



NOISE ASSESSMENT

**APPLICATION TO VARY PLANNING CONDITIONS
AT DUNSTABLE MOTOCROSS TRACK**

CENTRAL BEDFORDSHIRE COUNCIL

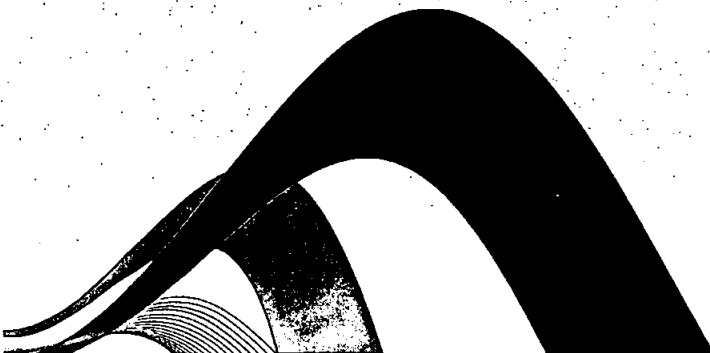
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DECEMBER 2014

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This report has been prepared using all reasonable skill, care and diligence within the resources and brief agreed with the client. LFAcoustics Ltd accept no responsibility for matters outside the terms of the brief or for use of this report, wholly or in part, by third parties.

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1. Introduction

LF Acoustics Limited have been appointed by Central Bedfordshire Council to undertake an assessment of the noise levels associated with the use of the existing motocross track located on land off Billington Road, Stanbridge, Leighton Buzzard.

Planning consent for the operation of the track was granted in 1995 (Application Ref. SB/95/00176/FULL). The application was subject to conditions, which limited the operation of the site to:

- between 1st April and 30th September in any calendar year;
- to operate the track only between the hours of 10:00 – 12:30 and 14:30 – 17:00 hours Mondays to Saturdays and between 10:00 – 14:00 on Sundays and Bank Holidays; and
- a restriction of no more than 7 bikes on the track at any one time.

Mr Brooks, a new operator, took over control of the track approximately 3 years ago and has renovated the track and layout such that it is now one of the most demanding in the country. Following a number of recent complaints, he is seeking to vary the conditions of the current planning consent to operate during the winter months, with variations to the number of operating dates, times and number of bikes allowable on the track.

The following section of this report describes the relevant guidance within the UK with regards planning and the operation of motocross facilities. Section 3 describes the current and proposed operating regime for the track. Section 4 presents the results of a noise monitoring exercise carried out to evaluate the current and proposed noise levels associated with the bikes, with the levels assessed within Section 5. Section 6 provides recommendations for additional noise mitigation and control measures which should be implemented should the variation in conditions be permitted. Finally, Section 7 provides a brief summary of the assessment.

2. Applicable Guidelines

2.1. Noise Units

Decibels (dB)

Noise can be considered as 'unwanted sound'. Sound in air can be considered as the propagation of energy through the air in the form of oscillatory changes in pressure. The size of the pressure changes in acoustic waves is quantified on a logarithmic decibel (dB) scale firstly because the range of audible sound pressures is very great, and secondly because the loudness function of the human auditory system is approximately logarithmic.

The dynamic range of the auditory system is generally taken to be 0 dB to 140 dB. Generally, the addition of noise from two sources producing the same sound pressure level, will lead to an increase in sound pressure level of 3 dB. A 3 dB noise change is generally considered to be just noticeable, a 5 dB change is generally considered to be clearly discernible and a 10 dB change is generally accepted as leading to the subjective impression of a doubling or halving of loudness.

A-Weighting

The bandwidth of the frequency response of the ear is usually taken to be from about 18 Hz to 18,000 Hz. The auditory system is not equally sensitive throughout this frequency range. This is taken into account when making acoustic measurements by the use of A-weighting, a filter circuit which has a frequency response similar to the human auditory system. All the measurement results referred to in this report are A-weighted.

Units Used to Describe Time-Varying Noise Sources (L_{Aeq} and L_{A90})

Instantaneous A-weighted sound pressure level is not generally considered as an adequate indicator of subjective response to noise because levels of noise usually vary with time.

For many types of noise the Equivalent Continuous A-Weighted Sound Pressure Level ($L_{Aeq,T}$) is used as the basis of determining community response. The $L_{Aeq,T}$ is defined as the A-weighted sound pressure level of the steady sound which contains the same acoustic energy as the noise being assessed over a specific time period, T.

The L_{A90} is the noise level exceeded for 90% of the measurement period. It is generally used to quantify the background noise level, the underlying level of noise that is present even during the quieter parts of measurement period.

2.2. National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published in March 2012 [1]. The Framework seeks to simplify the planning system and has replaced a number of national policies, including the former noise guidance contained in Planning Policy Guidance Note PPG 24.

The aim of the Framework is to move the decision making process to a local level and to promote new development, with the presumption in favour of sustainable development.

Local planning authorities are required to develop local policies, and regards noise, planning policies and decisions should aim to:

- Avoid noise from giving rise to significant adverse impacts on health and quality of life from new development;

- Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- Recognise that development will often create some noise.

2.2.1. Reference is made within the NPPF to the Noise Policy Statement for England [2] (NPSE), which sets out the long term vision of the Government noise policy. Further information has been provided on the assessment of noise within recent Planning Practice Guidance, published in March 2014 and available on the Government planning web site. Whilst this guidance does not provide any objective criteria upon which to base noise assessments, the guidance provides a description of the relevant Effects Levels identified within the NPPF and NPSE and this is reproduced in Table 2.1:

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

Table 2.1 Significance Criteria

The NPPF advises that development should seek to ensure that noise from proposed developments does not give rise to significant impacts, i.e. a level identified as a Significant Observed Adverse Effect (SOAEL), which is at a level where the noise would cause a material change in behaviour.

2.3. Code of Practice on Noise from Organised Off-Road Motor Cycle Sport

Specific guidance on noise from organised off-road motor cycling was developed by the Noise Council together with representatives of the sports' governing bodies [3].

The guidance recommends a range of measures aimed at reducing noise and potential disturbance associated with motocross activities, with particular attention to providing noise reduction at source and restricting the operating times for courses.

The main guidance given is to reduce noise at source by imposing maximum noise limits for the bikes in use. It recommends that random checks be carried out on bikes before an event to ensure that they are below the specified limits.

The noise limits specified in Table 2.1 below are the maximum levels measured at 0.5m from the tailpipe of a bike, at an angle of 45° to the tailpipe and at least 0.2m above ground level.

Event	Machine	Mean Piston Speed	Maximum Sound Level
Motocross	2 Stroke	13 m/s	100 dB(A)
	4 Stroke	11 m/s	100 dB(A)

Table 2.1 Maximum Permitted Sound Pressure Levels in the Code of Practice

2.4. British Standard BS 8233

British Standard BS 8233 [4] provides design aims for new properties. With regards residential premises, the guidance advises the following daytime design aims associated with anonymous noise sources, such as those associated with road traffic:

- 35 dB $L_{Aeq,T}$ within living rooms and bedrooms used for resting purposes;
- 50 dB $L_{Aeq,T}$ within gardens is considered to be a desirable level, with an upper guideline value of 55 dB $L_{Aeq,T}$.

2.5. General Standards of Daytime Noise

The World Health Organisation Guidelines' [5] advise that:

- few people are seriously annoyed by daytime activities with L_{Aeq} levels below 55 dB(A); and
- few people are moderately annoyed by activities with L_{Aeq} levels below 50 dB(A).

3. Current and Proposed Operating Proposals

3.1. Current Consent

As indicated previously, planning consent was granted in 1995 to enable the track to operate up to 7 days per week between 1st April – 30th September in any calendar year.

Further restrictions have been imposed on operating hours and number of bikes, as follows:

- to operate the track only between the hours of 10:00 – 12:30 and 14:30 – 17:00 hours Mondays to Saturdays and between 10:00 – 14:00 on Sundays and Bank Holidays; and
- a restriction of no more than 7 bikes on the track at any one time.

The current planning consent therefore enables the track to operate for up to 183 days per year over a 6 month period, equating to a maximum of 6405 on track bike hours, on the basis of a maximum of 7 bikes on track at any one time.

As mentioned earlier, Mr Brooks took over the operation of the track approximately 3 years ago. During this time, he has improved the standard of the track considerably, by altering the layout and improving the overall surface of the track.

The new layout of the track has sought to ensure that the main jumps are located furthest from the surrounding properties, with the section of track running closest to the nearest property running parallel to the existing bunding to reduce noise.

Bunding was constructed around the track by the land owner, who previously operated the track. Over time, the overall height of the bund has reduced as it has slumped and there are presently a number of gaps within it and where it was never fully completed. In addition, the improvements to the track have effectively raised the height by approximately 1 metre compared to the original track. The effect of the bund slumping and the increase in track height has effectively reduced the overall mitigation height by approximately 2 metres. In fact, at present, the tops of the two main jumps are above the height of the bund, thus negating any effect in reducing noise levels.

3.2. Proposed Operating Regime

Following a number of complaints relating to the summer operation of the site, Mr Brooks has considered options for the future viability of the facility.

He is seeking consent to vary the operating conditions, to move the operating period from the summer months to the winter months, which he considers would be less likely to be potentially disturbing to the surrounding residents.

He has therefore submitted a planning application (Application Ref. CB/14/03678/VOC) to vary Conditions 3 – 5 of the current consent for the motocross track to the following periods:

- Operate between 1st October to 30th April in any calendar year;
- Operate the track on these days between 10:00 – 13:00 and 13:30 – 16:00 on Fridays, Saturdays and Sundays only, and between 10:00 – 14:00 hours on Bank Holidays; and
- To increase the maximum number of bikes on track from 7 to 18.

The proposed operating days see a reduction from the 183 days presently permitted to a maximum of 90 days per calendar year, albeit over a 7 month period, rather than the 6 month period presently permitted.

With regards operational hours, Mr Brooks considers that an earlier finish on Fridays and Saturdays would provide a benefit to the residents, utilising a shorter lunch period to provide a broadly equivalent operating period each day. On Sundays, whilst longer hours are proposed than at present, he considers that this is offset by the winter operating and the fact that the track could not operate for 4 days during the week.

It is understood that the increase in the number of bikes is being sought to ensure that the operation of the track can remain financially viable, with the reduced operating period.

The changes to the operating hours would equate to an overall increase in the potential bike track hours over the year up to 8910 hours. However, it should be noted that it is unlikely that the track would operate every weekend, as there would be a number of times where it would need to be closed for inclement weather and in addition, it is highly unlikely that the track would be operational at Christmas. On this basis, we would not anticipate that the overall bike track hours would differ significantly to those present permitted.

4. Noise Monitoring

4.1. Introduction

In order to evaluate the noise levels associated with the bikes using the track, an event was organised for 29th November 2014 during the track's closed period.

Following recent heavy rains, it is understood that a large amount of new track base had to be laid to ensure that the track was dry and suitable for use.

Mr Brooks arranged for between 30 – 50 riders to attend the meeting. The riders were split into groups of either 7 or 18 riders upon arrival, to enable a comparison of the current and proposed numbers of riders on track to be made. The groups were sent out onto the track alternatively throughout the test, with each group running for between 10 – 20 minutes. It is understood that due to the difficulty of the track, it is physically difficult for the riders to remain on track for longer periods and this was observed throughout the day, as riders would tend to leave the track after 5 – 10 minutes.

The track in its current configuration is approximately 1 mile long with riders taking around 1½ minutes to complete a circuit. It was observed with the smaller groups, that they would tend to stick together around the track giving rise to periods of higher and then lower noise levels. With a larger number on track, they tended to spread out, leading to a more continuous noise.

In order to establish the noise levels associated with the use of the track, noise measurements were carried at two positions adjacent to the track, with further measurements taken at the closest property, Mead House to the west and at Rye Farm in Eaton Bray to the south.

Weather conditions throughout the monitoring period were fine and dry, with easterly winds, generally very light (<1 m/s), increasing to around 2 m/s for a short period around midday.

The measurements were all taken using four Rion NL-52 Class 1 Sound Level Meters, which were calibrated before and after the exercise using a Rion NC-74 Class 1 Acoustic Calibrator, with each meter reading 94.0 dB on each occasion. At each position, the microphones were set at a height of between 1.2 – 1.3 metres above the ground and at a freefield position (i.e. away from a building facade).

The meters were configured to record the noise levels over 1 second periods throughout the survey, which enabled individual events to be identified during the analysis. Each meter was additionally fitted with a waveform recording card, with the audio captured alongside the measured level data.

4.2. Identification of Potentially Affected Noise Sensitive Receptors

There are relatively few dwellings within close proximity to the track.

Mead House is the closest property, located to the west of the track, approximately 400 metres from the closest point on the track. This property is along Stanbridge Road, adjacent to Mead Open Farm.

Dwellings in Eaton Bray to the south are located beyond 900 metres to the south of the track, with the closest dwellings along The Rye.

To the north, the dwellings are all beyond the A505, with the closest properties at Stanbridgeford, approximately 1.1km to the east of the track.

The properties are shown on Figure 1.

4.3. On site Noise Monitoring

In order to evaluate the noise levels associated with the bikes on track, noise measurements were taken at two positions on the boundary of the track:

- Position 1 – on the south eastern boundary adjacent to the booking in cabin, on top of the bund at a distance of 10 metres from the track; and
- Position 2 – on the south western boundary on top of the bund 10m from the track.

The monitoring positions are indicated on Figure 2.

The measurements on track were all attended, which enabled the number of bikes to be counted within each group and to evaluate subjectively differences between the groups.

The results of the monitoring at these locations have been analysed using the Rion AS-60 Data Management Software and have been summarised into 1 minute periods for reporting purposes. The results are provided graphically within Appendix A.

L_{Aeq} noise levels associated with each group of bikes have been evaluated from the results. Given that the bikes took longer than 1 minute to complete a circuit, with bikes from each group tending to leave the circuit after 5 – 10 minutes, it has been considered appropriate to evaluate the noise levels over the first five minute period whilst each group was on track. The results obtained are presented in Table 4.1.

Time Period	Number of Bikes on Track	Measured $L_{Aeq, 5 \text{ minute}}$ [dB]	
		Position 1	Position 2
11:05 - 11:10	16	75.1	78.1
11:20 - 11:25	15	80.2	83.5
11:31 - 11:36	7	74.5	78.3
11:43 - 11:48	8	73.6	76.7
11:52 - 11:57	7	74.6	76.1
12:01 - 12:06	6	71.5	75.0
12:12 - 12:17	7	67.5	74.1
12:32 - 12:37	7	74.5	76.3
12:40 - 12:45	9	77.1	80.3
12:50 - 12:55	8	73.8	76.6
13:38 - 13:43	7	79.0	81.2
13:50 - 13:55	18	77.4	79.1

Table 4.1 Summary Results of On-Site Noise Monitoring

Considering the smaller numbers of bikes initially, the results indicate a large variation in noise levels, which were principally attributable to the mix of ranges of abilities of the riders using the track, with the most experienced making the most use out of their bike and thus generating higher noise levels.

It was only possible to get large numbers of riders onto track on three occasions during the test, as the riders would tend to take a break after one or two rides for rest or bike maintenance. It is also understood that the less experienced riders tend to use the track less later in each session, as the track quality degrades after around 30 minutes. The lunchtime break period is primarily there to enable the track to be re-graded for the afternoon session, and during the measurements, this took around 40 minutes to complete and is understood at times could take up to 1 hour to complete.

With larger numbers of riders on track, the noise levels tended to increase by around 3 dB(A), which would be anticipated; however, the maximum noise levels were not dissimilar to those generated by 7 experienced riders.

4.4. Noise Measurements at Mead House

The measurements taken at Mead House were principally made unattended, with a period of attendance after 14:00 hours, where the overall audibility of the bikes was established.

The meter was positioned at the front gate to the property, approximately 30 metres from the property, which is approximately 400 metres from the closest corner of the track. There was a good line of sight over onto the track from the monitoring position. The monitoring position is indicated on Figure 1.

Noise monitoring was carried out at this location between 09:40 – 14:00 hours, which enabled the noise levels to be established when the majority of the bikes were on track, as identified in Table 4.1 and associated with the general noise environment.

As with the on track monitoring, the results obtained at this location have been summarised into 1 minute periods and are presented graphically in Appendix B.

Ambient Noise Environment

The noise levels obtained during the periods when there were no bikes on track were as follows.

Time Period	Measured Noise Levels [dB]		
	L _{Aeq}	L _{Amax,F}	L _{A90}
09:40 - 09:45	49.4	63.3	46.3
09:45 - 09:50	52.1	64.6	46.0
09:50 - 09:55	51.7	65.0	44.9
13:05 - 13:10	48.9	57.4	45.7
13:10 - 13:15	48.8	56.3	45.9
13:15 - 13:20	53.2	62.6	47.2
13:20 - 13:25	53.8	63.5	46.0
13:25 - 13:30	50.8	61.6	44.3
13:30 - 13:35	50.1	61.6	44.4

Table 4.2 Ambient Noise Levels Monitored at Mead House

The general ambient noise environment at this location was attributable to vehicles travelling along the A505 to the north, which was audible throughout, regular vehicle movements along Stanbridge Road, aircraft movements overhead, flying into Luton Airport and occasional light aircraft. There were also chickens within the farm yard clucking at times, which influenced the measured noise levels.

Noise from Motocross Track

In order to assess the noise levels associated with the operation of the motocross track, the L_{Aeq} noise levels have been evaluated over the same periods as those measured on track. The results of this analysis are provided in Table 4.3.

Time Period	Number of Bikes on Track	Measured L_{Aeq} , 5 minute [dB]	Comments
11:05 - 11:10	16	53.3	Road traffic / Birdsong / Bikes just audible
11:20 - 11:25	15	57.2	Birds Clucking in yard. Bikes more audible at times, with occasional bike clearly audible (max up to 64 dB(A))
11:31 - 11:36	7	56.9	Birds Clucking in yard, aircraft overhead. Bikes more audible at times, with occasional bike clearly audible (max up to 64 dB(A))
11:43 - 11:48	8	50.1	Road Traffic Main source / Bikes just audible
11:52 - 11:57	7	51.4	Road Traffic Main source / Bikes just audible
12:01 - 12:06	6	54.2	Road Traffic Main source / Light aircraft overhead / Bikes just audible
12:12 - 12:17	7	56.8	Hens clucking during measurement main source / Bikes audible
12:32 - 12:37	7	54.2	Hens clucking during measurement main source / Bikes audible (Cockerill calling excluded from measurement)
12:40 - 12:45	9	54.9	Road Traffic Main source / Bikes just audible
12:50 - 12:55	8	54.4	Road Traffic Main source / Bikes just audible
13:38 - 13:43	7	50.6	Road Traffic Main source / Bikes just audible / Aircraft at end of monitoring period excluded from measurement (max 60 dB(A))
13:50 - 13:55	18	49.6	Road Traffic Main source / Bikes just audible

Table 4.3 Summary Results of Noise Levels at Mead House During Activity on Motocross Track

Observations made whilst at the property and from an analysis of the audio recordings indicated that the bikes using the track were generally just audible, with the more experienced riders, who tended to get more air over the jumps more audible.

Noise from the bikes became inaudible whenever a vehicle passed along Stanbridge Road or there was an aircraft overhead.

As the L_{Aeq} noise levels measured were principally associated with other noise sources, principally road traffic, the results indicate that there was little variation in the noise levels at the property with either 7 or up to 18 bikes using the track. It is noted that the lowest noise level measured was obtained during the period when the maximum number of bikes were on the track, with the highest levels obtained from either 7 or 15 bikes on track.

4.5. Noise Measurements at Rye Farm

The meter at this location was positioned within the garden area to the side of the property at a position where there was a line of sight toward the track. The measurements at this property were all made unattended, although there was a period of attendance whilst the bikes were still running prior to the equipment being retrieved during the afternoon.

Noise levels monitored throughout the day at this location were principally influenced by distant road traffic, birdsong and the periodic aircraft flying overhead.

The summary results obtained from these measurements are presented graphically in Appendix C.

Ambient, L_{Aeq} noise levels measured at this location were principally attributable to birdsong, with levels ranging from 47 – 50 dB L_{Aeq} during the survey period.

Background noise levels, which were principally attributable to distant road traffic were typically in the range of 37 – 39 dB L_{A90} .

An analysis of the audio files and during the period of attendance indicated that the bike using the track were not audible at this position, indicating that the levels of noise associated with their use were at least 10 dB(A) below the noise levels measured.

The results of the survey at this location would indicate that noise from the operation of the motocross track were acceptable.

5. Assessment

The results of the noise measurements taken at Mead House and Rye Farm on 29th November 2014 indicated acceptable noise levels associated with the operation of the motocross track.

Whilst the bikes were audible at Mead House, the level of noise associated with their use was very low, with the bikes becoming inaudible as either a vehicle passed along Stanbridge Road or an aircraft flew overhead.

During the measurements, winds were light although in a slight positive direction towards Mead House. With a slightly stronger wind, given the distances between the property and the track, it is likely that noise levels could increase marginally, but would reduce when winds were blowing in a direction away from the house.

Similarly, at Rye Farm, it is considered that the use of the bikes could be audible when the winds were from a north westerly direction. However, it is also likely that the noise associated with distant road traffic using the A505 would also increase on these occasions.

The results of the monitoring indicated that there was little variation in the noise levels at the dwellings when 18 bikes were using the track, compared to the presently permitted 7. As discussed earlier, with a larger number of bikes on track, the noise generated tends to be more continuous, as the bikes spread around the course, whereas with a smaller number of bikes, the riders tend to bunch up creating periodic highs and lows in the noise.

Based upon the measured noise levels, allowing 18 bikes to use the track would make no significant increase in noise levels at the surrounding properties.

Consideration has been given to the changes in operating days and times during the year. The change from summer to winter operation would be very subjective. The majority would tend to spend less time outdoors over the winter months and hence the bikes operating would be less noticeable. However, a few people who make use of the daylight hours within the winter months, may notice the bikes more, as they would be operating for a longer period, although stopping an hour earlier in the day on Fridays and Saturdays. With regards Sundays, a 16:00 finish would make little difference objectively in noise terms, as the general background noise environment will be very similar at 14:00 and 16:00 hours.

Furthermore, whilst a longer operating period of 7 months a year is being sought, in reality it is unlikely that the track would be fully operational during this period, as there would be times when the track would have to be close due to poor weather, which is more likely than when operating during the summer months.

On balance, it is not considered that the proposed variations to the operational times nor increasing the number of bikes from 7 to 18 would result in a noticeable change in the noise environment at the surrounding properties. Furthermore, the results obtained from the noise monitoring indicated that whilst the bikes were audible, the level of noise generated was below that associated with other surrounding noise sources.

An assessment against the NPPF guidelines would therefore indicate that the operation of the track does not result in a significant adverse effect at the surrounding properties. The assessment would conclude that the operation has the potential to generate an Observed Adverse Effect under certain weather conditions and under these situations the NPPG guidelines advised that the noise from the operation should be mitigated and reduced to a minimum.

Recommendations for additional mitigation and control measures are therefore discussed in the following section.

6. Recommendations for Additional Mitigation and Control

Whilst it is considered that the operation of the track over the winter months and with up to 18 bikes on track is unlikely to generate significant adverse effects, additional noise mitigation and control measures have been identified, which would further seek to reduce noise levels and potential adverse impacts.

6.1. Perimeter Bunding

As discussed previously, the mitigating effect of the perimeter bunding has deteriorated over time, as a result of the bund slumping, small sections of the bund having been removed or incomplete and the increase in track level. These changes have resulted in the overall effective height reducing and in some areas to a level which is now below the track level.

It is recommended that the bund is reinstated correctly, ideally to a minimum height of 2 metres above the track at any point (i.e. increasing in overall height adjacent to jumps), which is understood to have been its original height.

With the bund reinstated to its correct height, noise levels associated with the bikes generally would be reduced. However, more effectively, the bund would seek to reduce the occasional peaks which are presently heard as the more experienced riders take air over the jumps.

It is also suggested that a planning condition be imposed, if possible, which seeks to ensure that the bund is constructed to a minimum height of 2 metres above track level and that it is inspected / maintained at regular intervals (e.g. at the end of each season) to ensure that the effective height is maintained and does not slump again, which has happened at the present time.

6.2. Control of Noise Levels from Bikes on Track

At present, it is understood that Mr Brooks undertakes a subjective assessment of the noise levels from the bikes using the track and will pull any off which appear to be generating higher than expected levels of noise. These bikes are then subject to a noise test and if found to fail, either offered packing for the exhaust silencer or the rider is asked to leave the circuit.

Whilst this assessment is considered a satisfactory approach for this type of facility, it is recommended that the procedure be fully documented and extended (if not already implemented) to allow the track marshals' the ability to identify and remove any offending bikes.

7. Summary and Conclusions

LF Acoustics Limited have been appointed by Central Bedfordshire Council to undertake an assessment of the noise levels associated with the use of the existing motocross track located on land off Billington Road, Stanbridge, Leighton Buzzard.

Planning consent for the operation of the track was granted in 1995 (Application Ref. SB/95/00176/FULL). The application was subject to conditions, which limited the operation of the site to:

- between 1st April and 30th September in any calendar year;
- to operate the track only between the hours of 10:00 – 12:30 and 14:30 – 17:00 hours Mondays to Saturdays and between 10:00 – 14:00 on Sundays and Bank Holidays; and
- a restriction of no more than 7 bikes on the track at any one time.

Mr Brooks, a new operator, took over control of the track approximately 3 years ago and has renovated the track and layout such that it is now one of the most demanding in the country. Following a number of recent complaints, he is seeking to vary the conditions of the current planning consent to operate during the winter months, with variations to the number of operating dates, times and number of bikes allowable on the track as follows:

- Operate between 1st October to 30th April in any calendar year;
- between 10:00 – 13:00 and 13:30 – 16:00 on Fridays, Saturdays and Sundays only, and between 10:00 – 14:00 hours on Bank Holidays; and
- To increase the maximum number of bikes on track from 7 to 18.

In order to evaluate any potential additional adverse impacts upon surrounding residents from the proposals, a noise monitoring exercise was carried out during a test event, where combinations of up to 7 and up to 18 bikes were used on track.

The assessment indicated that whilst noise levels generally increased at the track with the additional bikes, there was no noticeable increase in noise levels at the surrounding properties, with the noise generated by the bikes remaining below that which would be considered to represent a significant adverse effect as described in the NPPF planning guidance.

The operation of the track could, however, generate an observed adverse effect during certain weather conditions, with winds blowing towards the surrounding properties. In this situation the NPPF guidance recommends that the noise should be mitigated and minimised. It was noted that the existing bund has become ineffective and this should be reinstated, should consent be granted, which would reduce noise levels at the properties and a recommendation is made to ensure that this is constructed to a minimum height of 2 metres relative to the adjacent track level. With regards noise levels associated with the bikes, there is some control on the noise levels at present, however, it is recommended that the procedure for removing bikes for testing, should they be identified as generating high levels of noise, is formalised.

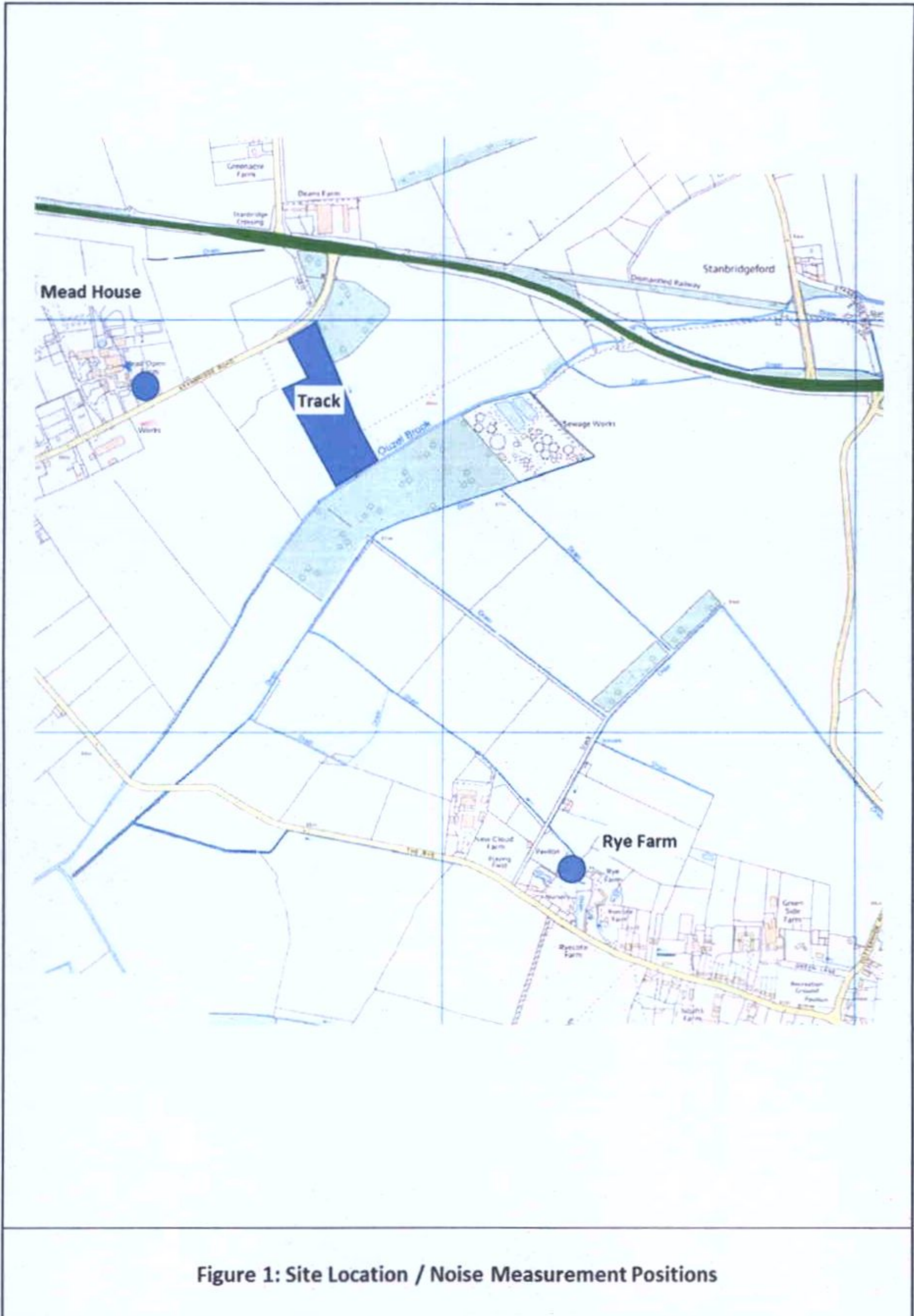
The proposed winter operating over a seven month period, rather than the presently permitted 6 months and additional bikes permitted on track, would give rise to an overall increase in bike hours permissible over the operating period. As indicated within this report, the additional bikes would be unlikely to result in a significant impact at the surrounding dwellings. The overall increase in operating hours is not anticipated to be as high as anticipated, as the track would be closed for a number of days within the 7 month period due to poor weather, which is more likely over winter than summer months.

In summary, with appropriate control and reinstated boundary mitigation, it considered that the proposed winter operating would not result in any additional impacts upon occupants of surrounding properties.

References

1. Department for Communities and Local Government. National Planning Policy Framework. March 2012.
2. Department for Communities and Local Government. Noise Policy Statement for England. 2010.
3. Code of Practice on Noise from Organised Off-road Motor Cycle Sport. 1994. The Noise Council.
4. British Standards Institute. Guidance on Sound Insulation and Noise Reduction in Buildings. BS 8233: 2014.
5. World Health Organisation. Guidelines for Community Noise. 1999. WHO Geneva.

Figures



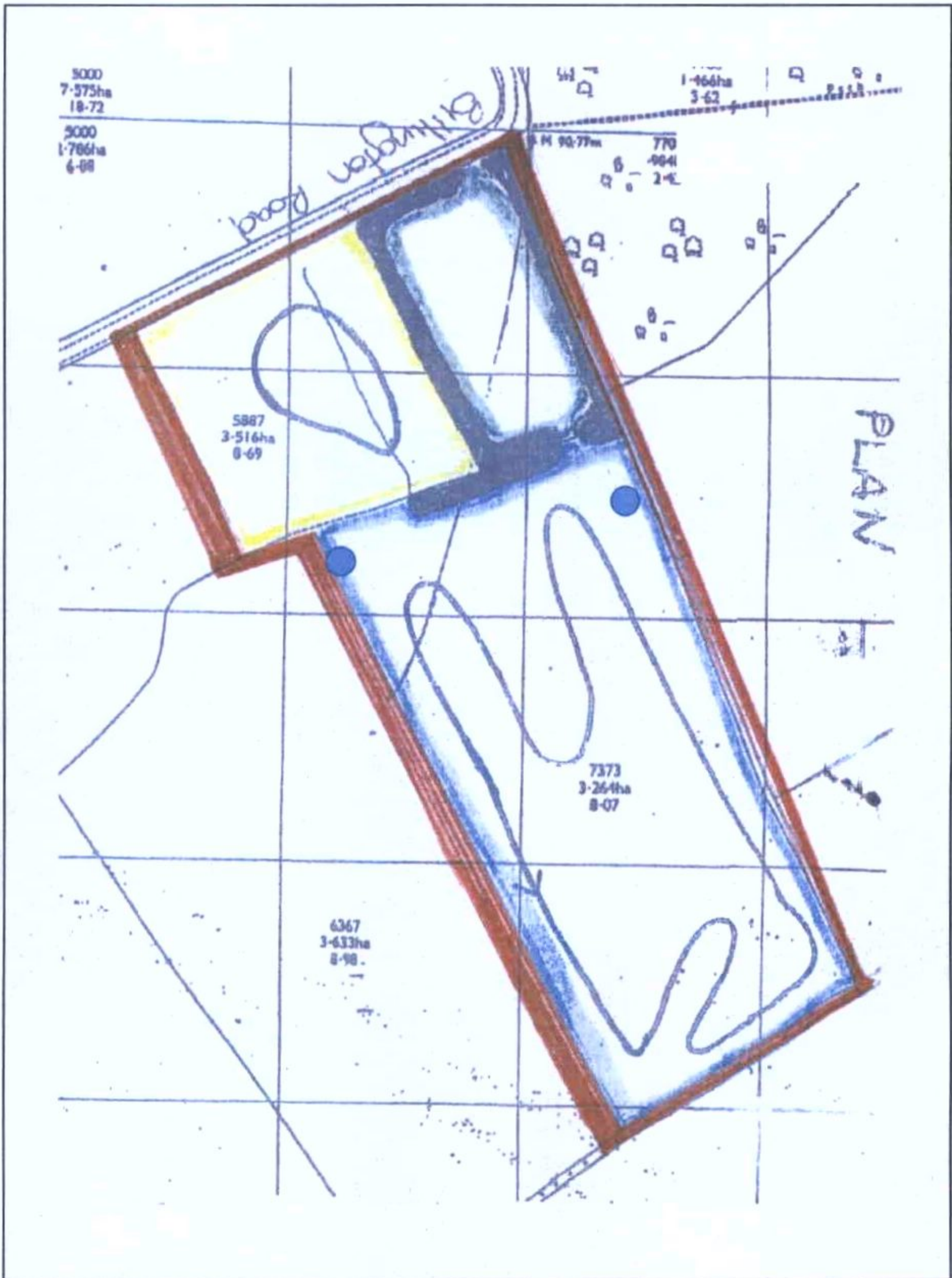


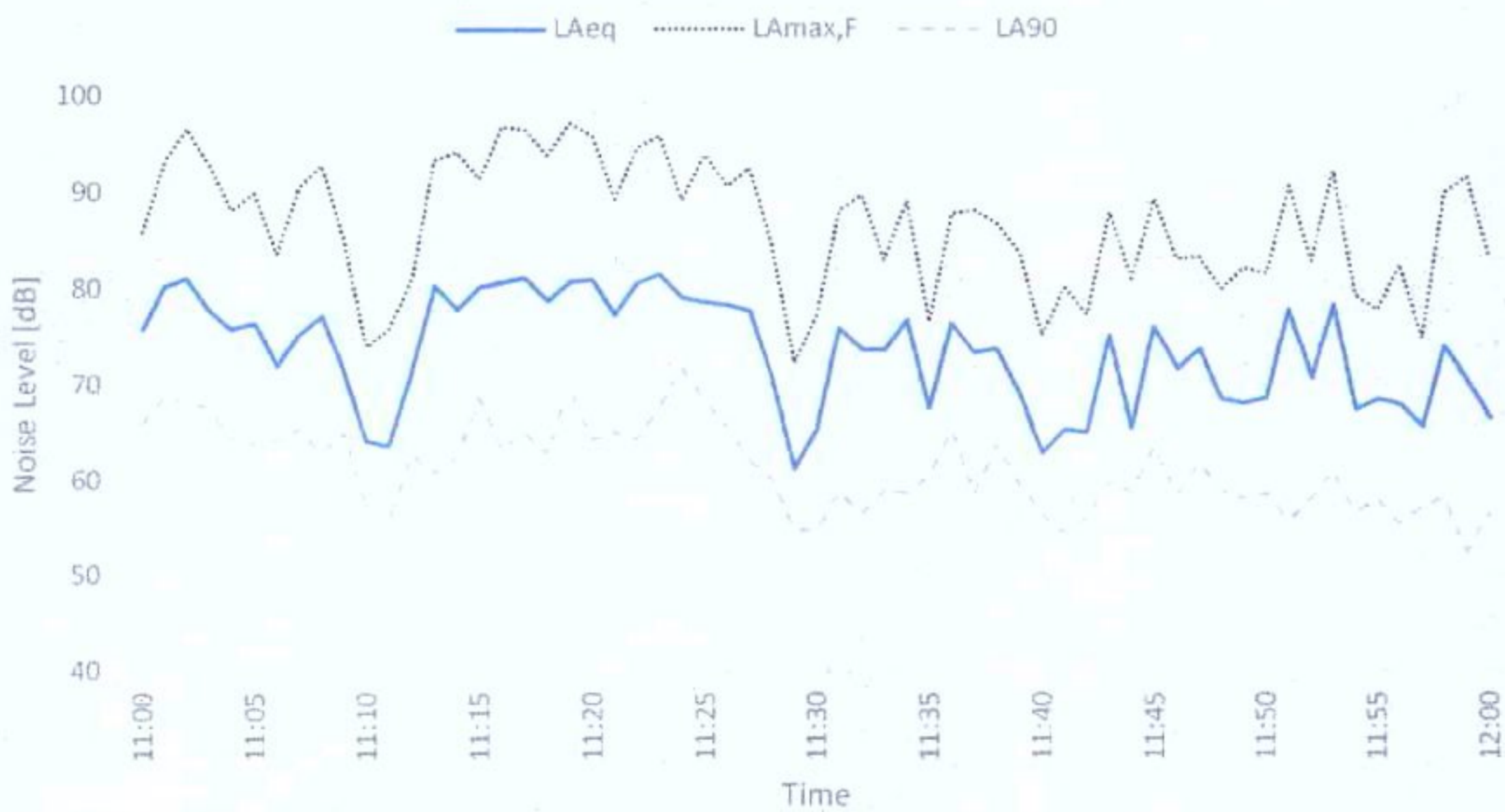
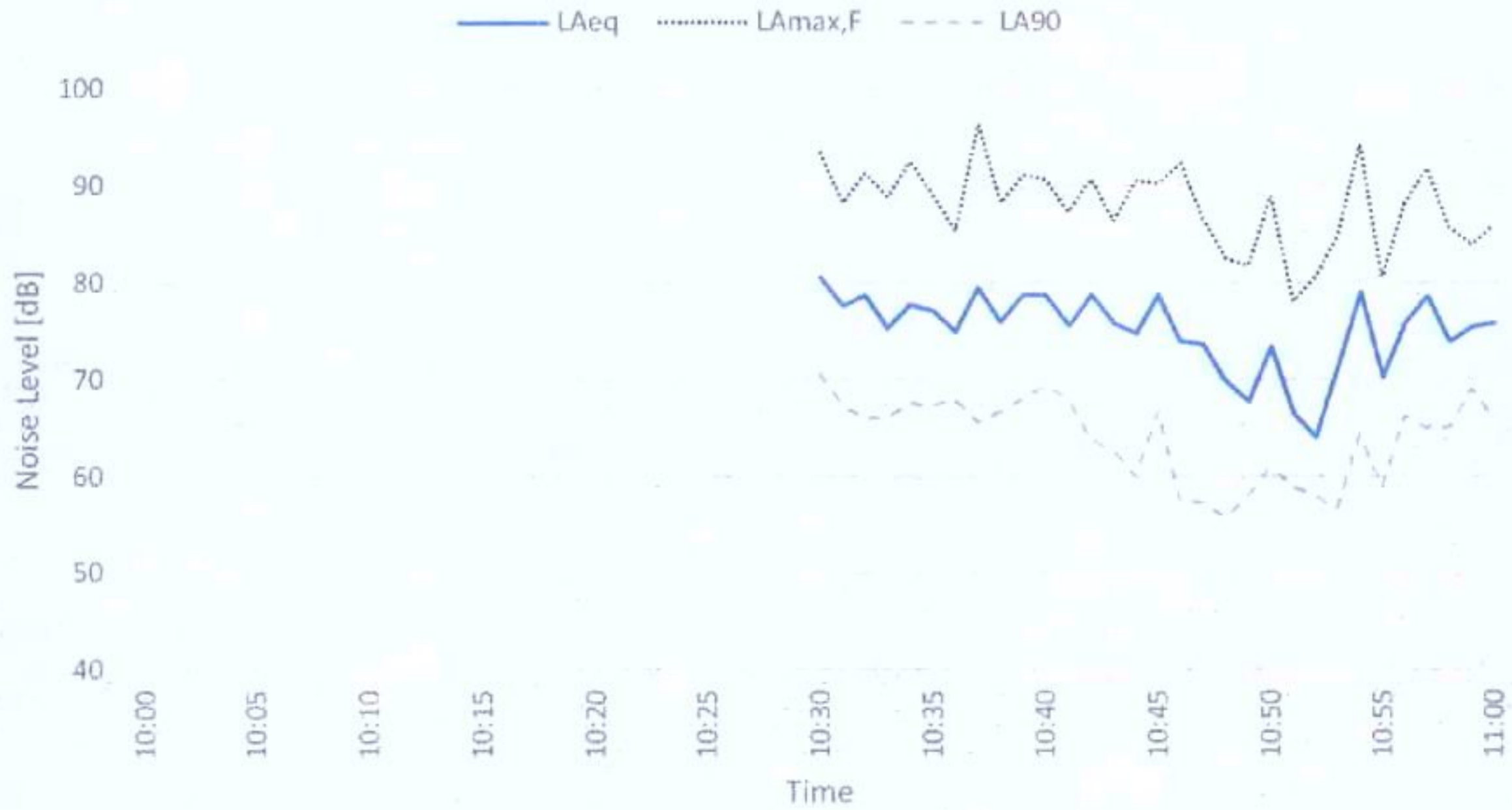
Figure 2: On Site Noise Measurement Positions

Appendix A
Summary Results of On Track Noise Monitoring

Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: On Site North Eastern Position By Control Cabin
 10m from Track

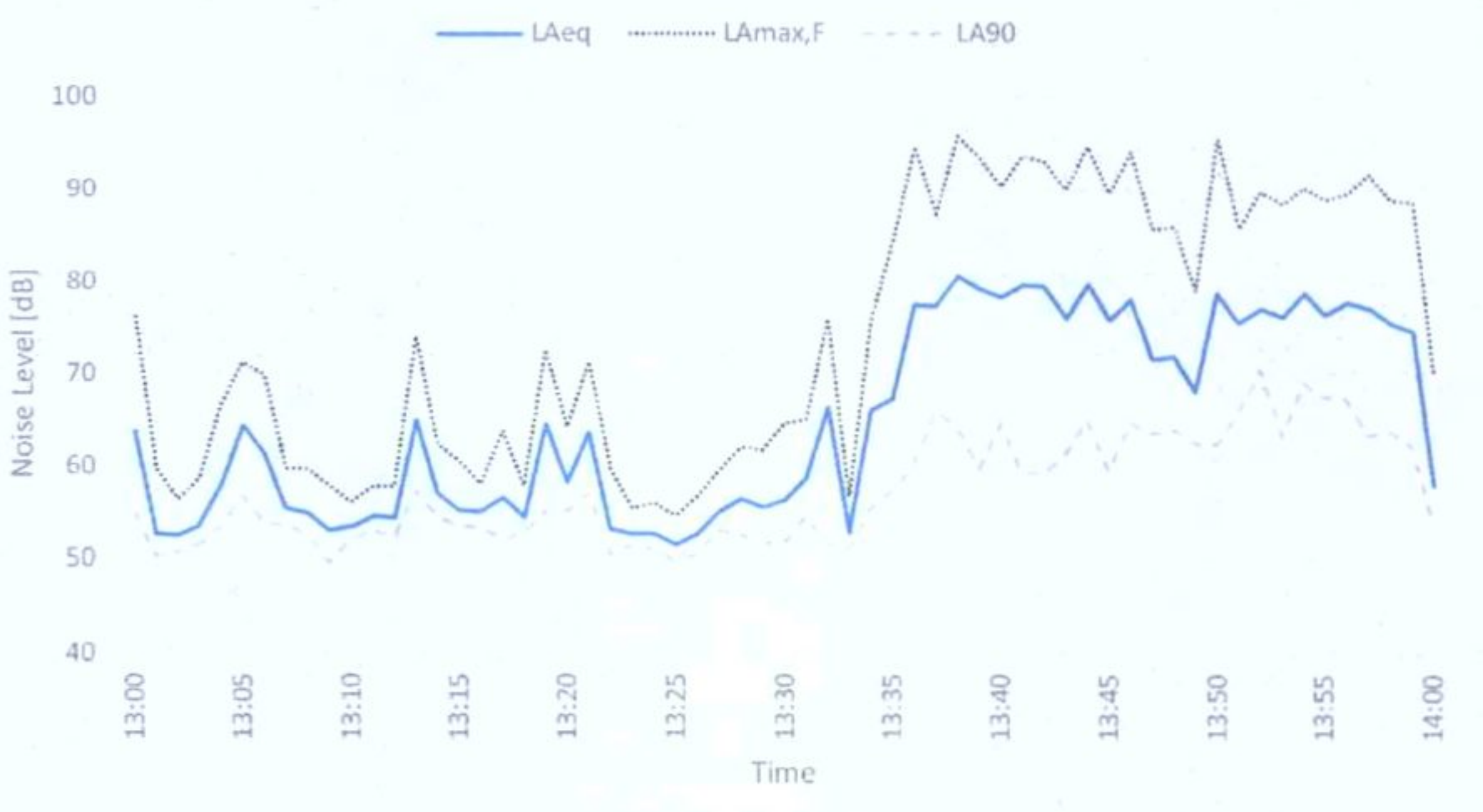
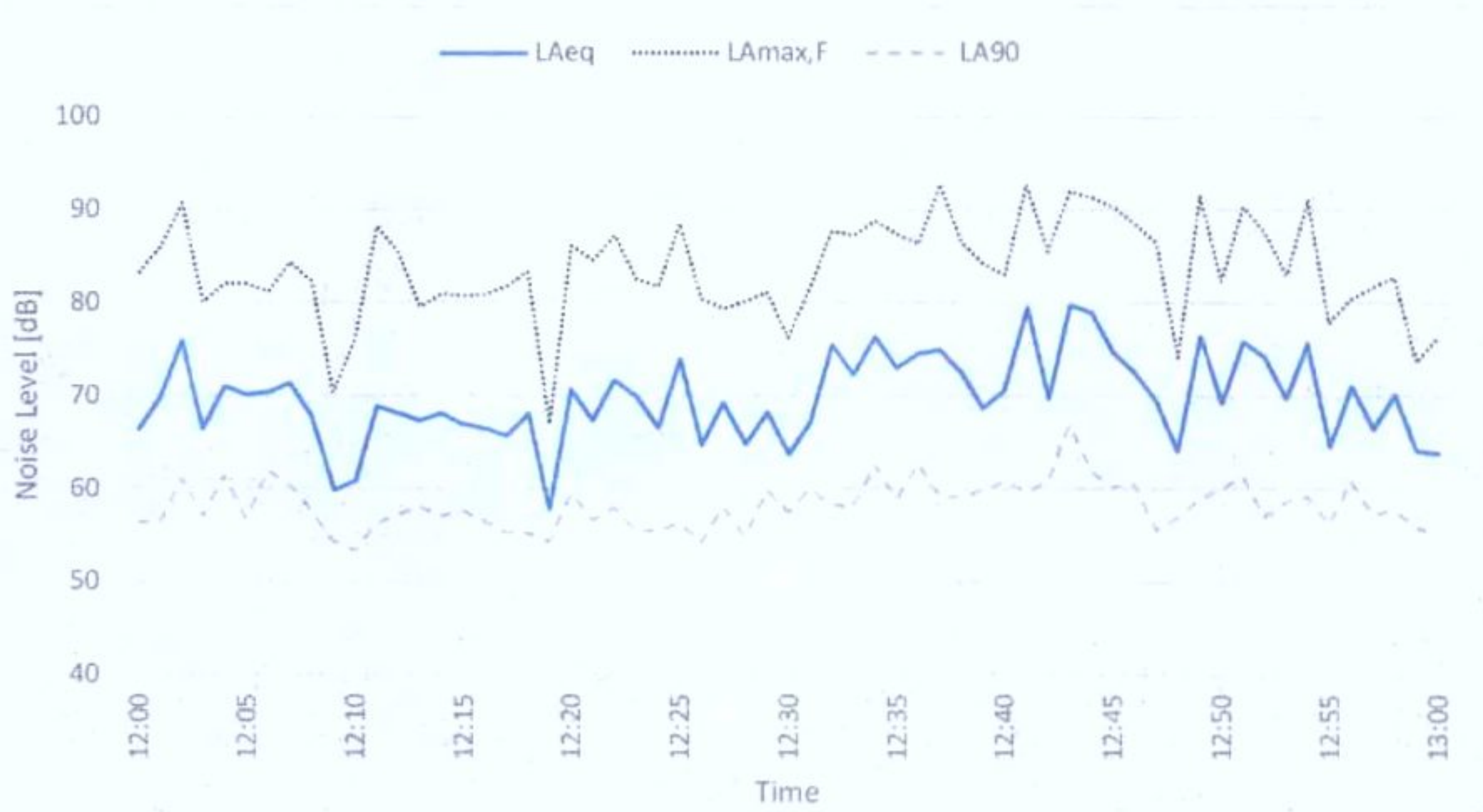
Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231656)
 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: On Site North Eastern Position By Control Cabin
 10m from Track

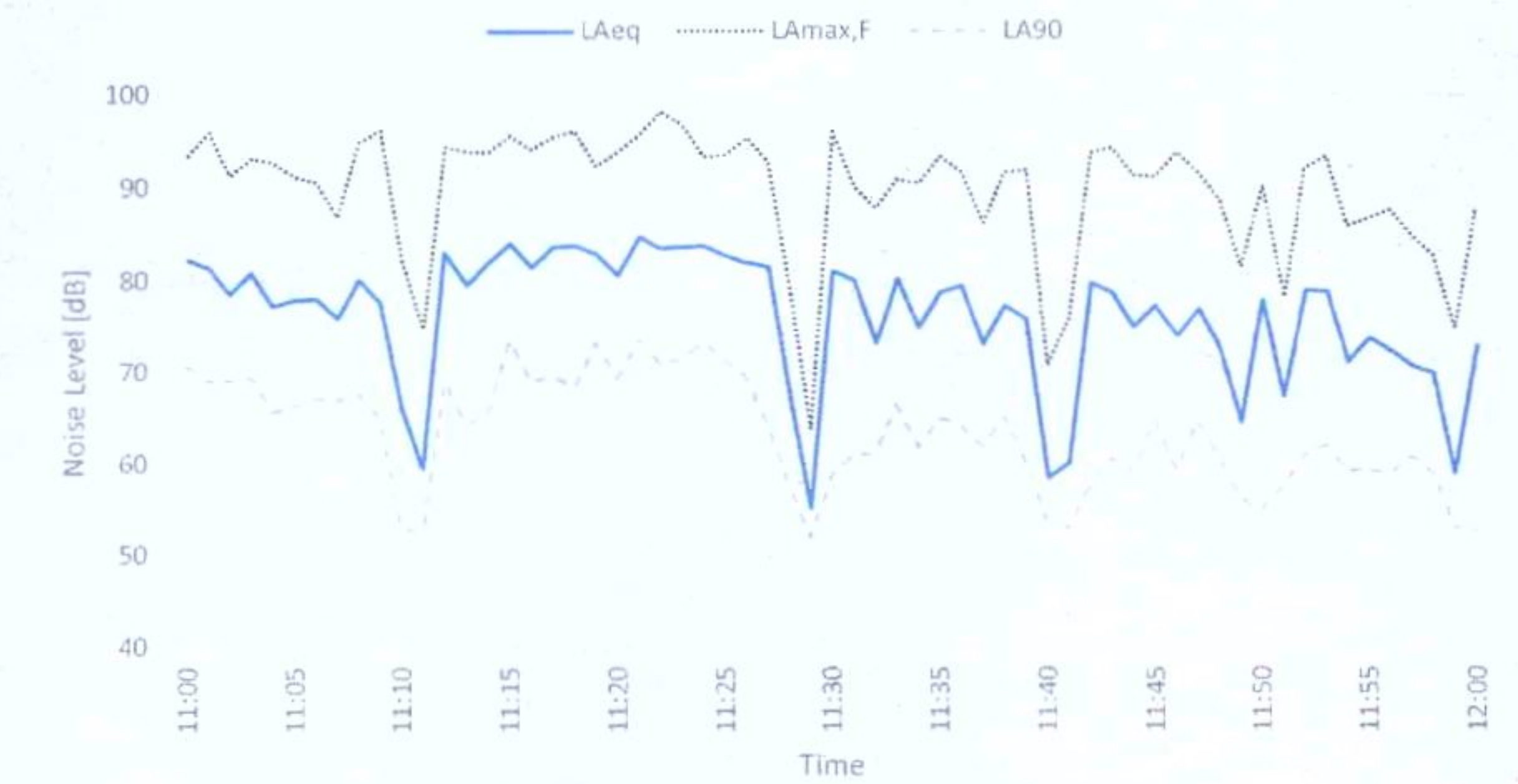
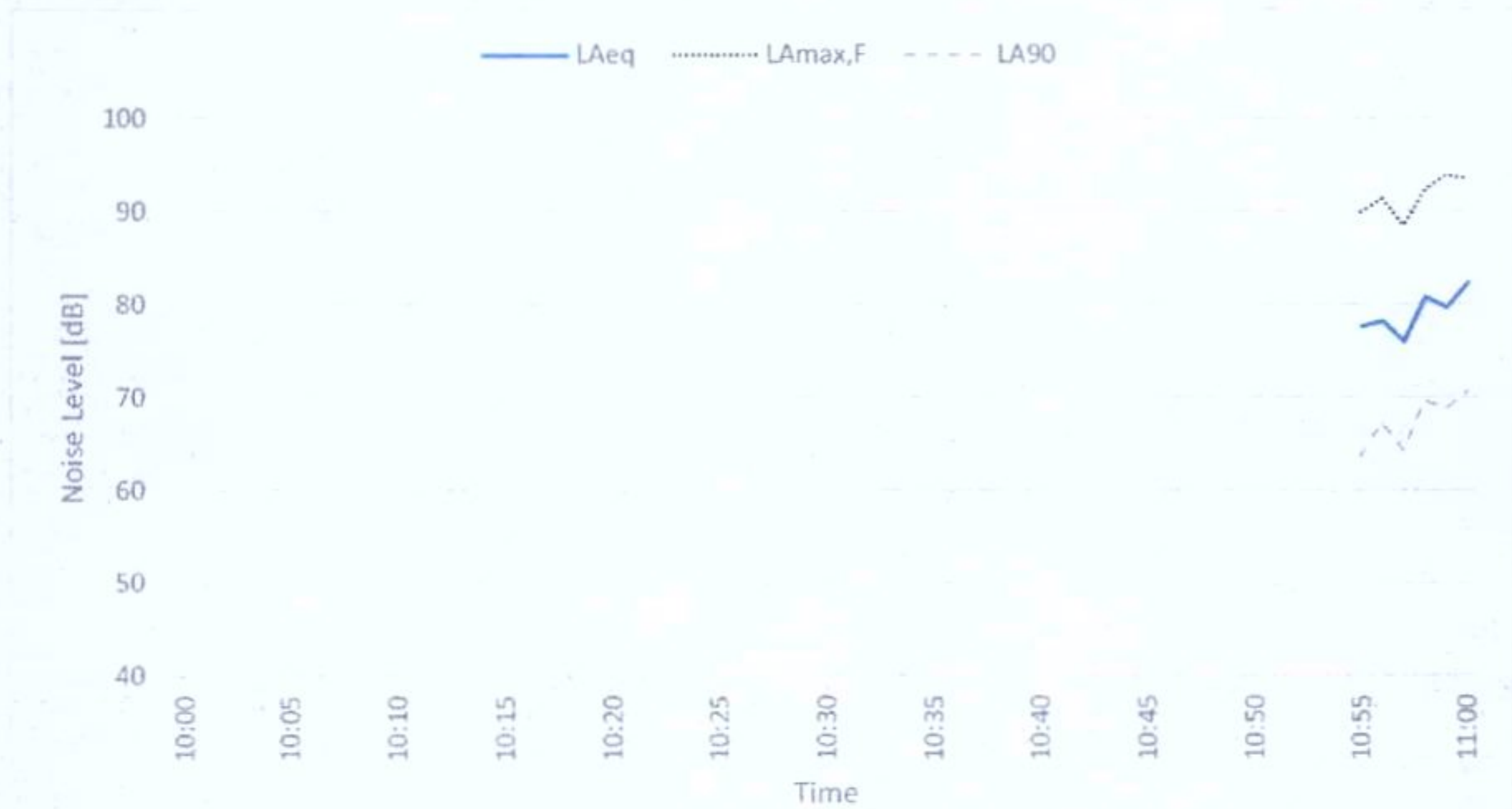
Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231656)
 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: On Site North Western Boundary on Top of Bund
 10m from Track

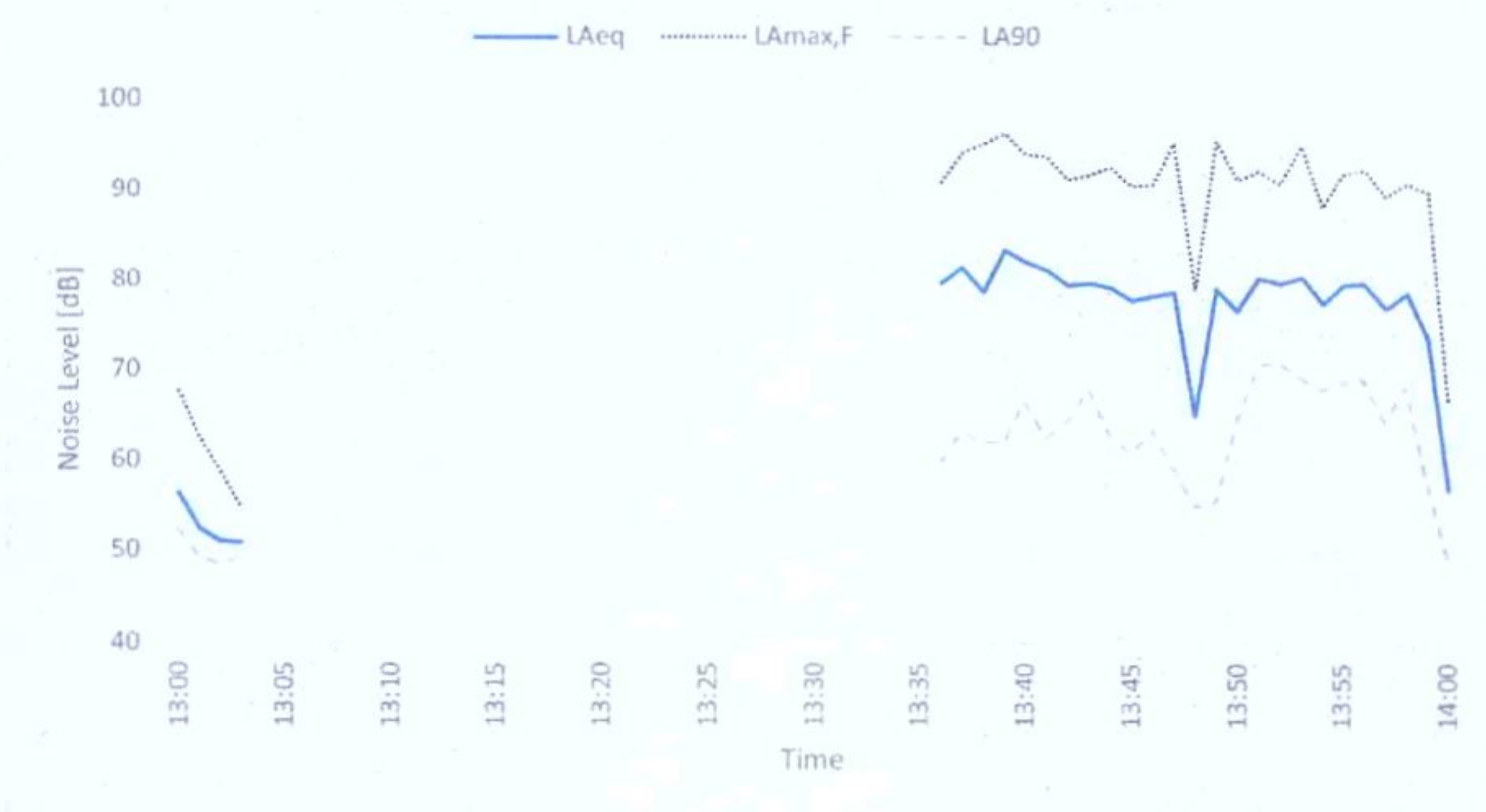
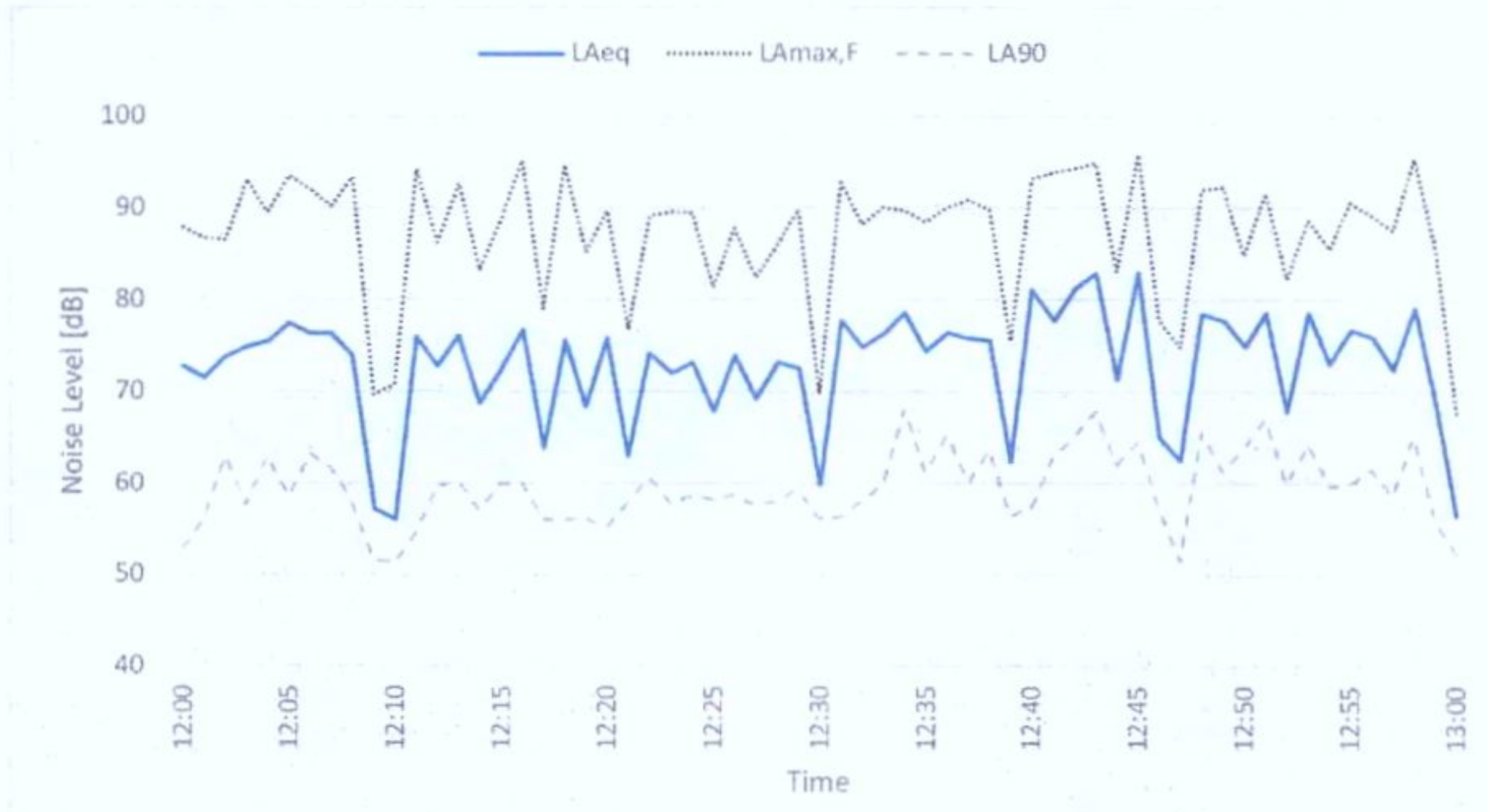
Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231657)
 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: On Site North Western Boundary on Top of Bund
 10m from Track

Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231657)
 Mic Height 1.3m Freefield

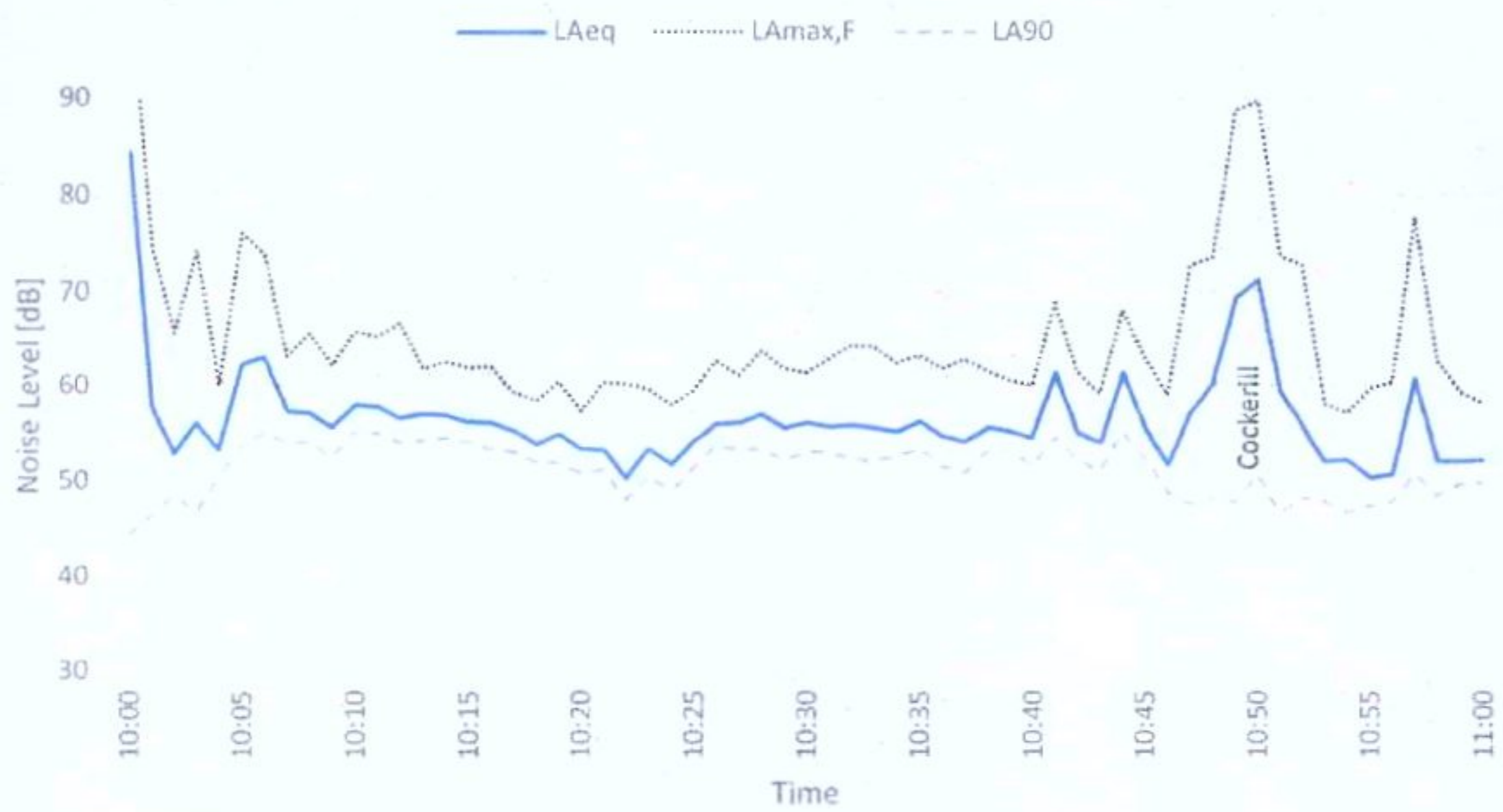


Appendix B
Summary Results of Noise Monitoring at Mead House

Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

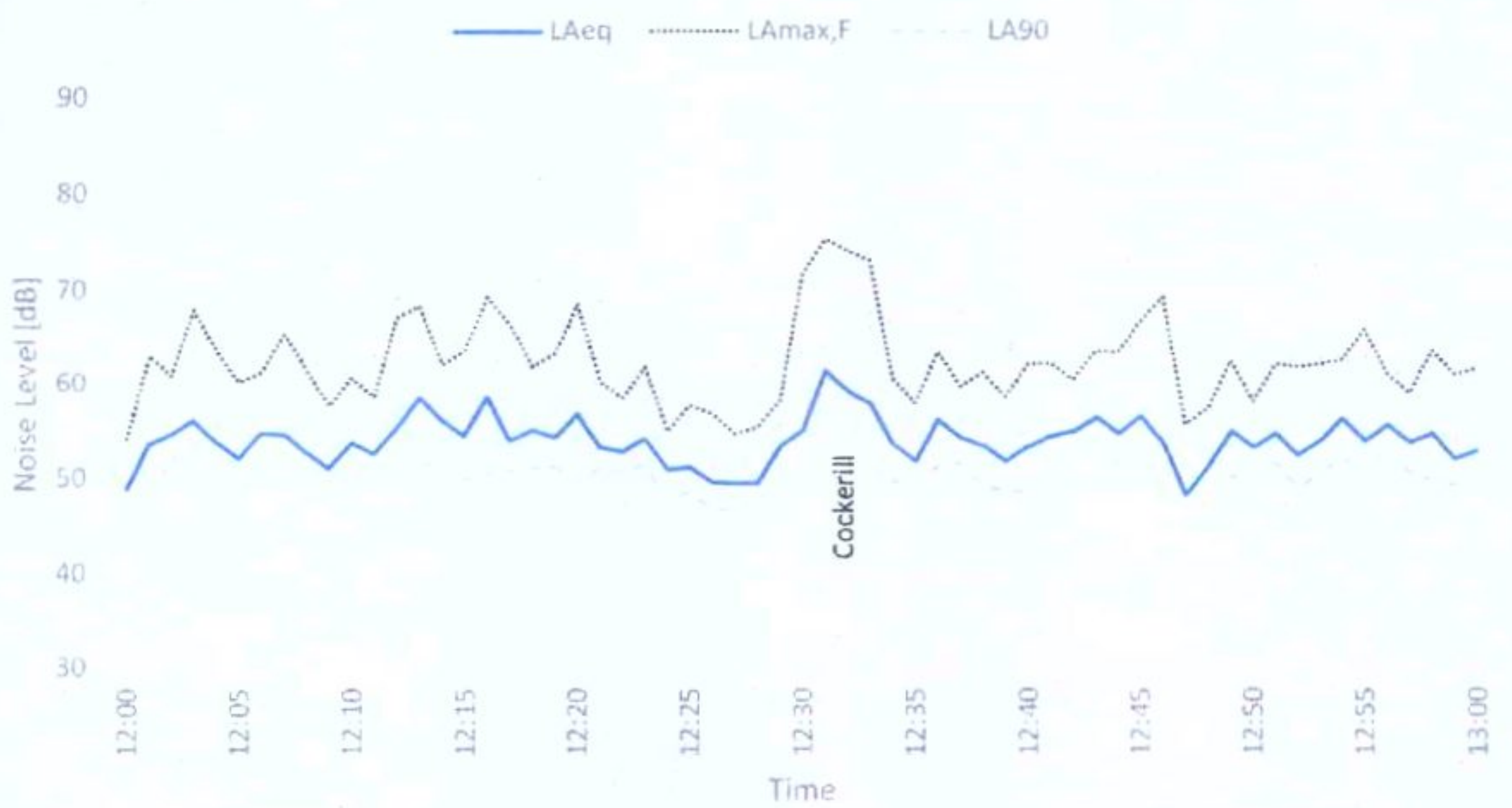
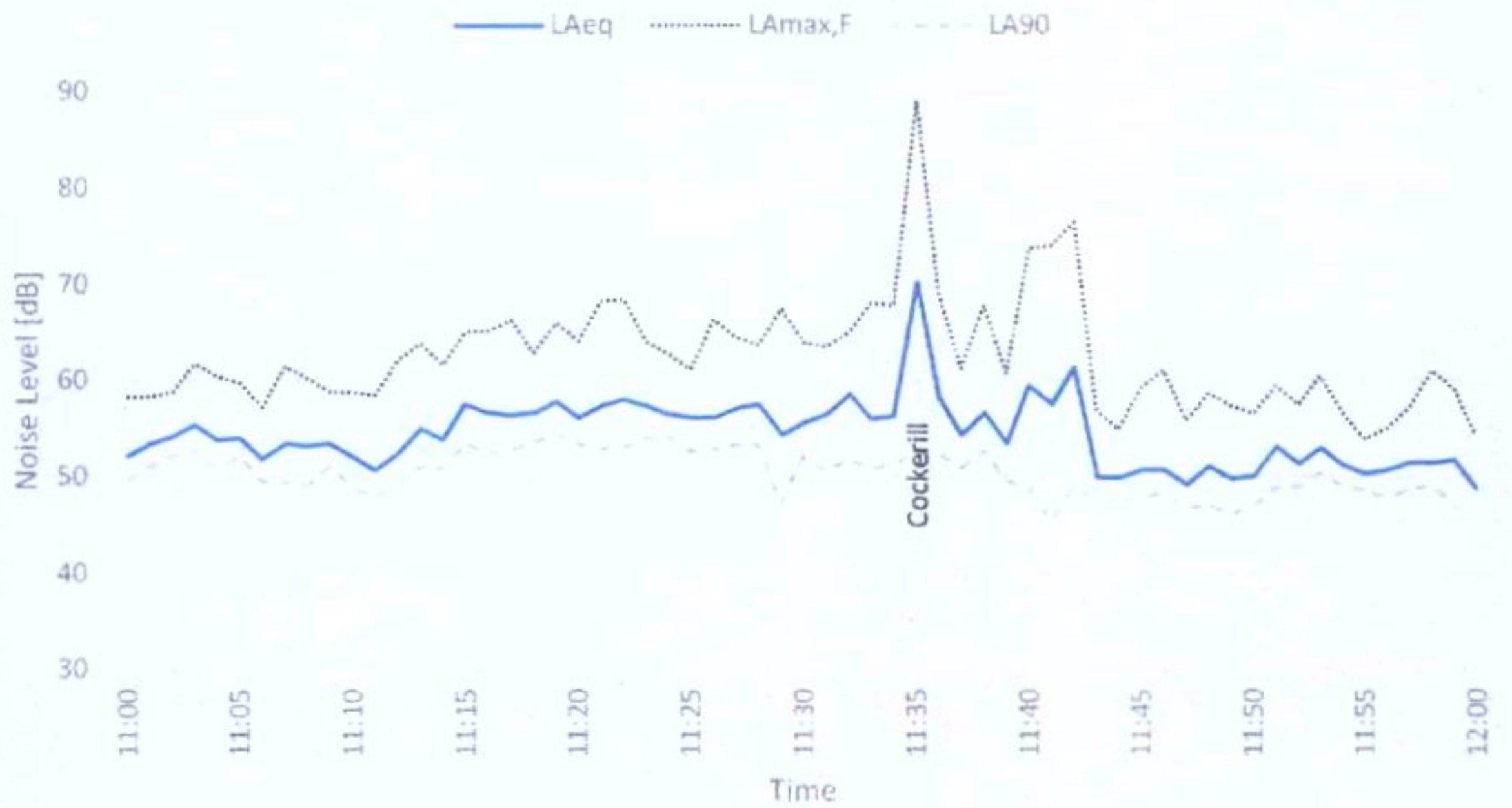
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 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

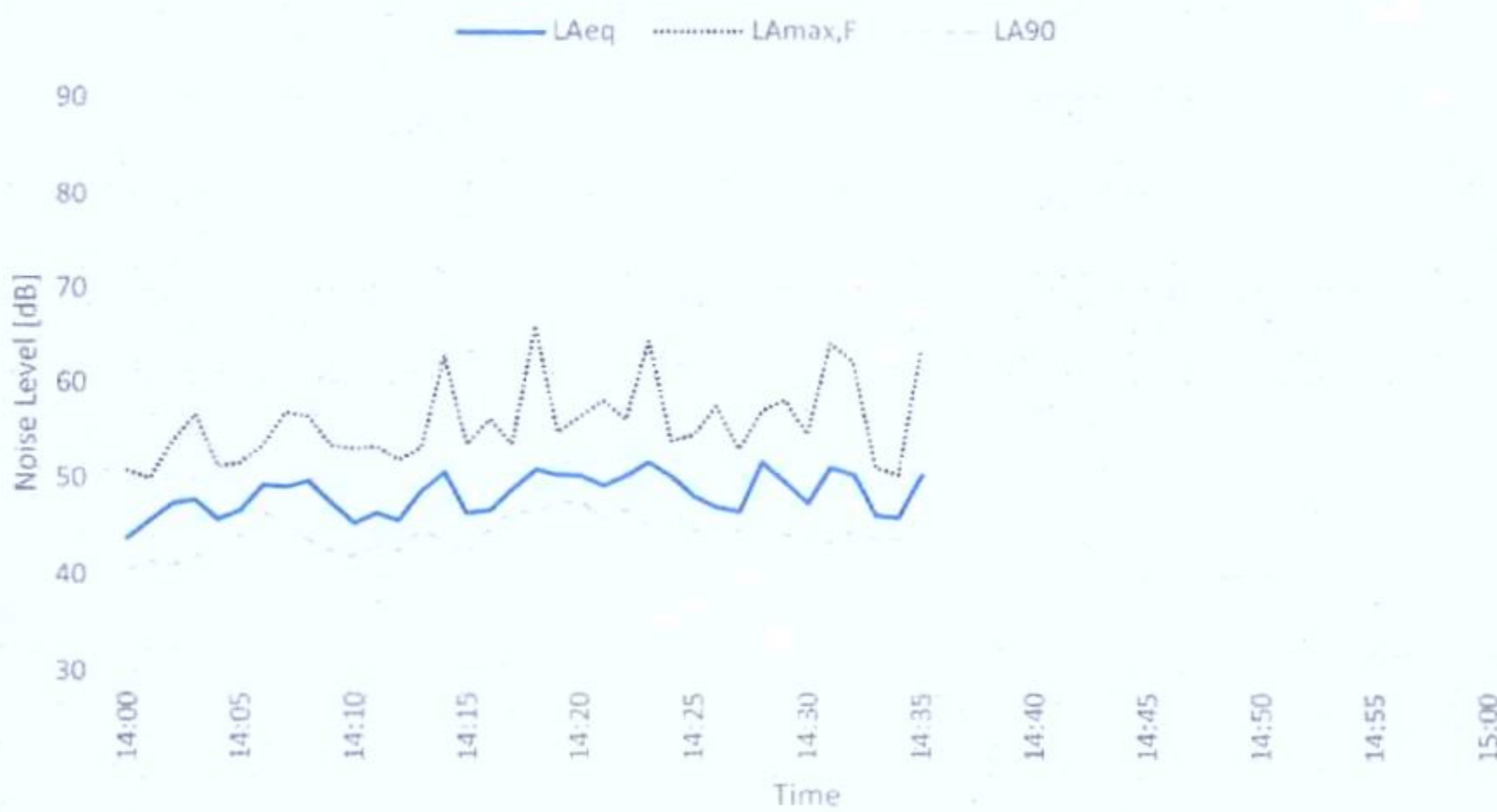
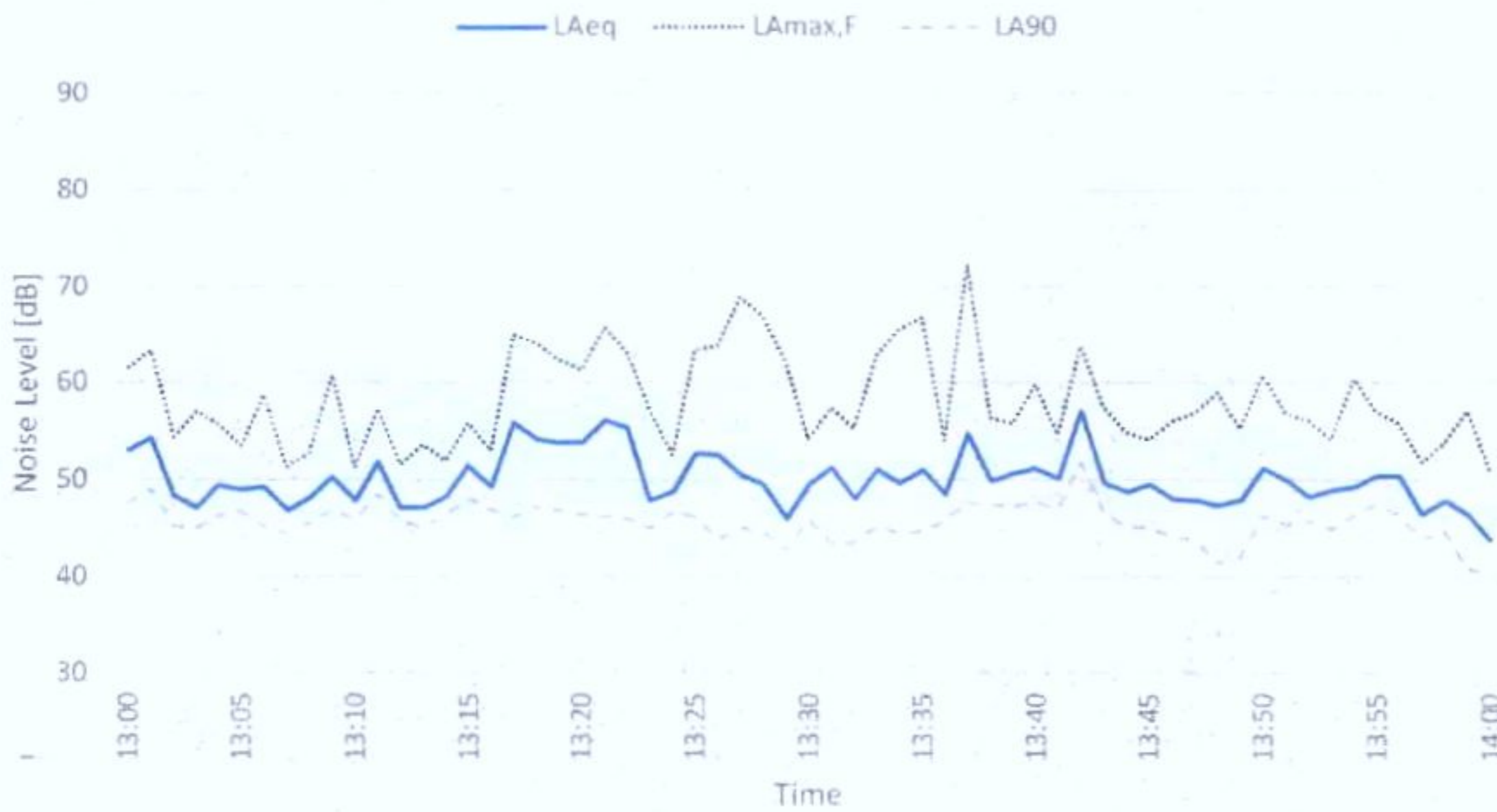
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 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231655)
 Mic Height 1.3m Freefield

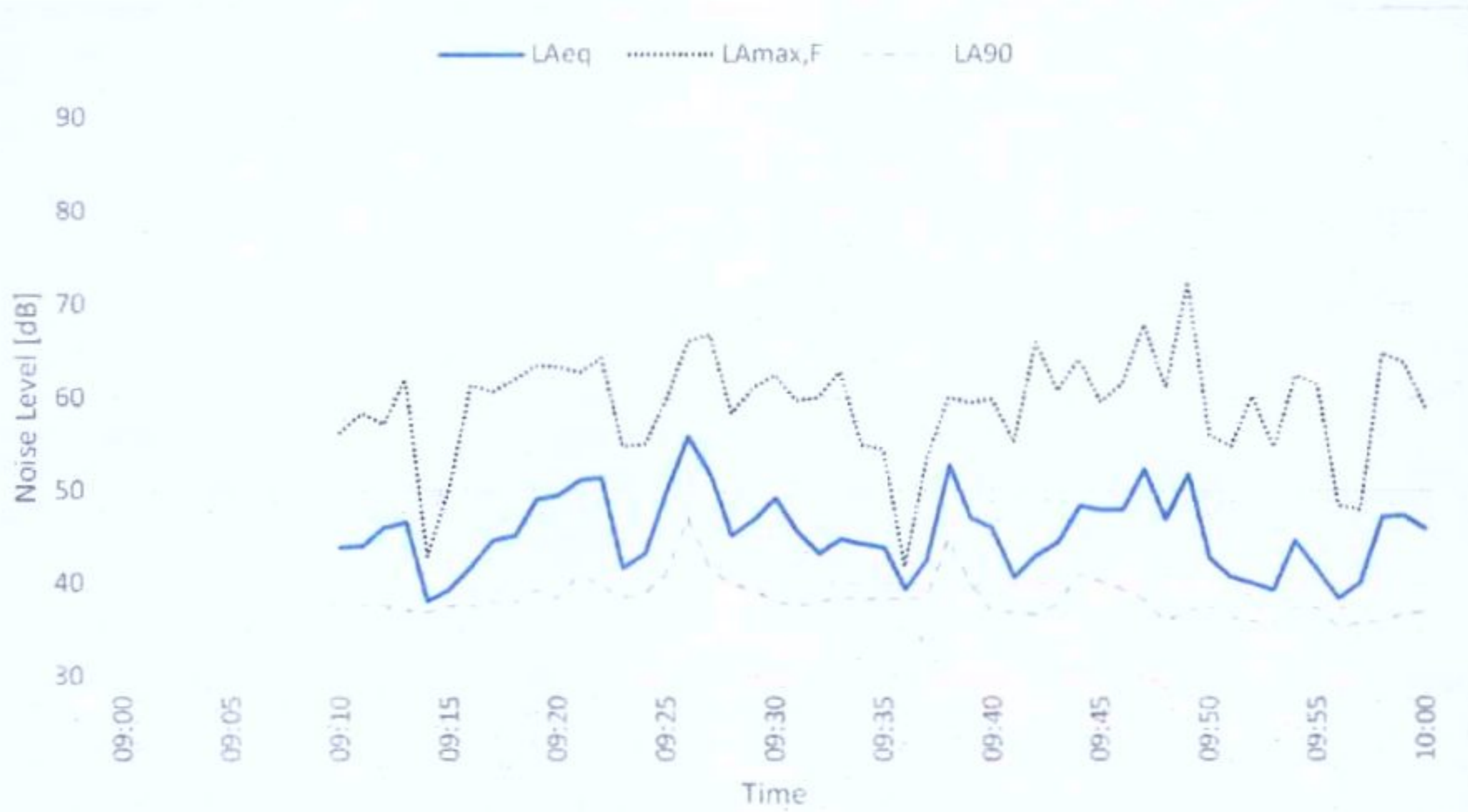


Appendix C
Summary Results of Noise Monitoring at Rye Farm

Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

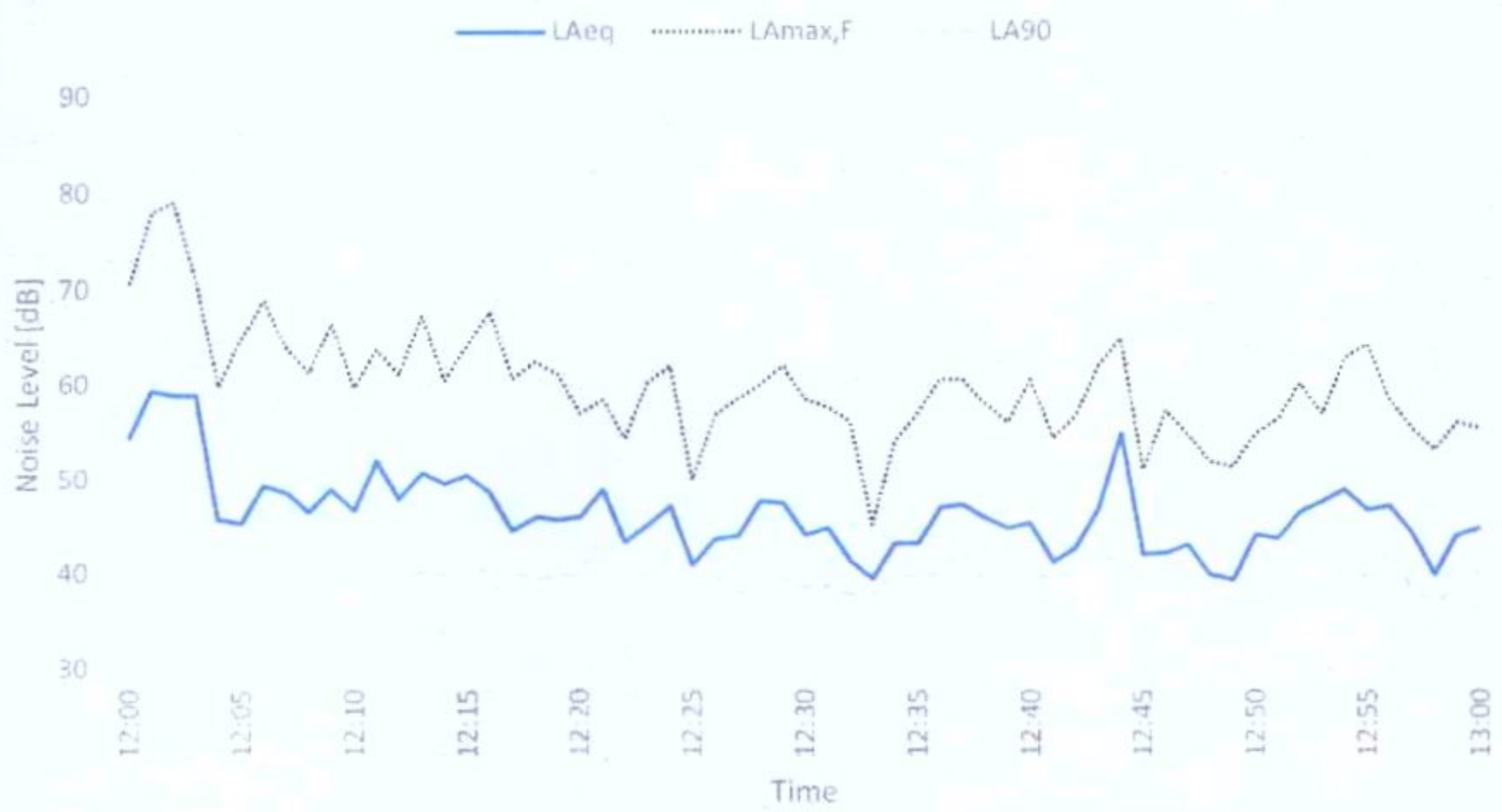
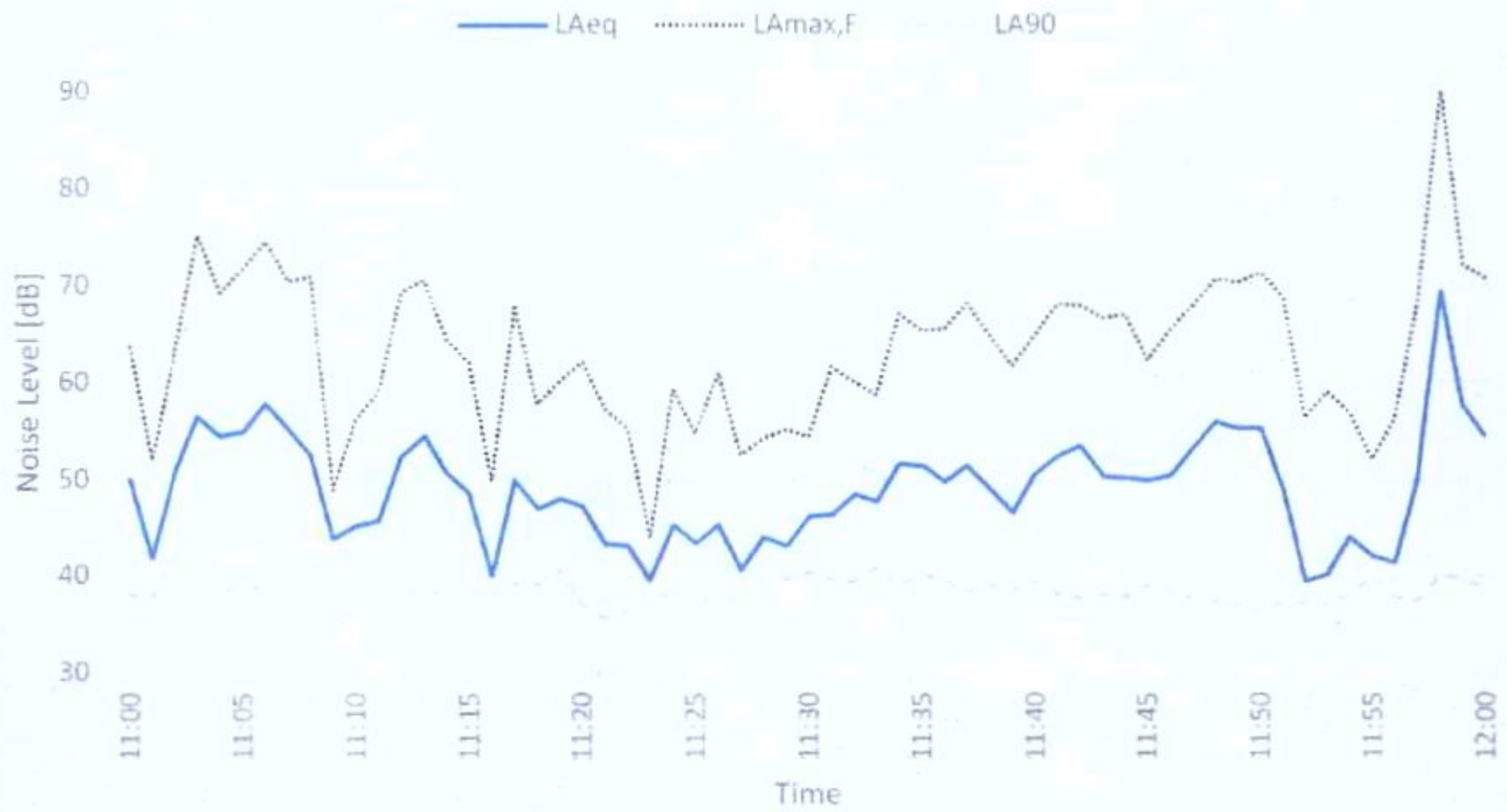
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 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00610177)
 Mic Height 1.3m Freefield



Central Bedfordshire Council - Dunstable Motocross Track
 Results of Noise Monitoring Undertaken on 29 November 2014

Location: Rye Farm
 Within Garden to Side of Dwelling

Instrumentation: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00610177)
 Mic Height 1.3m Freefield

