



1ST
EDITION

WINTER WEATHER



A Preparedness Guide | SkyWarn UK

WINTER WEATHER

A DECEPTIVE KILLER

This preparedness guide explains the dangers of winter weather and suggests life-saving action you can take. With this information you can recognize winter weather hazards, plan for severe winter weather, and be prepared for when severe winter weather strikes.

WHY TALK ABOUT WINTER WEATHER?

- People die each year due to exposure to the cold. Add to that the number killed or injured in road traffic collisions, fires due to faulty heaters, and other winter weather related fatalities and you have a significant threat.
- Threats such as hypothermia and frostbite can lead to loss of fingers or toes, and may even cause damage to the liver, kidneys, or pancreas. In extreme circumstances exposure to the cold can be fatal.
- A major winter storm may last a considerable length of time, and be accompanied by high winds, heavy snow, and freezing temperatures.
- People can become trapped in their cars or at home, with failure of utilities and little in the way of assistance.
- Attempting to walk for help during a winter storm can be a potentially deadly decision.
- Heavy snow, cold temperatures, and coastal flooding can cause hazardous conditions and hidden dangers.

HEAVY SNOW

Heavy snow can paralyze a region, stranding commuters, closing roads and airports, stopping the flow of supplies, and causing disruption to emergency and medical supplies. Large accumulations of snow can bring down power and telephone lines, tree limbs, and even cause roof failure. Homes and farms, especially in rural areas, can be isolated for days and livestock may be lost. In mountainous areas heavy snow fall may lead to avalanches. The disruption and damage caused by heavy snow can have a severe economic impact on the communities affected.



accumulation possible.

SNOW FLURRIES – shortlived, light snow showers with little or no accumulation.



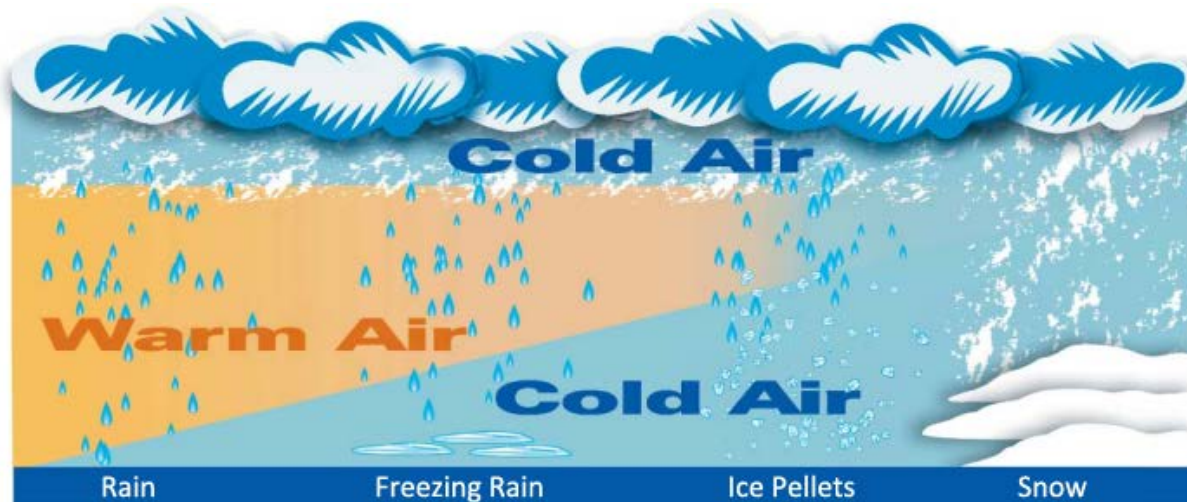
AVALANCHES

An avalanche is a mass of tumbling snow. The largest avalanches may have a mass approaching 1 million tons, and can travel at speeds of up to 200 mph. Rapid snow accumulation of more than 2cm / hr leads to a significant avalanche risk. 90% of all avalanches in the UK occur during snowstorms. Additionally, 90% of all avalanches involving human subjects are triggered by their victims.

More information: → www.sais.gov.uk

ICE / FREEZING RAIN

Heavy accumulations of ice (freezing rain) are relatively rare in the UK. However, they have potential to cause significant disruption. Heavy ice accumulations can bring down power and telephone lines, large tree limbs, and cause damage to communication towers. Power and communications may be disrupted for a number of days. Even lesser accumulations can be hazardous, especially for motorists and pedestrians.



WINTER FLOODING

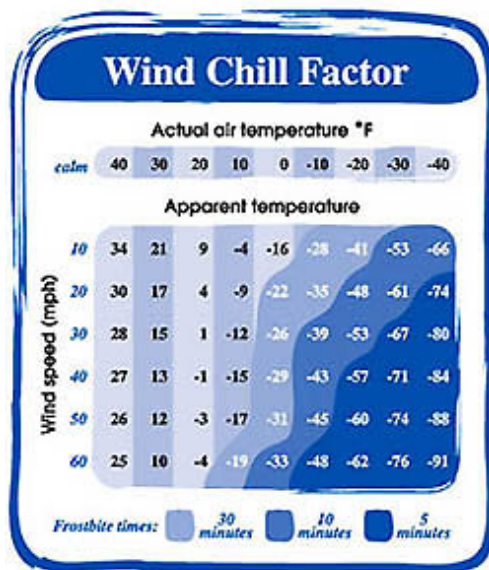
Winter storms can generate coastal flooding due to high winds and storm surge. Heavy rain and snow melt can lead to flooding inland too.



COASTAL FLOODS – winds generated by intense winter storms can cause widespread coastal flooding and severe beach erosion.

SNOW MELT – thawing of the snow pack often leads to flooding, especially when the thaw is rapid due to a sudden temperature rise or heavy rain fall.

COLD



Exposure to cold can cause frostbite or hypothermia, both of which can become life-threatening conditions. Infants and the elderly are most at risk. What constitutes extreme cold varies across the UK. Near freezing temperatures along the south coast may be considered extreme cold, whereas across the north temperatures of near freezing can be quite common. Temperatures near freezing or below can cause damage to sensitive plants, crops, and vegetation. Pipes may freeze or burst when poorly insulated.

WIND CHILL – not the actual temperature, but rather how the wind and cold feel on exposed skin. As the wind speed increases heat is carried away from the body at an increasing rate. This in turn can cause the body temperature to drop. Animals exposed to such conditions are also affected, but plants and other objects are not. Wind chill in the UK rarely drops to extreme

levels, but may drop to below -20f (-28c) on exposed hills and mountains.

FROSTBITE – damage caused to body tissue by extreme cold is called frostbite. A wind chill of -20f (-28c) will cause frostbite in less than 30 minutes. We have already seen such low values are rare in the UK, however frostbite remains a real risk to persons outside when the temperature drops below freezing, especially if they are exposed to freezing conditions for a significant length of time. Frostbite causes a loss of feeling in the affected areas. This is usually accompanied by white or pale areas. Extremities such as hands, feet, fingers, toes, the tip of the nose and the earlobes, are most likely to be affected. Earlier, less severe types of frostbite include frostnip and chilblains. Should symptoms occur, medical help should be sought immediately. If you need to wait for medical help, then the affected areas should be gently rewarmed. However, if the person is also showing signs of hypothermia then the core body must be rewarmed first.

HYPOTHERMIA – normal body temperature is around 98.6f / 37.0c. When that drops to 95f / 35c or below, hypothermia has set in. Hypothermia is a killer. For those who are lucky enough to survive hypothermia there may be long-term liver, kidney, and pancreas problems. Warning signs that a person may be suffering from hypothermia include uncontrollable and violent shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion. Their temperature should be taken as soon as possible, and if it is below 95f / 35c medical assistance must be summoned immediately.

IF MEDICAL CARE IS NOT AVAILABLE warm the person slowly. It is important to warm the body core first, as warming the extremities first drives cooler blood towards the heart and can lead to cardiac failure. It may be necessary to use your own body heat. The person should be placed in to dry clothing, wrapped in a blanket, paying particular attention to ensure the head and neck is covered. Do not give the person alcohol, drugs, or warm food or drinks.

WINTER WEATHER HAZARDS IN THE UK

Winter weather hazards differ greatly across the UK. Areas most at risk of severe winter weather are those further to the north. However, significant and occasionally severe winter weather can impact even southern parts of the UK.

SCOTTISH ISLANDS (NORTHERN AND WESTERN ISLES)

Heavy snow, blizzards, violent winds, extreme wind chill, coastal flooding

MAINLAND SCOTLAND

Heavy snow, blizzards, high winds, avalanches, extreme wind chill, coastal flooding, snowmelt flooding

NORTHERN IRELAND

Heavy snow, blizzards, high winds, significant to severe wind chill, coastal flooding

NORTHERN ENGLAND

Heavy snow, blizzards, high winds, severe wind chill, coastal flooding, snowmelt flooding

WALES

Heavy snow, blizzards, high winds, avalanches, significant wind chill, snowmelt flooding

EASTERN AND SOUTHEASTERN ENGLAND

Heavy snow, blizzards, high winds, significant to severe wind chill, coastal flooding

SOUTHWESTERN ENGLAND

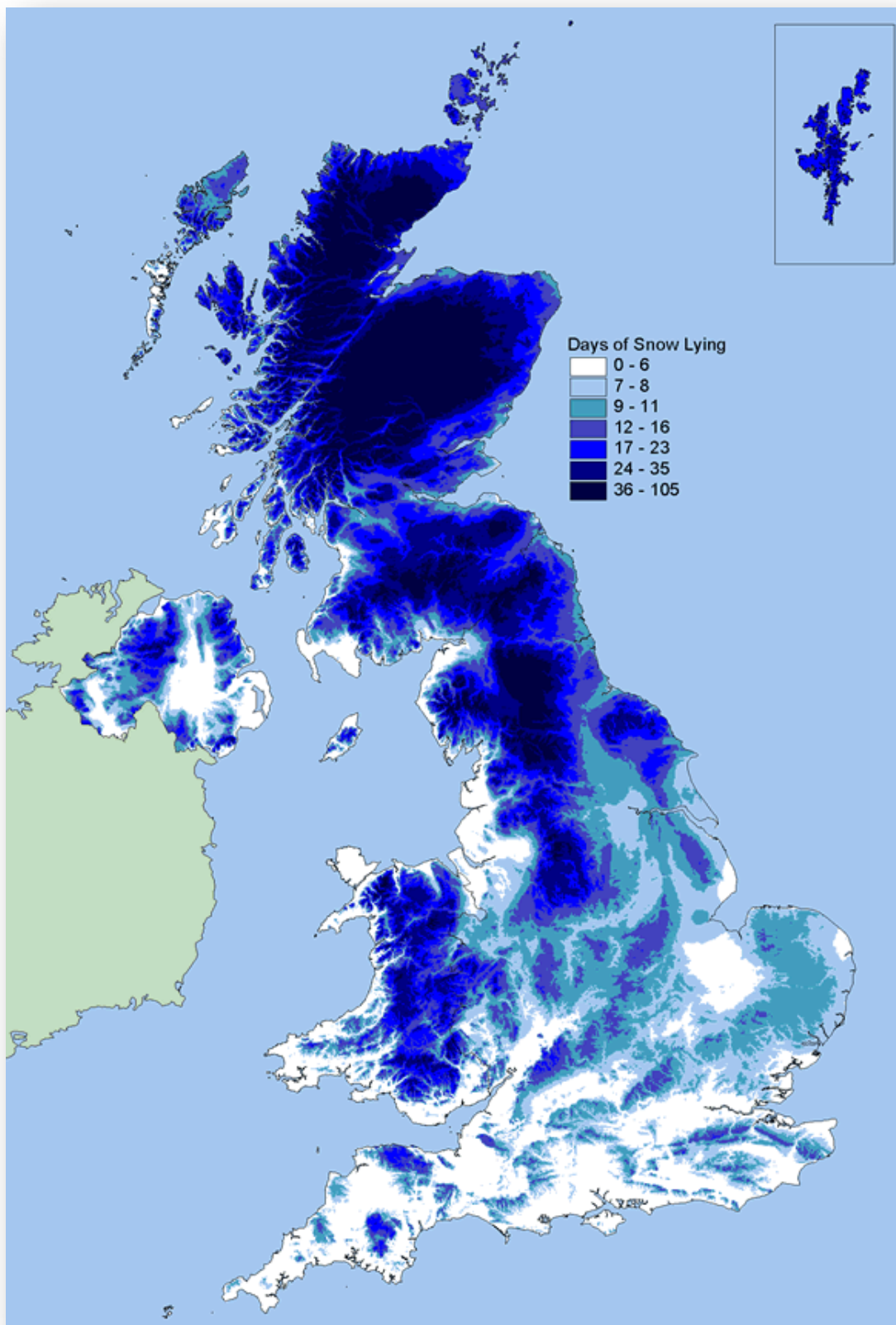
Heavy snow, blizzards, high winds, significant wind chill, coastal flooding, snowmelt flooding

CENTRAL AND SOUTHERN ENGLAND

Heavy snow, significant wind chill

MEAN ANNUAL SNOW DAYS

(1971 - 2000 AVERAGE)



BE PREPARED!

BEFORE THE STORM STRIKES

AT HOME AND WORK

Primary concerns are loss of heat, power, and telephone service, and a shortage of supplies should the storm persist for more than a day.

Have available:

A torch with extra batteries

A battery powered radio – this may be your link to the outside world

Extra food and water – this should include high energy foods such as dried fruit, nuts, and granola bars. Have food that does not need cooking or refrigeration.

Extra medicine and baby supplies

First aid items

Heating fuel – refuel before you are empty as fuel carriers may be unable to reach you for several days

Emergency heat source – wood stove, fire place, space heater

- Use properly to prevent fire
- Ventilate properly

Fire extinguisher and smoke alarm

- Test smoke alarms at least once per month to ensure they work

Make sure pets have plenty of food, water, and shelter

IN VEHICLES

Plan your route, and be sure to **check the latest forecasts**.

Fully check and winterize your vehicle before winter arrives.

Carry a WINTER STORM SURVIVAL KIT:

- Mobile phone, charger, and batteries
- Blankets/ sleeping bags
- Torch & spare batteries
- First aid kit
- High-calorie, non-perishable food
- Extra clothing to keep dry
- Small can and water-proof matches to melt snow for drinking
- Bag of sand or cat litter for traction
- Shovel
- Windscreen scraper & brush
- Tool kit
- Tow rope
- Booster cables
- Water container
- Compass & road maps

Keep fuel tank near full in order to reduce the risk of ice in the tank and fuel lines

Avoid travelling alone

Let somebody know your timetable as well as your primary and alternative routes

ON THE FARM / PETS

Move animals to sheltered areas. Shelter belts, properly laid out and oriented, afford better protection for cattle than confining shelters, such as sheds.

Haul extra feed to nearby feeding areas

Have water available – most animals die from dehydration during severe winter weather.

Make sure pets have plenty of food, water, and shelter

DRESS FOR THE SEASON - Clothes should be loose, lightweight and worn in layers. Remove layers to avoid sweating which can lead to chilling. Outer garments should be tightly woven, water repellent, and hooded. Wear a hat – half of your body heat loss can be from the head. Cover your mouth to protect your lungs from extreme cold. Mittens snug at the wrist are better than gloves. Try to stay dry.

WHEN *CAUGHT* IN A WINTER STORM

OUTSIDE

Find shelter:

- Try to stay dry
- Cover all exposed body parts

No shelter:

- Build a lean-to, wind-break, or snow cave for protection from the wind
- Build a fire for heat and to attract attention
- Place rocks around the fire to absorb and reflect heat

Melt snow for drinking water:

- Eating snow will lower your body temperature

IN A VEHICLE

Stay in the vehicle:

- You will become disoriented in wind-driven snow and cold
- Run the engine for about 10 minutes each hour to provide heat
- Open the window slightly for fresh air and to reduce the risk of carbon monoxide poisoning
- Make sure the exhaust pipe is not blocked

Be visible to rescuers:

- Turn on the interior lights at night when running the engine
- Tie a coloured piece of cloth, preferably red, to the antenna or door handles of your vehicle
- After snow has stopped falling, open the bonnet to indicate you need help

Exercise:

- From time to time move your hand, arms, legs, and toes vigorously to keep blood circulating and to help keep warm

INSIDE

Stay inside:

- When using alternate heat from a fire place, stove, or space heater use fire guards and ensure you properly ventilate the area

No heat:

- Close off unneeded rooms
- Use towels and rags to fill gaps under doors
- Cover windows at night
- Eat and drink. Food provides the body with the energy it needs to help keep warm. Drink to ensure you are not at risk from dehydration
- Wear layers of loose-fitting, lightweight, warm clothing. Remove layers to avoid overheating and sweating which in turn may lead to chilling.

AVOID OVEREXERTION, such as shovelling heavy snow, pushing a car, or walking in deep snow. The strain from the cold and the hard labor increases the risk of cardiac arrest. Sweating could lead to a chill and hypothermia.

WINTER WEATHER PLAN

You can prepare for the hazards that could affect your area by developing a Winter Weather Plan. Where will you and your family be when severe winter weather strikes? How will you find each other? What would you do if basic services – water, gas, electricity, or telephones – were cut off?

STEPS TO TAKE

- I) **Be familiar with the hazards** – identify what the risks are in your location, and how you should respond. Sources include the Environment Agency, SEPA, and the UK Met Office. Learn if there are warning signals in your community – some locations have flood warning sirens for example – and if there are any evacuation plans. Assess the risks and identify if there are actions you can take to make your home and property more secure.
- II) **Create a plan** – meet with your family and discuss your plan. Pick two places to meet: a spot outside your home for an emergency, such as fire, and a place away from your home in case you can't return there. Choose an out-of-area friend as a point of contact should the family become separated.
- III) **Implement your plan**
 - Post emergency telephone numbers by the phone
 - Install safety features in your home, such as smoke alarms and fire extinguishers
 - Inspect your home for potential hazards and try to minimize the risk they pose
 - Have the family learn basic safety measures, such as First Aid; and how and when to turn off water, gas, and electricity in your home.
 - Teach children how and when to call 999
 - Keep enough supplies in your home for at least 3 days. Assemble an emergency supplies kit and store in secure, easy to carry containers, such as a back-pack.

AN EMERGENCY SUPPLIES KIT SHOULD CONTAIN:

- A 3-day supply of water (1 gallon per person, per day)
- Food that won't spoil
- 1 change of clothing and shoes per person
- First Aid kit
- One blanket or sleeping bag per person
- Prescription medicines
- Emergency Tools
- Torch and spare batteries
- Battery powered radio
- Extra set of keys
- Cash and a credit card
- Special items for infant, elderly, or disabled family members

- IV) Practice and maintain your plan. Ensure your family knows meeting places, phones numbers, and safety rules. Test smoke alarms regularly, and replace batteries each year. Recharge fire extinguishers according to manufacturer's instructions. Replace stored water and food every 6 months.