APPENDIX L

STAGE WIND MANAGEMENT POLICY

Date	August 2017	
Version	1.0	
Review	June 2018	
Owner		

City of BRADFORD METROPOLITAN DISTRICT COUNCIL

Wind Management Policy
Bingley Music Live Festival

General

The Stage roofs have been designed to a wind speed of 25m/s, as recommended by the ISE Report on Temporary Demountable Structures. BS6399 Pt 2.

The stage roof will have a Remote Wireless Anemometer and Weather Station as standard, allowing on site monitoring of the weather. There will also be hand held Anemometer to record wind speeds

The Stage Roof systems incorporate fast-release sheets, which may be rapidly removed in the event of exceptional wind conditions. The possible need to remove sheets is described below.
The same can be done with large tented structures on the event site

Precautions

Bingley Music Live operates a number of pre-emptive measures to manage unfavourable weather conditions. On-site, responsibility for weather monitoring lies with the crew chief during the build or the standby at other times or the on site independent safety advisor

Consultation of two reputable weather data services
(http://www.metoffice.gov.uk/weather/uk/uk_latest_weather.html and
http://www.metoffice.gov.uk/services/public-sector/hazardmanager

is carried out on a daily basis by office staff. The data feeds relevant to areas in the country where we are currently operating are then compiled into archives which are held by Emergency Planning.

The installation of Remote Wireless Anemometer on-site provides ancillary climate information to the Stage baby sitter or standby staff enabling them to make informed decisions about procedure. They will consult with Neil Marcus (safety officer) and Andrew Wood (event manager) as to the wind speeds and they will agree the action required and inform bronze control and other concerned parties.

Duties of the Stage crew and office are detailed below.

Unattended Stages

Stages being left overnight should be left in a 'vented' state with all doors opened. Lights and PA should be dropped and infill sheets removed should a wind speed of 15m/s or higher be forecast.

Where there is no standby - on long term installations or where the stage has more than one night between shows - lights and PA have to be lowered from the Roof / Masts when the structure is not in use, unless otherwise approved by the staging company in advance.

Operational Procedure in Adverse Conditions

Level 1 Windspeed (60% of design load) 19.4 m/s – 43 mph

When monitoring registers a gust wind speed in excess of 19.4m/s (measured at 10m above ground level) in conjunction with an increasing general trend of recorded wind speeds, staff should be put on alert that action may be required and if erection is still in progress consideration should be given to delaying further erection.

- The roof should be "vented" by means of the removal of the infill sheets
- Event Production to be briefed on possible further actions.
- The Stage area should be designated a hard-hat zone.
- Suspended video screens and P.A. equipment may need to be lowered and secured.

Level 2 Windspeed (80% of design load) 22.3 m/s – 50 mph

When monitoring registers a gust wind speed in excess of 22.3m/s (measured at 10m above ground level) in conjunction with an increasing general trend of recorded wind speeds, the operational procedures defined in the management plan should be implemented and the site secured against access by the public.

- The area is deemed unsafe and production/event staffare made aware that the show will not go ahead.
- Stage and surrounding area should be cleared of all but essential personnel.

Wind Chart

The maximum gust speed is the maximum instantaneous speed that occurred during the hour ending at the time of entry.

The terms used for describing wind strength are as follows:-

Beaufort Force	Description	Average speed at 10 metres above the ground		
0	Calm	Less than 1 knot	(less than 1 mph)	
1-3	Light	1 to 10 knots	(0.7 to 12.2 mph)	0.3 to 5.4m/s
4	Moderate	11 to 15 knots	(12.3 to 17.8 mph)	5.5 to 7.9m/s
5	Fresh	16 to 21 knots	(17.9 to 24 mph)	8 to 10.7m/s
6	Strong	22 to 27 knots	(24.1 to 31 mph)	10.8 to 13.8m/s
7	Near gale	28 to 33 knots	(31.1 to 38.3 mph)	13.9 to 17.1m/s
8	Gale	34 to 40 knots	(38.4 to 46.4 mph)	17.2 to 20.7m/s
9	Strong gale	41 to 47 knots	(46.5 to 54.7 mph)	20.8 to 24.4m/s
10	Storm	48 to 55 knots	(54.8 to 63.6 mph)	24.5 to 28.4m/s

Note: Beaufort Forces apply only to average wind speeds and should not be used in reference to gusts. The speeds given above would be considerably exceeded in gusts. For example, in a gale, gusts of over 48 knots (over 55 mph) are common.

1 knot = 1.15078 miles per hour = 0.51444 metres per second

Stage Staff Responsibilities

Weather Management Liaison's Daily duties

- ✓ Using a hand held Anemometer
- ✓ Get a 5-day forecast for each of these areas from the Met Office website.
- ✓ Log in to Hazard Manager and get windspeed ratings for each of the areas.
- ✓ Save this data into the relevant directory; each date should have its own subfolder. Create one if none exists.
- ✓ Where either of the weather data sources predicts that weather conditions are going to be unfavourable (i.e. above 15 m/s (33mph) wind) contact the relevant member of on-site personnel.
- ✓ During builds and takedowns, the site contact is the crew chief and during the show the site contact is the standby. This information is available through consulting the crew sheets and standby sheets which are in the office.
- ✓ The site contact should be contacted and informed that unfavourable weather is expected

Crew Chief / Standby duties regarding weather management.

- ✓ Ensure you can readily access a copy of the Bingley Music Live Wind Policy document so that it is known to all concerned parties. The file is accessible direct email on request
- ✓ Install a weather station/anemometer at the highest practical point on the structure during the build.
- ✓ In normal conditions, monitor the readout of the weather station on an hourly basis and record the data using form WSL1.
- ✓ When the readouts begin to register 15 m/s wind or higher, or the Weather Management Liaison informs you that adverse weather is expected, begin to monitor the readouts every 15 minutes using form WSL2.
- ✓ Inform the production staff that remedial action may need to be taken.
- ✓ Consult the Bingley Music Live Wind Policy document which details the practical action which must be taken in certain conditions.

BINGLEY MUSIC LIVE
MAIN STAGE/ TEMPORARY STRUCTURES WIND SPEED LOG SHEET
WSL1

NAME _____

SITE _____

DATE _____

Time	Windspeed
9.00 am	
10.00 am	
11.00 am	
12.00 midday	
1.00 pm	
2.00 pm	
3.00 pm	
4.00 pm	
5.00 pm	
6.00 pm	
7.00 pm	
8.00 pm	

MAIN STAGE WIND SPEED LOG SHEET
WSL2 – ADVERSE WIND CONDITIONS

NAME _____

SITE _____

DATE _____

Time *Please complete every 15 minutes*	Windspeed

BINGLEY MUSIC LIVE
DISCOVERY STAGE/ TEMPORARY STRUCTURES WIND SPEED LOG SHEET
WSL1

NAME _____

SITE _____

DATE _____

Time	Windspeed
9.00 am	
10.00 am	
11.00 am	
12.00 midday	
1.00 pm	
2.00 pm	
3.00 pm	
4.00 pm	
5.00 pm	
6.00 pm	
7.00 pm	
8.00 pm	

DISCOVERY STAGE WIND SPEED LOG SHEET
WSL2 – ADVERSE WIND CONDITIONS

NAME _____

SITE _____

DATE _____

Time *Please complete every 15 minutes*	Windspeed