

Hot spell August 1990

At the beginning of August 1990 there was a widespread hot spell, during which a new UK temperature record was set

A maximum of 37.1 °C was measured at Cheltenham on the 3rd, beating the record of 36.7 °C set at Raunds (Northamptonshire), Epsom (Surrey) and Canterbury (Kent) on 9 August 1911. Temperatures exceeded 32 °C over large areas of southern, central and eastern England and east Wales from the 1st to 4th, peaking on the 3rd with over 35 °C recorded in several large swathes of England.

Impacts

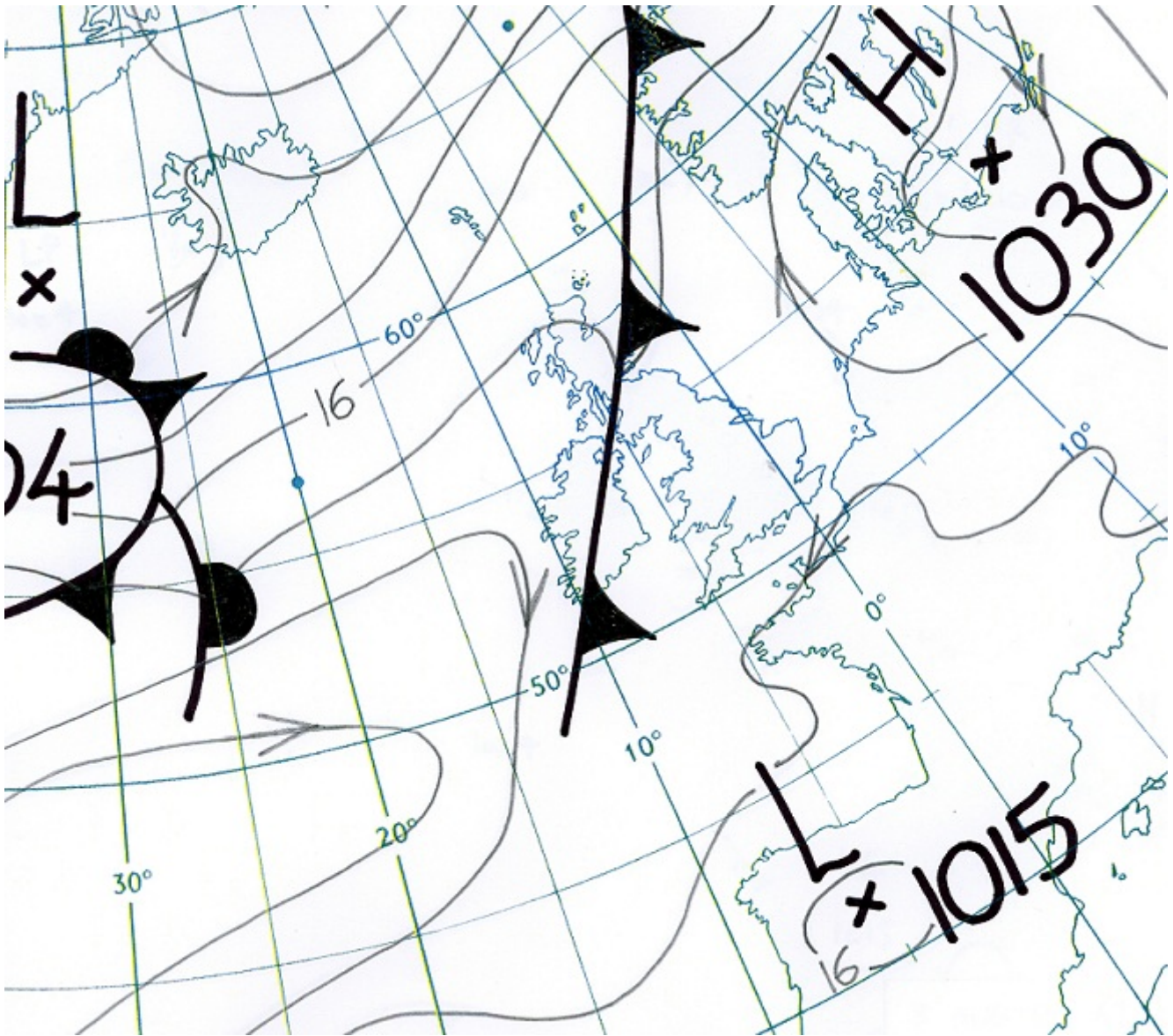
Across England and Wales, the heat placed strains on every day life. Transport was affected with road closures as surfaces melted, a runway at Heathrow airport suffered similar problems and, as a precaution, speed restrictions were in force for some inter-city trains in case rails buckled. There was also a surge in hospital admissions with heat-related conditions, and an increased mortality rate. The fire services were kept busy tackling heath and farmland fires that broke out in dry conditions that had prevailed since March. On 3 and 4 August there was a spate of drownings as people turned to swimming as a way of keeping cool. The entire stock of a Liverpool chocolate factory melted and at Stansted Mountfichet Castle, Essex a waxwork knight melted into a puddle.

Weather data

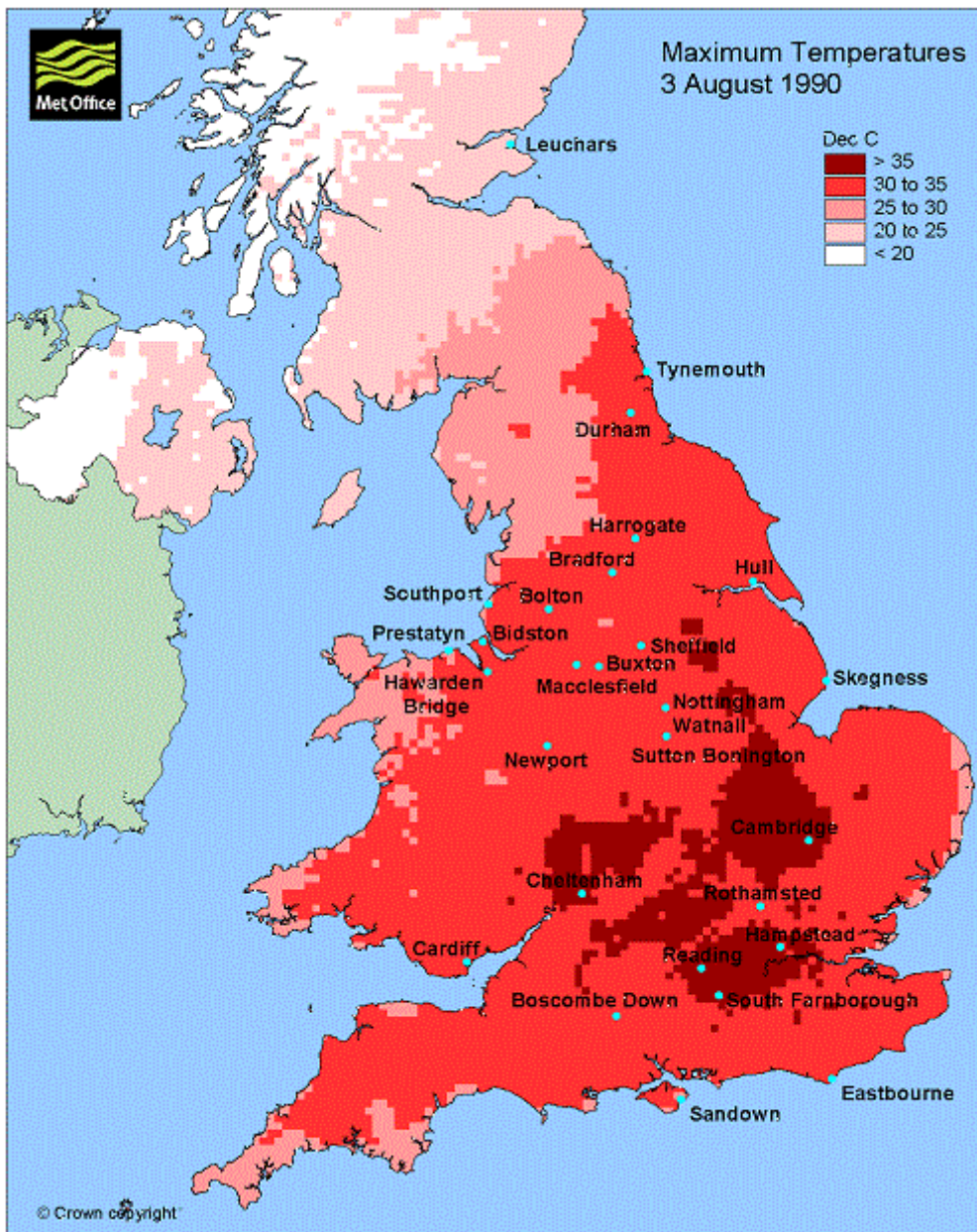
The first four days of August saw a degree and spatial extent of high temperatures that exceeded any other hot spell in the 20th century. On the 1st, over 32 °C was recorded in parts of the Thames Valley, East Anglia and the west Midlands. On the 2nd, large areas of England and Wales passed 32 °C with a new record set for Wales of 35.2 °C at Hawarden Bridge, Flintshire. The 3rd was the hottest day of the spell, with most of east Wales and England exceeding 32 °C and the new UK record of 37.1 °C at Cheltenham. By midday on the 4th a southward moving cold front had introduced cooler weather to all but southern and eastern England and 34 °C was again reached inland in south-east England. By the 5th, the cooler air had also reached here and the temperatures had dropped by at least 10 degrees.

Rainfall totals for the period since early March had been one-third of average resulting in dry soil and vegetation. Indeed, from 7 July to 13 August in some southern districts only 1 or 2 mm of rainfall was recorded, while in parts of Sussex, Kent and Essex there was no measurable rainfall.

The synoptic chart for 12 GMT on 3 August 1990



The distribution of the highest temperatures on 3 August 1990 showing places named in the table below



A remarkable feature of the hot spell was the setting of new maximum temperature records from places as far apart as east Scotland and the Isle of Wight. Details of the temperature records broken are given in the following table, with most of the stations having over 70 years of data:

Station	County	August 1990 Maximum temperature (°C)	Date	Previous record	Date	Next record	Date
Cheltenham	Gloucestershire	37.1	3	35.9	3 July 1976	None	
Cambridge Botanic Gardens	Cambridgeshire	36.5*	3	35.6	19 August 1932	36.9	10 August 2003
South Farnborough	Hampshire	36.2	3	35.9	3 July 1976		
Reading (Whiteknights)	Berkshire	35.5*	3	35.0	12 July 1923	36.4	10 August 2003
Hawarden Bridge	Flintshire	35.2	2	33.0	3 July 1976	None	
Newport	Shropshire	34.8	3	32.0	3 July 1976		
Sutton Bonington	Nottinghamshire	34.8	3	32.8	12 August 1953		
Nottingham (Watnall)	Nottinghamshire	34.6	3	33.8	8 August 1975		
Hampstead	Greater London	34.6*	3	34.4	19 August 1932	37.4	10 August 2003
Cardiff (Weather Centre)	South Glamorgan	34.5	3	33.1	13 July 1983	None	
Bidston	Merseyside	34.5	2	31.4	3 July 1976	None	
Hull	Humberside	34.4	3	32.8	7 July 1941		
Sheffield	South Yorkshire	34.3	3	33.5	9 August 1911		
Prestatyn	Denbighshire	34.3	2	32.4	3 July 1976		
Boscombe Down	Wiltshire	34.2#	3	33.3	2 July 1976	34.5	19 July 2006
Southport (Greenbank)	Merseyside	33.9	2	32.0	3 July 1976	None	
Rothamsted	Hertfordshire	33.8*	3	33.3	19 August 1932	35.6	10 August 2003
Macclesfield	Cheshire	33.1	3	31.8	8 August 1975	None	
Harrogate	North Yorkshire	33.1	2	30.6	31 July 1943	None	
Buxton	Derbyshire	32.7	3	30.0	31 July 1943		
Eastbourne	East Sussex	32.6	4	31.6	3 July 1976		
Durham Observatory	Durham	32.5	3	30.6	31 July 1943		
Skegness	Lincolnshire	32.4	3	32.0	29 July 1983		

Bradford	West Yorkshire	32.2	3	31.1	12 August 1953	
Bolton	Greater Manchester	32.1	3	31.7	27 August 1930	None
Sandown	Isle of Wight	32.0	4	31.1	16 August 1947	None
Tynemouth	Northumberland	31.9	3	28.1	16 July 1969	None
Leuchars	Fife	30.8	2	28.9	2 July 1933	

Many of these records survived the heatwaves of [Hot spell - August 2003](#) [* value exceeded in August 2003] and [Record breaking heat and sunshine - July 2006](#) [# value exceeded in July 2006] although some stations had ceased to make observations by then, shown by 'none' in next record column. These figures were reviewed in July 2009.

Additional information

For further details and a comparison with the heatwaves of 1906 and 1911, please see: The record breaking heatwave of 1-4 August 1990 over England and Wales, R. Brugge, *Weather*, 46, 2-10, Jan 1991.

The exceptional hot spell of early August 1990 in the United Kingdom, S. Burt, *International Journal of Climatology*, 12, 547-567 1992.

Last updated: 30 October 2012