

Extreme Weather Action Plan

Standon Calling 2026

DOCUMENT CONTROL

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PURPOSE AND AIMS

The purpose of this plan is to outline the procedures in place for extreme weather occurring during the Event. This can include:

- High winds
- Heavy rains
- Electrical storms / lighting strikes
- Rapidly arriving weather systems
- Extreme heat

TERMS OF REFERENCE

Operational wind speed: Maximum wind speed at which a temporary structure is designed to be used.

Wind speeds are generally either expressed in mph / kmph for regional weather forecasts, or knots for shipping forecasts. Forecasts issued for aviation are given in terms of m/s.

The precise relationship between these is $11.18 \text{ m/s} = 21.74 \text{ knots} = 25.00 \text{ mph}$. However, as a rule of thumb the following conversion factors may be used: $10 \text{ m/s} = 20 \text{ knots} = 23 \text{ mph}$

Note that twice the wind speed means four times the pressure, i.e. four times the hazard and hence four times the risk unless risk control measures are taken.

Note that wind speed increases with height and may be 50% greater at a height of 20 metres above ground level.

Note that weather forecasts should be taken to be mean wind speeds unless gust speeds are explicitly mentioned.

DECISION MAKING

Appendix B details the action points that should be undertaken by various stakeholders in the case of all extreme weather.

WIND

Monitoring and measuring

All wind speed should be measured in 'clean' air avoiding turbulence and shelter from surrounding features. Ideally this will be achieved by sitting the anemometer on a 10m high mast which is located at least 60m away from all large obstructions, trees, etc. In many cases this will not be possible, and the anemometer will need to be fixed to the temporary structure itself. In this case, the anemometer should ideally be mounted at a height of at least $(1.3H) + 1\text{m}$ where H is the maximum height of the structure on which the anemometer is mounted.

The Event will not rely solely on the site anemometer. Careful monitoring of several weather websites will be carried out throughout the build and show (see appendix C). If venue or structure supervisors are concerned about the wind speed and have not heard from Event Control, they should contact Event Control for confirmation of the wind conditions.

The main stage provider will also install and monitor an anemometer and will share this information with the Event when requested.

Alert levels

Alert levels for wind will be set using the operational maximum capacity for a structure. As each structure on site is different, actions will be categorised for wind speeds in excess of 75% of operational maximum, and 90% of operational maximum.

Appendix A details the alert levels for specific structures on site, and alert levels can be found in appendix B.

Contractors

It is required that a suitable and sufficient wind management plan be in place for all temporary demountable structures. It is incumbent on the contracted Structural Supplier to supply such plans and ensure the Event is made aware of the Maximum Operational Gust Wind Speed for the structures in advance of arriving onsite.

Suppliers of temporary structures are reminded of their responsibility to develop a Managed Wind Plan for every one of their structures (how to do this is outlined in Temporary Demountable Structures, Guidance on Procurement, design and use Third Edition 2007.)

Special Notes on Mobile Elevated Working Platforms (MEWPs)

Where possible, the Event ensures that the manufacturers recommendations allow all plant used for lifting and access to be used up to 28mph. Where this is not the case, the limiting conditions will be requested from the manufacturer.

Additional care must be taken when handling building cladding, sheet materials, panels, and other such materials, which can act as "sails" and seriously affect the stability of a MEWP, especially in gusty wind conditions.

ELECTRICAL STORMS

Monitoring and measuring

During the Event and normal conditions, careful monitoring of several weather websites will be carried out by the Site Manager and Event Controller. If venue or structure supervisors are concerned about the Electrical Storms and have not heard from Event Control, they should contact Event Control for confirmation of the conditions.

Alert levels

On receipt of a forecast which indicates that lightning may be a possibility within 12hrs, Event Control will bring all parties to a state of awareness. If a storm is approaching, Event Control will maintain contact with all parties, providing regular updates and advising on preparations.

Risk of lightning strike should not be taken in isolation; risk of high winds and precipitation are also highly likely in conjunction with this weather phenomenon.

Alert levels and action steps can be found in appendix B.

‘Flash to Bang’ principle

To check the distance of the storm, the Event will use the flash to bang principle as recommended in PLASA's Lightning Guide For Outdoor Events (2019). ‘Flash to Bang’ is based on the following facts:

- Sound travels at 330- 340 meters per second or at 1 km in 3 seconds (approximately 1 mile every 5 seconds).

- Light travels at 300,000 km per second.
- Lightning will always be seen before thunder.

To calculate the distance between yourself and the storm, count the time between the lightning strike and thunderclap, then divide the number of seconds by 3 to find the distance in kilometres (by 5 for miles). If the distance between the thunder and lightning increases over a couple of strikes, the storm is moving away from you. If it decreases, it is coming towards you.

Action levels and lightning distances can be found in appendix B.

Further guidance

In an electrical storm, ideally, seek shelter inside large / permanent buildings, failing that motor vehicles are a good option. The idea being to keep away from open spaces and places of elevation.

Do not attempt to shelter under trees, it is estimated that 1 in 4 struck by lightning were hit whilst sheltering under trees.

If the show is paused for an electrical storm, the restart guidance is to wait 30 minutes after the last sub-30 second strike.

RAIN

Monitoring and measuring

During the Event, careful monitoring of several weather websites will be carried out by the Site Manager and Event Controller. If venue or structure supervisors are concerned about rain and have not heard from Event Control, they should contact Event Control for confirmation of the conditions.

Alert levels

In the event of forecast heavy rain there will be action points which are laid out in appendix B.

Special notes on wet weather

Due to the frequency of rain, there are a number of pre-emptive measures in place to help control the effects:

- The installation of additional gravel tracks in both public and back of house areas
- Reinforcement of carpark entrance points with gravel to improve the hardness of the area
- Installation of temporary roadway to run the entire distance of the exit route
- Availability of temporary metal trackway (LD20) which comes in rolls and can be moved to specific locations more easily than the usual trackway.
- Covered venues and bars

- A supply of hay or equivalent to limit any excessive slippery areas. Excessive slippery areas will be isolated using hazard tape and Stewards if necessary.
- All temporary structures will be monitored for anchor slip and will be signed off by the erector for the prevailing conditions.
- All enclosed structures will have queue management systems in place before the gates open (sufficient fencing and stewards)

EXTREME HEAT

In 2018 and 2022 the UK was subject to irregular and elongated high temperatures which resulted in a new set of challenges for outdoor events. In this instance, the below considerations will be addressed:

- Scorched earth and increased fire risk, especially in car parks
- Reassessment of fire coverage
- Use of BBQs prohibited
- Drinking water points added
- Shaded areas added
- Additional welfare requirements including suncream and PPE
- Traders' food storage assessed

APPENDIX A – SPECIFIC TDS ACTION LEVELS

Examples below – details tbc once site plan is finalised

TENT WIND LOADINGS AND ACTION PROCEDURES											
Location	Name / Description	Style and size	Wind loading capacity		75% of Wind loading capacity		Action	90% of wind loading capacity		Action of Event team	Action of Contractor
			mph	kph	mph	kph		mph	kph		
Site wide	Access Towers	misc	35	65	26	42	No working at height from 17mph	32	51	Dismantle	As per contractor documents
Arena	Cup Wash	9 x 9 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
	Artist dressing room	9 x 24 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
	Entrance tent	6 x 21 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
		3 x 6 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
		6 x 6 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
		6 x 12 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
		3 x 3 clearspan	50	80	37	60	Contractor & event on standby	45	72	Evacuate structure	As per contractor documents
		12 x 18 clearspan	50	80	37	60	Contractor & event	45	72	Evacuate structure	As per contractor

							on standby				document s
		5 x 5 clearspan	50	80	37	60	Contracto r & event on standby	45	72	Evacuate structure	As per contractor document s
		9 x 12 clearspan	50	80	37	60	Contracto r & event on standby	45	72	Evacuate structure	As per contractor document s
		40ft x 120ft trad	40	54	30	48	Contracto r & event on standby	36	58	Evacuate structure	As per contractor document s
		2 x 10.5 x 15m stretch	55	88	41	66	Contracto r & event on standby	50	79	Evacuate structure	As per contractor document s
Arena	Main Stage	15m orbit	44	70	33	53	Contracto r & event on standby	39	62	Evacuate structure	As per contractor document s

APPENDIX B – EXTREME WEATHER PLAN

THREAT & ALERT		ACTIONS			
ALERT METHOD	VISUAL INDICATOR	SITE MANAGEMENT	EVENT MANAGEMENT	TECH PRODUCTION	OTHER
Storm Level 1 (electrical storm within 20 miles of site / 32km - 1 minute 40 seconds Flash to Bang)					
Event Control alert site, safety, tech production	Potential visual of storm	Standby mode	Event Control alerts site, safety, and tech production only.	Standby mode	
Storm Level 2 (electrical storm within 10 miles / 16km - 50 seconds Flash to Bang)					
Event Control alert all channels, ensure all are on standby, cease work as listed, and prepare for crowd movements	Potential visual of storm	All work at height ceases Standby to implement level 3	All work at height ceases including fairground rides and observation towers Alert ELT. Standby to implement level 3. Prepare for large crowd movements, especially around undercover structures. consider public comms.	All work at height ceases including any follow spot ops in elevated positions Standby to implement level 3	SECURITY: Ensure access to loud hailers SECURITY: Prepare for large crowd movements, especially around undercover structures

Storm Level 3 (electrical storm within 6 miles of site / 10km - 30 seconds Flash to Bang)					
Event Control alert all channels and implement protocols as decided by ELT	Visual of storm	<p>Cease normal work and prepare protection of equipment</p> <p>Ensure ELT is aware of protected and unprotected structures</p> <p>Ensure representative from power contractor is available</p>	<p>ELT consider if it is necessary to power down stage dependent on movement of storm and frequency of strikes</p> <p>If required, implement show pause protocol and prepare for partial evacuation</p> <p>Prepare for large crowd movements</p>	<p>Power down stages where necessary and when advised from Event Control</p> <p>Use show pause protocol and messaging</p> <p>Protect equipment where possible</p>	<p>SECURITY: Assist with show pause or evacuation as required</p> <p>SECURITY: Relay messaging to customers on the ground using show pause or localised evacuation protocol</p>
Storm Level 4 (electrical storm within 3 miles of site / 5km - 18 seconds Flash to Bang)					
Event Control alert all channels and implement show pause and / or localised evacuation	Visual of storm	<p>Show pause implemented for larger stages</p> <p>Where possible, crew to cease work and take shelter</p>	<p>Show pause implemented, ELT to take further decisions on restart after 30 minutes from last post-30 second strike</p> <p>Advise public to move from wood area</p> <p>Where possible, crew to cease work</p>	<p>Show pause implemented in for larger stages and in line with protocol and messaging</p> <p>Where possible, crew to cease work and take shelter</p> <p>All stage crew evacuated from structure,</p>	<p>SECURITY: Assist with show pause or localised evacuation as required</p> <p>SECURITY: Relay messaging to customers on the ground using show pause or localised evacuation protocol.</p> <p>Advise public to move from wood area</p>

			and take shelter Prepare for large crowd movements	including FOH towers Monitor the PA and light swing	
Severe rain >10mm / hr					
Event Control provide periodic updates on forecast to all channels	Rain	<p>Contact all structural babysitters to check structures for leaks, slipping pins / pegs / anchors, and ponding Contract power to check installations</p> <p>Check ground conditions and consider redeployment of ground protection or wood chippings Check drains and runoff</p>	<p>Ensure outdoor personnel have correct PPE / weather Prepare for large crowd movements</p> <p>Welfare considerations for damaged belongings or illness</p> <p>Consider public comms protection</p>	Protect equipment where possible	<p>STRUCTURAL CONTRACTOR: check for ponding, moved pins/pegs/anchors, , subsidence, leaks SECURITY: Advise on locations for assistance to those with damaged belongings</p> <p>POWER: Check installations</p>

Wind level 1 - repeated gusts / hourly levels 15 mph					
Event Control alert site, safety, tech production of speed and direction	Small branches move and flags flutter (15mph)	Standby mode, contact all structural babysitters or if no babysitter then call the contractor to discuss	At 15mph, Event Control alerts site, safety, and tech production only.	Standby mode	STRUCTURAL CONTRACTOR: revert to specific structure plans
Wind level 2 - Winds at the lowest of either repeated gusts / hourly levels of 16-30 mph OR % of structural capacity					
Event Control alert all channels to be on standby and cease any work as required by individual structural plans	Small trees sway (21mph) Flags move, heras fence starts to blow over (28mph)	At 17mph all access tower work ceases At 25mph all scissor lift work ceases At 28mph all work on cherry pickers cease Checks undertaken for damage to fencing, hoarding, pop-ups , if upward trend of wind then remove cladding, scrim etc All structural babysitters to	Prepare for potential evacuations of structures - alert ELT	Secure and prepare to cover equipment Monitor the PA and light swing All work at height ceases	STRUCTURAL CONTRACTOR: revert to specific structure plans SECURITY: Prepare for potential evacuations of structures SECURITY: Ensure access to loud hailers SECURITY: Prepare for large crowd movements TRADER MANAGER: alert all traders

		<p>check and reinforce structures as per structural plans</p> <p>For structures that are at 75% of wind capacity, ensure babysitters are undertaken procedures as per structural plans</p>			<p>CREATIVE: check all installations and remove if required</p>
<p>Wind level 3 - Winds at the lowest of either repeated gusts / hourly levels of 30-40 mph OR % of structural capacity</p>					

Event Control alert all channels and where required, follow evacuation protocol	Whole trees sway (35mph)	Remove all fence covering and cladding	Prepare for potential evacuations of structures - call ELT, raise alert level	Secure and cover equipment	STRUCTURAL
Updates to channels every 15 mins.	Camping tents blow away (40mph)	For structures at 90% of wind capacity, manage the structural babysitters to lock down structures in line with structural plans	Ensure outdoor personnel have correct PPE / weather protection	Video wall lowered (at TBC mph)	CONTRACTOR: revert to specific structure plans
		For structures that are at 75% of wind capacity, ensure babysitters are undertaken procedures as per structural plans	Prepare for large crowd movements	PA lowered (at TBC mph)	SECURITY: Assist with show pause or localised evacuation as required
			Welfare considerations for damaged belongings or illness	Truss lowered (at TBC mph)	SECURITY: Relay messaging to customers on the ground
				Prepare for show stop Clear stage of all non-essential crew	CREATIVE: remove an installations at risk
				Where allowable, remove stage sheeting to allow wind to blow through	
Wind level 4 - Winds at the lowest of repeated gusts / either hourly levels of 40mph OR % of structural capacity					

Event Control alert all channels and show pause called.	Twigs break (43mph) Branches break (50mph)	<p>Continuation of safety critical work only.</p> <p>Non-essential staff to a place of safety</p> <p>For structures at 90% of wind capacity, manage the structural babysitters to lock down structures in line with structural plans</p> <p>For structures that are at 75% of wind capacity, ensure babysitters are undertaken procedures as per structural plans</p>	<p>Continuation of safety critical work only</p> <p>Manage evacuation and show pause</p> <p>Non-essential staff to a place of safety</p>	<p>Continuation of safety critical work only.</p> <p>Non-essential staff to a place of safety</p>	<p>STRUCTURAL</p> <p>CONTRACTOR: revert to specific structure plans</p> <p>SECURITY: Assist with show pause. All non-essential staff to be removed to a safe distance from structures</p> <p>SECURITY: Relay messaging to customers on the ground</p>
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APPENDIX C – WEATHER FORECAST SOURCES

- <http://www.xcweather.co.uk>
- <http://www.windguru.cz/int>
- <http://www.raintoday.co.uk>
- <https://www.lightningmaps.org>
- <https://www.lightningmaps.org>
- <https://www.rain-alarm.com>
- <https://itunes.apple.com/us/app/storm-radar-weather-tracker/id1216396545?mt=8>

APPENDIX D – BEAUFORT SCALE

Wind Speed Conversion Chart

Beaufort Force	Description	Specification on Land	Knots	Km/h	mph	m/s	kN/m ²
0	Calm	Smoke rises vertically	0	0	0	0	0
1	Very light	Direction of wind shown by smoke drift but not by wind vanes	0-3	1-5	1-3	1-2	.002
2	Light Breeze	Wind felt on face, leaves rustle, ordinary wind vane moved by wind	4-6	6-11	4-7	2-3	.005
3	Gentle Breeze	Leaves and small twigs in constant motion, wind extends light flag	7-10	12-19	8-12	3-5	.015
4	Moderate breeze	Wind raises dust and loose paper, small branches move	11-16	20-29	13-18	5-8	.039
5	Fresh breeze	Small trees in leaf start to sway	17-21	30-39	19-24	8-11	.074
6	Strong breeze	Large branches in motion, telegraph wires whistle	22-27	40-50	25-31	11-14	.120
7	Near gale	Whole trees in motion, inconvenient to walk against wind	28-33	51-61	32-38	14-17	.177
8	Gale	Twigs break from trees, difficult to walk	34-40	62-74	39-46	17-20	.245
9	Strong gale	Slight structural damage occurs, chimney pots and slates removed	41-47	75-87	47-54	20-24	.353
10	Storm	Trees uprooted, considerable structural damage	48-55	88-101	55-63	24-28	.481
11	Violent storm	Widespread damage	56-63	102-117	64-73	28-32	.628
12	Hurricane	Widespread damage	>64	>118	>74	>32	

