

## Extreme Norfolk rainfall, 16 August 2020

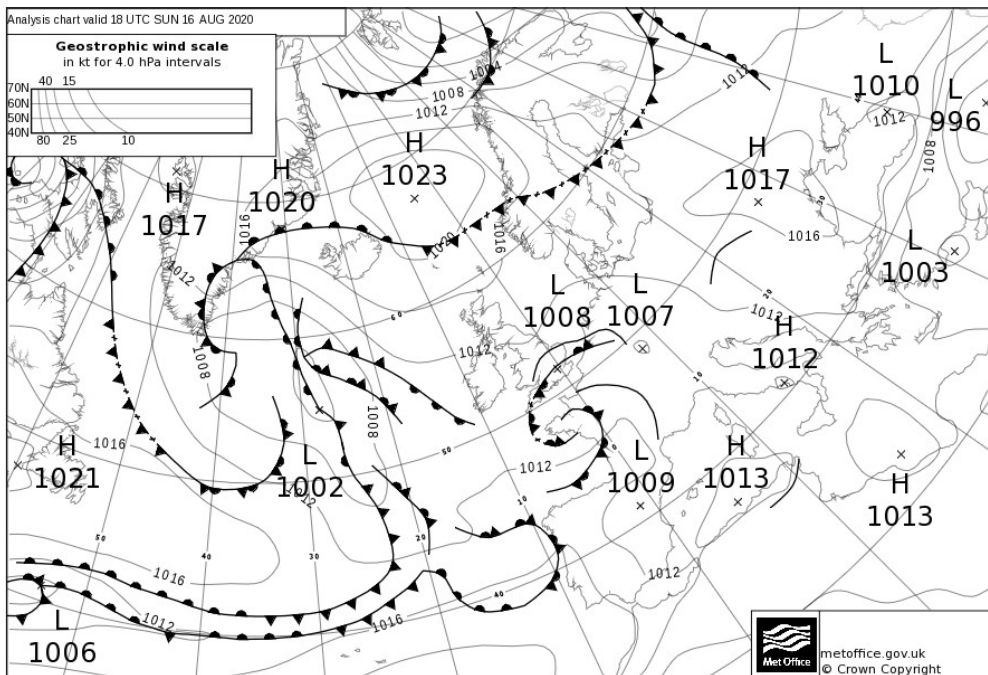
Thunderstorms affected parts of East Anglia on 16th August. A rain-gauge in East Wretham, Norfolk recorded a remarkable daily total of 239.9mm, setting a new UK August daily rainfall record at an individual station.

### Impacts

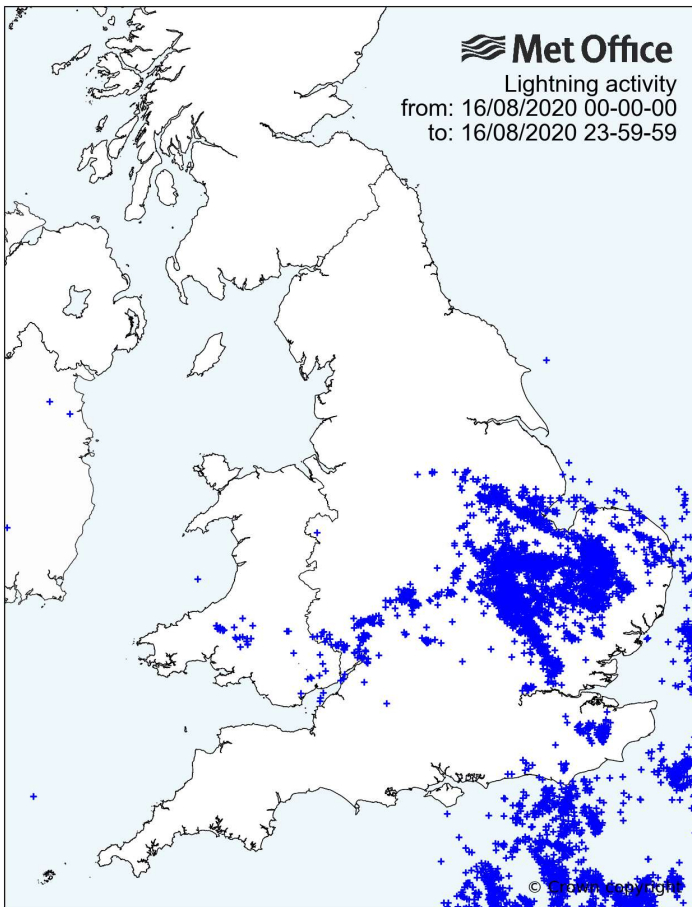
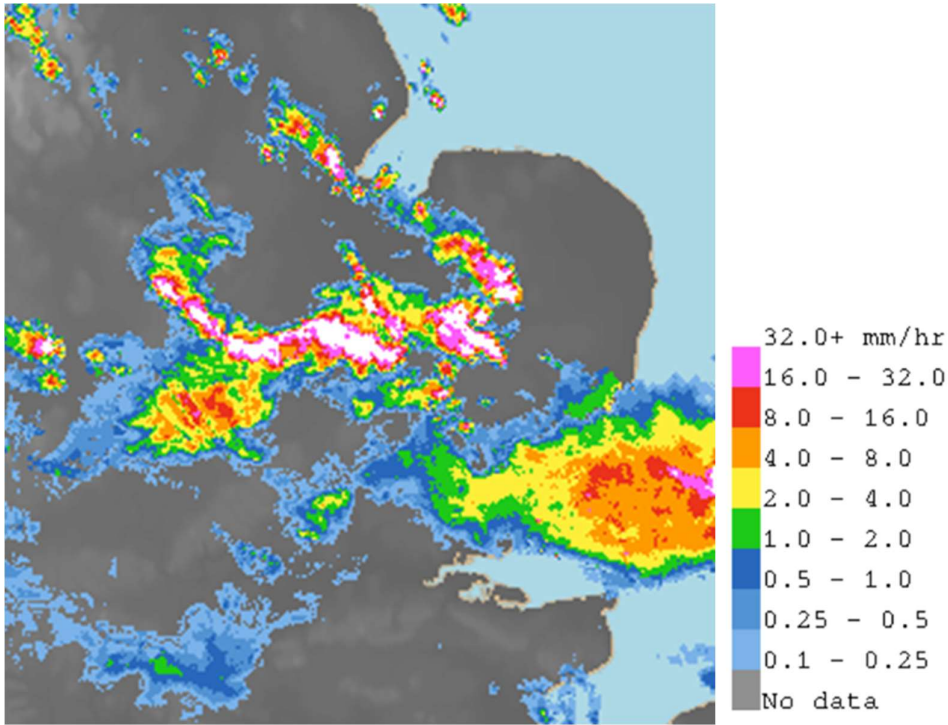
The torrential rainfall caused localised flash-flooding in the nearby town of Watton with several properties affected, and there were other flooding problems more widely across Norfolk from thunderstorms and torrential downpours. However, flood impacts overall from this event were relatively modest and likely to relate to the localised nature of the extreme rainfall, the rural nature of the area and the low-lying topography.

### Weather data

The analysis chart at 1800 UTC 16 August 2020 shows low pressure across southern England with a trough across Norfolk bringing thunderstorms and torrential downpours.

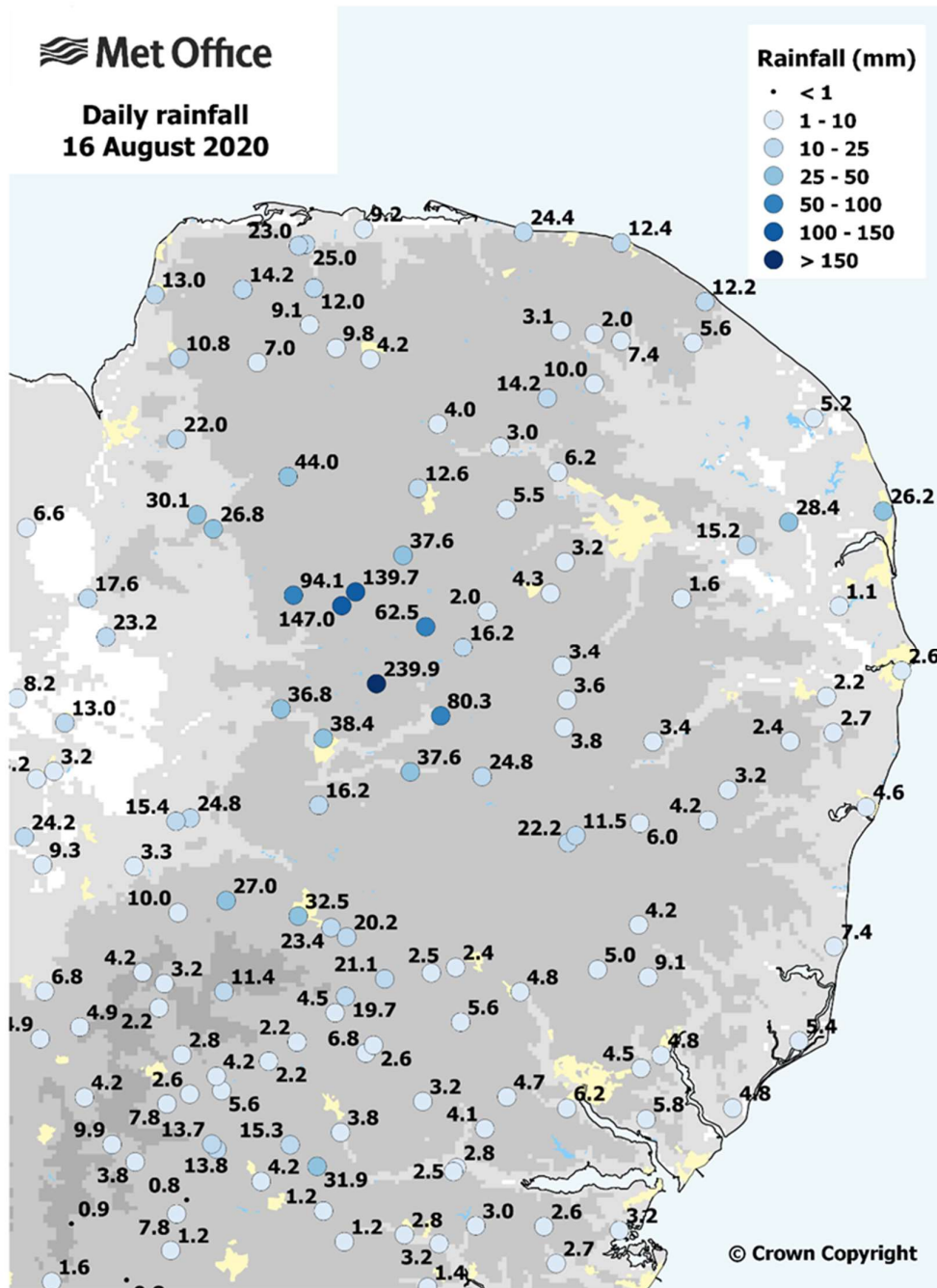


The rain-radar image below at 1530 UTC 16 August 2020 shows some intense downpours across East Anglia and parts of the East Midlands, with localised rainfall rates exceeding 32mm per hour, while the lightning map shows lightning strikes recorded across England on 16 August 2020.



The map below shows daily rainfall totals across East Anglia on 16 August 2020 (09-09 UTC). 50mm to 100mm of rain fell locally in an area of Norfolk between Thetford and Norwich, including 239.9mm at East Wretham. Four unofficial rain-gauges on adjacent farms within a 5km radius recorded 180mm or more, while two other rain-gauges in the registered network at Watton and Saham Toney 10km to the north-west of East Wretham recorded 147.0mm and 139.7mm respectively. The East Wretham rainfall total of 239.9mm set a new UK August daily rainfall

record, exceeding 200.4mm at Otterham, Cornwall on 16th August 2004 during the extreme Boscastle flooding event.



Daily rainfall totals exceeding 200mm remain relatively rare in the UK and the majority have occurred across upland areas of western Britain – the English Lake District in particular – from prolonged frontal rainfall events in the autumn and winter months. However, it is notable that of around 20 such observations since 1961, almost half have occurred in the most recent decade. Historically, one of the most severe flooding events to affect Norfolk occurred in August 1912, when 180 square miles of East Anglia from the Broads to Wymondham (Norfolk) received more than 175mm of rain in 48 hours. The 160.3mm that fell at Norwich on 26 August was reported at the time as the largest amount on record for a rainfall day in eastern England. This event caused widespread flooding and damage across East Anglia.

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