

# Guidance on the Effect of Weather on your Event

## **General**

Whether it is the result of global warming or just a cyclical change in weather patterns the fact is that we appear to be experiencing extreme weather conditions with greater frequency.

It is therefore important that contingency plans are in place to ensure the reasonable safety of spectators in the event of adverse weather conditions.

In drawing up those contingency plans the following should be considered:

- How the local weather forecast will be obtained and monitored. A suggested website is <http://www.metoffice.gov.uk>
- What structures, systems and/or equipment are likely to be affected.
- What will the impact be upon the safety of the spectator accommodation, or the access to or egress from it.
- What action can be taken to make the areas safe before the admission of spectators.
- What action can be taken to mitigate the effects of the conditions.
- Will the conditions cause spectators in uncovered areas to seek shelter in covered areas leading to an unacceptable increase in crowd density.
- Should admission or ticket sales to affected areas be restricted.
- Should the event be delayed / cancelled / postponed / abandoned.

Where a decision is taken to delay, cancel, postpone or abandon an event it is important to be aware that in addition to spectators, a number of agencies may be affected by the decision. Event management must therefore consider carefully how it will communicate the decision to all those affected.

If a decision is taken to delay an event, event management will need to have considered the impact the later termination time will have on the travel arrangements of spectators as well as any licensing or planning restrictions to which the event may be subject.

If a decision is taken to cancel, postpone or abandon an event, event management will need to have procedures in place to provide refunds or replacement tickets in line with any local policies, rules of the sport governing body and consumer law.

The sections below give suggested sections for different types of adverse weather. These sections can be used individually or in combination as necessary. Where the event is particularly large or complex advice should be sought from Gateshead Councils Events team or Environmental Health Team on 0191 4333000.

## **High Winds**

To monitor and appropriately deal with high winds, we will follow a traffic light style wind speed monitoring procedure as shown below:

If there is advance warning that wind speeds will reach a red light during the event then the event may be cancelled. Wind speed monitoring will be done in advance of the event by checking the Met Office forecasts at <http://www.metoffice.gov.uk>. Site specific measurements will be taken on the day using an anemometer with wind speeds being recorded every hour. The following system utilises the Beaufort scale as a point of reference.

### **Green**

Wind level - Moderate breeze (Beaufort scale 4 or less)

- Event to go ahead as scheduled. Monitor wind speed.
- All temporary demountable structures are set up in accordance with manufacturer guidelines, weighted to the ground and (where possible) tethered to a permanent structure (i.e. fence). Unless 'green light' conditions are met, the structure must be disassembled

### Amber

Wind level - Fresh breeze (Beaufort scale 5)

- Set up for event can take place provided extra care is taken and side panels are not installed
- If structures are already set up, side panels and/or roof panels to be taken down to allow for wind relief
- Monitor wind speed
- Gazebos taken down if wind speed 23mph or more or if any structures display signs of serious instability or weakening

### Red

Wind level – Strong breeze (Beaufort scale 6 or higher)

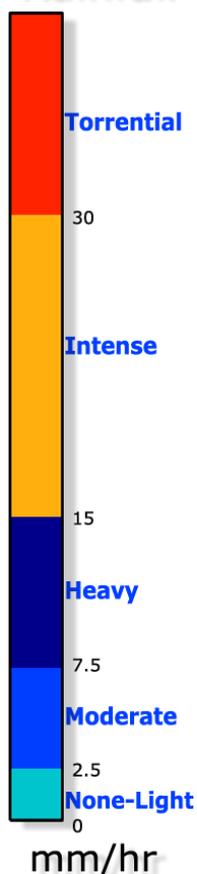
- Site evacuation of all visitors
- Take down all structures in accordance with manufacturer guidelines
- Site evacuation of all traders and event staff
- Event cancelled
- Close off site

Number	Speed	Description	Observed Conditions
0	<1	Calm	Calm. Smoke rises vertically.
1	1-3	Light air	Wind motion visible in smoke.
2	3-7	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8-12	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13-17	Moderate breeze	Dust and loose paper raised. Small branches begin to move.
5	18-24	Fresh breeze	Branches of a moderate size move. Small trees begin to sway. Gazebos blow away.
6	25-30	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	31-38	Near gale	Whole trees in motion. Effort needed to walk against the wind. Swaying of skyscrapers may be felt.
8	39-46	Gale	Twigs broken from trees. Cars veer on road.
9	47-54	Strong gale	Larger branches break off trees and some small trees blow over. Construction / temporary signs blow over. Damage to marquees.
10	55-63	Storm	Trees are broken off or uprooted. Saplings bent and deformed.
11	64-72	Violent storm	Widespread vegetation damage. Damage to most roofing surfaces.
12	>72	hurricane	Considerable and widespread damage to vegetation. Windows broken. Structural damage to mobile homes. Debris hurled about.

## High Rainfall

If there is advance warning that heavy rain will occur during the event then the event may be cancelled. Expected rainfall will be checked in advance of the event by checking the Met Office forecasts at <http://www.metoffice.gov.uk>. Site specific observations will be taken on the day. If the rainfall is considered to be heavy the event will be closed and the site evacuated.

### Rainfall



## Snow or Ice

If there is advance warning that snow or ice will occur during or on the days prior the event may be cancelled. Forecasts for snow and temperatures will be checked in advance of the event by checking the Met Office forecasts at <http://www.metoffice.gov.uk>. Where snow is expected in the days prior to the event the site will be evaluated and if safe walkways and public areas will be cleared and gritted prior to the event taking place.

Site specific observations will be taken on the day. If the snow begins to lie and build up the event will be closed and the site evacuated.

Where temperatures of less than 3°C are expected then the safety of structures will be assessed and all walkways gritted prior to and during the event. If temperatures during the event fall below -2°C the event will be closed and the site evacuated.



## **Thunder and Lightning**

30-60 people are struck by lightning each year in Britain, and on average, there are 3 fatalities each year. Generally the possibility of lightning can be predicted and as with other weather issues the forecast should be checked prior to the event. The Met Office forecasts at <http://www.metoffice.gov.uk> can be used to check for the possibility of thunder and lightning. If lightning is forecast then a decision needs to be made as to whether the event can proceed. Where it proceeds then you must have a contingency plan for evacuation to a safe location. When lightning is expected tall, large or metal structures should not be allowed, due to the potential to attract lightning, unless provided with suitable protection and earthing.

ROSPA provides advice at <https://www.rospa.com/leisure-safety/advice/lightning/> which is summarised here:



### **Flash to bang**

To check if a storm is coming or going from where you are standing apply the flash to bang principle, counting as soon as the lightening flash is seen until the thunder is heard. 'Flash to bang' is based on the following facts:

1. Sound travels at 1 km in 3 seconds (approximately 1 mile every 5 seconds).
2. Light travels at 300,000 km per second.
3. Lightning will always be seen before thunder.

To calculate the distance between yourself and the storm divide the number of seconds by 3 to find the distance in kilometres.

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.

### **30/30 rule**

Research shows that people struck by lightning are predominantly hit before and after the peak of the storm. This means that you should be thinking about the proximity of the lightning, not the occurrence of rain. The 30/30 rule provides a good way of ensuring one is sheltering during the most risky parts of the storm. It proposes that if the flash to bang is 30 seconds in length or less you should seek shelter. Staying inside this shelter is advised until 30 minutes past the last clap of thunder. This ensures that any distant strikes at the beginning of the storm (lightning can travel up to 10 miles), or trailing storm clouds at the back of the storm do not take anyone by surprise.

### **Seeking shelter**

- Ideally, seek shelter inside a large building or a motor vehicle keeping away from, and getting out of wide, open spaces and exposed hilltops.
- If you are exposed to the elements with nowhere to shelter, make yourself as small a target as possible by crouching down with your feet together, hands on knees and your head tucked in. This technique keeps as much of you off the ground as possible.
- The inside of a car is a safe place to be in a storm, lightning will spread over the metal of the vehicle before earthing to the ground through the tyres.
- If you are golfing and the clubhouse is too far away, your best protection is to leave your clubs and crouch down in a bunker.
- Do not shelter beneath tall or isolated trees, it has been estimated that one in four people struck by lightning are sheltering under trees .

- If you are on water, get to the shore and off wide, open beaches as quickly as possible as water will transmit strikes from further away. Studies have shown that proximity to water is a common factor in lightning strikes.

### **Event organisers**

- Monitor the local weather from the day before activity to the end of play and the dispersal of crowds.
- Have an efficient method of warning people at risk, and evacuation if necessary.
- Define and list safe structures and locations. Safe structures can include a large/substantial building with plumbing and wiring that will conduct lightning to the ground such as a clubhouse, or fully enclosed metal vehicles including buses.
- Determine criteria for suspension and resumption of activity – for example, use the 30/30 rule.
- Ensure the dissemination of information – participants, officials, spectators, and staff must be aware of potential dangers and how to minimise the risk of injury.