2018 in Reading: weather highlights and statistics

by
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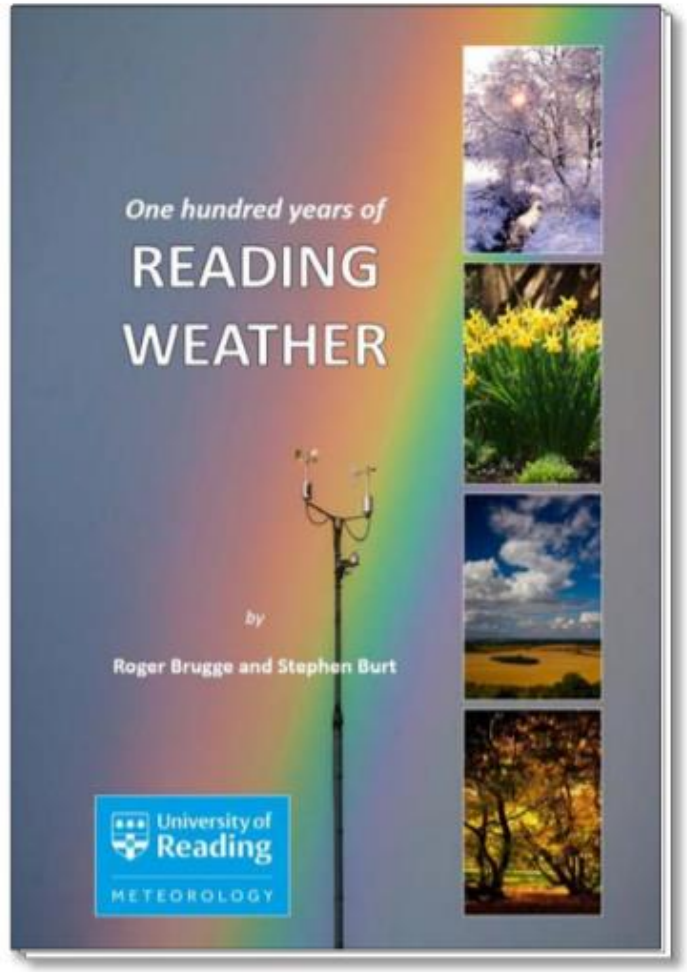
Data sources - University

Much of the information presented has been taken from the manual 0900 GMT observations - that have been made at the University since 1901 (rainfall) and 1908 (temperature).

Sunshine data goes back 63 years.

Early observations (before 1968) were made closer to the town centre rather than on the current campus.

Observations have been digitised and described in the book *One hundred years of Reading weather*



Current weather: http://www.met.rdg.ac.uk/weatherdata/

I'd like to thank our principal observers - Selena Zito, Cahyo Leksmono and Shaula Garibbo – who carried out the majority of the 0900 GMT observations in 2018.

East Berkshire temperature series

This series has been determined using reported monthly-mean temperatures from many of the weather stations that have been open in the Reading-Bracknell-Wokingham-Maidenhead area at some point in time since 1863.

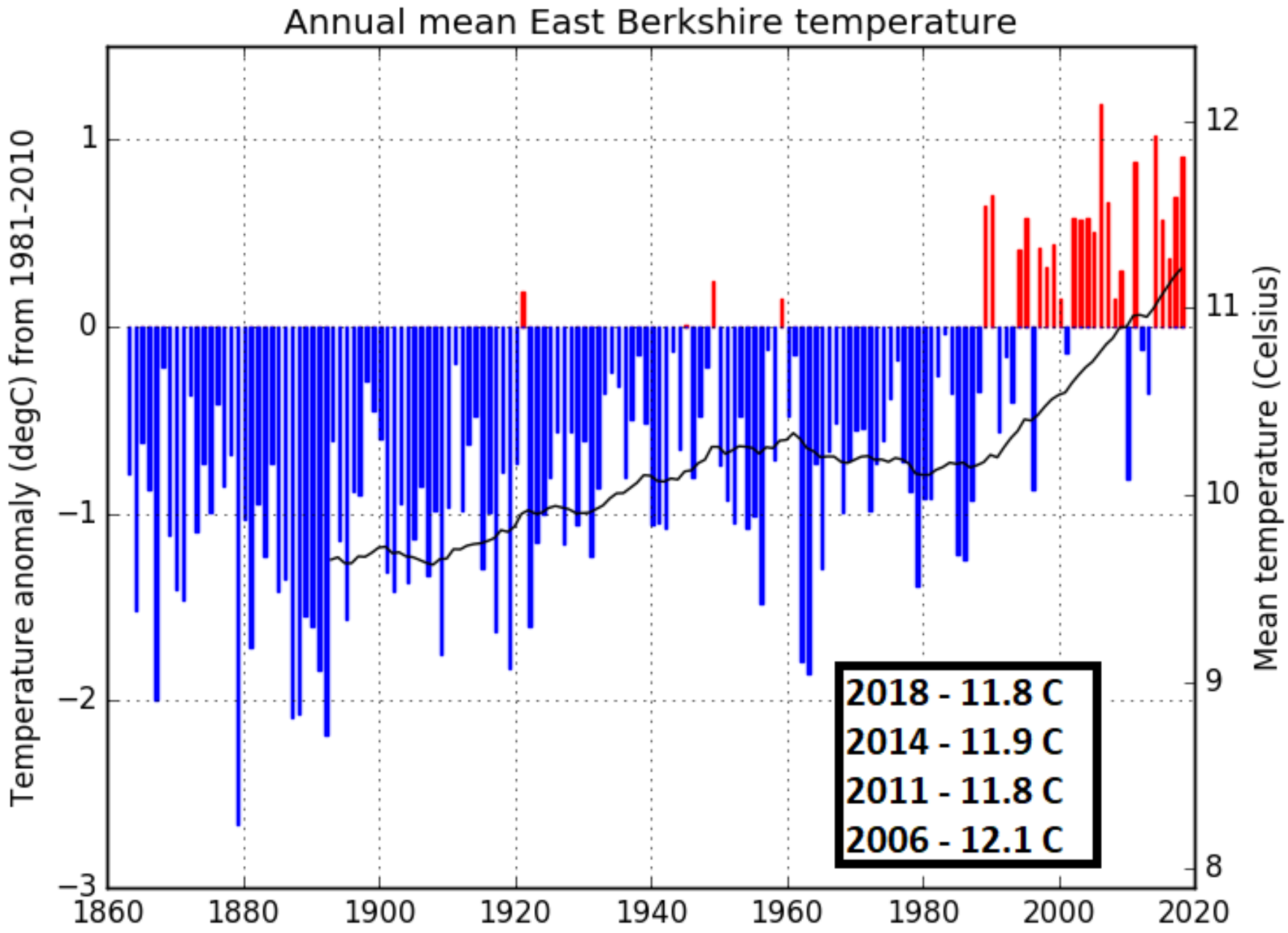
The observations currently used are from stations (including the University of Reading) in the monthly Bulletin of the Climatological Observers Link (https://www.colweather.org.uk)

Temperatures are combined based on the monthly departure from long-term average – to allow for differences in exposure and altitude, for example.

More details and other graphs at
http://www.met.rdg.ac.uk/~brugge/east_berks_temp/eastberks.html

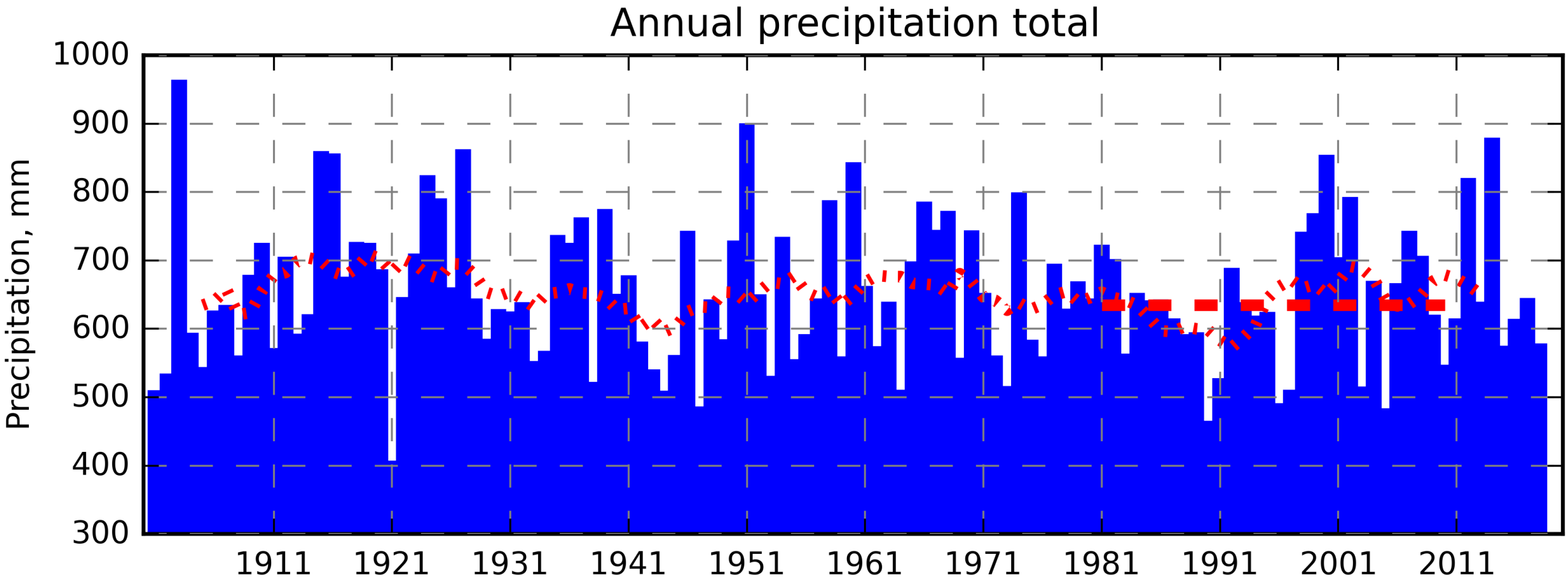
An overall summary of 2018

2018 annual mean temperature



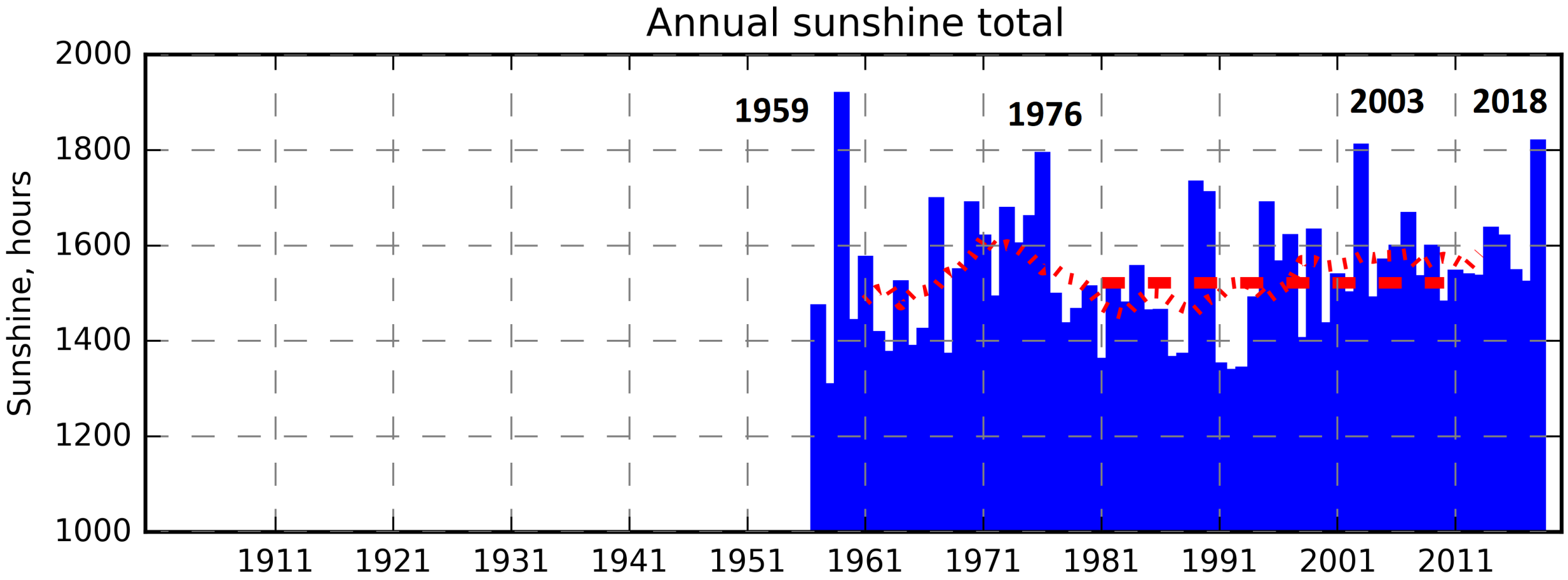
30-year running mean denoted by the thin, black line

Reading rainfall



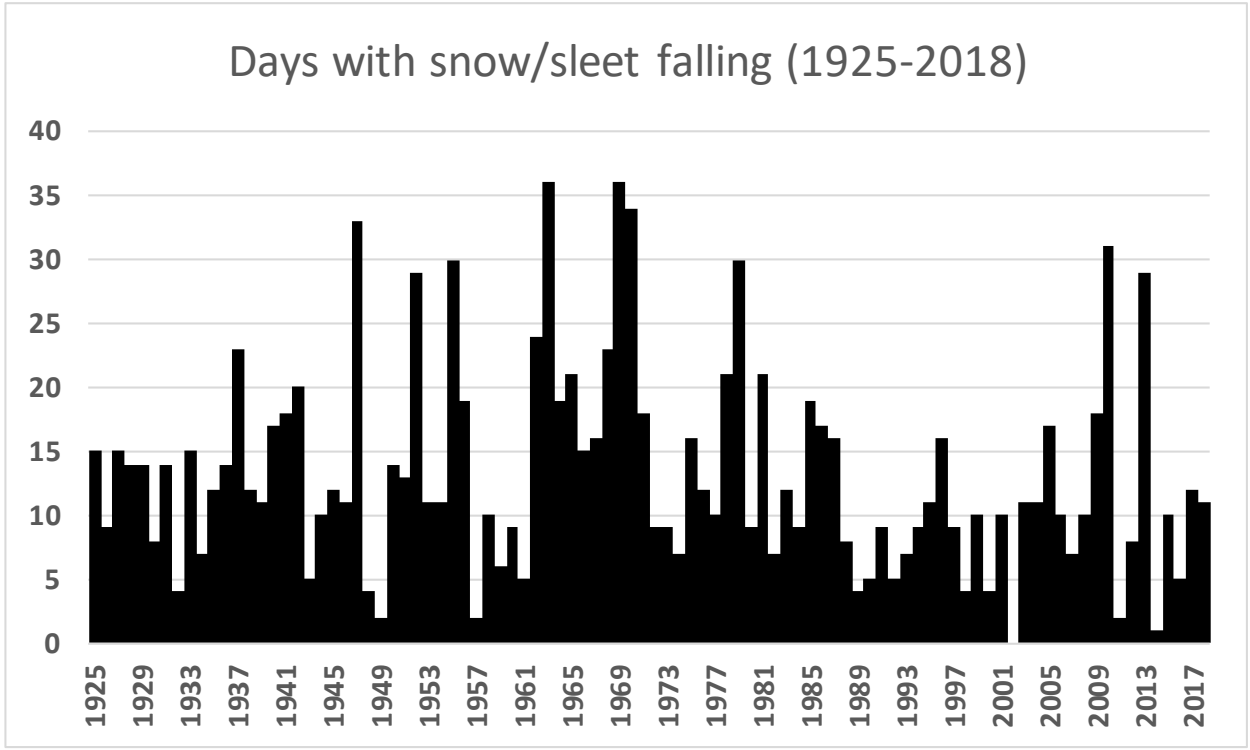
The 1981-2010 averages are indicated by the thick dashed line, while the 10-year running mean centred on the year shown is indicated by a dashed line

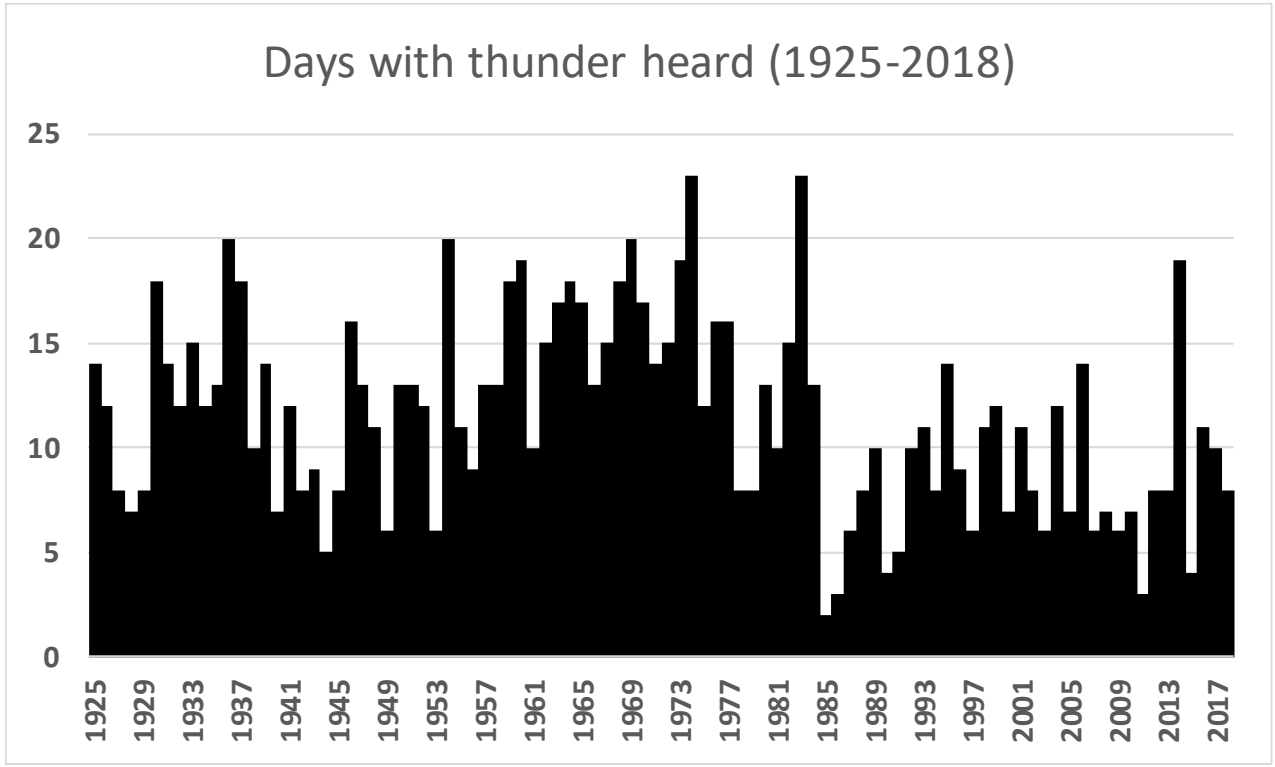
Reading sunshine



The 1981-2010 averages are indicated by the thick dashed line, while the 10-year running mean centred on the year shown is indicated by a dashed line

Days with snow/sleet falling or thunder heard





	1981-2010	2018
Days with snow falling	10.9	11 (February and March mainly)
Thunder heard	9.0	8 (4 in May, just 1 thereafter)

A breakdown by month and season

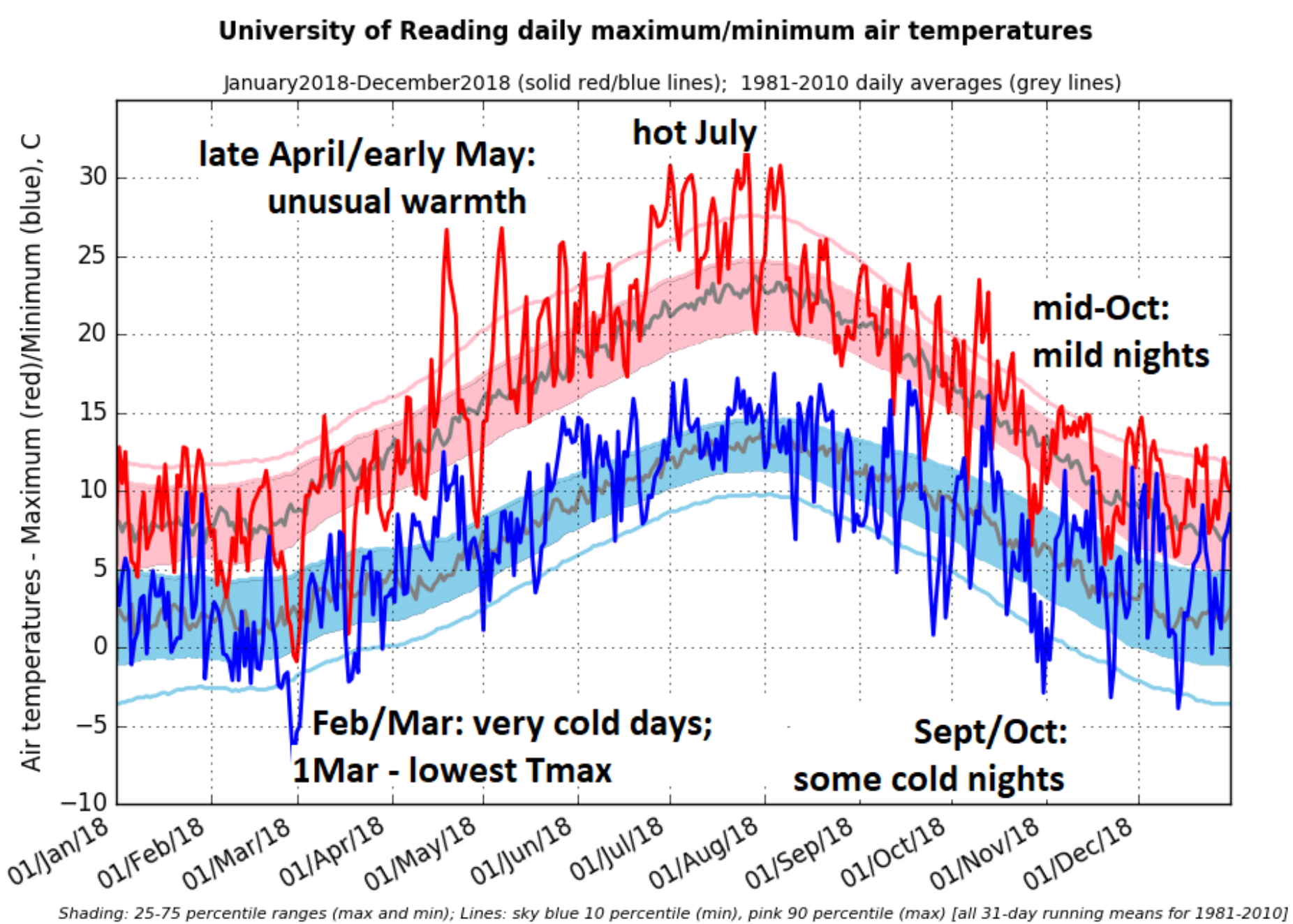
Reading: A brief summary by month (ranking=1: lowest); shading indicates top/bottom 10

	Temp anomaly (degC)	Rainfall % of average	Sunshine % of average	Temperature ranking (111)	Rainfall ranking (118)	Sunshine ranking (63)
Jan	+1.3	95	101	99	55	39
Feb	-1.8	65	163	21	37	62
Mar	-1.4	187	71	35	106	10
Apr	+1.8	131	77	104	89	9
May	+1.8	92	141	101	56	62
Jun	+1.8	15	133	107	3	54
Jul	+3.2	31	152	110	10	63
Aug	+0.8	79	106	94	46	46
Sep	-0.1	78	138	59	42	61
Oct	+0.2	88	120	76	67	54
Nov	+0.9	96	107	95	69	42
Dec	+2.3	120	65	103	80	27
2018	+0.9	91	119	109	32	62

Reading: A brief summary by season (ranking=1: lowest); shading indicates top/bottom 10

	Temperature (degC)	Rainfall mm	Sunshine h	Temperature ranking (111)	Rainfall ranking (118)	Sunshine ranking (63)
Winter	4.9	162	219	61	63	59
Spring	10.3	188	466	95	99	36
Summer	18.6	62	755	111	4	60
Autumn	11.4	167	387	89	51	59

Particular events during 2018

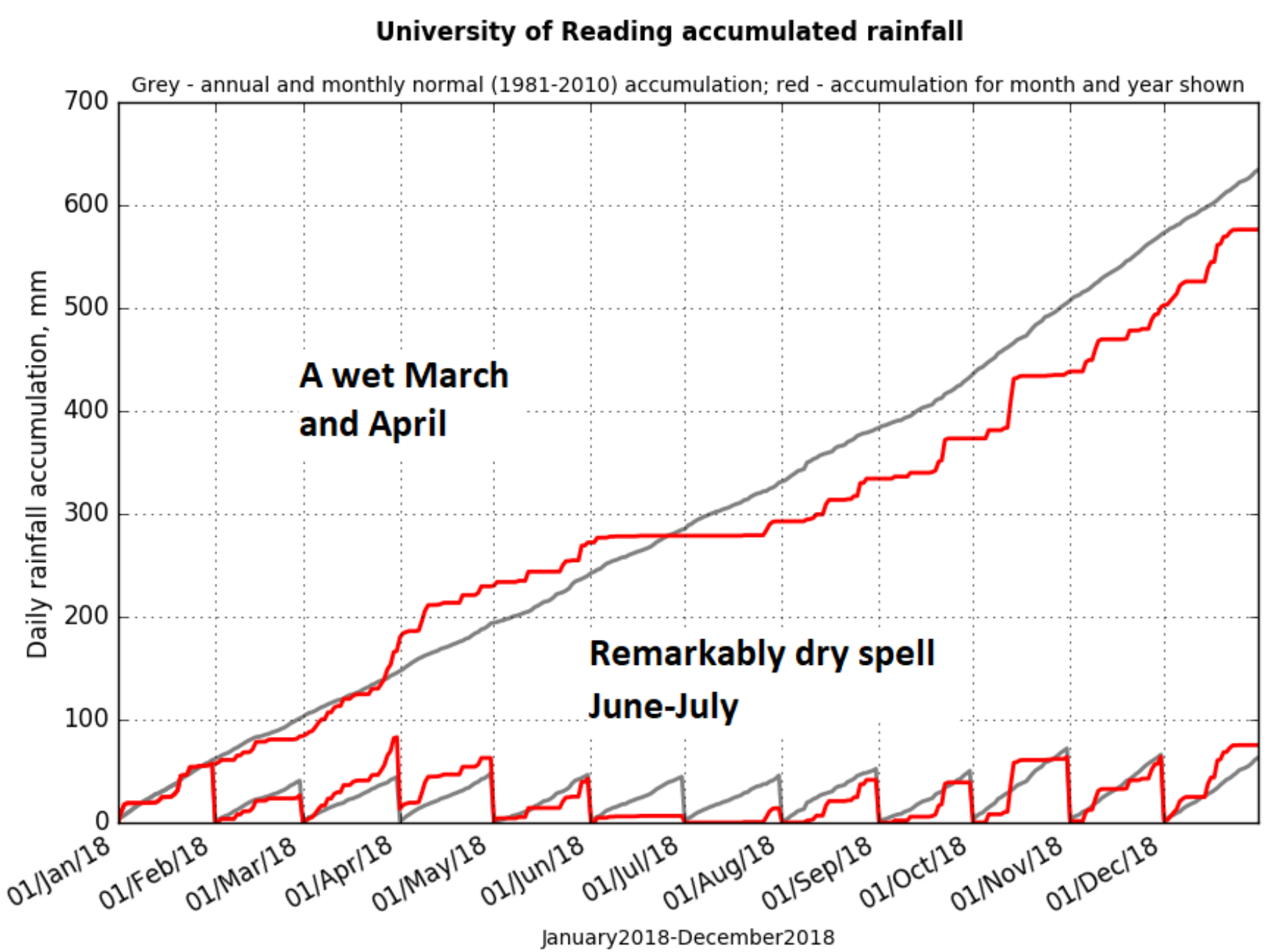


Key:

Tmax and **Tmin**

Tmax climate:
Pink:
90% and 25-75% range

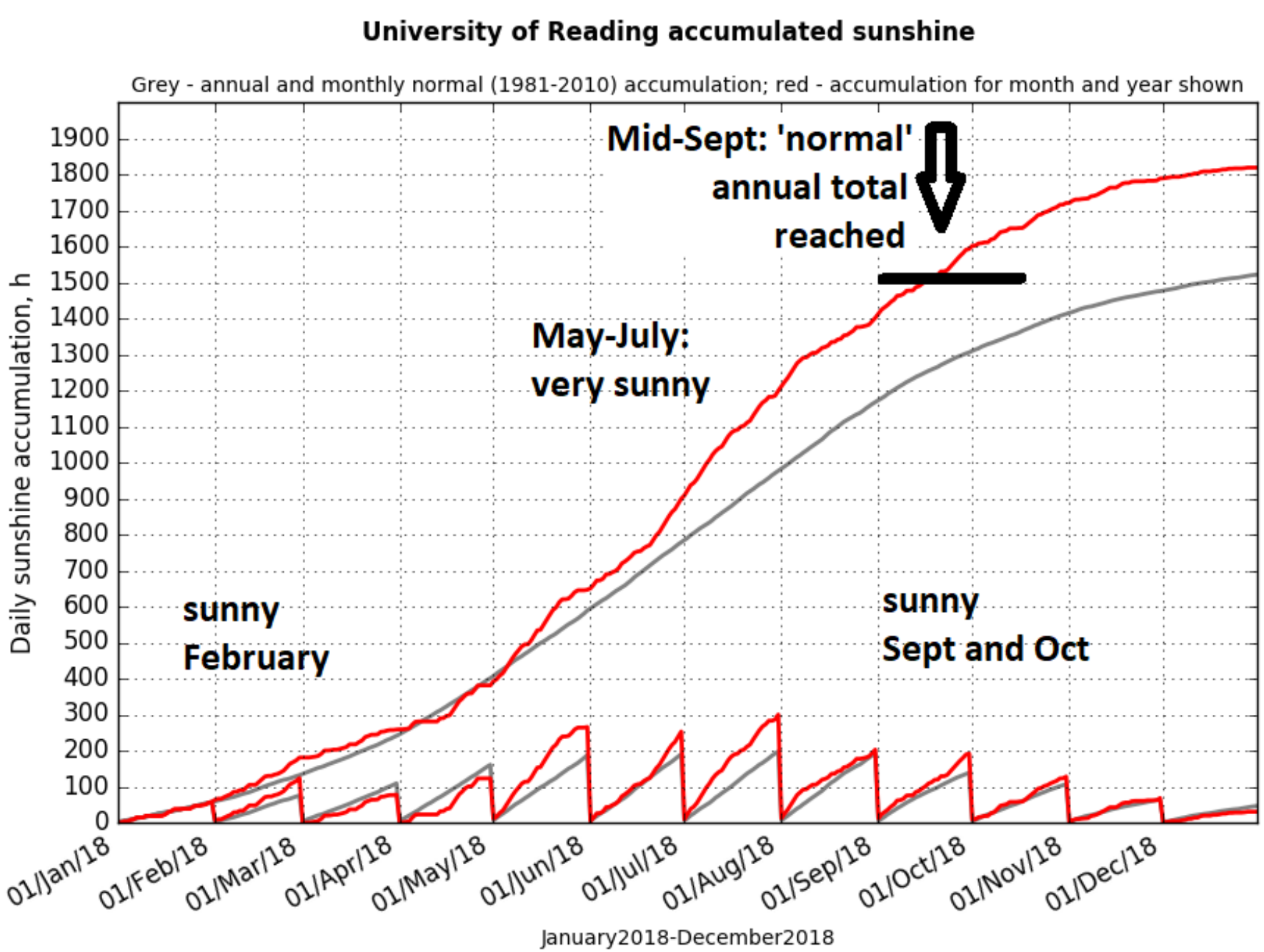
Tmin climate:
Blue:
10% and 25-75% range



Key:

Grey lines:
Climatological monthly and annual accumulations

Red lines:
2018 monthly and annual accumulations



Key:

Grey lines:
Climatological monthly and annual accumulations

Red lines:
2018 monthly and annual accumulations

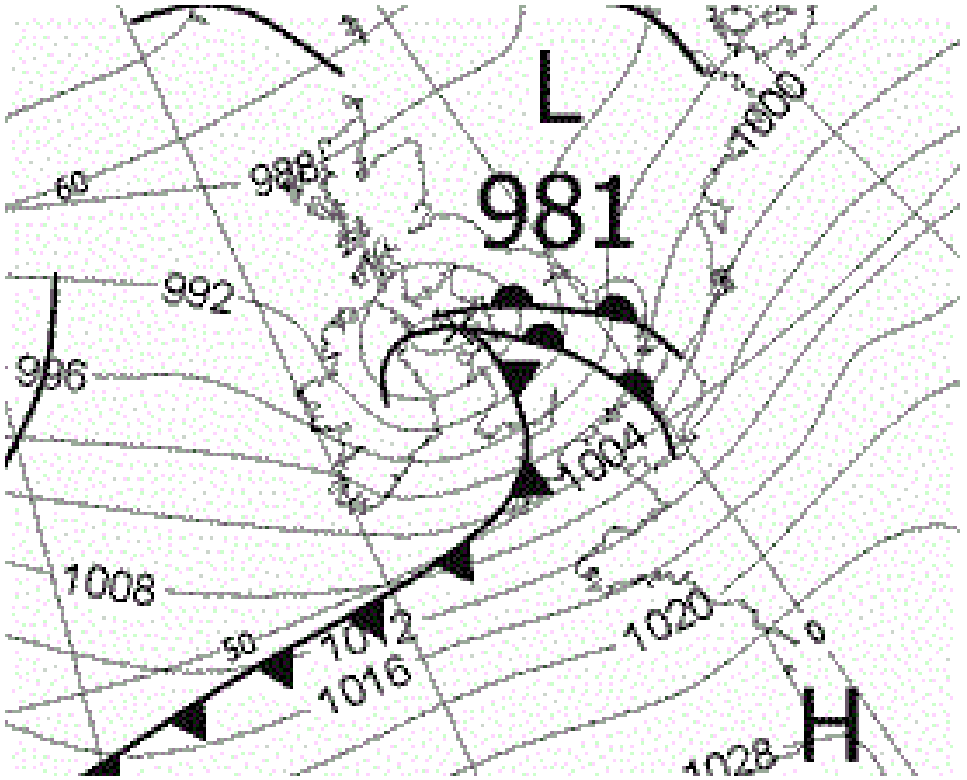
January

January was an unsettled month:

- occasionally stormy – especially on the 2nd-4th and the 18th.
- 47 kn maximum gust of 2018 on the 18th – storm David (named by Météo-France).

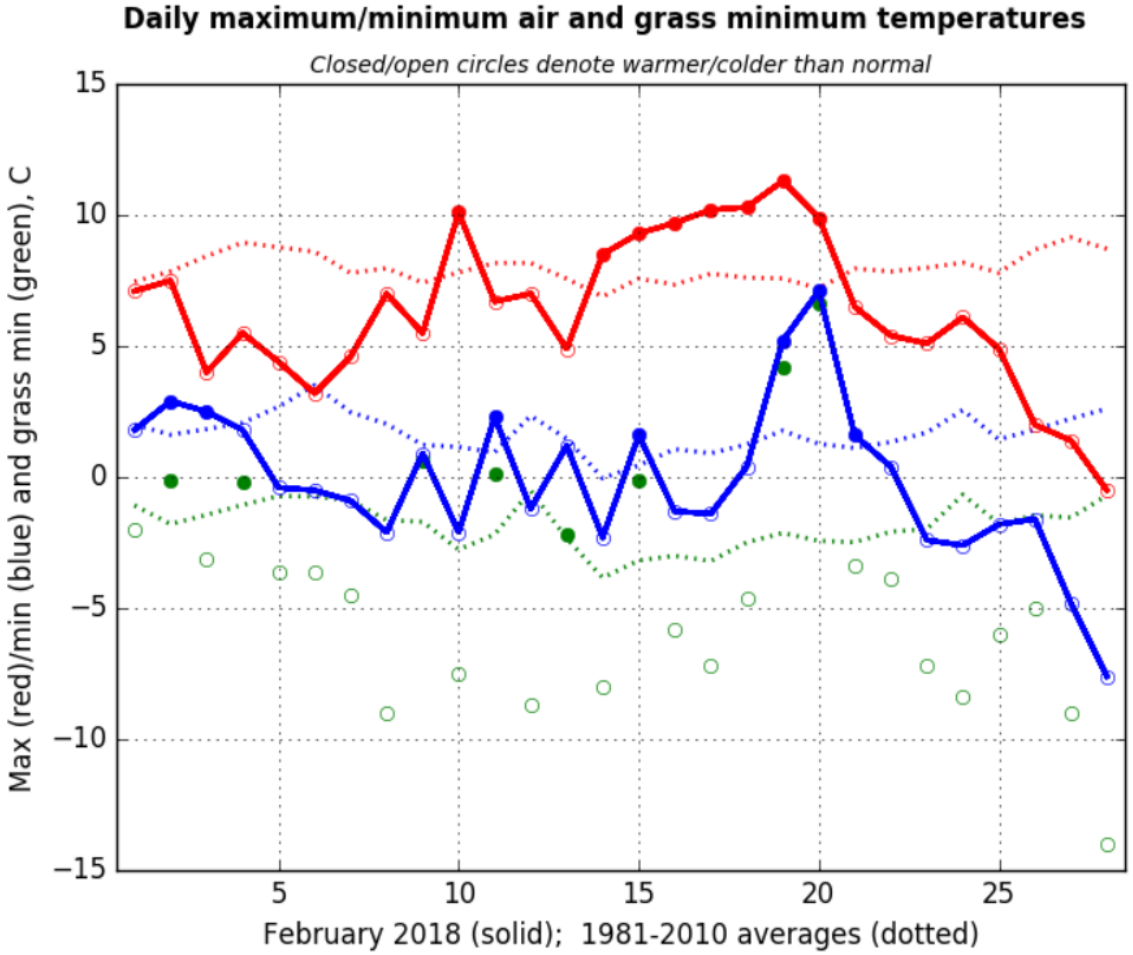
A general lack of cold weather:

- milder than the coming February and March.
- four air frosts.



Extracted from:
Met Office surface analysis, ***0000 GMT 18 January 2018***
Original image © Crown Copyright. Downloaded from http://www.wetterzentrale.de (select Archive and UKMO)

February – the ‘start of winter’



24th - a sudden stratospheric warming led to a cold flow from the east. The surface air was very dry and sunny conditions resulted (‘Beast from the East’).

28th – coldest night (-7.6 °C), and second coldest day (maximum -0.5 °C), of the year as about 1 cm of snow lay on the ground.

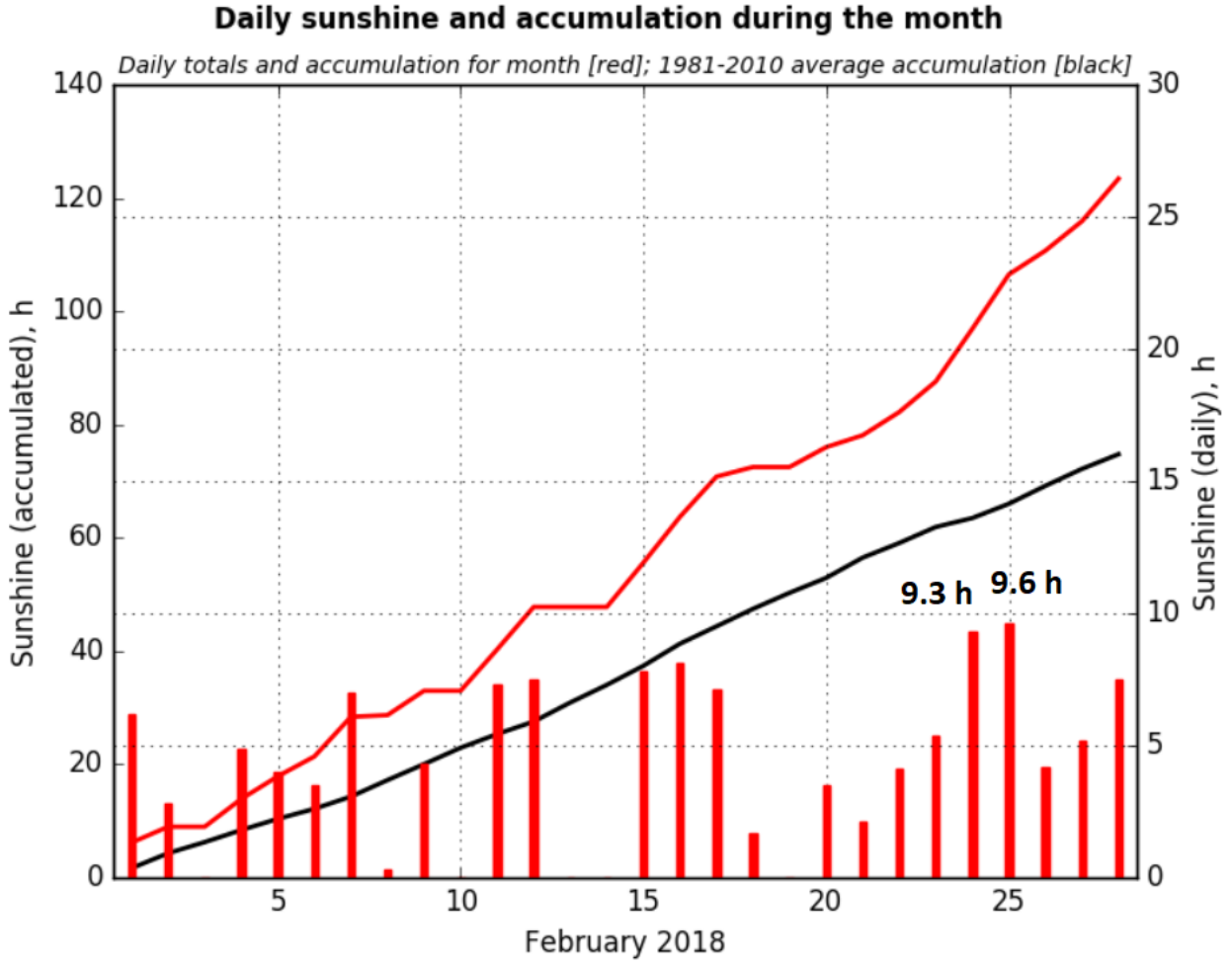
Key: Daily **maximum**, **minimum** and **grass minimum** temperatures.
Open circles – below normal; Shaded circles: above normal.
Dotted lines : 30-year averages for 1981-2010

February sunshine 123.4 h, second sunniest after 126.7 h in 2008

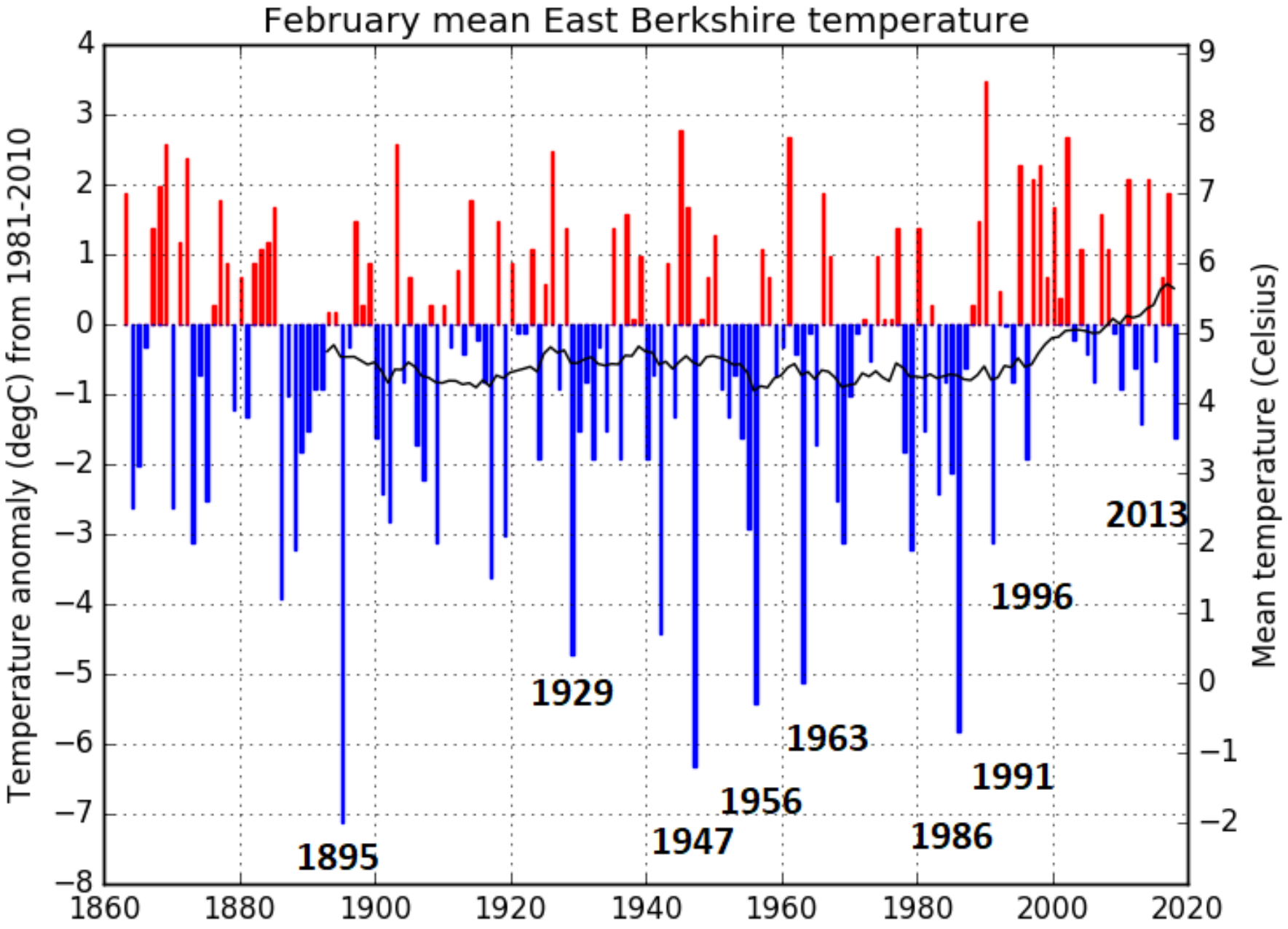
Two cold but exceptionally clear days on 24th and 25th broke new February sunshine records.

On the 25th 9.6 h of sunshine. This followed 9.3 h on the previous day – itself a remarkably sunny day for February.

Previous February sunniest day (since 1956): 9.5 h on 20 Feb 1970, 27 Feb 1973 and 26 Feb 1977).



Key: histogram daily values in 2018; sloping lines show accumulations **red-2018**, **black-average for 1981-2010**.



The coldest month since December 2010

The coldest February since 1996

Lying snow in 2018

Depths at 0900 GMT

28 Feb	1 cm
1 Mar	4 cm
2 Mar	4 cm
3 Mar	3 cm
18 Mar	6 cm – the deepest since 9 cm in January 2013
19 Mar	4 cm

Forbury Gardens, Reading, on 1 March
Credit: Eddie Greville
Source: https://www.inyourarea.co.uk/news/in-pictures-snow-in-berkshire/

March

1 March (part of the so-called ‘Beast from the East’

Midday -3.5 °C; temperature rose until next morning due to less cold E’ly air from the S - storm Emma.

-0.9 °C reached at 0200 GMT on the 2nd.

Only the third March ice day (i.e. sub-zero day) on record, but the coldest-ever March day – previously 6 March 1942, which had a maximum of only -0.6 °C.

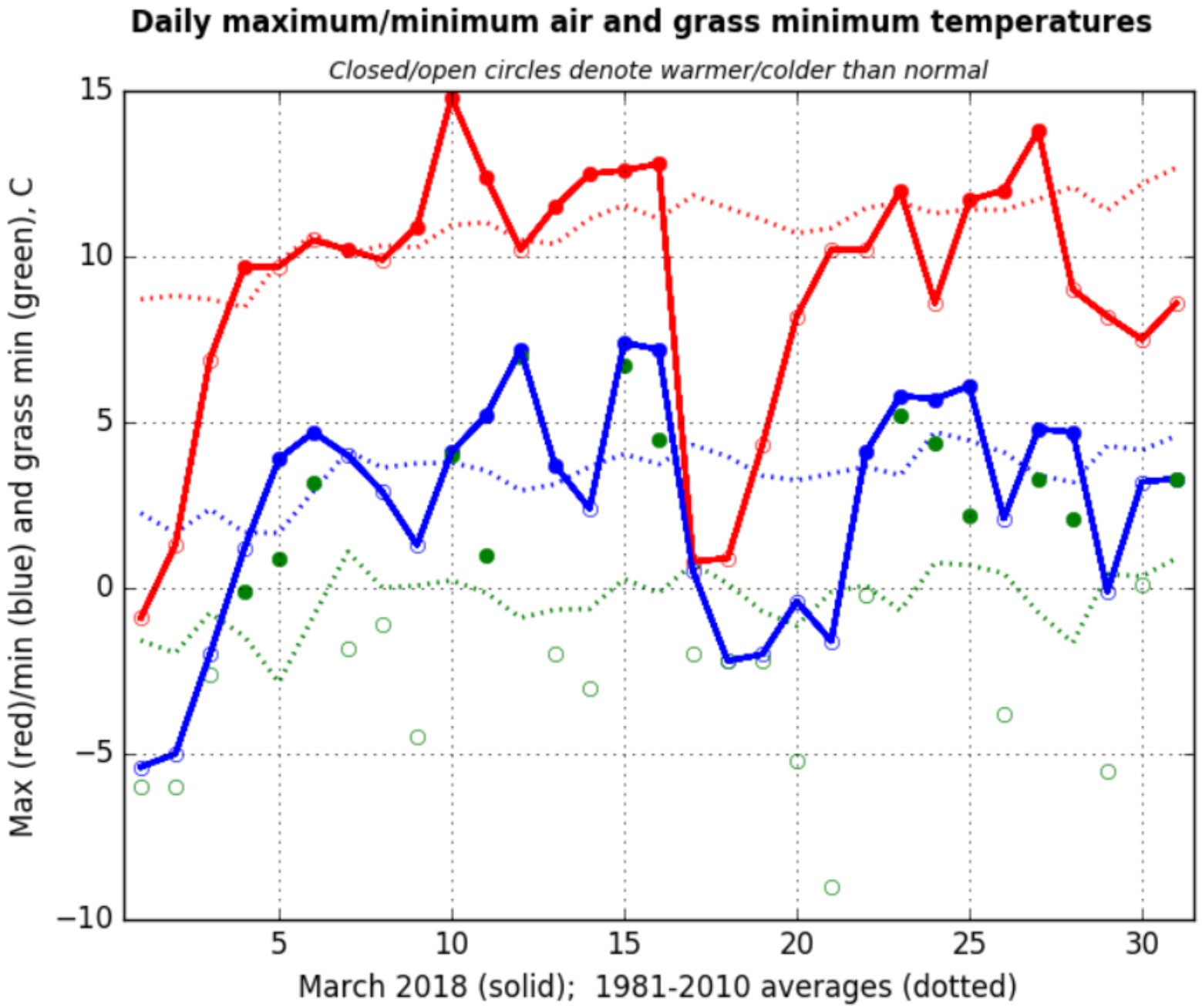
This was the coldest day (lowest maximum temperature) of 2018.

17-18 March (during the ‘mini Beast from the East’)

Cold E’ly flow – Reading reached 0.8 °C on the 17th and 0.9 °C on the 18th.

Both were unusually cold days for so late in March – previously no date after mid-March had failed to reach 1.0 °C.

18th: 6 cm of lying snow at 0900 GMT -> **The Reading Half Marathon was cancelled due to lying snow.**



Overall the coldest March for five years: 1.4 degC colder than normal.

83 mm of precipitation: the wettest March for 17 years and the wettest month of 2018.

UK – unusually cyclonic but also with a large component of flow from the E.

In Reading (1001.9 hPa) *and in parts of S England the monthly mean MSLP was the lowest for March since 1909.*

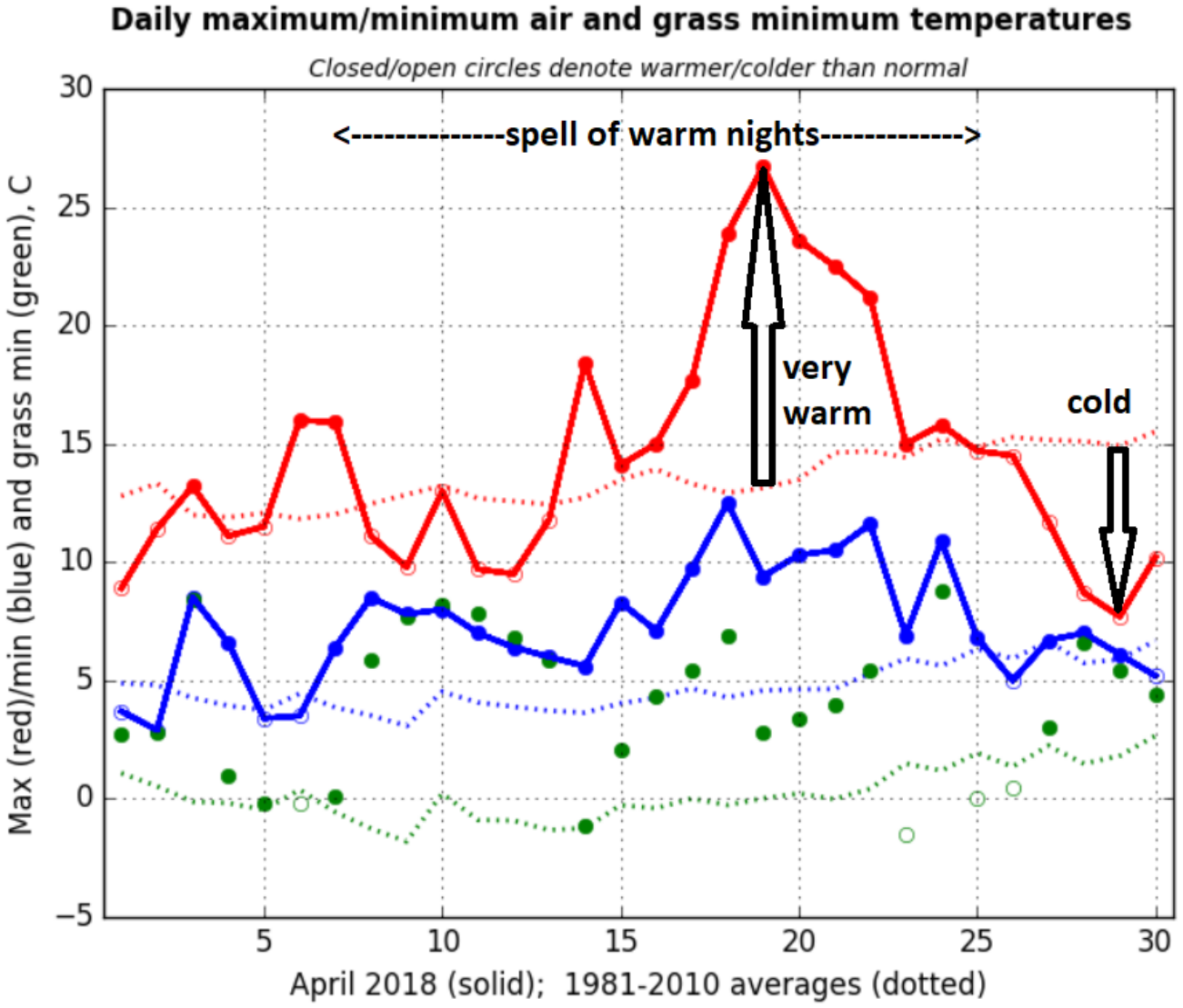
April – spring starts

A very warm spell after mid-month, with the highest April temperature (26.7 °C) on record on the 19th. *(Warm air had been drawn up from the S due to a deep low to the W previously – 958 hPa SW of Ireland on the 17th.)*

29th: temperature failed to rise above 7.7 °C. *(A NE'ly flow off Scandinavia.)*

The month was 1.8 degC warmer than normal due to a lack of air frost.

Only seven milder Aprils in the entire Reading record.



May - the start of summer

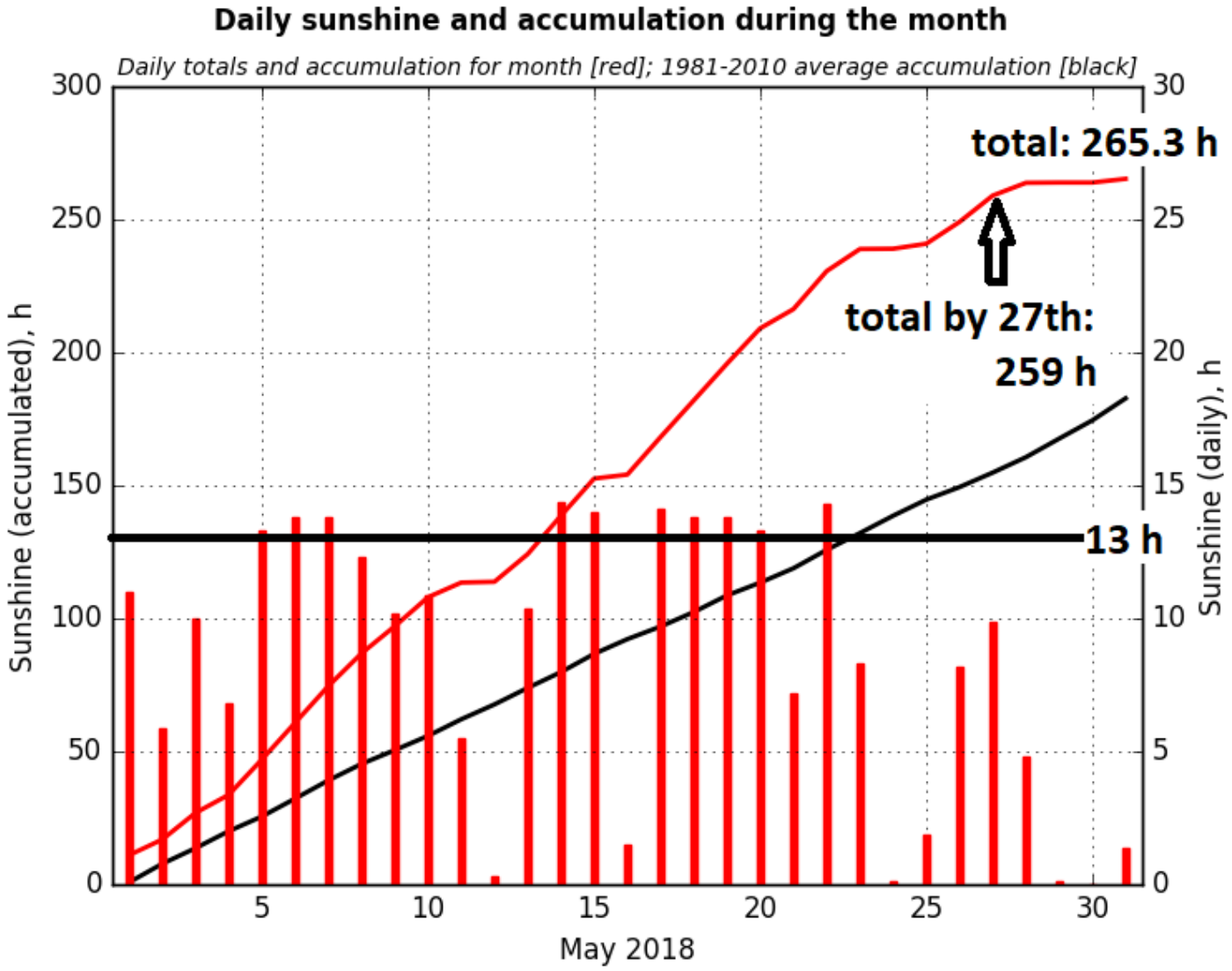
High pressure overall but also a large incidence of flow from the NE over the month.

Second sunniest May (265.3 h) after 295.1 h in 1989.

10 days with 13 h or more sunshine.

But only 6.3 h in final 4 days.

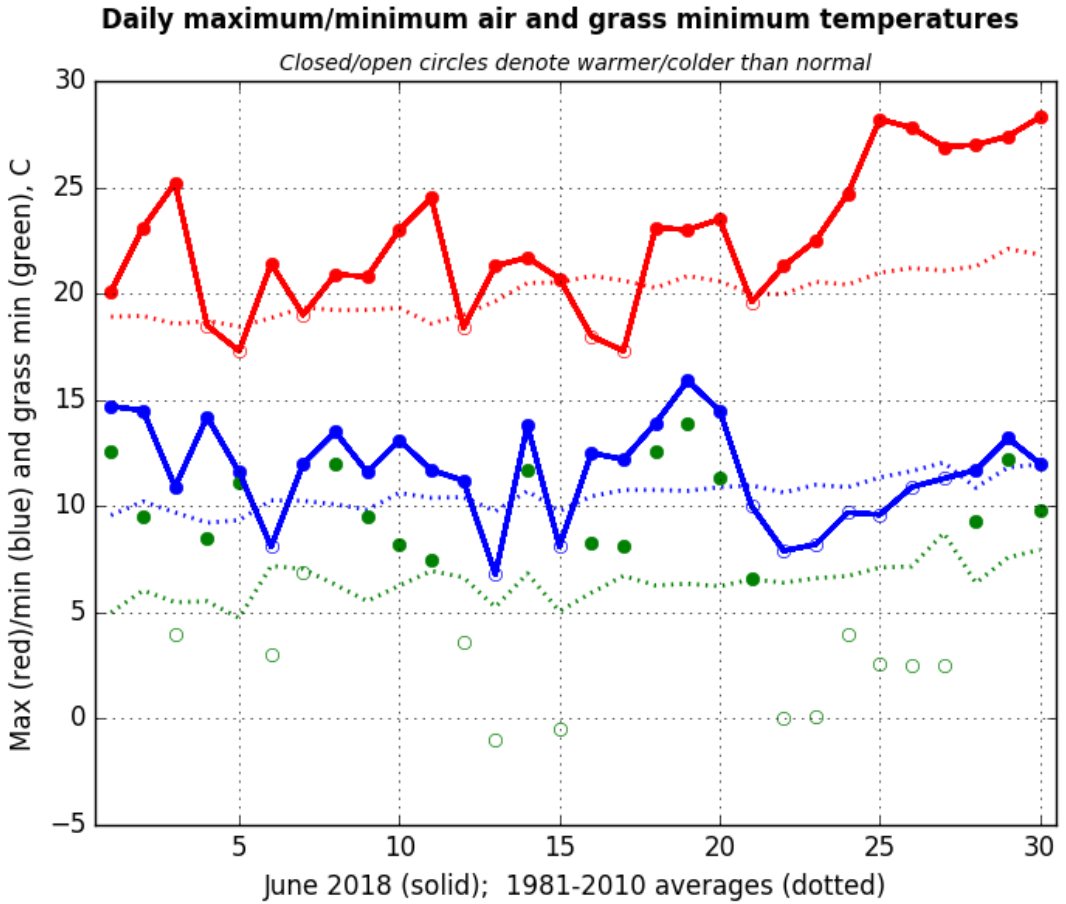
May was very mild by day (mean maximum temperature was 2.7 degC above average) and was the warmest May for ten years. As early as the 7th 26.8 °C was reached.

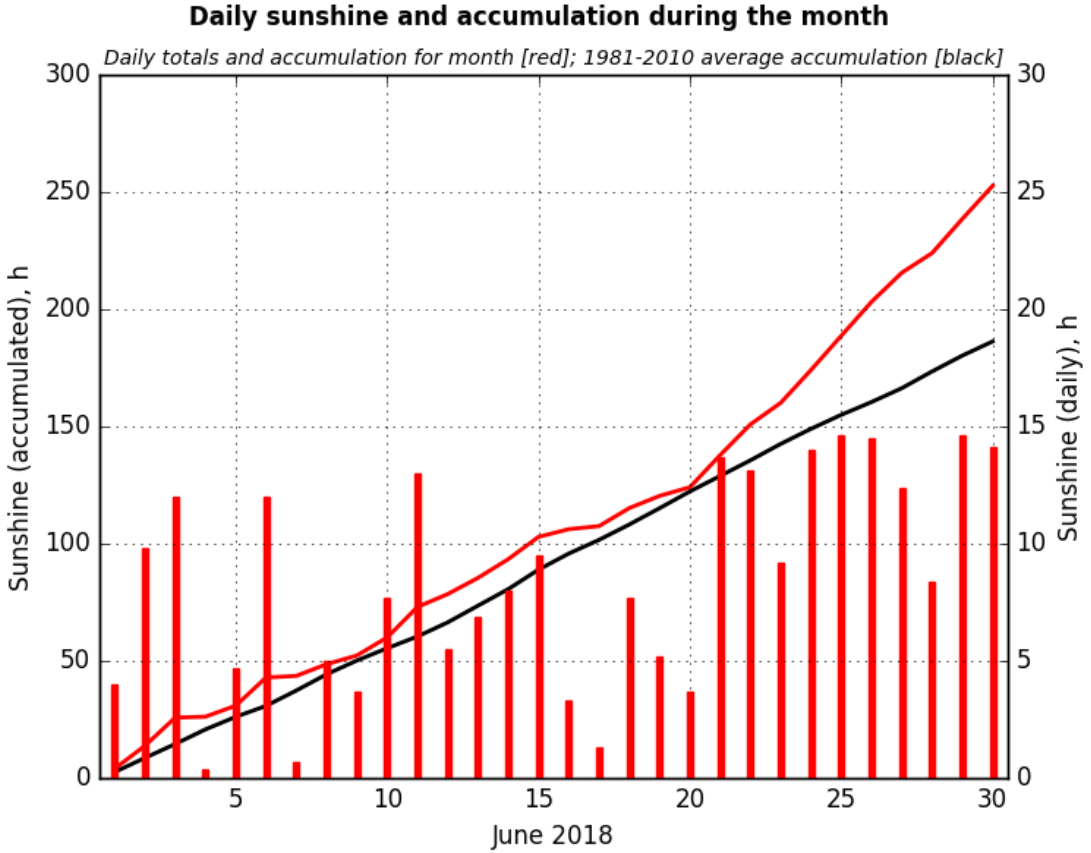


June

June was (especially in final week) warm, dry and sunny (with 252.7 h of sunshine).

UK – high pressure, slack winds, but a larger component to the flow from the NE than usual.





Just 6.5 mm of rain made it the third driest June on record.

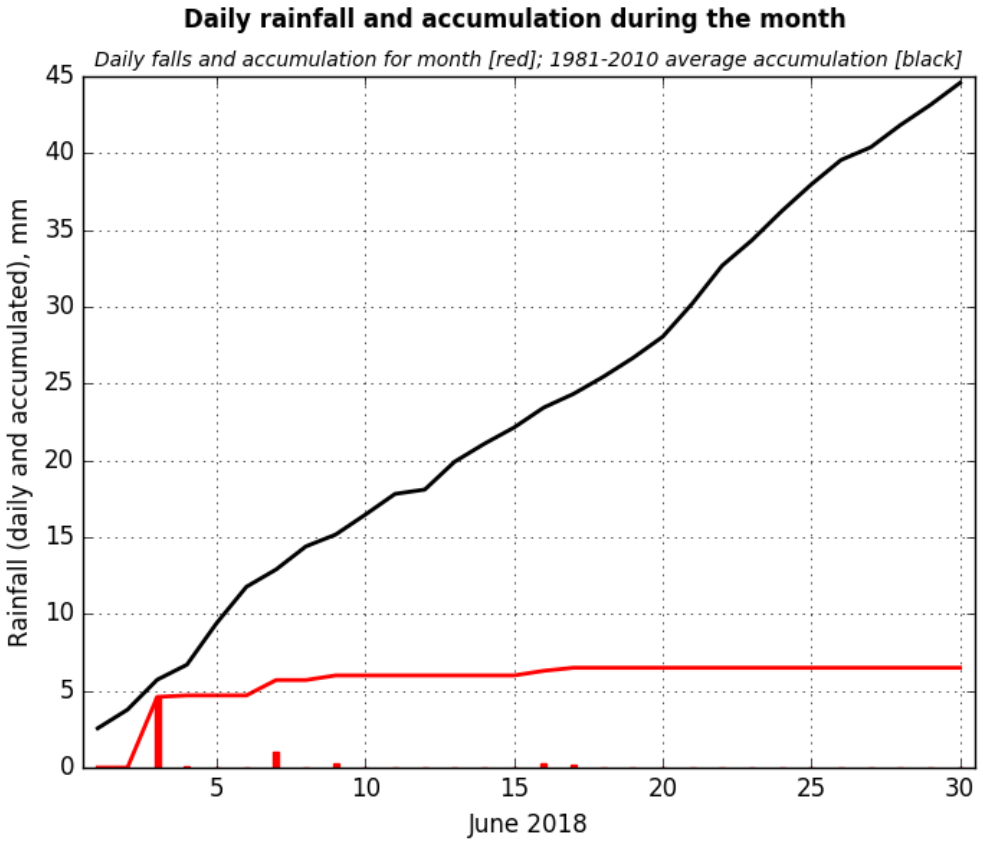
Overall the equal fifth warmest June on record although marginally cooler than June 2017.

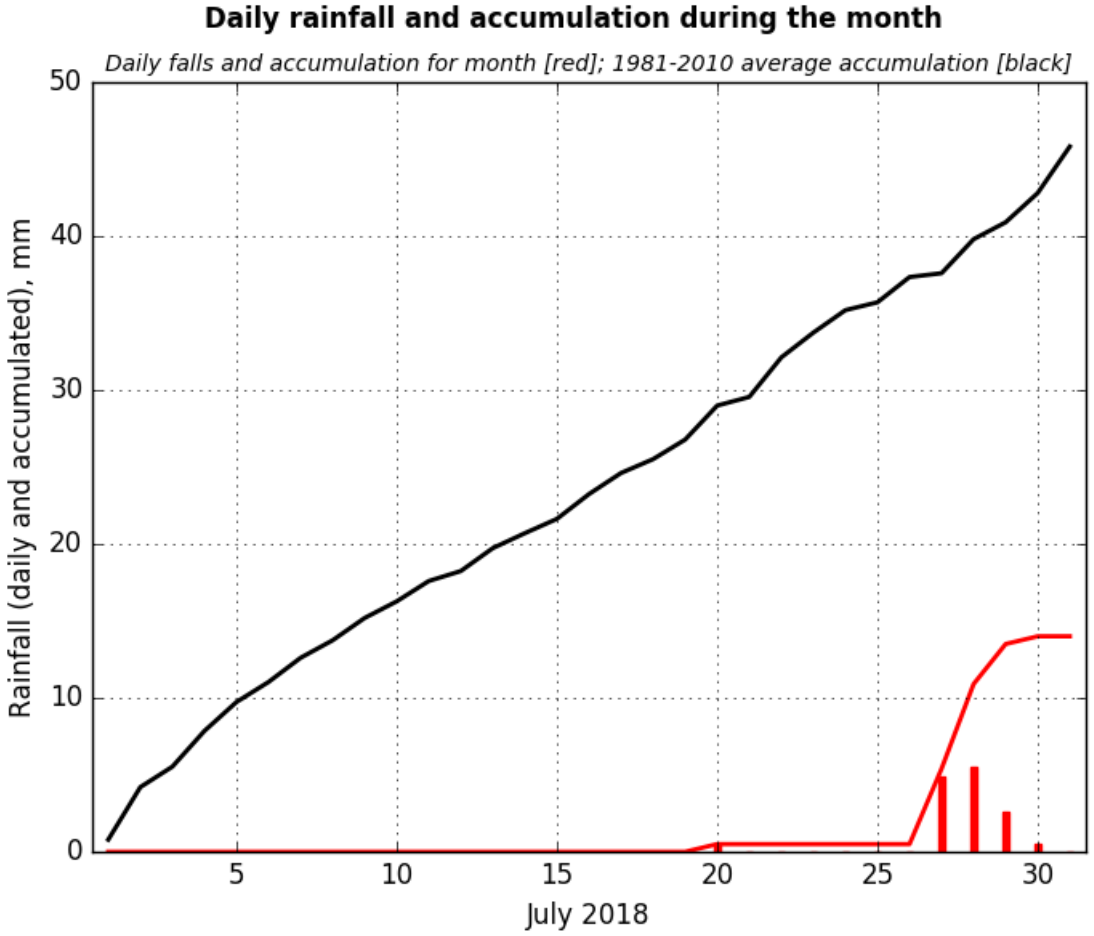
But, the mean maximum temperature was the highest for June since 2006.

Summer drought

Only 0.5 mm of rainfall in the 39 days from 18 June. *(High pressure again quite dominant into July.)*

No measurable rain in the 32 days from the same date.





June+July rainfall total: 20.5 mm.

Only 1921 has been drier (12.3 mm) in this two-month period.

End of July – more of a cyclonic/W'ly flow.

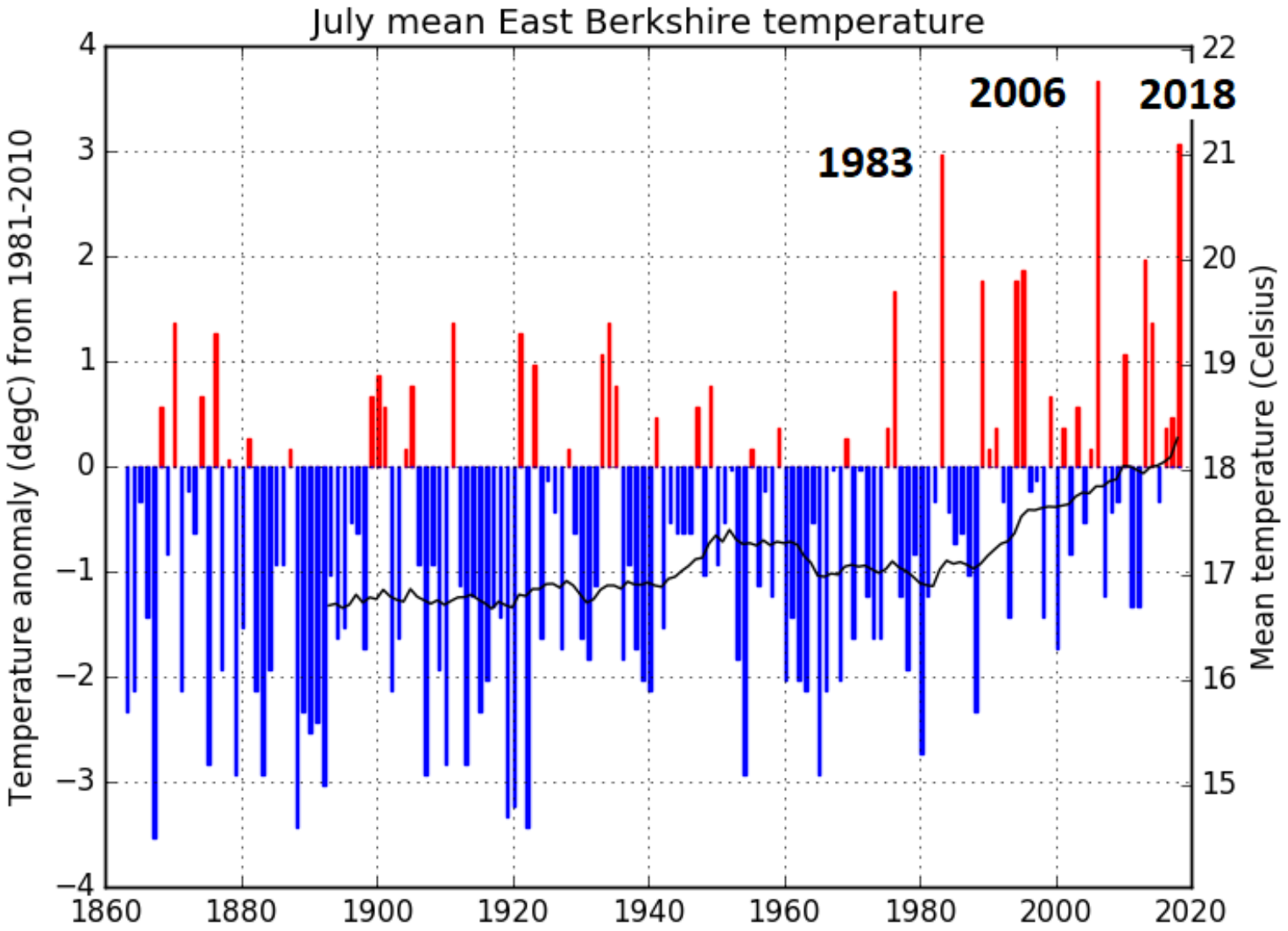
A hot July

A very warm month and one of the driest Julys on record.

The sunniest July on record – only the 29th was sunless.

The total of 299.7 h made it the second sunniest month of any name after June 1975 (305.6 h).

30 °C or above on five days (32.9 °C on 26th) although night-time minimum temperatures never exceeded 17.2 °C.



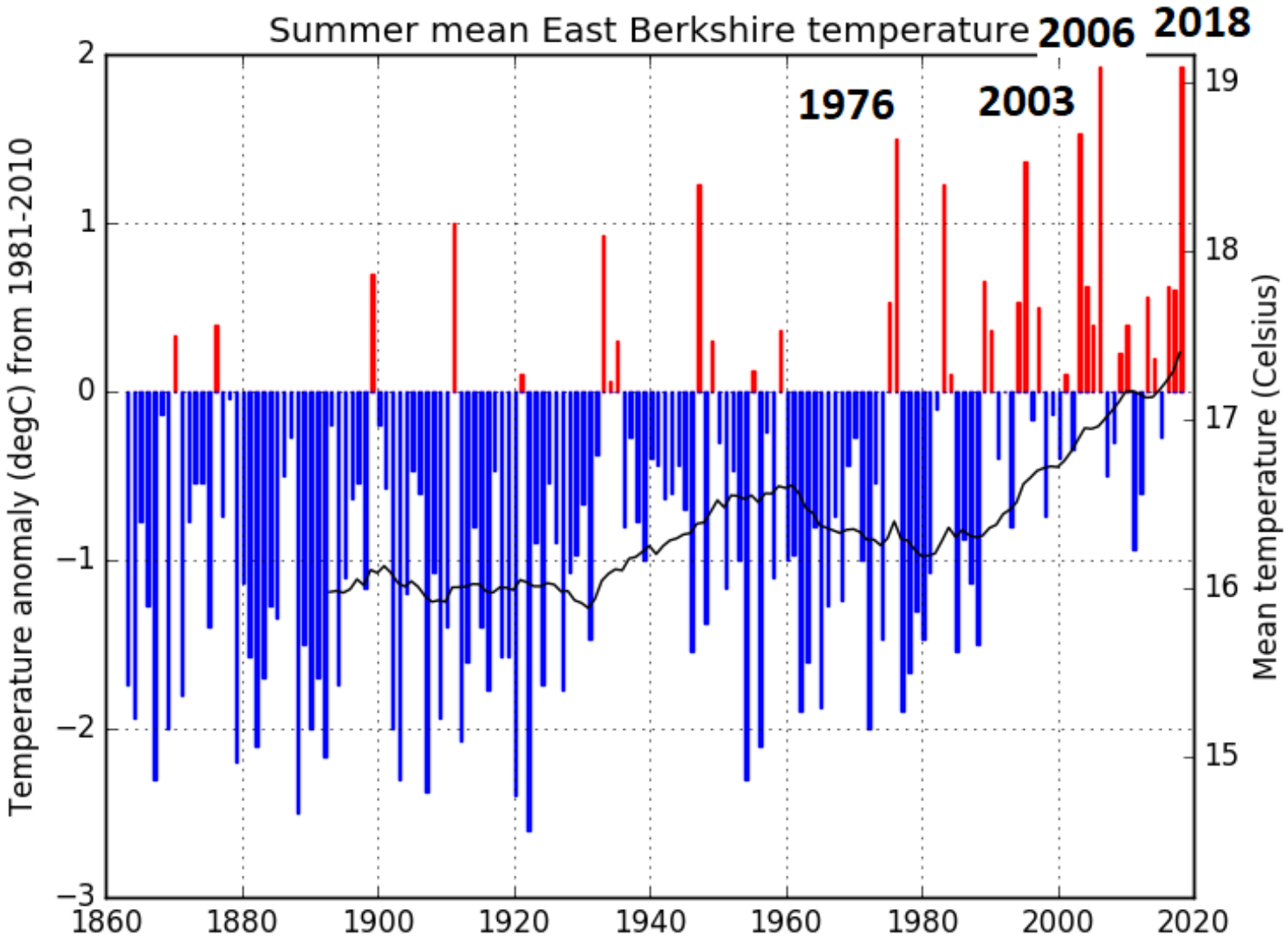
Overall, very warm by day (by almost 5 degC), but the month was 0.4 degC cooler than July 2006.

August and summer

August was 0.8 degC warmer than average, meaning that summer (June-August) was the equal warmest (with 2006) on record. *(UK flow was generally from the SW quadrant and slightly stronger than normal.)*

Summer was the fourth driest on record with 62.0 mm of rainfall.

754.9 h of sunshine made this the fourth sunniest summer on record (since 1956) .



September

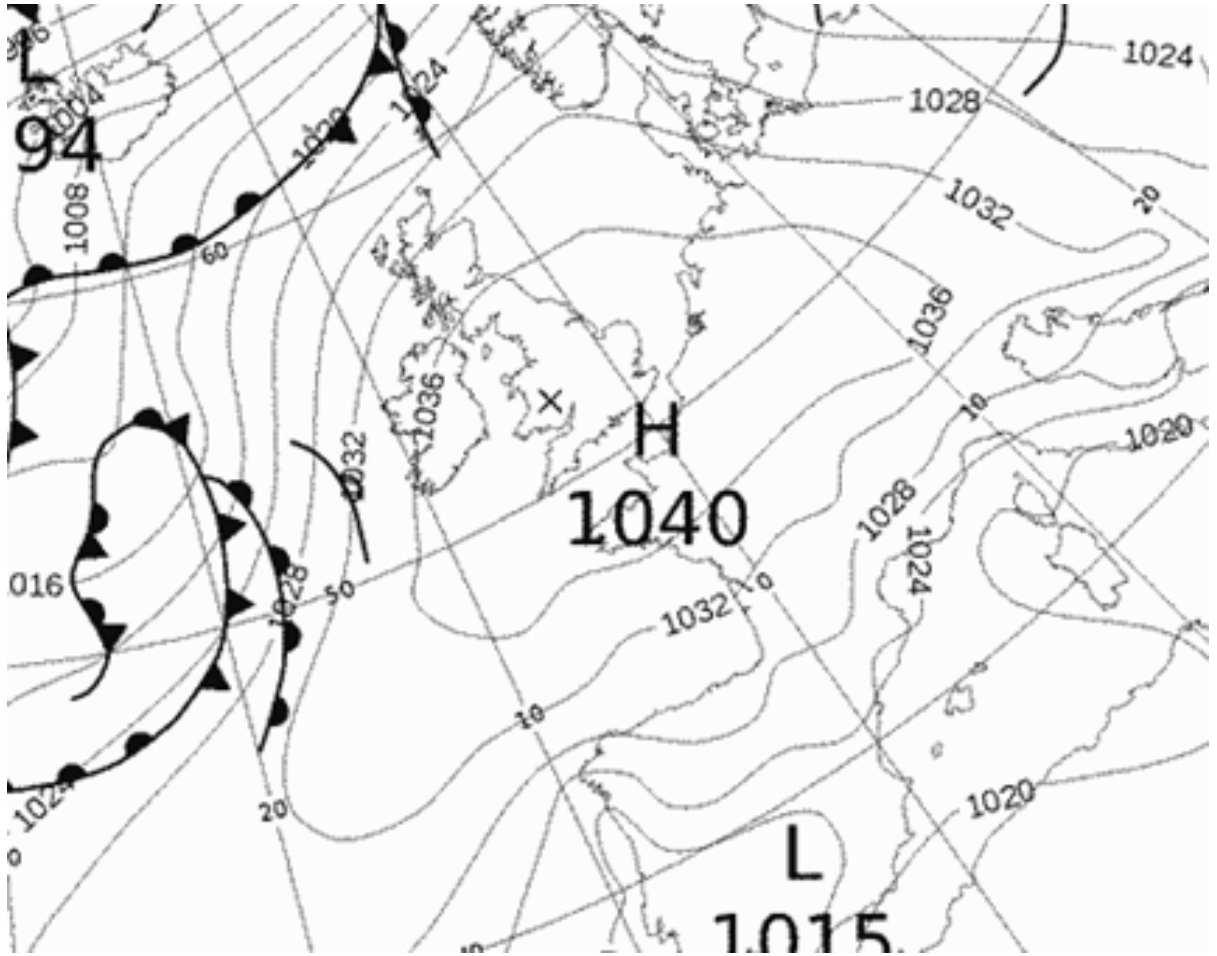
Summer carried on into September helped by high pressure. MSL pressure reached 1039.5 hPa at 0900 GMT on the 25th – the equal highest in September along with 1986 (19th).

But… under this high pressure the air temperature fell to 0.8 °C on the 25th (equalling the lowest in 1969 – otherwise the lowest temperature in September since 1928).

MSL pressure overall was 1021.8 hPa – the highest for September since 2009.

Over the UK flow was again from the SW quadrant mainly – and stronger than normal with lower pressure than normal over N Scotland.

191.3 h of bright sunshine made this the third sunniest September in the past 60 years.



Extracted from:
Met Office surface analysis, ***0000 GMT 25 September 2018***

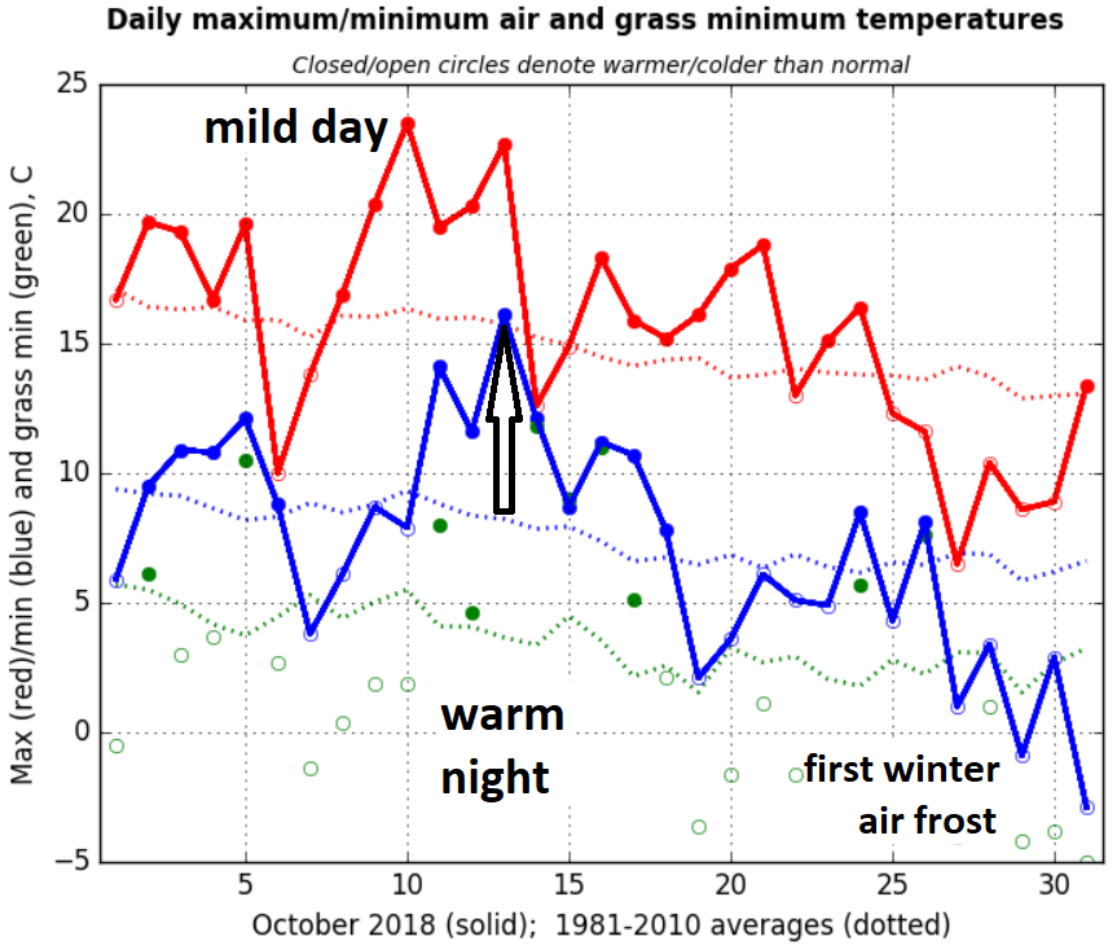
October-November and autumn

Some cold nights but also mild ones in mid-October.

October temperature graph below

October:

12th-13th - unusually warm October night, minimum temperature 16.1C; only 1916, 2005 and 2013 had a warmer night in October since 1908. *(A deep low W of Ireland had drawn a S'ly flow of air from a long way south.)*



November:

A mild month with just 3 air frosts and the seventh in a run of sunny months.

UK – dominant flow from the S. Pressure anomalies for the month: Valentia -8 hPa, Lerwick +4 hPa)

Autumn: The fifth sunniest autumn on record, and the sunniest for 15 years.

December

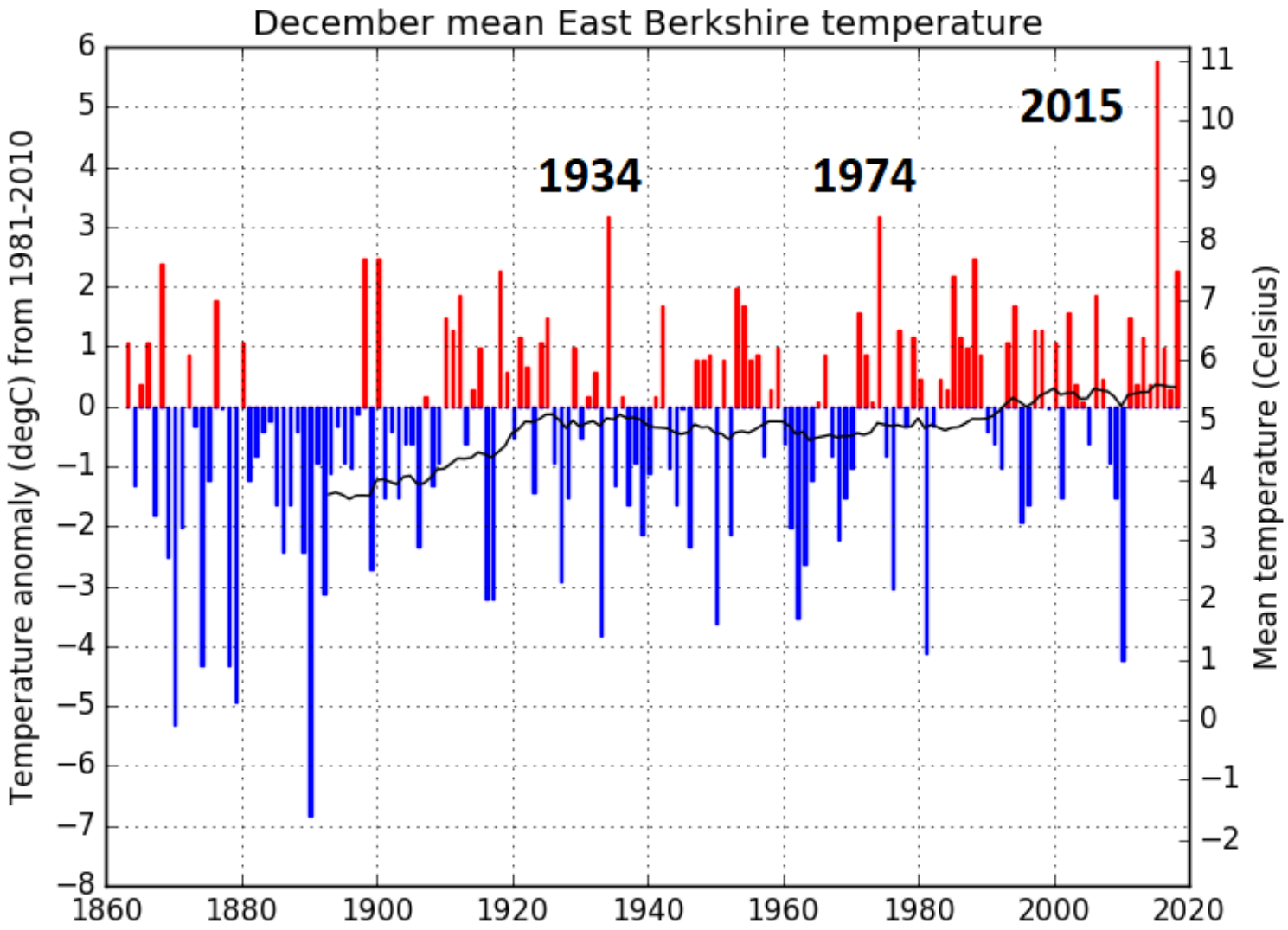
December was mild and wet – and the dullest month of 2018.

The mildest December since the remarkably warm December 2015.

Overnight cloud, especially towards the end of the month, reduced the number of air frosts and led to some mild nights.

UK - Cloudy W'lies then cloudy high pressure in the final week.

The year ended without any autumn/early winter snowfall.



Conclusions

2018 was a year with a lot of variation in the weather in Reading

Memorable features:

- Wintry weather that arrived at the end of winter and in early spring
- A summer drought/dry spell
- Hot weather in July
- A sunny summer and sunny year overall
- Only slightly drier than normal overall
- Almost no thunder after May
- A mild year overall