	44.6	41.2
(2017/04/03 02:39:45.00)	43.1	47.0	43.9	42.5
(2017/04/03 02:44:46.00)	42.8	45.8	43.4	42.1
(2017/04/03 02:49:47.00)	42.3	49.2	42.9	41.6
(2017/04/03 02:54:49.00)	42.8	56.5	43.4	41.9
(2017/04/03 02:59:50.00)	42.6	44.9	43.2	42.0
(2017/04/03 03:04:52.00)	43.8	47.0	44.6	42.6
(2017/04/03 03:09:53.00)	44.1	48.0	44.6	43.6
(2017/04/03 03:14:55.00)	44.5	49.5	45.1	43.9
(2017/04/03 03:19:56.00)	45.3	51.1	46.2	44.3
(2017/04/03 03:24:58.00)	46.8	57.6	47.3	44.2
(2017/04/03 03:29:59.00)	47.9	65.6	46.5	44.2
(2017/04/03 03:35:01.00)	44.3	47.7	45.2	43.5
(2017/04/03 03:40:02.00)	46.1	55.7	49.1	43.3
(2017/04/03 03:45:03.00)	44.6	56.8	46.4	42.6
(2017/04/03 03:50:05.00)	45.2	57.7	46.9	43.0
(2017/04/03 03:55:06.00)	47.5	59.3	49.9	44.1
(2017/04/03 04:00:08.00)	46.2	54.2	47.4	44.7
(2017/04/03 04:05:09.00)	48.0	54.4	50.0	46.0
(2017/04/03 04:10:11.00)	48.0	62.0	49.0	46.9
(2017/04/03 04:15:12.00)	49.4	53.6	51.2	47.9
(2017/04/03 04:20:13.00)	47.8	51.1	49.4	46.0
(2017/04/03 04:25:15.00)	47.8	56.2	49.3	45.8
(2017/04/03 04:30:16.00)	49.1	57.4	52.0	46.0
(2017/04/03 04:35:18.00)	48.3	51.8	49.0	47.6
(2017/04/03 04:40:19.00)	49.5	57.0	51.6	47.7
(2017/04/03 04:45:21.00)	48.5	54.9	50.8	45.8
(2017/04/03 04:50:22.00)	45.5	50.4	46.6	44.3
(2017/04/03 04:55:23.00)	45.6	49.1	46.5	44.6
(2017/04/03 05:00:25.00)	47.4	53.3	49.5	44.8
(2017/04/03 05:05:26.00)	49.1	57.0	53.2	45.3
(2017/04/03 05:10:28.00)	47.6	54.5	50.0	45.2
(2017/04/03 05:15:29.00)	52.2	59.2	55.1	50.0
(2017/04/03 05:20:31.00)	50.5	62.2	51.3	49.4
(2017/04/03 05:25:32.00)	50.9	59.1	52.0	49.5
(2017/04/03 05:30:34.00)	51.8	58.3	54.3	49.9
(2017/04/03 05:35:35.00)	53.3	65.5	55.7	50.6
(2017/04/03 05:40:36.00)	52.3	62.5	55.5	48.3
(2017/04/03 05:45:38.00)	52.5	66.0	56.0	48.1
(2017/04/03 05:50:39.00)	50.9	61.6	52.5	48.4
(2017/04/03 05:55:41.00)	52.2	64.0	55.4	49.1
(2017/04/03 06:00:42.00)	52.1	64.6	54.7	49.1
(2017/04/03 06:05:44.00)	51.2	60.2	52.5	48.6
(2017/04/03 06:10:45.00)	56.6	78.5	56.7	50.2
(2017/04/03 06:15:47.00)	53.1	62.6	54.5	51.0
(2017/04/03 06:20:48.00)	52.8	60.7	54.6	51.1
(2017/04/03 06:25:49.00)	53.1	60.4	54.3	51.4
(2017/04/03 06:30:51.00)	53.8	63.8	55.6	51.5
(2017/04/03 06:35:52.00)	56.0	74.1	58.9	52.0
(2017/04/03 06:40:54.00)	54.3	68.5	55.1	51.8
(2017/04/03 06:45:55.00)	52.8	63.4	53.9	51.2
(2017/04/03 06:50:57.00)	54.2	61.7	57.6	50.3
(2017/04/03 06:55:58.00)	55.0	63.9	58.4	51.1
(2017/04/03 07:01:00.00)	53.8	63.5	56.7	50.3
(2017/04/03 07:06:01.00)	52.6	63.6	54.4	50.3
(2017/04/03 07:11:03.00)	54.1	65.1	57.2	50.5
(2017/04/03 07:16:04.00)	52.1	67.1	53.4	49.8
(2017/04/03 07:21:06.00)	55.8	66.8	59.1	50.8

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

5th day	LAeq	LAF(max)	LA10	LA90
(2017/04/03 07:26:07.00)	54.9	67.1	57.0	50.1
(2017/04/03 07:31:08.00)	55.7	68.4	59.0	51.1
(2017/04/03 07:36:10.00)	52.6	60.2	54.2	50.7
(2017/04/03 07:41:11.00)	54.1	63.1	56.5	51.4
(2017/04/03 07:46:13.00)	53.8	63.3	57.3	50.3
(2017/04/03 07:51:14.00)	56.0	67.5	59.4	50.3
(2017/04/03 07:56:16.00)	54.3	64.5	56.4	50.1
(2017/04/03 08:01:17.00)	53.2	62.8	55.7	50.4
(2017/04/03 08:06:18.00)	55.8	65.5	58.8	50.9
(2017/04/03 08:11:20.00)	54.9	66.4	56.2	50.1
(2017/04/03 08:16:21.00)	57.2	71.3	60.6	52.1
(2017/04/03 08:21:23.00)	54.0	65.0	56.2	50.2
(2017/04/03 08:26:24.00)	54.2	65.8	57.5	48.6
(2017/04/03 08:31:26.00)	54.2	67.8	57.2	48.1
(2017/04/03 08:36:27.00)	53.8	69.0	56.8	47.5
(2017/04/03 08:41:28.00)	49.7	60.7	51.1	47.0
(2017/04/03 08:46:30.00)	55.0	66.6	58.9	47.4
(2017/04/03 08:51:31.00)	53.1	66.7	56.1	47.5
(2017/04/03 08:56:33.00)	53.9	67.2	57.5	47.5
(2017/04/03 09:01:34.00)	56.2	72.2	59.7	47.5
(2017/04/03 09:06:36.00)	53.0	66.3	56.7	47.2
(2017/04/03 09:11:37.00)	52.3	64.8	55.4	47.1
(2017/04/03 09:16:39.00)	50.8	60.4	54.6	46.5
(2017/04/03 09:21:40.00)	52.0	66.1	55.2	46.5
(2017/04/03 09:26:42.00)	52.5	67.0	55.9	46.4
(2017/04/03 09:31:43.00)	53.1	62.2	56.8	47.0
(2017/04/03 09:36:44.00)	54.7	65.3	58.8	46.5
(2017/04/03 09:41:46.00)	56.9	68.8	60.6	48.9
(2017/04/03 09:46:47.00)	55.1	65.8	59.3	47.7
(2017/04/03 09:51:49.00)	54.4	66.7	58.0	47.0
(2017/04/03 09:56:50.00)	54.1	67.2	59.1	46.7
(2017/04/03 10:01:52.00)	56.3	68.4	60.4	47.3
(2017/04/03 10:06:53.00)	54.5	62.6	59.5	47.3
(2017/04/03 10:11:54.00)	54.9	68.3	59.1	45.8
(2017/04/03 10:16:56.00)	55.7	69.5	57.5	48.3
(2017/04/03 10:21:57.00)	52.8	66.0	56.0	46.9
(2017/04/03 10:26:59.00)	55.3	65.0	59.2	49.1
(2017/04/03 10:32:00.00)	52.8	64.2	54.9	47.8
(2017/04/03 10:37:01.00)	53.0	64.7	55.8	47.6
(2017/04/03 10:42:03.00)	59.2	69.5	62.9	50.9
(2017/04/03 10:47:04.00)	52.8	65.2	54.7	48.7
(2017/04/03 10:52:06.00)	58.1	69.1	61.0	51.4
(2017/04/03 10:57:07.00)	52.6	63.4	55.3	48.9
(2017/04/03 11:02:09.00)	59.7	75.6	63.3	48.3
(2017/04/03 11:07:10.00)	55.4	64.7	60.3	47.1
(2017/04/03 11:12:11.00)	52.8	64.5	56.4	47.3
(2017/04/03 11:17:13.00)	52.3	60.3	56.1	48.2
(2017/04/03 11:22:14.00)	55.1	67.8	59.0	47.9
(2017/04/03 11:27:16.00)	56.1	65.2	60.5	48.2
(2017/04/03 11:32:17.00)	53.7	66.6	57.2	48.7
(2017/04/03 11:37:18.00)	55.9	66.7	60.5	48.7
(2017/04/03 11:42:20.00)	56.2	77.0	58.9	50.0
(2017/04/03 11:47:21.00)	56.8	67.6	61.2	49.3
(2017/04/03 11:52:23.00)	55.7	65.5	60.3	48.1
(2017/04/03 11:57:24.00)	55.7	65.7	60.3	47.7
(2017/04/03 12:02:26.00)	55.7	68.6	59.5	48.3
(2017/04/03 12:07:27.00)	57.5	71.6	63.1	47.4
(2017/04/03 12:12:29.00)	55.0	76.0	58.4	48.1
(2017/04/03 12:17:30.00)	54.3	68.5	57.6	48.5
(2017/04/03 12:22:31.00)	55.1	72.0	58.3	48.7
(2017/04/03 12:27:33.00)	57.9	68.9	62.0	48.3
(2017/04/03 12:32:34.00)	54.5	64.7	59.3	47.3
(2017/04/03 12:37:36.00)	56.9	68.5	60.9	47.1
(2017/04/03 12:42:37.00)	52.5	68.1	54.7	46.8
(2017/04/03 12:47:39.00)	54.1	65.7	57.4	46.9
(2017/04/03 12:52:40.00)	54.1	71.4	57.4	46.5
(2017/04/03 12:57:41.00)	58.3	69.1	63.2	48.4
(2017/04/03 13:02:43.00)	54.0	66.3	58.3	48.1
(2017/04/03 13:07:44.00)	56.8	65.7	61.3	48.5
(2017/04/03 13:12:46.00)	58.6	72.8	61.9	46.4
(2017/04/03 13:17:47.00)	53.2	65.1	57.2	46.7
(2017/04/03 13:22:49.00)	54.8	66.3	58.7	46.3
(2017/04/03 13:27:50.00)	56.1	71.5	60.5	46.4
(2017/04/03 13:32:51.00)	57.5	66.8	62.0	48.0
(2017/04/03 13:37:53.00)	57.0	68.7	61.2	47.0
(2017/04/03 13:42:54.00)	55.1	64.8	59.3	49.3
(2017/04/03 13:47:56.00)	57.2	80.6	60.1	49.2
(2017/04/03 13:52:57.00)	59.1	69.5	64.5	49.5
(2017/04/03 13:57:59.00)	58.5	69.3	63.7	49.2
(2017/04/03 14:03:00.00)	56.8	70.7	61.0	48.6
(2017/04/03 14:08:01.00)	56.8	72.4	61.6	47.7
(2017/04/03 14:13:03.00)	57.6	74.7	61.8	49.0
(2017/04/03 14:18:04.00)	62.1	74.3	67.6	47.4
(2017/04/03 14:23:06.00)	58.9	68.1	62.7	50.7
(2017/04/03 14:28:07.00)	56.1	73.5	59.5	50.3
(2017/04/03 14:33:09.00)	56.0	63.7	60.1	48.7
(2017/04/03 14:38:10.00)	58.0	66.7	61.8	51.6
(2017/04/03 14:43:11.00)	55.4	70.1	56.8	49.3
(2017/04/03 14:48:13.00)	54.1	67.1	57.3	49.4
(2017/04/03 14:53:14.00)	56.6	70.1	60.1	48.7
(2017/04/03 14:58:16.00)	56.4	68.8	59.8	47.3
(2017/04/03 15:03:17.00)	56.2	80.1	58.9	47.8
(2017/04/03 15:08:19.00)	57.6	66.3	62.3	48.3
(2017/04/03 15:13:20.00)	57.9	76.9	60.0	51.0
(2017/04/03 15:18:21.00)	56.0	78.0	57.9	50.0
(2017/04/03 15:23:23.00)	54.6	64.1	59.8	48.2

5th day	LAeq	LA(Fmax)	LA10	LA90
(2017/04/03 15:28:24.00)	55.2	67.3	59.6	48.8
(2017/04/03 15:33:26.00)	54.3	67.6	57.6	49.3
(2017/04/03 15:38:27.00)	57.8	65.7	61.4	51.0
(2017/04/03 15:43:29.00)	54.3	69.4	57.1	49.6
(2017/04/03 15:48:30.00)	55.4	64.8	60.1	49.0
(2017/04/03 15:53:32.00)	57.8	70.5	61.0	48.8
(2017/04/03 15:58:33.00)	54.2	63.0	57.2	49.8
(2017/04/03 16:03:34.00)	57.7	68.2	62.1	50.2
(2017/04/03 16:08:36.00)	54.4	67.0	58.2	48.9
(2017/04/03 16:13:37.00)	58.7	70.2	62.0	49.9
(2017/04/03 16:18:39.00)	56.9	66.2	60.9	50.1
(2017/04/03 16:23:40.00)	55.5	65.8	59.0	50.6
(2017/04/03 16:28:41.00)	58.4	69.0	62.6	51.1
(2017/04/03 16:33:43.00)	56.2	66.5	60.1	50.0
(2017/04/03 16:38:44.00)	57.8	68.4	61.6	50.3
(2017/04/03 16:43:46.00)	55.4	66.8	59.5	48.5
(2017/04/03 16:48:47.00)	57.7	67.5	62.3	49.1
(2017/04/03 16:53:49.00)	58.6	73.6	63.7	48.7
(2017/04/03 16:58:50.00)	57.8	68.1	61.5	48.1
(2017/04/03 17:03:51.00)	59.0	68.9	63.7	48.7
(2017/04/03 17:08:53.00)	54.1	70.6	56.4	46.0
(2017/04/03 17:13:54.00)	55.5	66.0	60.5	47.7
(2017/04/03 17:18:56.00)	56.2	67.9	60.9	46.9
(2017/04/03 17:23:57.00)	59.1	68.3	63.9	46.7
(2017/04/03 17:28:59.00)	55.0	69.3	59.9	45.6
(2017/04/03 17:34:00.00)	55.3	70.5	58.8	46.9
(2017/04/03 17:39:02.00)	58.3	69.8	62.4	46.3
(2017/04/03 17:44:03.00)	50.1	62.9	51.8	45.0
(2017/04/03 17:49:04.00)	57.5	68.4	62.8	47.1
(2017/04/03 17:54:06.00)	57.7	69.5	62.4	46.6
(2017/04/03 17:59:07.00)	54.6	64.7	57.7	48.8
(2017/04/03 18:04:09.00)	61.4	76.0	63.2	49.5
(2017/04/03 18:09:10.00)	54.0	67.1	57.4	47.5
(2017/04/03 18:14:11.00)	59.8	74.4	64.1	48.6
(2017/04/03 18:19:13.00)	55.6	71.4	58.2	51.1
(2017/04/03 18:24:14.00)	59.4	74.6	63.4	52.0
(2017/04/03 18:29:16.00)	57.2	67.3	61.2	51.8
(2017/04/03 18:34:17.00)	56.0	69.2	58.9	51.0
(2017/04/03 18:39:18.00)	59.0	69.2	63.6	50.6
(2017/04/03 18:44:20.00)	55.9	68.1	59.4	51.9
(2017/04/03 18:49:21.00)	59.0	69.9	64.0	52.5
(2017/04/03 18:54:23.00)	55.2	65.3	59.5	50.1
(2017/04/03 18:59:24.00)	57.2	67.2	60.7	50.7
(2017/04/03 19:04:26.00)	57.0	66.8	60.1	50.5
(2017/04/03 19:09:27.00)	56.9	64.7	60.4	51.7
(2017/04/03 19:14:28.00)	55.6	65.6	57.9	52.8
(2017/04/03 19:19:30.00)	58.3	66.5	62.5	53.0
(2017/04/03 19:24:31.00)	57.4	66.9	61.5	51.7
(2017/04/03 19:29:33.00)	54.7	64.5	57.7	51.4
(2017/04/03 19:34:34.00)	57.5	64.7	61.4	51.4
(2017/04/03 19:39:36.00)	50.8	63.5	52.3	46.1
(2017/04/03 19:44:37.00)	55.7	69.6	61.4	46.3
(2017/04/03 19:49:38.00)	51.3	65.9	54.0	46.3
(2017/04/03 19:54:40.00)	55.4	64.6	60.0	46.8
(2017/04/03 19:59:41.00)	54.7	66.2	59.3	46.4
(2017/04/03 20:04:43.00)	54.7	63.6	59.6	46.1
(2017/04/03 20:09:44.00)	56.1	68.8	60.9	48.4
(2017/04/03 20:14:46.00)	54.6	63.0	57.9	48.6
(2017/04/03 20:19:47.00)	56.2	67.2	61.0	48.1
(2017/04/03 20:24:48.00)	54.4	64.1	59.3	47.8
(2017/04/03 20:29:50.00)	56.1	69.4	59.3	48.7
(2017/04/03 20:34:51.00)	53.8	64.7	56.6	48.1
(2017/04/03 20:39:53.00)	56.0	69.0	59.3	47.8
(2017/04/03 20:44:54.00)	54.4	68.5	58.3	46.6
(2017/04/03 20:49:56.00)	57.4	68.3	60.8	50.4
(2017/04/03 20:54:57.00)	58.4	75.9	63.2	49.3
(2017/04/03 20:59:59.00)	49.5	63.0	51.0	47.2
(2017/04/03 21:05:00.00)	58.6	71.1	62.4	48.3
(2017/04/03 21:10:01.00)	57.9	68.1	62.8	46.5
(2017/04/03 21:15:03.00)	52.8	65.3	55.6	47.1
(2017/04/03 21:20:04.00)	54.5	65.7	59.7	47.2
(2017/04/03 21:25:06.00)	52.8	64.3	56.1	46.8
(2017/04/03 21:30:07.00)	47.9	54.6	50.8	45.4
(2017/04/03 21:35:08.00)	51.8	65.3	54.9	45.9
(2017/04/03 21:40:10.00)	55.2	67.4	59.8	46.5
(2017/04/03 21:45:11.00)	52.0	60.6	56.0	46.6
(2017/04/03 21:50:13.00)	54.3	67.2	57.7	46.6
(2017/04/03 21:55:14.00)	53.1	64.3	56.6	46.9
(2017/04/03 22:00:16.00)	52.5	66.2	55.6	47.0
(2017/04/03 22:05:17.00)	60.9	77.0	63.4	46.6
(2017/04/03 22:10:18.00)	56.5	65.9	61.1	47.3
(2017/04/03 22:15:20.00)	49.5	59.4	53.1	46.0
(2017/04/03 22:20:21.00)	50.7	62.3	52.3	45.9
(2017/04/03 22:25:23.00)	54.7	65.2	57.7	49.5
(2017/04/03 22:30:24.00)	54.0	67.1	57.0	49.5
(2017/04/03 22:35:26.00)	52.1	61.2	52.7	50.9
(2017/04/03 22:40:27.00)	57.6	70.6	60.6	51.2
(2017/04/03 22:45:29.00)	56.7	68.3	59.5	50.6
(2017/04/03 22:50:30.00)	54.4	63.5	58.1	49.5
(2017/04/03 22:55:31.00)	56.6	64.8	61.8	48.9
(2017/04/03 23:00:33.00)	53.4	66.7	52.3	47.5
(2017/04/03 23:05:34.00)	53.4	67.5	54.3	48.4
(2017/04/03 23:10:36.00)	53.3	64.6	56.5	49.1
(2017/04/03 23:15:37.00)	50.8	66.3	51.5	46.6
(2017/04/03 23:20:39.00)	46.6	63.3	47.7	45.0
(2017/04/03 23:25:40.00)	54.3	64.9	57.1	47.1

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

5th day	LAeq	LAF(max)	LA10	LA90
(2017/04/03 23:30:41.00)	52.0	64.6	54.9	47.9
(2017/04/03 23:35:43.00)	56.3	83.2	57.8	48.8
(2017/04/03 23:40:44.00)	52.3	65.0	54.0	49.2
(2017/04/03 23:45:46.00)	55.0	69.8	58.6	50.3
(2017/04/03 23:50:47.00)	54.8	71.6	58.0	48.6
(2017/04/03 23:55:49.00)	53.0	63.1	55.8	48.8
(2017/04/04 00:00:50.00)	50.1	60.6	51.4	47.8
(2017/04/04 00:05:51.00)	53.2	63.7	55.9	48.0
(2017/04/04 00:10:53.00)	52.7	63.2	56.3	47.2
(2017/04/04 00:15:54.00)	48.5	64.4	49.5	46.9
(2017/04/04 00:20:56.00)	49.7	63.7	50.4	46.8
(2017/04/04 00:25:57.00)	52.1	60.9	55.4	48.1
(2017/04/04 00:30:59.00)	52.8	62.4	57.4	48.6
(2017/04/04 00:36:00.00)	52.2	66.2	53.0	48.8
(2017/04/04 00:41:02.00)	53.0	65.2	55.4	48.1
(2017/04/04 00:46:03.00)	50.8	66.2	52.1	48.0
(2017/04/04 00:51:05.00)	51.2	66.1	54.0	47.7
(2017/04/04 00:56:06.00)	52.4	63.9	54.2	45.6
(2017/04/04 01:01:07.00)	50.4	63.9	51.7	44.4
(2017/04/04 01:06:09.00)	50.2	67.6	52.9	44.8
(2017/04/04 01:11:10.00)	55.2	66.4	59.3	46.3
(2017/04/04 01:16:12.00)	48.1	59.4	50.4	43.5
(2017/04/04 01:21:13.00)	47.8	57.4	49.3	43.9
(2017/04/04 01:26:15.00)	46.4	57.6	48.1	44.5
(2017/04/04 01:31:16.00)	52.2	62.4	55.3	46.9
(2017/04/04 01:36:17.00)	52.7	65.6	55.3	49.0
(2017/04/04 01:41:19.00)	49.4	56.3	50.4	48.4
(2017/04/04 01:46:20.00)	52.0	62.4	54.2	48.6
(2017/04/04 01:51:22.00)	54.7	63.3	57.4	50.2
(2017/04/04 01:56:23.00)	49.5	62.8	51.0	47.6
(2017/04/04 02:01:25.00)	47.5	59.0	49.1	45.7
(2017/04/04 02:06:26.00)	46.4	57.3	47.6	44.8
(2017/04/04 02:11:27.00)	45.6	51.8	46.5	44.6
(2017/04/04 02:16:29.00)	46.3	53.8	47.8	44.7
(2017/04/04 02:21:30.00)	46.9	58.4	49.0	44.7
(2017/04/04 02:26:32.00)	44.5	51.8	46.2	42.2
(2017/04/04 02:31:33.00)	52.0	62.0	57.4	41.4
(2017/04/04 02:36:35.00)	48.7	62.2	51.4	41.4
(2017/04/04 02:41:36.00)	42.8	53.4	43.8	41.5
(2017/04/04 02:46:37.00)	42.3	48.7	44.4	39.8
(2017/04/04 02:51:39.00)	39.9	47.3	41.4	37.7
(2017/04/04 02:56:40.00)	48.7	61.0	54.9	38.1
(2017/04/04 03:01:42.00)	50.5	60.1	54.8	39.3
(2017/04/04 03:06:43.00)	46.9	52.0	49.3	43.3
(2017/04/04 03:11:45.00)	43.1	49.5	44.4	42.0
(2017/04/04 03:16:46.00)	43.9	53.0	44.5	43.0
(2017/04/04 03:21:48.00)	43.7	61.4	44.2	41.1
(2017/04/04 03:26:49.00)	45.5	58.3	49.2	39.9
(2017/04/04 03:31:51.00)	46.7	66.3	43.7	39.3
(2017/04/04 03:36:52.00)	40.7	50.2	41.9	39.0
(2017/04/04 03:41:53.00)	38.7	48.4	40.4	36.3
(2017/04/04 03:46:55.00)	40.2	51.3	42.5	36.2
(2017/04/04 03:51:56.00)	38.1	48.2	40.3	35.7
(2017/04/04 03:56:58.00)	45.8	58.0	49.8	40.6
(2017/04/04 04:01:59.00)	49.9	59.7	53.1	46.5
(2017/04/04 04:07:01.00)	56.1	66.5	61.9	47.0
(2017/04/04 04:12:02.00)	50.3	59.3	54.0	46.1
(2017/04/04 04:17:04.00)	47.6	55.5	50.4	40.3
(2017/04/04 04:22:05.00)	47.8	52.2	48.7	46.9
(2017/04/04 04:27:07.00)	48.4	55.4	50.0	46.5
(2017/04/04 04:32:08.00)	49.9	57.3	52.1	47.4
(2017/04/04 04:37:10.00)	50.2	57.2	53.0	47.0
(2017/04/04 04:42:11.00)	52.2	65.2	55.6	44.0
(2017/04/04 04:47:12.00)	47.7	58.4	49.5	43.8
(2017/04/04 04:52:14.00)	49.5	64.4	52.5	44.7
(2017/04/04 04:57:15.00)	48.3	63.6	49.7	45.1
(2017/04/04 05:02:17.00)	52.0	61.4	55.7	46.2
(2017/04/04 05:07:18.00)	51.0	64.7	52.9	48.2
(2017/04/04 05:12:19.00)	50.8	60.7	52.6	48.7
(2017/04/04 05:17:21.00)	51.3	60.6	51.7	50.1
(2017/04/04 05:22:22.00)	52.0	58.9	53.7	50.3
(2017/04/04 05:27:24.00)	52.2	58.5	55.4	49.5
(2017/04/04 05:32:25.00)	49.7	54.5	50.6	48.8
(2017/04/04 05:37:27.00)	53.0	65.1	55.5	50.2
(2017/04/04 05:42:28.00)	54.4	65.8	58.5	47.6
(2017/04/04 05:47:30.00)	53.0	61.7	56.7	45.4
(2017/04/04 05:52:31.00)	49.8	62.2	52.5	45.8
(2017/04/04 05:57:32.00)	53.4	64.7	57.5	48.2
(2017/04/04 06:02:34.00)	51.7	64.1	54.0	46.0
(2017/04/04 06:07:35.00)	53.3	72.5	54.6	47.8
(2017/04/04 06:12:37.00)	51.0	65.6	53.5	48.1
(2017/04/04 06:17:38.00)	55.0	67.4	57.4	49.9
(2017/04/04 06:22:40.00)	56.6	65.0	61.1	51.0
(2017/04/04 06:27:41.00)	54.0	70.8	55.8	51.6
(2017/04/04 06:32:43.00)	53.7	63.6	55.7	50.3
(2017/04/04 06:37:44.00)	54.1	64.2	56.9	50.9
(2017/04/04 06:42:45.00)	52.8	62.5	54.0	50.9
(2017/04/04 06:47:47.00)	55.9	68.7	57.3	51.9
(2017/04/04 06:52:48.00)	56.3	64.9	59.9	50.3
(2017/04/04 06:57:50.00)	52.1	61.8	54.2	49.4
(2017/04/04 07:02:51.00)	52.9	63.0	56.2	49.2
(2017/04/04 07:07:53.00)	53.1	65.5	56.9	48.0
(2017/04/04 07:12:54.00)	51.5	63.9	53.2	46.5
(2017/04/04 07:17:55.00)	54.3	65.4	59.1	45.6
(2017/04/04 07:22:57.00)	53.1	68.5	56.6	45.8
(2017/04/04 07:27:58.00)	52.8	66.6	56.6	44.3

6th day	LAeq	LAf(max)	LA10	LA90
(2017/04/04 07:33:00.00)	50.7	62.2	53.8	44.0
(2017/04/04 07:38:01.00)	54.0	73.4	56.8	45.7
(2017/04/04 07:43:03.00)	53.4	62.4	57.0	47.2
(2017/04/04 07:48:04.00)	53.0	65.9	56.7	44.3
(2017/04/04 07:53:06.00)	55.0	65.6	58.8	45.5
(2017/04/04 07:58:07.00)	53.5	67.0	55.0	45.6
(2017/04/04 08:03:09.00)	54.0	64.7	58.1	46.4
(2017/04/04 08:08:10.00)	52.6	64.8	56.3	46.2
(2017/04/04 08:13:11.00)	55.1	66.1	58.3	47.1
(2017/04/04 08:18:13.00)	54.2	64.6	58.9	46.6
(2017/04/04 08:23:14.00)	52.9	69.8	56.0	44.7
(2017/04/04 08:28:16.00)	55.2	75.9	58.0	44.6
(2017/04/04 08:33:17.00)	53.6	72.3	53.5	45.5
(2017/04/04 08:38:19.00)	57.3	73.5	60.3	46.1
(2017/04/04 08:43:20.00)	54.4	65.6	57.9	46.5
(2017/04/04 08:48:21.00)	57.0	82.7	58.3	45.9
(2017/04/04 08:53:23.00)	54.8	72.5	57.1	44.6
(2017/04/04 08:58:24.00)	53.5	67.4	57.6	45.1
(2017/04/04 09:03:26.00)	54.4	65.6	57.8	47.4
(2017/04/04 09:08:27.00)	53.0	69.8	57.1	44.7
(2017/04/04 09:13:29.00)	53.8	67.5	57.2	45.9
(2017/04/04 09:18:30.00)	52.4	66.6	55.7	45.1
(2017/04/04 09:23:32.00)	50.1	66.1	52.3	44.1
(2017/04/04 09:28:33.00)	50.7	65.2	52.7	45.7
(2017/04/04 09:33:34.00)	50.8	62.8	53.6	45.8
(2017/04/04 09:38:36.00)	54.6	68.2	58.6	45.5
(2017/04/04 09:43:37.00)	57.0	73.4	58.3	47.8
(2017/04/04 09:48:39.00)	50.9	65.1	53.6	45.1
(2017/04/04 09:53:40.00)	50.7	62.5	53.4	45.3
(2017/04/04 09:58:42.00)	53.8	70.1	55.9	50.1
(2017/04/04 10:03:43.00)	54.4	63.6	57.1	50.6
(2017/04/04 10:08:45.00)	50.7	65.2	51.4	48.9
(2017/04/04 10:13:46.00)	54.3	69.2	57.3	49.2
(2017/04/04 10:18:48.00)	54.0	63.2	57.3	50.6
(2017/04/04 10:23:49.00)	55.2	71.7	56.4	48.6
(2017/04/04 10:28:50.00)	53.4	72.3	54.3	49.3
(2017/04/04 10:33:52.00)	52.9	63.5	56.3	47.8
(2017/04/04 10:38:53.00)	55.2	65.6	58.9	49.5
(2017/04/04 10:43:55.00)	53.0	64.8	56.1	47.5
(2017/04/04 10:48:56.00)	53.7	68.5	56.4	46.3
(2017/04/04 10:53:57.00)	53.9	75.0	55.7	47.6
(2017/04/04 10:58:59.00)	55.8	66.8	59.6	46.9
(2017/04/04 11:04:00.00)	55.3	66.5	59.1	48.0
(2017/04/04 11:09:02.00)	52.8	64.4	55.8	47.2
(2017/04/04 11:14:03.00)	50.9	58.2	52.8	47.0
(2017/04/04 11:19:05.00)	54.4	68.5	57.8	48.8
(2017/04/04 11:24:06.00)	54.2	63.9	57.7	49.8
(2017/04/04 11:29:07.00)	55.4	66.4	59.4	48.0
(2017/04/04 11:34:09.00)	51.6	64.2	52.5	47.7
(2017/04/04 11:39:10.00)	53.6	64.3	56.1	49.6
(2017/04/04 11:44:12.00)	63.0	69.9	67.7	53.4
(2017/04/04 11:49:13.00)	54.1	66.9	57.6	48.2
(2017/04/04 11:54:15.00)	54.5	64.8	57.7	49.4
(2017/04/04 11:59:16.00)	52.7	64.3	55.2	48.7
(2017/04/04 12:04:17.00)	54.1	69.0	57.8	48.0
(2017/04/04 12:09:19.00)	52.1	68.0	53.0	47.8
(2017/04/04 12:14:20.00)	53.5	67.3	56.7	46.8
(2017/04/04 12:19:22.00)	56.6	70.2	61.0	46.8
(2017/04/04 12:24:23.00)	54.5	69.3	56.3	48.2
(2017/04/04 12:29:25.00)	53.3	67.0	55.8	47.3
(2017/04/04 12:34:26.00)	52.9	67.6	56.6	47.9
(2017/04/04 12:39:27.00)	54.2	66.7	56.9	47.8
(2017/04/04 12:44:29.00)	58.8	76.1	62.4	48.4
(2017/04/04 12:49:30.00)	57.4	77.1	59.2	47.7
(2017/04/04 12:54:32.00)	54.0	64.6	58.3	47.1
(2017/04/04 12:59:33.00)	52.2	63.2	55.7	46.0
(2017/04/04 13:04:35.00)	52.3	64.1	55.3	46.5
(2017/04/04 13:09:36.00)	53.2	68.8	56.4	45.7
(2017/04/04 13:14:37.00)	47.9	61.4	50.4	44.6
(2017/04/04 13:19:39.00)	50.0	62.2	53.4	45.5
(2017/04/04 13:24:40.00)	53.5	64.2	58.3	45.1
(2017/04/04 13:29:42.00)	54.4	64.3	59.2	44.6
(2017/04/04 13:34:43.00)	59.4	82.0	55.1	44.8
(2017/04/04 13:39:45.00)	53.0	67.5	54.7	45.8
(2017/04/04 13:44:46.00)	51.0	64.6	53.5	44.6
(2017/04/04 13:49:48.00)	54.3	71.0	57.3	45.0
(2017/04/04 13:54:49.00)	49.3	62.6	51.6	46.0
(2017/04/04 13:59:50.00)	53.7	72.8	56.1	47.8
(2017/04/04 14:04:52.00)	53.3	64.0	57.5	47.5
(2017/04/04 14:09:53.00)	54.1	74.6	55.9	48.4
(2017/04/04 14:14:55.00)	52.4	67.1	52.7	47.6
(2017/04/04 14:19:56.00)	52.1	69.3	55.1	47.7
(2017/04/04 14:24:58.00)	54.8	69.3	57.0	48.7
(2017/04/04 14:29:59.00)	54.6	70.8	56.1	48.4
(2017/04/04 14:35:00.00)	55.7	69.0	60.5	48.6
(2017/04/04 14:40:02.00)	53.5	69.7	55.5	48.1
(2017/04/04 14:45:03.00)	53.4	68.7	55.7	49.0
(2017/04/04 14:50:05.00)	52.4	63.9	55.4	48.5
(2017/04/04 14:55:06.00)	50.5	59.5	53.0	47.4
(2017/04/04 15:00:08.00)	55.8	76.7	57.7	48.0
(2017/04/04 15:05:09.00)	60.8	82.5	60.1	47.5
(2017/04/04 15:10:11.00)	55.2	66.3	59.2	48.9
(2017/04/04 15:15:12.00)	54.5	71.8	55.7	49.3
(2017/04/04 15:20:13.00)	51.6	58.5	53.8	49.0
(2017/04/04 15:25:15.00)	52.1	68.0	53.5	49.2
(2017/04/04 15:30:16.00)	52.2	66.0	55.2	48.2

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

6th day	LAeq	LAF(max)	LA10	LA90
(2017/04/04 15:35:18.00)	50.7	64.7	50.9	47.2
(2017/04/04 15:40:19.00)	53.7	65.4	56.8	47.8
(2017/04/04 15:45:21.00)	51.0	64.8	52.7	47.8
(2017/04/04 15:50:22.00)	57.6	68.6	61.2	50.4
(2017/04/04 15:55:23.00)	52.3	66.7	54.1	49.3
(2017/04/04 16:00:25.00)	52.1	64.2	53.7	48.7
(2017/04/04 16:05:26.00)	52.7	64.3	56.7	47.9
(2017/04/04 16:10:28.00)	52.8	66.9	55.2	47.4
(2017/04/04 16:15:29.00)	53.0	64.6	55.3	49.1
(2017/04/04 16:20:31.00)	55.9	71.4	60.0	48.6
(2017/04/04 16:25:32.00)	56.3	68.8	59.9	49.2
(2017/04/04 16:30:33.00)	53.8	67.7	56.1	46.3
(2017/04/04 16:35:35.00)	49.1	60.8	51.3	46.6
(2017/04/04 16:40:36.00)	55.2	65.9	59.5	46.9
(2017/04/04 16:45:38.00)	54.9	65.2	59.2	46.5
(2017/04/04 16:50:39.00)	53.6	67.1	56.9	45.9
(2017/04/04 16:55:41.00)	53.2	65.7	56.0	47.0
(2017/04/04 17:00:42.00)	53.5	64.9	57.4	46.8
(2017/04/04 17:05:43.00)	52.5	68.1	55.8	46.8
(2017/04/04 17:10:45.00)	56.0	75.4	55.6	46.2
(2017/04/04 17:15:46.00)	52.7	65.3	55.4	46.6
(2017/04/04 17:20:48.00)	55.4	71.1	57.2	46.3
(2017/04/04 17:25:49.00)	54.6	68.9	57.9	46.9
(2017/04/04 17:30:51.00)	58.7	73.4	63.0	46.9
(2017/04/04 17:35:52.00)	51.2	65.7	54.1	46.7
(2017/04/04 17:40:54.00)	55.9	74.7	59.1	46.3
(2017/04/04 17:45:55.00)	54.0	72.2	55.5	47.1
(2017/04/04 17:50:56.00)	54.5	72.9	58.8	46.1
(2017/04/04 17:55:58.00)	54.6	70.2	57.4	46.5
(2017/04/04 18:00:59.00)	56.5	73.7	59.8	47.7
(2017/04/04 18:05:01.00)	54.5	75.2	57.1	46.9
(2017/04/04 18:11:02.00)	53.7	70.9	56.2	48.0
(2017/04/04 18:16:04.00)	53.3	69.6	56.2	46.8
(2017/04/04 18:21:05.00)	52.0	67.5	54.1	46.6
(2017/04/04 18:26:07.00)	52.3	67.1	54.2	46.5
(2017/04/04 18:31:08.00)	53.6	74.6	56.1	47.3
(2017/04/04 18:36:10.00)	52.6	64.6	56.2	46.3
(2017/04/04 18:41:11.00)	50.9	62.6	54.6	45.5
(2017/04/04 18:46:13.00)	51.9	65.8	54.8	46.0
(2017/04/04 18:51:14.00)	49.6	68.3	52.7	45.1
(2017/04/04 18:56:16.00)	50.9	67.2	53.2	44.1
(2017/04/04 19:01:17.00)	48.7	63.6	50.6	45.1
(2017/04/04 19:06:19.00)	51.1	62.3	54.2	45.9
(2017/04/04 19:11:20.00)	52.8	67.4	56.3	47.0
(2017/04/04 19:16:21.00)	50.5	61.5	52.8	47.2
(2017/04/04 19:21:23.00)	48.9	56.5	51.1	46.8
(2017/04/04 19:26:24.00)	49.2	66.6	50.8	46.8
(2017/04/04 19:31:26.00)	51.9	64.1	55.8	45.8
(2017/04/04 19:36:27.00)	51.2	63.7	54.1	45.6
(2017/04/04 19:41:29.00)	54.3	75.1	56.2	46.2
(2017/04/04 19:46:30.00)	47.9	65.1	50.0	44.3
(2017/04/04 19:51:31.00)	50.6	66.4	52.6	44.1
(2017/04/04 19:56:33.00)	50.8	64.1	52.5	46.0
(2017/04/04 20:01:34.00)	49.0	63.8	49.5	44.1
(2017/04/04 20:06:36.00)	50.7	68.8	52.4	44.5
(2017/04/04 20:11:37.00)	50.4	61.0	53.7	45.8
(2017/04/04 20:16:39.00)	49.3	64.1	50.3	46.5
(2017/04/04 20:21:40.00)	49.9	58.7	52.7	45.7
(2017/04/04 20:26:42.00)	49.1	61.6	52.7	44.6
(2017/04/04 20:31:43.00)	49.4	61.8	53.1	44.7
(2017/04/04 20:36:44.00)	48.0	60.4	49.8	45.7
(2017/04/04 20:41:46.00)	48.6	62.3	50.2	45.6
(2017/04/04 20:46:47.00)	50.1	65.5	52.0	45.1
(2017/04/04 20:51:49.00)	48.6	56.2	51.7	45.4
(2017/04/04 20:56:50.00)	48.1	56.6	49.7	45.3
(2017/04/04 21:01:52.00)	47.9	65.7	49.9	44.6
(2017/04/04 21:06:53.00)	48.1	63.5	48.4	43.6
(2017/04/04 21:11:54.00)	49.5	63.6	52.7	44.4
(2017/04/04 21:16:56.00)	45.9	52.6	47.4	44.0
(2017/04/04 21:21:57.00)	47.3	60.0	49.3	45.1
(2017/04/04 21:26:59.00)	47.9	57.9	50.2	45.1
(2017/04/04 21:32:00.00)	48.6	56.1	51.1	46.0
(2017/04/04 21:37:02.00)	47.3	56.8	48.9	44.9
(2017/04/04 21:42:03.00)	49.6	62.6	50.4	46.7
(2017/04/04 21:47:05.00)	47.0	52.1	48.1	45.4
(2017/04/04 21:52:06.00)	49.9	64.7	51.5	45.8
(2017/04/04 21:57:07.00)	47.9	55.0	50.0	45.4
(2017/04/04 22:02:09.00)	46.9	56.7	48.8	44.7
(2017/04/04 22:07:10.00)	49.4	66.1	52.2	45.9
(2017/04/04 22:12:12.00)	49.2	57.5	52.6	45.3
(2017/04/04 22:17:13.00)	48.9	58.2	49.7	47.2
(2017/04/04 22:22:15.00)	49.2	56.1	51.5	46.7
(2017/04/04 22:27:16.00)	47.9	51.2	48.9	46.9
(2017/04/04 22:32:18.00)	48.7	59.3	50.3	46.5
(2017/04/04 22:37:19.00)	48.9	59.0	51.7	45.4
(2017/04/04 22:42:20.00)	50.4	62.2	53.5	45.9
(2017/04/04 22:47:22.00)	54.5	74.7	54.2	46.2
(2017/04/04 22:52:23.00)	48.6	55.1	51.1	45.5
(2017/04/04 22:57:25.00)	50.2	59.8	53.1	46.9
(2017/04/04 23:02:26.00)	48.7	62.3	51.9	45.4
(2017/04/04 23:07:28.00)	48.7	56.1	50.0	47.2
(2017/04/04 23:12:29.00)	49.4	60.3	50.3	47.0
(2017/04/04 23:17:30.00)	49.9	65.6	49.1	46.0
(2017/04/04 23:22:32.00)	48.3	55.2	50.9	45.5
(2017/04/04 23:27:33.00)	49.1	61.0	50.6	46.3
(2017/04/04 23:32:35.00)	48.9	63.4	51.5	45.9

6th day	LAeq	LAF(max)	LA10	LA90
(2017/04/04 23:37:36.00)	47.5	56.9	49.7	44.5
(2017/04/04 23:42:38.00)	50.7	61.7	52.6	46.5
(2017/04/04 23:47:39.00)	48.6	57.0	50.8	46.1
(2017/04/04 23:52:41.00)	49.2	63.6	52.5	46.2
(2017/04/04 23:57:42.00)	46.7	51.8	48.0	45.4
(2017/04/05 00:02:44.00)	46.9	55.6	48.9	44.5
(2017/04/05 00:07:45.00)	52.0	66.6	55.7	44.7
(2017/04/05 00:12:46.00)	45.1	64.6	46.0	42.7
(2017/04/05 00:17:48.00)	50.6	68.3	47.5	42.7
(2017/04/05 00:22:49.00)	45.4	63.7	46.4	43.7
(2017/04/05 00:27:51.00)	47.4	58.3	48.6	44.7
(2017/04/05 00:32:53.00)	47.8	55.3	51.2	45.0
(2017/04/05 00:37:54.00)	47.4	53.3	48.6	46.1
(2017/04/05 00:42:55.00)	51.6	70.1	50.4	46.8
(2017/04/05 00:47:57.00)	51.4	61.5	54.6	47.3
(2017/04/05 00:52:58.00)	50.2	57.4	54.0	46.8
(2017/04/05 00:58:00.00)	46.4	52.9	47.7	44.6
(2017/04/05 01:03:01.00)	48.9	58.2	52.1	44.0
(2017/04/05 01:08:03.00)	47.0	52.5	48.8	45.4
(2017/04/05 01:13:04.00)	46.6	56.6	47.7	44.9
(2017/04/05 01:18:06.00)	47.8	63.1	47.7	44.4
(2017/04/05 01:23:07.00)	46.7	56.5	47.7	45.1
(2017/04/05 01:28:08.00)	44.6	57.4	45.4	43.6
(2017/04/05 01:33:10.00)	45.9	56.5	47.8	43.5
(2017/04/05 01:38:11.00)	45.0	52.4	46.2	43.5
(2017/04/05 01:43:13.00)	48.8	58.0	51.5	44.6
(2017/04/05 01:48:14.00)	48.4	56.2	50.0	45.5
(2017/04/05 01:53:16.00)	47.2	61.3	48.8	44.8
(2017/04/05 01:58:17.00)	48.0	54.7	52.3	43.8
(2017/04/05 02:03:19.00)	48.2	62.1	50.3	46.5
(2017/04/05 02:08:20.00)	47.6	57.3	48.6	46.3
(2017/04/05 02:13:22.00)	47.7	58.8	47.9	45.8
(2017/04/05 02:18:23.00)	46.7	57.2	47.8	45.6
(2017/04/05 02:23:24.00)	45.7	50.7	47.0	44.5
(2017/04/05 02:28:26.00)	46.2	56.0	48.1	44.1
(2017/04/05 02:33:27.00)	49.3	58.4	52.6	44.6
(2017/04/05 02:38:29.00)	45.9	49.6	47.1	44.8
(2017/04/05 02:43:30.00)	46.2	50.9	47.7	44.7
(2017/04/05 02:48:32.00)	46.0	53.2	47.6	44.4
(2017/04/05 02:53:33.00)	48.0	58.2	51.1	44.9
(2017/04/05 02:58:35.00)	46.1	52.0	47.5	44.5
(2017/04/05 03:03:36.00)	46.1	58.6	47.0	44.5
(2017/04/05 03:08:38.00)	46.8	57.2	48.9	44.2
(2017/04/05 03:13:39.00)	45.4	53.0	46.5	44.0
(2017/04/05 03:18:40.00)	45.7	56.6	46.8	44.3
(2017/04/05 03:23:42.00)	46.3	67.3	46.8	43.6
(2017/04/05 03:28:43.00)	45.1	58.0	46.2	43.6
(2017/04/05 03:33:45.00)	48.5	64.0	48.4	43.3
(2017/04/05 03:38:46.00)	51.3	61.4	55.7	43.4
(2017/04/05 03:43:48.00)	45.3	51.4	46.3	44.4
(2017/04/05 03:48:49.00)	44.8	53.3	45.7	43.7
(2017/04/05 03:53:51.00)	45.6	49.6	46.6	44.6
(2017/04/05 03:58:52.00)	45.2	50.4	46.4	43.6
(2017/04/05 04:03:53.00)	45.6	53.7	46.4	44.6
(2017/04/05 04:08:55.00)	45.0	51.3	45.6	44.2
(2017/04/05 04:13:56.00)	46.3	61.8	47.1	45.3
(2017/04/05 04:18:58.00)	46.5	52.4	47.5	45.3
(2017/04/05 04:23:59.00)	46.4	62.1	47.9	44.9
(2017/04/05 04:29:01.00)	45.1	53.4	46.9	43.1
(2017/04/05 04:34:02.00)	47.5	52.1	48.6	46.0
(2017/04/05 04:39:03.00)	48.7	55.3	49.4	47.6
(2017/04/05 04:44:05.00)	50.2	60.2	52.6	48.5
(2017/04/05 04:49:06.00)	50.2	60.2	52.7	47.4
(2017/04/05 04:54:08.00)	47.9	55.6	49.4	46.5
(2017/04/05 04:59:09.00)	50.7	57.4	53.6	48.4
(2017/04/05 05:04:11.00)	50.8	64.8	51.4	48.9
(2017/04/05 05:09:12.00)	50.2	55.9	51.2	49.3
(2017/04/05 05:14:13.00)	52.3	65.2	53.5	49.3
(2017/04/05 05:19:15.00)	50.3	59.6	52.4	46.6
(2017/04/05 05:24:16.00)	49.0	59.2	51.5	45.7
(2017/04/05 05:29:18.00)	49.6	64.4	52.0	45.3
(2017/04/05 05:34:19.00)	53.2	69.3	56.2	45.8
(2017/04/05 05:39:21.00)	50.7	65.8	51.5	46.7
(2017/04/05 05:44:22.00)	48.5	59.1	50.4	46.1
(2017/04/05 05:49:24.00)	50.7	60.2	54.3	45.8
(2017/04/05 05:54:25.00)	50.1	60.3	53.9	46.4
(2017/04/05 05:59:27.00)	51.7	66.4	53.3	46.8
(2017/04/05 06:04:28.00)	49.7	63.2	51.5	46.1
(2017/04/05 06:09:29.00)	53.4	60.3	55.1	49.6
(2017/04/05 06:14:31.00)	55.3	70.3	57.0	50.2
(2017/04/05 06:19:32.00)	53.0	69.4	55.0	49.7
(2017/04/05 06:24:34.00)	53.1	70.5	55.9	49.4
(2017/04/05 06:29:35.00)	52.1	64.7	53.4	50.4
(2017/04/05 06:34:37.00)	52.2	61.8	53.6	50.1
(2017/04/05 06:39:38.00)	53.0	62.6	55.8	50.3
(2017/04/05 06:44:40.00)	54.1	68.4	55.1	51.0
(2017/04/05 06:49:41.00)	55.4	63.4	57.7	51.3
(2017/04/05 06:54:43.00)	53.7	61.3	57.0	49.3
(2017/04/05 06:59:44.00)	53.6	64.7	55.3	50.4
(2017/04/05 07:04:46.00)	50.8	62.3	51.9	49.2
(2017/04/05 07:09:47.00)	54.2	61.5	57.5	49.4
(2017/04/05 07:14:49.00)	51.0	59.9	53.9	47.2
(2017/04/05 07:19:50.00)	54.0	66.8	57.9	46.7
(2017/04/05 07:24:51.00)	52.4	66.0	55.2	47.9
(2017/04/05 07:29:53.00)	52.6	64.0	57.1	47.4
(2017/04/05 07:34:54.00)	50.8	65.2	52.9	47.2

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

(2017/04/05 07:39:56.00)	55.0	68.5	59.2	47.0
(2017/04/05 07:44:57.00)	54.9	66.7	59.0	46.6
(2017/04/05 07:49:59.00)	58.3	70.9	62.0	47.7
(2017/04/05 07:55:00.00)	55.7	68.3	59.7	47.1
(2017/04/05 08:00:02.00)	54.6	65.4	58.5	47.2
(2017/04/05 08:05:03.00)	57.0	69.0	61.5	47.5
(2017/04/05 08:10:04.00)	54.1	65.5	57.2	47.2
(2017/04/05 08:15:06.00)	55.1	67.0	57.4	48.2
(2017/04/05 08:20:07.00)	54.9	66.7	59.1	46.2
(2017/04/05 08:25:09.00)	55.0	72.3	58.1	45.9
(2017/04/05 08:30:10.00)	54.4	64.8	59.4	46.7
(2017/04/05 08:35:12.00)	54.0	67.9	56.2	46.0
(2017/04/05 08:40:13.00)	53.4	70.9	57.3	45.6
(2017/04/05 08:45:14.00)	54.5	68.7	58.0	46.2
(2017/04/05 08:50:16.00)	53.4	68.1	56.5	45.8
(2017/04/05 08:55:17.00)	53.6	68.3	57.0	46.8
(2017/04/05 09:00:19.00)	54.7	68.3	57.1	47.9
(2017/04/05 09:05:20.00)	52.6	67.4	54.2	47.7
(2017/04/05 09:10:22.00)	53.1	65.6	56.1	47.9
(2017/04/05 09:15:23.00)	52.0	66.1	53.9	47.8
(2017/04/05 09:20:25.00)	51.7	68.2	54.1	47.6
(2017/04/05 09:25:26.00)	49.6	64.6	51.0	46.0
(2017/04/05 09:30:27.00)	52.6	64.5	56.3	46.9
(2017/04/05 09:35:29.00)	52.2	66.2	54.8	46.9
(2017/04/05 09:40:30.00)	55.6	67.8	60.1	47.1
(2017/04/05 09:45:32.00)	53.2	65.0	56.2	48.0
(2017/04/05 09:50:33.00)	52.5	66.4	54.8	48.0
(2017/04/05 09:55:35.00)	52.4	64.4	55.7	47.2
(2017/04/05 10:00:36.00)	53.6	67.1	55.8	48.0
(2017/04/05 10:05:37.00)	52.7	66.1	55.1	47.4
(2017/04/05 10:10:39.00)	52.9	65.7	55.4	47.3
(2017/04/05 10:15:40.00)	52.1	69.7	51.8	47.5
(2017/04/05 10:20:42.00)	52.2	62.1	55.0	48.1
(2017/04/05 10:25:43.00)	53.8	67.3	55.7	48.1
(2017/04/05 10:30:44.00)	53.5	70.0	55.5	50.2
(2017/04/05 10:35:46.00)	54.0	68.7	56.8	49.5
(2017/04/05 10:40:47.00)	53.9	65.7	57.0	49.2
(2017/04/05 10:45:49.00)	50.8	64.7	53.6	47.2
(2017/04/05 10:50:50.00)	52.8	68.0	55.1	47.9
(2017/04/05 10:55:52.00)	54.2	68.5	57.8	48.5
(2017/04/05 11:00:53.00)	56.2	70.5	60.2	48.3
(2017/04/05 11:05:54.00)	52.4	66.3	54.7	48.0
(2017/04/05 11:10:56.00)	54.3	71.3	56.7	47.1

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

2nd day	LAF(max)	LAeq	L10	L90
31/03/2017 07:00:20	64.17	55.10	57.70	51.60
31/03/2017 07:15:20	70.81	54.08	56.60	48.80
31/03/2017 07:30:20	65.05	54.15	58.20	48.40
31/03/2017 07:45:20	66.27	53.84	57.50	47.90
31/03/2017 08:00:20	66.45	56.01	59.50	48.50
31/03/2017 08:15:20	73.28	56.50	58.80	51.50
31/03/2017 08:30:20	72.95	55.79	59.00	51.30
31/03/2017 08:45:20	79.62	58.32	59.90	52.60
31/03/2017 09:00:20	69.09	56.99	60.70	49.40
31/03/2017 09:15:20	73.27	54.00	57.00	48.60
31/03/2017 09:30:20	74.69	55.57	59.30	49.00
31/03/2017 09:45:20	76.13	56.65	58.50	49.00
31/03/2017 10:00:20	71.43	55.10	58.40	48.90
31/03/2017 10:15:20	67.27	55.93	59.70	49.20
31/03/2017 10:30:20	67.59	55.84	60.10	48.40
31/03/2017 10:45:20	79.31	59.99	62.70	49.00
31/03/2017	68.64	54.18	57.80	47.70
31/03/2017 11:15:20	69.38	57.07	60.50	49.70
31/03/2017 11:30:20	77.89	58.10	60.80	50.80
31/03/2017 11:45:20	68.98	56.34	59.60	50.70
31/03/2017 12:00:20	70.60	56.39	60.30	49.00
31/03/2017 12:15:20	65.14	53.85	57.30	49.00
31/03/2017 12:30:20	71.75	56.51	59.10	50.30
31/03/2017 12:45:20	69.75	55.22	58.70	49.00
31/03/2017 13:00:20	67.41	55.45	58.60	49.10
31/03/2017 13:15:20	68.96	56.46	60.70	49.30
31/03/2017 13:30:20	73.60	56.78	59.70	50.90
31/03/2017 13:45:20	69.48	56.39	60.00	51.00
31/03/2017 14:00:20	69.26	55.91	59.80	48.30
31/03/2017 14:15:20	67.35	55.33	58.50	49.20
31/03/2017 14:30:20	71.44	56.62	60.30	49.20
31/03/2017 14:45:20	82.86	57.49	59.40	49.50
31/03/2017 15:00:20	70.08	57.10	61.70	49.00
31/03/2017 15:15:20	74.68	56.81	60.40	49.60
31/03/2017 15:30:20	71.00	55.10	57.60	50.10
31/03/2017 15:45:20	77.43	57.05	60.20	48.10
31/03/2017 16:00:20	75.40	59.93	62.10	48.70
31/03/2017 16:15:20	67.37	55.99	60.50	48.50
31/03/2017 16:30:20	67.88	55.00	59.10	48.80
31/03/2017 16:45:20	75.10	56.89	60.50	48.50
31/03/2017 17:00:20	68.30	54.97	58.50	47.50
31/03/2017 17:15:20	71.07	55.70	60.50	47.00
31/03/2017 17:30:20	70.13	55.38	58.70	47.40
31/03/2017 17:45:20	69.08	55.93	60.60	47.10
31/03/2017 18:00:20	77.98	57.35	59.70	47.20
31/03/2017 18:15:20	69.34	56.98	60.80	50.00
31/03/2017 18:30:20	69.70	57.02	60.90	51.20
31/03/2017 18:45:20	65.73	54.83	58.70	47.50
31/03/2017 19:00:20	66.87	55.06	57.70	50.40
31/03/2017 19:15:20	66.83	55.31	59.20	49.30
31/03/2017 19:30:20	67.28	53.98	56.80	44.20
31/03/2017 19:45:20	63.38	51.94	56.80	43.60
31/03/2017 20:00:20	68.24	51.19	53.30	45.80
31/03/2017 20:15:20	63.59	51.75	55.90	46.10
31/03/2017 20:30:20	61.34	51.30	55.10	44.50
31/03/2017 20:45:20	64.14	51.32	54.50	44.10
31/03/2017 21:00:20	62.35	49.93	52.30	45.50
31/03/2017 21:15:20	64.79	52.52	54.80	48.40
31/03/2017 21:30:20	65.11	52.15	55.00	

Project: Former Cox and Wyman Premises, Cardiff Road, Reading
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

3rd day	LAF(max)	LAeq	L10	L90
01/04/2017 07:00:20	62.18	52.82	56.00	46.90
01/04/2017 07:15:20	67.93	54.27	58.80	44.80
01/04/2017 07:30:20	64.68	52.04	55.70	46.00
01/04/2017 07:45:20	67.04	53.38	56.40	46.80
01/04/2017 08:00:20	63.82	52.87	55.80	48.10
01/04/2017 08:15:20	65.82	52.66	57.10	44.80
01/04/2017 08:30:20	67.96	54.12	56.80	45.00
01/04/2017 08:45:20	66.67	56.52	61.40	46.50
01/04/2017 09:00:20	66.78	53.84	57.00	46.20
01/04/2017 09:15:20	65.02	52.83	56.70	45.00
01/04/2017 09:30:20	64.33	52.62	56.30	46.50
01/04/2017 09:45:20	65.80	53.67	58.30	45.20
01/04/2017 10:00:20	66.25	53.70	56.70	45.50
01/04/2017 10:15:20	66.20	54.02	58.40	45.50
01/04/2017 10:30:20	67.02	54.81	58.50	46.50
01/04/2017 10:45:20	66.15	54.96	59.50	46.00
01/04/2017	63.78	52.08	56.00	44.30
01/04/2017 11:15:20	69.35	52.10	56.00	44.10
01/04/2017 11:30:20	64.79	51.95	55.40	44.30
01/04/2017 11:45:20	66.86	52.00	56.00	43.50
01/04/2017 12:00:20	62.78	51.11	54.80	42.20
01/04/2017 12:15:20	66.71	52.12	56.10	44.50
01/04/2017 12:30:20	69.64	55.14	58.50	45.00
01/04/2017 12:45:20	66.90	53.45	57.90	44.00
01/04/2017 13:00:20	66.57	52.86	57.00	43.30
01/04/2017 13:15:20	65.06	52.30	56.70	42.60
01/04/2017 13:30:20	72.63	51.04	54.80	41.00
01/04/2017 13:45:20	61.61	50.45	54.20	42.20
01/04/2017 14:00:20	65.46	51.97	56.90	39.10
01/04/2017 14:15:20	73.27	53.92	57.80	45.00
01/04/2017 14:30:20	69.53	55.88	60.50	45.70
01/04/2017 14:45:20	69.93	55.42	59.70	45.90
01/04/2017 15:00:20	67.52	54.44	58.30	46.40
01/04/2017 15:15:20	68.17	53.34	57.90	44.70
01/04/2017 15:30:20	65.27	53.62	57.60	46.80
01/04/2017 15:45:20	67.58	54.74	58.20	48.40
01/04/2017 16:00:20	69.42	55.65	59.40	48.30
01/04/2017 16:15:20	67.07	54.55	59.10	44.50
01/04/2017 16:30:20	67.70	54.73	59.00	45.00
01/04/2017 16:45:20	66.42	53.54	58.00	44.40
01/04/2017 17:00:20	65.04	53.43	57.90	45.20
01/04/2017 17:15:20	72.69	52.88	56.70	46.00
01/04/2017 17:30:20	67.63	53.71	56.70	47.10
01/04/2017 17:45:20	68.02	54.52	58.90	46.30
01/04/2017 18:00:20	62.55	50.74	54.40	44.60
01/04/2017 18:15:20	67.31	52.59	57.20	43.40
01/04/2017 18:30:20	61.47	52.05	56.80	42.60
01/04/2017 18:45:20	63.31	50.63	54.30	42.50
01/04/2017 19:00:20	64.87	51.11	53.80	46.00
01/04/2017 19:15:20	68.26	54.48	57.20	48.30
01/04/2017 19:30:20	64.14	52.78	56.20	47.70
01/04/2017 19:45:20	62.04	52.25	56.20	47.20
01/04/2017 20:00:20	60.52	47.82	50.10	42.50
01/04/2017 20:15:20	60.80	49.11	52.60	43.60
01/04/2017 20:30:20	73.69	52.49	55.80	44.60
01/04/2017 20:45:20	63.78	51.75	55.40	43.90
01/04/2017 21:00:20	59.18	45.27	47.30	42.00
01/04/2017 21:15:20	62.37	49.58	52.50	44.30
01/04/2017 21:30:20	71.83	47.72	50.60	41.70
01/04/2017 21:45:20	70.69	50.25	52.70	46.00
01/04/2017 22:00:20	72.88	50.75	52.30	46.80
01/04/2017 22:15:20	60.53	49.75	51.40	47.20
01/04/2017 22:30:20	63.48	48.22	50.70	44.30
01/04/2017 22:45:20	61.05	50.67	53.00	47.30
01/04/2017 23:00:20	61.25	50.46	53.20	43.10
01/04/2017 23:15:20	61.78	50.14	51.80	47.00
01/04/2017 23:30:20	60.14	49.28	52.10	46.30
01/04/2017 23:45:20	63.35	47.10	49.70	44.30
02/04/2017 00:00:20	59.82	48.64	51.60	43.10
02/04/2017 00:15:20	66.28	50.57	52.80	45.30
02/04/2017 00:30:20	68.87	51.70	52.80	50.20
02/04/2017 00:45:20	71.07	50.64	51.60	49.10
02/04/2017 01:00:20	63.04	49.19	50.70	46.60
02/04/2017 01:15:20	60.72	48.56	50.50	45.60
02/04/2017 01:30:20	58.50	46.20	49.30	43.10
02/04/2017 01:45:20	57.63	49.09	53.20	43.80
02/04/2017 02:00:20	70.74	50.10	52.20	46.50
02/04/2017 02:15:20	58.39	48.62	49.70	47.20
02/04/2017 02:30:20	70.47	47.88	49.30	37.60
02/04/2017 02:45:20	62.76	38.69	39.70	36.40
02/04/2017 03:00:20	66.48	41.30	42.20	37.80
02/04/2017 03:15:20	67.14	41.17	41.90	35.50
02/04/2017 03:30:20	65.82	38.40	39.70	35.10
02/04/2017 03:45:20	48.19	39.11	41.00	35.50
02/04/2017 04:00:20	50.36	36.97	38.80	34.40
02/04/2017 04:15:20	46.48	36.78	38.80	34.10
02/04/2017 04:30:20	51.56	38.13	40.60	34.70
02/04/2017 04:45:20	55.54	38.84	41.30	35.40
02/04/2017 05:00:20	59.43	43.35	46.40	34.60
02/04/2017 05:15:20	66.85	45.49	48.90	34.80
02/04/2017 05:30:20	60.82	45.64	49.40	36.60
02/04/2017 05:45:20	55.70	43.47	47.30	36.20
02/04/2017 06:00:20	60.74	43.00	46.10	35.80
02/04/2017 06:15:20	54.49	41.42	44.20	37.30
02/04/2017 06:30:20	54.31	41.92	44.60	37.40
02/04/2017 06:45:20	56.95	44.33	47.20	38.50

4th day	LAF(max)	LAeq	L10	L90
02/04/2017 07:00:20	62.07	44.37	47.90	38.10
02/04/2017 07:15:20	54.23	41.96	44.60	36.20
02/04/2017 07:30:20	58.11	44.39	47.90	36.40
02/04/2017 07:45:20	59.30	48.19	51.40	37.60
02/04/2017 08:00:20	62.75	49.31	52.50	44.10
02/04/2017 08:15:20	56.65	45.29	48.20	40.00
02/04/2017 08:30:20	64.23	46.88	50.60	39.40
02/04/2017 08:45:20	70.75	52.31	54.40	44.50
02/04/2017 09:00:20	67.00	50.38	53.50	41.00
02/04/2017 09:15:20	62.60	47.67	52.20	40.10
02/04/2017 09:30:20	66.90	48.62	50.60	42.10
02/04/2017 09:45:20	68.66	50.22	52.50	42.60
02/04/2017 10:00:20	62.01	49.56	52.60	43.00
02/04/2017 10:15:20	63.51	48.33	50.40	42.20
02/04/2017 10:30:20	63.10	49.40	53.50	41.10
02/04/2017 10:45:20	63.46	50.59	54.50	41.80
02/04/2017	72.98	54.12	56.80	41.50
02/04/2017 11:15:20	65.95	48.76	50.50	45.10
02/04/2017 11:30:20	67.08	53.33	56.80	45.00
02/04/2017 11:45:20	71.56	50.93	50.60	38.20
02/04/2017 12:00:20	72.79	52.12	55.00	39.40
02/04/2017 12:15:20	69.61	52.21	55.10	41.40
02/04/2017 12:30:20	66.43	50.56	55.00	39.70
02/04/2017 12:45:20	67.09	50.18	53.60	40.40
02/04/2017 13:00:20	65.63	49.77	54.40	38.20
02/04/2017 13:15:20	67.27	49.63	53.40	40.70
02/04/2017 13:30:20	69.40	49.07	52.10	40.60
02/04/2017 13:45:20	59.68	46.63	51.10	39.30
02/04/2017 14:00:20	68.44	50.82	54.70	39.40
02/04/2017 14:15:20	65.18	50.54	55.30	40.60
02/04/2017 14:30:20	57.91	46.87	50.60	38.00
02/04/2017 14:45:20	65.85	49.56	53.30	38.10
02/04/2017 15:00:20	67.27	49.67	53.60	37.30
02/04/2017 15:15:20	71.77	52.65	56.80	36.60
02/04/2017 15:30:20	65.56	50.59	55.50	38.90
02/04/2017 15:45:20	66.05	50.17	53.70	37.80
02/04/2017 16:00:20	62.42	47.37	51.60	37.80
02/04/2017 16:15:20	63.44	49.28	53.40	38.80
02/04/2017 16:30:20	66.00	50.52	54.70	42.20
02/04/2017 16:45:20	61.56	48.13	51.00	41.00
02/04/2017 17:00:20	68.48	51.87	54.70	41.30
02/04/2017 17:15:20	63.08	50.17	53.10	45.10
02/04/2017 17:30:20	59.65	49.20	52.30	43.80
02/04/2017 17:45:20	78.30	55.13	52.70	38.20
02/04/2017 18:00:20	57.26	47.80	52.30	40.10
02/04/2017 18:15:20	61.93	49.29	52.10	45.30
02/04/2017 18:30:20	57.03	45.55	48.50	37.40
02/04/2017 18:45:20	76.10	47.60	48.40	38.20
02/04/2017 19:00:20	55.95	46.22	49.50	40.20
02/04/2017 19:15:20	61.64	47.51	50.50	41.10
02/04/2017 19:30:20	56.68	47.60	52.20	41.40
02/04/2017 19:45:20	55.94	42.55	45.20	37.90
02/04/2017 20:00:20	56.45	45.11	48.80	37.80
02/04/2017 20:15:20	62.10	48.14	51.30	38.90
02/04/2017 20:30:20	66.19	49.92	51.70	40.80
02/04/2017 20:45:20	59.56	43.93	46.30	39.40
02/04/2017 21:00:20	66.55	48.29	53.00	40.00
02/04/2017 21:15:20	58.71	47.97	52.00	42.40
02/04/2017 21:30:20	57.41	46.53	50.10	41.90
02/04/2017 21:45:20	59.11	46.17	46.90	41.50
02/04/2017 22:00:20	55.89	45.29	48.10	41.20
02/04/2017 22:15:20	57.34	48.52	52.60	41.80
02/04/2017 22:30:20	60.65	48.22	50.60	45.30
02/04/2017 22:45:20	58.66	49.87	53.30	44.70
02/04/2017 23:00:20	62.99	49.51	51.70	46.30
02/04/2017 23:15:20	75.04	49.99	51.70	44.00
02/04/2017 23:30:20	67.91	46.87	48.40	43.30
02/04/2017 23:45:20	69.57	48.59	50.40	42.50
03/04/2017 00:00:20	63.87	49.93	50.90	47.40
03/04/2017 00:15:20	62.58	48.27	49.80	44.70
03/04/2017 00:30:20	66.57	49.17	49.70	42.80
03/04/2017 00:45:20	67.08	49.82	47.60	41.50
03/04/2017 01:00:20	62.44	45.15	46.60	42.30
03/04/2017 01:15:20	53.86	46.33	48.00	43.40
03/04/2017 01:30:20	56.56	44.00	45.20	42.70
03/04/2017 01:45:20	57.29	47.14	49.10	43.60
03/04/2017 02:00:20	56.12	44.86	46.50	43.00
03/04/2017 02:15:20	67.42	50.90	47.90	41.70
03/04/2017 02:30:20	49.36	42.62	43.90	41.20
03/04/2017 02:45:20	55.88	42.09	43.20	40.70
03/04/2017 03:00:20	48.39	41.78	42.80	40.60
03/04/2017 03:15:20	59.25	43.68	44.90	42.00
03/04/2017 03:30:20	51.48	43.79	45.20	42.10
03/04/2017 03:45:20	56.46	46.70	49.30	44.00
03/04/2017 04:00:20	60.22	49.34	50.60	47.90
03/04/2017 04:15:20	61.91	49.39	51.60	46.40
03/04/2017 04:30:20	56.95	48.60	50.30	46.00
03/04/2017 04:45:20	62.37	50.21	50.90	48.40
03/04/2017 05:00:20	59.62	50.55	53.30	47.40
03/04/2017 05:15:20	61.85	53.45	55.40	51.30
03/04/2017 05:30:20	59.22	50.94	53.20	47.50
03/04/2017 05:45:20	56.49	49.36	50.90	47.20
03/04/2017 06:00:20	68.49	51.40	53.50	48.00
03/04/2017 06:15:20	63.32	53.30	54.60	52.00
03/04/2017 06:30:20	69.15	53.78	55.90	51.20
03/04/2017 06:45:20	71.91	53.38	55.70	49.90

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

[illegible]

Project: Former Cox and Wyman Premises, Cardiff Road, Reading **Date:** 28 September 2017
Client: Thames Properties Ltd **Reference:** 20170928/3948/ENA 001

Project: Former Cox and Wyman Premises, Cardiff Road, Reading RG1 8EX
Client: Thames Properties Ltd

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

File	Date	Duration	Status	L _{eq}	L _{Amax}	L _{Amin}
NOR118_7276246_170403_0001.NBF	(2017/04/03 13:33:14.00)(0:5:0.0)	MP1	Set 1	66.3	84.1	56.1
NOR118_7276246_170403_0002.NBF	(2017/04/03 13:38:42.00)(0:5:0.0)	MP1	Set 1	66.4	87.0	53.9
NOR118_7276246_170403_0003.NBF	(2017/04/03 13:44:27.00)(0:5:0.0)	MP2	Set 1	64.6	80.9	57.6
NOR118_7276246_170403_0004.NBF	(2017/04/03 13:53:20.00)(0:5:0.0)	MP2	Set 1	64.3	82.2	58.0
NOR118_7276246_170403_0005.NBF	(2017/04/03 13:58:51.00)(0:5:4.0)	MP3	Set 1	61.1	78.5	52.0
NOR118_7276246_170403_0006.NBF	(2017/04/03 14:04:47.00)(0:4:13.0)	MP3	Set 1	60.9	79.6	52.2
NOR118_7276246_170403_0007.NBF	(2017/04/03 14:09:43.00)(0:0:14.0)	HGV SEL		72.1	78.2	64.0
NOR118_7276246_170403_0008.NBF	(2017/04/03 14:12:43.00)(0:5:0.0)	MP4	Set 1	78.5	112.1	43.0
NOR118_7276246_170403_0009.NBF	(2017/04/03 14:18:01.00)(0:5:0.0)	MP4	Set 1	57.7	78.7	45.7
NOR118_7276246_170403_0010.NBF	(2017/04/03 14:36:12.00)(0:5:0.0)	MP5	Set 1	55.6	72.8	45.5
NOR118_7276246_170403_0011.NBF	(2017/04/03 14:45:18.00)(0:4:13.0)	MP6	Set 1	48.9	68.6	44.0
NOR118_7276246_170403_0012.NBF	(2017/04/03 14:50:28.00)(0:5:0.0)	MP7	Set 1	53.3	68.8	44.2
NOR118_7276246_170403_0013.NBF	(2017/04/03 14:56:28.00)(0:5:0.0)	MP8	Set 1	57.5	72.0	45.6
NOR118_7276246_170403_0014.NBF	(2017/04/03 15:03:24.00)(0:5:0.0)	MP9	Set 1	64.5	78.9	51.1
NOR118_7276246_170403_0015.NBF	(2017/04/03 15:08:55.00)(0:3:9.0)	MP1	Set 2	63.4	78.8	52.1
NOR118_7276246_170403_0016.NBF	(2017/04/03 15:12:32.00)(0:2:21.0)	MP2	Set 2	60.5	78.7	56.5
NOR118_7276246_170403_0017.NBF	(2017/04/03 15:15:29.00)(0:3:9.0)	MP3	Set 2	58.8	71.6	53.4
NOR118_7276246_170403_0018.NBF	(2017/04/03 15:34:08.00)(0:2:40.0)	MP4	Set 2	58.3	86.3	42.3
NOR118_7276246_170403_0019.NBF	(2017/04/03 15:37:47.00)(0:5:0.0)	MP5	Set 2	60.0	79.7	45.5
NOR118_7276246_170403_0020.NBF	(2017/04/03 15:43:51.00)(0:4:20.0)	MP7	Set 2	57.5	71.1	46.0
NOR118_7276246_170403_0021.NBF	(2017/04/03 15:50:57.00)(0:2:33.0)	MP8	Set 2	53.5	70.1	45.0
NOR118_7276246_170403_0022.NBF	(2017/04/03 15:54:09.00)(0:3:34.0)	MP9	Set 2	61.1	76.3	50.9
NOR118_7276246_170403_0023.NBF	(2017/04/03 15:59:26.00)(0:5:0.0)	MP10	Set 2	63.1	81.1	45.3
NOR118_7276246_170403_0024.NBF	(2017/04/03 16:05:22.00)(0:3:47.0)	MP4	Set 3	58.3	74.2	45.3
NOR118_7276246_170403_0025.NBF	(2017/04/03 16:10:11.00)(0:4:40.0)	MP5	Set 3	50.8	66.1	44.8
NOR118_7276246_170403_0026.NBF	(2017/04/03 16:15:56.00)(0:4:2.0)	MP7	Set 3	55.6	68.0	44.7
NOR118_7276246_170403_0027.NBF	(2017/04/03 16:48:50.00)(0:2:24.0)	MP8	Set 3	54.1	71.5	46.0
NOR118_7276246_170403_0028.NBF	(2017/04/03 16:51:31.00)(0:4:17.0)	MP9	Set 3	62.9	79.2	49.3
NOR118_7276246_170403_0029.NBF	(2017/04/03 16:56:15.00)(0:1:56.0)	MP1	Set 1	67.5	87.4	55.9

File	Date	Duration	Status	L _{eq}	6.3 Hz	8.0 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0 kHz	1.25 kHz	1.6 kHz	2.0 kHz	2.5 kHz	3.15 kHz	4.0 kHz	5.0 kHz	6.3 kHz	8.0 kHz	10.0 kHz	12.5 kHz	16.0 kHz	20.0 kHz	
NOR118_7276246_170403_0001.NBF	(2017/04/03 13:33:14.00)(0:5:0.0)	MP1	Set 1	71.4	70.8	69.9	68.5	68.3	66.2	64.8	65.2	66.0	63.7	61.1	61.5	60.7	57.3	56.8	55.6	55.2	54.8	55.9	55.9	54.9	54.6	54.5	54.5	61.0	56.1	53.4	53.1	52.7	50.3	47.8	48.1	43.7	40.4	36.2	32.8	27.0	23.2
NOR118_7276246_170403_0002.NBF	(2017/04/03 13:38:42.00)(0:5:0.0)	MP1	Set 1	66.8	65.5	64.7	63.5	62.4	59.8	59.8	60.9	64.4	64.1	59.5	62.7	61.7	58.6	58.9	58.0	54.8	57.2	59.0	56.6	57.6	55.8	56.4	59.7	58.9	56.8	56.1	55.6	58.5	52.3	48.6	46.1	43.4	38.7	35.3	26.8	24.4	
NOR118_7276246_170403_0003.NBF	(2017/04/03 13:44:27.00)(0:5:0.0)	MP2	Set 1	69.5	66.6	64.7	63.6	62.5	61.1	63.9	71.0	70.2	64.3	62.5	72.9	73.3	58.9	57.6	57.1	56.5	57.6	56.7	56.6	54.6	53.5	54.1	54.1	52.6	51.1	50.4	50.2	50.3	46.3	45.2	40.6	38.6	36.2	31.3	24.4	20.2	
NOR118_7276246_170403_0004.NBF	(2017/04/03 13:53:20.00)(0:5:0.0)	MP2	Set 1	64.5	64.8	62.2	60.6	60.7	58.4	61.1	59.4	59.3	61.1	58.4	60.9	64.1	59.4	56.2	54.6	53.9	52.9	52.5	53.0	53.4	53.9	53.3	51.1	48.9	46.2	43.8	43.2	41.0	39.4	39.6	35.0	31.8	28.7	24.4	20.2		
NOR118_7276246_170403_0005.NBF	(2017/04/03 13:58:51.00)(0:5:4.0)	MP3	Set 1	66.4	63.9	62.0	60.7	60.1	58.4	57.6	57.5	57.5	59.1	59.4	61.6	62.1	55.0	54.6	53.3	52.9	53.2	50.8	51.9	52.2	52.3	52.6	51.1	49.6	48.2	46.8	46.1	44.0	42.1	41.2	37.2	32.9	29.8	27.4	23.2		
NOR118_7276246_170403_0006.NBF	(2017/04/03 14:04:47.00)(0:0:14.0)	HGV SEL		70.8	71.8	75.5	68.3	67.1	68.0	66.6	64.9	72.8	61.1	74.7	65.6	65.5	60.5	61.4	63.6	62.4	62.0	61.0	62.6	61.2	61.2	61.8	65.8	61.8	61.7	58.9	55.8	54.8	53.9	47.8	45.7	42.3	37.6	35.0	30.8	27.0	
NOR118_7276246_170403_0008.NBF	(2017/04/03 14:12:43.00)(0:5:0.0)	MP4	Set 1	82.8	81.8	80.7	79.8	79.0	78.0	76.9	76.1	74.9	73.9	72.8	71.8	70.9	70.0	68.1	68.3	67.6	67.0	66.4	66.0	66.0	66.1	66.4	66.8	67.3	67.8	68.1	68.1	67.7	66.3	63.0	56.3	59.0	61.8	57.3	58.6		
NOR118_7276246_170403_0009.NBF	(2017/04/03 14:18:01.00)(0:5:0.0)	MP4	Set 1	64.2	62.7	60.8	60.5	66.8	63.2	62.2	63.5	60.7	58.8	52.7	54.0	55.0	58.5	56.5	52.7	50.8	52.4	50.3	49.6	49.7	47.7	48.1	47.1	45.5	44.2	43.4	42.0	40.2	40.2	33.8	29.7	24.2	19.1	13.6	10.0		
NOR118_7276246_170403_0010.NBF	(2017/04/03 14:36:12.00)(0:5:0.0)	MP5	Set 1	69.5	67.8	65.8	64.2	62.5	60.7	59.8	62.3	66.4	59.2	53.8	51.3	52.6	51.1	48.4	48.4	48.8	47.6	46.5	47.3	47.3	48.0	48.6	46.5	43.5	41.5	38.7	38.0	35.1	33.4	31.7	28.7	24.1	19.8	14.7	12.1		
NOR118_7276246_170403_0011.NBF	(2017/04/03 14:45:18.00)(0:4:13.0)	MP6	Set 1	60.3	60.0	58.7	59.5	59.6	59.3	60.5	62.0	63.3	59.8	54.5	53.0	48.1	47.9	46.1	47.4	45.7	43.8	41.7	41.9	41.3	41.4	41.0	39.3	38.1	35.5	33.3	31.0	29.0	27.2	24.0	21.3	17.8	13.7	11.6	11.3		
NOR118_7276246_170403_0012.NBF	(2017/04/03 14:50:28.00)(0:5:0.0)	MP7	Set 1	66.8	65.8	64.6	63.5	62.3	59.8	59.7	58.6	58.2	57.8	54.7	52.5	52.5	49.7	48.3	48.1	47.8	46.4	44.6	45.4	44.1	44.5	44.3	43.0	42.2	40.3	39.5	37.8	35.4	35.1	32.5	27.1	24.3	20.9	16.1	12.0		
NOR118_7276246_170403_0013.NBF	(2017/04/03 14:56:28.00)(0:5:0.0)	MP8	Set 1	68.4	65.3	64.9	64.0	62.4	59.4	61.3	62.4	60.6	57.4	59.6	57.1	55.3	57.2	49.7	48.0	47.9	47.1	46.3	46.4	47.4	47.1	48.7	47.4	48.5	45.4	44.3	44.0	45.2	40.7	35.6	31.4	27.8	28.1	20.0	14.9		
NOR118_7276246_170403_0014.NBF	(2017/04/03 15:03:24.00)(0:5:0.0)	MP9	Set 1	82.0	80.2	78.8	78.4	74.9	73.0	75.2	77.0	74.6	70.2	63.6	62.0	62.9	61.9	57.8	56.7	54.1	54.4	56.0	55.5	54.9	56.0	55.3	55.0	54.0	52.6	51.0	50.8	49.3	45.9	42.0	38.2	35.3	32.7	28.2	25.9		
NOR118_7276246_170403_0016.NBF	(2017/04/03 15:12:32.00)(0:2:21.0)	MP2	Set 2	70.8	68.9	67.5	65.7	65.0	62.5	60.9	58.5	62.1	58.7	56.3	70.5	72.2	53.7	52.6	51.1	49.7	49.4	50.1	50.4	50.8	49.6	50.2	48.1	49.3	48.3	44.6	44.9	42.7	42.7	43.0	37.0	31.6	27.0	20.7	14.8		
NOR118_7276246_170403_0017.NBF	(2017/04/03 15:15:29.00)(0:2:23.0)	MP3	Set 2	67.8	68.0	65.6	62.8	60.3	58.2	57.1	61.1	58.1	56.2	66.5	66.7	55.6	53.9	50.9	51.7	51.9	49.3	49.5	49.3	49.3	50.7	48.7	47.3	44.8	42.6	41.8	40.6	38.4	36.9	34.3	31.5	27.9	22.2	16.9			
NOR118_7276246_170403_0018.NBF	(2017/04/03 15:34:08.00)(0:2:40.0)	MP4	Set 2	65.7	65.1	63.4	61.0	59.6	57.8	58.0	58.1	60.8	51.5	50.5	47.9	47.6	45.1	43.9	44.3	42.5	42.0	42.0	42.5	42.0	42.6	42.7	46.6	54.6	50.5	39.6	37.3	32.2	29.9	26.2	24.4	18.3	12.5	8.5	8.4		
NOR118_7276246_170403_0019.NBF	(2017/04/03 15:37:47.00)(0:5:0.0)	MP5	Set 2	73.2	71.1	69.5	68.4	66.8	65.1	63.0	62.8	64.2	61.7	58.4	53.3	52.6	52.8	51.9	51.6	52.3	51.8	50.0	51.1	51.3	53.4	53.1	51.0	48.1	45.3	43.2	42.1	40.4	37.9	35.2	32.6	29.8	26.0	22.8	19.1		
NOR118_7276246_170403_0020.NBF	(2017/04/03 15:43:51.00)(0:4:20.0)	MP7	Set 2	69.5	68.8	66.8	65.4	64.1	62.2	61.6	62.9	65.8	55.2	55.6	54.9	51.7	50.5	51.0	49.2	48.5	48.6	48.9	49.5	48.9	47.9	46.2	44.3	42.9	40.3	38.8	37.1	34.3	30.3	27.7	23.4	19.5	15.1				
NOR118_7276246_170403_0021.NBF	(2017/04/03 15:50:57.00)(0:2:33.0)	MP8	Set 2	66.4	66.2	64.4	61.6	60.9	58.2	58.0	57.9	61.6	60.3	58.9	52.6	49.5	50.4	46.9	47.6	44.6	44.6	44.6	44.5	44.9	45.1	45.6	44.6	42.9	41.3	38.0	34.5	32.1	28.7	24.0	20.3	18.0	15.1	13.2	13.3		
NOR118_7276246_170403_0022.NBF	(2017/04/03 15:50:57.00)(0:2:34.0)	MP9	Set 2	76.6	74.3	71.8	69.6	67.9	66.9	64.6	63.6	64.0	57.3	55.8	57.0	59.1	51.2	52.3	52.1	53.6	55.9	55.6	54.9	54.0	51.1	50.1	50.0	50.6	46.2	44.3	42.5	40.1	39.3	34.2	33.1	29.8	24.6	21.0	17.2		
NOR118_7276246_170403_0023.NBF	(2017/04/03 16:05:22.00)(0:3:47.0)	MP1	Set 3	71.7	70.7	69.5	68.2	67.1	65.8	64.7	63.6	62.5	61.4	60.3	59.2	58.1	57.0	55.9	54.8	53.7	52.6	51.5	50.4	49.3	48.2	47.1	46.0	44.9	43.8	42.7	41.6	40.5	39.4	38.3	37.2	36.1	35.0	33.9	32.8	31.7	
NOR118_7276246_170404_0004.NBF	(2017/04/04 16:05:22.00)(0:3:47.0)	MP3	Set 3	67.3	64.5	63.4	62.1	62.4	61.2	58.9	58.7	61.6	63.1	61.7	60.4	55.8	49.9	49.2	46.8	45.5	46.0	45.8	46.5	47.7	47.4	47.3	47.3	45.8	45.0	42.4	41.0	39.0	36.3	34.5	30.0	27.7	23.1	18.1	12.3		
NOR118_7276246_170403_0025.NBF	(2017/04/04 16:10:11.00)(0:4:40.0)	MP5	Set 3	78.4	75.7	75.0	73.5	71.8	69.6	68.0	66.7	65.9	63.1	58.4	55.5	54.4	53.4	53.5	48.2	47.8	44.5	43.9	43.5	42.0	41.9	41.5	38.9	38.8	35.8	33.0	29.9	28.0	27.8	21.0	19.5	18.5	16.6	12.6	10.0		
NOR118_7276246_170403_0026.NBF	(2017/04/04 16:10:11.00)(0:4:40.0)	MP7	Set 3	72.9	72.9	72.9	71.4	70.4	69.4	68.4	67.4	66.4	63.4	58.4	55.4	54.4	53.4	53.4	48.4	47.4	44.4	43.4	42.4	41.4	41.4	41.4	38.4	38.4	35.4	32.4	29.4	27.4	21.4	19.4	18.4	16.4	12.4	10.4	9.4		
NOR118_7276246_170403_0027.NBF	(2017/04/04 16:48:50.00)(0:2:24.0)	MP3	Set 4	65.4	64.6	62.4	62.0	59.2	56.9	58.0	56.5	55.9	56.3	61.1	57.4	48.8	41.6	49.6	51.2	46.1	44.5	44.8	46.6	46.0	46.9	45.1	43.2	43.2	42.3	38.6	35.6	34.5	28.4	26.0	23.2	20.5	17.7	14.5	11.3		
NOR118_7276246_170403_0028.NBF	(2017/04/04 16:51:31.00)(0:2:24.0)	MP4	Set 4	65.7	64.9	62.6	62.2	59.4	57.1	58.2	56.7	56.1	56.5	61.3	57.6	48.9	41.7	49.7	51.3	46.2	44.6	44.9	46.7	46.1	47.0	45.2	43.3	43.3	42.4	38.9	35.9	34.8	28.7	26.3	23.5	20.8	17.8	14.6	11.4		
NOR118_7276246_170403_0029.NBF	(2017/04/04 16:56:15.00)(0:1:56.0)	MP1	Set 4	71.0	70.6	74.2	71.8	69.4	68.7	68.8	66.4	67.6	67.1	70.4	68.0	72.3	69.4	63.5	64.0	62.8	58.0	58.4	57.2	55.2	54.4	56.0	55.8	55.9	51.1	48.9	46.1	42.2	42.2	46.3	43.3	38.6	34.1	33.9	25.5	19.4	

Date: 28 September 2017
Reference: 20170928/3948/ENA 001

File	Date	LUF_Period																																				
		6.3 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1.25 kHz	1.6 kHz	2.0 kHz	2.5 kHz	3.15 kHz	4.0 kHz	5.0 kHz	6.3 kHz	8.0 kHz	10.0 kHz	12.5 kHz	16.0 kHz	20.0 kHz		
NOR118_6212828_170405_0001.NBFF	(2017/04/05 04:56:02.00)	MP1	43.4	43.9	43.0	43.0	42.6	43.9	44.2	45.8	46.9	54.7	46.7	54.4	56.6	49.5	49.5	48.2	43.8	39.9	40.6	41.7	40.5	38.8	40.2	38.5	35.3	33.0	30.8	29.5	27.4	25.6	22.0	17.4	13.0	9.9	9.8	9.8
NOR118_6212828_170405_0002.NBFF	(2017/04/05 05:02:15.00)	MP2	46.4	45.1	45.9	44.5	43.6	43.3	44.2	48.6	53.0	50.8	52.8	68.3	69.0	54.9	53.4	52.4	46.9	43.6	46.4	46.9	44.1	43.2	43.2	41.2	39.7	37.9	36.0	34.6	32.5	32.1	28.3	23.9	20.3	15.6	12.6	9.9
NOR118_6212828_170405_0003.NBFF	(2017/04/05 05:06:21.00)	MP3	53.8	50.7	50.0	48.4	47.5	47.8	48.2	46.5	45.9	44.2	46.0	61.2	62.1	47.1	45.4	42.2	40.0	39.6	39.9	40.8	37.5	35.9	36.6	36.0	33.5	31.2	28.9	27.6	26.3	24.2	20.4	15.5	11.4	9.9	9.8	9.8
NOR118_6212828_170405_0004.NBFF	(2017/04/05 05:12:36.00)	MP4	50.4	48.6	48.0	47.0	46.0	45.0	45.0	42.8	41.7	40.8	40.8	32.5	31.7	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
NOR118_6212828_170405_0005.NBFF	(2017/04/05 05:12:36.00)	MP4	45.2	43.6	42.6	43.6	44.0	43.0	41.2	46.8	54.8	41.4	39.7	38.5	36.3	34.1	28.6	27.9	27.3	26.2	26.9	27.2	26.9	27.2	26.9	24.0	26.7	24.1	22.5	18.6	15.0	11.9	9.9	9.8	9.8	9.8	9.8	9.8
NOR118_6212828_170405_0006.NBFF	(2017/04/05 05:20:07.00)	MP5	39.7	39.4	40.0	43.0	41.7	42.7	44.0	50.4	55.8	44.2	42.0	39.3	37.9	33.3	31.6	32.1	30.0	33.3	29.6	29.2	28.3	29.5	29.2	27.5	25.3	25.9	22.4	18.2	15.1	10.4	9.9	9.8	9.8	9.8	9.8	9.8
NOR118_6212828_170405_0007.NBFF	(2017/04/05 05:25:14.00)	MP7	49.8	48.2	47.2	45.6	43.4	43.8	43.8	53.0	56.7	43.3	42.4	41.3	36.0	36.4	33.6	32.1	29.8	28.5	30.3	29.7	28.9	31.7	32.0	29.8	27.4	27.1	23.5	19.7	16.2	12.7	10.0	9.9	9.8	9.8	9.8	9.8