# National Meteorological Library and Archive

## Fact sheet No. 5 – White Christmases

### Are you dreaming of a White Christmas?

Snow at Christmas is deep-seated in British culture, and many of us long for the likes of the scenes depicted on traditional Christmas cards and in works like Dickens' 'A Christmas Carol' or 'Pickwick Papers'.

The interest in snowy Christmases has its origins in the colder climate of the period 1550-1850 when Britain was in the grip of a 'Little Ice Age'. Winters were particularly persistent and severe - 1813/14 was the last winter that a 'frost fair' was held on the River Thames in London.


**Figure 1.** Snow scene.

For most parts of the United Kingdom, Christmas comes at the beginning of the season for snow. Wintry weather is more likely early in the deepening cold of January. White Christmases were more frequent in the 18th and 19th centuries, even more so before the change of calendar in 1752 which effectively brought Christmas day back by 12 days.

## What is a White Christmas?

For many a White Christmas means a complete covering of snow, ideally falling between midnight and midday on the 25th.

However, the definition used most widely, notably by those placing and taking bets, is for a single snow flake (perhaps amongst a shower of rain and snow mixed) to be observed falling in the 24 hours of December 25th.

## Christmas weather – will it or won't it snow?

The likelihood of snow falling depends on many factors, principally latitude and height above sea level. Not all of us can live in the highlands of Scotland and falls of sleet or snow over low-lying areas area usually confined to between November and April. However, there have been isolated falls as late as June.

Even if falls in December are possible, there is no guarantee that snow will 'stick'. On days snow is falling, the temperature of the air above the ground sometimes remains above freezing point - so the snow does not lie for long.

The last time we had a White Christmas with snow falling across the United Kingdom was 2004, although large parts of southeast England missed any significant falls. 1995 was also a good year for Scotland, Wales, Northern Ireland and northern England.

Climate change has brought higher average temperatures over land and sea in recent years and this generally reduces the chances of a White Christmas. However, the natural variability of the weather will not stop cold, snowy winters happening in the future. In fact, in terms of widespread sleet/snow falling across the United Kingdom on Christmas Day, between 1971 and 1992 there was only one year (1980), whereas in the years 1993 to 2003 there were five such occasions.

## Recent events around the United Kingdom

There follows details of recent White Christmas events (snow/sleet on 25th December) at nine locations in the UK.

The locations are:

- London
- Brimingham
- Glasgow
- Aberdeen
- Aberporth
- Bradford
- Belfast
- Lerwick
- Newquay (St Mawgan)

**Key:**

 Sleet (combination of Rain and Snow)

 Snow

## **London**: 10 White Christmases since 1900

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1916** |  | - |
| **1927** |  | Yes |
| **1938** |  | Yes (15 cm) |
| **1956** |  | - |
| **1964** |  | - |
| **1968** |  | - |
| **1970** |  | Yes |
| **1976** |  | - |
| **1981*** | No | Yes (from earlier falls) |
| **1996** |  | - |
| **1999** |  | - |

*1981 is included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **Birmingham**: 9 White Christmases since 1940

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1950** |  | - |
| **1956** |  | Yes (9 cm) |
| **1968** |  | Yes (10 cm) |
| **1970** |  | Yes (2 cm) |
| **1981*** | No | Yes (10 cm from earlier falls) |
| **1990** |  | - |
| **1993** |  | - |
| **1999** |  | - |
| **2000** |  | - |
| **2004** |  | - |

*1981 is included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **Glasgow**: 10 White Christmases since 1918

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1923** |  | Yes |
| **1925** |  | Yes |
| **1927** |  | - |
| **1938*** | No | Yes (from earlier falls) |
| **1956** |  | - |
| **1962** |  | Yes |
| **1963** |  | Yes |
| **1964*** | No | Yes (from earlier falls) |
| **1966*** | No | Yes (from earlier falls) |
| **1970** |  | - |
| **1980** |  | Yes |
| **1995*** | No | Yes (6 cm from earlier falls) |
| **1999** |  | - |
| **2000** |  | - |

*These years have been included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **Aberdeen**: 15 White Christmases since 1942

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1953** |  | - |
| **1954** |  | - |
| **1956** |  | - |
| **1961** |  | - |
| **1963** |  | Yes (3 cm) |
| **1964** |  | Yes (4 cm) |
| **1965** |  | - |
| **1966** |  | - |
| **1968** |  | - |
| **1976** |  | - |
| **1981** |  | Yes (5 cm) |
| **1993** |  | Yes (13 cm) |
| **1995** |  | Yes (13 cm) |
| **2000** |  | - |
| **2004** |  | - |

## **Aberporth**: 5 White Christmases since 1941

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1956** |  | - |
| **1964** |  | Yes (1 cm) |
| **1970** |  | - |
| **1993** |  | Yes (0.5 cm) |
| **1995** |  | - |

## **Bradford**: 5 White Christmases since 1971

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1981*** | No | Yes (22cm from earlier falls) |
| **1993** |  | - |
| **1995** |  | - |
| **1999** |  | - |
| **2000** |  | - |
| **2004** |  | - |

*1981 is included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **Belfast**: 11 White Christmases since 1927

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1927** |  | - |
| **1956** |  | - |
| **1963** |  | Yes |
| **1964*** | No | Yes (8 cm from earlier falls) |
| **1965** |  | - |
| **1968** |  | Yes (5 cm) |
| **1980** |  | - |
| **1993** |  | -- |
| **1995** |  | Yes (1 cm) |
| **1998** |  | - |
| **1999** |  | - |
| **2004** |  | - |

*1964 is included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **Lerwick**: 19 White Christmases since 1957

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1957** |  | - |
| **1960** |  | - |
| **1961** |  | - |
| **1962** |  | - |
| **1964** |  | Yes (6 cm) |
| **1965** |  | Yes (13 cm) |
| **1966** |  | Yes (2 cm) |
| **1968** |  | - |
| **1974** |  | - |
| **1975** | No | Yes (3 cm form earlier falls) |
| **1976** |  | - |
| **1978** |  | - |
| **1980** |  | - |
| **1981** |  | Yes (6 cm) |
| **1985** |  | - |

## Lerwick continued...

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1988** |  | - |
| **1993** | No | Yes (5 cm from earlier falls) |
| **1995** |  | Yes (32 cm) |
| **2000** |  | - |
| **2001** |  | - |
| **2004** |  | Yes (1 cm) |

*1975 and 1993 have been included in this table because, although not strictly speaking a White Christmas going by the standard definition, there was a covering of snow on the ground resulting from falls on previous days.

## **St Mawgan**: 5 White Christmases since 1957

| Year | Snow/sleet Falling | Snow lying |
|---|---|---|
| **1961** |  | - |
| **1964** |  | - |
| **1990** |  | - |
| **2000** |  | - |
| **2004** |  | - |

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