

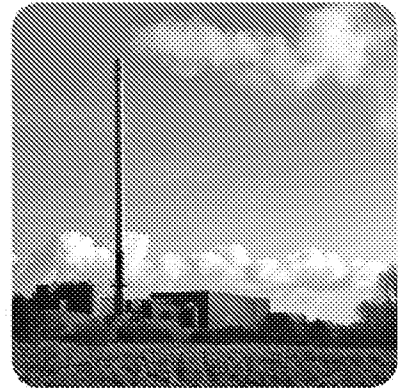


**Noise Assessment for Proposed Residential Development at Lake Lane,
Barnham, Bognor Regis, PO22 0AF**

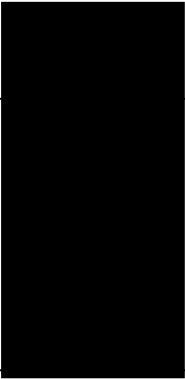
For Redrow

Report No. JAE9392-REPT1-R6

06 February 2018



Quality Management

Prepared by:	Charlotte Birch MSci (Hons), MSc	Assistant Consultant - Acoustics		06/02/2018
Reviewed, checked & Authorised by:	Phil Evans BSc (Hons) MSc MIOA FGS	Senior Director - Acoustics		06/02/2018
Report number:	JAE9392-REPT1-R6		Date of issue:	06/02/2018
Document file path:	\\BRIG-LW-03\Projects\Jobs_9001-9900\9392e\Report 1\Rev6\9392e_Report1_Rev6_20160206.docx			
Appendices location:	O:\Jobs_9001-9900\9392e\Report 1\Rev5			

Revision History				
Rev	Date	Status	Reason for revision	Additional comments
0	23/12/2016	Draft	-	-
1	10/01/2017	Final	Client Comments	-
2	13/01/2017	Final	Client Comments	-
3	16/01/2017	Final	Client Comments	-
4	13/02/2017	Final	Local Authority Comments	-
5	30/10/2017	Final	Client Comments	-
6	06/02/2018	Final	Base layout revision of figure 2	-

Sources of Data Relevant to this Revision:					
Document	Link		Prepared by:		Checked by:
Assessment and Survey	O:\Jobs_9001-9900\9392e\Rev0\9392e_Data_Assessment_20161216.xlsm		JA	✓	SH ✓

DISCLAIMER

RPS has used reasonable skill and care in completing this work and preparing this report, within the terms of its brief and contract and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the stated scope. This report is confidential to the client and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. The opinions and interpretations presented in this report represent our reasonable technical interpretation of the data made available to us. RPS accepts no responsibility for data provided by other bodies and no legal liability arising from the use by other persons of data or opinions contained in this report.

Except for the provision of professional services on a fee basis, RPS does not have a commercial arrangement with any other person or company involved in the interests that are the subject of this report.

COPYRIGHT © RPS

The material presented in this report is confidential. This report has been prepared for the exclusive use of the client and shall not be distributed or made available to any other company or person without the knowledge and written consent of the client or RPS.

Contents

1	Introduction.....	1
2	Consultation and Relevant Guidance	2
	Consultation	2
	British Standard 8233:2014 ‘Guidance on Sound Insulation and Noise Reduction for Buildings’	2
3	Baseline Conditions	4
	Baseline Surveys.....	4
4	Assessment.....	8
	Internal Sound Levels	8
	External Sound Levels	9
	Night-time Maximum Noise Levels	9
5	Summary and Conclusions.....	11

References

Tables, Figures and Appendices

Tables

Table 2.1: BS 8233:2014 Indoor Ambient Noise Levels for Dwellings.....	3
Table 3.1: Summary of Long Term Baseline Sound Level Data	6
Table 3.2: Noise Levels from Boilers on Nursery Site.....	6
Table 3.3: Representative Ambient Noise Levels for the Southern Boundary of Site.....	7
Table 4.1: Façade Reduction with Various Façade Elements	8

Figures

Figure 1: Baseline Survey Monitoring Locations

Figure 2: Façade Treatment Plan (for Current Scheme Ref: P16-0421_24)

Appendices

Appendix A: Baseline Survey Data

1 Introduction

- 1.1 The Acoustics Team at RPS Planning and Environment (RPS) has been appointed by Redrow to undertake a noise assessment for the discharge of Planning Condition (PC) 20 of the planning consent for the residential development at Lake Lane, Barnham, Bognor Regis, PO22 0AF. The site is located within the administrative area of Arun District Council (ADC).
- 1.2 PC 20 states:
- “No part of any dwelling shall be located within 15 metres from the boundary fence with the railway. Construction work shall not commence until a detailed scheme setting out mitigation measures for noise sensitive façades and amenity areas, as informed by an agreed noise assessment, has been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details prior to the occupation of the dwellings.”*
- 1.3 Condition 20 has been provided, primarily to ensure that there is adequate mitigation for noise from trains on the West Coastway railway line to the south of the site. However, following consultations with the Environmental Health Officers (EHO) at ADC, other noise sources including road traffic and HGVs and static plant within the adjacent nursery have been considered within this assessment.
- 1.4 The assessment has been undertaken based upon appropriate information on the proposed development provided by the client and its project team, including the current development plans that are being submitted under application reference BN52/16 which vary slightly from the approved plans. This report contains details of the assessment, including consultations made with the EHO, the baseline monitoring undertaken, an analysis of the results, a scheme of mitigation measures to address PC 20 and a summary of the conclusions of the assessment.
- 1.5 RPS is a member of the Association of Noise Consultants (ANC), the representative body for acoustics consultancies, having demonstrated the necessary professional and technical competence. The assessment has been undertaken with integrity, objectivity and honesty in accordance with the Code of Conduct of the Institute of Acoustics (IOA) and ethically, professionally and lawfully in accordance with the Code of Ethics of the ANC.
- 1.6 The technical content of this assessment has been provided by RPS personnel, all of whom are corporate (MIOA) or non-corporate, associate members (AMIOA) of the IOA (the UK's professional body for those working in acoustics, noise and vibration). This report has been peer reviewed within the RPS team to ensure that it is technically robust and meets the requirements of our Quality Management System accredited to British Standard (BS) EN ISO 9001:2015 [1].

2 Consultation and Relevant Guidance

Consultation

- 2.1 Prior to undertaking the assessment (29 November 2016), RPS consulted with Fiona Fitzgerald, an EHO from ADC, regarding the assessment. It was agreed that further baseline sound monitoring would be carried out on the site, in order to determine the contribution of noise from trains on the railway line, road traffic on the local network and industrial noise sources within the vicinity of the site. It was agreed that the mitigation scheme would be designed to achieve the criteria for internal noise levels in habitable rooms and amenity areas from BS 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings' [2]. The relevant criteria from BS 8233:2014 is provided below.
- 2.2 It was noted that there was the potential for construction works that are currently taking place on site to influence measured noise levels and, therefore, that the levels in some periods would not reflect the levels of noise expected to occur on site when the development has been completed. Therefore, some discretion would be required for the interpretation of the data to determine the noise mitigation requirements.

British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'

- 2.3 BS 8233:2014 provides guideline values for internal ambient noise levels in spaces when they are unoccupied. A summary of the levels recommended in paragraph 7.7.1 of sub clause 7.7 and Table 4 of BS 8233:2014 for rooms used for resting, dining and sleeping is provided in Table 2.1 below. The guideline values in Table 2.1 are annual average values and do not have to be achieved in all circumstances.
- 2.4 The guidance in paragraph 7.7.1 of Section 7.7 of BS 8233:2014 applies to external noise as it affects the internal acoustic environment from sources without a specific character. The paragraph states, including the accompanying note:

"... Occupants are usually more tolerant of noise without a specific character than, for example, that from neighbours which can trigger complex emotional reactions. ..."

"NOTE Noise has a specific character if it contains features such as a distinguishable, discrete and continuous tone, is irregular enough to attract attention, or has strong low-frequency content, in which case lower noise limits might be appropriate."

Table 2.1: BS 8233:2014 Indoor Ambient Noise Levels for Dwellings

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

2.5 Note 7 of the following text states the following:

“NOTE 7 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.”

2.6 Although a guideline internal noise limit for the night-time $L_{Amax,F}$, is not provided in BS 8233:2014, a limit of 45 dB is commonly adopted for events occurring several times a night, This is based on the guidance in the World Health Organisation Guidelines for Community Noise [3].

2.7 In relation to external noise levels, the second paragraph of 7.7.3.2 states that:

“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$ with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it 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.”

3 Baseline Conditions

- 3.1 The development site is bordered by Lake Lane and residential land to the north, residential land to the west, the West Coastway railway line to the south and the Pollards Nursery site to the east. The site is located approximately 520 m east of Barnham railway station. There is between approximately 180 and 230 train pass by's each 24 hour period, with the majority of pass by's occurring between 06:00 and 00:00.
- 3.2 The main noise source to be considered is train movements on the railway line to the south of the site. There is also potential for noise from road traffic movements on Yapton Road (B2233, approximately 270 m south of the site), Lake Lane (immediately north of the northern boundary of site), and static plant and HGV noise from the adjacent nursery to contribute to the sound environment within the development.
- 3.3 RPS contacted Pollards Nursery prior to carrying out site work and identified that there were two boilers on site which may contribute to noise in the area. The peak number of HGV deliveries per day is six; however, at the time of the surveys, there were no deliveries expected. Therefore, noise from deliveries by HGV has been accounted for through prediction.
- 3.4 In addition to the above sources of noise, there were construction works being carried out on site at the time of the surveys which had a potential influence on the noise levels experienced, and does not reflect future levels expected to occur on site. Therefore, consideration has been made in site observations and interpretation of the data of the degree of influence of noise from construction works at each location and data have been removed from the analysis, where appropriate, as agreed during the consultation with ADC.

Baseline Surveys

- 3.5 Three long term baseline sound level surveys were deployed on site and ran from 11:30 hours on Thursday 8 December 2016 until 12:00 hours on Thursday 15 December 2016. The surveys were carried out to determine the existing levels of environmental sound affecting the development area. In addition to the long term surveys, a series of short-term attended surveys were carried out on 15 December 2016 between 10:30 and 12:30 in order to quantify and characterise the sound emitted from the boilers located on the Pollards Nursery site. A plan showing the approximate location of the measurement positions and site boundary is provided in Figure 1.
- 3.6 The first long term survey (LT1) was located towards the southern boundary of the site, approximately 8 m north of the nearest railway tracks. The microphone was mounted on a pole approximately 1.2 m above ground level and placed in a free field location (at least 3.5 m from any reflecting surface, excluding the ground). During the time spent on site, construction works were being carried out in the northern area of the site and there were also other construction works audible to the south-west at the LT1 location. It was noted that, during times of low

construction noise, the following sound sources were affecting the site: road traffic on Yapton Road, passing trains, distant air traffic and birdsong.

- 3.7 The second long term survey (LT2) was located on the northern boundary of the site, approximately 50 m south of Lake Lane. The microphone was mounted on a pole approximately 1.2 m above ground level and placed in a free field location. On-site construction works were the main sound source during the time spent at the LT2 location. Distant air traffic was also audible.
- 3.8 The third long-term survey (LT3) was located on the Pollards Nursery site on the north-eastern corner of the small reservoir, approximately 25 m east of the site boundary and 115 m south of Lake Lane. The microphone was mounted on a pole approximately 1.2 m above ground level and placed in a free field location; it was noted that the ground level adjacent to the reservoir was approximately 1.5 m above that of the surrounding area. During the time spent on site at LT3, construction works were the main source of sound; however, car movements on the nursery site, air traffic, passing trains and wind rustling in trees were also audible.
- 3.9 The first set of short-term attended measurements (ST1) were taken next to the boiler located on the east side of the large greenhouse which borders the eastern boundary of site and approximately 65 m north of the railway line. The boiler is housed within a greenhouse and measurements were taken at three locations around the greenhouse each 5 m from the greenhouse wall. The microphone was mounted on a tripod 1.5 m above ground level and in a free field location.
- 3.10 The second set of short-term attended measurements (ST2) were taken next to the boiler located approximately 175 m east side of site boundary, due east of the reservoir at which LT3 was located. The boiler is housed within a greenhouse and measurements were taken at four locations around the greenhouse each 2 m from the greenhouse wall. The microphone was mounted on a tripod 1.5 m above ground level and in a free field location.
- 3.11 All sound level measurements were made using a 'Class 1' Rion NL-52 sound level meter (SLM) in accordance with BS 7445-2:1991 [4]. The SLM was calibrated before and checked after use with a Rion NC-74 calibrator with no significant drift occurring.
- 3.12 Meteorological conditions were monitored and logged with a data logging meteorological station also installed at LT1. Measured wind speeds were varied throughout the survey period, ranging between 0.0 and 5.2 m/s for the entire period however for the majority of time the wind speed was below 3 m/s and, on inspection of the data, high wind speeds do not appear to have affected the measured noise levels. The wind was predominantly in a easterly direction and survey period was dry. On this basis, no data have been excluded from the analysis due to meteorological conditions.
- 3.13 During the survey, construction works were taking place on the development site. Measured noise levels on site were elevated during construction hours and it is therefore considered that the daytime noise levels ($L_{Aeq,16h}$) measured at LT2 and LT3, where construction noise was dominant, are not representative of the baseline noise environment which will be experienced at

the proposed residential dwellings. Therefore, the representative daytime levels at LT2 and LT3 have been taken from the highest level of the full daytime $L_{Aeq,16h}$ on Sunday 11th December and the average weekday level between 16:30 and 19:00 (when construction works had ended but before noise levels began to become lower in the evening).

- 3.14 At LT1, representative daytime and night-time levels have been calculated from the average of every day of the survey period excluding those beginning on 13 December and 14 December 2016. This omission is due to the ASLEF Southern Railway strikes which resulted in no trains running during these periods and caused abnormally low ambient noise levels to be measured.
- 3.15 A summary of the long term measured data which is considered to be representative of the on-site baseline noise environment is provided in Table 3.1 below; further details are provided in Appendix A.

Table 3.1: Summary of Long Term Baseline Sound Level Data

Period	Baseline Noise Levels (dB)					
	LT1		LT2		LT3	
	$L_{Aeq,T}$	$L_{AFmax,T}$	$L_{Aeq,T}$	$L_{AFmax,T}$	$L_{Aeq,T}$	$L_{AFmax,T}$
Daytime (0700 - 2300)	57	-	48	-	44	-
Night-time (2300 - 0700)	52	32-94 ¹	39	39-75 ¹	36	37-67 ¹

¹ These values indicate the range of night-time maximum noise levels per 15-minute measurement at each survey location during the duration of the survey.

Short Term Measurements of Sound from Boilers

- 3.16 Table 3.2 below contains a summary of the short-term measurements taken at the boilers.

Table 3.2: Noise Levels from Boilers on Nursery Site

Position	ST1		ST2	
	Distance from Boiler (m)	Noise Level $L_{Aeq,30s}$ (dB)	Distance from Boiler (m)	Noise Level $L_{Aeq,30s}$ (dB)
1	5	41	2	54
2	5	44	2	49
3	5	41	2	50
4	-	-	2	49

- 3.17 With reference to Table 3.2, the measured levels from the boilers are, at most, 44 dB $L_{Aeq,30s}$ at 5 m from the boilers on the east side of the large greenhouse, at approximately 125 m from the nearest dwelling in the development (ST1) and 54 dB $L_{Aeq,30s}$ at the boiler located approximately 175 m east side of site boundary (ST2). Ignoring screening effects, attenuation of the boiler sound over the distance to the closest proposed dwelling will result in noise levels from the boilers significantly lower than the existing ambient noise levels at the location of the proposed dwellings. Therefore, it is considered that sound from boilers on the nursery site will not contribute significantly to sound levels on site and it is likely that they will be inaudible.

HGV Movements on Nursery Site

- 3.18 During the surveying period, Pollards Nursery was in a period of low activity and therefore there were not the usual HGV movements on the site. In order to account for this, a calculation has been made to predict the $L_{Aeq,16h}$ level due to HGV movements at the nearest proposed dwelling using the haul road method in Section F.2.5.2 of BS 5228-1:2009+A1:2014 [5]. The assessment assumes a sound power level of 110 dB L_{WA} , and a vehicle speed of 10 km/h. The calculation has been based on 6 HGVs (12 one-way movements) over a 16-hour period. The resulting sound level is 47 dB $L_{Aeq,16h}$ which, when added to the existing measured ambient sound level, results in a total ambient sound level of 49 dB $L_{Aeq,16h}$ for the proposed dwellings on the eastern boundary of the site.

Representative Noise Levels for the Development

- 3.19 With reference to the 15 minute time history plot for LT1, given in Appendix A, it is considered that throughout the survey period, the dominant noise source at LT1 was that of passing trains on the railway, the centre of which lies approximately 10.5 m south of the survey location. In order to calculate the ambient noise levels which will be present at the façades of the houses in closest proximity to the boundary with the railway, a distance correction has been made to the ambient noise levels measured at LT1. The current layout plan for the development (Ref: P16-0421_03B dated 28/09/2016) indicates that the closest facades will be 28.5 m from the centre of the railway, a distance correction of the railway noise source from 10.5 m to 28.5 m results in a reduction of 4.3 dB, assuming that the railway is a continuous line source (i.e. worst case). This correction has been applied to the ambient noise levels at LT1 and the resulting figures are presented in Table 3.3 below.
- 3.20 The baseline ambient noise levels measured at LT2 and LT3 are considered to be representative of the northern and eastern boundaries of the site respectively. However, as a worst case, the noise levels at LT3 have been increased during the daytime period to account for noise from HGV movements on the site access road.

Table 3.3: Representative Ambient Noise Levels for the Southern Boundary of Site

Period	Representative Noise Levels (dB)					
	Southern Boundary of the Site		Northern Boundary of the Site		Eastern Boundary of the Site	
	$L_{Aeq,T}$	$L_{AFmax,T}$	$L_{Aeq,T}$	$L_{AFmax,T}$	$L_{Aeq,T}$	$L_{AFmax,T}$
Daytime (0700 - 2300)	53	-	48	-	49	-
Night-time (2300 - 0700)	48	32-90	39	39-75	36	37-67

4 Assessment

Internal Sound Levels

- 4.1 With reference to paragraph G.1 of BS 8233:2014, an estimate of the internal sound levels within typical dwellings may be determined on the basis of the sound reduction provided by the windows as they are generally the weakest part of any façade in terms of noise attenuation. Research contained within Report NANR 116 [6] finds that a window partially open to provide background ventilation provides approximately 15 dB $D_{A, road}$ of attenuation to road traffic noise.
- 4.2 On this basis, and with reference to the design targets contained within BS 8233:2014 that are reproduced in Table 2.1 of this report, satisfactory internal acoustic environments are likely to be achievable with no acoustic treatments in areas of the site where the external environmental noise level is no greater than 50 dB $L_{Aeq,16h}$ and 45 dB $L_{Aeq,8h}$ during the daytime and night-time periods, respectively. Where external sound levels exceed these criteria, habitable rooms (living rooms and bedrooms) are likely to require suitable ventilation systems as an alternative to opening the windows. For this site, only facades that have line-of-sight to the railway line are exposed to noise levels above these criteria.
- 4.3 The specific acoustic performance requirements of the glazing and ventilation system are dependent on the exact layout and orientation of the buildings, room size, wall and roof design etc. However, an estimation of the sound level difference across a 'standard' façade design¹ for a typical dwelling room type and size is around 25 dB $D_{2m,n}$. For dwellings built with this façade type, satisfactory internal acoustic environments are likely to be achieved with standard double glazing and trickle ventilators where the external sound level is no greater than 60 dB $L_{Aeq,16h}$ and 55 dB $L_{Aeq,8h}$ during the daytime and night-time periods, respectively. All areas of the site are exposed to noise levels that are within these criteria
- 4.4 Table 4.1 below provides a summary of external sound levels and the façade type required to achieve suitable internal sound levels for typical habitable room types and sizes. Figure 2: provides a presentation of areas of the proposed site requiring either an enhanced or standard façade design.

Table 4.1: Façade Reduction with Various Façade Elements

External Sound Level (Day / Night)	Façade Type	Façade Sound Reduction (dB)
50 – 60 dB $L_{Aeq,16h}$ or 45 – 55 dB $L_{Aeq,8h}$	Standard ¹	25
<50 dB $L_{Aeq,16h}$ and < 45 dB $L_{Aeq,8h}$	Partially Open Windows	15
NOTES: 1 Based on brick and block' external wall; '6-(12)-6 double glazing'; and 0.08 m ² standard trickle ventilator 27 dB $D_{ne,w}$.		

¹ 'Brick and block' external wall; '4-(6)-6 double glazing'; and 0.08 m² trickle ventilator.

- 4.5 With reference to Table 3.1, Table 3.2 and Table 3.3, for dwellings built towards the central, northern and eastern areas of the site, away from the railway line, external sound levels will not exceed 50 dB $L_{Aeq,16h}$ during the daytime and 45 dB $L_{Aeq,8h}$ during the night-time and, therefore, for facades of habitable rooms in these areas, openable windows will provide sufficient attenuation to ensure suitable internal sound levels and no alternative form of ventilation will be required. For dwellings on the southern boundary of the site, facades of habitable rooms facing south, east and west should be provided with an alternative method of ventilation, such as standard trickle ventilators, as indicated as a “Standard” façade type in Table 4.1.
- 4.6 On the basis of the above, through appropriate design, internal sound levels will meet the guideline values contained within BS 8233:2014.

External Sound Levels

- 4.7 With reference to Table 3.1, external amenity areas of dwellings on the southern boundary of the site may experience levels in exceedance of the upper guideline value for external amenity areas of 55 dB $L_{Aeq,16h}$ with no screening. It is recommended that a 2 m high solid, closed board fence is erected along the southern boundary, as indicated in Figure 2, this will provide sufficient screening to the external amenity areas to bring levels below 55 dB $L_{Aeq,16h}$.
- 4.8 For external amenity areas in the central, northern and eastern areas of site, sound levels will be well below the upper guideline value (55 dB $L_{Aeq,16h}$) and it is likely that sound levels will be below the desirable level of 50 dB $L_{Aeq,T}$.
- 4.9 On this basis, and with reference to paragraph 2.7, it is considered that sound levels within proposed external amenity areas would not exceed the BS 8233:2014 upper guideline value of 55 dB $L_{Aeq,16h}$ and, for the majority of areas, sound levels would be below the desirable level of 50 dB $L_{Aeq,16h}$.

Night-time Maximum Noise Levels

- 4.10 On the basis that facades of habitable rooms closest to, and facing towards the railway line on the southern boundary of the site, will be designed such that they meet the criteria detailed in Table 2.1, internal levels will not exceed 45 dB(A) unless the external sound level exceeds 70 dB(A). From paragraph 3.19, there would be a level reduction of at least 4.3 dB from the monitoring location (LT1); therefore this roughly corresponds to a level of 74 dB L_{AFmax} at the noise monitoring location.
- 4.11 Analysis of the 15-minute survey data at LT1 shows that, during the night-time period, the maximum sound level during a 15-minute period exceeded 74 dB on average eight periods per night. Therefore, it is considered that the internal maximum levels during the night-time do not normally exceed 45 dB L_{Amax} and such instances are limited.

- 4.12 On the basis that the facades of habitable rooms closest to, and facing towards the northern and eastern boundary of the site, will be designed such that they meet the criteria detailed in Table 2.1, internal levels will not exceed 45 dB(A) unless the external sound level exceeds 60 dB(A).
- 4.13 Analysis of the 15-minute survey data shows that, during the night-time period, the maximum sound level during a 15-minute period, at the northern and eastern boundary of the site, exceeded 60 dB(A) on average twice and once per night respectively. Therefore, it is considered that the internal maximum levels during the night-time do not normally exceed 45 dB L_{Amax} and such instances are limited.

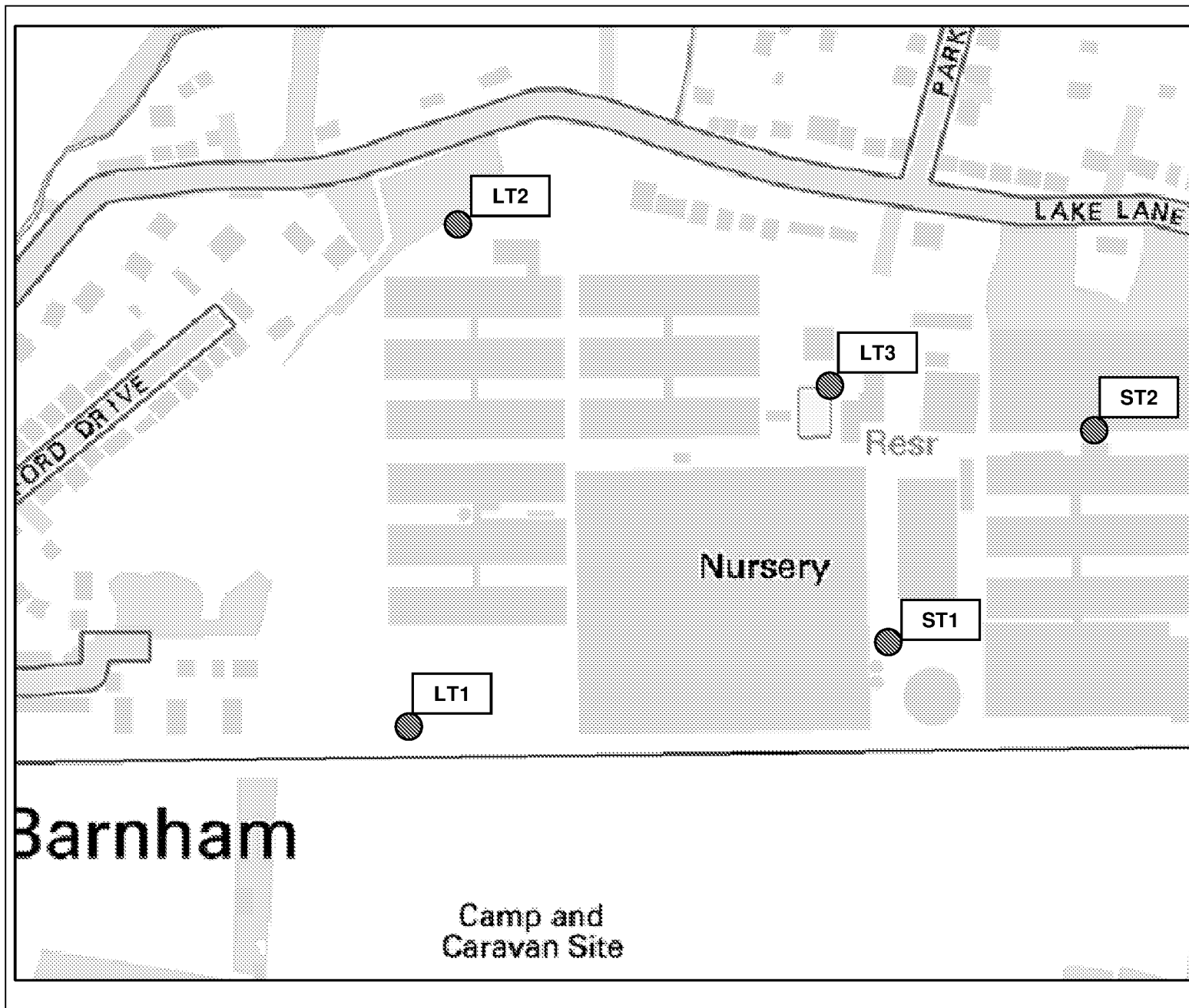
5 Summary and Conclusions

- 5.1 The Acoustics Team of RPS Planning and Development (RPS) has been appointed by Redrow to undertake a noise assessment to discharge Planning Condition 20 of the planning consent for a residential development on Land off Lake Lane, Barnham, West Sussex. The assessment has been undertaken based upon appropriate information on the proposed development provided by the client and its project team, including the current development plans that are being submitted under application reference BN52/16 which vary slightly from the approved plans.
- 5.2 Environmental sound levels were determined from three long term surveys. The main sound sources affecting the site are from passing trains on the West Coastway Line and road traffic on Yapton Road and Lake Lane. Further measurements were taken in order to quantify sound from the boilers on the Pollards Nursery site.
- 5.3 Sound from the boilers will result in levels significantly lower than the existing measured ambient noise levels at the nearest proposed dwellings and it is considered unlikely that this sound will be audible at the dwellings.
- 5.4 Through appropriate design, the proposed residential development would be subject to satisfactory internal and external acoustic environments with respect to British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'.
- 5.5 On the basis of the above, the proposed development accords with the criteria agreed with ADC to satisfy Planning Condition 20 and therefore Planning Condition 20 can be discharged.

References

- 1 British Standards Institution. British Standard EN ISO 9001:2015 Quality management systems. Requirements.
- 2 British Standards Institution. British Standard 8223:2014 Guidance on sound insulation and noise reduction for buildings
- 3 Berglund, B. et al. Guidelines for Community Noise. World Health Organisation. 2000.
- 4 British Standards Institution. British Standard 7445-2:1991 Description and measurement of environmental noise - Part 2: Guide to the acquisition of data pertinent to land use. 1991.
- 5 British Standards Institution. British Standard 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites.
- 6 Defra Report NANR116. Open/Closed Window Research – Sound Insulation through Ventilated Domestic open Windows. The Building Performance Centre, School of the Built Environment, Napier University. 2007.

Figures



(c) 2016 RPS Group

Notes

1. This drawing has been prepared in accordance with the scope of RPS' appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.



6-7 Lovers Walk
Brighton East Sussex BN1 6AH
T 01273 546800
E rpsbn@rpsgroup.com W rpsgroup.com

Client: Redrow

Project: Residential Development on Land off Lake Lane, Barnham

Job Ref: JAE9392

File location:

Date: 22/12/2016

Rev: 0

Drawn: JA

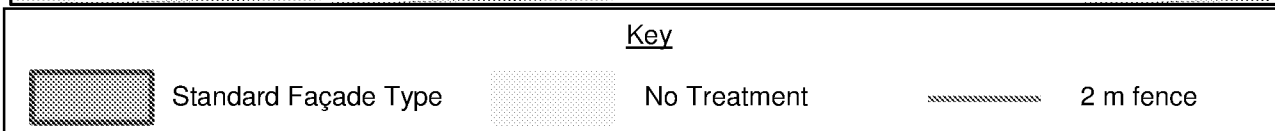
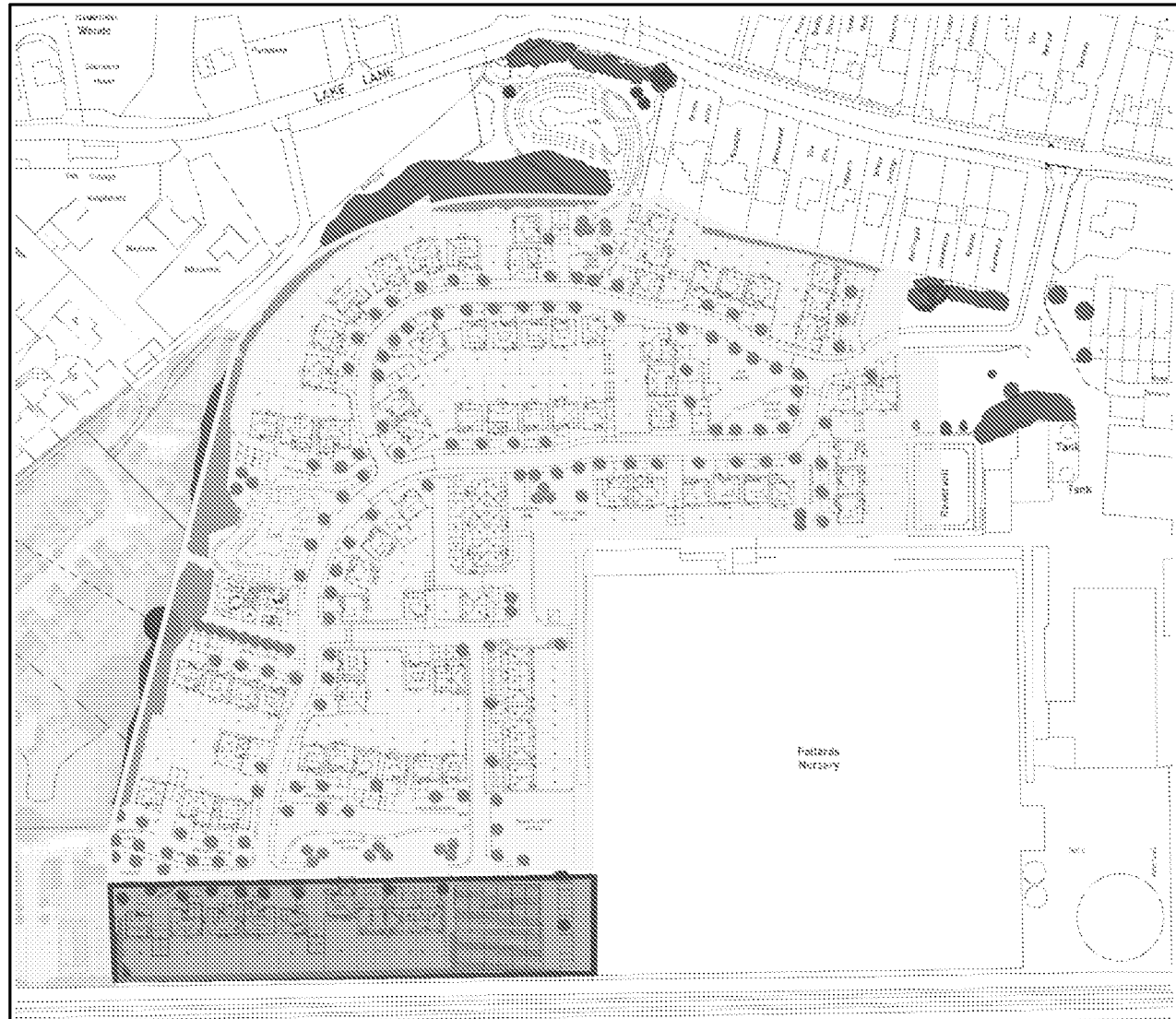
Checked: SH

Figure 1: Baseline Survey Monitoring Locations

NOT TO SCALE

rpsgroup.com/uk

Noise Assessment for Proposed Residential Development at Lake Lane, Barnham, Bognor Regis, PO22 0AF



(c) 2016 RPS Group

Notes

1. This drawing has been prepared in accordance with the scope of RPS' appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.



6-7 Lovers Walk
 Brighton East Sussex BN1 6AH
 T 01273 546800
 E rpsbn@rpsgroup.com W rpsgroup.com

Client: Redrow

Project: Residential Development at Lake Lane, Barnham

Job Ref: JAE9392

File location:

Date: 06/02/2018

Rev: 5

Drawn: JW

Checked: PE

Figure 2: Façade Treatment Plan (for Current Scheme Ref: P16-0421_24)

NOT TO SCALE

rpsgroup.com/uk

Appendices

Appendix A: Baseline Survey Data

LT1

Daytime (0700 - 2300)

Start Date/ Time	Duration	LAeq,16h	LA10,16h	LA90,16h
09/12/2016 07:00	16:00	59	48	37
10/12/2016 07:00	16:00	56	47	39
11/12/2016 07:00	16:00	55	46	38
12/12/2016 07:00	16:00	57	47	37
13/12/2016 07:00	16:00	50	47	38
14/12/2016 07:00	16:00	49	47	38
Average L _{Aeq,16h} , all periods:	16:00	54	47	38
Average L _{Aeq,16h} , excluding strike periods:	16:00	57	47	38

Night-time (2300 - 0700)

Start Date/ Time	Duration	LAeq,8h	LA10,8h	LA90,8h
08/12/2016 23:00	08:00	55	40	26
09/12/2016 23:00	08:00	51	41	29
10/12/2016 23:00	08:00	52	39	29
11/12/2016 23:00	08:00	52	42	26
12/12/2016 23:00	08:00	49	40	24
13/12/2016 23:00	08:00	46	41	28
14/12/2016 23:00	08:00	52	40	24
Average L _{Aeq,8h} , all periods:	08:00	51	40	27
Average L _{Aeq,8h} , excluding strike periods:	08:00	52	40	27

LT2

Daytime (0700 - 2300)

Start Date/ Time	Duration	LAeq,16h	LA10,16h	LA90,16h
09/12/2016 07:00	16:00	48	49	39
10/12/2016 07:00	16:00	48	50	40
11/12/2016 07:00	16:00	48	46	36
12/12/2016 07:00	16:00	55	54	38
13/12/2016 07:00	16:00	50	52	39
14/12/2016 07:00	16:00	54	52	41
Average L _{Aeq,16h} , all periods:	16:00	50	50	39

Daytime (1630 - 1900) - Outside Construction Hours

Start Date/ Time	Duration	LAeq,16h
08/12/2016 16:30	02:30	42
09/12/2016 16:30	02:30	43
10/12/2016 16:30	02:30	46
11/12/2016 16:30	02:30	42
12/12/2016 16:30	02:30	43
13/12/2016 16:30	02:30	45
14/12/2016 16:30	02:30	46
Average L _{Aeq,16h} , all periods:	02:30	44

Night-time (2300 - 0700)

Start Date/ Time	Duration	LAeq,8h	LA10,8h	LA90,8h
08/12/2016 23:00	08:00	40	42	37
09/12/2016 23:00	08:00	39	41	37
10/12/2016 23:00	08:00	37	38	27
11/12/2016 23:00	08:00	38	42	26
12/12/2016 23:00	08:00	39	40	36
13/12/2016 23:00	08:00	40	42	38
14/12/2016 23:00	08:00	40	42	37
Average L _{Aeq,8h} , all periods:	08:00	39	41	34

LT3

Daytime (0700 - 2300)

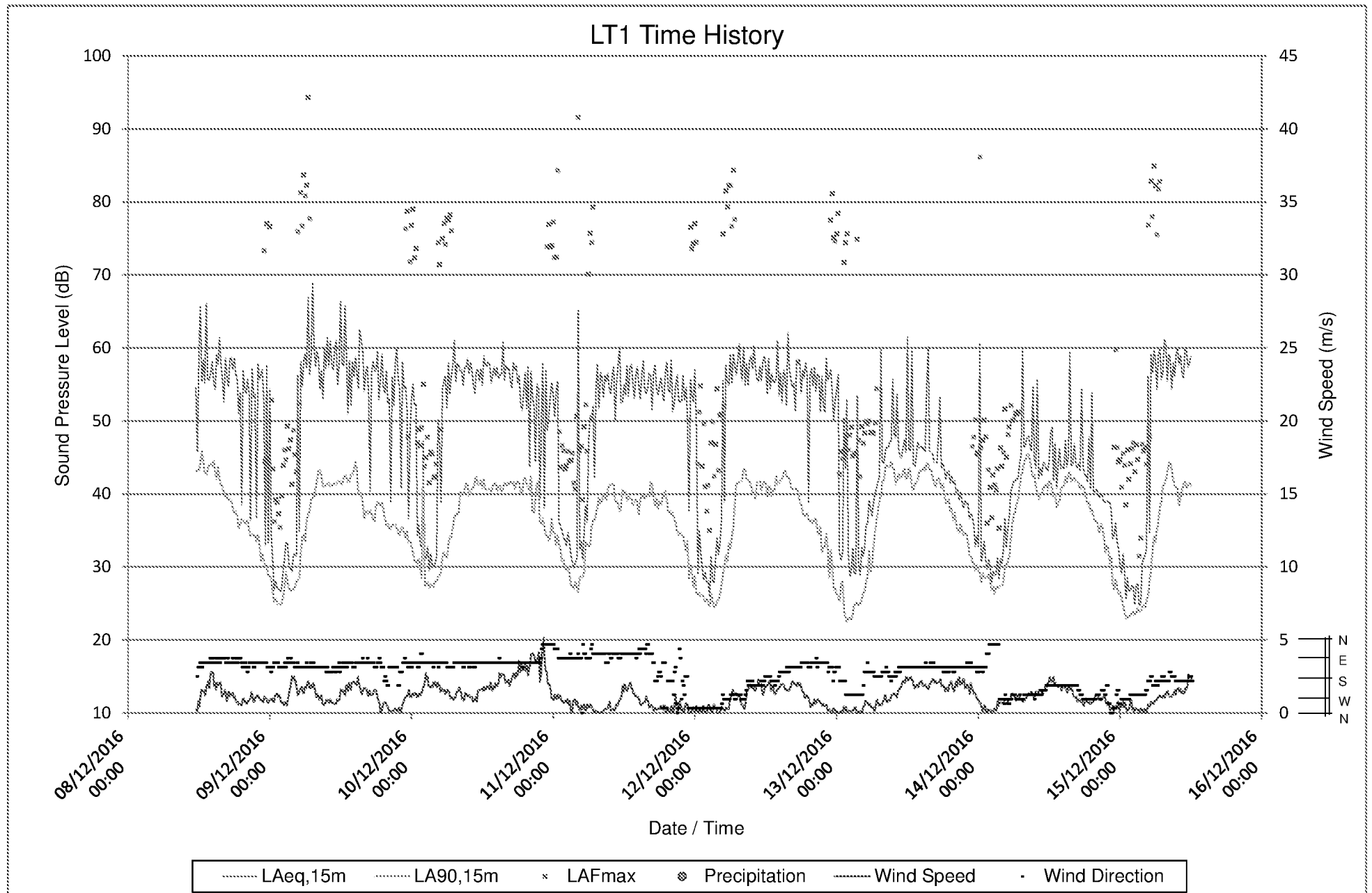
Start Date/ Time	Duration	LAeq,16h	LA10,16h	LA90,16h
09/12/2016 07:00	16:00	55	56	37
10/12/2016 07:00	16:00	50	53	39
11/12/2016 07:00	16:00	44	45	37
12/12/2016 07:00	16:00	53	56	36
13/12/2016 07:00	16:00	50	53	37
14/12/2016 07:00	16:00	51	52	35
Average LAeq,16h, all periods:	16:00	50	52	37

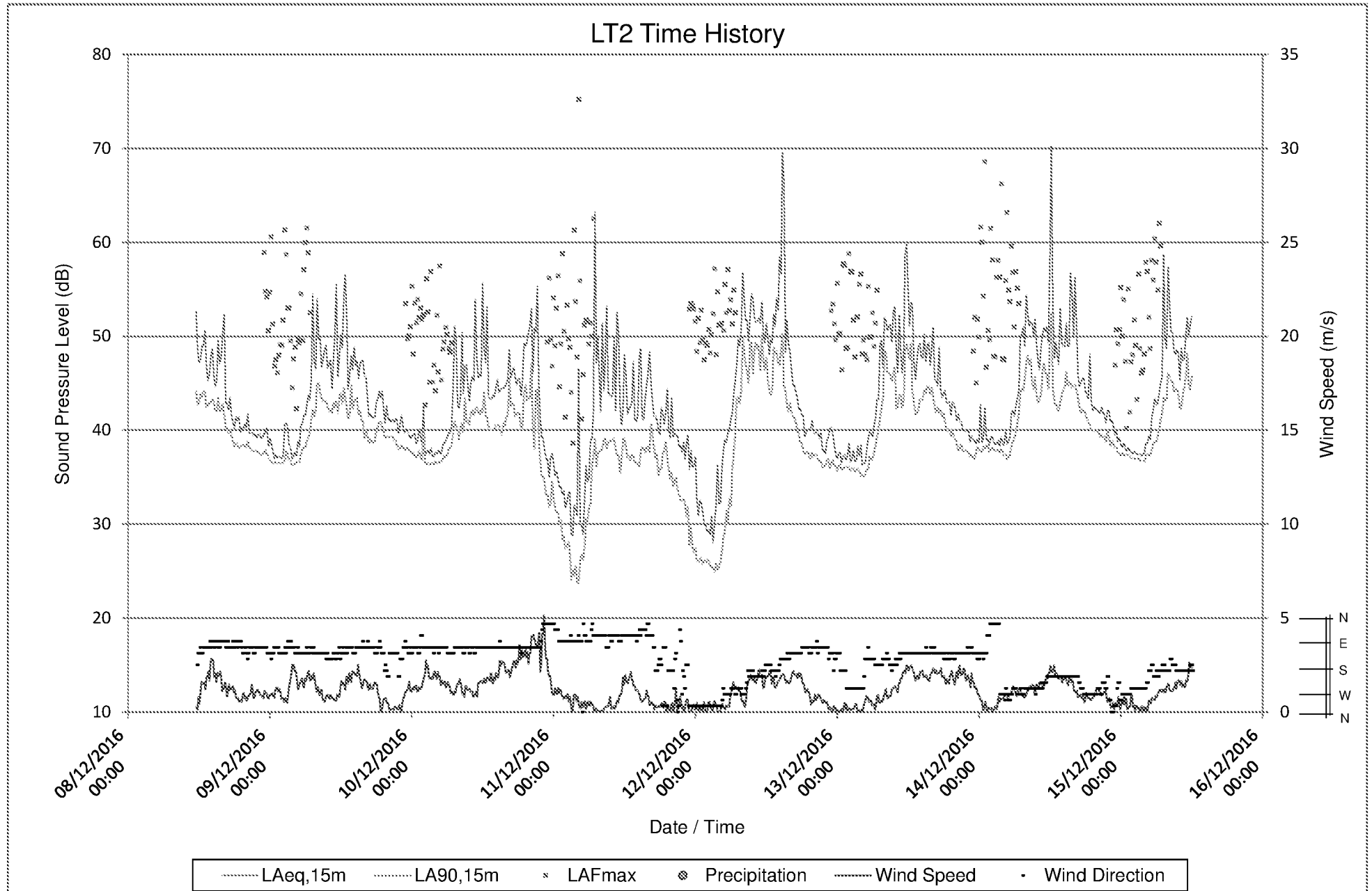
Daytime (1630 - 1900) - Outside Construction Hours

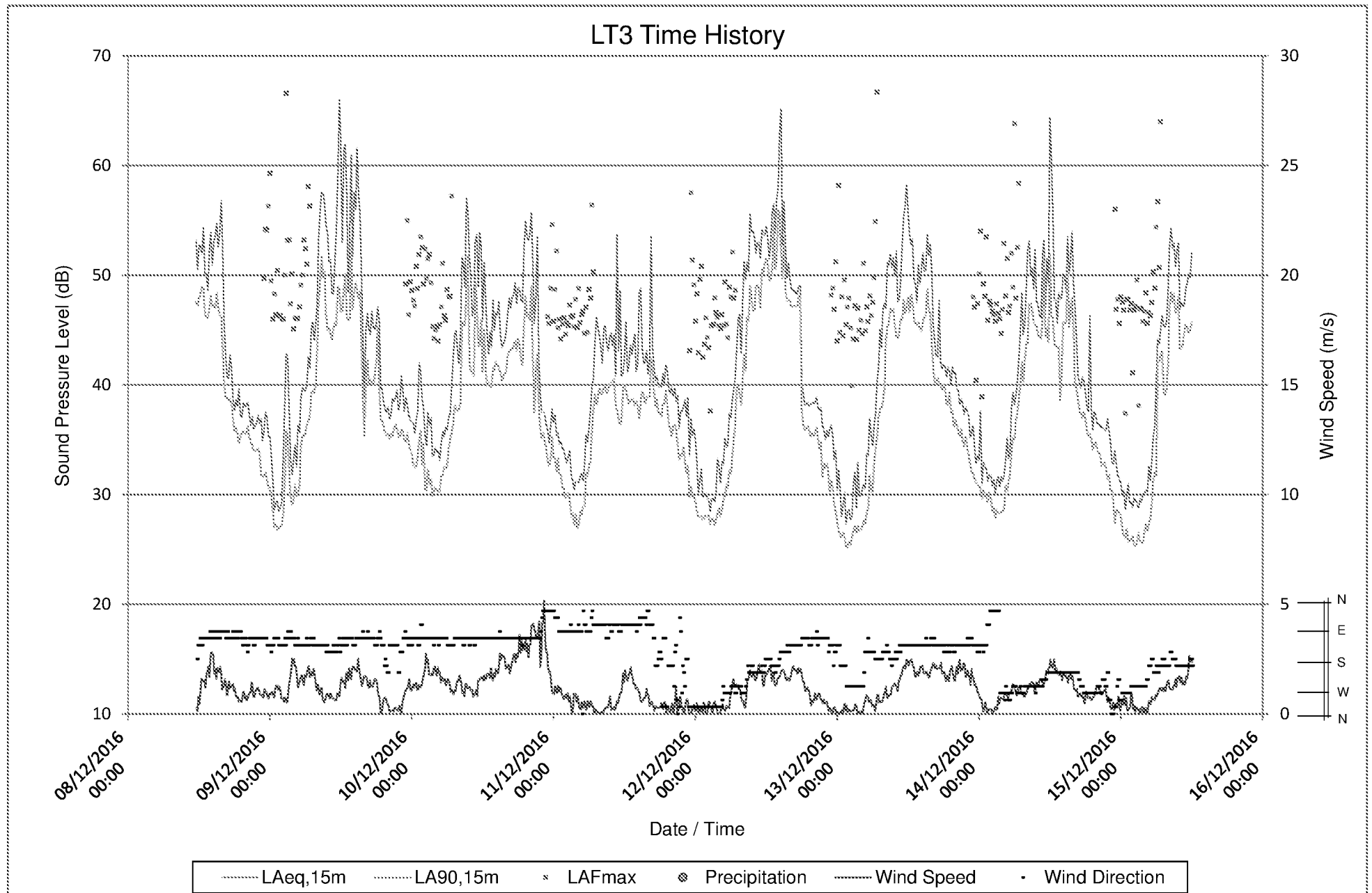
Start Date/ Time	Duration	LAeq,16h
08/12/2016 16:30	02:30	40
09/12/2016 16:30	02:30	45
10/12/2016 16:30	02:30	48
11/12/2016 16:30	02:30	45
12/12/2016 16:30	02:30	47
13/12/2016 16:30	02:30	43
14/12/2016 16:30	02:30	42
Average LAeq,16h, all periods:	02:30	44

Night-time (2300 - 0700)

Start Date/ Time	Duration	LAeq,8h	LA10,8h	LA90,8h
08/12/2016 23:00	08:00	37	41	28
09/12/2016 23:00	08:00	37	40	32
10/12/2016 23:00	08:00	35	38	29
11/12/2016 23:00	08:00	35	38	28
12/12/2016 23:00	08:00	33	37	27
13/12/2016 23:00	08:00	35	38	29
14/12/2016 23:00	08:00	36	42	27
Average LAeq,8h, all periods:	08:00	36	39	28







Boiler A - 119 m from boundary of residential development

The duration of each measurement was 30 seconds.

*Each measurement was taken at **5m** from the outside of the greenhouse.*

Boiler was operating as normal with greenhouse doors closed. However there were a number of louvres and holes in the greenhouse.

Table 1: Measurements taken outside the green house enclosing the boiler (A).

Position	L _{Aeq, 30s}	L _{A90, 30s}	L _{Amax, 30s}	L _{Aeq, 30s} Arithmetic Average	
1	40	39	45	41	
	41	39	52		
2	44	42	53	44	Note: This measurement was directly opposite a louvre.
	44	43	47		
3	41	39	49	41	
	42	41	46		

Table 2: Background measurements.

Position	L _{Aeq, 30s}	L _{A90, 30s}	L _{Amax, 30s}
1	41	39	51
2	43	42	47
3	44	42	47

Boiler B - 175 m from boundary of residential development

The duration of each measurement was 30 seconds.

*Each measurement was taken at **2m** from the outside of the greenhouse.*

Boiler was operating as normal with greenhouse doors closed. However there were a number of louvres and holes in the greenhouse.

Table 3: Measurements taken outside the green house enclosing the boiler (B).

Position	L _{Aeq, 30s}	L _{A90, 30s}	L _{Amax, 30s}	L _{Aeq, 30s} Arithmetic Average
1	54	53	62	54
	54	53	58	
	53	53	55	
2	51	48	63	49
	48	48	50	
	49	48	53	
3	49	48	56	50
	49	48	56	
	53	48	67	
4	49	48	54	49
	49	48	57	
	50	47	57	

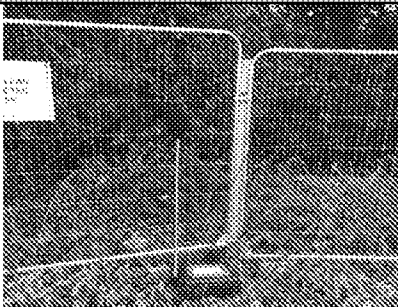
Table 4: Background measurements.

Position	L _{Aeq, 30s}	L _{A90, 30s}	L _{Amax, 30s}
1	47	45	51
2	46	45	49
3	47	45	56
4	46	45	54

Sound Level Survey Record

Location		LT1, southern boundary of site											
Purpose of Monitoring		Baseline											
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System													
RPS ID	Manufacturer / Model		Serial Number	Last Lab Verification	Filename	Memory Card ID							
112	Rion NL-52		943363	28/01/2015	Auto_0001								
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?							
~ 1.2m	100 ms	25 - 138	Fast	A	Freefield	x							
START				END									
Personnel			JW				JW						
Date / time			08/12/2016 11:30				15/12/2016 12:00						
Calibrator	RPS ID		15				15						
	Manufacturer / Model		RION NC-74				RION NC-74						
	Serial Number		110090				110090						
	Date last verification		09/11/2016				09/11/2016						
	Reference level		94				94						
	Meter reading		94				94.5						
	Wind speed (m/s) & dir'n Av.		0.3	S	2.4		SW						
Cloud cover (100% = 8 oktas)		8				8							
Temperature (degrees Celsius)		~ 12				~ 10							
Relative Humidity (%)		-				-							
Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
					x					x			
Subjective description / additional details													
Photographs of Measurement Location													
													
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))													
On southern boundary of site approximately 8 m from nearest tracks. Roughly centre of southern area on grassy/ boggy ground													
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction on site and to SW, traffic on Yapton road, trains dominant when passing, air traffic, birdsong													
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction on site and to SW, traffic on Yapton road, trains dominant when passing, air traffic, birdsong													

Sound Level Survey Record

Location		LT2, near northern boundary of site											
Purpose of Monitoring		Baseline											
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System													
RPS ID	Manufacturer / Model		Serial Number	Last Lab Verification	Filename	Memory Card ID							
114	Rion NL-52		943365	12/10/2015	Auto_0001								
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?							
~ 1.2m	100 ms	25 - 138	Fast	A	Freefield	x							
START				END									
Personnel			JW				JW						
Date / time			08/12/2016 11:30				15/12/2016 12:00						
Calibrator	RPS ID		15				15						
	Manufacturer / Model		RION NC-74				RION NC-74						
	Serial Number		110090				110090						
	Date last verification		09/11/2016				09/11/2016						
	Reference level		94				94						
	Meter reading		94				94						
	Wind speed (m/s) & dir'n Av.		0.3	S	2.4	SW							
Cloud cover (100% = 8 oktas)		8				8							
Temperature (degrees Celsius)		~ 12				~ 10							
Relative Humidity (%)		-				-							
Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
Subjective description / additional details													
Photographs of Measurement Location													
													
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))													
In northern area of site, approximately 50 m south of Lake Lane													
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction noise dominant, distant air traffic, nearby generator for construction													
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction noise dominant, distant air traffic, nearby generator for construction													

Sound Level Survey Record

Location		LT3, near north-eastern boundary of site											
Purpose of Monitoring		Baseline											
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System													
RPS ID	Manufacturer / Model		Serial Number	Last Lab Verification	Filename	Memory Card ID							
124	Rion NL-52		164421	03/03/2016	Auto_0001								
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?							
~ 1.2m	100 ms	25 - 138	Fast	A	Freefield	x							
START				END									
Personnel			JW				JW						
Date / time			08/12/2016 11:30				15/12/2016 12:00						
Calibrator	RPS ID		15				15						
	Manufacturer / Model		RION NC-74				RION NC-74						
	Serial Number		110090				110090						
	Date last verification		09/11/2016				09/11/2016						
	Reference level		94				94						
	Meter reading		94				94.5						
	Wind speed (m/s) & dir'n Av.		0.3	S	2.4		SW						
Cloud cover (100% = 8 oktas)		8				8							
Temperature (degrees Celsius)		~ 12				~ 10							
Relative Humidity (%)		-				-							
Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
Subjective description / additional details													
Photographs of Measurement Location													
													
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))													
On NE corner of reservoir on Pollards Nursery site approximately 25 m east of site, reservoir approximately 1.5 m higher than surrounding ground													
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction noise dominant, traffic on nursery site, distant aircraft noise, trains passing to S, trees rustling													
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)													
Construction noise dominant, traffic on nursery site, distant aircraft noise, trains passing to S, trees rustling													

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
08/12/2016 11:30	54.6	72.8	47.9	43.1	52.7	71.5	54.2	44.1	53.2	64.4	55.8	47.6
08/12/2016 11:45	45.8	60.7	47.5	43.3	48.6	66.3	49.8	42.7	50.5	64.7	52.6	47.2
08/12/2016 12:00	59.2	77.8	51.8	43.2	47.2	67.4	49.0	43.0	52.7	64.8	55.4	47.9
08/12/2016 12:15	65.6	92.3	50.8	44.1	47.5	62.3	49.3	43.8	52.6	72.1	55.1	48.3
08/12/2016 12:30	55.4	74.3	50.7	45.8	49.0	75.1	49.1	43.6	51.9	68.4	54.1	49.0
08/12/2016 12:45	58.3	75.1	50.8	44.3	48.9	66.1	51.0	44.1	54.4	72.7	56.2	48.8
08/12/2016 13:00	55.2	73.1	48.0	42.8	50.6	72.0	52.1	44.0	50.1	65.4	52.7	46.5
08/12/2016 13:15	66.1	96.8	50.0	42.6	47.1	63.8	49.1	42.5	50.1	60.3	52.9	46.3
08/12/2016 13:30	55.8	75.0	49.1	43.3	45.3	54.1	47.3	42.6	48.6	64.1	50.6	46.1
08/12/2016 13:45	55.6	74.3	50.6	44.1	45.9	61.8	47.8	43.0	52.3	69.2	54.6	47.0
08/12/2016 14:00	56.7	77.2	49.8	44.0	47.7	69.7	48.5	43.0	53.9	71.7	55.1	48.1
08/12/2016 14:15	58.1	77.7	49.4	43.8	48.7	75.0	48.6	43.3	50.9	64.8	52.9	47.1
08/12/2016 14:30	55.3	73.2	49.3	44.5	45.8	58.5	47.8	42.9	53.1	76.2	54.3	47.3
08/12/2016 14:45	54.3	77.1	48.3	43.0	44.6	57.5	46.6	42.1	53.6	67.2	56.0	47.0
08/12/2016 15:00	59.0	77.2	47.7	42.0	45.4	62.2	47.1	42.0	54.7	68.9	56.8	48.4
08/12/2016 15:15	57.8	78.2	49.6	43.8	49.6	72.1	50.5	43.4	52.6	64.2	55.4	47.1
08/12/2016 15:30	61.4	86.0	48.6	41.9	47.1	62.6	49.6	41.9	53.8	73.1	55.3	46.4
08/12/2016 15:45	57.7	78.2	47.0	41.3	47.8	70.4	49.4	42.1	56.8	80.6	57.5	46.3
08/12/2016 16:00	55.4	73.6	44.7	40.8	50.2	70.2	49.5	42.8	52.6	71.8	55.6	43.4
08/12/2016 16:15	52.6	73.5	44.3	40.2	52.3	75.7	50.3	41.7	45.6	64.1	47.9	40.0
08/12/2016 16:30	58.6	79.1	45.9	39.4	43.0	50.0	45.5	40.4	42.6	65.4	43.5	38.8
08/12/2016 16:45	55.9	73.8	44.8	39.8	42.7	51.4	45.1	40.2	40.8	54.9	42.3	38.8
08/12/2016 17:00	54.6	73.8	42.8	39.1	42.2	52.4	44.8	39.7	40.6	53.9	42.0	38.5
08/12/2016 17:15	58.4	76.8	47.3	39.3	43.5	62.9	46.1	39.9	42.7	66.7	44.6	38.7
08/12/2016 17:30	58.7	81.3	45.3	39.1	41.5	49.2	44.1	39.4	41.5	62.2	43.1	38.3
08/12/2016 17:45	57.0	77.3	43.4	38.0	40.8	51.1	43.1	38.8	38.7	52.7	40.1	36.9
08/12/2016 18:00	58.5	84.9	42.5	37.3	40.2	49.5	42.1	38.3	37.6	48.5	39.5	35.7
08/12/2016 18:15	56.4	74.5	45.3	37.6	41.4	50.5	44.3	38.7	38.6	50.9	40.3	36.0
08/12/2016 18:30	55.7	76.4	41.8	36.9	41.0	50.4	43.6	38.5	38.1	48.6	40.0	35.5
08/12/2016 18:45	51.0	72.6	44.3	35.3	41.4	56.9	43.7	38.1	39.6	59.3	40.5	34.7
08/12/2016 19:00	53.8	74.5	41.2	35.9	39.8	47.1	41.1	38.3	37.3	46.0	39.1	35.3
08/12/2016 19:15	38.5	46.5	40.1	36.5	40.2	50.9	41.4	38.4	37.0	45.8	38.3	35.5
08/12/2016 19:30	56.9	74.8	42.1	36.5	40.2	54.0	41.8	38.4	38.3	49.1	40.2	35.8
08/12/2016 19:45	54.5	75.7	41.9	36.1	40.6	52.5	42.5	38.2	38.0	48.6	40.1	35.7
08/12/2016 20:00	53.7	75.6	41.3	35.9	40.2	49.8	42.3	38.2	38.1	48.7	40.2	35.5
08/12/2016 20:15	55.7	77.5	41.6	36.4	41.7	57.0	43.2	38.8	38.4	49.2	40.4	36.2
08/12/2016 20:30	53.8	74.7	39.8	35.1	39.7	48.5	41.3	38.1	37.3	50.7	39.1	35.2
08/12/2016 20:45	36.4	43.8	38.2	34.2	39.7	50.4	40.2	37.9	36.3	45.2	37.5	34.8
08/12/2016 21:00	57.2	77.1	41.9	34.4	39.7	50.0	40.4	37.7	37.1	46.3	39.3	34.5
08/12/2016 21:15	53.3	73.1	39.0	34.2	39.4	50.1	40.0	37.8	36.0	44.5	37.6	33.9
08/12/2016 21:30	53.6	74.7	39.5	34.3	39.6	47.6	41.7	37.8	36.3	47.2	37.8	34.0
08/12/2016 21:45	36.7	46.8	38.7	33.5	39.2	50.2	40.0	37.7	36.5	48.0	37.8	34.1
08/12/2016 22:00	57.8	75.9	43.3	34.4	39.5	51.3	40.9	37.7	37.2	48.4	40.0	34.2
08/12/2016 22:15	55.7	78.1	40.0	33.3	39.6	57.5	39.9	37.6	36.5	55.8	37.5	33.7
08/12/2016 22:30	56.4	74.2	42.4	30.8	39.2	52.3	40.7	37.4	36.9	54.0	40.0	31.7
08/12/2016 22:45	57.0	77.3	40.6	31.8	39.2	53.6	40.6	37.3	34.9	53.4	37.2	31.8
08/12/2016 23:00	52.7	73.3	38.7	30.8	39.6	58.9	41.5	37.6	35.8	49.7	38.6	31.6
08/12/2016 23:15	32.9	44.5	35.1	30.4	39.8	54.8	41.4	37.9	37.5	54.2	40.4	32.0
08/12/2016 23:30	57.6	77.0	40.5	29.8	40.2	54.2	42.5	37.4	37.0	54.1	40.1	31.3
08/12/2016 23:45	33.3	44.2	36.9	28.9	38.2	50.6	39.3	37.1	35.3	56.3	37.3	30.6
09/12/2016 00:00	54.4	76.6	40.0	28.6	39.1	54.7	40.1	36.9	35.4	59.3	38.1	30.6
09/12/2016 00:15	34.6	52.8	37.1	28.2	38.5	60.6	39.1	36.7	33.4	49.5	35.1	29.8
09/12/2016 00:30	30.7	43.4	33.5	26.6	37.7	51.3	37.8	36.5	31.1	46.0	32.7	28.4
09/12/2016 00:45	26.8	36.2	27.9	25.2	37.0	46.8	37.4	36.5	28.6	48.3	29.2	27.0
09/12/2016 01:00	28.1	39.2	29.4	25.7	37.4	47.5	37.7	36.6	29.2	46.4	30.5	27.3
09/12/2016 01:15	27.0	38.8	28.5	24.9	37.1	46.1	37.5	36.5	29.4	50.4	30.0	26.8
09/12/2016 01:30	26.9	37.3	28.6	24.9	37.2	48.0	37.4	36.5	28.5	46.3	29.1	26.9
09/12/2016 01:45	26.6	35.4	28.0	24.9	37.0	49.1	37.4	36.5	28.8	46.3	29.7	27.1
09/12/2016 02:00	26.9	39.7	28.4	24.9	37.0	49.0	37.3	36.5	29.3	46.0	30.5	27.2
09/12/2016 02:15	29.2	43.9	30.8	25.9	37.3	51.7	37.8	36.5	33.5	46.0	36.6	28.2
09/12/2016 02:30	31.2	46.0	33.6	27.1	40.6	61.3	43.2	36.7	38.3	50.0	41.7	30.9
09/12/2016 02:45	33.3	44.7	36.1	29.3	40.7	58.7	43.0	37.8	42.8	66.6	45.7	35.9
09/12/2016 03:00	33.2	49.3	35.9	28.0	40.3	53.0	42.6	37.4	42.5	53.2	45.9	35.3
09/12/2016 03:15	30.3	46.2	32.4	27.1	38.4	53.0	39.5	36.8	38.1	53.2	41.2	32.4
09/12/2016 03:30	29.9	47.4	31.8	26.7	38.1	49.5	38.3	36.7	33.2	47.4	35.2	29.7
09/12/2016 03:45	29.3	41.3	30.8	26.9	37.0	44.5	37.7	36.3	31.8	50.1	33.8	29.1
09/12/2016 04:00	31.4	48.7	34.7	26.8	37.2	47.6	37.9	36.3	33.1	45.1	35.8	29.4
09/12/2016 04:15	31.9	45.4	34.5	27.2	37.7	48.8	38.3	36.5	34.5	46.1	36.7	30.9
09/12/2016 04:30	31.5	43.0	34.4	28.0	37.3	42.3	38.0	36.6	32.5	46.0	34.4	29.9
09/12/2016 04:45	56.3	75.9	44.6	28.3	38.9	49.6	40.0	36.6	36.3	46.1	39.7	30.1

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
09/12/2016 05:00	34.9	52.3	38.1	28.5	38.2	49.3	39.7	36.6	35.6	47.1	38.6	30.8
09/12/2016 05:15	58.1	81.3	43.6	31.9	40.5	54.5	42.1	37.4	38.7	49.1	41.8	34.3
09/12/2016 05:30	54.7	76.7	42.9	34.1	40.7	49.5	42.8	38.0	39.7	50.0	42.3	35.4
09/12/2016 05:45	58.2	83.7	42.3	34.3	41.7	57.1	43.3	38.2	39.4	53.2	41.6	35.3
09/12/2016 06:00	59.2	80.8	44.2	33.5	41.5	60.0	43.7	38.1	39.5	52.4	42.2	35.5
09/12/2016 06:15	57.3	82.3	45.5	36.4	42.7	61.5	45.3	38.9	39.9	51.0	42.1	36.4
09/12/2016 06:30	66.9	94.3	46.6	37.2	43.7	58.9	44.7	39.2	42.6	58.1	45.1	36.7
09/12/2016 06:45	56.2	77.7	44.4	37.5	43.2	52.5	46.1	39.7	41.5	56.3	44.2	37.1
09/12/2016 07:00	58.8	80.0	50.3	39.3	45.5	62.8	48.2	41.1	45.0	60.7	47.5	39.2
09/12/2016 07:15	68.9	98.0	46.5	39.5	54.5	77.4	55.5	42.2	45.8	61.0	49.3	39.4
09/12/2016 07:30	60.2	83.5	46.2	39.6	47.4	69.0	48.7	41.4	44.0	58.4	47.0	39.3
09/12/2016 07:45	57.5	81.0	45.7	40.8	46.4	62.7	48.8	42.2	45.6	64.3	48.4	40.0
09/12/2016 08:00	59.5	84.1	49.5	41.7	54.0	72.8	53.2	44.9	47.4	62.9	50.1	43.0
09/12/2016 08:15	58.6	82.2	49.4	43.1	49.7	66.9	52.1	45.0	53.5	71.6	55.4	47.7
09/12/2016 08:30	54.3	76.8	48.7	43.2	49.6	65.0	52.5	44.0	56.0	77.1	58.1	49.6
09/12/2016 08:45	56.8	80.5	48.4	42.5	46.7	58.8	49.2	43.4	57.6	71.3	60.5	51.7
09/12/2016 09:00	52.9	74.4	47.3	41.1	47.6	64.2	49.8	43.0	57.5	71.8	60.6	49.8
09/12/2016 09:15	60.1	83.0	47.7	41.0	48.5	72.2	49.3	43.1	56.6	72.6	59.2	50.3
09/12/2016 09:30	57.2	76.9	47.3	41.1	49.0	65.2	51.3	43.1	54.5	71.9	57.5	46.4
09/12/2016 09:45	61.4	88.0	46.2	41.3	46.6	62.4	48.6	42.5	53.8	71.0	55.6	45.0
09/12/2016 10:00	57.4	74.7	48.5	41.5	47.0	63.8	49.7	42.0	51.3	65.9	54.3	45.2
09/12/2016 10:15	60.9	84.4	46.6	41.1	47.4	65.8	49.8	42.1	51.4	65.8	55.5	44.7
09/12/2016 10:30	57.7	77.0	46.0	41.2	44.4	56.2	46.1	41.8	48.3	69.8	50.5	44.1
09/12/2016 10:45	56.9	79.7	46.1	41.2	47.3	65.2	50.1	42.9	48.3	66.0	50.5	45.2
09/12/2016 11:00	59.8	84.2	50.0	41.5	50.5	68.7	52.6	42.4	51.4	70.9	53.7	45.6
09/12/2016 11:15	61.0	86.4	49.2	41.3	55.5	71.0	59.8	43.1	54.0	74.0	55.6	45.4
09/12/2016 11:30	54.8	73.9	48.2	41.7	45.6	62.6	47.6	41.8	59.2	77.5	58.8	49.0
09/12/2016 11:45	58.1	82.2	46.5	41.8	47.9	68.7	49.7	43.6	66.0	76.9	70.8	48.8
09/12/2016 12:00	66.3	92.5	51.9	41.7	50.1	63.7	54.1	43.9	62.2	78.2	66.6	46.7
09/12/2016 12:15	57.8	79.6	49.5	41.3	48.8	66.7	51.4	42.8	53.0	69.5	54.9	46.7
09/12/2016 12:30	57.6	77.8	49.7	42.1	54.3	68.1	57.4	44.5	61.5	77.6	65.1	48.8
09/12/2016 12:45	65.7	95.6	48.1	42.6	56.6	72.0	61.3	43.5	61.9	75.7	66.6	50.1
09/12/2016 13:00	58.6	83.6	48.9	42.4	51.8	67.1	53.8	42.4	57.5	75.1	58.1	46.3
09/12/2016 13:15	50.9	74.9	48.2	41.6	44.4	58.7	46.7	41.1	48.4	60.3	49.9	45.8
09/12/2016 13:30	58.2	77.0	49.8	41.7	45.9	60.2	48.2	41.8	53.7	72.9	54.1	46.0
09/12/2016 13:45	52.1	76.2	49.3	42.6	47.9	62.1	49.6	44.8	60.9	72.6	67.2	53.2
09/12/2016 14:00	58.2	82.3	48.5	42.6	46.4	66.3	48.5	42.2	51.7	71.6	54.4	46.9
09/12/2016 14:15	56.0	74.5	50.8	43.3	48.9	65.1	51.1	43.0	57.6	71.2	59.1	48.3
09/12/2016 14:30	58.8	81.5	50.6	44.3	46.9	66.0	48.8	43.4	56.0	67.5	58.5	49.4
09/12/2016 14:45	56.7	83.8	51.0	43.3	47.3	62.5	49.7	43.4	61.6	73.1	68.4	48.5
09/12/2016 15:00	54.4	74.0	46.2	40.1	45.5	57.1	48.1	41.7	57.3	72.3	60.4	47.9
09/12/2016 15:15	62.5	85.5	48.6	40.1	47.0	62.4	49.4	42.1	55.7	72.8	58.2	48.5
09/12/2016 15:30	61.0	86.4	46.2	40.0	47.4	72.3	49.0	41.1	50.1	65.6	52.8	43.8
09/12/2016 15:45	59.4	80.3	50.6	38.7	47.3	66.8	48.0	40.8	43.8	64.2	45.1	38.5
09/12/2016 16:00	54.0	80.7	41.9	36.5	45.8	64.4	48.8	39.1	38.9	54.5	40.9	35.4
09/12/2016 16:15	56.6	76.5	46.2	37.7	45.7	69.5	47.4	39.8	45.0	55.4	47.9	40.7
09/12/2016 16:30	57.5	83.2	45.3	37.6	43.4	57.5	45.8	39.4	46.5	63.3	48.9	42.2
09/12/2016 16:45	53.5	80.4	43.3	37.3	41.5	54.4	43.8	38.6	45.1	61.2	47.3	40.0
09/12/2016 17:00	40.4	52.5	42.2	37.8	41.7	50.9	44.3	39.0	44.6	57.1	47.0	40.5
09/12/2016 17:15	56.5	76.9	44.5	37.2	41.3	49.4	44.1	38.8	46.7	58.4	49.3	40.4
09/12/2016 17:30	58.1	83.1	41.2	36.6	41.4	50.9	44.6	38.7	45.3	64.4	48.5	39.9
09/12/2016 17:45	56.9	79.1	43.7	36.3	41.3	49.5	43.9	38.8	45.1	56.5	46.8	41.0
09/12/2016 18:00	56.8	77.5	44.9	38.3	42.9	54.0	45.2	39.9	45.5	53.8	47.2	42.0
09/12/2016 18:15	59.5	79.9	50.5	38.9	43.3	51.7	46.0	40.3	47.1	61.0	48.9	45.3
09/12/2016 18:30	52.9	76.0	48.0	38.8	44.1	52.9	47.1	40.9	45.7	61.2	48.5	39.5
09/12/2016 18:45	55.9	76.2	44.0	38.3	43.5	55.3	45.2	40.8	39.8	50.7	41.7	36.9
09/12/2016 19:00	59.1	82.7	46.6	38.9	44.1	60.4	45.6	40.5	39.5	46.9	41.9	36.7
09/12/2016 19:15	54.7	74.7	43.7	37.9	42.1	53.9	43.7	39.7	38.3	51.2	39.4	36.1
09/12/2016 19:30	53.8	74.6	42.6	36.6	40.8	52.0	42.3	39.2	37.8	52.2	39.6	35.6
09/12/2016 19:45	56.8	81.0	41.9	35.7	42.6	60.5	43.1	39.3	37.5	48.0	38.8	35.4
09/12/2016 20:00	52.3	75.9	41.4	35.9	41.3	55.8	42.3	39.2	38.0	49.0	39.6	35.5
09/12/2016 20:15	53.0	79.9	41.1	35.1	41.1	53.4	42.2	39.4	36.9	48.2	38.0	35.1
09/12/2016 20:30	38.9	47.8	41.7	35.2	40.9	49.4	42.8	39.2	37.3	46.5	38.8	35.5
09/12/2016 20:45	56.0	78.1	43.0	35.7	41.1	52.4	42.5	39.3	38.8	47.5	41.0	35.3
09/12/2016 21:00	52.1	74.1	41.2	35.8	40.8	50.2	42.0	38.9	38.5	54.7	40.0	36.0
09/12/2016 21:15	57.6	77.8	49.7	35.8	41.2	53.4	42.8	38.9	38.8	47.9	40.7	36.4
09/12/2016 21:30	60.0	84.0	44.4	35.4	41.0	53.3	42.6	38.4	39.5	53.4	42.0	36.0
09/12/2016 21:45	55.6	78.5	41.5	34.7	39.7	49.9	41.0	38.0	37.7	48.7	39.6	35.3
09/12/2016 22:00	54.5	74.9	42.3	34.4	40.4	54.3	42.1	38.0	38.3	47.7	40.6	35.2
09/12/2016 22:15	40.8	63.0	42.7	35.3	41.6	62.2	43.3	38.4	40.8	59.7	42.8	35.9

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
09/12/2016 22:30	58.0	78.7	43.3	35.4	40.5	55.2	42.1	38.2	39.4	60.2	41.1	35.7
09/12/2016 22:45	54.4	78.3	41.8	34.8	39.7	51.0	40.7	37.9	37.6	52.3	39.4	35.0
09/12/2016 23:00	54.8	76.3	44.0	34.0	40.1	53.5	42.8	38.0	38.8	49.2	42.3	34.7
09/12/2016 23:15	51.7	78.7	39.8	34.9	39.8	49.7	40.8	38.2	38.1	55.0	39.6	35.6
09/12/2016 23:30	36.6	47.9	39.1	33.3	39.6	50.0	41.0	37.8	37.2	46.4	39.3	34.7
09/12/2016 23:45	48.4	71.8	40.8	33.5	39.1	51.0	40.5	37.7	36.8	49.4	39.1	34.0
10/12/2016 00:00	52.8	76.8	40.6	32.9	39.3	55.3	40.4	37.5	36.7	48.6	38.9	33.8
10/12/2016 00:15	55.0	79.0	41.3	32.0	39.5	48.1	41.4	37.6	36.6	47.7	39.3	32.7
10/12/2016 00:30	52.2	72.3	38.4	30.9	39.6	53.5	41.5	37.3	35.6	47.2	37.7	32.6
10/12/2016 00:45	52.3	73.6	40.7	30.8	38.6	51.4	39.9	37.0	36.7	50.8	38.9	32.4
10/12/2016 01:00	34.3	47.0	37.0	30.5	38.9	53.9	40.4	37.3	37.6	48.8	40.1	33.5
10/12/2016 01:15	35.7	48.8	38.6	31.1	40.1	52.0	42.2	37.8	42.0	51.9	46.0	35.0
10/12/2016 01:30	33.2	46.6	35.3	29.8	39.3	53.0	41.0	37.2	41.2	53.5	44.4	35.8
10/12/2016 01:45	32.6	49.1	35.3	28.5	38.5	51.8	39.7	36.8	38.7	52.5	42.1	32.7
10/12/2016 02:00	47.2	55.0	49.3	44.4	42.4	52.3	44.2	40.0	37.9	49.2	39.9	34.6
10/12/2016 02:15	31.4	43.8	34.0	27.3	37.3	42.7	38.0	36.5	35.5	52.4	38.6	30.5
10/12/2016 02:30	31.2	45.0	32.8	27.8	37.7	56.1	38.9	36.3	34.4	49.7	36.5	30.4
10/12/2016 02:45	32.8	47.8	35.6	27.9	37.8	52.6	39.0	36.5	37.5	51.5	40.5	32.3
10/12/2016 03:00	29.5	41.5	31.3	27.1	37.4	45.1	38.7	36.3	36.3	51.9	39.1	30.9
10/12/2016 03:15	31.9	45.7	34.7	27.6	38.1	56.9	39.5	36.5	37.0	49.3	40.3	31.4
10/12/2016 03:30	30.3	45.4	31.7	27.3	37.3	45.1	38.2	36.4	33.5	45.3	36.1	29.9
10/12/2016 03:45	29.9	42.2	31.6	27.3	37.2	46.9	37.8	36.4	33.6	44.2	36.1	30.1
10/12/2016 04:00	30.5	42.4	32.3	28.0	37.6	44.2	38.6	36.7	34.3	45.0	37.4	30.7
10/12/2016 04:15	31.4	44.1	33.5	28.1	37.5	52.2	38.4	36.5	34.0	45.3	36.3	30.5
10/12/2016 04:30	50.1	74.4	36.1	28.6	37.8	46.2	38.8	36.6	33.8	44.0	36.6	30.3
10/12/2016 04:45	47.1	71.4	35.0	28.7	37.7	57.5	38.7	36.5	33.1	45.5	35.4	30.3
10/12/2016 05:00	38.7	48.8	42.7	29.5	37.5	45.3	38.3	36.6	34.8	47.1	37.0	31.8
10/12/2016 05:15	54.3	75.0	40.1	31.5	38.4	48.6	39.2	36.9	35.7	51.1	38.1	31.8
10/12/2016 05:30	55.5	77.0	39.7	32.0	38.6	49.4	39.6	37.3	35.3	46.3	37.7	32.5
10/12/2016 05:45	56.2	74.2	42.1	31.5	38.9	50.9	39.9	37.1	36.1	45.9	39.3	32.4
10/12/2016 06:00	51.8	77.8	38.2	31.2	39.2	50.2	40.1	37.3	35.9	48.7	37.9	32.6
10/12/2016 06:15	57.9	77.5	43.8	33.0	39.7	48.7	41.0	38.0	37.0	48.0	39.4	34.2
10/12/2016 06:30	53.8	78.2	40.1	34.2	39.7	48.3	41.0	38.2	37.4	48.1	39.3	35.1
10/12/2016 06:45	56.2	76.0	43.0	34.1	40.4	49.3	41.9	38.4	39.7	57.2	40.5	35.6
10/12/2016 07:00	57.8	78.5	45.0	35.5	44.5	60.3	47.9	39.7	42.3	59.5	44.5	36.4
10/12/2016 07:15	61.0	84.6	45.7	36.7	51.1	72.9	51.8	40.9	44.6	64.1	48.4	38.1
10/12/2016 07:30	55.3	76.3	43.8	37.2	49.8	76.1	48.2	40.4	44.9	59.1	48.6	37.9
10/12/2016 07:45	57.9	80.4	44.4	37.3	42.9	58.0	45.1	40.0	43.1	58.6	46.0	37.7
10/12/2016 08:00	57.5	76.7	47.2	37.2	42.2	62.9	44.3	39.0	41.9	54.9	44.7	37.6
10/12/2016 08:15	56.9	78.7	48.3	40.2	43.5	56.8	45.8	40.1	44.7	64.4	47.3	38.4
10/12/2016 08:30	57.0	77.9	46.5	39.9	50.4	71.5	53.6	40.8	51.7	67.7	53.8	45.8
10/12/2016 08:45	54.9	78.0	45.6	39.9	43.9	58.6	46.7	39.8	51.0	65.1	53.5	45.5
10/12/2016 09:00	57.5	77.2	49.3	40.6	46.8	62.9	48.4	43.4	49.0	67.0	51.4	45.4
10/12/2016 09:15	57.2	76.7	50.1	41.4	46.9	65.9	48.0	40.9	57.0	76.8	60.1	49.6
10/12/2016 09:30	58.6	77.3	48.8	41.2	44.8	61.5	47.4	41.0	55.9	74.2	58.0	51.7
10/12/2016 09:45	56.5	76.9	45.7	39.7	43.1	52.1	45.2	40.6	51.7	67.4	54.0	42.2
10/12/2016 10:00	58.0	77.1	50.8	40.3	44.9	59.6	47.2	41.8	50.0	75.2	51.6	41.2
10/12/2016 10:15	56.7	77.2	47.5	40.6	45.7	61.1	48.0	42.1	46.3	63.8	48.4	41.0
10/12/2016 10:30	54.9	75.6	46.7	40.8	45.2	64.2	46.9	41.6	47.2	66.2	50.8	40.8
10/12/2016 10:45	53.8	76.6	49.7	41.9	53.9	82.8	51.5	42.1	53.0	69.8	54.5	49.7
10/12/2016 11:00	56.9	76.1	50.1	42.3	47.7	65.9	49.7	42.4	53.7	71.9	55.4	47.5
10/12/2016 11:15	57.0	75.9	48.2	41.3	45.6	56.6	48.3	41.9	48.9	71.0	51.0	43.6
10/12/2016 11:30	55.4	78.1	46.3	41.3	45.9	61.4	48.6	41.7	53.9	71.7	57.2	43.5
10/12/2016 11:45	57.2	79.7	47.4	41.8	45.8	69.1	47.8	42.2	52.5	71.0	54.8	45.9
10/12/2016 12:00	54.9	76.8	45.2	40.8	55.7	74.1	58.7	41.9	45.8	60.6	48.2	41.2
10/12/2016 12:15	58.9	78.1	46.7	42.0	48.8	60.1	51.4	44.0	51.1	65.9	54.1	45.1
10/12/2016 12:30	57.6	76.0	45.6	40.6	47.2	59.3	50.3	41.6	47.7	61.1	51.6	41.5
10/12/2016 12:45	57.5	81.5	46.3	40.6	53.1	73.1	51.3	41.3	44.9	67.6	47.2	39.9
10/12/2016 13:00	58.1	80.7	46.4	40.7	43.6	62.2	45.9	40.3	42.8	58.3	44.2	40.2
10/12/2016 13:15	57.8	77.7	46.6	40.4	43.4	54.9	46.3	40.0	44.9	67.2	45.0	39.9
10/12/2016 13:30	55.2	75.9	46.3	40.3	43.3	54.0	45.8	40.0	43.4	61.6	45.5	39.8
10/12/2016 13:45	56.2	77.3	46.2	41.0	43.7	53.8	46.2	40.0	47.7	69.8	48.7	41.5
10/12/2016 14:00	57.4	76.5	47.1	41.4	43.6	58.8	46.2	40.1	45.0	64.4	47.1	41.4
10/12/2016 14:15	56.1	77.7	48.5	41.5	44.5	59.3	46.9	40.6	46.6	66.4	49.0	42.1
10/12/2016 14:30	57.3	77.3	47.6	40.4	45.4	66.2	47.7	40.5	46.4	58.7	49.7	41.8
10/12/2016 14:45	55.8	77.8	46.1	41.1	44.0	57.9	46.2	40.5	47.6	68.9	48.3	41.5
10/12/2016 15:00	56.3	76.5	48.8	41.1	44.3	62.4	46.2	39.9	44.6	63.4	46.5	41.2
10/12/2016 15:15	56.3	76.8	47.3	40.3	44.5	73.0	45.5	39.5	43.4	56.5	45.4	40.4
10/12/2016 15:30	60.8	84.0	47.3	40.8	44.4	62.7	47.0	40.7	43.7	54.1	46.0	40.7
10/12/2016 15:45	55.5	79.4	47.1	41.5	44.6	63.3	47.4	40.4	44.1	58.2	46.2	41.0

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
10/12/2016 16:00	57.6	78.7	46.9	41.1	44.9	68.0	47.3	41.3	44.9	60.9	47.4	41.3
10/12/2016 16:15	57.0	76.9	47.4	41.5	45.4	55.5	47.8	41.5	46.5	57.5	49.2	42.7
10/12/2016 16:30	57.2	76.5	47.8	41.2	48.6	61.4	50.5	45.5	47.9	60.4	50.5	43.0
10/12/2016 16:45	55.5	78.0	46.6	41.6	45.6	58.0	48.0	42.5	47.0	55.0	49.2	43.2
10/12/2016 17:00	54.5	75.4	47.3	41.5	46.1	56.4	48.6	42.8	48.0	61.1	51.3	43.2
10/12/2016 17:15	58.0	78.8	47.7	41.6	46.7	59.3	49.2	42.6	48.2	58.5	51.2	43.6
10/12/2016 17:30	56.9	78.0	47.6	40.7	45.7	57.6	48.6	41.5	49.3	59.0	52.7	44.0
10/12/2016 17:45	57.5	78.6	47.6	41.4	44.8	56.0	47.1	41.6	47.4	56.1	50.4	43.1
10/12/2016 18:00	55.1	75.2	48.4	41.9	45.5	55.9	48.1	41.8	48.9	60.0	51.8	44.2
10/12/2016 18:15	56.2	78.7	47.4	41.5	45.4	57.0	47.7	41.7	48.7	59.4	51.8	43.6
10/12/2016 18:30	52.3	77.2	45.7	40.4	43.7	56.2	46.2	40.0	47.7	60.8	50.2	42.2
10/12/2016 18:45	51.4	73.5	47.0	40.1	45.2	55.3	48.1	40.4	47.5	57.4	50.6	41.8
10/12/2016 19:00	53.8	78.8	47.0	41.8	49.2	59.2	52.5	43.9	52.4	63.4	56.0	45.5
10/12/2016 19:15	56.6	74.5	49.8	42.3	49.0	57.4	52.1	44.8	54.9	71.7	58.1	48.1
10/12/2016 19:30	51.7	76.1	47.1	41.1	49.3	60.2	52.6	43.2	53.6	64.3	57.1	46.3
10/12/2016 19:45	57.5	79.2	47.7	41.0	50.4	60.3	54.2	43.3	53.2	63.5	56.4	46.4
10/12/2016 20:00	43.7	58.8	45.7	40.5	51.0	69.6	54.6	43.4	53.7	66.7	56.9	45.9
10/12/2016 20:15	56.8	77.7	49.5	42.4	52.9	63.7	55.7	47.1	55.7	69.2	58.9	49.0
10/12/2016 20:30	53.3	76.4	45.9	37.6	46.0	59.9	49.6	40.5	50.7	63.9	53.8	42.2
10/12/2016 20:45	51.9	73.3	45.8	37.2	50.9	62.9	55.2	38.0	45.6	59.9	49.1	37.5
10/12/2016 21:00	44.5	57.2	47.4	39.4	50.4	61.0	54.2	44.2	47.9	61.4	51.9	41.0
10/12/2016 21:15	55.0	76.1	54.2	41.5	55.3	65.9	59.7	44.3	53.6	69.0	57.4	42.8
10/12/2016 21:30	54.6	76.1	47.2	41.8	45.2	56.4	48.0	39.5	42.6	50.8	46.1	38.2
10/12/2016 21:45	39.3	49.3	41.9	36.3	41.2	54.1	44.0	36.6	39.1	49.9	41.3	35.9
10/12/2016 22:00	49.8	75.1	40.2	35.8	39.3	56.6	41.6	35.1	37.5	52.4	39.3	35.1
10/12/2016 22:15	58.0	76.5	43.8	36.6	39.0	53.7	40.7	35.1	37.5	50.1	39.0	35.6
10/12/2016 22:30	38.1	52.7	40.1	35.5	37.7	48.7	39.7	34.4	37.3	47.5	39.1	34.8
10/12/2016 22:45	56.9	86.6	42.8	34.4	37.1	54.7	38.1	33.0	36.4	49.4	38.0	34.3
10/12/2016 23:00	48.6	73.9	39.4	34.3	36.7	49.4	38.8	33.0	35.9	46.2	37.9	33.1
10/12/2016 23:15	50.6	76.9	37.4	33.6	35.0	56.2	36.5	31.8	34.7	45.6	36.5	32.6
10/12/2016 23:30	53.4	73.8	40.6	34.2	37.0	49.6	38.8	32.2	36.1	48.8	38.2	33.1
10/12/2016 23:45	55.3	74.0	42.7	36.7	37.5	46.8	39.5	34.5	37.8	54.6	39.4	35.2
11/12/2016 00:00	53.5	77.2	41.1	34.5	36.6	54.1	38.5	32.9	36.5	45.8	38.7	33.4
11/12/2016 00:15	50.6	72.4	40.9	34.7	35.2	49.0	37.5	31.7	37.2	48.7	39.6	33.2
11/12/2016 00:30	53.9	72.4	40.1	33.0	35.6	53.0	37.4	31.3	35.4	52.2	37.8	32.1
11/12/2016 00:45	55.4	84.3	40.2	34.3	34.8	56.4	36.1	31.3	35.6	45.2	37.2	33.3
11/12/2016 01:00	36.2	48.5	38.4	33.0	34.0	44.6	36.3	30.1	34.6	46.0	36.6	31.8
11/12/2016 01:15	35.5	43.7	37.8	32.4	33.9	49.2	35.7	30.4	34.8	44.2	36.8	31.7
11/12/2016 01:30	35.0	46.6	37.3	30.8	33.1	58.8	35.0	28.4	34.2	45.5	36.5	30.6
11/12/2016 01:45	34.1	45.9	36.5	30.9	33.5	50.5	34.9	28.7	34.0	46.1	36.2	30.5
11/12/2016 02:00	33.7	43.4	36.5	30.1	31.7	41.4	34.6	27.4	33.4	44.6	36.0	29.7
11/12/2016 02:15	32.8	43.9	35.0	29.5	32.3	53.3	34.0	27.5	32.9	45.7	35.0	29.9
11/12/2016 02:30	34.7	45.8	37.9	30.1	33.1	49.7	35.5	28.1	33.5	45.4	35.7	30.1
11/12/2016 02:45	33.4	44.5	36.1	29.1	33.5	48.8	34.7	27.3	34.0	47.3	36.7	29.5
11/12/2016 03:00	31.7	44.6	34.5	27.5	28.8	44.0	31.2	24.1	31.7	46.2	33.9	28.0
11/12/2016 03:15	30.6	45.6	32.9	27.5	28.8	38.6	31.0	25.2	31.2	46.3	33.1	28.3
11/12/2016 03:30	29.8	41.5	31.9	27.0	32.0	61.3	29.5	24.5	30.4	45.3	32.4	27.2
11/12/2016 03:45	30.6	40.7	32.4	27.9	31.6	53.7	31.1	25.5	31.2	47.8	32.9	28.2
11/12/2016 04:00	31.1	50.6	32.9	27.3	30.9	47.8	32.9	23.9	31.1	45.2	34.1	26.9
11/12/2016 04:15	65.1	91.6	38.0	26.6	46.6	75.2	32.6	23.7	31.1	48.8	33.1	27.2
11/12/2016 04:30	32.3	46.0	34.7	28.5	30.1	55.9	32.2	26.2	31.6	45.7	33.6	28.4
11/12/2016 04:45	33.4	46.5	35.9	28.7	29.9	41.2	32.2	26.7	31.9	46.4	34.1	28.2
11/12/2016 05:00	31.0	39.2	32.8	28.6	28.9	45.9	30.8	26.2	31.2	46.7	32.4	28.9
11/12/2016 05:15	34.9	49.2	37.8	29.3	32.8	51.2	35.1	27.6	32.8	44.7	35.7	28.9
11/12/2016 05:30	38.5	52.2	41.6	33.4	36.2	51.7	38.4	30.5	35.5	47.1	38.2	32.0
11/12/2016 05:45	36.1	45.9	38.7	33.0	34.5	51.5	36.8	30.3	34.8	44.8	37.3	31.7
11/12/2016 06:00	47.1	70.1	38.9	32.9	34.9	49.2	36.8	31.7	36.0	48.7	38.1	32.6
11/12/2016 06:15	50.7	75.7	43.6	32.9	38.9	51.4	41.5	32.1	37.7	47.9	40.4	33.0
11/12/2016 06:30	50.0	74.4	43.5	35.5	39.1	50.0	41.3	36.3	39.9	56.4	41.3	36.0
11/12/2016 06:45	52.1	79.3	41.3	36.3	41.8	62.5	43.0	37.0	40.5	50.3	42.8	37.6
11/12/2016 07:00	42.2	75.0	40.8	36.4	63.2	88.3	60.0	39.0	43.9	56.4	47.4	39.1
11/12/2016 07:15	54.4	74.0	44.0	37.2	47.2	68.9	47.6	36.1	46.1	64.2	49.5	38.1
11/12/2016 07:30	57.8	81.1	47.5	38.2	49.9	72.5	49.7	37.6	45.3	70.3	48.2	38.7
11/12/2016 07:45	51.7	76.3	44.8	39.5	45.6	61.7	48.9	37.8	44.5	66.8	47.1	39.7
11/12/2016 08:00	56.6	76.3	47.3	38.7	41.9	52.3	44.8	37.8	43.5	64.4	45.8	39.2
11/12/2016 08:15	56.0	80.8	43.7	39.0	51.4	71.6	53.2	38.1	42.0	57.9	43.6	39.2
11/12/2016 08:30	53.2	80.9	47.2	39.7	44.2	67.8	47.6	38.9	45.2	63.1	48.2	39.8
11/12/2016 08:45	56.2	76.3	48.6	39.8	47.5	63.5	50.9	39.1	45.4	64.6	46.6	39.8
11/12/2016 09:00	55.4	76.9	45.8	39.1	53.2	81.0	49.6	38.0	43.8	68.6	44.9	39.2
11/12/2016 09:15	56.5	80.6	44.9	40.6	44.0	72.9	44.6	38.8	43.1	64.2	43.4	39.6

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
11/12/2016 09:30	54.5	74.9	45.8	41.2	43.7	62.5	45.6	38.9	44.3	63.6	44.8	40.0
11/12/2016 09:45	53.8	76.0	44.8	41.3	43.5	59.6	45.5	38.8	44.7	64.3	45.8	40.2
11/12/2016 10:00	56.4	77.0	45.6	41.3	43.8	60.4	46.1	38.9	43.6	55.3	45.9	40.3
11/12/2016 10:15	57.4	77.5	49.6	41.3	49.9	73.2	52.0	39.1	44.5	58.1	46.7	40.5
11/12/2016 10:30	49.9	73.8	42.5	38.9	42.1	55.0	45.0	38.0	40.8	53.0	42.6	38.1
11/12/2016 10:45	55.1	75.4	52.7	39.1	52.5	73.9	55.0	37.3	53.7	74.6	52.1	37.7
11/12/2016 11:00	57.7	78.5	49.3	38.6	50.3	72.5	51.3	37.3	43.1	60.9	43.8	36.9
11/12/2016 11:15	60.2	82.2	44.8	37.6	42.5	57.4	44.9	35.4	48.6	67.0	47.6	36.4
11/12/2016 11:30	52.5	77.1	43.8	38.0	40.5	52.4	43.4	36.6	40.8	58.1	43.1	36.6
11/12/2016 11:45	52.6	74.5	44.1	40.6	42.0	53.0	45.0	39.0	41.1	50.4	42.3	39.6
11/12/2016 12:00	54.9	79.2	44.0	40.2	48.0	71.5	47.7	39.1	42.2	58.8	44.0	40.0
11/12/2016 12:15	53.5	73.2	50.4	40.3	45.9	64.1	46.4	38.3	45.7	65.2	45.0	39.5
11/12/2016 12:30	57.7	80.7	46.8	39.1	41.7	55.0	45.8	37.1	41.1	52.8	42.2	38.8
11/12/2016 12:45	53.4	75.9	44.4	39.6	42.2	58.8	45.8	37.2	41.8	56.4	44.3	38.3
11/12/2016 13:00	57.2	79.1	48.4	39.2	42.5	57.0	45.2	36.8	43.6	62.4	45.9	38.6
11/12/2016 13:15	57.7	82.0	43.8	39.3	43.0	60.9	45.7	37.3	42.8	67.7	42.6	38.7
11/12/2016 13:30	55.2	76.4	49.4	38.5	47.3	71.2	50.2	37.3	43.8	56.8	47.6	38.7
11/12/2016 13:45	53.1	75.1	44.6	38.8	41.1	53.9	44.6	36.5	44.6	64.9	47.0	38.1
11/12/2016 14:00	56.4	78.2	42.5	39.2	40.9	60.6	42.5	36.6	41.2	53.8	42.7	38.5
11/12/2016 14:15	57.4	81.0	44.8	38.8	41.5	56.3	44.9	36.5	41.8	56.9	43.7	38.2
11/12/2016 14:30	54.9	75.8	51.3	37.2	47.6	67.4	49.4	36.0	48.4	67.2	50.5	36.9
11/12/2016 14:45	52.9	75.9	51.1	39.2	48.7	65.3	50.5	37.7	48.8	76.6	49.1	38.4
11/12/2016 15:00	56.3	79.3	46.2	39.8	41.3	51.7	43.8	38.2	43.4	57.0	45.3	39.4
11/12/2016 15:15	58.2	82.3	43.6	39.6	41.1	56.3	43.7	38.1	41.9	55.2	43.6	39.0
11/12/2016 15:30	54.5	76.5	42.8	39.3	43.2	67.7	43.1	37.6	42.1	56.5	44.8	38.3
11/12/2016 15:45	53.8	76.2	46.9	39.5	44.8	65.1	46.7	38.2	43.1	56.8	44.3	38.8
11/12/2016 16:00	54.5	79.9	43.6	40.1	46.0	73.4	45.7	38.2	41.0	48.2	42.8	39.0
11/12/2016 16:15	56.6	81.2	46.4	39.6	48.3	73.1	47.8	37.6	42.3	59.9	44.5	38.8
11/12/2016 16:30	56.4	75.9	46.5	41.6	44.9	55.4	47.7	40.6	53.6	75.4	57.6	42.3
11/12/2016 16:45	51.5	77.4	44.7	41.5	43.1	56.2	45.9	39.5	43.6	50.8	45.7	41.5
11/12/2016 17:00	56.4	78.7	45.5	39.5	41.5	55.0	43.4	38.1	41.6	59.2	42.9	39.4
11/12/2016 17:15	57.8	82.4	45.2	38.4	41.5	58.3	44.2	36.9	40.4	51.2	42.3	38.0
11/12/2016 17:30	54.5	75.7	44.6	39.4	41.1	52.1	43.6	37.5	40.8	51.2	42.6	38.6
11/12/2016 17:45	53.6	74.0	43.2	37.9	40.1	63.9	40.7	35.1	39.9	53.0	41.6	37.4
11/12/2016 18:00	54.7	76.9	44.9	39.0	39.5	50.7	41.5	35.9	39.8	50.0	41.9	37.5
11/12/2016 18:15	55.9	80.5	44.8	38.5	42.4	62.2	43.1	35.9	39.8	57.2	40.8	37.1
11/12/2016 18:30	53.9	77.0	45.6	39.4	41.7	53.9	44.2	37.6	41.0	51.9	43.1	38.3
11/12/2016 18:45	52.6	76.8	46.2	39.7	40.7	56.1	41.9	37.8	40.0	51.7	41.3	38.2
11/12/2016 19:00	56.6	77.7	46.7	40.4	41.9	52.9	44.1	38.9	41.9	53.7	43.4	39.5
11/12/2016 19:15	58.1	83.5	47.1	39.0	44.4	68.2	43.9	36.9	41.2	49.9	43.4	38.0
11/12/2016 19:30	54.4	74.2	45.0	37.5	40.1	53.2	42.4	35.8	39.7	53.8	41.5	36.5
11/12/2016 19:45	53.8	75.3	45.2	37.7	39.1	52.0	41.1	34.8	39.2	52.2	40.9	36.0
11/12/2016 20:00	58.4	79.0	47.4	37.0	43.4	58.5	44.0	35.5	39.8	59.7	42.7	35.3
11/12/2016 20:15	51.3	75.6	44.5	37.4	39.3	58.5	41.3	33.9	38.9	52.1	41.0	36.2
11/12/2016 20:30	52.4	74.0	43.1	36.6	39.6	50.3	42.9	34.6	39.7	48.3	42.3	36.3
11/12/2016 20:45	54.8	74.3	45.4	36.1	39.6	50.6	42.5	34.9	38.5	45.5	40.5	36.0
11/12/2016 21:00	56.3	77.5	46.3	34.8	39.3	57.9	42.0	33.6	39.0	56.9	40.7	34.5
11/12/2016 21:15	52.8	78.0	44.8	34.4	38.2	52.0	41.6	33.1	36.0	49.2	37.6	33.2
11/12/2016 21:30	52.6	77.9	41.8	34.7	38.3	51.4	41.9	32.6	37.6	51.1	39.8	33.7
11/12/2016 21:45	52.7	74.4	42.7	34.6	37.7	53.2	40.7	32.5	37.6	61.6	38.7	33.5
11/12/2016 22:00	56.2	76.5	44.3	34.3	38.7	52.0	42.0	32.7	38.1	61.1	38.8	34.4
11/12/2016 22:15	52.8	76.3	44.7	33.2	36.9	51.6	40.0	32.1	38.6	63.0	39.2	32.9
11/12/2016 22:30	54.6	76.6	43.7	32.2	38.6	53.4	41.5	30.8	37.1	53.7	39.8	31.9
11/12/2016 22:45	50.5	74.2	44.9	33.5	39.5	63.1	42.3	31.8	38.9	63.7	40.5	32.6
11/12/2016 23:00	37.7	50.1	41.8	28.4	35.8	52.9	39.5	27.7	33.5	43.1	36.4	29.7
11/12/2016 23:15	55.6	76.5	44.8	30.4	37.8	53.5	41.1	29.6	36.9	57.5	40.2	30.7
11/12/2016 23:30	53.6	73.6	43.2	29.1	36.0	53.2	39.2	27.6	35.4	51.4	37.9	29.7
11/12/2016 23:45	52.5	74.3	45.3	27.2	36.2	52.9	39.5	27.0	36.0	49.1	39.4	29.8
12/12/2016 00:00	57.0	77.0	42.8	28.7	37.2	51.6	39.6	27.4	34.9	45.8	38.5	29.3
12/12/2016 00:15	49.4	74.5	39.4	26.5	32.7	48.4	36.4	26.1	33.1	48.3	36.3	28.5
12/12/2016 00:30	29.0	44.1	30.9	26.1	30.8	51.9	33.7	25.9	30.0	42.9	31.9	28.0
12/12/2016 00:45	35.1	51.2	37.7	26.4	32.6	49.3	35.5	26.2	31.1	49.6	32.7	28.0
12/12/2016 01:00	31.8	54.8	33.4	26.0	32.2	52.8	33.8	26.4	32.3	50.8	33.8	28.0
12/12/2016 01:15	29.7	43.8	31.9	26.1	31.2	49.6	33.5	25.7	29.7	42.5	30.4	27.7
12/12/2016 01:30	28.2	49.6	29.4	25.7	30.1	47.5	31.2	26.1	30.0	43.7	31.4	27.8
12/12/2016 01:45	29.2	41.0	31.1	25.3	29.8	49.3	32.0	25.9	30.1	46.1	31.5	28.1
12/12/2016 02:00	28.0	37.6	30.0	25.6	29.2	49.0	30.7	26.2	29.6	44.3	30.5	28.0
12/12/2016 02:15	28.1	41.2	29.6	25.1	29.4	50.7	31.0	26.0	29.6	43.4	30.6	28.1
12/12/2016 02:30	25.9	35.0	26.9	24.6	28.8	48.2	30.3	25.6	28.4	37.6	29.5	27.3
12/12/2016 02:45	31.4	47.0	33.2	26.3	30.8	50.2	33.1	25.4	29.6	45.4	30.8	27.8

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
12/12/2016 03:00	28.0	49.9	27.6	25.3	28.0	52.4	29.0	25.4	29.6	45.5	30.8	27.8
12/12/2016 03:15	27.8	42.4	27.8	24.6	30.3	57.2	32.9	24.9	29.3	47.9	30.5	27.2
12/12/2016 03:30	31.1	46.8	34.9	24.5	31.9	48.0	35.4	25.8	30.1	46.6	31.4	27.6
12/12/2016 03:45	34.0	54.4	34.7	25.4	36.3	54.7	38.7	25.2	33.3	46.2	36.5	28.3
12/12/2016 04:00	31.7	43.2	35.3	25.4	32.2	51.2	34.8	25.5	32.5	45.4	35.5	28.7
12/12/2016 04:15	33.3	50.8	35.6	26.2	32.2	51.2	34.3	25.9	31.0	45.1	32.8	28.0
12/12/2016 04:30	36.6	50.9	41.1	27.5	36.0	51.4	39.6	27.2	33.0	46.4	36.0	28.6
12/12/2016 04:45	55.5	75.6	42.5	28.9	37.7	50.6	41.5	28.5	32.7	45.4	34.9	29.5
12/12/2016 05:00	38.9	52.1	42.3	30.0	39.0	55.5	42.8	29.3	35.1	49.4	38.3	29.8
12/12/2016 05:15	57.6	81.5	43.5	31.6	38.7	52.5	42.0	31.4	34.3	45.5	37.0	30.9
12/12/2016 05:30	55.3	79.3	44.2	30.7	39.7	57.1	42.8	30.0	34.5	44.3	37.4	30.6
12/12/2016 05:45	54.9	82.3	43.6	33.2	40.0	52.7	43.2	32.7	37.4	48.9	40.5	32.2
12/12/2016 06:00	59.0	82.2	46.5	32.5	41.2	53.9	45.0	31.9	37.0	48.0	40.4	31.9
12/12/2016 06:15	55.0	76.6	44.5	34.1	41.8	51.3	44.9	35.7	38.6	52.1	42.1	33.4
12/12/2016 06:30	59.1	84.3	45.7	35.4	43.9	54.9	47.2	37.6	39.7	47.9	42.3	35.1
12/12/2016 06:45	57.7	77.6	49.3	38.5	45.2	52.5	48.1	39.5	40.6	48.6	43.4	36.3
12/12/2016 07:00	56.3	75.5	48.5	41.3	46.9	58.3	49.5	43.4	43.3	58.6	45.8	39.6
12/12/2016 07:15	57.9	81.9	48.4	41.6	49.6	70.4	51.1	43.5	46.0	60.4	49.4	39.9
12/12/2016 07:30	60.5	86.7	47.3	41.5	49.0	72.7	48.4	42.8	46.4	63.6	50.1	39.2
12/12/2016 07:45	57.3	80.5	47.2	41.7	50.6	67.9	53.5	44.1	42.8	58.7	44.9	38.2
12/12/2016 08:00	55.5	75.3	47.5	41.8	56.7	73.4	59.1	49.9	47.8	65.2	50.7	40.4
12/12/2016 08:15	60.1	83.5	49.3	43.4	54.2	72.3	57.4	48.5	51.2	68.3	54.1	42.9
12/12/2016 08:30	54.9	75.6	47.4	43.4	51.7	67.7	54.3	47.0	49.5	70.4	50.8	41.3
12/12/2016 08:45	57.8	80.3	48.1	42.1	51.8	68.7	54.4	46.3	51.2	71.5	52.5	46.1
12/12/2016 09:00	54.9	78.2	46.3	42.0	49.4	65.9	51.6	45.0	50.3	70.9	52.4	45.8
12/12/2016 09:15	58.1	83.3	48.0	41.8	52.1	64.4	54.1	49.1	55.6	65.0	59.3	49.0
12/12/2016 09:30	58.9	80.9	48.3	41.0	54.5	72.8	56.7	49.5	54.0	73.6	56.5	48.0
12/12/2016 09:45	57.1	81.1	45.5	40.4	53.9	79.2	54.5	46.0	54.0	78.0	55.1	46.8
12/12/2016 10:00	60.3	84.3	47.8	40.1	51.9	63.3	53.8	48.7	53.4	67.0	56.5	46.8
12/12/2016 10:15	57.3	81.2	46.4	39.4	51.5	62.7	53.1	49.3	52.0	64.4	54.4	48.9
12/12/2016 10:30	55.9	73.0	48.0	41.5	51.6	64.8	53.7	48.7	53.0	64.6	55.8	49.1
12/12/2016 10:45	55.3	78.2	48.1	41.6	51.9	67.0	53.9	48.9	53.0	73.0	55.2	48.9
12/12/2016 11:00	57.6	80.9	48.1	41.7	51.4	64.6	54.0	46.2	51.5	65.1	54.4	46.9
12/12/2016 11:15	55.4	74.8	48.3	40.5	53.7	66.4	55.9	50.3	54.1	67.0	56.3	50.5
12/12/2016 11:30	58.0	80.3	48.7	41.3	50.5	64.4	52.2	47.4	53.8	70.3	56.0	50.2
12/12/2016 11:45	58.9	82.1	50.4	41.6	49.3	64.6	51.4	46.4	53.6	74.9	55.4	51.1
12/12/2016 12:00	57.6	80.0	46.8	41.6	51.4	65.5	53.7	47.7	54.5	65.5	56.6	51.5
12/12/2016 12:15	53.6	76.2	45.1	39.7	50.0	70.7	52.3	45.5	53.4	68.8	55.1	51.1
12/12/2016 12:30	58.5	83.7	47.1	41.1	48.0	63.6	50.4	44.2	51.5	63.4	53.0	49.6
12/12/2016 12:45	54.4	75.0	46.4	41.0	49.6	67.1	52.1	43.8	52.8	69.1	54.9	49.5
12/12/2016 13:00	56.5	80.0	45.3	39.7	49.3	59.0	52.3	44.1	55.6	64.1	57.0	50.6
12/12/2016 13:15	55.4	77.4	46.8	40.4	52.4	59.9	54.6	48.8	56.5	63.9	58.0	54.8
12/12/2016 13:30	55.3	76.3	47.4	40.5	51.0	65.0	53.0	48.1	53.8	66.6	56.2	50.5
12/12/2016 13:45	55.8	78.4	49.3	42.4	54.1	70.8	57.1	48.4	56.9	73.5	58.6	51.4
12/12/2016 14:00	61.0	81.2	50.3	41.3	52.8	67.0	56.2	47.0	58.0	69.4	59.4	56.0
12/12/2016 14:15	53.4	77.6	46.9	41.5	58.4	71.0	63.6	46.9	62.8	78.9	66.0	55.5
12/12/2016 14:30	56.5	74.5	48.8	41.8	56.6	67.5	60.7	48.6	65.2	76.8	70.1	52.2
12/12/2016 14:45	52.5	77.6	46.8	41.9	69.5	74.5	71.5	50.2	52.8	67.6	55.0	49.7
12/12/2016 15:00	56.9	74.8	49.7	42.8	66.4	74.2	71.1	44.7	56.7	71.1	57.4	53.5
12/12/2016 15:15	56.2	77.0	48.8	43.2	48.3	63.5	50.8	44.2	52.5	68.0	54.6	48.6
12/12/2016 15:30	52.2	70.8	47.7	42.6	51.7	76.1	51.4	42.7	49.7	65.6	50.9	47.7
12/12/2016 15:45	62.1	86.1	48.1	42.2	49.2	77.4	49.4	42.0	51.2	74.5	53.2	47.7
12/12/2016 16:00	57.1	75.5	48.1	42.1	48.3	71.5	50.2	42.9	49.6	70.7	50.7	47.6
12/12/2016 16:15	55.7	79.4	47.6	41.0	46.6	62.9	48.5	41.9	48.8	64.3	49.5	47.1
12/12/2016 16:30	54.7	77.7	46.6	40.8	44.9	54.0	47.7	41.6	48.5	56.1	49.6	47.2
12/12/2016 16:45	55.1	77.3	45.9	40.6	44.8	63.0	47.6	41.2	48.7	66.4	49.9	47.2
12/12/2016 17:00	51.4	78.3	44.5	40.7	44.1	60.9	46.7	40.9	48.4	58.6	49.4	47.2
12/12/2016 17:15	58.4	82.0	45.9	40.6	43.4	55.1	46.0	40.1	48.3	56.0	49.3	47.2
12/12/2016 17:30	57.8	79.8	45.8	40.1	42.3	57.7	44.0	39.5	49.0	56.8	49.7	48.1
12/12/2016 17:45	58.5	79.8	46.1	39.0	42.2	50.3	45.4	38.7	49.0	57.8	49.7	48.1
12/12/2016 18:00	53.8	76.2	43.9	38.6	41.7	60.7	44.4	38.5	40.3	56.0	42.2	37.7
12/12/2016 18:15	56.9	77.2	43.9	37.5	41.6	55.5	44.5	37.9	39.3	53.3	41.3	36.4
12/12/2016 18:30	55.8	80.9	41.7	37.0	39.3	56.5	40.6	37.5	38.2	53.7	40.0	35.9
12/12/2016 18:45	57.9	76.9	45.3	37.0	39.7	49.7	42.0	37.5	38.2	53.5	39.9	36.0
12/12/2016 19:00	56.3	81.4	42.2	37.4	40.1	54.6	41.5	37.7	38.4	52.4	40.0	36.2
12/12/2016 19:15	38.7	44.6	40.4	36.6	40.1	51.2	43.4	37.2	38.1	49.2	39.5	35.9
12/12/2016 19:30	56.2	81.4	42.1	36.2	40.0	54.9	41.8	37.0	38.2	49.2	40.2	35.2
12/12/2016 19:45	57.1	81.3	42.7	36.4	41.0	50.0	43.8	37.7	38.3	51.9	40.1	35.7
12/12/2016 20:00	54.7	75.6	42.5	36.0	39.8	50.6	41.7	37.1	38.4	52.4	40.9	35.3
12/12/2016 20:15	57.4	79.9	43.9	36.6	39.6	54.0	41.0	37.4	38.3	49.9	40.3	35.6

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
12/12/2016 20:30	54.1	74.3	42.5	36.6	39.8	52.8	41.2	37.3	38.9	51.3	40.8	36.1
12/12/2016 20:45	56.4	79.2	42.5	35.0	39.8	53.4	41.8	37.0	38.0	48.3	40.0	35.2
12/12/2016 21:00	56.2	80.5	42.5	34.3	39.1	53.9	40.1	36.7	37.6	49.0	40.0	34.1
12/12/2016 21:15	51.2	75.9	42.3	35.6	39.7	52.9	41.1	36.7	37.9	54.5	40.0	34.7
12/12/2016 21:30	56.1	76.6	43.2	32.0	38.0	46.4	39.5	36.1	36.3	50.5	39.0	31.6
12/12/2016 21:45	52.4	78.7	39.3	32.6	37.8	52.7	38.6	36.1	35.9	49.7	38.1	32.8
12/12/2016 22:00	51.1	75.3	38.0	32.7	37.5	47.7	38.1	36.3	35.0	46.6	36.8	32.4
12/12/2016 22:15	58.7	81.8	43.0	34.5	38.9	54.0	39.6	36.7	35.8	49.5	38.2	32.8
12/12/2016 22:30	55.5	78.4	39.5	32.6	39.2	56.8	39.4	36.9	35.3	47.2	37.3	32.1
12/12/2016 22:45	56.2	78.2	42.7	28.5	40.1	55.2	41.6	36.0	35.9	48.6	39.3	30.0
12/12/2016 23:00	57.0	77.5	43.3	32.3	40.3	52.7	42.0	36.4	36.3	48.2	39.6	31.3
12/12/2016 23:15	54.1	81.1	38.7	30.6	39.6	53.4	40.8	36.8	35.3	48.8	37.6	30.5
12/12/2016 23:30	50.2	75.1	37.7	26.9	38.5	51.3	39.9	36.2	33.2	46.9	35.9	29.2
12/12/2016 23:45	52.7	74.6	36.8	27.1	37.5	49.6	38.5	36.1	34.0	51.2	33.7	28.4
13/12/2016 00:00	54.1	75.6	36.2	26.2	36.9	55.6	38.0	35.7	30.4	44.0	32.2	27.5
13/12/2016 00:15	56.3	78.4	39.2	25.9	37.5	50.2	38.7	36.2	32.2	58.2	34.4	26.7
13/12/2016 00:30	32.0	42.7	35.1	25.3	37.6	50.3	37.9	36.3	30.4	44.8	33.1	26.3
13/12/2016 00:45	30.9	45.8	32.3	27.6	36.5	46.4	37.1	35.8	28.0	48.0	28.5	26.1
13/12/2016 01:00	32.0	44.8	33.8	28.0	37.2	57.7	38.3	35.9	29.1	44.5	31.0	26.5
13/12/2016 01:15	50.4	71.7	36.4	24.2	37.4	57.5	38.3	36.1	30.2	49.6	30.9	26.2
13/12/2016 01:30	43.5	74.4	28.2	23.0	36.8	48.7	37.5	36.0	27.3	45.5	27.8	25.1
13/12/2016 01:45	53.0	75.6	26.4	22.5	37.3	48.8	38.2	36.1	28.4	47.1	30.1	25.2
13/12/2016 02:00	31.6	46.0	36.0	22.9	38.7	58.8	39.1	36.1	28.6	47.9	29.9	25.7
13/12/2016 02:15	28.6	48.1	28.8	23.0	36.6	56.9	37.4	35.7	27.7	45.2	29.0	25.4
13/12/2016 02:30	29.6	49.1	30.6	22.8	37.0	56.8	37.2	35.9	28.0	39.9	29.2	26.1
13/12/2016 02:45	32.6	45.2	37.0	23.6	37.9	51.7	39.0	36.0	30.8	44.2	33.5	26.7
13/12/2016 03:00	29.1	45.6	30.4	24.8	36.7	47.8	37.5	35.7	32.1	47.2	33.9	27.1
13/12/2016 03:15	29.1	45.4	29.5	25.1	36.7	52.0	37.4	35.6	28.7	44.1	29.8	26.4
13/12/2016 03:30	53.5	74.9	39.8	25.0	38.3	52.1	39.1	35.9	32.9	47.0	36.3	27.1
13/12/2016 03:45	30.3	47.4	32.4	24.8	37.2	55.5	38.2	35.7	29.9	45.0	32.1	26.7
13/12/2016 04:00	28.9	42.4	31.7	24.9	38.4	56.6	37.1	35.1	29.9	45.9	31.5	26.8
13/12/2016 04:15	32.6	49.2	35.7	25.6	36.3	48.1	37.2	35.2	30.5	44.7	32.9	27.0
13/12/2016 04:30	31.5	46.9	34.5	26.3	36.5	49.6	37.4	35.1	30.9	51.1	33.4	27.6
13/12/2016 04:45	32.7	48.3	36.0	26.7	36.5	48.0	37.4	35.3	30.5	44.9	32.9	27.3
13/12/2016 05:00	35.8	49.9	39.8	27.9	37.8	47.5	39.7	35.7	33.7	47.1	37.1	28.3
13/12/2016 05:15	35.9	49.6	39.8	28.6	39.1	55.3	40.5	35.9	33.5	45.8	36.7	28.8
13/12/2016 05:30	39.1	50.0	42.6	32.4	39.8	49.9	41.8	37.2	37.0	48.1	40.1	31.8
13/12/2016 05:45	38.0	48.4	41.4	29.3	39.7	49.9	41.5	36.8	35.4	46.3	38.0	30.3
13/12/2016 06:00	37.0	48.4	40.7	30.4	39.3	52.5	40.7	36.9	34.4	47.5	37.5	30.2
13/12/2016 06:15	38.9	48.3	42.2	32.9	40.5	48.9	42.9	37.6	36.2	49.8	38.4	32.8
13/12/2016 06:30	40.0	49.7	43.0	34.7	41.3	51.4	43.9	38.4	37.4	54.9	39.1	34.2
13/12/2016 06:45	40.8	54.4	43.5	36.3	43.2	54.9	46.8	39.2	40.2	66.7	43.1	35.1
13/12/2016 07:00	41.6	50.1	44.0	37.6	43.2	52.9	45.6	40.2	41.5	65.3	43.8	37.0
13/12/2016 07:15	42.3	49.8	44.6	39.0	49.1	67.0	52.7	41.3	45.1	64.4	48.4	37.8
13/12/2016 07:30	59.7	85.0	45.1	39.8	49.5	73.0	50.2	42.4	43.4	59.4	46.7	37.8
13/12/2016 07:45	44.5	55.8	46.5	41.7	46.7	56.8	49.3	43.4	46.9	61.0	51.6	38.5
13/12/2016 08:00	44.2	56.2	45.8	41.8	52.0	67.3	54.0	48.3	47.4	72.4	49.7	39.7
13/12/2016 08:15	45.9	54.8	47.6	43.7	51.7	66.9	53.5	48.3	47.0	62.0	49.1	44.1
13/12/2016 08:30	46.4	62.3	47.9	44.0	50.6	71.5	52.3	46.2	51.1	69.8	53.6	45.3
13/12/2016 08:45	46.3	63.4	47.8	43.8	51.0	66.6	54.2	46.3	50.9	72.0	51.5	45.6
13/12/2016 09:00	47.1	63.1	49.0	43.7	51.2	63.4	54.7	45.8	51.9	72.0	53.1	46.9
13/12/2016 09:15	47.3	61.9	49.5	44.4	49.3	65.5	51.6	45.2	50.7	71.3	53.1	46.6
13/12/2016 09:30	55.7	81.0	49.7	43.7	52.5	63.8	55.1	45.9	51.6	74.2	53.3	46.9
13/12/2016 09:45	48.3	62.4	51.2	43.3	53.2	70.6	56.1	46.7	49.9	65.3	52.6	45.5
13/12/2016 10:00	47.7	64.9	48.8	41.3	48.5	66.7	50.8	42.3	52.2	73.3	53.9	44.4
13/12/2016 10:15	53.6	74.9	47.7	41.9	46.0	60.3	48.8	42.4	47.6	61.0	49.7	44.2
13/12/2016 10:30	46.1	61.4	48.2	42.7	52.2	68.6	55.7	43.7	47.8	62.2	49.9	44.7
13/12/2016 10:45	45.1	57.5	47.4	42.2	48.6	62.2	50.5	43.7	49.4	67.3	51.0	46.0
13/12/2016 11:00	44.9	57.6	46.6	42.2	46.1	60.5	48.8	42.4	52.7	74.5	54.3	45.9
13/12/2016 11:15	46.3	61.2	47.9	43.0	48.4	66.0	50.1	43.2	55.4	79.5	57.1	47.8
13/12/2016 11:30	47.4	63.8	49.1	43.4	58.7	69.2	64.0	48.4	56.3	74.8	61.5	46.5
13/12/2016 11:45	45.7	62.4	47.5	42.0	59.8	72.9	65.7	49.1	58.3	79.7	63.1	47.0
13/12/2016 12:00	61.5	87.5	47.7	42.2	54.9	69.7	56.0	48.3	55.6	73.4	58.0	48.1
13/12/2016 12:15	46.1	60.2	47.9	43.6	51.1	67.0	52.9	47.6	53.8	72.1	53.6	46.6
13/12/2016 12:30	46.0	63.2	47.8	43.0	53.6	68.9	55.3	49.2	52.8	72.9	53.7	48.2
13/12/2016 12:45	59.7	83.6	48.1	40.6	53.2	65.3	57.4	44.1	53.3	64.1	56.0	47.6
13/12/2016 13:00	43.9	61.3	45.7	40.6	47.2	60.7	50.1	42.9	49.6	72.1	51.4	46.0
13/12/2016 13:15	43.7	52.7	45.6	41.3	45.4	60.6	47.7	41.7	49.2	65.0	50.2	45.5
13/12/2016 13:30	45.3	65.0	46.8	41.7	47.3	60.0	51.0	41.8	47.5	61.2	49.0	45.5
13/12/2016 13:45	47.1	68.6	48.5	41.9	48.9	66.6	51.2	42.2	50.9	64.9	53.6	45.7

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
13/12/2016 14:00	46.3	60.5	48.4	43.1	49.2	68.2	51.7	43.3	49.2	64.9	51.7	45.1
13/12/2016 14:15	46.5	64.2	47.5	43.3	47.7	64.1	49.8	43.2	50.4	63.6	53.8	44.9
13/12/2016 14:30	46.4	65.0	47.6	43.1	47.7	64.1	50.5	43.3	52.0	73.3	54.1	45.7
13/12/2016 14:45	46.0	56.1	47.9	43.6	50.2	64.5	53.5	44.3	50.4	69.7	52.5	46.2
13/12/2016 15:00	45.8	62.3	47.4	43.2	47.2	68.0	49.3	44.0	50.4	68.3	52.6	46.4
13/12/2016 15:15	54.4	77.1	48.8	44.2	49.0	61.8	51.3	44.7	53.7	70.3	55.7	48.7
13/12/2016 15:30	60.1	85.5	48.8	44.0	49.3	66.2	51.6	44.6	51.8	64.3	54.4	46.9
13/12/2016 15:45	45.9	57.4	47.8	43.3	46.9	62.4	49.1	43.8	52.9	70.9	54.1	46.5
13/12/2016 16:00	45.8	54.5	47.8	43.2	48.9	69.3	51.1	44.5	50.3	70.5	50.3	43.8
13/12/2016 16:15	45.6	57.4	47.8	42.4	50.9	66.4	53.2	43.6	45.6	59.5	47.6	41.7
13/12/2016 16:30	44.4	60.7	46.2	41.6	45.4	57.7	47.8	42.5	44.0	61.9	46.2	40.2
13/12/2016 16:45	44.3	58.0	46.3	40.9	45.4	62.8	47.5	41.9	42.6	56.7	44.0	40.0
13/12/2016 17:00	44.2	52.4	46.0	41.9	44.7	51.5	46.7	42.4	42.5	49.3	44.0	40.6
13/12/2016 17:15	47.8	67.2	46.9	42.1	48.9	70.0	47.1	41.9	47.7	70.4	44.5	40.3
13/12/2016 17:30	53.2	76.1	46.1	41.7	44.4	59.8	46.2	42.3	42.1	48.3	43.5	40.3
13/12/2016 17:45	43.5	52.2	45.4	40.8	43.5	52.0	45.2	41.3	41.5	48.5	43.2	39.4
13/12/2016 18:00	44.1	52.4	46.0	41.4	43.9	53.6	45.7	41.8	41.9	49.4	43.6	40.0
13/12/2016 18:15	43.4	51.8	45.7	39.9	44.2	59.9	46.4	40.9	41.7	52.4	43.5	39.6
13/12/2016 18:30	42.0	51.8	44.1	38.8	43.0	53.7	45.5	40.0	40.7	50.5	42.5	38.3
13/12/2016 18:45	43.1	58.2	45.3	38.7	42.9	57.4	44.9	39.9	41.6	58.1	43.6	38.2
13/12/2016 19:00	43.1	51.9	45.4	39.3	43.0	51.5	45.2	40.2	41.3	50.3	42.9	39.3
13/12/2016 19:15	41.5	56.6	43.9	37.6	41.5	52.2	43.4	39.4	39.9	49.5	41.8	37.5
13/12/2016 19:30	42.5	57.2	44.8	38.0	43.0	56.4	45.4	40.1	41.6	54.9	43.8	37.6
13/12/2016 19:45	41.4	54.0	44.3	36.4	42.8	58.7	45.1	39.3	41.1	53.2	43.9	36.2
13/12/2016 20:00	41.8	51.9	44.4	37.4	42.1	52.9	44.3	39.1	41.0	57.7	43.1	36.8
13/12/2016 20:15	40.2	54.9	42.7	36.0	41.0	53.8	43.0	38.5	39.7	48.4	42.1	36.4
13/12/2016 20:30	40.6	52.7	43.7	34.9	41.7	52.4	44.0	37.8	39.5	48.2	41.8	35.7
13/12/2016 20:45	39.1	47.5	41.5	34.7	40.9	49.9	43.1	38.0	38.2	47.1	40.1	35.3
13/12/2016 21:00	40.3	58.5	42.6	35.9	40.9	54.1	42.3	38.5	38.7	50.0	40.7	36.0
13/12/2016 21:15	38.9	50.3	41.4	35.0	40.0	51.1	41.6	37.8	38.2	47.9	40.8	34.8
13/12/2016 21:30	38.1	49.7	40.5	34.4	40.0	49.9	41.8	37.8	37.3	48.2	39.4	34.4
13/12/2016 21:45	39.0	54.2	42.1	34.7	39.9	51.9	41.7	37.8	38.0	48.7	39.8	35.3
13/12/2016 22:00	38.5	52.2	40.8	34.5	40.0	52.2	41.8	37.9	37.5	51.1	38.8	34.3
13/12/2016 22:15	38.7	54.2	42.2	33.4	39.9	51.0	42.3	37.5	37.3	50.6	39.8	33.6
13/12/2016 22:30	36.6	48.7	39.8	31.7	38.7	47.9	40.1	37.2	35.2	48.4	37.1	32.8
13/12/2016 22:45	37.2	51.3	40.6	31.6	39.4	49.7	41.2	37.3	35.6	48.1	38.2	32.1
13/12/2016 23:00	36.8	46.5	39.9	30.7	39.1	48.4	40.9	37.1	36.3	48.0	38.7	31.9
13/12/2016 23:15	35.6	47.8	38.8	30.3	38.9	52.0	40.0	37.0	34.3	47.1	36.5	31.4
13/12/2016 23:30	32.8	50.1	35.2	29.5	38.5	45.0	39.2	37.6	32.8	40.4	34.3	31.1
13/12/2016 23:45	34.3	45.6	37.1	30.3	39.1	51.8	40.0	38.2	33.5	47.4	34.9	31.0
14/12/2016 00:00	32.8	45.4	35.2	29.6	38.7	49.9	39.2	37.8	33.1	50.1	34.3	30.8
14/12/2016 00:15	60.7	86.1	35.9	29.3	42.7	61.6	39.6	37.8	37.6	54.0	36.7	30.5
14/12/2016 00:30	30.7	46.3	32.1	27.9	38.7	60.0	39.0	37.7	30.9	38.9	32.0	29.6
14/12/2016 00:45	32.0	47.3	33.8	29.1	39.1	54.3	39.7	38.2	32.9	49.2	34.1	30.5
14/12/2016 01:00	33.5	50.1	36.1	28.7	42.3	68.6	39.9	38.1	32.6	48.1	34.3	29.8
14/12/2016 01:15	30.9	47.8	32.2	28.5	39.0	46.7	39.4	38.4	32.3	53.5	33.0	29.6
14/12/2016 01:30	29.7	36.0	30.7	28.4	39.0	50.6	39.2	38.2	31.2	45.9	32.2	29.3
14/12/2016 01:45	31.0	43.3	31.5	29.0	38.4	49.6	39.0	37.7	31.8	47.6	32.8	30.2
14/12/2016 02:00	30.0	40.9	31.6	28.1	39.3	61.5	39.9	38.0	31.8	47.3	33.1	29.7
14/12/2016 02:15	27.9	36.7	28.8	26.8	39.2	58.1	40.3	38.1	30.8	46.7	31.7	28.5
14/12/2016 02:30	29.4	42.6	29.9	27.3	38.8	47.9	39.4	38.0	31.3	46.4	32.3	28.7
14/12/2016 02:45	28.8	41.2	29.5	26.3	38.5	47.8	39.0	37.8	30.1	45.8	31.8	27.9
14/12/2016 03:00	29.0	40.5	30.1	27.3	38.5	56.3	38.8	37.9	31.2	47.4	32.4	28.6
14/12/2016 03:15	31.3	43.5	34.8	27.3	38.9	58.1	39.7	37.8	31.6	46.5	33.7	28.4
14/12/2016 03:30	28.3	35.3	29.3	27.1	38.2	56.3	38.5	37.5	30.7	46.0	32.2	28.3
14/12/2016 03:45	31.1	46.3	31.9	27.4	39.3	66.2	39.2	38.1	31.6	44.7	32.9	28.4
14/12/2016 04:00	30.5	43.8	32.9	27.5	38.6	47.6	39.1	37.6	31.2	46.9	32.7	28.4
14/12/2016 04:15	32.4	45.7	35.0	27.8	38.4	47.5	39.2	37.3	31.7	52.9	33.1	28.6
14/12/2016 04:30	36.7	51.6	39.9	30.3	39.9	55.9	41.8	37.4	33.1	48.1	34.6	30.8
14/12/2016 04:45	32.7	45.0	34.7	30.1	38.5	63.2	39.2	36.9	35.2	51.5	36.8	30.3
14/12/2016 05:00	35.2	48.1	38.7	30.8	38.8	54.9	40.3	37.1	33.3	46.6	35.2	31.1
14/12/2016 05:15	37.0	49.2	40.3	31.5	39.3	53.7	41.3	37.4	33.8	47.2	35.3	31.9
14/12/2016 05:30	40.3	52.1	43.7	33.6	41.8	59.6	44.4	38.3	37.8	52.0	40.4	33.8
14/12/2016 05:45	41.0	50.0	44.2	35.9	42.1	56.8	44.8	38.8	39.3	48.9	42.5	35.2
14/12/2016 06:00	41.8	50.2	43.8	37.1	41.5	51.0	43.4	39.2	38.2	63.8	39.5	35.0
14/12/2016 06:15	41.8	51.0	44.6	37.5	42.6	56.9	44.9	39.7	38.9	47.9	40.9	36.7
14/12/2016 06:30	42.1	50.9	44.6	38.7	43.4	55.1	45.8	40.8	40.3	52.5	43.1	37.4
14/12/2016 06:45	42.1	51.2	44.2	39.2	44.3	53.5	46.8	41.9	42.6	58.4	44.8	38.8
14/12/2016 07:00	44.2	53.1	46.3	41.0	49.9	73.7	51.5	44.0	44.7	59.5	47.5	39.8
14/12/2016 07:15	45.4	55.7	47.4	42.5	50.2	74.0	51.2	44.4	48.4	66.0	51.2	42.1

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
14/12/2016 07:30	59.9	85.9	47.8	43.1	51.0	68.7	54.1	44.2	44.6	59.8	47.9	40.3
14/12/2016 07:45	46.4	55.6	48.1	44.3	48.9	67.4	50.7	45.4	45.5	61.1	48.1	42.1
14/12/2016 08:00	46.8	61.5	48.5	44.7	54.4	72.3	57.5	47.2	48.9	67.0	50.5	43.9
14/12/2016 08:15	47.7	59.3	49.5	45.4	52.4	70.5	54.1	47.9	52.3	69.1	55.0	43.8
14/12/2016 08:30	47.9	60.9	49.6	45.4	51.1	65.8	53.0	47.0	53.1	70.0	55.2	47.4
14/12/2016 08:45	46.8	59.6	48.4	44.7	51.6	71.2	53.6	47.5	49.9	65.7	51.8	47.4
14/12/2016 09:00	45.8	59.3	47.7	43.3	51.4	68.1	54.7	45.1	50.6	65.9	52.1	46.8
14/12/2016 09:15	54.6	80.0	46.6	42.1	49.9	65.0	52.9	44.4	48.7	62.5	51.1	45.7
14/12/2016 09:30	44.8	54.2	46.5	42.6	51.8	68.8	54.7	45.6	52.3	70.3	53.0	45.6
14/12/2016 09:45	43.5	59.6	45.1	41.0	49.1	66.7	50.8	43.6	47.6	67.1	49.0	45.3
14/12/2016 10:00	55.7	84.7	45.0	40.1	47.3	64.5	49.8	42.9	47.2	63.9	49.1	44.6
14/12/2016 10:15	42.1	55.5	44.2	39.3	46.4	60.3	48.7	43.3	46.4	66.0	47.1	44.3
14/12/2016 10:30	43.6	64.0	44.4	40.0	48.8	61.8	51.6	43.8	46.1	65.0	47.6	44.2
14/12/2016 10:45	42.5	53.6	44.3	39.9	50.2	65.6	52.5	46.3	51.9	69.4	53.7	46.1
14/12/2016 11:00	44.3	61.6	46.4	40.9	50.9	68.5	52.7	47.1	53.2	66.6	54.2	51.1
14/12/2016 11:15	44.0	54.3	45.7	40.9	50.5	65.9	53.3	46.1	47.1	64.0	49.4	44.3
14/12/2016 11:30	43.6	54.7	45.5	41.4	51.0	75.4	52.8	45.8	51.5	71.6	54.3	45.2
14/12/2016 11:45	43.1	64.1	44.2	40.5	49.3	68.3	51.3	44.4	49.2	66.4	51.3	43.9
14/12/2016 12:00	44.5	55.8	46.6	41.8	58.5	71.5	62.6	49.8	64.4	78.4	68.3	52.0
14/12/2016 12:15	48.3	61.3	51.4	41.7	70.2	77.5	74.3	52.4	60.8	79.3	63.0	46.4
14/12/2016 12:30	49.1	66.9	50.0	40.6	53.2	70.0	55.9	44.6	55.8	70.8	59.1	46.0
14/12/2016 12:45	41.8	55.2	43.4	39.7	47.7	69.2	50.1	43.0	47.7	64.0	50.2	43.8
14/12/2016 13:00	47.0	64.3	47.4	40.0	49.4	66.5	52.0	42.7	47.7	64.0	48.1	43.5
14/12/2016 13:15	40.8	49.2	42.9	38.2	48.0	64.4	51.4	42.3	45.6	61.0	47.4	43.4
14/12/2016 13:30	43.8	60.4	44.2	38.7	47.0	64.5	49.2	42.1	48.4	64.8	50.6	43.5
14/12/2016 13:45	46.2	61.5	47.9	39.0	52.9	73.8	54.1	42.9	47.8	62.7	50.7	38.6
14/12/2016 14:00	43.5	55.4	45.5	40.6	49.2	72.5	50.2	43.7	48.0	62.9	51.8	41.3
14/12/2016 14:15	43.7	57.6	45.5	40.9	48.9	67.7	51.2	44.3	50.2	67.4	52.5	45.7
14/12/2016 14:30	43.5	53.2	45.4	41.0	48.9	69.3	51.1	44.5	50.0	70.4	50.9	45.6
14/12/2016 14:45	47.3	65.2	48.2	42.3	51.4	75.2	53.5	46.2	48.4	66.0	50.1	45.8
14/12/2016 15:00	43.7	58.8	45.3	41.6	48.9	70.4	50.3	44.7	53.5	67.2	54.8	51.1
14/12/2016 15:15	45.2	63.8	46.9	42.6	49.0	71.4	51.0	45.0	50.2	64.2	53.6	45.3
14/12/2016 15:30	59.4	85.1	46.9	43.0	56.7	75.4	57.7	45.1	51.3	64.8	54.1	46.6
14/12/2016 15:45	43.8	60.8	45.3	41.7	54.5	75.8	57.3	44.5	54.0	68.5	55.1	47.9
14/12/2016 16:00	44.0	57.5	45.7	42.1	49.9	66.1	52.0	44.7	49.1	65.2	51.1	44.9
14/12/2016 16:15	46.9	62.4	47.0	42.2	56.2	76.4	59.7	44.8	47.2	62.5	49.2	40.2
14/12/2016 16:30	44.2	65.9	45.5	41.6	51.4	69.1	54.3	44.3	44.2	64.8	45.6	39.6
14/12/2016 16:45	43.6	59.2	45.4	41.6	45.8	55.8	48.0	43.4	40.8	52.8	42.9	38.6
14/12/2016 17:00	44.1	62.4	46.0	41.4	44.7	64.5	46.4	42.4	40.2	62.7	41.2	37.7
14/12/2016 17:15	43.2	49.9	45.1	40.6	45.1	53.3	47.6	41.9	39.7	51.5	41.5	37.3
14/12/2016 17:30	54.3	77.9	46.3	41.3	45.4	54.1	48.2	42.2	40.7	51.6	42.9	37.0
14/12/2016 17:45	43.6	52.0	45.7	41.0	45.6	60.9	48.1	42.1	40.4	53.9	42.7	37.5
14/12/2016 18:00	42.8	50.5	44.6	40.5	44.1	56.3	46.1	41.8	39.3	49.2	41.1	36.9
14/12/2016 18:15	42.5	55.1	44.5	39.5	43.8	52.6	46.2	41.1	38.1	49.2	40.1	35.8
14/12/2016 18:30	41.7	51.4	43.6	38.6	43.4	51.5	45.9	41.0	37.5	47.8	38.8	35.4
14/12/2016 18:45	47.8	65.9	47.0	38.9	48.1	66.9	47.0	40.5	46.3	64.5	44.2	35.5
14/12/2016 19:00	40.8	50.4	42.9	37.6	43.1	54.0	45.3	40.1	37.9	52.3	39.3	35.1
14/12/2016 19:15	53.8	74.0	43.3	38.0	42.1	54.9	43.8	39.9	35.9	46.1	37.5	34.1
14/12/2016 19:30	40.2	50.0	42.5	36.9	42.5	54.5	44.2	40.0	37.5	50.3	39.7	34.6
14/12/2016 19:45	40.3	51.0	42.9	36.3	42.3	52.0	44.0	39.8	37.2	50.1	38.8	34.7
14/12/2016 20:00	40.6	50.5	43.0	36.2	42.2	53.4	43.8	40.0	36.5	46.7	38.1	34.1
14/12/2016 20:15	40.1	47.9	42.7	35.7	42.0	58.2	43.7	39.8	36.5	47.1	38.2	33.9
14/12/2016 20:30	39.4	50.6	42.2	34.5	41.8	63.1	43.5	39.3	36.3	47.7	38.4	33.5
14/12/2016 20:45	40.2	52.2	42.7	35.9	42.4	55.4	43.9	39.5	36.1	49.0	38.1	32.6
14/12/2016 21:00	39.7	50.4	42.2	35.5	41.9	53.4	43.3	39.3	36.1	53.7	37.7	32.7
14/12/2016 21:15	38.9	49.0	41.9	34.3	41.5	58.5	42.5	39.3	36.0	48.2	37.8	32.9
14/12/2016 21:30	38.8	49.3	41.9	31.9	40.8	55.0	42.2	38.7	35.8	51.1	37.5	32.4
14/12/2016 21:45	39.0	48.7	42.1	32.9	42.1	52.6	43.9	40.0	36.9	53.3	39.3	31.4
14/12/2016 22:00	38.8	54.0	41.9	32.9	42.0	55.3	43.3	39.2	35.8	52.8	37.9	31.8
14/12/2016 22:15	38.9	49.3	42.4	30.5	40.9	51.3	42.9	38.3	34.9	48.0	37.7	30.3
14/12/2016 22:30	37.7	52.5	40.9	31.4	41.0	54.5	42.6	38.9	33.0	43.5	35.1	30.4
14/12/2016 22:45	33.9	48.7	37.0	27.7	40.4	53.5	41.8	38.4	32.8	49.8	34.6	29.1
14/12/2016 23:00	34.3	46.4	38.0	26.9	39.5	46.9	40.8	38.1	34.0	56.0	34.5	27.4
14/12/2016 23:15	36.0	59.7	39.3	28.4	39.9	50.7	41.4	38.1	32.7	46.9	34.8	28.6
14/12/2016 23:30	33.5	46.3	36.9	27.2	38.8	49.2	39.7	37.7	31.7	47.8	33.4	28.5
14/12/2016 23:45	32.4	44.4	35.9	26.3	39.2	50.7	40.4	37.6	31.4	45.6	33.7	28.2
15/12/2016 00:00	30.4	44.7	33.1	26.5	38.5	55.2	38.8	37.3	31.0	48.0	32.7	28.1
15/12/2016 00:15	29.0	40.9	31.2	25.8	38.1	50.0	38.6	37.5	30.0	47.5	31.5	26.9
15/12/2016 00:30	31.8	45.5	36.0	24.7	38.6	53.9	39.0	37.4	30.4	46.8	32.7	26.2
15/12/2016 00:45	29.7	43.9	33.1	23.8	38.1	47.3	38.7	37.3	28.6	37.4	30.4	26.0

Baseline Survey Results - 15 min

Start	LT1				LT2				LT3			
	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90	LAeq	LAFmax	LA10	LA90
15/12/2016 01:00	25.5	38.5	26.5	23.0	37.8	40.2	38.3	37.4	29.8	47.8	31.2	26.9
15/12/2016 01:15	28.5	46.0	30.9	23.1	38.1	55.0	38.5	37.4	31.0	47.8	32.0	25.7
15/12/2016 01:30	26.7	42.0	29.1	23.1	37.8	41.9	38.3	37.3	29.2	46.8	31.0	25.8
15/12/2016 01:45	26.8	44.1	26.3	23.4	37.6	47.3	38.0	37.1	29.3	47.4	31.1	25.9
15/12/2016 02:00	27.4	46.2	26.1	23.7	37.5	48.0	37.8	37.0	28.8	41.1	30.6	26.2
15/12/2016 02:15	27.2	47.0	27.1	23.8	37.7	51.7	38.0	37.0	29.7	46.8	31.4	25.5
15/12/2016 02:30	24.8	43.0	25.4	23.3	37.5	49.0	37.8	37.0	29.4	47.2	31.1	25.3
15/12/2016 02:45	27.6	46.7	29.1	23.7	37.4	43.3	37.8	37.0	29.2	49.6	30.7	25.7
15/12/2016 03:00	27.6	44.7	26.9	24.4	37.5	56.6	37.7	37.0	28.7	38.1	30.5	26.5
15/12/2016 03:15	24.7	31.5	25.4	23.9	37.4	48.7	37.5	36.7	29.6	47.0	31.2	25.6
15/12/2016 03:30	25.0	33.9	26.0	24.0	37.2	46.1	37.6	36.8	29.3	46.9	31.0	25.6
15/12/2016 03:45	30.6	46.8	33.9	24.4	37.4	46.4	38.3	36.7	30.0	45.8	32.5	25.6
15/12/2016 04:00	31.1	45.9	34.0	24.7	37.6	48.1	38.3	36.6	30.1	46.7	32.1	26.6
15/12/2016 04:15	31.7	46.4	35.2	24.4	38.6	57.9	39.1	37.3	30.4	48.4	32.5	27.3
15/12/2016 04:30	32.4	44.1	36.8	25.3	38.6	56.9	39.5	37.4	30.2	45.6	32.2	26.6
15/12/2016 04:45	56.1	76.8	40.8	26.2	39.4	52.0	40.1	37.2	32.6	46.6	35.4	27.4
15/12/2016 05:00	34.7	47.8	38.3	28.0	39.0	48.7	40.2	37.4	31.3	46.3	33.5	27.7
15/12/2016 05:15	59.2	82.8	44.2	29.7	41.5	58.1	42.2	37.9	33.1	47.5	35.4	29.3
15/12/2016 05:30	56.6	78.0	44.9	32.2	42.0	56.0	43.4	38.6	35.2	50.3	37.6	31.2
15/12/2016 05:45	59.6	84.9	43.4	34.1	43.4	60.4	44.8	38.8	36.2	48.8	39.1	32.0
15/12/2016 06:00	58.5	82.2	47.0	33.4	42.7	57.9	44.7	38.6	40.5	54.4	42.1	31.6
15/12/2016 06:15	54.3	75.5	43.3	35.1	42.8	54.9	45.1	39.4	44.2	56.7	44.9	42.2
15/12/2016 06:30	59.0	81.7	44.7	36.1	43.9	62.0	45.3	40.0	43.7	50.7	44.6	42.2
15/12/2016 06:45	59.8	82.8	49.2	38.2	45.1	59.6	47.2	41.2	45.2	64.0	45.9	42.7
15/12/2016 07:00	55.7	73.9	47.1	39.0	45.6	58.7	48.6	41.8	46.3	66.8	47.7	43.1
15/12/2016 07:15	56.6	77.4	47.2	41.0	58.7	77.4	59.8	43.4	45.3	57.3	48.6	39.4
15/12/2016 07:30	61.1	86.3	46.7	41.4	49.7	68.5	53.0	43.0	45.3	61.7	49.2	39.1
15/12/2016 07:45	60.5	84.5	48.3	41.9	48.7	64.9	51.6	43.3	45.7	69.1	47.1	39.6
15/12/2016 08:00	55.4	77.9	49.9	42.8	57.3	76.3	60.3	46.1	48.7	68.8	51.7	41.9
15/12/2016 08:15	59.1	82.6	49.6	44.2	53.7	73.0	55.7	45.6	52.5	67.9	54.2	47.0
15/12/2016 08:30	58.6	83.6	49.6	44.4	50.4	69.9	52.4	45.4	54.3	68.7	56.4	48.5
15/12/2016 08:45	54.3	77.2	48.7	43.4	50.3	65.6	52.8	45.2	52.5	69.8	55.0	47.6
15/12/2016 09:00	57.9	81.7	48.8	41.9	48.5	62.3	50.7	44.1	52.9	67.8	55.0	48.3
15/12/2016 09:15	56.1	78.4	48.1	41.2	48.1	64.9	50.1	44.2	50.8	70.9	52.6	46.6
15/12/2016 09:30	59.1	80.4	50.6	41.0	48.6	61.7	51.1	44.4	52.2	64.7	54.5	46.9
15/12/2016 09:45	59.9	85.4	45.6	40.6	48.1	59.4	50.7	43.8	52.9	65.8	53.9	48.0
15/12/2016 10:00	57.7	76.8	50.2	38.5	45.3	66.3	47.6	42.2	46.9	66.3	48.6	43.3
15/12/2016 10:15	59.0	83.0	50.4	39.5	48.7	64.5	51.0	42.4	47.5	62.9	49.7	43.3
15/12/2016 10:30	56.6	75.4	46.0	40.5	47.4	60.2	49.8	43.8	47.1	61.3	49.2	43.7
15/12/2016 10:45	55.9	77.6	47.4	41.3	47.6	59.4	49.9	44.6	47.3	62.1	48.9	44.9
15/12/2016 11:00	60.0	85.3	48.4	41.6	50.0	62.3	52.3	45.6	48.8	67.2	50.7	45.5
15/12/2016 11:15	59.6	81.0	48.5	40.7	52.0	69.2	54.5	48.2	49.3	64.9	51.4	45.2
15/12/2016 11:30	57.4	81.9	47.3	41.3	50.1	64.0	52.8	44.9	50.2	66.9	54.1	44.7
15/12/2016 11:45	57.8	81.2	46.0	41.5	51.2	73.7	54.4	44.3	49.8	61.3	52.8	45.0
15/12/2016 12:00	58.8	82.2	47.0	41.1	52.1	71.7	55.4	45.7	52.0	74.5	52.2	45.7



Contact

