

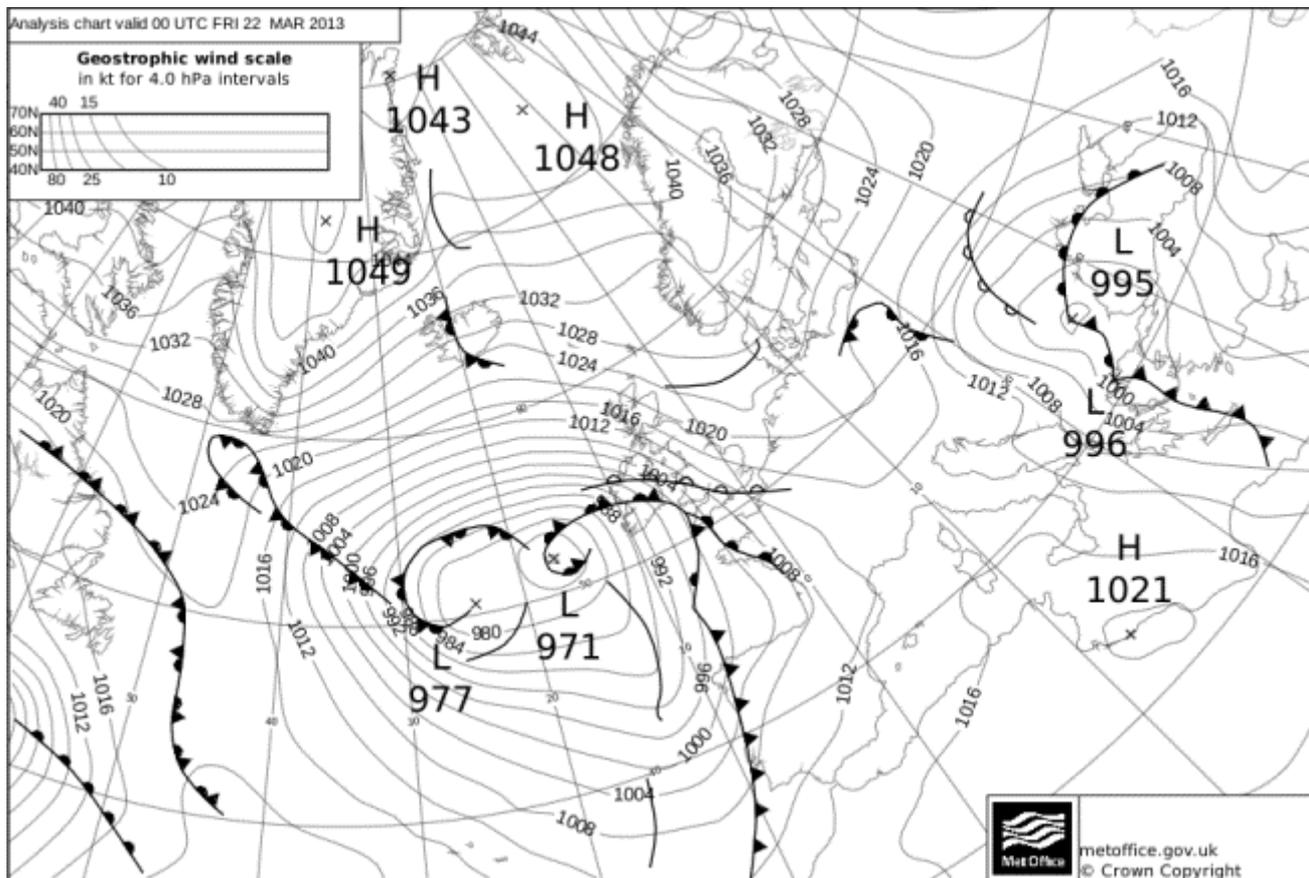
# Snow and low temperatures late March 2013

A spell of severe winter weather brought significant snowfalls and unseasonably low temperatures to many parts of the UK from late March to early April 2013.

From around 10 March to 10 April the UK experienced a prolonged spell of below average temperatures with winds from the east or north, drawing bitterly cold air from northern Europe and Siberia. Persistent cloud cover resulted in cold, overcast days with a strong easterly wind often contributing to significant wind chill. The cold was often accompanied by snowfalls. For example, from 10 to 12 March southern coastal counties of England and the Channel Islands were affected by snowfalls and strong north-easterly winds causing significant disruption, and further snow and low temperatures affected parts of North East England and Eastern Scotland around mid-month.

The most severe wintry weather occurred from 22 to 24 March 2013 as frontal systems associated with an area of low pressure to the west of the UK moved north, with the associated rain turning to snow. In South West England, most of the precipitation fell as rain. However, there were prolonged and heavy snowfalls across North Wales, northern England, south-west Scotland and the east of Northern Ireland. 20 cm or more of snow fell quite widely, especially across the higher ground, with significant drifting in a strong easterly wind. As the low temperatures continued, much of this snow lay un-melted across the higher ground until early April.

Synoptic situation 00 UTC Friday 22 March 2013 showing frontal systems pushing north across the UK



The following photograph provides an indication of the snow depth on Hope Mountain, near Mold, Flintshire on 26 March 2013 (courtesy Tim Graham, Met Office Hadley Centre)



The following photograph shows lying snow at Tarn Hows (English Lake District) on 31 March 2013. This snow would have fallen a week earlier. Note the snow covered fells in the background (courtesy Roger Saunders, Met Office)



## Impacts

The heavy rainfall resulted in localised flooding problems across parts of South Devon and Cornwall, with Newlyn, Penzance, Mevagissey, St Ives and Plymstock worst affected. Most problems related to surface water flooding but a number of properties were inundated.

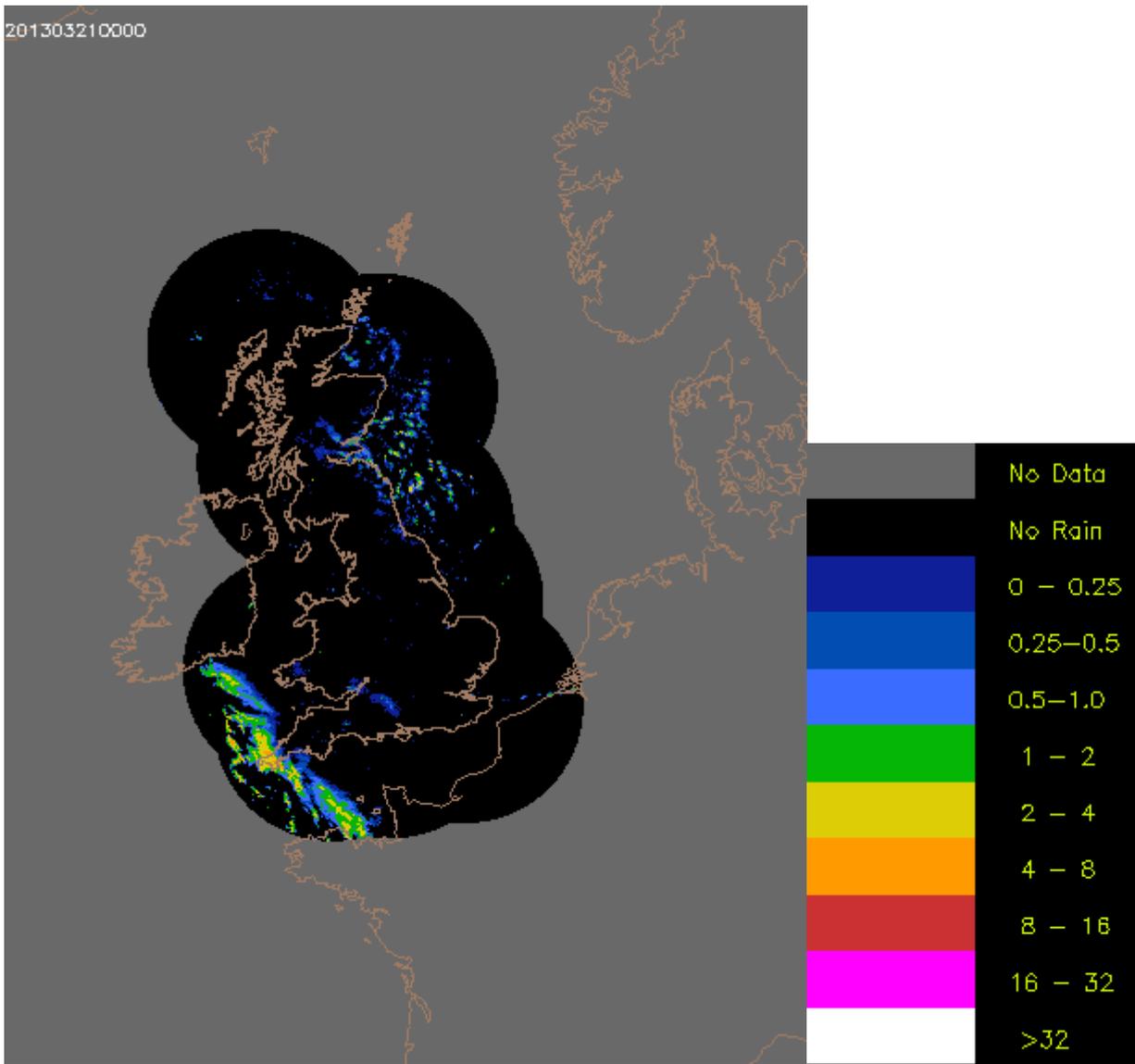
The persistent heavy snowfalls, accompanied by freezing temperatures and drifting, caused numerous impacts across North Wales, northern England, south-west Scotland and the east of Northern Ireland. In Northern Ireland, ice, snow and strong winds brought down power lines with over 100,000 homes and businesses without power, and power cuts also affected parts of Arran and Kintyre. More than 1,000 schools were closed across the UK and there was severe disruption to transport networks. In the worst affected parts of the UK people in cut-off areas had emergency supplies flown in by helicopter.

The unseasonably late severe winter weather had an adverse impact on the farming community - particularly affecting hill farmers during the lambing season. With deep drifting snow, low temperatures and easterly winds adding to the wind chill, several thousand sheep and lambs died. In parts of Wales laws were relaxed concerning the burial of dead livestock.

## Weather Data

The frontal systems brought heavy rain to parts of South West England. More than 50 mm of rain fell widely across Cornwall and South Devon in the 48 hours to 0900 UTC on 23 March, with 98.0 mm at Liskeard, Cornwall and 115.8 mm at Holne, Devon in this period. Over 50 mm also fell across parts of South Wales.

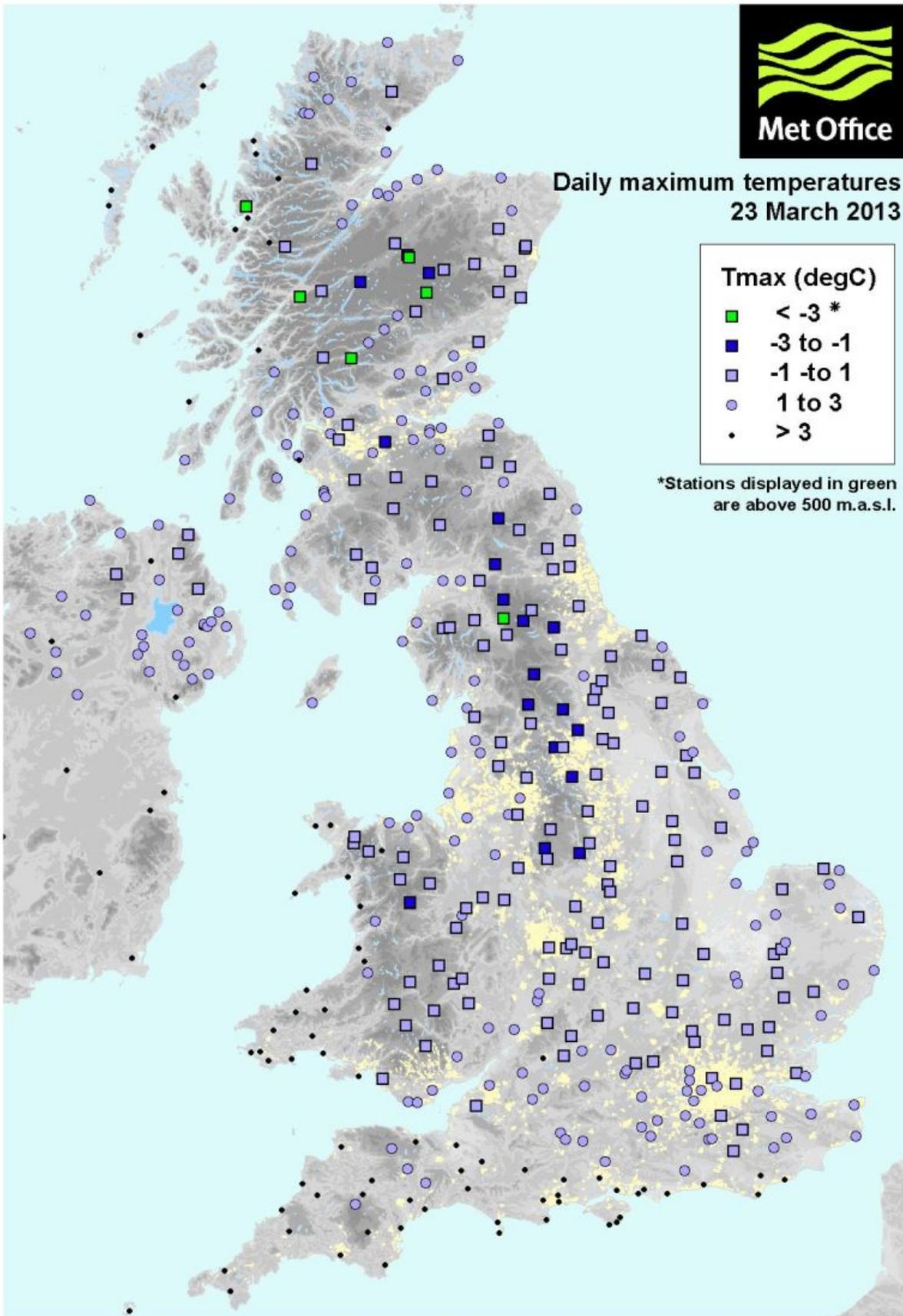
UK rain radar 00 UTC 21 March to 00 UTC 24 March 2013 showing frontal systems bringing heavy rain to South West England and significant snowfalls further north. Scale: mm per hour



Further north, the rain turned to snow across North Wales, northern England, south-west Scotland and the east of Northern Ireland. The snow was accompanied by strong winds, gusting at around 30 kt (35 mph). Recorded snow depths at 0900 UTC on 24 March included 41 cm at Middleton, Derbyshire, 27 cm at Bingley, West Yorkshire, 35 cm at Darwen, Lancashire and 75 cm at Llamarnon Dyffryn Ceiriog, Wrexham.

The snow was accompanied by unseasonably low temperatures. On Saturday 23 March, daily maximum temperatures were widely only 1-2 °C, lower across high ground. In places these temperatures were as much as 10 °C below normal for this time of year.

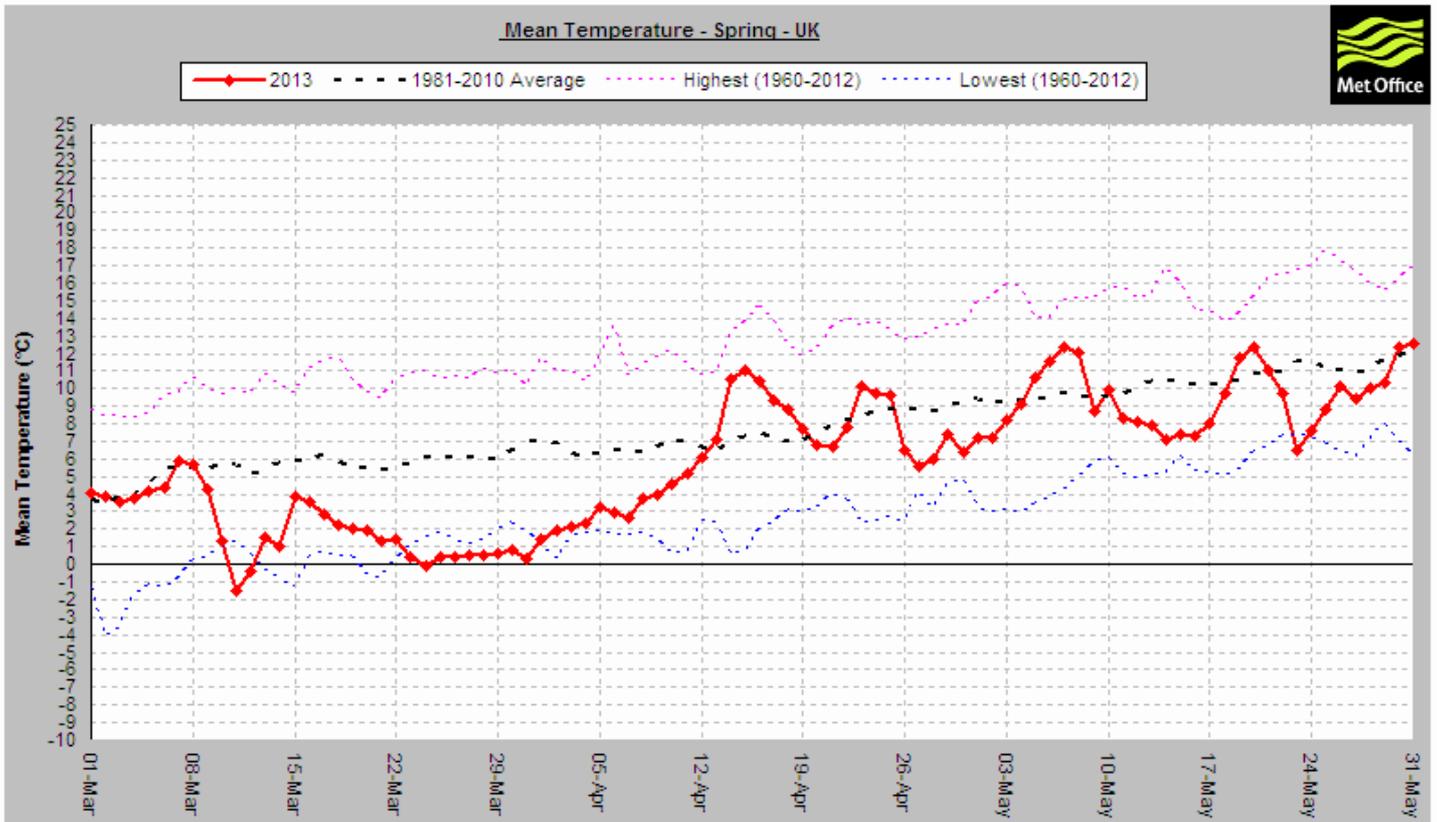
Daily maximum temperatures Saturday 23 March 2013



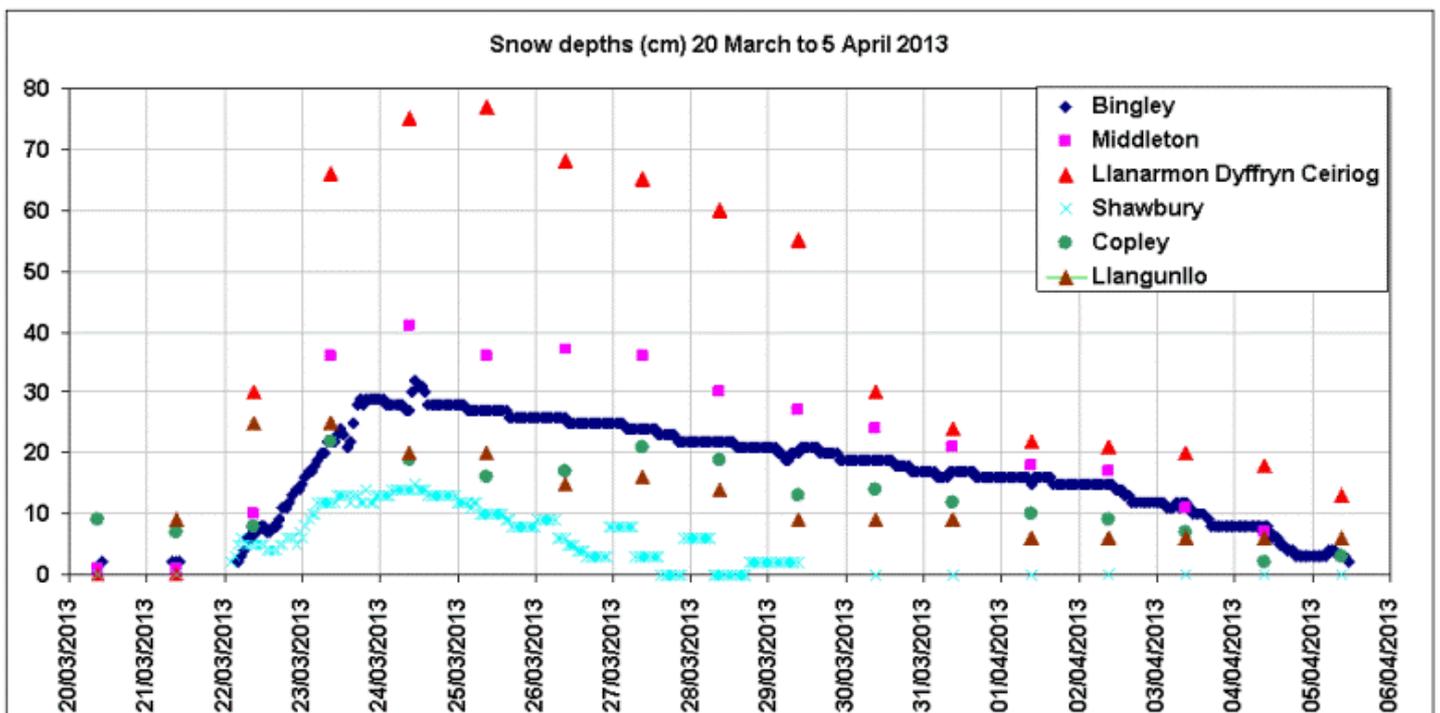
The cold spell persisted into early April with lying snow remaining un-melted across high ground for up to two weeks. As a result of the prolonged low temperatures, for the UK it was the coldest March since 1962. March was also the coldest month of the 'extended winter', the first time this has happened since 1975.

Snow depths at selected stations (Bingley, West Yorkshire; Middleton, Derbyshire; Llanarmon Dyffryn Ceiriog, Wrexham; Shawbury, Shropshire; Copley, County Durham; Llangunllo, Powys) show a steady build-up of accumulations from 22 to 23 March 2013, with a subsequent gradual decline (but in many cases a significant depth still remaining) by early April.

UK daily mean temperatures for spring 2013 (March to May)



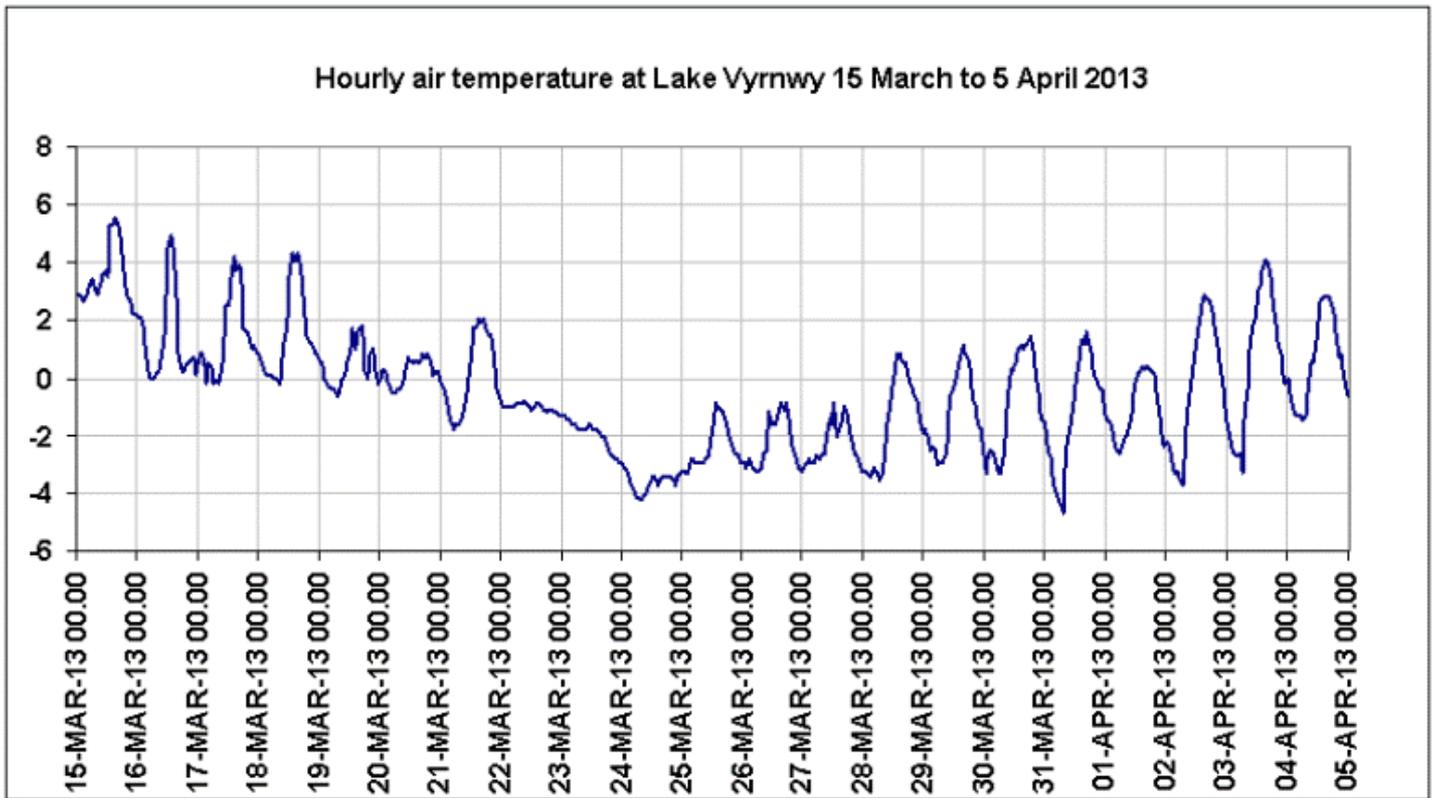
Observed snow depths at selected stations 20 March to 5 April 2013



Hill farmers were particularly badly affected by the severe wintry weather. In mid-Wales, the air temperature at Lake Vyrnwy, Powys (303 m above sea level) remained continuously below freezing for 6 consecutive days from 22 to 28 March inclusive, with minima around  $-3^{\circ}\text{C}$ . The 1981-2010 mean daily maximum temperature

for March at this station is 8.0 °C. With an easterly wind gusting at 25 Kt (around 30 mph) and deep drifts of snow the conditions were exceptionally severe for livestock.

Air temperature at Lake Vyrnwy, Powys 15 March to 5 April 2013



## Historical context

The snow and low temperatures were unusual because they occurred so late in the year - in late March - and this was the most significant spell of snow and low temperatures at this time of year since 1979. There are a number of examples of snow in late March or April in the UK's historical record; dates include: 4 April 2012, 6 April 2008, 23 March 2008, 21-22 March 2001, 28 March 1995, 19 March 1987, 25 April 1981, 17-24 March 1979, 16 March 1964. However, for many of these events the snow was less extensive, less deep or less long-lasting.

One of the most significant examples of snowfall in late March was from **17 to 24 March 1979**. 10 to 20 cm of snow fell across the Midlands and North West England, with 10 to 30 cm across the Pennines and North Wales, with the snow lying un-melted for at least a week. This event was similarly accompanied by strong north-easterly winds causing significant drifting, for example snow drifts up to 5 metres deep were observed in the northern Pennines. For more information, see the [Monthly Weather Report](#).

There was also a very significant snow event on **25 April 1981** (one month later in the calendar year). Observed depths included 26 cm at Buxton, Derbyshire and 29 cm at Sheffield, with over 30 cm across the high ground of the Pennines. The photograph below provides an indication of snow depths in Sheffield in late April.

Snow in Crookes, a suburb of Sheffield, 27 April 1981 (courtesy David Parker, Met Office Hadley Centre)



Last updated: 16 June 2016