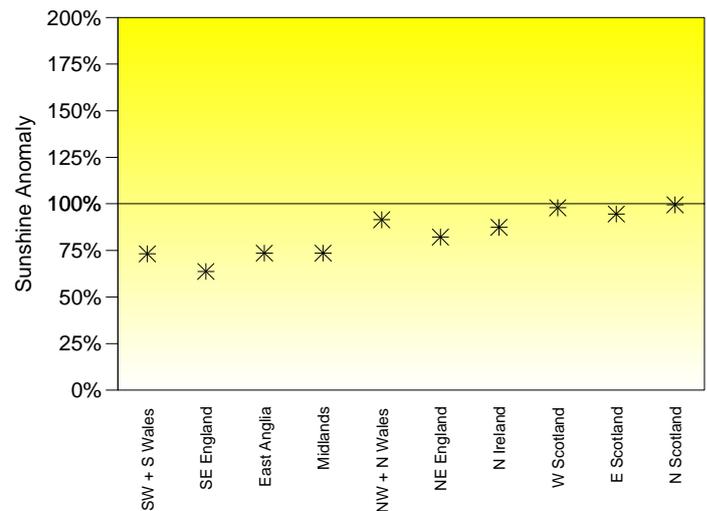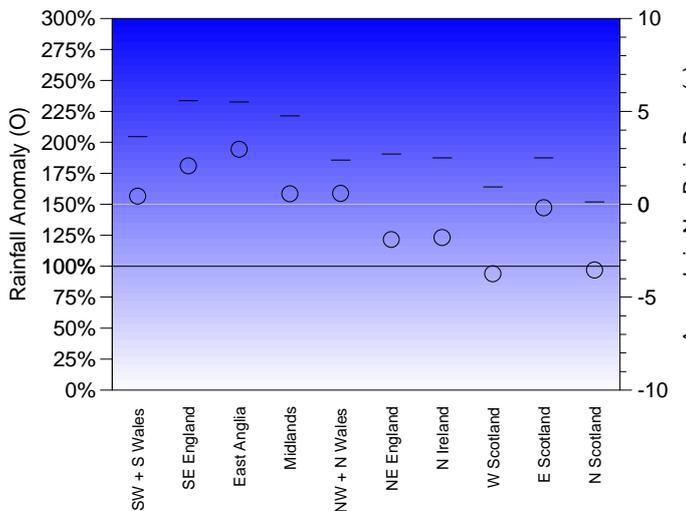## Extremes for June 2016

Hottest:	27.8°C	Porthmadog, Gwynedd, 5th
Coldest:	0.0°C	Kirkwall, Orkney, 2nd
Most Rain:	55.2mm	Winterbourne No 2, West Midlands, 16th
Most Sun:	16.7hrs	Lerwick, Shetland, 5th
Windiest:	58mph	Pembrey Sands, Dyfed, 28th
Warmest:	16.8°C	St James Park, Greater London
Coolest:	10.4°C	Fair Isle, Shetland
Wettest:	182.0mm	Porthmadog, Gwynedd
Driest:	34.0mm	Scilly St. Mary's SAWS, Cornwall
Sunniest:	205.3hrs	Valley, Gwynedd
Dullest:	91.4hrs	Thomastown, County Fermanagh

Despite the long days and abundant sunshine, June only contains the hottest day about 1 year in 4. Much rarer still is for June to be the hottest month. This has occurred just a handful of times in the last 100 years. The reality is that June is rarely very warm and normally experiences temperatures similar to September. Even during the exceptional heat of 1976, June was only as warm as a typical July or August. Characteristic of month end is a wetter regime as winds revert once more from the Atlantic - a phenomena termed 'the Return of the Westerlies or the 'June monsoon'.

June began dry and settled although sunshine (and temperatures) followed a marked west / east divide - as cool north easterly winds brought low cloud in from the North Sea. Just before sunrise on the 2nd, beneath clear skies in Sutherland, Ressallach recorded an air frost (-0.1°C), the months lowest. The 5th was a glorious day nationwide and Porthmadog (Gwynedd) reached 27.8°C (82°F) - the months highest. Whilst the next few days were warm and often sunny, it became increasingly unsettled and thunderstorms broke out somewhere in the UK virtually every day through to the 17th. On the 7th there was flash flooding and lightning damage across the Home Counties, Lothian and Perthshire. In the far north, a storm over Scardroy Lodge, Ross and Cromarty dumped 87.8mm of rainfall in just a few hours. On the 8th torrential rain across the Midlands caused the fire and rescue service to be called to over 400 separate weather related incidents, and on the 12th, heavy rain inundated Gatwick Airport causing damage to the main runway and numerous flight delays. East Anglia bore the brunt the following day and waterlogged tracks stopped train services to Norwich. On the 14th thunderstorms over Manchester led to flight disruption at the airport, 100 homes in Cheltenham were flooded, and part of the roof of the Bullring Shopping Centre in Birmingham collapsed beneath the weight of rainwater. Leicester was badly affected on the 15th and Folkestone on the 17th.

After a brief quieter spell, EU Referendum Day, June 23rd was marked by some violent storms - principally affecting London and the south east. London St James Park recorded 44mm - nearly a months typical rainfall in just 6 hours. Road, rail and underground were all seriously affected. Polling stations in Kingston and Barking were flooded and forced to close, and the London Fire brigade attended more than 400 weather related incidents. The Environment Agency issued 45 flood alerts and 16 red flood warnings. Storms on the 24th were confined to northern Scotland, but returned to Norfolk, Essex and Kent for one final blitz on the 25th. The worst of the months weather was now over, but it remained unsettled - and the 28th was a notably windy day for exposed coasts - with Pembrey Sands (Dyfed) and Needles (Isle of Wight) both recording wind gusts of 58 mph. The same day a tornado also caused damage to properties in Mawdesley, Lancashire.

Whilst daytime temperatures during June were close to normal for most places, it was consistently and exceptionally mild by night. Night time temperatures for Wales averaged 2°C above normal, and for the UK as a whole, no June since at least 1910 has experienced warmer nights. Rainfall was well above average widely, but its predominantly thundery origin produced significant regional - and local variation. London, Manchester, the Midlands and Aberdeenshire all received double their normal June totals - and at various stations, notably St James park, London (133.8mm) it was the wettest June ever - although nowhere did this extend to a region. June was a dull month everywhere except the extreme north of Scotland and north Wales. Many places received a quarter less sunshine than normal. For south east England and for various stations like Heathrow (132.5 hours) and Brize Norton (120.9 hours), it was the dullest June in 100 years.

Heavy rainfall affected Europe at the start of the month. In southern Germany on the 1st, 35mm fell within six hours at Pfarrkirchen. Nearby Passau was flooded to a depth of several metres, and rivers burst their banks at Triftern. In France, the high level of the Seine in Paris forced closure of many promenades, and the town of Nemours, was inundated and had to be evacuated. Holland experienced its wettest June ever - Limburg recording a total of 277mm. In Belgium following stifling heat, and temperatures exceeding 32°C, (90°F) a massive thunderstorm hit the province of Brabant on the evening of the 23rd. There were spectacular lightning displays, violent squalls and golf ball sized hail that cracked car windscreens and peppered roofs.

In the eastern USA, on 23rd-24th, up to 250mm of rain fell in 24 hours across West Virginia triggering catastrophic flooding that caused rivers to overflow, left 32,000 homes without power and 24 dead. Meanwhile, record heat affected the southwest. Phoenix, Arizona, reached 48°C (118°F) on the 23rd, its fifth highest temperature ever, Needles, California 51.5°C (125°F) on the 20th, its hottest June day ever, and Blythe, California, 52°C (126°F) on the 22nd - its hottest ever day.

In India, violent electrical storms across the states of Bihar, Jharkhand, Uttar Pradesh and Madhya Pradesh on the 21st, were responsible for at least 93 deaths. Most of the fatalities were to agricultural field workers struck by lightning. A powerful tornado struck the eastern Chinese city of Yancheng on the 23rd. The storm hit a densely populated area of farms and factories - and flying debris and giant hail left 78 people dead and 500 injured.