

METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL

EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 GMT ON 21 JULY 1982



Depressions with their associated fronts and thundery troughs continued to bring unsettled weather to many parts of Great Britain during the first part of the period, but a blocking anti-cyclonic situation has developed during the last few days bringing drier weather to all parts of the country with the exception of extreme Northern Scotland.

The wettest day generally was the 14th when thunderstorms affected all parts of the country with the exception of western Scotland; the general value for the 0900-0900 GMT rainfall day on the 14th was 9.6 mm over England and Wales and 16.2 mm over Scotland.

There were many storms during the first half of the period and among the reports of heavy rainfall so far received are the following:-

9th:	47.3 mm	fell in 1 hour starting 0751 GMT at Cardiff Airport
11th:	54.8 mm	fell in 24 hours starting 0900 GMT at Burrington (SW England)
12th:	38.1 mm	fell in 1 hour starting 0900 GMT at Yeovilton (SW England)
12th:	55.1 mm	fell in 12 hours starting 0210 GMT at Hurn Airport (Bournemouth)
14th:	36.5 mm	fell in 24 hours starting 0900 GMT at Eskdalemuir (Dumfries)
14th:	22.5 mm	fell in 14 minutes starting 1151 GMT at Stansted (Essex)
14th:	23.3 mm	fell in 30 minutes starting 0950 at Brize Norton (Oxfordshire)
14th:	25.9 mm	fell in 90 minutes starting 1335 at Shawbury (Shropshire)

The frequency and severity of storms affecting individual stations during the first part of the period decided whether a place had more or less than the average rainfall, but generally, with the exception of high ground, most places to the west of a line from the Mersey to the Isle of Wight had more than the average rainfall during the period, while with the exception of North East Scotland, the Cheviots and the Pennines most places east of the line had less than the average. Individual reports received ranged from 3% of Average at Coltishall in East Anglia to over 300% of Average at Yeovilton and Hurn.

Soil moisture deficits are near or below average in most River Board areas in England and Wales, the exceptions which now have above average deficits are Norfolk and Suffolk, Essex, Kent, Sussex, Wye, South West Wales and Gwynedd.

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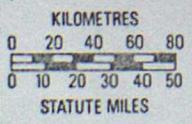
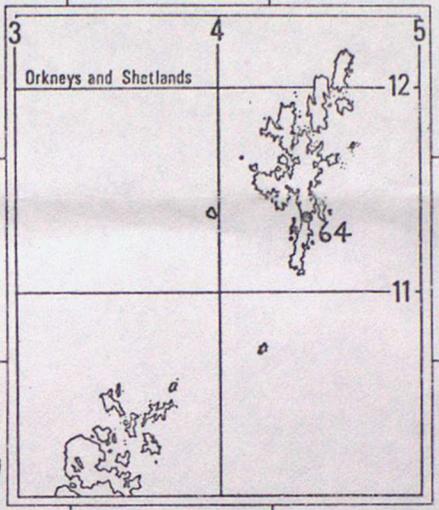
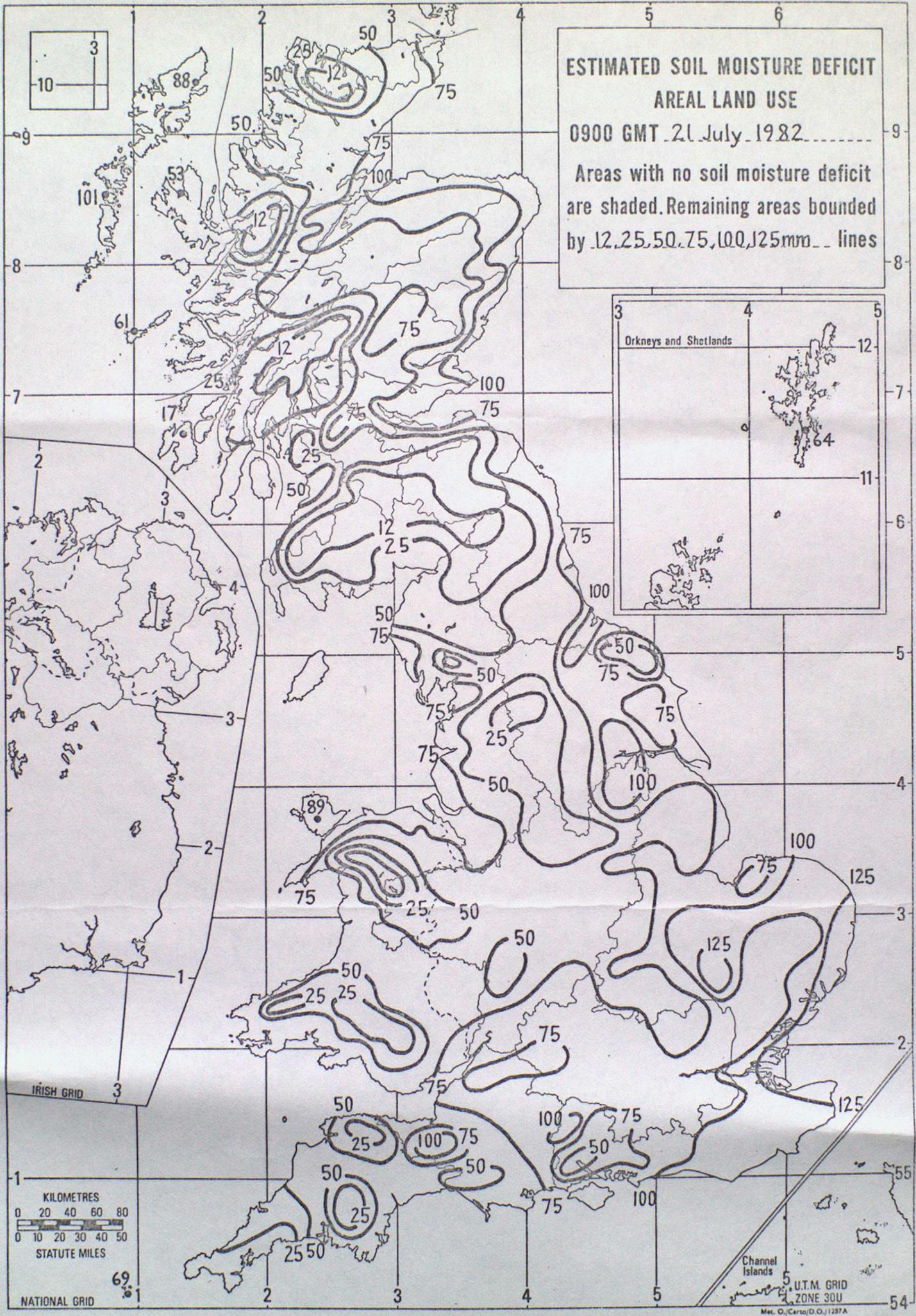
ESTIMATED SOIL MOISTURE DEFICIT (S.M.D) AT 09 GMT ON 21 JUL 1982

River Area	Areal Land Use Estimated S.M.D. mm	Change during the week ending 09 GMT on	
		21 July 82 mm	14 July 82 mm
Northumbrian	56.5	+ 0.7	+ 16.3
Yorkshire	63.1	+ 5.5	+ 15.4
Trent	63.7	+ 8.0	+ 21.0
Lincolnshire	82.9	+ 11.2	+ 19.3
Welland and Nene	86.9	+ 6.4	+ 23.6
Great Ouse	85.8	+ 6.1	+ 13.1
Norfolk and Suffolk	100.4	+ 9.2	+ 18.5
Essex	108.3	+ 2.2	+ 21.3
Lee Division	78.3	+ 0.8	+ 19.6
Thames Conservancy	75.8	+ 5.1	+ 6.4
London Area	88.8	+ 5.4	+ 10.7
Kent	113.9	+ 3.6	+ 9.0
Sussex	94.4	+ 6.9	+ 11.6
Hampshire	69.6	+ 5.1	- 1.4
Isle of Wight	81.7	+ 11.8	+ 0.1
Upper Thames	83.9	- 0.7	+ 5.9
Avon and Dorset	71.1	+ 8.2	- 9.9
Devon	49.7	+ 18.0	- 22.0
Cornwall	28.8	+ 15.5	- 12.7
Somerset	59.6	+ 15.2	- 27.5
Bristol Avon	69.8	+ 11.5	- 16.9
Severn	61.9	- 3.1	+ 10.9
Wye	67.2	+ 3.1	+ 0.6
Usk	63.3	+ 14.2	- 11.8
Glamorgan	52.8	+ 9.8	- 15.3
South West Wales	44.4	- 8.6	- 4.6
Gwynedd	49.4	- 0.5	- 0.6
Dee and Clwyd	49.8	- 2.3	+ 7.2
Mersey and Weaver	56.4	+ 6.6	+ 10.9
Lancashire	39.3	+ 0.3	+ 9.2
Cumbria	39.3	- 10.5	+ 9.9

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

**ESTIMATED SOIL MOISTURE DEFICIT
AREAL LAND USE
0900 GMT 21 July 1982**

Areas with no soil moisture deficit are shaded. Remaining areas bounded by 12, 25, 50, 75, 100, 125mm. lines



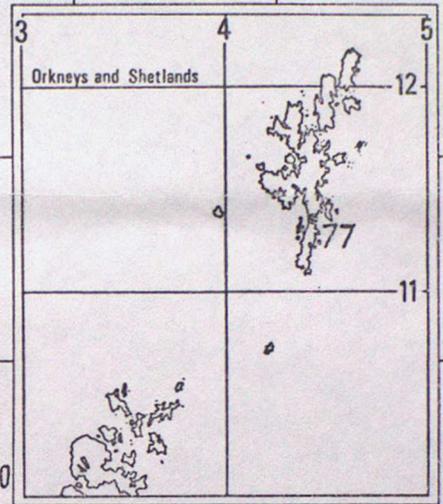
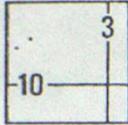
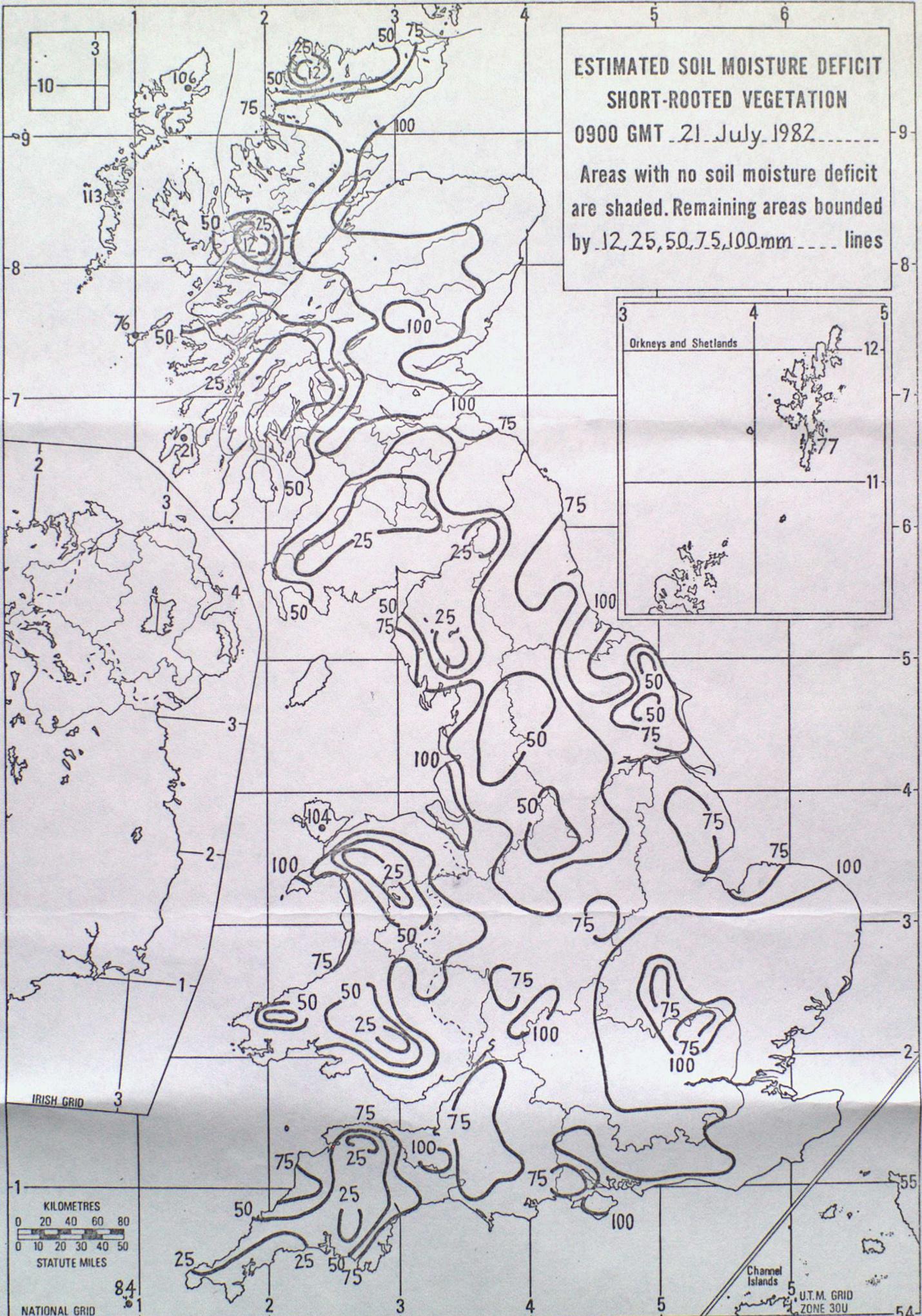
IRISH GRID
NATIONAL GRID

Channel Islands
U.T.M. GRID
ZONE 30U

Met. O., Carto./D.O./1237A

**ESTIMATED SOIL MOISTURE DEFICIT
SHORT-ROOTED VEGETATION
0900 GMT 21 July 1982**

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



NATIONAL GRID

U.T.M. GRID

Met. O./Caro./D.O./1297A