

METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL
EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 GMT ON 24 AUGUST 1977

Between the issue of the previous bulletin (10 August 1977) and 13 August the weather over England and Wales was mainly dry apart from a few showers that occurred in the east on 13th. However, from 14th onwards it became generally unsettled, with rain or showers occurring fairly widely on most days and often being heavy and thundery over the southern half of England and Wales. Large falls were recorded over the southern half of England on 16th and 17th and in South West England on 23rd. The wettest days generally over England and Wales were 16th and 17th August. The 16th was particularly wet in the London area with a fall of 113 mm being recorded at Ruislip. Over Scotland the weather has been more settled during the period (10th to 23rd August), especially in the north west which was dry throughout the period. Rain or showers occurred in some parts of Scotland on 13th and 14th, 19th and 20th and 22nd and 23rd August, although amounts were generally small. The wettest day over Scotland was 14th August. Falls of 15mm or more occurred at Watnall, Nottinghamshire (18mm) on 14th, Boscombe Down, Wiltshire (62 and 35mm) on 16th and 17th respectively, Binbrook, Lincolnshire (32mm) on 18th, Benson, Oxfordshire (26mm) on 19th, Manston, Kent and Culdrose, Cornwall (21mm) on 21st, Manston (24mm) on 22nd and Culdrose (50mm) on 23rd August.

Over most of England and Wales deficits have been decreasing throughout the period although there were small increases over Northern England during the first week and throughout the period in Cumbria. Quite large decreases have occurred over the southern half of England and Wales as a result of the recent heavy rain (a decrease of 59mm has occurred over Avon and Dorset during the period); the Brecon Beacons returning to field capacity. Over virtually the whole of Scotland deficits have been increasing steadily throughout the period. Over most of Wales and the northern half of England composite land use deficits are above average for the end of August and well above in Cumbria, Northumberland and Lancashire. Over the rest of England deficits are mostly below average. Deficits range from approximately 58mm above average in Cumbria to 37mm below average in Avon and Dorset. The largest deficits are at Squires Gate, Lancashire (122 and 132mm respectively, for both short rooted vegetation and composite land use).

Heavy rain over most of Great Britain on 24 August will have caused a further reduction in deficits.

RATES OF SUBSCRIPTION: £10.00 per season (post free)

Apply to: Director-General
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Issued on 25 August 1977

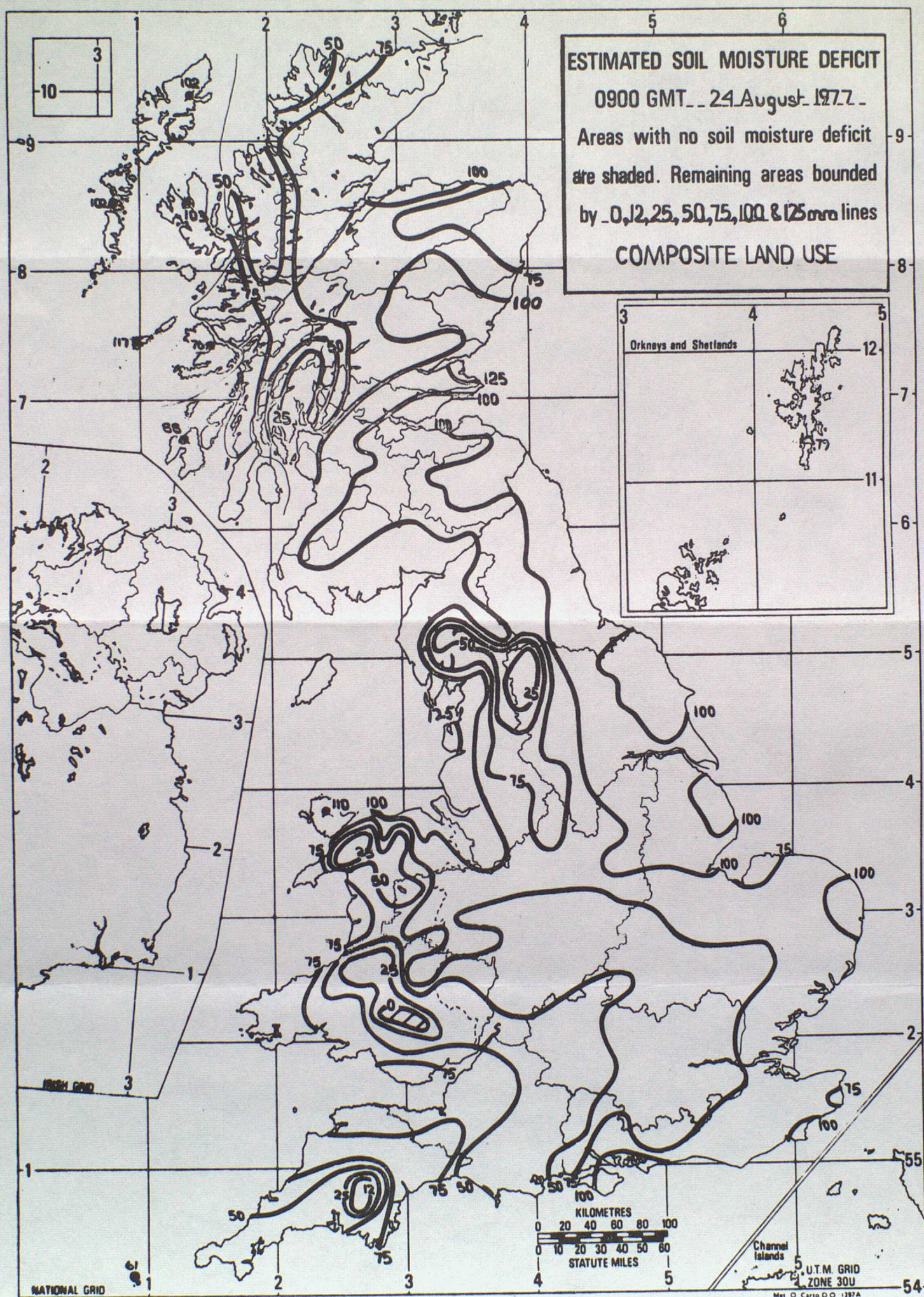
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ESTIMATED SOIL MOISTURE DEFICIT (S.M.D.)

AT 09 GMT ON 24 AUGUST 1977

River Area	Estimated Areal	Change during the week ending 09 GMT on	
	S.M.D. mm	24 August 1977 mm	17 August 1977 mm
Northumbrian	106.1	- 1.7	+ 8.4
Yorkshire	89.5	-12.1	+ 3.0
Trent	87.4	-18.1	+ 1.6
Lincolnshire	103.8	-16.9	+ 6.6
Welland and Nene	76.4	-27.0	+ 2.3
Great Ouse	68.6	-31.6	- 0.6
Norfolk and Suffolk	89.7	-28.2	+ 6.6
Essex	88.2	-23.5	- 1.6
Lee Division	73.9	-17.1	-13.9
Thames Conservancy	59.4	-20.1	-22.6
London Area	65.0	-11.2	-27.8
Kent	86.6	-16.4	- 8.8
Sussex	86.2	- 7.0	-21.3
Hampshire	58.3	-19.4	-27.4
Isle of Wight	109.1	- 5.1	- 5.0
Upper Thames	48.6	-22.5	-24.3
Avon and Dorset	42.3	-24.9	-34.2
Devon	66.6	-21.2	-13.8
Cornwall	44.2	-37.5	-10.6
Somerset	57.5	-22.9	-26.5
Bristol Avon	52.9	-26.0	-26.4
Severn	67.9	-22.3	- 6.3
Wye	64.8	-21.2	-13.7
Usk	49.3	-24.8	-21.1
Glamorgan	53.7	-21.4	-20.5
South West Wales	64.2	-21.1	-12.9
Gwynedd	73.9	-11.3	- 0.3
Dee and Clwyd	77.6	-10.0	+ 1.9
Mersey and Weaver	89.0	- 6.8	+ 4.6
Lancashire	80.9	- 0.9	+ 3.6
Cumbria	101.5	+ 1.5	+ 6.8

N.B. Apart from normal changes these differences also reflect retrospective adjustments after receipt of additional data.



ESTIMATED SOIL MOISTURE DEFICIT

0900 GMT..24 August 1977.

Areas with no soil moisture deficit are shaded. Remaining areas bounded by 0, 12, 25, 50, 75 & 100 mm lines

SHORT ROOTED VEGETATION

