METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 ON 3 JANUARY 1979

The last 10 days of December continued the disturbed weather which had been apparent earlier in the month. Snowfall occurred widely on 20 and 21 December but amounts were not generally large. Snowfall in the Midlands on 23 December began a further spell of wet, unsettled weather. Precipitation was particularly heavy in northern England and southern Scotland from 24th to 28th. The precipitation became snowy in Scotland on 27th and in northern England on 28th. By 30th the snow had moved south to cover most of the country, with substantial depths in many places. The first few days of January were mainly dry but heavy snowfall occurred in western Scotland on 1st and north-west England on 1st-2nd.

Following the prolonged dry spell in late summer and autumn over England and Wales, precipitation was much above average in December and it was, in fact, the wettest December over the two countries since 1934.

Where snow lies, the precipitation within the cover will not yet have contributed to reduction of soil moisture deficit and deficit values shown on the maps will have been artificially reduced. If a rapid thaw occurs, much of the snow melt may appear as surface run-off without contributing to reduction of soil mositure deficit.

In general, snow water equivalents at 0900 on 3 January were between 5 and 10 mm over much of lowland parts of eastern, southern England and much of Scotland. Amounts were small, even negligible, in west and south Midland districts of England, on west coasts of Wales and Scotland and on the south coast of Cornwall. Reports from upland areas were few but amounts exceeded 15 mm on the Moors in south-west England, the Pennines and Lake District, in an area around the Wash, in the Vale of York and Durham and over much of upland Scotland.

Areal composite land-use soil moisture deficits were still well above average in Essex, Thames, Kent, Bristol, Avon and Somerset rivers.

RATES OF SUBSCRIPTION: £15.00 per season (post free)

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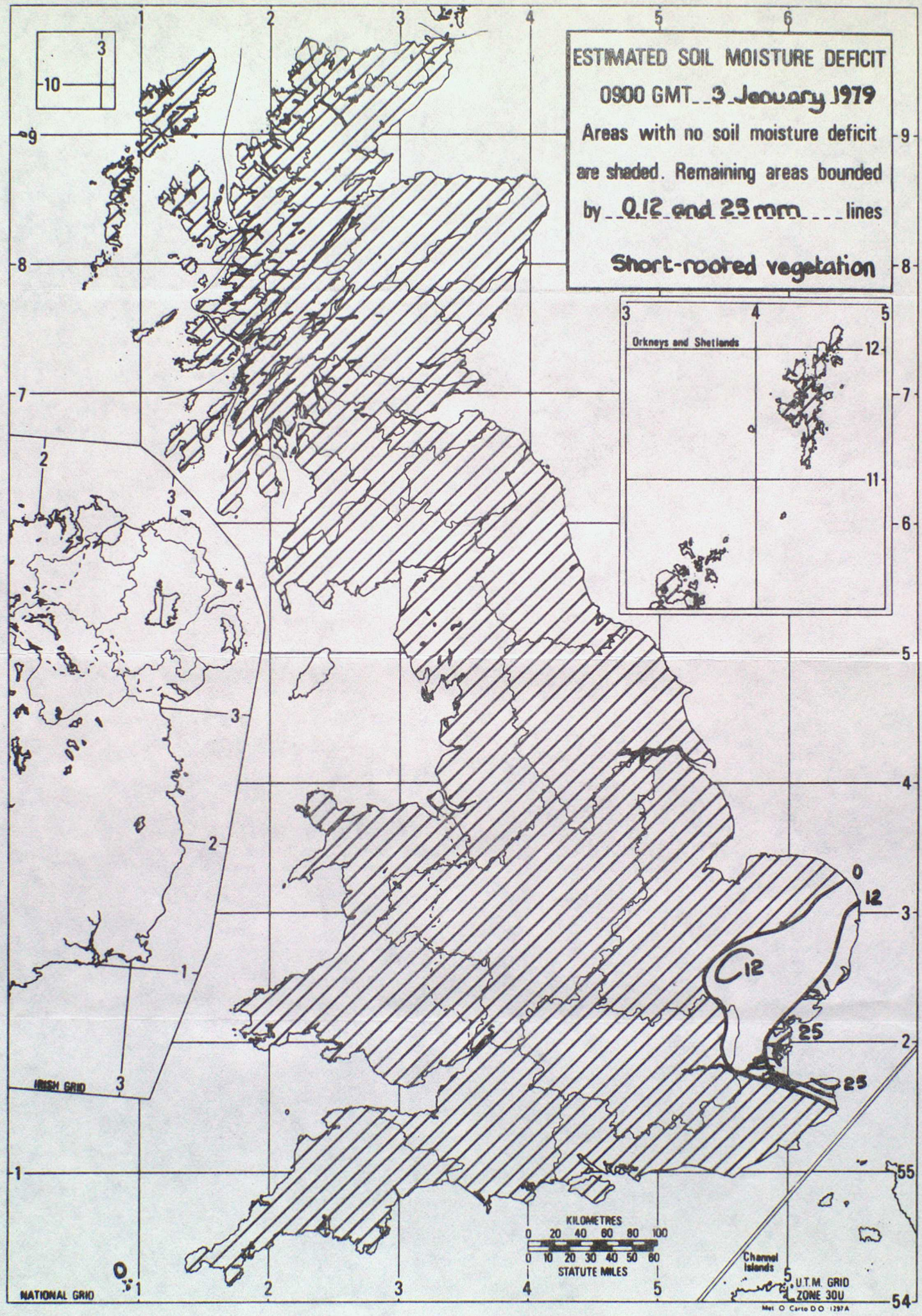
Issued on 4 January 1979

ESTIMATED SOIL MOSITURE DEFICIT (S.M.D.)
AT 09 GMT ON ~~28~~ 3 JAN 1979 JUNE 1978

River Area	Estimated Areal S.M.D. mm	Change during the week ending 09 GMT on 3 Jan 79 mm	27 Dec 78 mm
Northumbrian	0.0	0.0	- 3.4
Yorkshire	0.0	- 3.2	- 8.5
Trent	0.0	- 3.0	- 8.6
Lincolnshire	0.4	- 8.3	- 18.3
Welland and Nene	7.4	- 10.5	- 20.0
Great Ouse	17.4	- 13.9	- 17.7
Norfolk and Suffolk	17.6	- 19.3	- 12.8
Essex	44.0	- 16.1	- 13.2
Lee Division	25.6	- 12.9	- 13.8
Thames Conservancy	17.2	- 9.4	- 15.5
London Area	19.1	- 11.6	- 12.7
Kent	28.3	- 13.9	- 12.7
Sussex	11.5	- 7.6	- 14.2
Hampshire	2.6	- 7.0	- 10.5
Isle of Wight	18.4	- 8.1	- 16.6
Upper Thames	14.2	- 9.8	- 15.4
Avon and Dorset	3.0	- 6.3	- 15.4
Devon	6.8	- 3.1	- 9.9
Cornwall	0.2	+ 0.1	- 10.4
Somerset	6.1	- 4.4	- 6.7
Bristol Avon	10.7	- 8.6	- 8.0
Severn	4.3	- 6.0	- 12.6
Wye	0.7	- 2.4	- 10.0
Usk	0.1	- 0.4	- 4.0
Glamorgan	0.2	+ 0.2	- 2.4
South West Wales	0.1	+ 0.1	- 0.6
Gwynedd	0.0	0.0	- 0.3
Dee and Clwyd	0.0	0.0	- 0.3
Mersey and Weaver	0.0	0.0	- 0.3
Lancashire	0.0	0.0	- 0.3
Cumbria	0.0	0.0	- 0.3

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


ESTIMATED SOIL MOISTURE DEFICIT
0900 GMT 3 January 1979
Areas with no soil moisture deficit are shaded. Remaining areas bounded by 0.12 and 25 mm lines
Short-rooted vegetation
Orkneys and Shetlands
0
12
C12
25
25
KILOMETRES
0 20 40 60 80 100
0 10 20 30 40 50 60
STATUTE MILES
Channel Islands
U.T.M. GRID ZONE 30U
IRISH GRID
NATIONAL GRID
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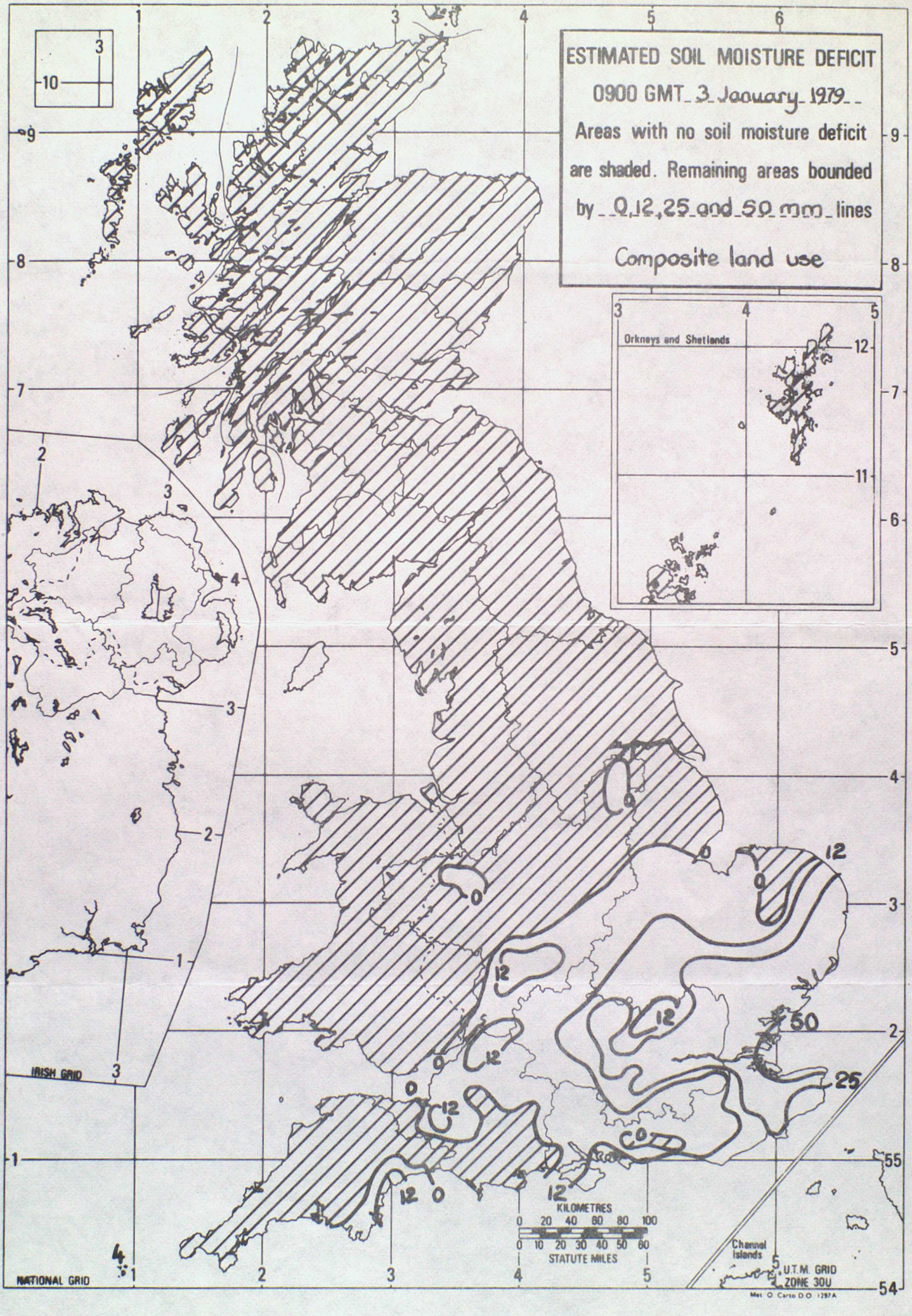
ESTIMATED SOIL MOISTURE DEFICIT
0900 GMT 3 January 1979
Areas with no soil moisture deficit are shaded. Remaining areas bounded by 0, 12, 25 and 50 mm lines
Composite land use
Orkneys and Shetlands
IRISH GRID
NATIONAL GRID
KILOMETRES
0 20 40 60 80 100
0 10 20 30 40 50 60
STATUTE MILES
Channel Islands
U.T.M. GRID ZONE 30U
Met O Carto D.O. 1297A