

Appendix 12A

Vanguardia noise report in response to Blue Sky submission.



WIRELESS 2017 LICENCE REVIEW

NOISE ASSESSMENT REPORT OF JIM GRIFFITHS

VC-102770-EW-RP-0001-FIN
FINAL

2 AUGUST 2018



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1. INTRODUCTION

PERSONAL STATEMENT

- 1.1. I confirm that I am a company director and founder of Vanguardia Limited, a company specialising in the field of acoustics in the leisure and entertainment sectors. From its origins in 2006, the company has now grown to the largest independent acoustic consultancy in the UK with offices in London, Manchester and the South East.
- 1.2. I have over 35 years' experience as a consultant in the field of acoustics. I am a Fellow of the Institute of Acoustics, Chairman of the London Branch of the Institute and was awarded the Institute's Tyndall Medal for my contribution to entertainment acoustics. I have a wide range of experience in all technical aspects related to acoustics, noise and vibration and have project managed numerous innovative projects as well as presenting evidence at legal proceedings, public inquiries and at several House of Commons Select Committees. I have presented over 40 technical papers nationally and internationally on noise and acoustics mainly dealing with noise management from entertainment. Over the last 30 years I have had direct personal and overall management responsibility for advising local authorities, venue owners, event organisers and private individuals on the setting of noise limits; and the monitoring and management of noise impact for pop concerts and festivals at more than 1,500 such events.
- 1.3. I sat on the Noise Council Working Party for the Code of Practice on Environmental Noise Control at Concerts [1] (The Pop Code) and my research papers were used to develop the noise guidelines presented in this publication.
- 1.4. I was also appointed to the working party which was formed to refresh the Pop Code and also appointed to the working party to provide noise guidance for other licensed premises.
- 1.5. In 2006 I was awarded the Defra government research contract to assess noise from Pubs and Clubs [2] which is referenced later in my report.

INSTRUCTION AND SCOPE OF REPORT

- 1.6. I have been instructed by Live Nation (Music) UK Limited, the Premises Licence Holder of Premises Licence LN0012182 which authorises a number of events at Finsbury Park. My instructions are to review and comment upon the evidence, provided in the Review Application submitted by the Friends of Finsbury Park which relates solely to the Wireless Festival in 2017. I have reviewed the documents which includes the Application, the Premises Licence, seven witness statements with exhibits and an acoustic report from Blue Sky Acoustics.

1.7. My report includes:-

- A review of the Blue Sky Acoustic report prepared for the Friends of Finsbury Park and my comments on the report,
- Comments on statements
- A commentary on the licence conditions and positive changes completed for 2018
- A summary of Noise Control at the 2017 Event

EXPERIENCE WITH WIRELESS FESTIVAL

- 1.8. I have extensive experience of undertaking the noise management of the Wireless Festival from its roots in Hyde Park in 2005 to The Olympic Park in 2013 to Perry Park in 2014 to its current location in Finsbury Park. Vanguardia has also provided the noise management at other events in Finsbury Park for shows such as The Stone Roses in 2013, Arctic Monkeys in 2014 and the more recent concerts including Liam Gallagher and Queens of the Stone Age that were held this year.
- 1.9. Finsbury Park has a history of staging large-scale music events starting with the legendary Jimi Hendrix in 1967 followed by many other world class bands and artists.

GLOSSARY

- 1.10. A glossary of acoustic terms is given in Appendix A.

2. REVIEW OF BLUE SKY REPORT

2.1. In this section, I have provided a review of the Blue Sky Report 'Assessment of Noise impact at Residential Properties – Wireless Festival 2017' which was prepared on 8 February 2018 and is dated 21 February 2018 [3]. My review starts with some general comments relating to the inadequacies of the report followed by a detailed review of relevant sections of the report.

GENERAL

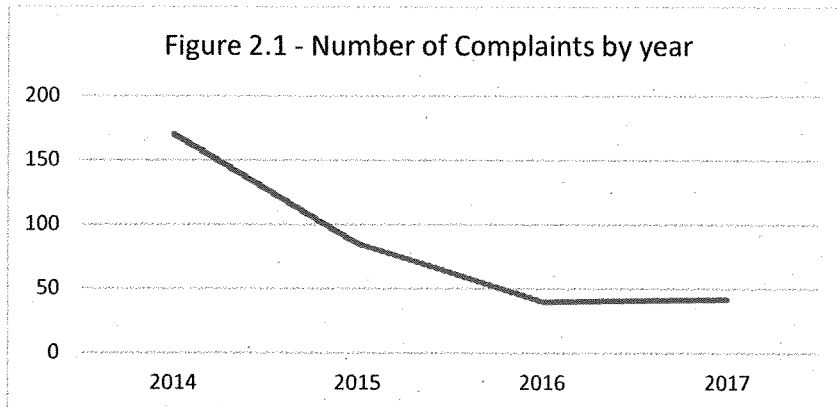
2.2. The consultant from Blue Sky only attended the 3 day Wireless event for several hours on Saturday evening 8 July 2017. This clearly does not provide a representative assessment of the noise over the 3 days of the festival.

2.3. The report is totally absent of any consideration of public nuisance in the context of the Licensing Act 2003 i.e. nuisance that affects a "class of persons". Consequently, the consultant, doesn't consider the classic tests for nuisance e.g. duration, timing, frequency of occurrence, nature and character of area etc. and focuses solely on sound levels over a 3 hour period. It is not possible to properly extrapolate an appropriate noise level for a three day festival based on performances of two main bands playing on a Saturday evening.

2.4. The consultant provides misleading information about the dB(A) scale stating that it provides '*a significant shortcoming when assessing noise from amplified music*' (para 10.1). What the consultants fails to acknowledge in the main body of the report is that the dB(A) scale correlates best with the hearing of an individual because the human ear is significantly less sensitive at the low bass frequencies. It is only in his Appendix A that he acknowledges that the ear '*is less sensitive to sound at low and very high frequencies*'. This is exactly the reason why the dB(A) metric is used in all premises licence conditions as the main unit for assessing noise from music (and indeed all other noise sources) as it best replicates the response of the human ear.

SPECIFIC

2.5. Para 2.2 implies the consultant is influenced by the "significant number" of complaints since 2014 and yet provides no evidence or references any source to justify this claim. It is interesting to note that in fact the complaints regarding noise have significantly reduced since 2014 as shown in figure 2.1 below.



- 2.6. Para 3.4. – the consultant claims measuring at an unnamed 3rd floor balcony set back slightly from Seven Sisters Rd is better than on the pavement due to the effect of road traffic. There is no evidence of any correlation exercise between the pavement and balcony or of any benefit from using the balcony. Vanguardia did not have access to the balcony and was not invited to carry out joint monitoring with the consultant. It is common professional courtesy in the acoustics profession to conduct noise monitoring jointly to avoid any disputes over the data/monitoring positions at a later date. As a minimum, I would expect the consultant to at least contact us to let us know that monitoring is taking place.
- 2.7. Para 3.6 – There is no evidence that the consultant visited any of the other measurement locations so he can't properly comment that there was no monitoring elsewhere. It is very clear that the consultant didn't go to Woodstock Road where there was a permanent Metrao noise monitoring system in place guarded by security personnel.
- 2.8. Para 5.3- References made to additional noise measurements with a hand-held measurement system in the immediate area but no data or details of locations is provided.
- 2.9. Para 5.4- No data are provided to support this assertion.
- 2.10. Para 5.5 – The consultant confirms that his logging equipment was unattended and therefore his data would be contaminated by extraneous noise. This is a fundamental point because this is the only data the Consultant relies upon in his noise measurement analysis given in section 6.
- 2.11. Para 6.2 – This paragraph is fundamentally flawed as the consultant claims that sound levels in dB(A) '*effectively exclude the bass*'. This is both misleading and incorrect. As stated at the beginning of this section, the dB(A) scale was developed to provide the best correlation to the response of the human ear. This is an international agreed scale, is based on fact and is the best objective method of assessing the noise impact on noise sensitive receivers. This is why the dB(A) scale is adopted for all noise limits accompanying Premises Licences. It should be

noted that if as the Blue Sky consultant suggests, the dB(A) metric *excludes bass* then the human ear would not be able to hear the bass which is clearly not the case.

2.12. Para 7.1 – In this section there is a claim to have measured 97 dB at the 31.5 Hz octave band in Wilberforce Rd. There is no information of where he was measuring or how and in what way this measurement would be representative of wider impacts. This location is behind the stage and when Vanguardia measured in this road during Wireless in 2018, the results were never more than around 75 dB at this frequency. Furthermore, even if this claim was accepted this would only have been for a maximum of 25 minutes (1915 to 1940 hours over a three day period) which self-evidently is unlikely to be a public nuisance. A 25 minute measurement to assess a 3 day event fails the test of reasonableness.

2.13. Para 7.3 – The consultant visited Adolphus Rd (which is a monitoring location on the licence), but the consultant provides no measurements even though a measurement was taken; instead of presenting the results of the measurements he reports on a shout from a child. This offers little objective value.

2.14. Para 7.4- Next the consultant visited Alexandra Grove and again no data are recorded of measurements taken.

2.15. Section 8.0 – In this section the Consultant makes assertions about the sound system specifying the power of the system and concluding it is a very large-scale PA for an urban area. He does so inaccurately. I have consulted with the sound system rental company SSE (who are the biggest provider of sound systems for festivals in the UK) who state two facts in their email which I attach at Appendix C:-

2.15.1. *'This festival (Wireless) uses a similar number of subs we have been used in the following London parks. Victoria Park, Clapham common, Gunnersbury Park and The Proms in Hyde park'*. Therefore, this sound system is NO LARGER than other sound systems used for festivals at other urban locations and to suggest the system is out of the norm is simply wrong.

2.15.2. The consultant has mis-stated the facts by stating the power of amplification just for low frequency noise is 78,000 watts. The speakers are rated at a much lower power so in fact the power of the system is 30,000 watts, less than half the power suggested by Blue Sky. This is confirmed in the email from SSE that states *'The cabinets are rated at 1000w – total 30,000 watts not 78,000'*.

2.15.3. Para 9.3- This statement is misleading and it shows a misunderstanding by the consultant of the management of music noise at events and the extent to which music noise is properly controlled by Premises Licence conditions and the Noise Management Plan

(NMP). Section 9 of the report does not provide an objective analysis of all the noise conditions in the licence as it only comments on one condition. It does not provide a complete picture of all of the robust safeguards within the licence conditions with the aim of preventing public nuisance. Nor does it refer to the safeguards in the NMP. I will deal with this later in detail in Section 3 of this report.

2.16. Para 9.5 – it is stated by the consultant that Condition 107 is flawed and yet the reasons given to support this statement are dubious.

Para 9.5a) the historical nature of the conditions reflects the long history of use of the park for concerts and festivals. The noise conditions reflect the 1995 Code of Practice which seeks to "minimise disturbance" i.e. this is different and more stringent than the Licensing Act objective of preventing public nuisance.

2.17. Para 9.5b) The consultant states that some of the measurement locations are influenced by road traffic where in fact only one of the measurement locations is subject to significant traffic noise from Seven Sisters Road. The other monitoring locations are some distance from the main roads which are substantially less affected by road traffic noise. This is why there are variable permitted MNLs dependent on local background noise rather than fixed Music Noise Levels (MNLs) that do not reflect local conditions.

2.18. Para 9.5c) The consultant incorrectly states the measurement positions are boundary conditions. There are no boundary noise conditions as the monitoring positions are near noise sensitive community sites. Furthermore, it is incorrect to suggest the limits should apply at "*all locations*" as where a limit relies on local conditions, you can't identify what limit would apply at which location as the baseline varies at each position.

2.19. Para 9.5d) In this paragraph there is yet another incorrect statement saying that the dB(A) scale does not control low frequency (bass). As I have stated previously, the dB(A) scale does measure the low frequency and in a way that replicates the response of the human ear. So for example, if the bass increases and the increase is audible, then the dB(A) scale will detect the change.

2.20. Para 9.8 – This is yet another incorrect statement concluding that 78 dBA on Seven Sisters Road is highest in London. The noise limit at Trafalgar Square, for example, is higher at 80dB(A).

2.21. Para 9.10 – The consultant states that residential properties located in quieter roads should be given more weight. This is exactly what the noise conditions (Condition 107) in the licence aim to achieve in that where there is a low background, the music limit is also set at a lower

level. The consultant doesn't appear to have understood the conditions as many of the monitoring locations are away from busy roads.

2.22. Para 9.11 – The consultant doesn't acknowledge that the Noise Council Code of Practice [1] pre-dates the Licensing Act and considers 'minimising disturbance' rather than the statutory test of preventing public nuisance. Applying the limits to any i.e. all locations is contrary to the principles of public nuisance having to affect a "class of persons" not individuals, and it is unreasonable as the licensee cannot access and consultants can't monitor any and all locations at the same time in an urban environment. It is a matter of selecting representative locations (as per the published guidance to the Act) which has been the process adopted by the Council in the selection of their monitoring sites.

2.23. Section 10 - This whole section on the description of the dB(A) scale is mis-conceived as it is predicated on the incorrect assumption that the A-weighted decibel does not measure low frequency noise as I have stated on numerous occasions.

2.24. Para 11.4 and 11.5 - In these paragraphs the consultant seeks to dismiss the DEFRA research which was published in 2006 and showed that the dB(A) scale was the most appropriate and reliable method to measure the impact of music noise. The conclusion from the Defra research was not too surprising as the dB(A) scale replicates the response of the human ear. The consultant states the research was under laboratory conditions and a small-scale sound system was used which would not replicate the extended low frequencies. I was the project manager for the research which was completed jointly with the Government research department BRE and both assumptions made by Blue Sky are wrong:-

- Firstly, the research was made in semi-detached houses which were specifically made as 'real-life' as possible. They were not '*laboratory conditions*' (see the images in Appendix B). and
- The sound system was used outside the houses (not just inside as seems to be suggested by Blue Sky). It was a professional full frequency range sound system which would reproduce low frequency sound as low as 31.5Hz. In addition, the track used to assess low frequency bass music was Bass Test by the Chemical Brothers which is renowned for producing the low frequency sound levels which are sometimes generated at the Wireless Festival (The Chemical Brothers performed at the Wireless Festival in 2011).

2.25. Based on the DEFRA research, I published an Institute of Acoustics paper with BRE [4] and the research was adopted by the government to develop the noise limit (in dBA terms) for late night licensed premises. I consider therefore that this music noise research provides useful

information for assessing music noise. The conclusions that the dB(A) scale is a reliable method to assess music is an important factor to be considered for this review.

- 2.26. Para 13.2 - The consultant makes a reference to taking objective measurements but only concludes that it was *'very intrusive'* which is entirely subjective. Also, the premises licence conditions do deal and control the noise from *'genre to genre as well as from engineer to engineer'* as the noise management plan (a requirement of the licence) deals specifically with these points.
- 2.27. Para 13.3 – The consultant makes reference again to the large-scale sound systems. The point that is missing is that these sound systems are controlled by the premises licence conditions, which limit the sound levels irrespective of the size of the sound system.
- 2.28. Para 13.4 – in his Conclusions, the consultant recommends a re-evaluation of the existing A-weighted noise limits. I agree that the historical background noise levels should be updated, and consideration should be given to other monitoring locations in agreement with the Council.

SUMMARY COMMENTS ON THE BLUE SKY REPORT

- 2.29. I have presented a number of detailed comments on the inadequacies of the Blue Sky report. In summary, the consultant only visited the site for a maximum of 3 hours which will not provide a representative view of the noise levels from the festival over the 3 day period, especially when assessing public nuisance. Furthermore, the regular assertion that the dB(A) scale *'effectively excludes bass'* is simply wrong and misleading. The dB(A) scale provides an objective measure that replicates what the human ear is hearing. Given these two points alone, I consider that very little weight should be given to the contents of the report for this review.

3. COMMENTS ON WITNESS STATEMENTS

- 3.1. I have reviewed the seven witness statements included in the review along with the Exhibits and the Appendix presenting the responses from residents received by the Friends of Finsbury Park.
- 3.2. It is interesting to note that two of the seven statements didn't mention noise at all and one other only mentioned it in one sentence of the 3 page statement. I conclude therefore that the noise impact is not so widespread as has been suggested.
- 3.3. In general, the witness statements and the Appendix that mention noise, refer to the intensity of the noise, the bass and rattling windows. There is also some mention of helicopters after the event.
- 3.4. The objections are clearly subjective in nature and the only objective measurements which were taken by Blue Sky were recorded over a short period during the event and for reasons given the data recorded cannot be relied upon.

4. LICENCE CONDITIONS AND IMPROVEMENTS FOR 2018

- 4.1. The current Premises Licence LN/000012182, includes a number of comprehensive conditions in respect of noise. The conditions are found in Annex 2 from 98 to 109. These were not properly considered by the consultant in the Blue Sky Report who chose to only comment on one condition.
- 4.2. The first point to make is that the noise conditions strictly follow the Noise Council's Code of Practice [1] allowing the music noise level (MNL) to exceed the background noise levels by 15dB when the event is operating. Details of the prevailing background noise levels are given (Condition 106) for 6 representative community locations around the Park and therefore prescriptive noise limits are set for each area dependant on the baseline conditions. This answers the Blue Sky point that lower levels should be adopted for the quieter 2nd line streets. This condition is therefore robust and should be maintained.
- 4.3. The background noise levels apply to measurements made a number of years ago and it would be prudent to update these measurements and also consider several alternative representative locations.
- 4.4. A key control is that specified in conditions 98 and 109. These conditions require that a noise management plan (NMP) will be produced in liaison with the Licensing Authority. It is made available to the Council and is produced for each event. The condition specifically states that it is a 'Live' document that is to be updated throughout the pre-event consultation period. A good example of this can be seen in the NMP for 2018, when specific reference was made for assessing low frequency based on the low frequency complaints in 2017. In addition, vibration measurements were conducted in 2018 in several properties to assess residents' concerns of the bass frequencies causing windows to rattle.
- 4.5. A further very important condition that gives the Council the overall control of noise levels during the event is present in Condition 108. The condition states '*Any reasonable request of the Licensing officer representative will be complied with by the Premises Licence holder in regard to sound levels*'. If during the event the Council considers that the music noise from the event is likely to give rise to a public nuisance under the Licensing Act 2003, then they have over-arching control to enforce an immediate reduction in sound levels. Again, this is a significant omission from the consultant's report'.

4.6. From my experience at working at many festivals in London and the UK, I consider that the current noise conditions are at least as robust as or in many cases, more robust and comprehensive than other premises licence conditions at other festivals in other areas.

NOISE CONTROL FOR THE 2017 WIRELESS FESTIVAL

4.7. A full noise management plan [5] was presented and agreed by the local authority prior to the 2017 Wireless event, the plan provided a thorough account of the noise control procedures including:-

- dealing with complaints
- site / sound system design
- pre event information
- sound control procedures
- sound propagation and pre-event tests
- sound control within the venue
- sound monitoring outside of the venue
- summary reporting

4.8. The Noise Management Plan was fully implemented at the events 2016 and 2017, and there were no breaches of the licence conditions related to noise at either festival. There is no justification or a review of the licence on the basis of non-compliance with the licence conditions or the NMP by Live Nation or Festival Republic in either year.

4.9. The Consultant makes no reference in his report to the NMP which is a significant omission to a key document.

IMPROVEMENTS FOR WIRELESS 2018

4.10. Several significant improvements were made for the noise management for 2018. These included:-

- 4.10.1. The full scale use of the Metrao software to detect bass frequencies in real-time as described in the 2018 NMP.
- 4.10.2. Vibration monitoring in residents' properties.

- 4.11. The Metrao system was trialed in 2017 as it was still under-development but the system was used to full effect at the 2018 festival. The system detects which stage is causing the highest levels off site and which frequencies are also generating the highest levels. The system works in real time so instant changes can be made to the sound levels for the mixer locations.
- 4.12. To assess the success of our noise management and monitoring systems, an independent audit was instructed by Live Nation. This comprised of qualified Environmental Health Practitioners (EHP) reviewing our monitoring protocols and taking sample measurements at various off-site locations. Their audit report was very encouraging with comments such as *'The Vanguardia WhatsApp group continuously updated on stage start times and reported complaints as they happened. There was excellent communication between the consultants and the noise conditions appeared well managed.'* In addition, the WhatsApp Group was extended to Council Officers from Haringey so that the whole process was transparent and in real-time.
- 4.13. In terms of the use of the Metrao system, the audit stated that *'the noise monitors on stage fed directly into the Metrao system and helped to set the offsite levels allowing the consultants to send messages to the sound engineers when there was a risk of the noise levels being met or overtaken and thus ensuring the MNL offsite was effectively controlled.'* Photos were taken by the independent EHP's of the Metrao software and their comments are shown in Appendix D for reference.
- 4.14. Vibration was detected on our vibration meters as certain times throughout the day and these results are currently being analysed and assessed.

5. SUMMARY

- 5.1. I have been instructed by the Premise Licence Holder for The Wireless Festival, to review the acoustic aspects of the evidence presented by The Friends of Finsbury Park for a Licence Review as well as consider the existing noise conditions in the Premises licence.
- 5.2. The main body of evidence on noise is presented in the Blue Sky Acoustic report [3] and I have presented a number of detailed comments on the inadequacies of this report. In summary, the consultant only visited the site for a maximum of 3 hours which will not provide a representative view of the festival over the 3-day period. This is especially the case when considering public nuisance which encompasses many factors such as duration, timing and the frequency of occurrence.
- 5.3. Furthermore, the regular assertion in the Blue Sky Report that the dB(A) scale '*effectively excludes bass*' is simply wrong and therefore misleading. The dB(A) scale is an objective measure that replicates what the human ear is hearing. Given these two points alone, I consider that very little weight should be given to the contents of the report for this review.
- 5.4. From my experience of working at many other parks holding music events in the UK, I consider that the current noise conditions are at least equivalent to or in many cases, more comprehensive than other premises licence conditions. The noise conditions also follow the guidance given in the Noise Council Code of Practice [1].
- 5.5. The 'live' Noise Management Plan which is a further requirement of the licence (Condition 109), was updated to make additional assessments of the low frequency noise for 2018 based on a number of complaints in 2017 which related to low frequency noise.
- 5.6. The background noise levels contained within the licence apply to measurements made a number of years ago and it would be prudent to update these measurements and also consider several alternative representative locations.
- 5.7. All our noise measurements made over the full three days in 2017 for the Wireless event complied with the licenced noise limits. This is confirmed in the post-concert report.
- 5.8. The Blue Sky Report does not provided a proper analysis of the conditions of the existing Premises Licence. Within those conditions there is a robust structure for controlling and managing noise at the event which is proactive and requires a new Noise Management Plan (NMP) specific to each event to be created and approved (condition 98). This provides the Licensing Authority with the discretion to add additional measures into the Noise Management Plan to promote the licensing objectives prior to each festival. If a suitable NMP is not agreed

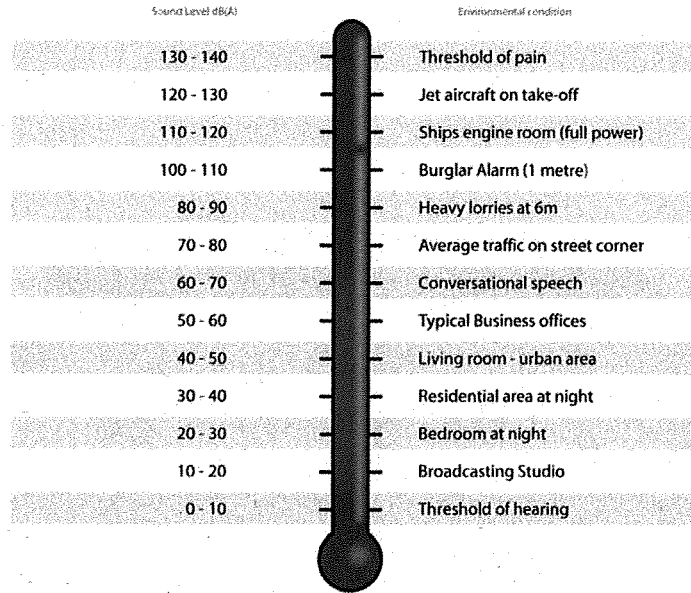
the effect of condition 30 is that the Licensing Authority may refuse permission for the event to proceed. During the event the Licensing Authority has the ability to require a reduction in noise levels if it considers sound levels are too high (condition 108).

6. REFERENCES

- [1] Code of Practice on Environmental Noise Control at Concerts, Noise Council, 1995.
- [2] Noise from Pubs and Clubs Phase II, Contract NANR163, 2006.
- [3] Assessment of noise impact at residential properties, Wireless Festival, Doc ref:- 17100745, Blue Sky Acoustics, February 2018.
- [4] Amplified Music From Licensed Premises – Developing the new Night Noise Offence, PROC IOA Vol 28:2006
- [5] Noise Management Plan, VC-102384-00-000, 5 May 2017

APPENDIX A - GLOSSARY OF ACOUSTIC TERMS

Noise is defined as unwanted sound. The range of audible sound is from 0dB to 140dB, which is taken to be the threshold of pain. The sound pressure detected by the human ear covers an extremely wide range. The decibel (dB) is used to condense this range into a manageable scale by taking the logarithm of the ratio of the sound pressure and a reference sound pressure.

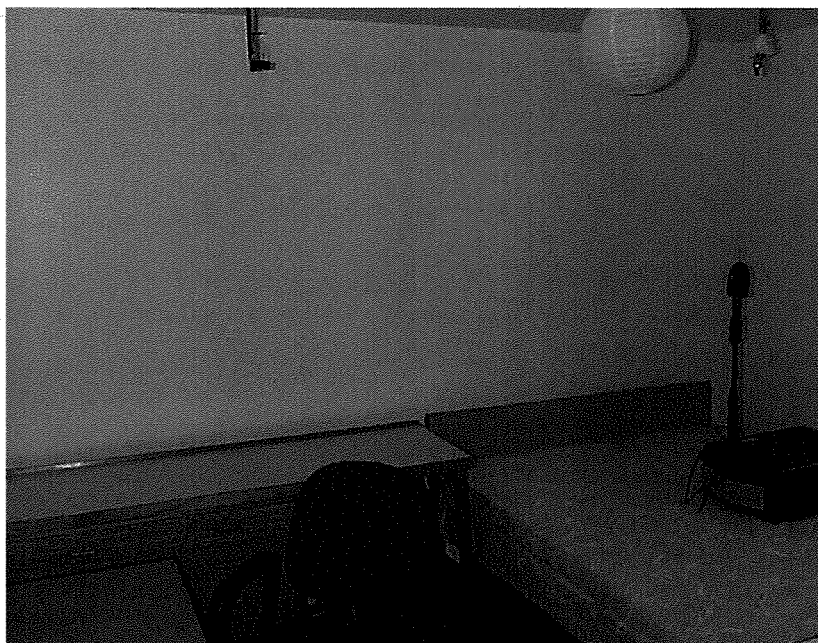


The frequency response of the ear is usually taken to be about 18Hz (number of oscillations per second) to 18,000Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than at the lower and higher frequencies, and because of this, the low and high frequency component of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most used and which correlates best with the subjective response to noise is the dB(A) weighting. This is an internationally accepted standard for noise measurements.

The ear can just distinguish a difference in loudness between two noise sources when there is a 3dB(A) difference between them. Also when two sound sources of the same noise level are combined the resultant level is 3dB(A) higher than the single source. When two sounds differ by 10dB(A) one is said to be twice as loud as the other.

The subjective response to a noise is dependent not only upon the sound pressure level and its frequency, but also its intermittency. Various indices have been developed to try and correlate annoyances with the noise level and its fluctuations. The parameter used for this measure is Equivalent Continuous Sound Pressure Level (L_{Aeq}). The A-weighted sound pressure level of a steady sound that has, over a given period, the same energy as the fluctuating sound under investigation. It is in effect the energy average level over the specified measurement period (T) and is the most widely used indicator for environmental noise. A few examples of noise of various levels are given right.

APPENDIX B - TEST HOUSES AND ROOMS USED FOR THE DEFRA RESEARCH



APPENDIX C – EMAIL FROM SSE RE THE PA SYSTEM



Tue 24-Jul-18 2:01 PM

Miles Hillyard <Miles.Hillyard@sseaudio.com>

Re: Blue Sky Report for Melvin

To: Jim Griffiths

Cc: John Pann

You replied to this message on 24-Jul-18 3:27 PM.



30xks28-92dB@SSR.pdf
399 KB



24xks28-97dB@SSR.pdf
437 KB

Hi Jim

The cabinets are rated at 1000w – total 30,000 watts not 78,000. The amplifier is bigger than the cabinet but if we were to use all this power we would blow the drivers very quickly.

The Finsbury Park is very challenging for a sound designer as are all London park festivals. Balancing the increasing demands of the artists, the viewing public and the strict licence levels pushes the technology and my skills to the maximum. However, this festival uses a similar number of subs we have used in the following London parks, Victoria Park, Clapham common, Gunnersbury Park and The proms in Hyde park.

I spend a long time designing the systems for all our shows. Looking at each one with its own individual needs. Although Finsbury park doesn't have a low frequency limit I have included a sub design specific to this venue and its style of music to reduce the offsite disturbance and increase the enjoyment for the paying audience.

See attached prediction for the 30 KS28 sub design and standard 24 KS28 sub design used on many shows of this size around the world. The 30 KS28 design shows a much tighter coverage area keeping the sound in the area and the conventional 24 sub design has an uncontrolled pattern with high levels way outside the festival site.

The sub design used has an 8dB advantage at the fixed metering points and has significant reduction behind the stage. This design is not specific to the brand used last year and is the correct approach that should be used with any sound system on this site to reduce offsite levels and maximise the onsite levels the concert goers expect.

To explain the difference between the two designs, I am using more cabinets to control the directivity of the sound. The number of subs used is not to generate more power.

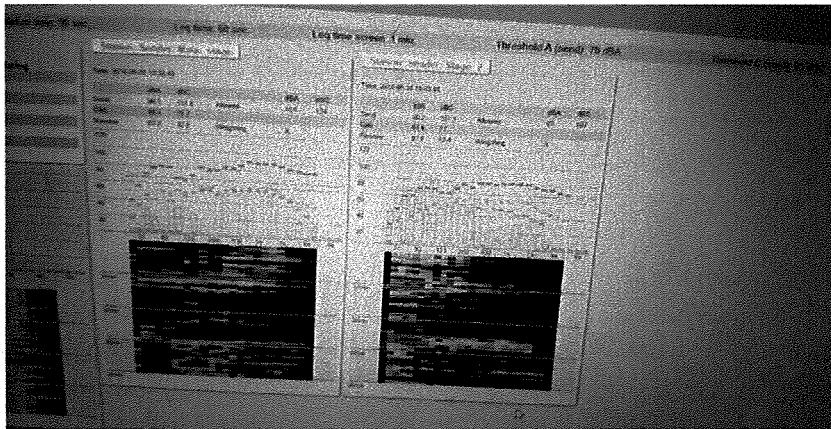
If you need any further explanation please don't hesitate to contact me.

Miles

APPENDIX D – EXTRACT FROM THE INDEPENDENT EHP'S REPORT REGARDING THE METRAO SYSTEM

The noise monitors on stage fed directly into the MeTrao system and helped to set the offsite levels allowing the consultants to send messages to the sound engineers when there was a risk of the noise levels being met or overtaken and thus ensuring the MNL offsite was controlled effectively.

Picture 3: MeTrao system in use. The above shows correlation between noise measured on stage and offsite for both stage one and two





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Appendix 12B

2nd Submission – P Kolvin

