Appendix 10

Appendix 10 - Balter Festival 2015 noise management plan

Balter Festival 2015 - NoiseManagement

This is a preliminary document whose purpose is to outline steps taken to reduce noise pollution in the local area surrounding the event site. This document describes the noise management plan that will be put in place for the duration of the event.

Contacts

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Festival operating times

Festival site Opens 14:00 on 05/06/15						
	05/06/15		06/06/15		07/06/15	
	Open	Close	Open	Close	Open	Close
Main Stage	CLOSED		10:00	22:00	10:00	22:00
Bar	18:00	02:00	12:00	02:00	12:00	00:00
Jigsore	18:00	02:00	12:00	02:00	12:00	00:00
The Hex	20:00	02:00	20:00	02:00	20:00	00:00
Drawing Room	18:00	02:00	10:00	02:00	10:00	00:00
Live Stage 2	22:00	02:00	22:00	02:00	CLOSED	
Disco Dome	22:00	02:00	22:00	02:00	CLOSED	
Festival Site closes 12:00 on 8/06/15						

Minimising noise pollution to surrounding properties

Steps being taken:

- The overall position of the festival site and the position and orientation of each sound system has

been chosento limit noise pollution to the surrounding area as much as possible.

- All sound systems bar one are within marquees; this will contain the noise level to some degree, particularly in the vocal range.
- Operating times have been staggered; at no point will all sound systems be running concurrently.
- The single outdoor stage is due to close at 10PM and only operates on Saturday and Sunday.

- Substantial acoustic barriers will be used behind sound systems to further reduceoffsite levels.
- Larger venues will use acoustic barriers to enclose the audience area to further reduceoff site levels.
- All venues will utilize arrays of bass bins stacked and processed to keep as much bass energywith in the venue as possible

Noise Monitoring Positions

Noise levels will be monitored from 4 points around the festival site these are

1. Mopla road, Tushill
2. Piercefild Avenue, Chepstow (adj to no.5/6)
3. Itton Road
4. St Arvans

The map below shows the 4 locations.

Noise Limits

The	preliminary	noise	levels	that	the	noise	management	team	will
	be	working	to	are					
09:00	-	19:00:	50dBA	over	a	15	minute	Leq	
19:00	-	23:00:	45dB(A)	over	a	15	minute	Leq	
23:00	-	02:00:	35dBA(A)	over	a	1	minute	Leq	

Measurement equipment

1 of CEL620B Octave band sound level meter

- This sound level meter can be calibrated and will be used for off site measurements
- A copy of the product specification is available in appendix 1

1 of CEL246 Integrating Sound Level Meter

- This sound level meter can be calibrated and will be used for on site measurements
- A copy of the product specification is available in appendix 2

6 of ColeMeter GM1358 Digital Sound Level Meter
- These will be positioned within each venue
- This meter can be calibrated and will be used in each venue to monitor levels
- A copy of the product specification is available in appendix 3

Acoustic barriers

- The three largest venues (Hex stage, Jigsore stage & The Drawing Room) will use acoustic barriers in an attempt to keep noise within the venue area.
- Acoustic barriers will be created from straw bales, individual bales have dimensions of 8ft x 2ft x 3ft and will be stacked two bales high to create a 6ft wall surrounding the venues
- Straw bales will be used on the remaining stages behind sound systems to try to block sound escaping from the rear of the venues.
- A picture showing the method and location of straw bales surrounding the 'Jigsore stage' is shown in appendix 4

Noise Management during the festival

- A team of four Noise managers is proposed.
- The over all noise manager is Russell Kearney.
- This will allow for at least one off-site and one on-site noise manager working at all times, whilst allowing for breaks, at most times 3 noise control team members will be on shift.
- The team will be in continuous radio contact with each other, and with the festival production office.
- The Noise management team will continuously monitor levels on and offsite, and adjust sound system levels to

avoid causing nuisance to residents in the area.

- All stages should have an SPL meter.
- A dedicated phone number will be distributed to local residents in the week leading up to the event.
- Local residents can use this number to request the noise management team investigate possible noise nuisances off-site and make adjustments to sound levels where necessary.
- This phone will be situated in the production office, which is manned 24 hours a day.
- The noise management team will be made aware of any incoming calls immediately
- Environmental Health will be provided with the phone numbers of the noise management team and the dedicated on site phone number before the festival opens.
- If local residents should chooseto bypassthe dedicated phone number and contact Environmental Health directly, the on call EHO can quickly and easily make direct contact with the noise control team and/or the Festival management/Production team.
- This allows complaints to be investigated and resolved as quickly as possible.
- In the event of this happening the off site Noise Control manager will be instructed to go immediately to the location of the complaint, take measurements and advise on turning down any sound system deemed to be causing a nuisance.
- A noise propagation test and sound system audit will be completed before the festival opens.
- Each sound system will be run at the desired level individually, and then concurrently.
- The levels will be recorded on and off site at various locations, a meeting will then be held between the festival management, the noise management team, the engineers in charge of each sound system, the venue managers and the council to discuss and set the initial operating levels for all sound systems.

Noise management Method statement Noise Propagation Test

The Noise propagation test will take place on Friday the 5th of June from 10:30AM

- At 10.30 Noise meterswill be calibrated, communications system will be checked, and noise management team will synchronise timepieces.
- Two-way radios will be used for on and off site communication, for some offsite positions, mobilephones may need to be used instead.
- At 10.45 all personnel and measuring equipment should be in Position.
    - A personis to be positioned 10m from each sound source measuring noise with a ColeMeter GM1358 Digital Sound Level Meter.
    - A personis to be positioned at each offsite monitoring position, measuring noise with a CEL620B Octave band sound level meter set to 5 minute LAeq.
- 11.00 Test start.

Each sound source is to be individually turned on, generating noise at 92dbA for 5 minutes. The resultsat the monitoring positions are to be recorded. When all sound systems have been individually tested, all sound systems are to be turned on at the same time for 5 minutes. Levels offsite recorded at the 4 monitoring positions.

- 12.30 Propagation test finish.
- 12.45 Correlation of data.
- All data to be returned to centralproduction, and sound system levels calculated.
- 14.00 Festival opens. Sound systems off.
- 16.00 Noise management meeting.

Noise management team, festival management, sound system engineers, and the council to be present. Maximum levels for day and for night of each sound system is given to sound system operator

- 18.00 Music starts, noise management starts.

Regularity of measurements

Sound engineers should have a ColeMeter GM1358 Digital Sound Level Meter at front of house mix position at all times and be making constant checks to make sure levels stay within the limits set in the noise propagation test

Venue managers take responsibility for controlling levels in venues not requiring a sound engineer, they should have a ColeMeter GM1358 Digital Sound Level Meter with them at all times and should take regular measurements to make sure levels stay within the limits set in the noise propagation test

The offsite member of the noise control team should travel to each of the four measurement locations in a loop taking and recording a 15 minute LAeq at each position

There will be a second calibrated noise level meter (CEL246) on site which will be used to take more accurate readings when dealing with adjustments through out the event, it will also work as a back up for the CEL620B

In the event sound system levels require adjustment during the event

- The off site noise control team member will radio production and the onsite noise team member and alert them to the off site levels
- The production team will radio Russel Kearney and the festival management to inform them
- The offsite noise control team member will advise the on site noise manager which sound system they feel requires adjustment, they will suggest an amount in dB that the sound system should be adjusted by.
- The on site noise control team member will go directly to the venue and with the assistance of the venue manager/sound engineer will implement the adjustments
- The onsite noise control team member will alert the off site noise control team member that the adjustment has been made via 2 way radio
- The off site noise control team member will take a new measurement to ascertain if the adjustments have been successful

- This process will continue until the desired level is set

Appendix 1

Overview

The CEL620B is an *Integrating* Sound Level Meter with Real-Time Octave Band Filters. This meter provides you with all the measurements needed for a full noise at work survey and detailed hearing protection assessment.

- Occupational noise measurement
- Hearing protection assessment (Octave Band method)
- **Data logging with download to computer**
- Quick and easy to use
- Simultaneous measurement of all parameters (LAeq, Max, Min, etc)
- Single range 20 to 140 dB
- Real-Time Octave Band Filters

Standards

- IEC 61672 - Class 1 or Class 2
- IEC 60651 and IEC 60804 - Type 1 or Type 2
- IEC 61260 Class 0 (Octave Band Filters)
- European Physical Agents (Noise) Directive 2003/10/EC

More info available at https://www.noisemeters.co.uk/product/cel/620b/

Appendix 2

The **CEL-246** is a simple integrating sound level meter that is ideal for use in many situations where a quick idea of the current noise level is needed. It features 2 ranges from 30 to 100 db and 60 to 130 db and provides the standardized A and C broadband frequency weightings required by many protocols. The **CEL-246** also has the Slow, Fast and Impulse time responses. A maximum hold function with a user reset is available to capture the highest level of noise to give a "worst case" measurement if needed. Results are displayed on a graphic LCD in either alpha numeric format or as a scrolling time history with either 1 or 5 minutes time history graph so that recent peaks and troughs may be viewed. Calibration is as simple as placing the calibrator over the microphone and switching it on. As soon as the calibration tone is steady it is automatically detected by the **CEL-246** and the user is offered the choice of performing the calibration with a single button press. There is no need to use old fashioned screwdrivers that may get lost as the calibration takes just 5 seconds and is very easy to perform.

The **CEL-246** adds on board storage capability at fixed 1, 2, 5 or 10 second intervals of the average sound level with the selected frequency weighting and time response and exchange rate to provide a low cost data logging instrument. Up to 99 runs can be stored each of up to 18 hours maximum continuous run time at the 1 second rate or more than 7 days at the 10 second rate. All runs are stored in memory tagged with the start date and time using the meter's real time clock so they can be correctly identified when the unit is connected to a computer.

The **CEL-246** is provided with a standard quarter inch socket so that it can be mounted on a tripod or other similar fixtures in a secure manner. A small foam windscreen provided as a standard accessory protects the microphone from wind induced errors when making measurements and a wrist

strap minimizes the risk that the meter will not be dropped when in use. Analog ac and optionaldc outputs are available to connect the **CEL-246** to other pieces of equipment and a low power digital output is also provided through the USB interface which can also be used to power the meter if required.

A standard **CEL-246** sound level meter is supplied complete with its fixed microphone, 3 x AA batteries, foam windscreen and wrist strap. Operating instructions for the meter are provided on a cdrom and an individual calibration certificate completes the package. The CEL-246 is covered by a 24 month warranty for peace of mind and full recalibration facilitiesare available from our NIST traceable service department.

A **CEL-246/K1** measurement kit includesall the above items plus a CEL-120/2 single level acoustic calibrator and a small kit case to store the unit.

The popular **CEL-246/K2** computer kit includesa USB cable and software cdrom containg a copy of dB24 and CasellaDrive software that can be loaded onto computers running Windows XP, Vista or Windows 7 operating systems. The CEL dB24 software allows the computer hard drive to be used as a simple data logger for live measurements of changing noise levels. This is ideal for training or teaching purposes where the features of the sound level meter can be displayed on a larger screen. CasellaDrive allows stored run results to be downloaded as csv format text files that can be read into many popular office spreadsheet programs for further manipulation.

More info available at http://www.enviroequipment.com/rentals/PDF/Datasheets/cel-246_brochure_201011.pdf

Appendix 3

ColeMeter Digital Sound Level Meter 30dB - 130dB Decibel Pressure LCD Display Noise Tester

Color: white
Dimension: 145 x 50 x 35 mm
Sound level: 30 - 130 dB
Accuracy: ± 1.5dB (under reference condition)
Measuring level: 40 -130dBA, 40-130dBC
Frequency range: 31.5 Hz - 8.5 kHz
4 digits LCD display with backlight
Self calibration Time: 3 seconds
Sampling rate: 2 times/second
1/2" electret condenser microphone

More info available at http://www.colemeter.com/?p=34&a=view&r=33

Appendix 4