

2003

FEBRUARY DATA

As a new month began it seemed as though we were about to experience a real taste of winter weather, the frosty conditions of late January extending into the first week of February. Winds remained predominantly westerly but flowing round a large anticyclone to the north west of the UK brought in at times exceptionally cold air that had originated in Polar Regions. As strengths increased wind-chill became a significant feature of the weather, on some days extending as low as $-10^{\circ}\text{C}/14^{\circ}\text{F}$. Air frost occurred on 4 nights, some of this as low as $-5.6^{\circ}\text{C}/21.9^{\circ}\text{F}$ on

the 6th, with 6 frosts over grass, the worst of these, also occurring on the 6th, to $-8.0^{\circ}\text{C}/17.6^{\circ}\text{F}$. Mean wind speeds were 7.1knots/8.1mph with gale force gusts on 2 days, the worst to 36knots/41mph on the 2nd.

These conditions were some of the most "wintry" for several years and falls of snow during the rush hour on the 6th caught most local councils totally by surprise, despite forecast warnings, and led to total gridlock on many Midland roads and motorways. By 11.00 GMT on the 6th snow lay to a depth of 3cm though this rapidly thawed during the afternoon. Snowflakes were observed on 5 days during the first week, though locally this did not lead to any serious accumulations apart from those already mentioned.

During the week the air maximum was no higher than $11.2^{\circ}\text{C}/52.2^{\circ}\text{F}$, this occurring on the 7th as a SW wind brought in much milder Atlantic air. Precipitation for the week totalled 6.3mm/0.25in over a time span of 18.5 hours, the longest duration being of 4.18 hours on the

6th during the snowstorm. Due to the cold conditions soil and earth temperatures have plunged, the mean 5cm standing at $1.1^{\circ}\text{C}/34.0^{\circ}\text{F}$ with the 100cm at $6.4^{\circ}\text{C}/43.5^{\circ}\text{F}$. However, black bulb radiation temperatures reached $37.6^{\circ}\text{C}/99.7^{\circ}\text{F}$ on the 7th as warmer air spread over the country, to conclude what had been a week of wintry weather overall.

At the start of the second week conditions seemed more settled in the outlook period, though it did continue wet with precipitation [or condensation] occurring on the first 5 days totalling 10.9mm/0.43in. Total duration for precipitation was 33.1 hours with a maximum daily of 13.7 hours on the 10th that was the wettest day in terms of both duration and amount. Temperatures varied widely ranging from a maximum of $9.4^{\circ}\text{C}/48.9^{\circ}\text{F}$ on the 8th to $-5.7^{\circ}\text{C}/21.7^{\circ}\text{F}$ on the 14th, the grass eventually falling as low as $-8.4^{\circ}\text{C}/16.9^{\circ}\text{F}$, also on the 14th. Despite the rather cold easterly winds that blew at times the black bulb maximum managed to reach $34.8^{\circ}\text{C}/94.6^{\circ}\text{F}$ on the 10th with sunshine for the week totalling 13.6 hours, 3 days being totally sunless.

The week saw 5 ground and 2 air frosts, winds being very variable in direction though light, averaging 4.4kn/5mph with a maximum gust of 24kn/28mph on the 8th. Soil temperatures warmed a little with the sunny days, the lowest at the surface falling as low as $-2.5^{\circ}\text{C}/27.5^{\circ}\text{F}$ on the 14th and $5.8^{\circ}\text{C}/47.4^{\circ}\text{F}$ at 100cm depth on the 9th. No snow or sleet was reported during the period though the ground was frozen on 2 mornings with quite dense fog on both the 11th and 12th. Total evaporation for the week was 11.0mm, some 5.1mm of

this coming on the 14th when we had a sunny day with good visibility after the clearance of early mist.

The very cold weather continued into the following week with widespread and severe night frosts, on occasions extending all day on the grass. Winds were still mainly from an easterly quarter bringing in cold, Continental, air. Frost occurred in the air every night bar one, the 21st, with frost on the grass every night and falling as low as $-9.0^{\circ}\text{C}/15.8^{\circ}\text{F}$ on the 18th. Due to the prevailing easterlies rainfall was minimal with mere traces measured on both the 19th and 21st, generally from condensation. Some days were cloudless resulting in quite reasonable sunshine totals for the time of the year, 36.8 hours being recorded over the week, 9.1 hours of this coming on the 15th. Despite this the air remained quite "wet" with total evaporation for the week amounting to no more than 8.2mm/0.32in.

For the first time in many winters, the ground was frozen solid for the entire week, even penetrating down to a depth of more than 5cm/2ins. Though fog was absent, mist did occur on three mornings, not unusual for February and one redeeming feature as the month progressed was the now noticeable increase in daylight which had risen from a total of 8.8 hours on the 1st to 12.2 hours on the 21st. At last some signs of the approaching spring were beginning to appear, however transient.