

REF: AS10285.200110.L2

21 January 2020

Paul Spratt
Crayfern Homes Ltd
Victoria House
14 St. Johns Road
Hedge End
Southampton
SO30 4AB

Dear Paul

AS10285 LAND TO THE WEST OF ORCHARD BUSINESS PARK, YAPTON**Planning Condition 13 (Ref. Y/49/18/PL)**

We are writing in respect of the discharge of planning condition 13 of the decision notice (ref. Y/49/18/PL) which states the following:

13 - Prior to the occupation of each dwelling, post validation testing shall be undertaken by a competent person to determine compliance with the Clarke Saunders Acoustic Design Statement (May 2018) ref. AS10285.180326.ADS. The test results must be submitted to and agreed in writing with the Local Planning Authority prior to first occupation of any of the dwellings.

Reason: In accordance with Arun Local Plan Policies QE SP1 and QE DM1 and the National Planning Policy Framework.

Environmental Health Liaison

CSA submitted a method statement (ref. AS10285.Method Statement) to Fiona Fitzgerald, Senior Environmental Health Officer, at Arun District Council, detailing the post completion measurements proposals. The method statement has been appended to this letter for ease of reference.

Post Completion Measurements

A survey of internal noise levels was undertaken over consecutive 5-minute periods between Friday 3rd January and Tuesday 7th January 2019 within Plots 1, 3 and 4 in accordance with the method statement. Test rooms were unfurnished and without curtains/carpets. Measurements were undertaken with the windows closed and trickle vents open.

This is as a 'live' construction site and whilst the test rooms were complete, work was being undertaken within these and adjacent plots and externally within close proximity to the test rooms during daytime site hours. Measurements undertaken during construction activity have, therefore, been excluded from the assessment. Furthermore, the central heating system within plot 1 was operating throughout the night-time period on Friday 3rd January and Saturday 4th January; noise from which was found to make a marked difference to the measured levels. Measurements during this period have also been excluded from the assessment for this location.

The following equipment was used during the survey:

- 5 no. Rion sound level meter type NL32;
- 1 no. Rion sound level calibrator type NC74.

The calibration of the sound level meters was calibrated before and after the survey period. No significant calibration drift was observed.

Results

Figures 10285/TH1-16 show the internal L_{Aeq} , L_{Amax} , L_{A10} and L_{A90} noise levels as time histories. The following table shows the measured noise levels for periods during which there was no construction activity and other extraneous noise.

Period	Measured $L_{Aeq,T}$ and typical* L_{Amax} noise level			
	Plot 1 bedroom	Plot 1 living room	Plot 3 bedroom	Plot 4 bedroom
03/01/20 – 07/01/20	$L_{Aeq,16hr}$ 45 dB		$L_{Aeq,16hr}$ 38 dB	$L_{Aeq,16hr}$ 39 dB
	$L_{Aeq,8hr}$ 35 dB	$L_{Aeq,16hr}$ 28 dB	$L_{Aeq,8hr}$ 30 dB	$L_{Aeq,8hr}$ 31 dB
	L_{Amax} 59 dB		L_{Amax} 53 dB	L_{Amax} 53 dB

*'typical' derived from 90th percentile of all maximum events in the night-time period (i.e. exceeded not more than 10 times a night)

On completion, when carpet, curtains and furniture have been fitted, noise levels (including maxima) will be significantly lower than those measured during this exercise. This correction would be approximately 5 dB with reverberation times within the rooms tested standardised to 0.5 seconds. The predicted noise levels following completion are shown in the following table.

Period	Predicted $L_{Aeq,T}$ and typical* L_{Amax} noise level			
	Plot 1 bedroom	Plot 1 living room	Plot 3 bedroom	Plot 4 bedroom
03/01/20 – 07/01/20	$L_{Aeq,16hr}$ 40 dB		$L_{Aeq,16hr}$ 33 dB	$L_{Aeq,16hr}$ 34 dB
	$L_{Aeq,8hr}$ 30 dB	$L_{Aeq,16hr}$ 23 dB	$L_{Aeq,8hr}$ 25 dB	$L_{Aeq,8hr}$ 26 dB
	L_{Amax} 54 dB		L_{Amax} 48 dB	L_{Amax} 48 dB

*'typical' derived from 90th percentile of all maximum events in the night-time period (i.e. exceeded not more than 10 times a night)

The Acoustic Design Statement (ref. AS10285.180326.ADS) refers to The Professional Practice Guidance on Planning and Noise (ProPG), which brings together relevant guidance from several sources including a British Standard (BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings*) and internationally published guidance in the form of World Health Organisation *Guidelines for Community Noise* (1999). The ProPG adds that *'the more often internal L_{Aeq} levels start to exceed the internal L_{Aeq} target by more than 5 dB, the more that most people are likely to regard them as "unreasonable..."* and *'Once internal L_{Aeq} levels exceed the target levels by more than 10 dB, they are highly likely to be regarded as "unacceptable" by most people, particularly if such levels occur more than occasionally.'* The internal noise levels shown in the table above suggest the only variance from the internal L_{Aeq} target during the survey period is in the Plot 1 bedroom during the daytime hours, by up to 5 dB.

On individual noise events, the ProPG states *'in most circumstances in noise-sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45 dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events.'* The internal noise levels shown in the table above suggest that the typical L_{Amax} noise levels occasionally exceed 45 dB, however given the nature of these noise levels (primarily road traffic), it is not expected that these maxima will give rise to significant adverse effects.

We are satisfied, therefore, that this validation exercise demonstrates that the plots provide the requisite level of protection from external noise sources, thereby, following the assessment set out in the Acoustic Design Statement. On this basis, the development has complied with the requirements of the planning condition.

We trust the above to be of assistance. Should you have any queries please do not hesitate to contact the undersigned.

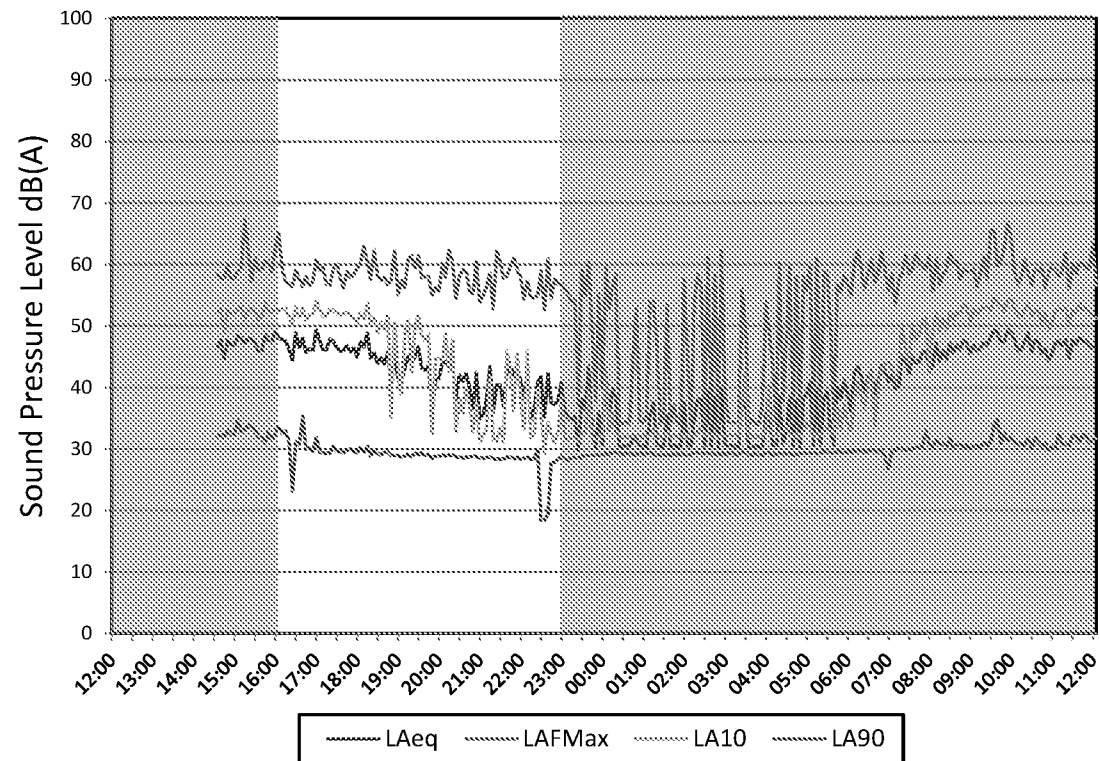
Yours sincerely
for CLARKE SAUNDERS ASSOCIATES



Will Fairman
email: wfairman@clarkesaunders.com

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Bedroom

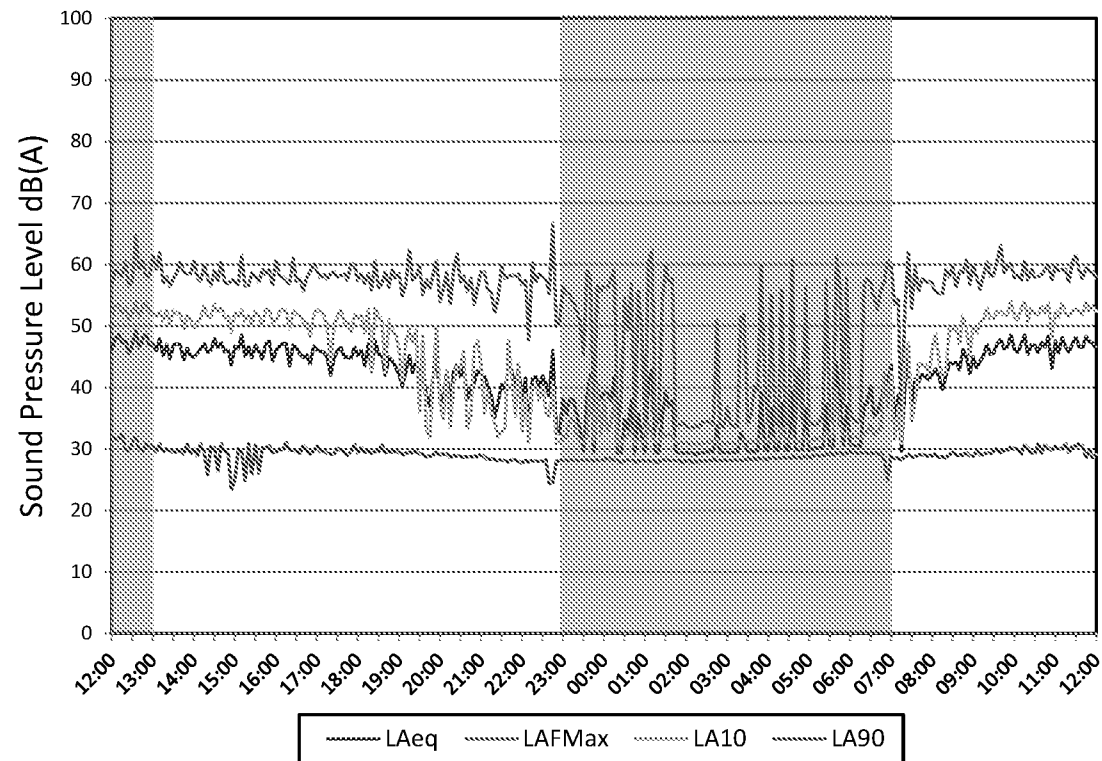


Friday 03 January to Saturday 04 January 2020

Figure AS10285/TH1

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Bedroom

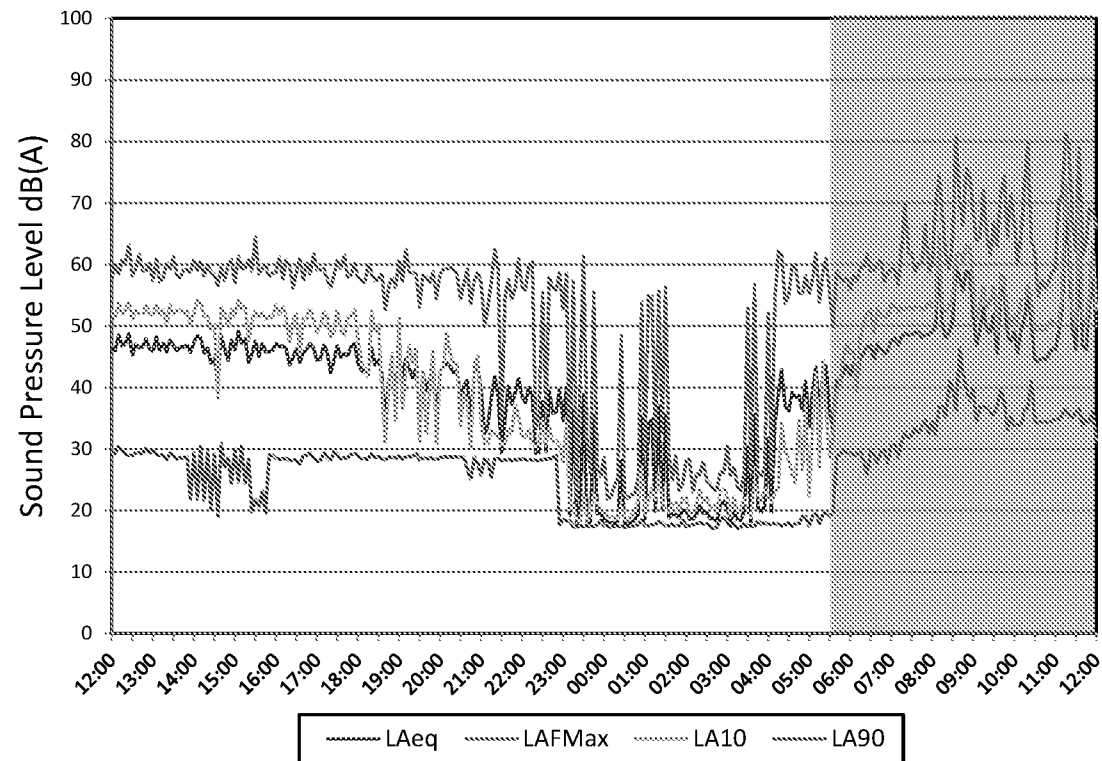


Saturday 04 January to Sunday 05 January 2020

Figure AS10285/TH2

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Bedroom

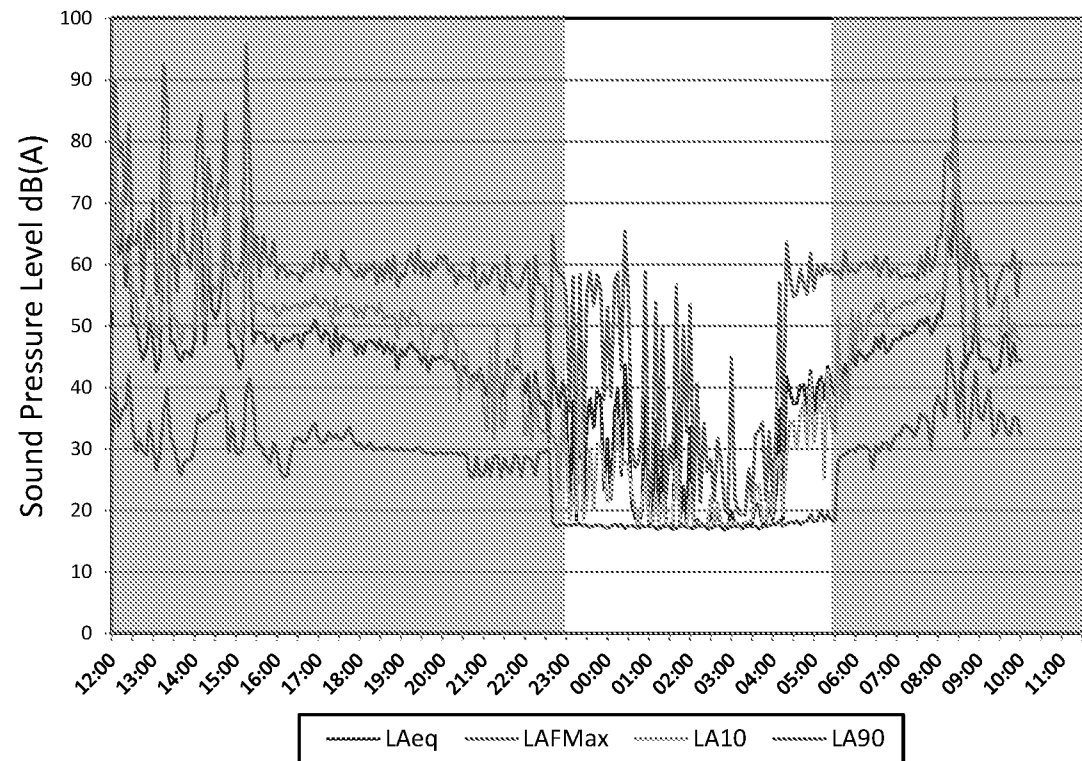


Sunday 05 January to Monday 06 January 2020

Figure AS10285/TH3

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Bedroom

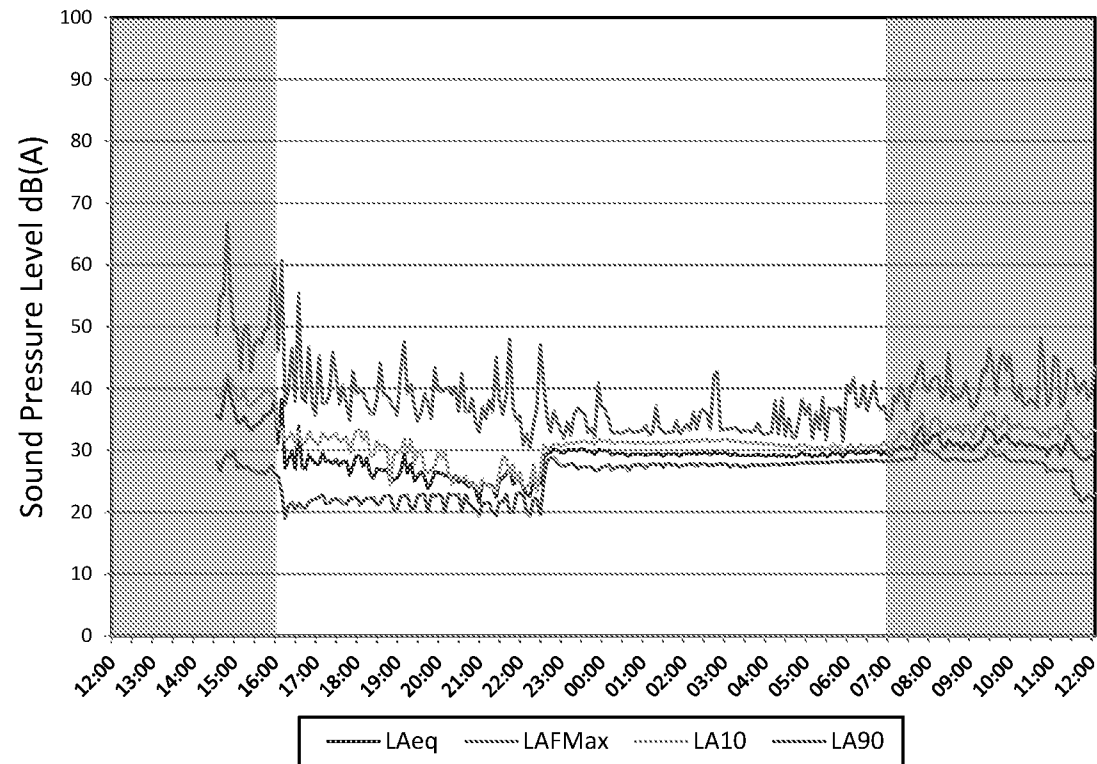


Monday 06 January to Tuesday 07 January 2020

Figure AS10285/TH4

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Living Room

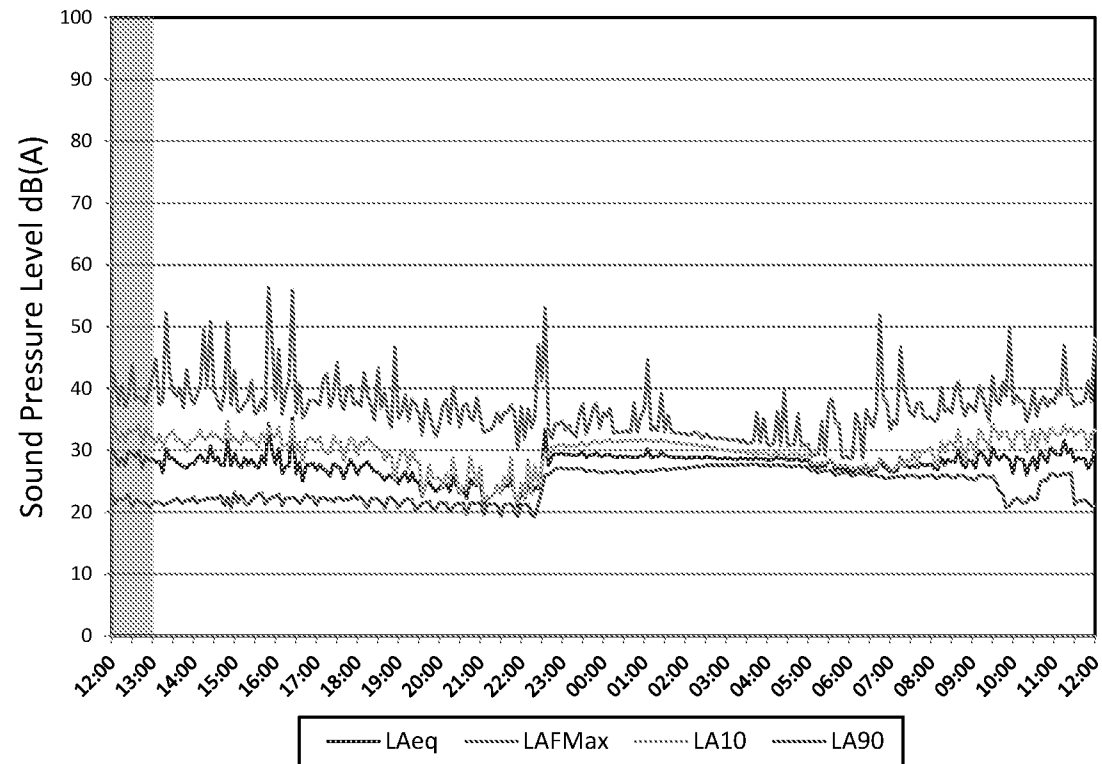


Friday 03 January to Saturday 04 January 2020

Figure AS10285/TH5

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Living Room

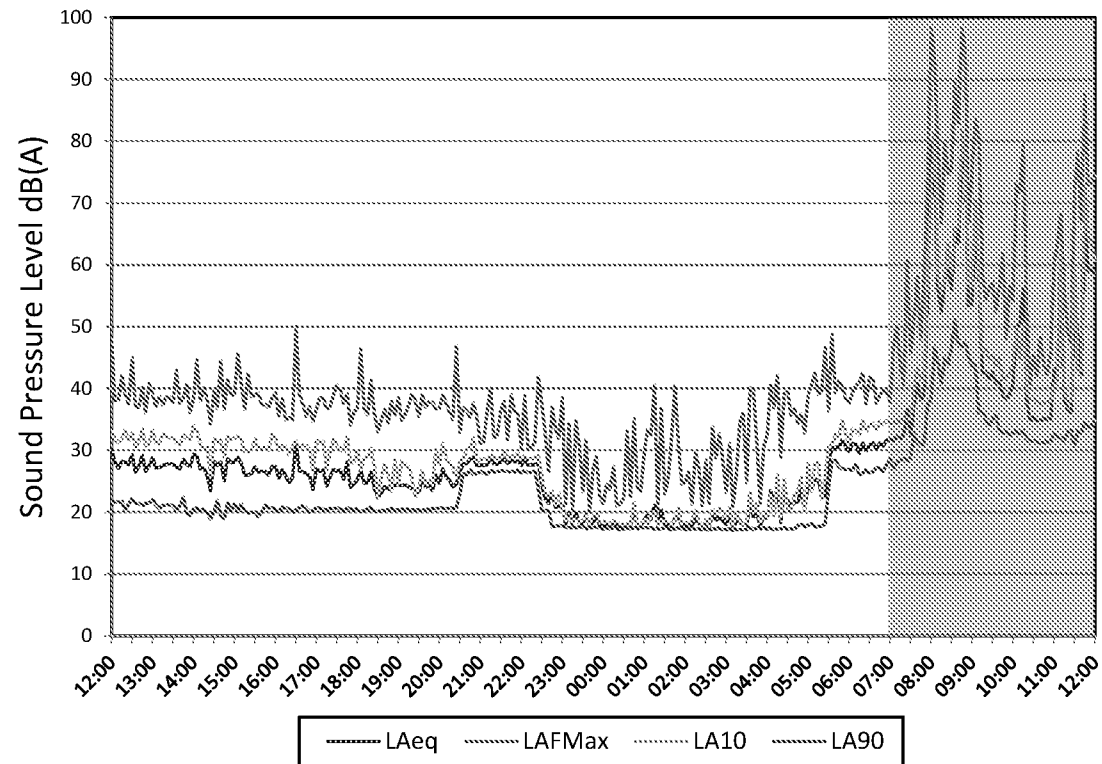


Saturday 04 January to Sunday 05 January 2020

Figure AS10285/TH6

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Living Room

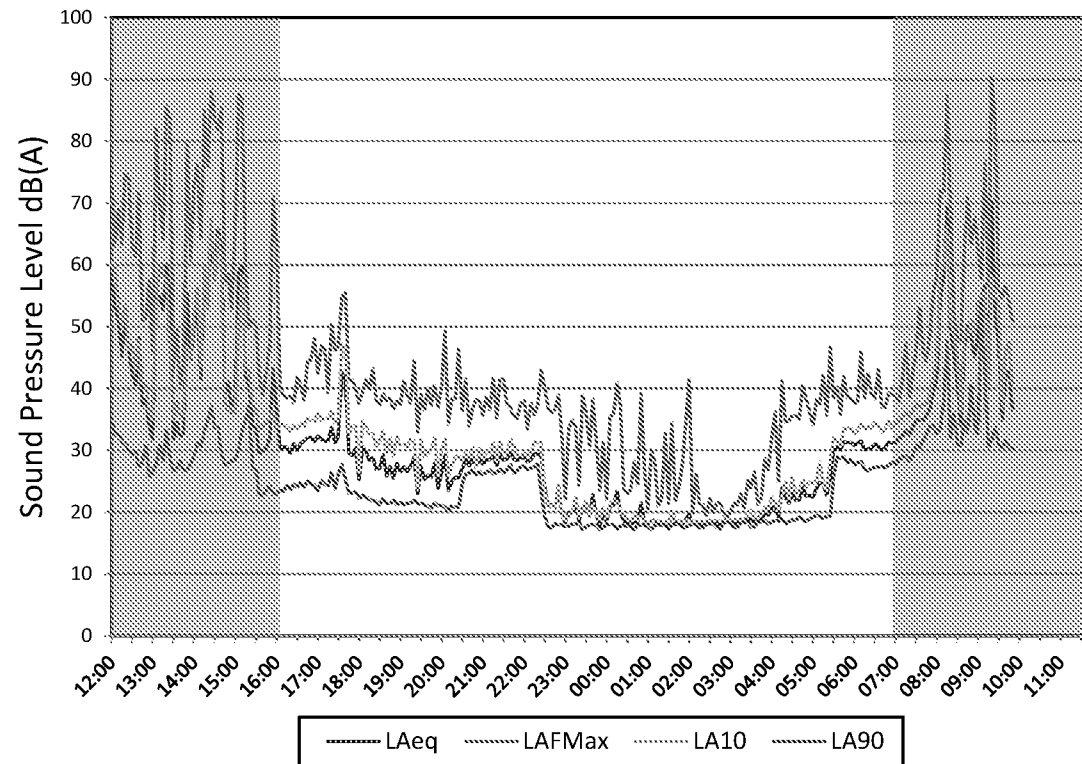


Sunday 05 January to Monday 06 January 2020

Figure AS10285/TH7

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 1 Living Room

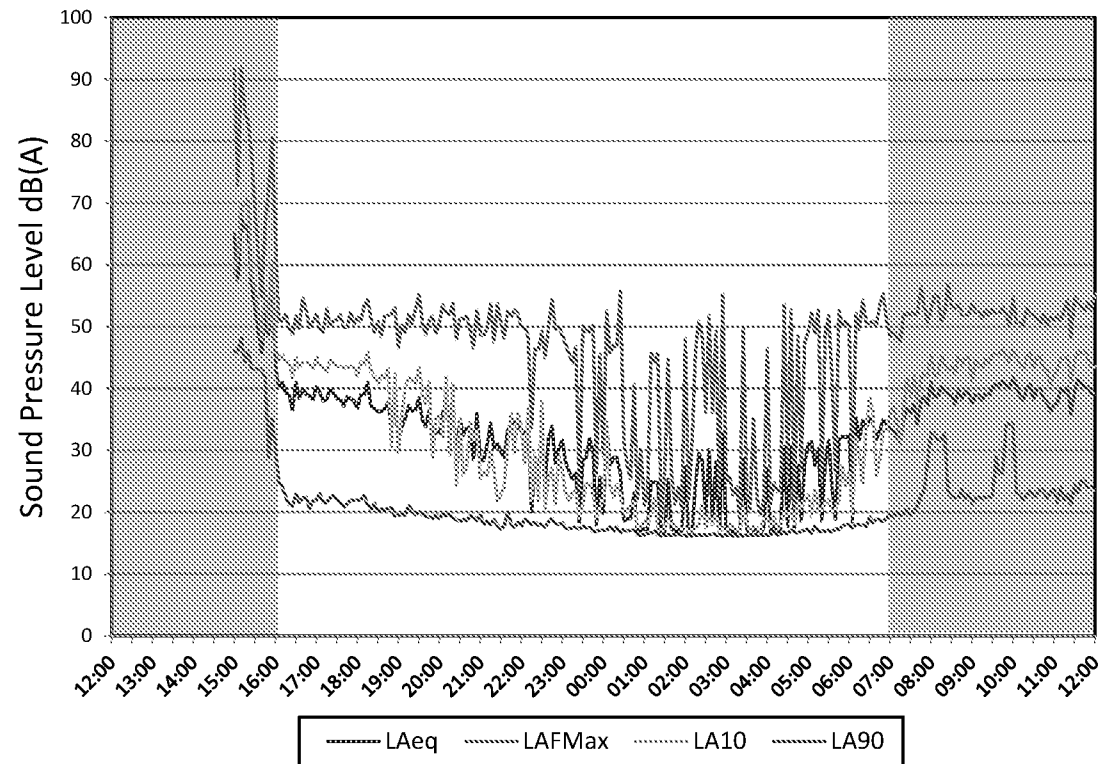


Monday 06 January to Tuesday 07 January 2020

Figure AS10285/TH8

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 3 Bedroom

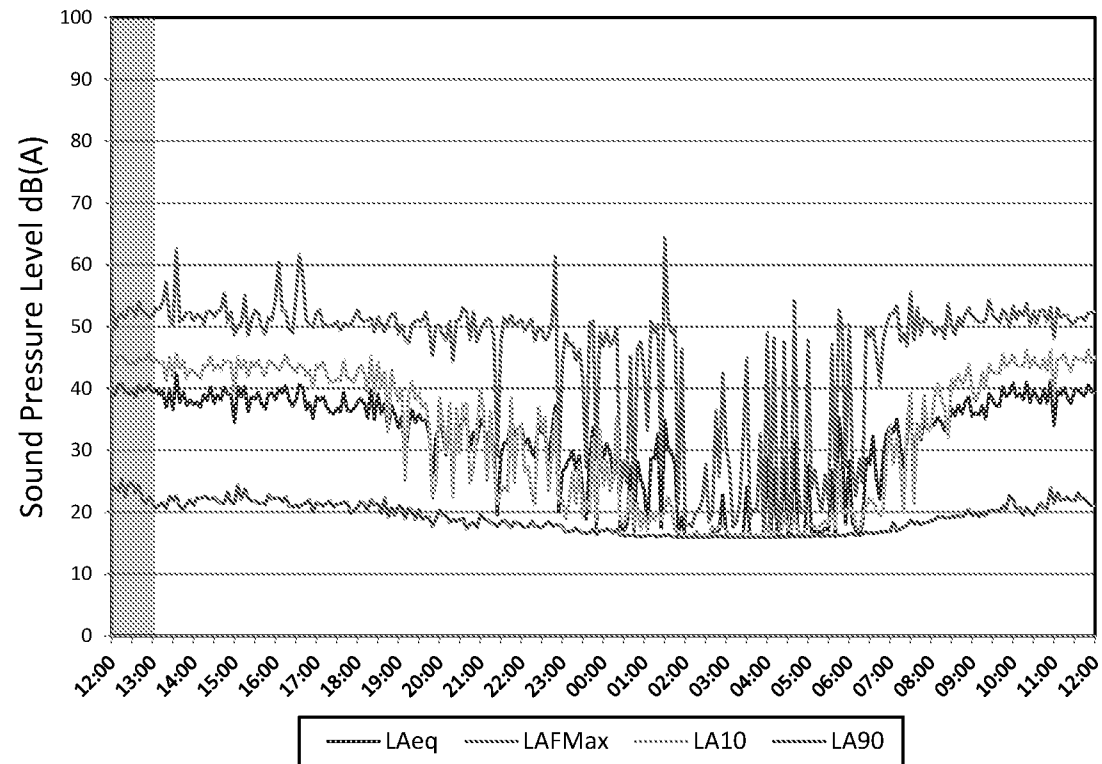


Friday 03 January to Saturday 04 January 2020

Figure AS10285/TH9

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 3 Bedroom

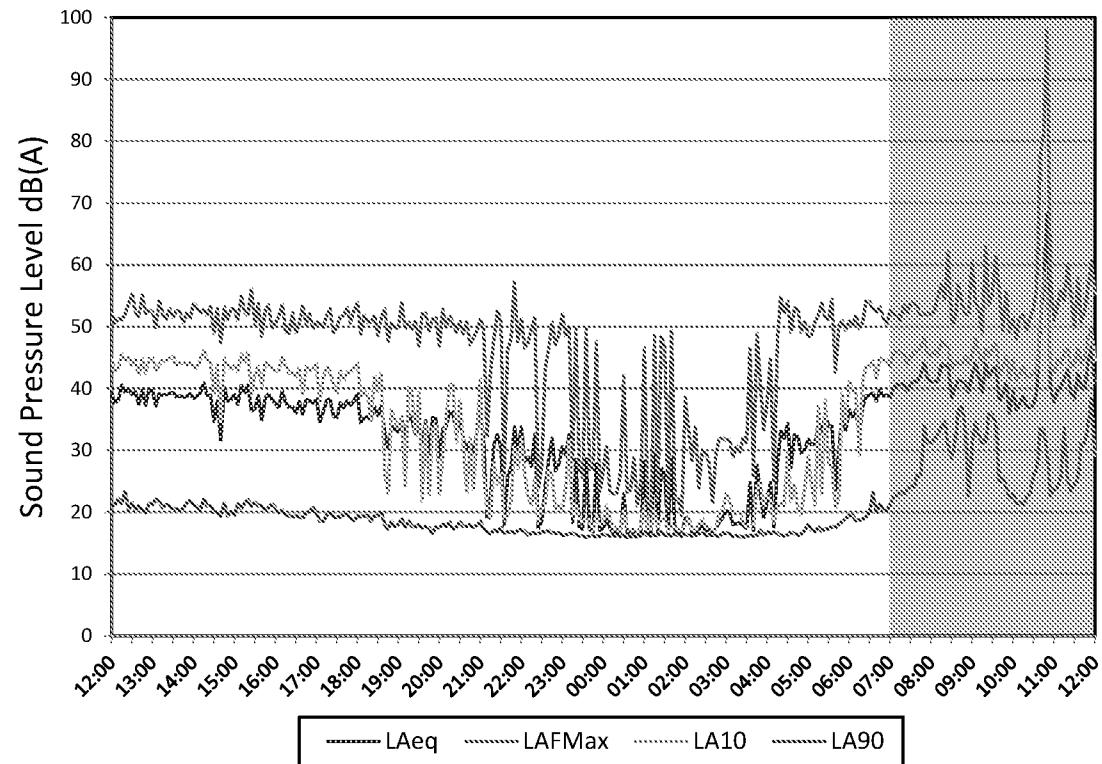


Saturday 04 January to Sunday 05 January 2020

Figure AS10285/TH10

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 3 Bedroom

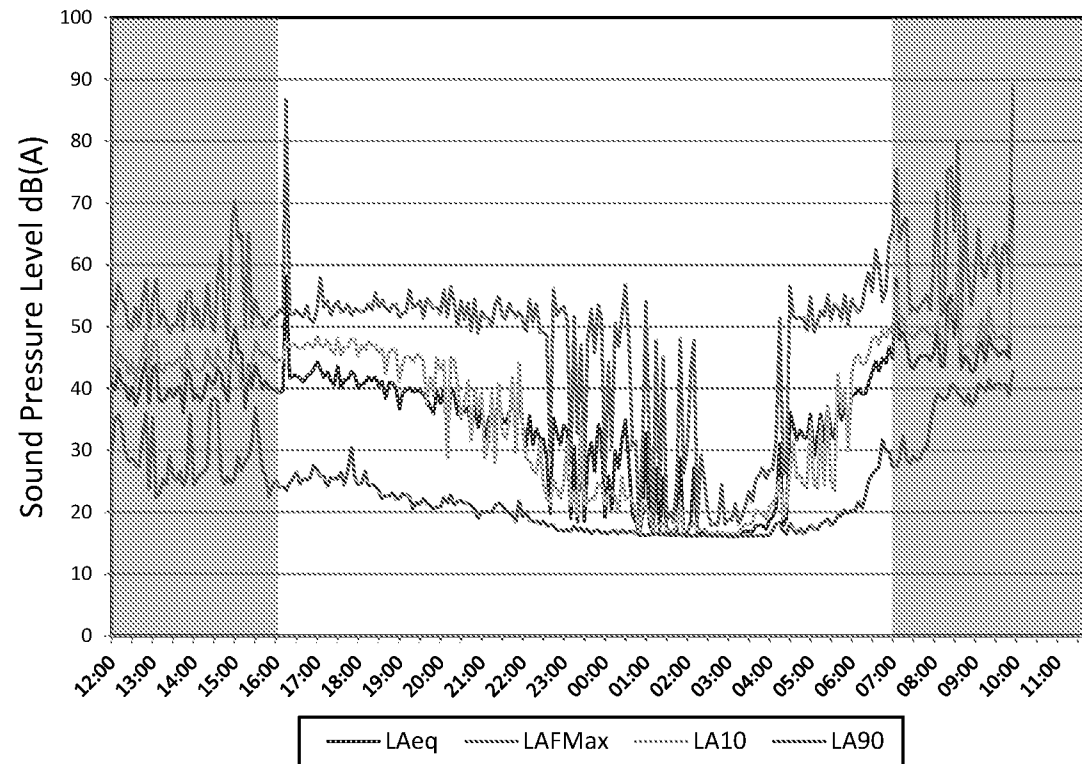


Sunday 05 January to Monday 06 January 2020

Figure AS10285/TH11

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 3 Bedroom

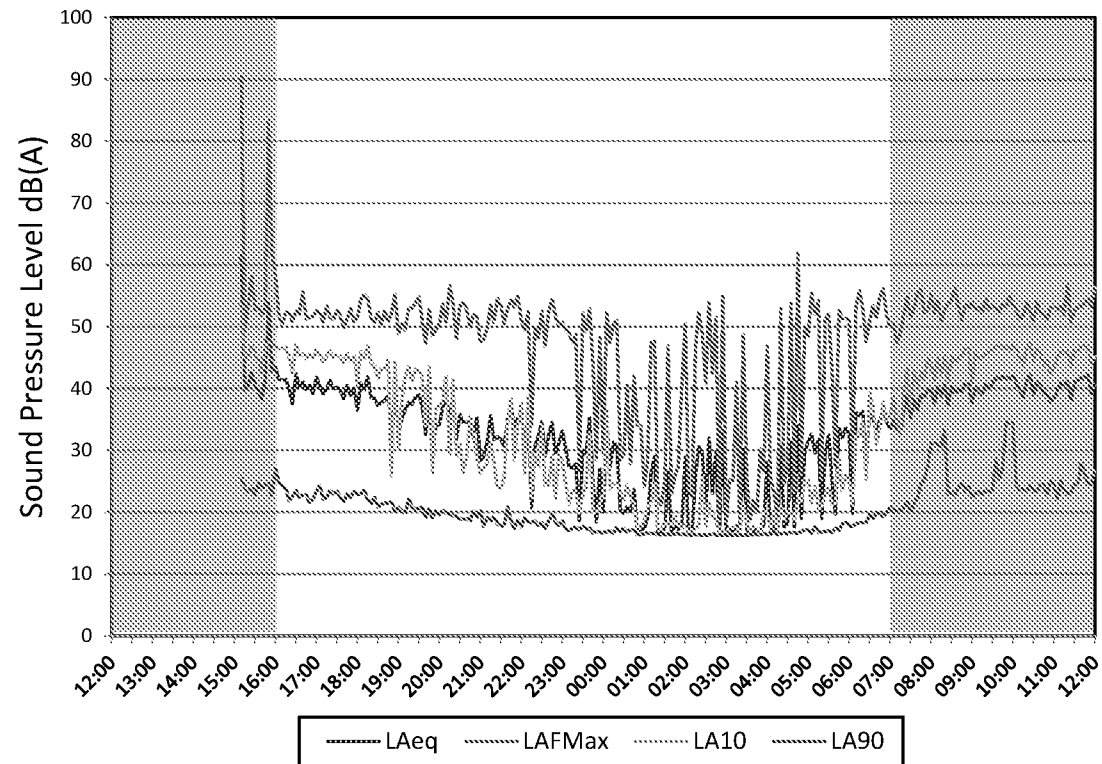


Monday 06 January to Tuesday 07 January 2020

Figure AS10285/TH12

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 4 Bedroom

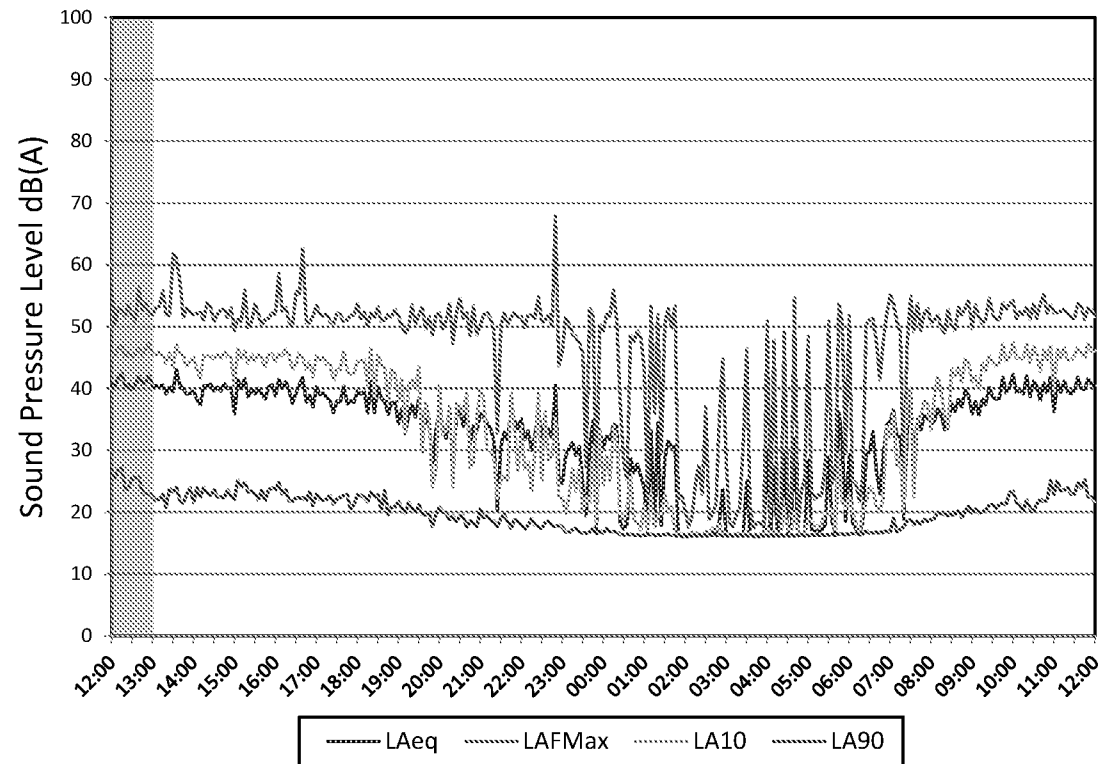


Friday 03 January to Saturday 04 January 2020

Figure AS10285/TH13

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 4 Bedroom

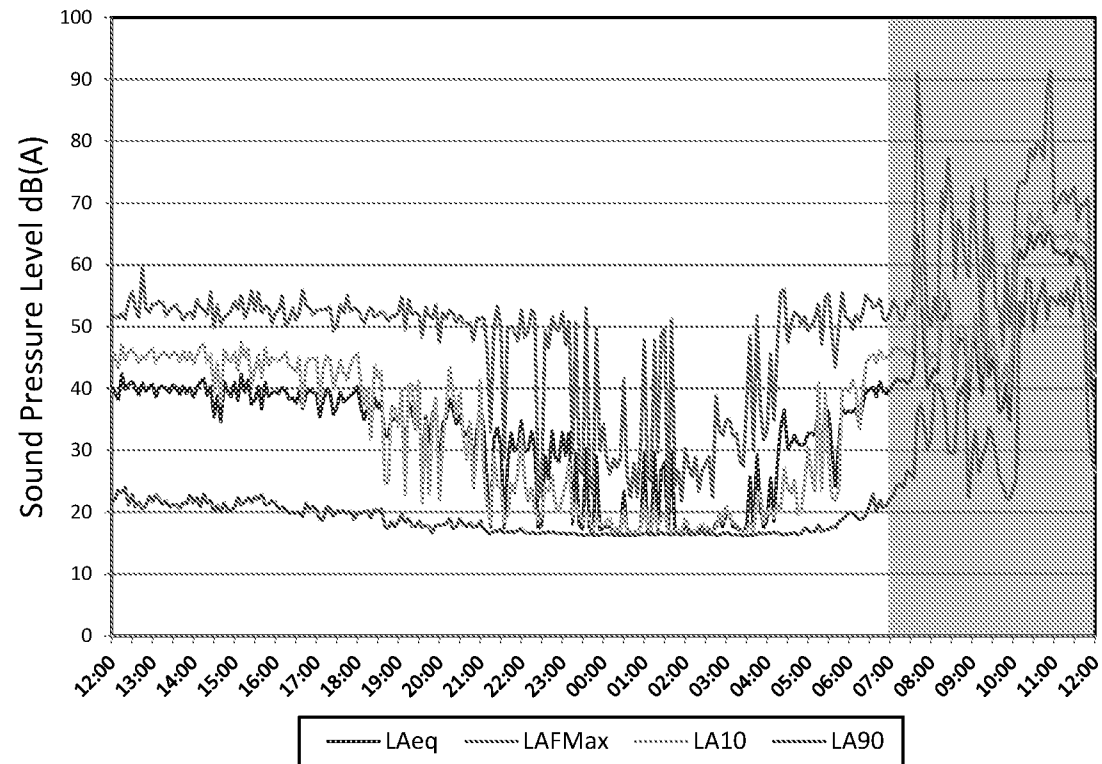


Saturday 04 January to Sunday 05 January 2020

Figure AS10285/TH14

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 4 Bedroom

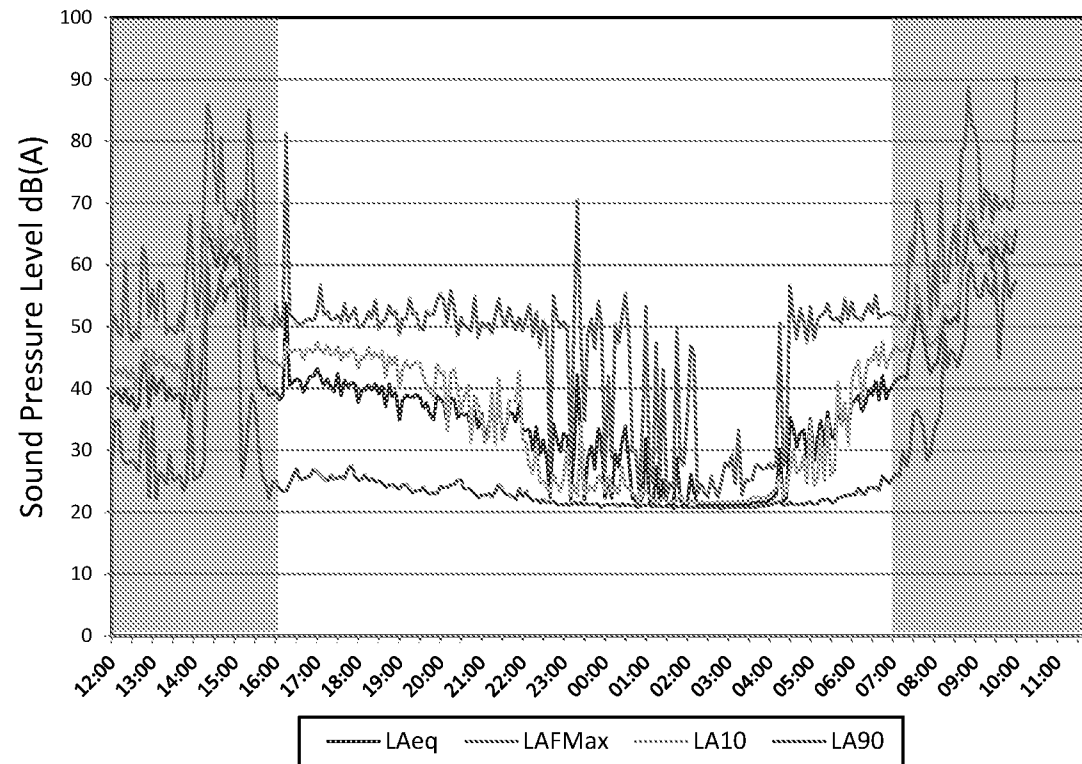


Sunday 05 January to Monday 06 January 2020

Figure AS10285/TH15

Land to the West of Orchard Business Park, Yapton

Environmental Noise Time History: Plot 4 Bedroom



Monday 06 January to Tuesday 07 January 2020

Figure AS10285/TH16

AS10285 Land to the West of Orchard Business Park, Yapton

INTERNAL NOISE SURVEY PROPOSALS

Decision Notice Ref: Y/49/18/PL, condition 13:

Prior to the first occupation of each dwelling, post validation testing shall be undertaken by a competent person to determine compliance with the Clarke Saunders Associates Acoustic Design Statement (May 2018) ref: AS10285.180326.ADS. The test results must be submitted to and agreed in writing with the Local Planning Authority prior to first occupation of any of the dwellings.

Reason: In accordance with Arun Local Plan policies QE SP1 and QE DM1 and the National Planning Policy Framework.

Clarke Saunders Associates is a member of The Association of Noise Consultants. All of its consultancy team are members of the Institute of Acoustics.

METHOD STATEMENT

We will visit site and undertake a noise survey to determine the internal ambient noise levels in the most affected habitable rooms of Plots 1 and, either, Plot 3 or 4.

The facades of the above rooms are highlighted in red on the attached site plan.

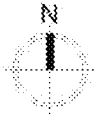
Class 1 sound level meters will be used, complying with the requirements of BS EN 61672-1:2003. They will be field calibrated with a class 1 calibrator complying with IEC 60942:2003. Calibration will be checked immediately before and after the survey period to check for any significant drift.

All measurements will follow the guidance stated in Association of Noise Consultants Guidelines: *Noise measurements in Buildings: Part 2: Noise from External Sources: August 1997 or the latest version (due to be published in 2020).*

The survey will involve automated, unattended continuous monitoring over a minimum 48-hour period, to establish trends in noise variations throughout daytime and night-time periods. Measurements will be undertaken using a 5-minute sampling period recording L_{Amax} , L_{Aeq} , L_{A10} and L_{A90} parameters. Daytime periods affected by site construction works would be omitted from the subsequent data analysis.

The sound level meters will be mounted on tripods at a suitable internal location representative of the bedhead. Wherever possible, test rooms will be carpeted but otherwise unfurnished. No access to the plots will be permitted during the survey period.

Data analysis will determine the $L_{Aeq,16hour}$ and $L_{Aeq,8hour}$ and night-time L_{Amax} noise levels to demonstrate compliance with Condition 13.



Existing sub-standard is
the second task as per

Figure 1 Non-contaminated
leaves to laboratory