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ACOUSTICS & NOISE CONTROL

**SWALCLIFFE PARK EQUESTRIAN
SECTION 73 APPLICATION
NOISE REPORT**

SUBMITTED TO:

**Swalcliffe Park Equestrian
PWA Planning**

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01 August 2016

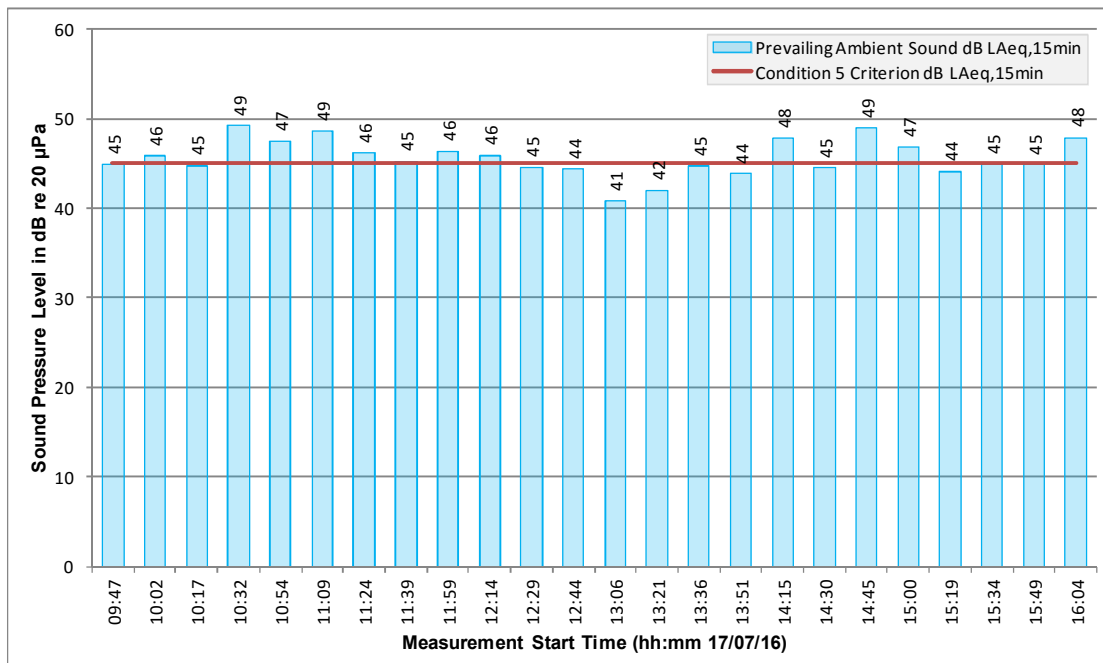
Dynamic experiences, Idibri design

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1. SUMMARY

- 1.1 Swalcliffe Park Equestrian proposes an application to Cherwell District Council to amend Condition 5 of Application 14/01762/F under Section 73 of the Town and Country Planning Act.
- 1.2 We discuss the current requirements for the control of noise under Condition 5 and demonstrate how these have potential to impact adversely and unreasonably on Swalcliffe Park Equestrian's ongoing operation.
- 1.3 Current requirements under Condition 5 are that noise from events (including all sources) should be controlled to a limit of 45 dB $L_{Aeq,15min}$ at nearby dwellings. However, this criterion is regularly exceeded by the ambient noise (dB $L_{Aeq,15min}$) on non-event days.
- 1.4 Noise monitoring at nearby dwellings will regularly show that the criterion is exceeded even on non-event days.



Measurements of the prevailing ambient sound at nearby dwellings show that the current criterion is regularly exceeded even on non-event days

- 1.5 We propose that requirements for the control of noise from events with more than 50 competing horses under Condition 5 are amended by Cherwell District Council such that:
 - Event sound including public address systems and other temporary equipment is controlled to a limit of 55 dB $L_{Aeq,15min}$.
 - Other sources of noise from events are controlled to best practicable means in accordance with the noise management plan agreed by Cherwell District Council.
 - Noise monitoring is undertaken in accordance with the Noise Management Plan agreed by Cherwell District Council.
- 1.6 We highlight an appropriate methodology for the assessment and control of noise from equestrian events under guidance in the National Planning Policy Framework in support of the proposed amendment to Condition 5.

- 1.7 We include details of previous assessments and correspondence for reference.
- 1.8 The relevant standards and guidance are discussed in Appendix A.
- 1.9 Our surveys at the site are described in Appendix B.

2. BACKGROUND

2.1 We have previously submitted the following to Cherwell District Council regarding noise associated with events at Swalcliffe Park Equestrian:

- Noise Assessment for Planning – October 2014
- Noise Management Plan – May 2015

Noise Assessment for Planning

2.2 This report was submitted in support of Application 14/01762/F regarding the operation of equestrian events with more than 50 competing horses.

2.3 Our assessment included the following:

- A method by which to establish a reasonable noise criterion based on appropriate standards and guidance.
- Calculation of sound from public address systems at nearby dwellings.
- Comparative measurements of ambient sound ($\text{dB } L_{\text{Aeq,T}}$) at nearby dwellings for an event day and non-event day.

2.4 We proposed a limit of $55 \text{ dB } L_{\text{Aeq,15min}}$ for the control of noise from amplified sound during events based on World Health Organization guidance and recommendations in The Noise Council 'Code of practice on environmental noise control at concerts'.

2.5 This methodology was largely rejected by Cherwell District Council which set a lower criterion for the control of noise under conditions to Application 14/01762/F.

Current Noise Limit under Condition 5

2.6 Application 14/01762/F for Swalcliffe Park Equestrian was recommended for approval subject to the following condition regarding noise:

'Condition 5:

Prior to any further equestrian events of greater than 50 competing horses taking place on a site, a Noise Management Plan (NMP) detailing the methods to be employed to achieve compliance with a noise limit of $45 \text{ dB } L_{\text{Aeq,15min}}$ when measured free field at noise sensitive locations adjacent to the residential properties of Partway House, Elm Farm, Swalcliffe House and Wykham, shown on the attached plan ref. CDC-01' [see Appendix C].

The full condition wording is shown in Appendix A.

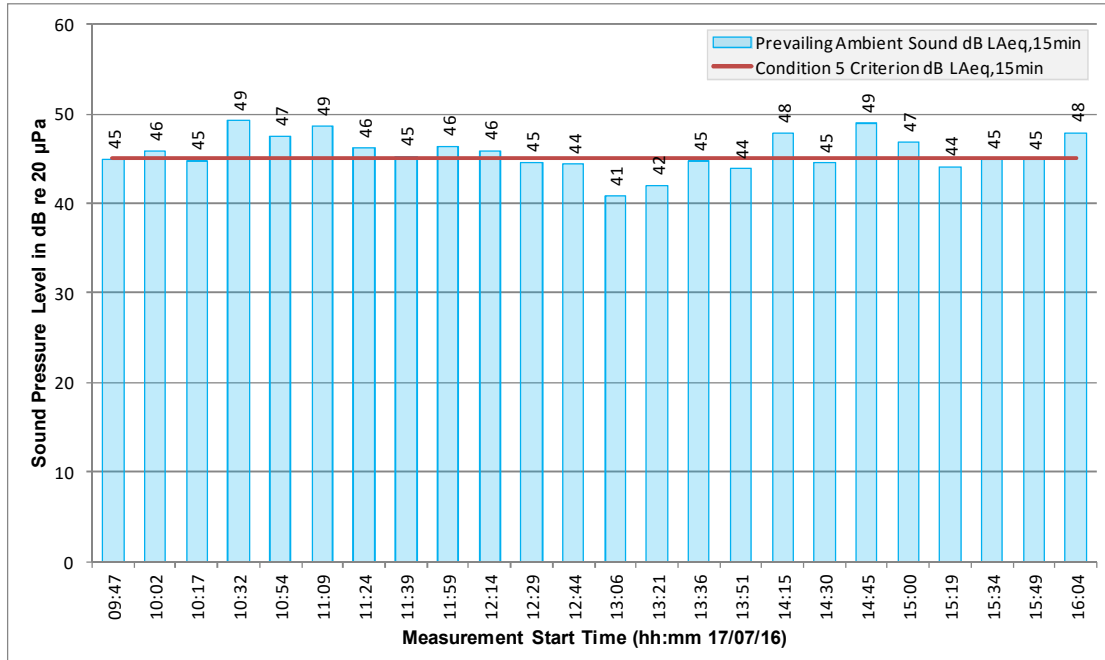
Noise Management Plan

- 2.7 Swalcliffe Park Equestrian now operates events with more than 50 competing horses under a Noise Management Plan (NMP) developed in agreement with Cherwell District Council and issued in May 2015 by Idibri.
- 2.8 The NMP addresses the control of noise from:
- Public address systems
 - Temporary equipment
 - Construction and dismantling activities
 - Traffic movements
 - Equestrian sounds
- 2.9 The NMP also outlines a strategy for noise monitoring from public address systems and for complaints management.
- 2.10 Detail of the standards and guidance on which the NMP is based is provided in Appendix A of this report for reference.

3. AMENDMENTS TO CONDITION 5

- 3.1 We propose that requirements for the control of noise from events with more than 50 competing horses under Condition 5 are amended by Cherwell District Council such that:
- Event sound including public address systems and other temporary equipment is controlled to a limit of 55 dB $L_{Aeq,15min}$.
 - Other sources of noise from events are controlled to best practicable means in accordance with the noise management plan agreed by Cherwell District Council.
 - Noise monitoring is undertaken in accordance with the Noise Management Plan agreed by Cherwell District Council.
- 3.2 Our professional opinion is that a limit of 45 dB $L_{Aeq,15min}$ covering all sources of event sound is unnecessarily onerous and there is no evidence under relevant standards and guidance to support that levels higher than 45 dB $L_{Aeq,15min}$ would give rise to significant adverse impacts on health or quality of life as a result noise.
- 3.3 It is also significant that events are largely restricted to daytime hours and occur on a very limited (and pre-determined) number of days each year which during 2016 is eleven (excluding set-up and take-down days).

3.4 We show that the criterion is regularly exceeded by the ambient noise (dB $L_{Aeq,15min}$) on non-event days.



Measurements of the prevailing ambient sound at nearby dwellings show that the current criterion is regularly exceeded even on non-event days

3.5 We provide discussion to support that the proposed limit of 55 dB $L_{Aeq,15min}$ is reasonable for the control of amplified sound from public address systems and noise from temporary equipment according to relevant standards and guidance under the National Planning Policy Framework.

3.6 Noise from other event sources such as set-up and take-down activities, low-speed vehicle movements on the site and animal sounds are in keeping with the normal rural/agricultural character of the area and do not need to be addressed by the specification of limits. These sources of event sound are addressed in the Noise Management Plan agreed by Cherwell District Council.

4. AMENDED LIMIT FOR THE CONTROL OF NOISE

Introduction

- 4.1 Our professional opinion is that a limit of 55 dB $L_{Aeq,15min}$ is appropriate for amplified sound from public address systems and noise from temporary equipment.
- 4.2 Other sources of event sound are in keeping with the rural/agricultural setting and can be controlled to acceptable levels according to the existing Noise Management Plan which has been agreed by Cherwell District Council.

Assessment Criterion

- 4.3 We refer to the following assessment criteria as relevant under the National Planning Policy Framework (NPPF) for the control of amplified sound and temporary equipment:
- World Health Organization Guidelines for Community Noise
 - Code of Practice on Environmental Noise Control from Concerts
- 4.4 The relevant standards and Guidance are discussed in detail in Appendix A.

National Planning Policy Framework and Noise Policy Statement England

- 4.5 The National Planning Policy Framework (NPPF) makes three important statements which are particularly relevant to this case. It states that planning policies and decisions should aim to:
1. Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development.
 2. 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.
 3. Recognize that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land use since they were established.
- 4.6 The National Planning Policy Framework refers to the Noise Policy Statement for England (NPSE) which provides guidance regarding acceptable noise burden and gives three assessment levels to help categorize this:
- No Observed Effect Level (NOEL)
 - Lowest Observed Adverse Effect Level (LOAEL)
 - Significant Observed Adverse Effect Level (SOAEL)

4.7 We quantify the different categories of noise burden stated in the NPSE based on guidance and noise limits in WHO and Code of Practice on Environmental Noise Control from Concerts.

Relevant Guidance	LOAEL	SOAEL
BS 8233: 2014	50 dB $L_{Aeq,15min}$	>55 dB $L_{Aeq,15min}$
WHO Guidelines for Community Noise		
Code of Practice on Environmental Noise Control at Concerts	50 dB $L_{Aeq,15min}$ (BGNL+15dB)	>55 dB $L_{Aeq,15min}$

Assessment criteria under NPPF and NPSE

WHO and The Noise Council

4.8 The recommended limit for outdoor sound under WHO during the daytime period is 55 dB $L_{Aeq,16-hour}$.

4.9 The Noise Council ‘Code of practice on environmental noise control from concerts’ states that amplified sound (typically music) should not exceed a level which is 15 dB above the background noise level (dB $L_{A90,T}$) at nearby dwellings. This corresponds to a level between 50 and 55 dB $L_{Aeq,15min}$ based on measurements of the background sound (dB $L_{A90,T}$) at different locations.

4.10 This provides a reasonable basis for assessment according to a criterion of 55 dB $L_{Aeq,15min}$ for the control of sound from public address systems and temporary equipment.

4.11 It is therefore reasonable to determine that significant adverse impact on health and quality of life can be avoided if the stated criterion is achieved.

4.12 This is further supported by the following:

- We have previously demonstrated by measurement and calculation that reasonable levels of noise from events can be achieved at nearby dwellings.
- Use of public address systems and operation of temporary equipment occurs only during the daytime. Hours of operation are pre-determined by condition and agreed with Cherwell District Council prior to events.
- Events with more than 50 competing horses occur on a limited number of days each year according to conditions. A calendar of event days is submitted to Cherwell District Council at the start of each year in accordance with conditions.
- Swalcliffe Park Equestrian operates a Noise Management Plan to control noise from events to best practicable means. The Noise Management Plan was agreed with Cherwell District Council in accordance with conditions.

Planning Practice Guidance – Noise

4.13 With reference to Planning Practice Guidance: Noise (PPGN) we determine that noise from events can be considered ‘**noticeable and not intrusive**’ where a limit of 55 dB $L_{Aeq,15min}$ is achieved at nearby dwellings and where operation of events is in accordance with conditions and the agreed Noise Management Plan.

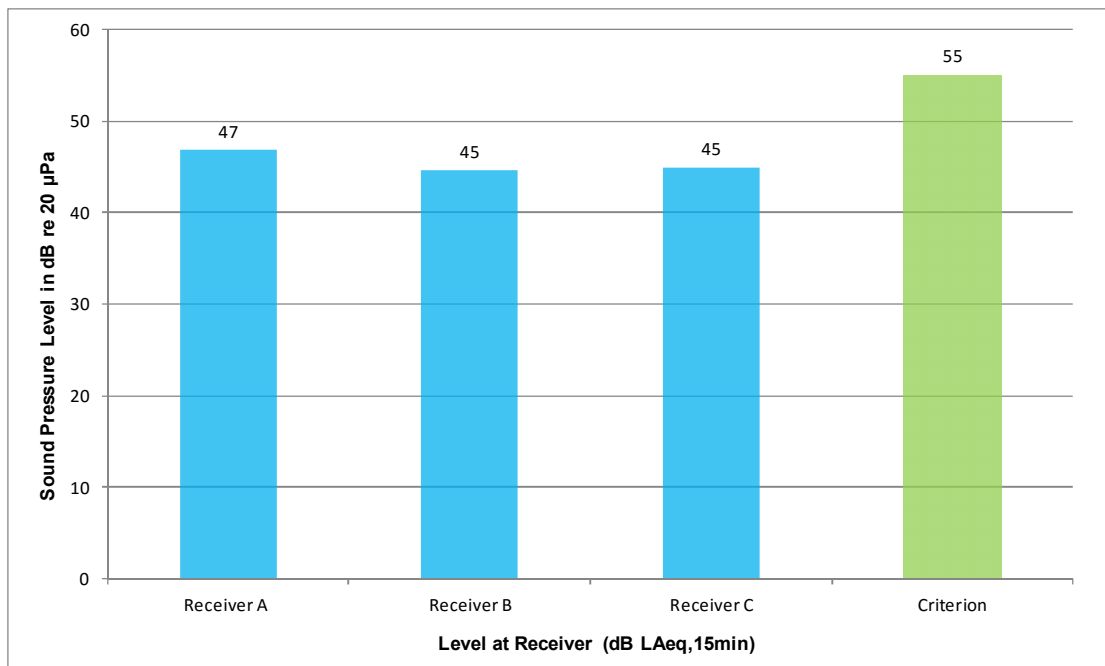
4.14 PPGN states the following as ‘*examples of outcomes*’ for noise which is considered noticeable but not intrusive:

‘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.’

Assessment

Amplified Sound from Public Address Systems

- 4.15 We have previously calculated the propagation of amplified sound from public address systems to demonstrate that a reasonable criterion of 55 dB $L_{Aeq,15min}$ can be achieved at nearby dwellings.
- 4.16 This assessment was described in our report to Cherwell District Council dated October 2014. We show the main assessment graph below for reference.



Assessment of amplified sound from public address systems at nearby dwellings based on source measurements made during equestrian event of 21 September 2014

- 4.17 Our calculations of amplified sound from public address systems are based on source levels shown in Appendix E. These were measured at an event at Swalcliffe Park Equestrian on 21 September 2014.
- 4.18 We use the higher of the two levels from these data (which is 93 dB $L_{Aeq,15min}$ measured on-axis to the horn loudspeaker). Noise levels at nearby dwellings that are off-axis to the loudspeakers would be lower than calculated here.
- 4.19 We have also used this information to identify methods for commissioning and monitoring of amplified sound from public address systems which are described in the Noise Management Plan agreed by Cherwell District Council.

Temporary Equipment

- 4.20 Temporary equipment at events typically constitutes small portable generators to provide power to public address systems and to retailers.
- 4.21 The current Noise Management Plan provides guidance on the control of noise from temporary equipment which has been agreed by Cherwell District Council.

4.22 Our experience and subjective assessment is that noise from temporary equipment such as small portable generators can be readily controlled to levels which are inaudible at the site boundary.

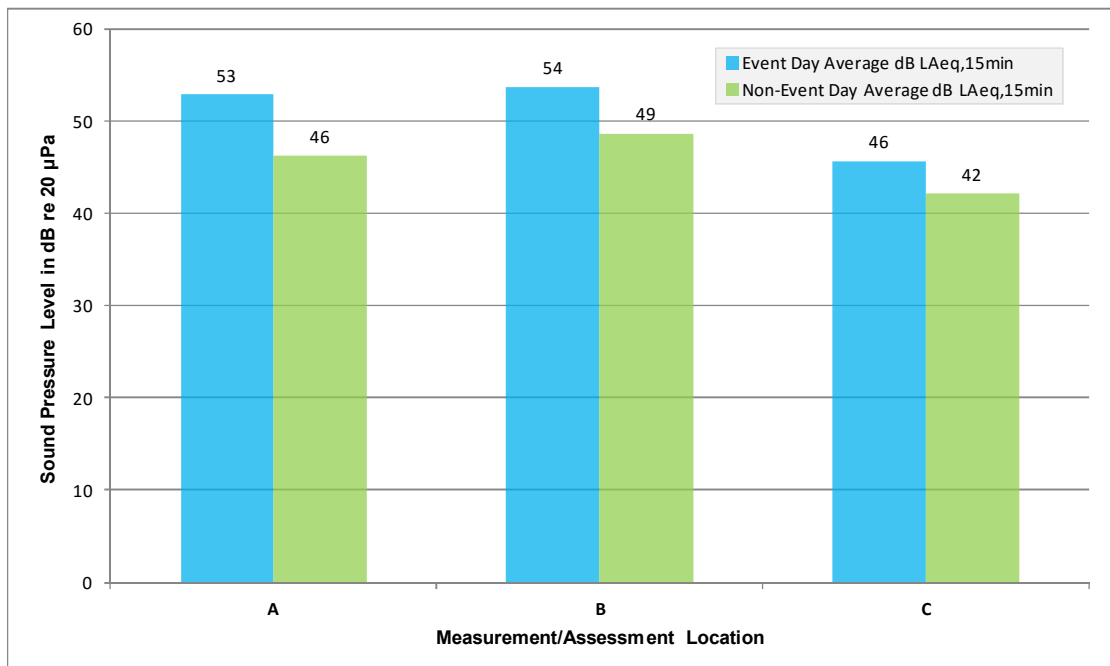
Other Sources of Events Noise

4.23 Other sources of event sound which are audible at the site boundary include vehicle traffic and sounds made by horses.

4.24 These are addressed according to best practicable means in the current Noise Management Plan and the character of these types of noise is in keeping with the rural/agricultural setting.

4.25 Our subjective assessment is that increased road traffic is a significant contributor to increased noise levels at the site which can be demonstrated by measurement at the site boundary on an event day.

4.26 We have previously assessed levels of ambient sound (dB $L_{Aeq,T}$) measured at nearby dwellings on an event day (21 September 2014) and a non-event day (14 September 2014) and show the main assessment graph.



Noise levels measured at the location of nearby dwellings comparing an event day with a non-event day

4.27 This provides an approximate assessment that the cumulative levels of event sound can achieve a criterion of 55 dB $L_{Aeq,15min}$.

5. NOISE MONITORING

- 5.1 We propose that noise monitoring is undertaken in accordance with the Noise Management Plan agreed by Cherwell District Council.
- 5.2 Condition 5 currently states:
- 'to achieve compliance with a noise limit of 45 dB $L_{Aeq,15min}$ when measured free field at noise sensitive locations adjacent to the residential properties'*
- 5.3 Our professional opinion is that the stated method for noise monitoring by measurement at nearby dwellings is scientifically untenable and has significant potential to impact adversely and unreasonably on Swalcliffe Park Equestrian's ongoing operation.
- 5.4 This is especially relevant to amplified sound from public address systems where a criterion of 45 dB $L_{Aeq,15min}$ is applied.
- 5.5 We have previously demonstrated by calculation that levels of amplified sound from public address systems are comparable with (often lower than) levels of prevailing ambient sound (dB $L_{Aeq,T}$) at nearby dwellings.
- 5.6 We have also demonstrated above how this criterion is regularly exceeded by the typical ambient sound (dB $L_{Aeq,T}$) even on non-event days.
- 5.7 For these reasons, noise monitoring at the location of nearby dwellings can lead to substantially inaccurate and misleading results.
- 5.8 We have previously discussed at length with Cherwell District Council the requirements for effective and reliable commissioning and noise monitoring of public address systems and temporary equipment which is reflected in the current Noise Management Plan.
- 5.9 It is therefore reasonable that specific reference to noise monitoring in Condition 5 is omitted other than by reference to the agreed Noise Management Plan.

APPENDICES

APPENDIX A: STANDARDS AND GUIDANCE

Summary

We discuss the relevant standards and guidance which includes the following:

- Requirements of Cherwell District Council
- National Planning Policy Framework (NPPF)
- Noise Policy Statement for England (NPSE)
- Planning Practice Guidance – Noise (PPGN)
- The Noise Council ‘Code of practice on environmental noise control from concerts’
- World Health Organization ‘Guidelines for Community Noise’

Cherwell District Council Application 14/01762/F Condition 5

‘Prior to any further equestrian events of greater than 50 competing horses taking place on a site, a Noise Management Plan (NMP) detailing the methods to be employed to achieve compliance with a noise limit of 45 dB $L_{Aeq, 15min}$, when measured free field at noise sensitive locations adjacent the residential properties of Partway House, Elm Farm, Swalcliffe House and Wykham, shown on the attached plan ref. CDC-01, shall be submitted to and approved in writing by the Local Planning Authority.

The NMP must identify all sources of noise generated by the equestrian use which may include those sources of noise associated with the construction and/or dismantling of any temporary structures, the operation of any sound amplification equipment, the internal movement of traffic within the site, hours of operation of the site in all phases of use, etc. The NMP must indicate the means that will be used to reduce noise at source to a minimum and where noise levels cannot be reduced the means of mitigation must be stated. Mitigation may include the sensitive positioning of certain elements of the use in such a way as to minimise the impact of a particular activity on noise sensitive premises. The NMP must also include a method and timetable for the periodic quantitative monitoring of noise emitted from the site and a procedure for recording and responding to complaints received either directly from local residents or via the Local Authority.

The NMP once approved must thereafter be implemented. Should justified complaints be received the NMP will be amended in such a way that prevents the recurrence of complaints of that type in the future. No operational changes shall be made in relation to noise without prior written approval by the Local Planning Authority in which case a revised NMP shall be submitted approved through the submission of a further ‘approval of details reserved by condition’ application.

Reason - In order to safeguard the amenities of the area and to comply with Policy ENV1 of the Adopted Cherwell Local Plan and Government guidance contained within the National Planning Policy Framework.’

Cherwell District Council Local Plan

Cherwell Local Plan (1996) is prepared by Cherwell District Council under the provisions of the Town & Country Planning Act, 1990 as amended by the Planning & Compensation Act, 1991.

Policy ENV1 is referenced in 14/01762/F Condition 5 and states:

‘Development which is likely to cause materially detrimental levels of noise, vibration, smell, smoke, fumes or other type of environmental pollution will not normally be permitted.’

National Planning Policy Framework

The National Planning Policy Framework (NPPF) states that planning policies and decisions should aim to:

- Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of 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.
- Recognize that development will often create some noise and existing businesses wanting to develop in continuance in nearby land use since they were established.
- Identify and protect areas of tranquility which have remained relatively undisturbed by noise and are prized for their recreation and amenity value for this reason.

The National Planning Policy Framework refers to the Noise Policy Statement for England (NPSE).

Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) provides guidance regarding acceptable noise burden and gives three assessment levels to help categorize this:

- No Observed Effect Level (NOEL)
- Lowest Observed Adverse Effect Level (LOAEL)
- Significant Observed Adverse Effect Level (SOAEL)

No Observed Effect Level

This is the level of noise below which no effect can be detected and there would be no discernible negative effect on health or quality of life.

Lowest Observed Adverse Effect Level

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

Significant Observed Adverse Effect Level

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

Design proposals and planning decisions should always seek to avoid noise impact which could be categorized as SOAEL.

Planning Practice Guidance – Noise

Planning Practice Guidance: Noise (PPGN) provides guidance on how planning can manage potential noise impacts with information to support the NPPF and NPSE approach.

PPGN includes the following table which summarises the noise exposure hierarchy based on the likely average response.

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

PPGN noise exposure hierarchy

PPGN recognizes that neither the Noise Policy Statement for England nor the National Planning Policy Framework expects noise to be considered in isolation, separately from the economic, social and other environmental dimensions of proposed development.

World Health Organization

World Health Organization ‘Guidelines for community noise’ includes the following:

‘Annoyance to community noise varies with the type of activity producing the noise. Speech communication, relaxation, listening to radio and TV are all examples of noise-producing activities. During the daytime [07:00-23:00], few people are seriously annoyed by activities with LAeq levels below 55 dB; or moderately annoyed with LAeq levels below 50 dB. Sound pressure levels during the evening and night should be 5-10 dB lower than during the day...It is emphasized that for intermittent noise it is necessary to take into account the maximum sound pressure level as well as the number of noise events. Guidelines or noise abatement measures should also take into account residential outdoor activities.’

Code of Practice on Environmental Noise Control at Concerts

The Noise Council ‘Code of practice on noise control at concerts’ provides guidance for sound generated at outside music events.

The recommended limits for events held between 09:00 and 23:00 are shown in the table below. These criteria are defined in terms of the music noise level (MNL).

Concert days per calendar year, per venue	Venue Category	Guidelines
1 to 3	Urban stadia or arenas	The MNL should not exceed 75 dB(A) over a fifteen minute period
1 to 3	Other urban and rural venues	The MNL should not exceed 65 dB(A) over a 15 minute period
4 to 12	All venues	The MNL should not exceed the background noise level by more than 15 dB over a 15 minute period.

The Noise Council recommended limits for noise from concerts

The number of scheduled event days at Swalcliffe excluding set-up and take-down is 11 days.

The accompanying footnotes state: ‘The use of inaudibility as a guideline is not universally accepted as an appropriate method of control’.

This is especially relevant in the case of the Swalcliffe site where background noise levels are relatively low which means achieving inaudibility or levels close to inaudible is not practicable.

It is significant in relation to the Swalcliffe site that measured background noise levels plus 15 dB (dB $L_{A90} + 15$ dB) is approximately equal to the WHO noise level limit of 50 to 55 dB $L_{Aeq,T}$.

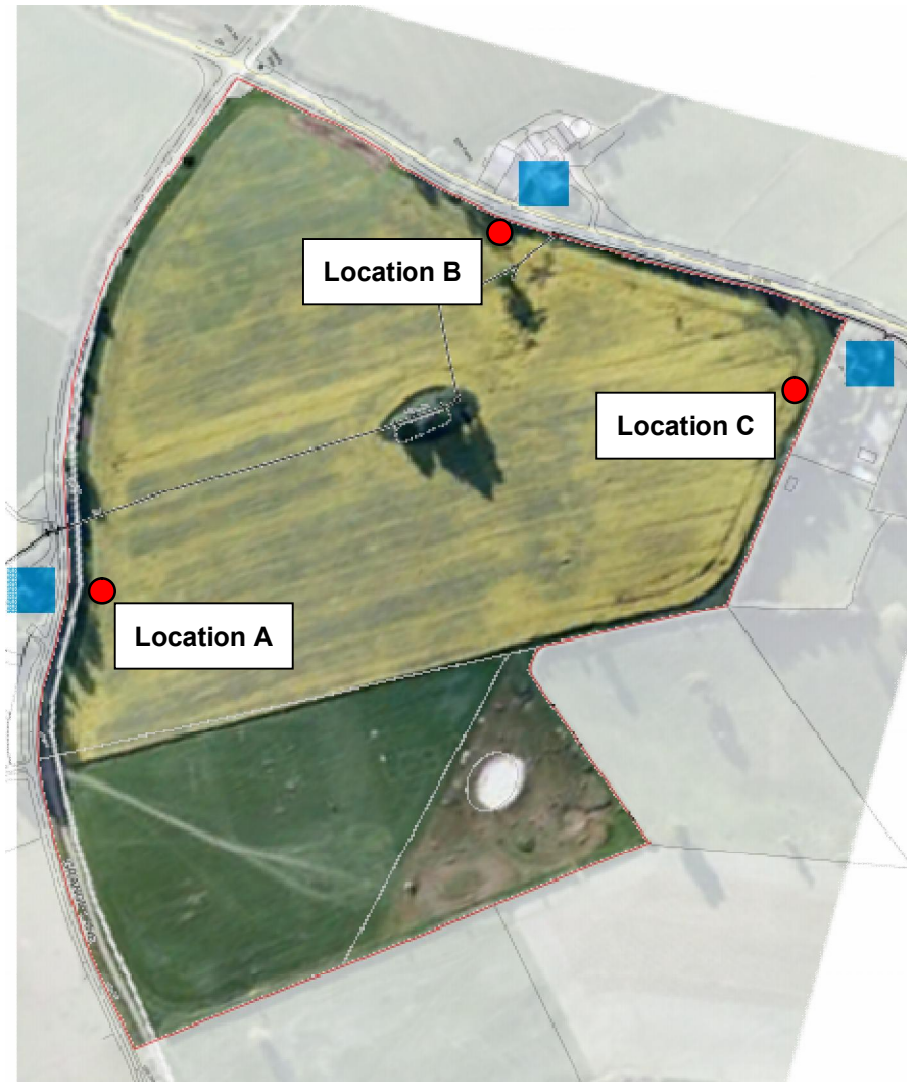
For this reason, we have selected the WHO limit, but with a 15 minute time base, as an appropriate criterion for this assessment.

APPENDIX B: SURVEYS

Site and Surroundings

We show below the site which is near the village of Swalcliffe.

We highlight nearby dwellings in blue and our measurement locations in red.



Site with significant locations

Our measurement locations are representative of the nearest dwellings to the site.

Measurement Location A

This location is adjacent to Grange Lane at the nearby dwelling. The prevailing ambient sound (dB $L_{Aeq,T}$) at this location on non-event days is largely determined by road traffic including agricultural vehicles, and light aircraft overhead.

Measurement Location B

This location is adjacent to Main Street at the rear garden of the nearby dwelling. Noise levels at this location on non-event days are determined largely by road traffic including agricultural vehicles, and light aircraft overhead.

We have observed during events that vehicles including vans, trailers and horse boxes arrive at and exit the site via access off Main Street near to Elm Farm (Location B). These vehicles are parked in the field towards the corner of Main Street Grange Lane. This traffic is similar in character to the type of agricultural vehicles observed during our surveys on non-event days.

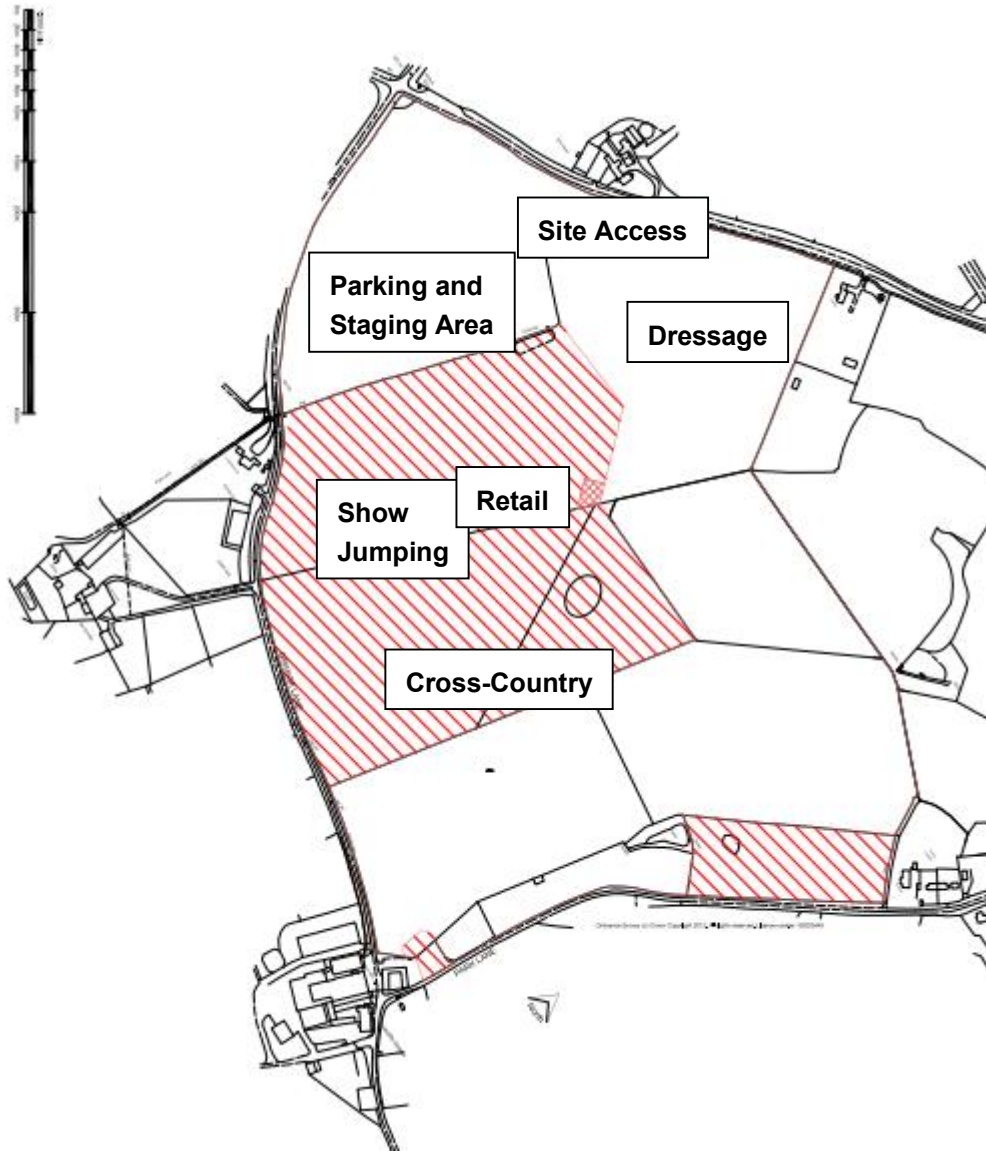
Measurement Location C

This location is set back from Main Street adjacent to the garden of the nearby dwelling.

The prevailing ambient sound at this location on the non-event days is determined largely by road traffic including agricultural vehicles, and light aircraft overhead.

Event Setup

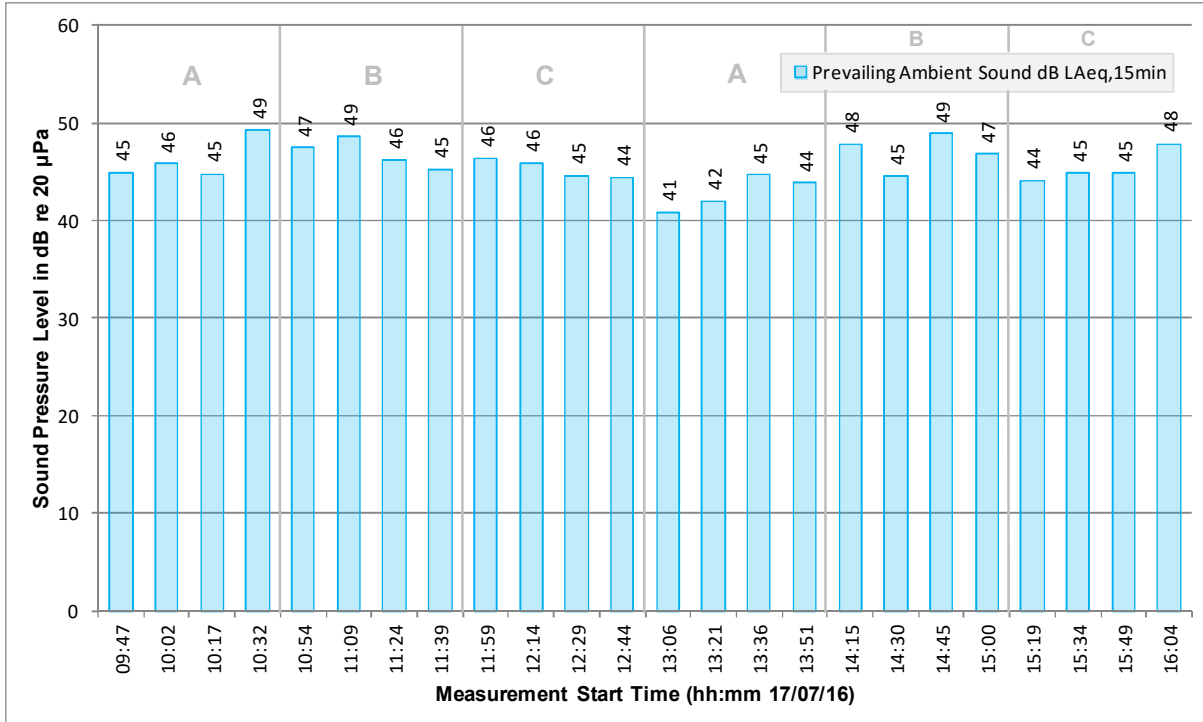
We show the approximate locations of different events at the site based on our observations during an event held on 21 September 2014.



Location of different activities during event held on 21 September 2014

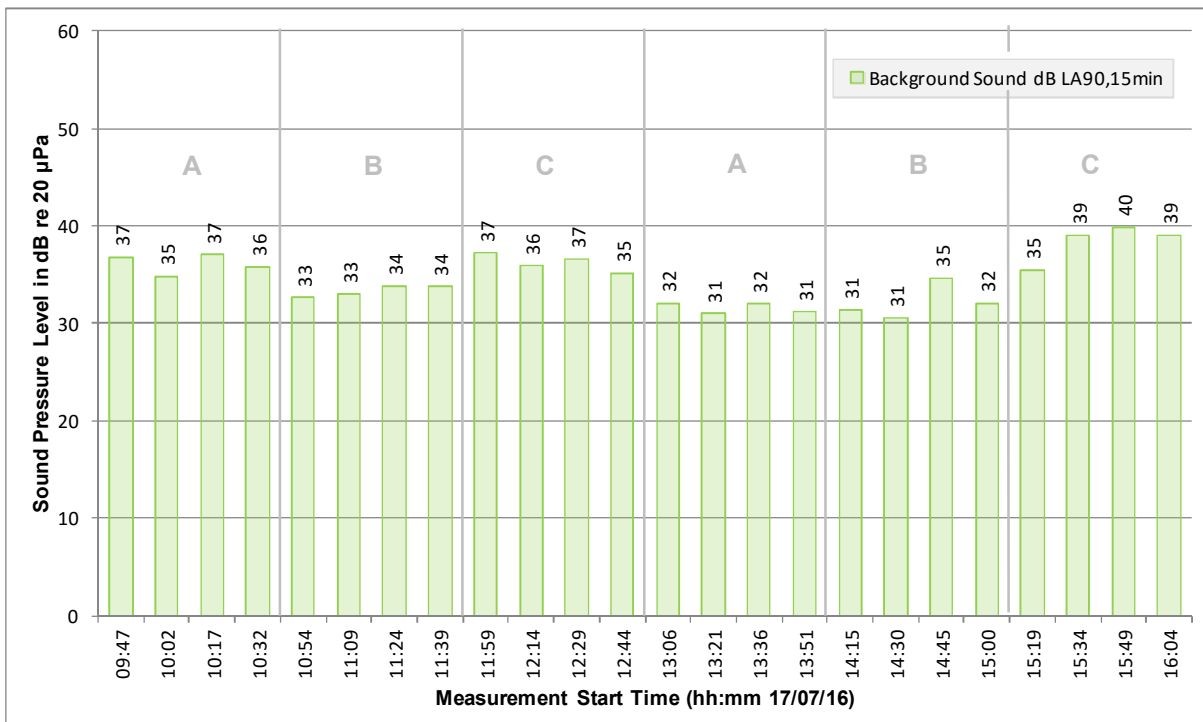
Measurement Results 17 July 2016

Ambient Sound (dB LAeq,T)



Measured ambient sound dB LAeq,15min on 17 July 2016 per measurement location (A,B or C)

Background Sound (dB LA90)



Measured background sound dB LA90,15min on 17 July 2016 per measurement location (A,B or C)

Measurement Results 14 and 21 September 2014

Measurement Location A

Date	Start Time	Measurement Duration (T)	dB L _{Aeq,T}	dB L _{AFMax}	dB L _{A10%}	dB L _{A90%}
20140914	11:28	00:15:00	46.4	60.9	49.0	38.5
20140914	12:40	00:15:00	46.1	58.0	48.5	41.5
20140921	11:54	00:05:00	51.8	67.3	55.0	45.0
20140921	11:59	00:05:00	51.5	64.1	54.5	44.5
20140921	12:04	00:05:00	51.6	71.0	53.0	42.0
20140921	14:13	00:05:00	54.6	69.9	58.0	46.5
20140921	14:18	00:05:00	53.3	67.2	55.5	46.5
20140921	14:23	00:05:00	54.2	73.4	55.5	44.0
20140921	16:04	00:05:00	56.0	70.1	60.0	44.5
20140921	16:09	00:05:00	49.0	67.1	50.0	41.0
20140921	16:14	00:05:00	47.1	61.3	49.0	41.0
20140921	16:19	00:05:00	48.4	68.3	51.0	42.0
20140921	16:24	00:05:00	55.0	71.1	58.5	44.5
20140921	16:29	00:05:00	54.1	72.4	57.5	44.0

Levels measured at Location A

Measurement Location B

Date	Start Time	Measurement Duration (T)	dB L _{Aeq,T}	dB L _{AFMax}	dB L _{A10%}	dB L _{A90%}
20140914	11:53	00:15:00	48	64.7	50.5	37.0
20140914	13:00	00:15:00	49	64.7	54.0	35.0
20140921	09:45	00:05:00	53	72.2	53.0	42.5
20140921	09:50	00:05:00	51	69.4	51.5	41.5
20140921	09:55	00:05:00	53	68.4	56.5	41.5
20140921	13:11	00:05:00	56	74.0	57.0	44.0
20140921	13:16	00:05:00	57	74.5	58.5	40.5
20140921	13:21	00:05:00	58	73.4	62.0	43.5
20140921	14:35	00:05:00	45	62.3	45.5	38.5
20140921	14:40	00:05:00	53	70.9	54.0	42.0
20140921	14:45	00:05:00	53	66.9	57.5	42.0

Levels measured at Location B

Measurement Location C

Date	Start Time	Measurement Duration (T)	dB L _{Aeq,T}	dB L _{AFMax}	dB L _{A10%}	dB L _{A90%}
20140914	12:17	00:15:00	41.9	52.4	44.5	36.0
20140914	13:19	00:15:00	42.4	61.8	46.0	35.5
20140921	12:50	00:05:00	44.3	58.9	46.5	38.5
20140921	12:55	00:05:00	45.4	55.8	49.0	39.5
20140921	13:00	00:05:00	46.9	60.1	50.0	42.5
20140921	14:56	00:05:00	42.3	61.4	44.5	35.5
20140921	15:01	00:05:00	43.1	53.9	46.0	36.5
20140921	15:06	00:05:00	51.8	63.4	55.5	44.5
20140921	16:45	00:05:00	42.2	54.9	44.5	35.0
20140921	16:50	00:05:00	42.8	53.9	46.0	34.5
20140921	16:55	00:05:00	44.7	64.0	47.5	36.5

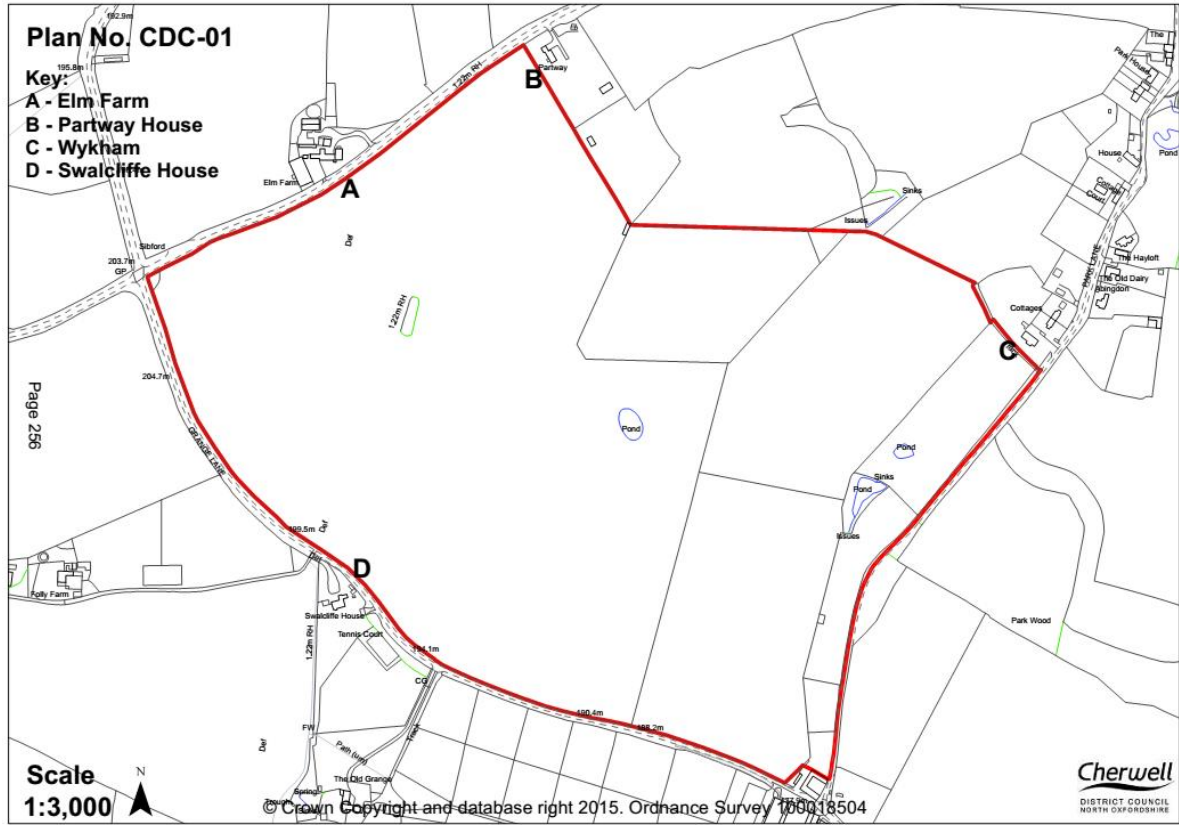
Levels measured at Location C

Measurement Results 14 and 21 September 2014

Equipment Item	Serial Number
B&K type 2238 sound level meter	2448204
B&K type 4231 sound calibrator	2450834
B&K type 4189 ½" microphone	1903936
B&K type ZC 0032 preamplifier	11448
B&K type 2250 hand held analyser	2506363
B&K type 4231 sound calibrator	2175976

Equipment

APPENDIX C: CONDITION 5 CHERWELL PLAN CDC-01



APPENDIX D: CORRESPONDENCE

Idibri Email to Cherwell District Council: 21 April 2015 08:57

Dear Trevor,

Thank you for time on Friday to discuss the noise management plan for Swalcliffe Park Equestrian.

Following our conversation, we ask that you consider revisions to the current wording of condition 5 which in brief states the following:

'Prior to any further equestrian events of greater than 50 competing horses taking place on a site, a Noise Management Plan (NMP) detailing the methods to be employed to achieve compliance with a noise limit of 45 dB $L_{Aeq,15min}$.

We have been unable to discuss the details of this condition with Cherwell District Council for reasons which you are aware.

We now understand that these discussions can take place and that you will be able to make recommendations to Cherwell District Council accordingly.

We ask that the following be considered in terms of revisions to the current wording of condition 5:

- *That a limit of 45 dB is inappropriate as levels exceeding this can be measured on a normal day at nearby dwellings when there is no event being held at the site.*
- *A limit of 55 dB $L_{Aeq,15min}$ is appropriate based on standards set-out in our report of October 2014 and considering that events with 50 horses or more will be held only during the daytime and on a small number of occasions each year.*
- *That a limit of 55 dB can only practicably apply to the control of sound from public address systems and stationary plant -- other sources of sound such as from setup and take-down activities and from animals are typical and expected within the context of the site and nearby dwellings.*
- *Control of sound from PA and stationary plant can be effectively achieved by appropriate placement and screening which would be informed by calculation and commissioning during event setup according to SPE's noise management plan.*
- *That noise monitoring at the site boundary is ineffective and unnecessary as there is no evidence to suggest that events give rise to significant adverse impact at nearby dwellings.*

Our assessment of October 2014 was:

'...noise does not give rise to significant disturbance, loss of amenity nor create reasonable grounds for complaint at nearby dwellings.'

The results of measurements commissioned by objectors to the application can be used to support our conclusion.

Our professional opinion is that the current wording of the condition for noise places a particularly heavy burden on Swalcliffe Park Equestrian without reasonable justification provided to suggest that events do or will cause significant adverse impact.

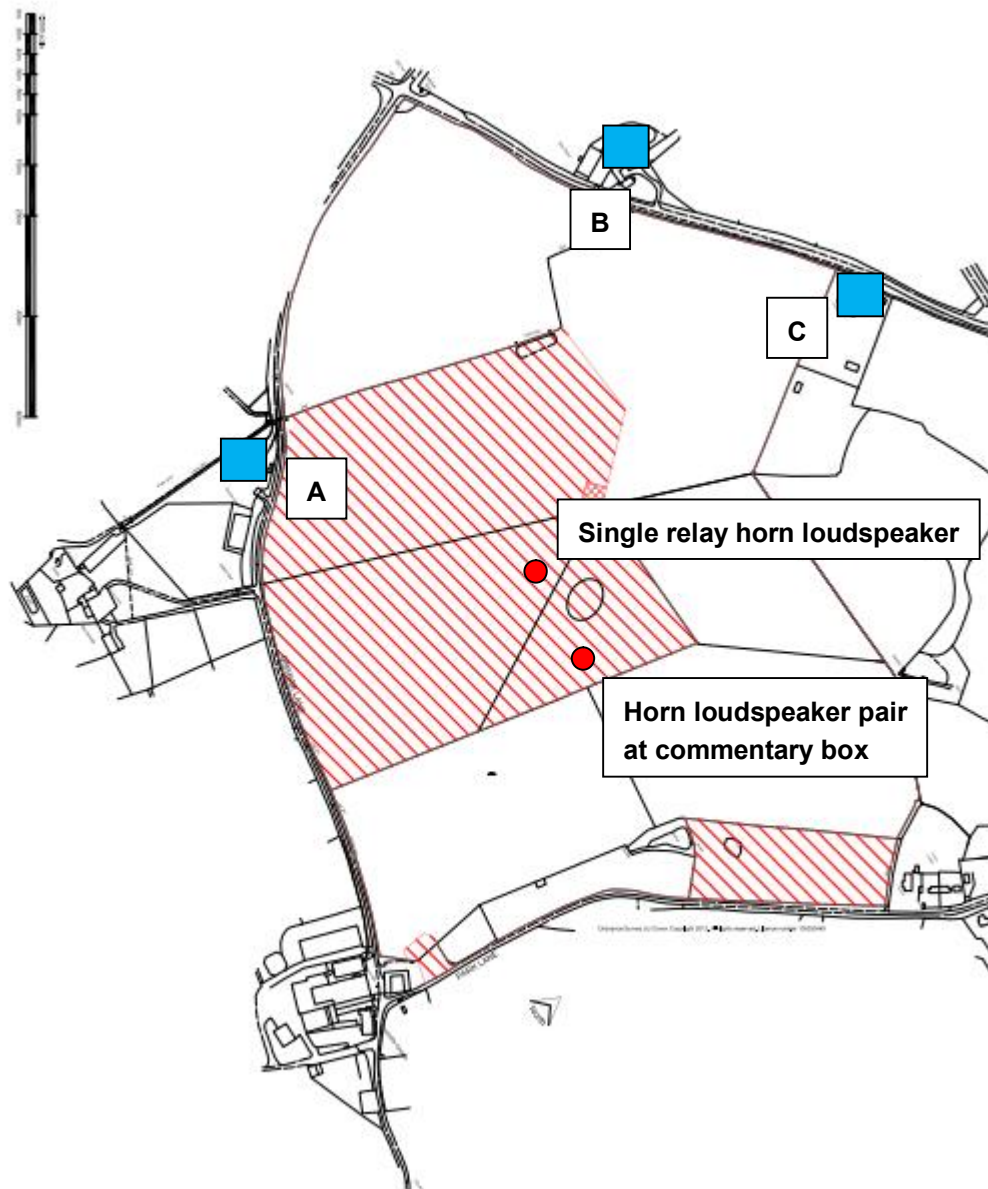
As such, we ask that a revision is considered by you for recommendation to Cherwell District Council.

If useful, we will be happy to provide a formal technical letter to detail the points discussed here.'

APPENDIX E: SUPPORTING INFORMATION

Assessment Locations – source and receiver Distances

Our assessment of noise from the public address system uses the following information regarding source locations and distances to the nearest dwellings. This information is based on our observations made during an equestrian event held at the application site.



Source and receiver locations used in our assessment

The horn loudspeaker locations shown above are based on our observations made during the event day of 21 September 2014.

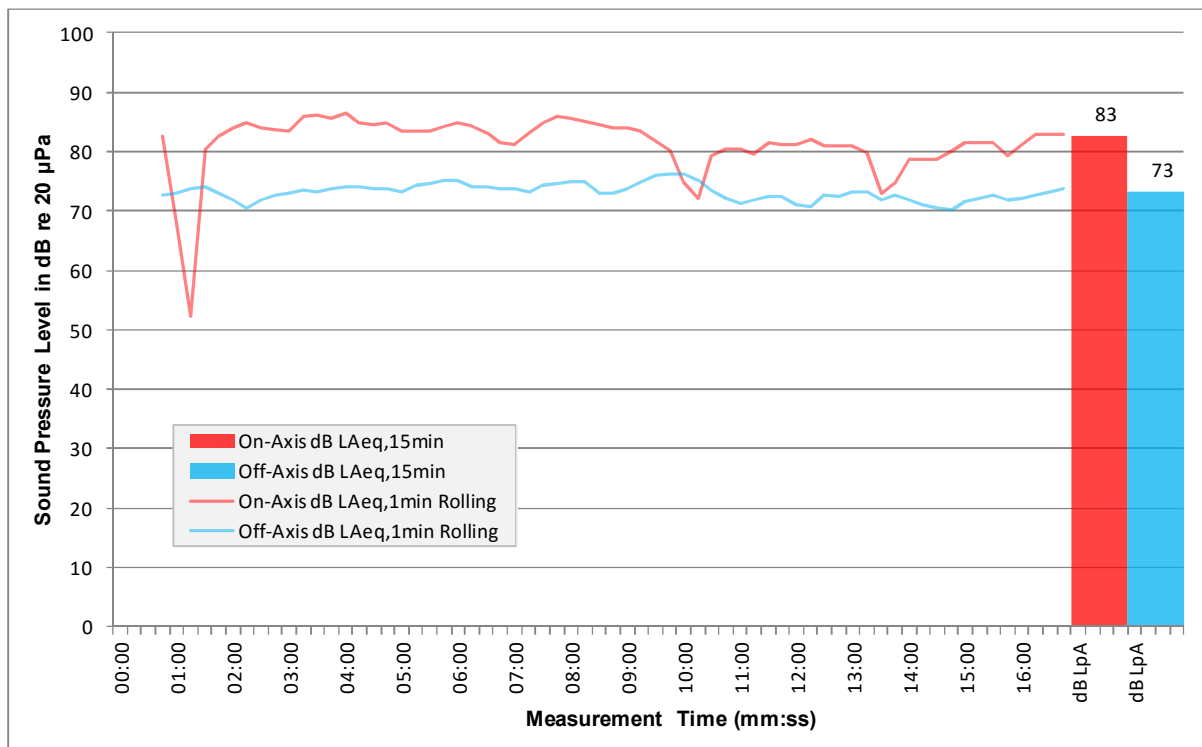
Our calculations use source receiver distances shown in the next table and which are based on measurements from the above plan.

Source	Assessment Location		
	A	B	C
Single relay horn loudspeaker	300 m	400 m	400 m
Horn loudspeaker pair at commentary box	360 m	470 m	430 m

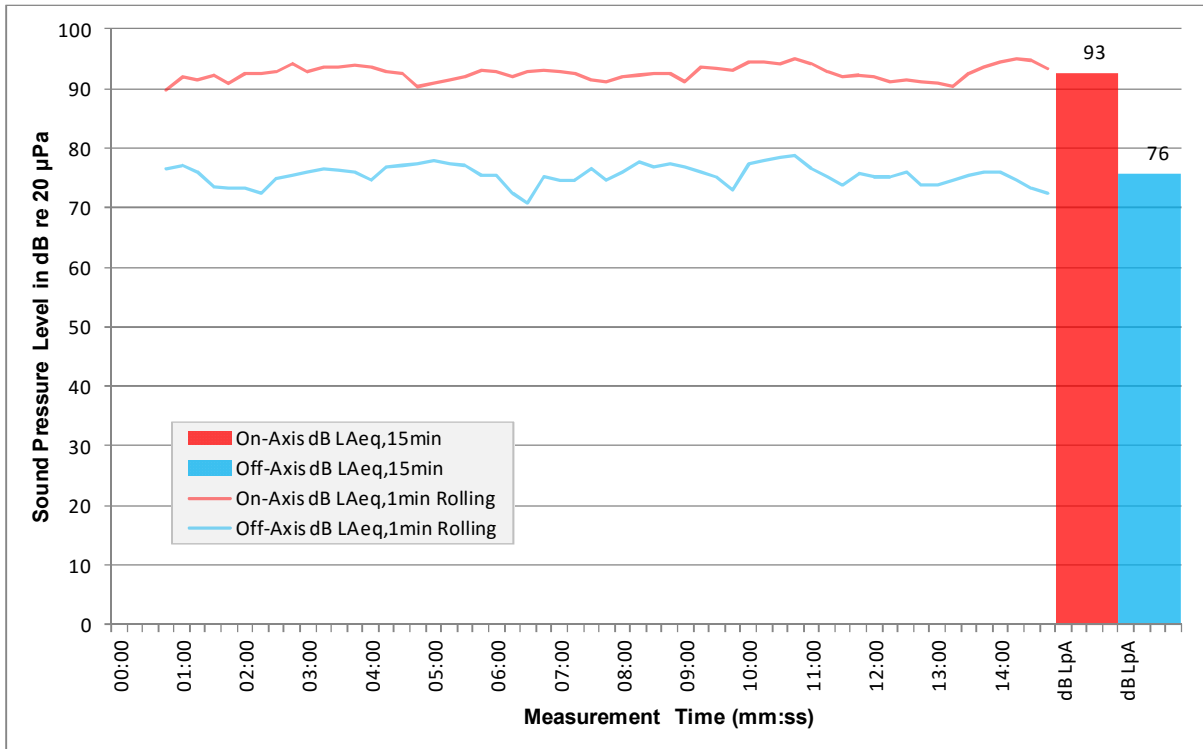
Calculation distances between source and receiver locations

Source Noise Levels – Public Address System

We measured the following source noise levels for a public address system at the application site on 21 September 2014 which was a horn loudspeakers. These levels are used in our assessment of sound from public address systems.



Source levels from public address system at 10:26 on 21 September 2014 measured at 2 m



Source levels from public address system at 15:21 on 21 September 2014 measured at 2 m

END OF REPORT