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CLIMATOLOGICAL MEMORANDA NO. 43.



1931-60 Monthly and annual maps of mean daily maximum and mean daily minimum temperature, and of average summer and winter temperature over Great Britain and Northern Ireland.

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The accompanying maps are based on data given in "Averages of Temperatures for Great Britain and Northern Ireland, 1931-60", M.O.735.

The data were obtained from daily readings at 187 stations of maximum and minimum thermometers exposed in Stevensons screens over short grass, the bulbs of the thermometers being approximately 4 feet above ground level. The readings were made either once daily at 9h G.M.T. (exceptionally at 21h) or twice during the 24 hours, at 9h and 21h G.M.T., when the absolute extremes were selected. The averages refer exclusively to the period 1931-60, values for any missing intervals, in no case exceeding seven years in all, having been computed to complete a record by reference to the nearest station with comparable values. For a few stations minor adjustments have been made for small changes in site or changes in the hour of observation but this has not been generally possible.

In order to make the maps less complicated the usual practice was adopted of adding 1°C for each 500 ft. of altitude to the station values before plotting, the variation with altitude being assumed linear. Thus to make an estimate for any given place the user will need to subtract 1°C for each 500 ft of altitude from the interpolated value obtained from one or other of the maps.

The summer is taken as the months June, July, August and the winter as December, January, February. The mean temperature is taken as  $\frac{1}{2}(\text{max} + \text{min})$ .

Similar maps of average daily maximum and average daily minimum temperatures for the period 1921-50 are available for comparison in Climatological Branch Memoranda No.3, and maps for the period 1901-30 are included in the Climatological Atlas of the British Isles 1952 M.O.488, published by H.M. Stationery Office. Averages for periods from 10 to 30 years ending in 1930 were published in

M.O. Maps 3A

M.O.364, and for periods ending in 1935 in M.O.407.

Comparison of the 1931-60 averages of daily mean temperature,  $\frac{1}{2}(\text{max} + \text{min})$ , with those of the previous 30 year period, 1921-50, shows that over the year as a whole the averages for the two periods are about the same, but that mid-winter temperatures, (January), are inclined to be a little lower, and that late spring and early summer temperatures, (April-June) a little higher. If, however, the 1931-60 averages are compared with those for 1901-30 it will be noted that they are higher every month than averages for the latter period except during January and February. Table I gives the average monthly and annual mean daily temperatures at various stations during the 30 year periods 1901-30, 1906-35, 1921-50, and 1931-60 and Table II may be used to convert degrees Celsius (Centigrade) to degrees Fahrenheit.

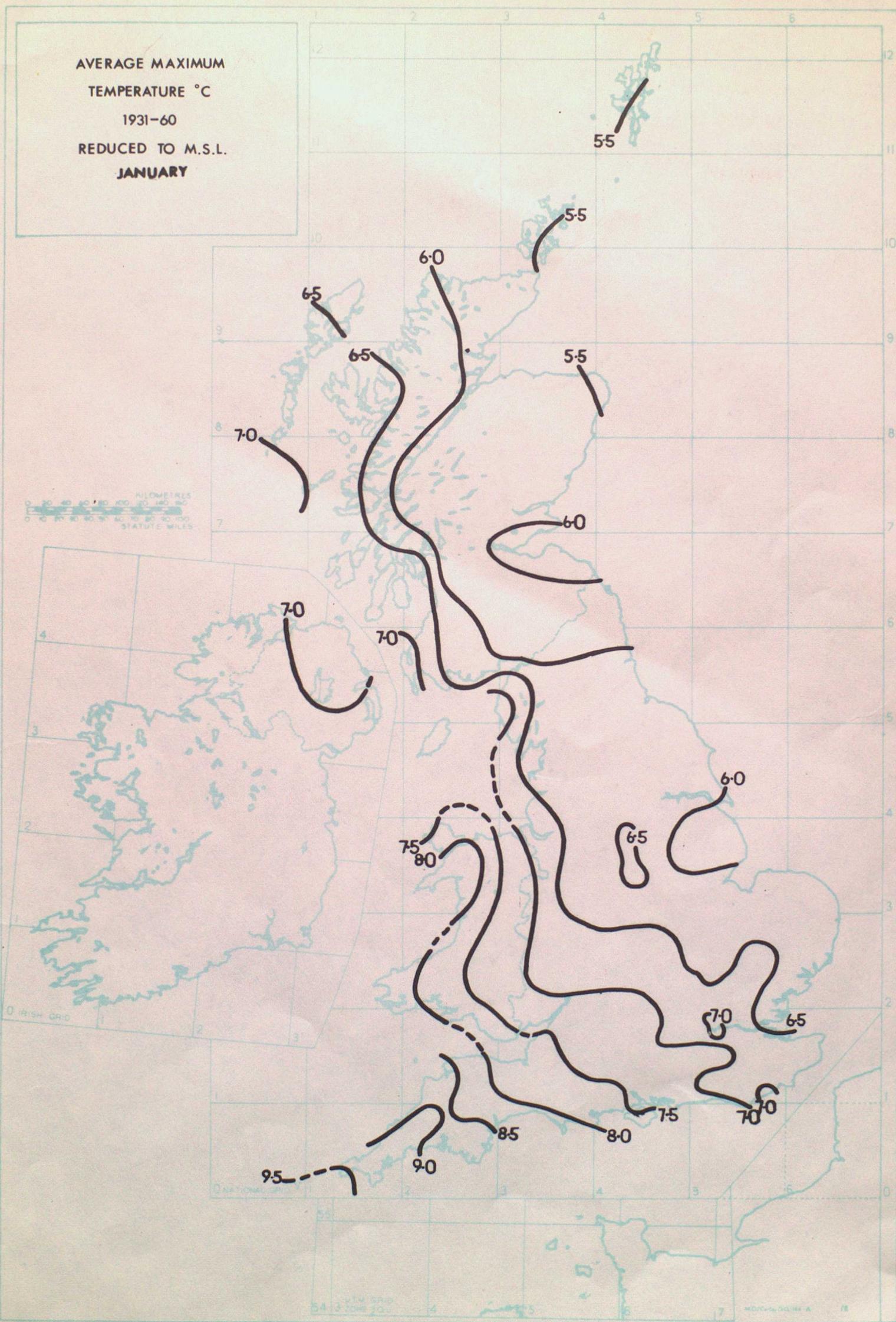


3 8078 0002 6316 2

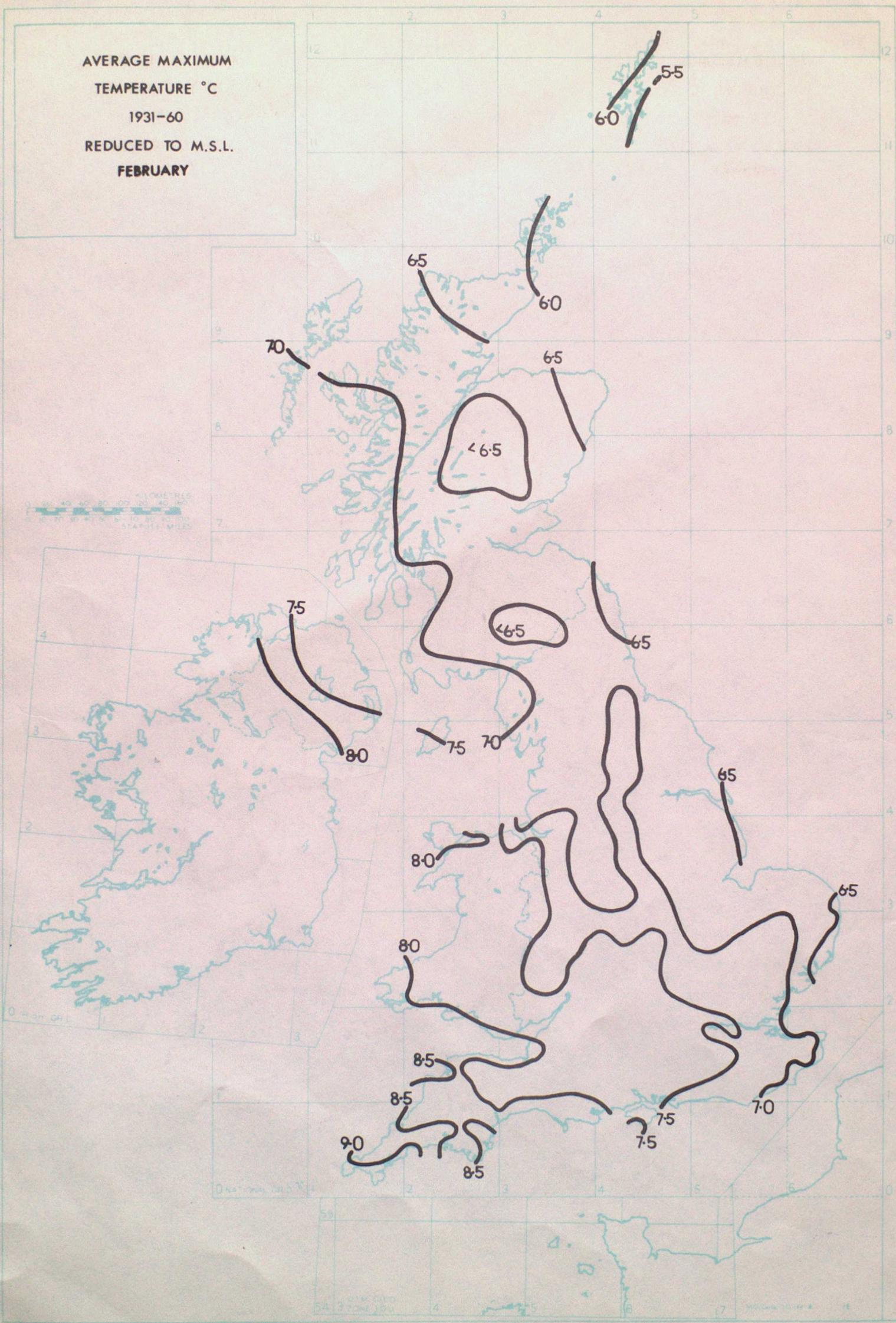
Table I - Comparison of averages of mean temperature for different periods

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
<b>Eastbourne</b>													
1901-30	5.4	5.2	6.4	8.3	11.8	14.1	16.2	16.4	14.6	11.6	7.7	6.2	10.3
1906-35	5.4	5.2	6.2	8.3	11.9	14.3	16.2	16.6	14.7	11.7	7.8	6.2	10.4
1921-50	5.2	5.1	6.5	8.9	11.8	14.8	16.8	16.9	15.2	11.8	8.1	5.7	10.6
1931-60	4.7	4.6	6.4	9.0	12.0	14.9	16.8	17.1	15.3	11.9	8.3	6.0	10.6
<b>Kew</b>													
1901-30	4.7	4.8	6.2	8.4	12.5	15.0	17.1	16.5	14.1	10.5	6.4	5.2	10.1
1906-35	4.7	4.8	6.2	8.4	12.6	15.3	17.2	16.8	14.2	10.6	6.6	5.3	10.2
1921-50	4.5	4.7	6.6	9.1	12.4	15.7	17.7	17.1	14.6	10.7	6.9	4.9	10.4
1931-60	4.2	4.4	6.6	9.3	12.5	15.9	17.6	17.2	14.8	10.8	7.3	5.2	10.5
<b>Oxford</b>													
1901-30	4.4	4.6	6.1	8.2	12.1	14.4	16.6	16.0	13.7	10.3	6.2	4.8	9.8
1906-35	4.5	4.5	6.0	8.3	12.2	14.6	16.6	16.3	13.8	10.3	6.3	4.9	9.8
1921-50	4.2	4.5	6.4	8.9	11.9	15.1	17.1	16.7	14.4	10.4	6.7	4.6	10.1
1931-60	3.7	4.2	6.4	9.1	12.0	15.3	17.1	16.9	14.4	10.5	7.0	4.9	10.1
<b>Sheffield</b>													
1901-30	4.3	4.2	5.4	7.5	11.1	13.6	15.7	15.3	13.1	9.8	6.2	4.6	9.2
1906-35	4.3	4.3	5.4	7.6	11.2	13.8	15.8	15.5	13.3	9.8	6.3	4.7	9.3
1921-50	4.0	4.0	5.8	8.1	11.1	14.3	16.4	15.8	13.7	10.1	6.6	4.7	9.6
1931-60	3.6	3.8	5.7	8.4	11.3	14.5	16.3	16.0	13.8	10.2	6.9	4.9	9.6
<b>Morpeth (Cockle Park)</b>													
1901-30	3.2	3.2	4.3	6.1	9.1	11.8	13.9	13.6	11.4	8.5	5.1	3.6	7.8
1906-35	3.3	3.4	4.3	6.2	9.2	11.9	14.1	13.8	11.5	8.6	5.2	3.8	7.9
1921-50	3.1	3.3	4.8	6.7	9.2	12.4	14.6	14.0	12.1	8.8	5.5	3.8	8.2
1931-60	2.6	3.0	4.7	6.9	9.4	12.5	14.5	14.1	12.1	9.0	5.8	4.0	8.2

AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
JANUARY



AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
FEBRUARY

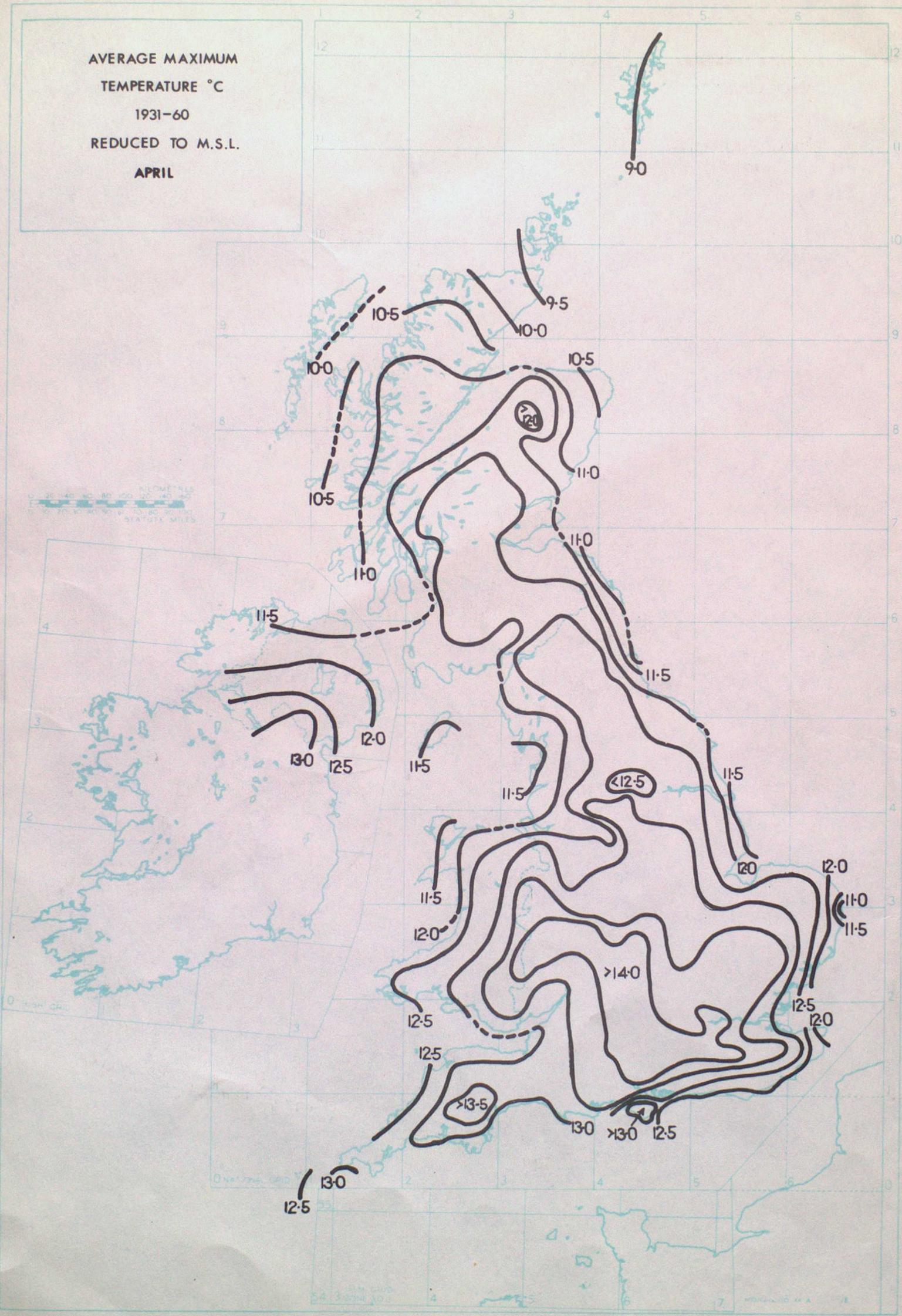


AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
MARCH

0 20 40 60 80 100 120 140 160  
KILOMETRES  
0 10 20 30 40 50 60 70 80 90 100  
STATUTE MILES



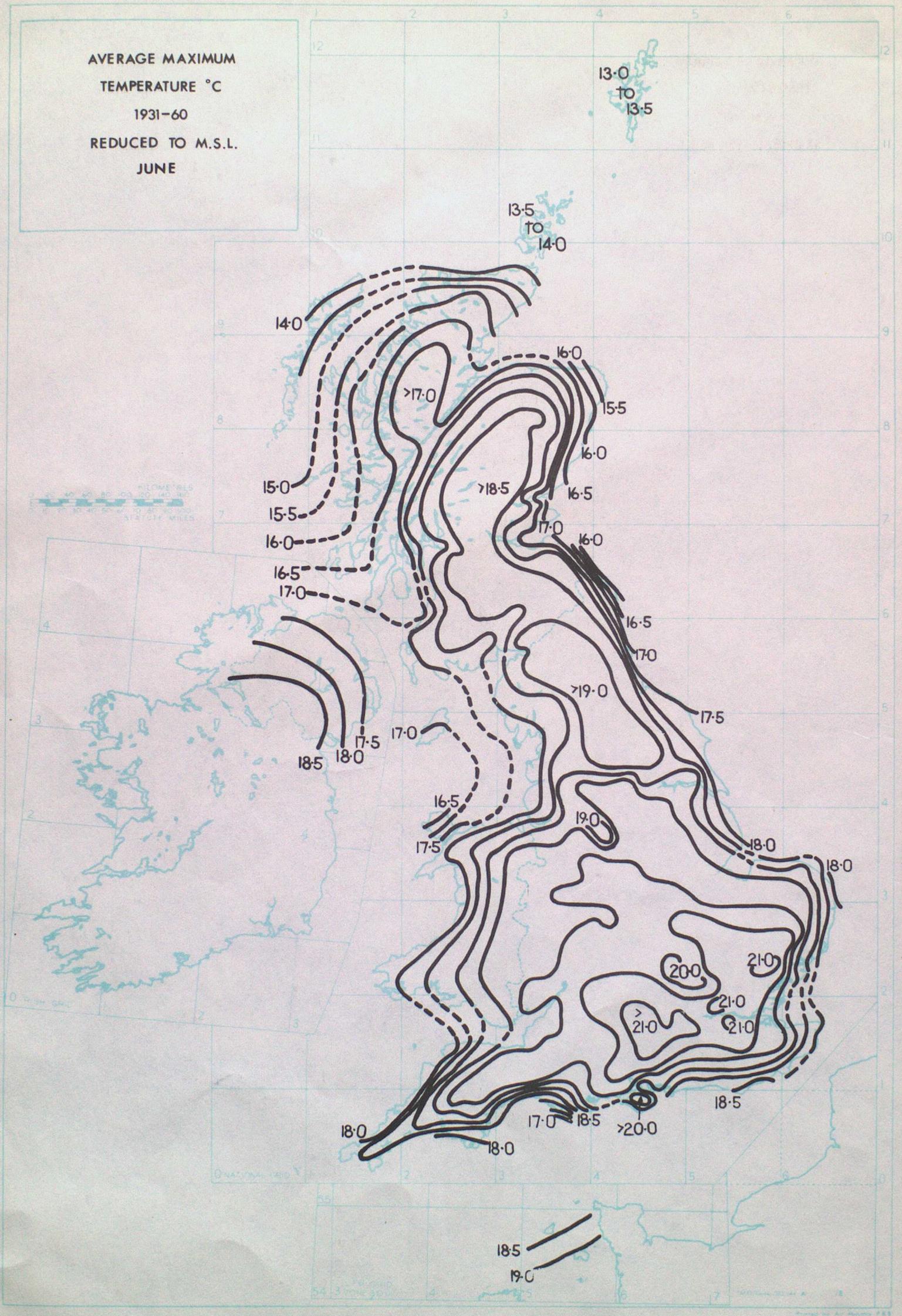
AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
APRIL



AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
MAY

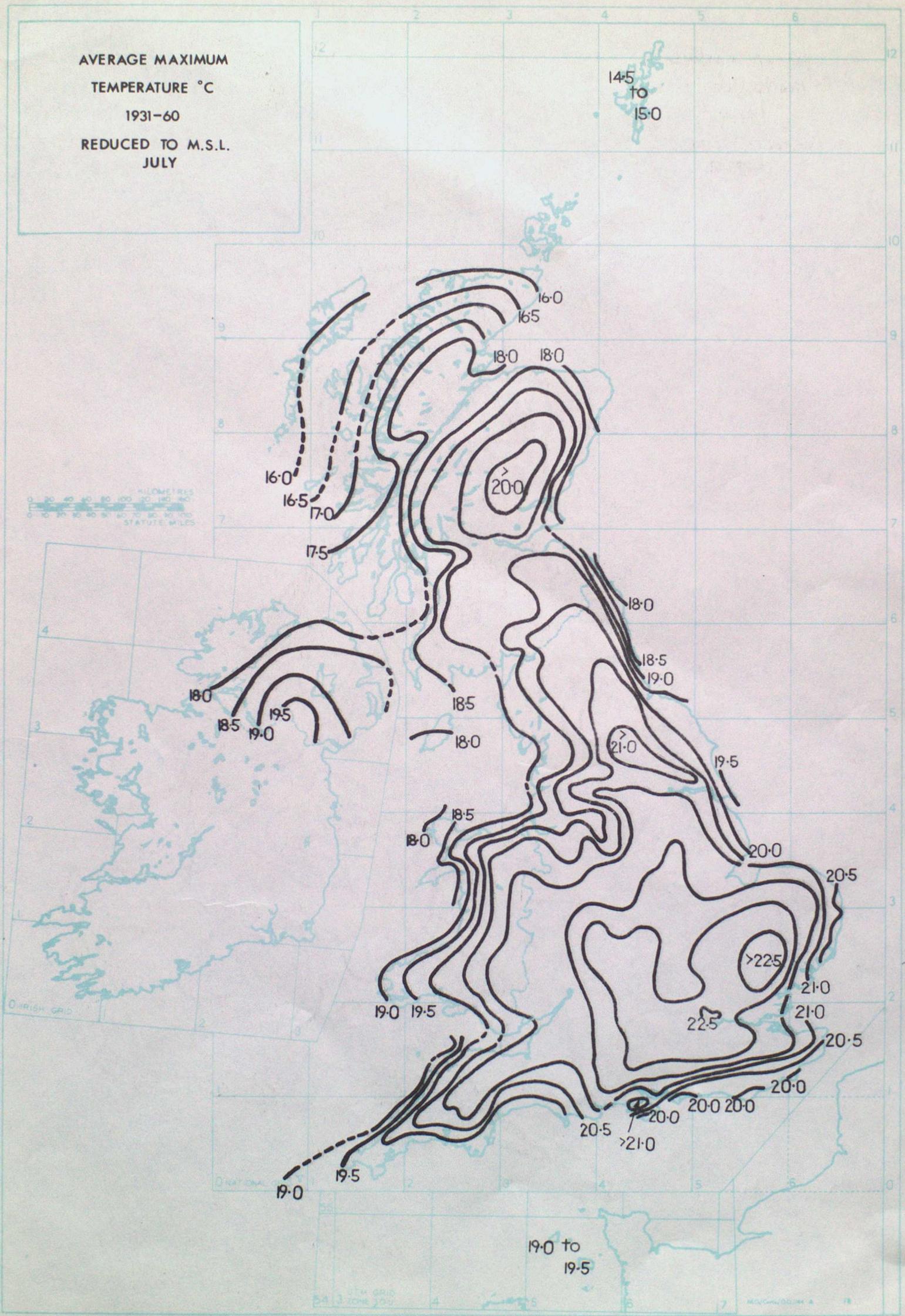


AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
JUNE

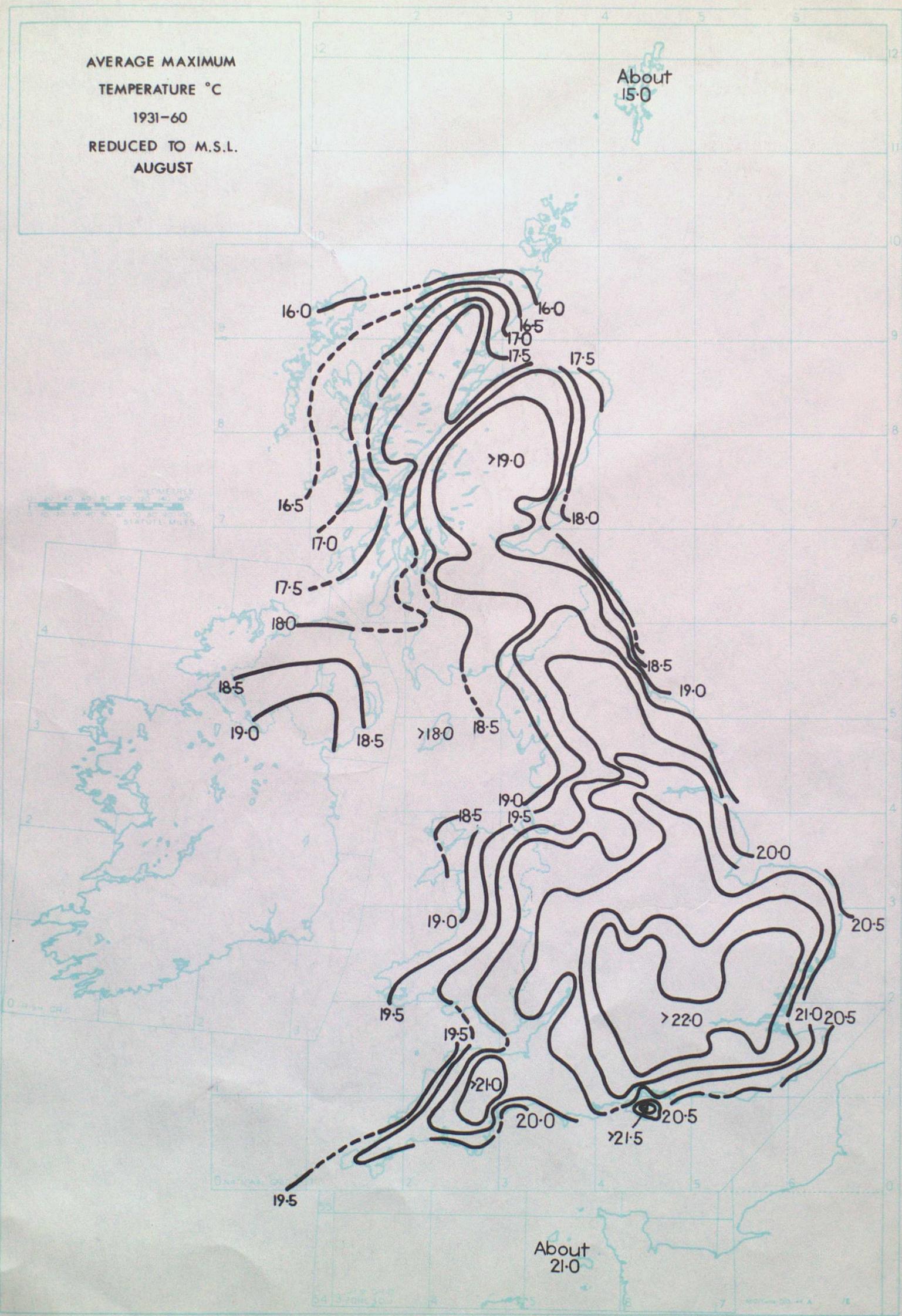


18.5 ———  
19.0 - - - -

AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
JULY

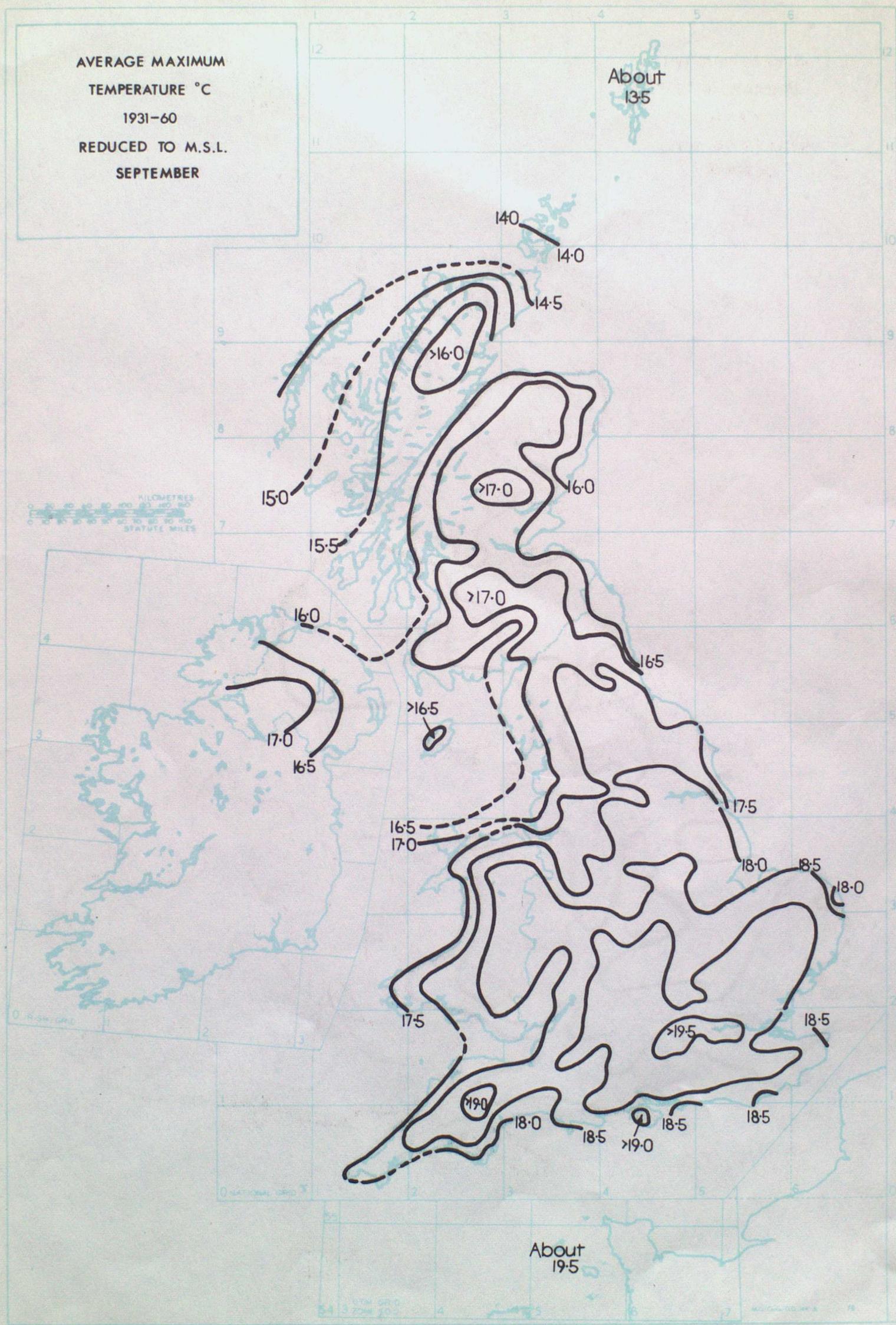


AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
AUGUST

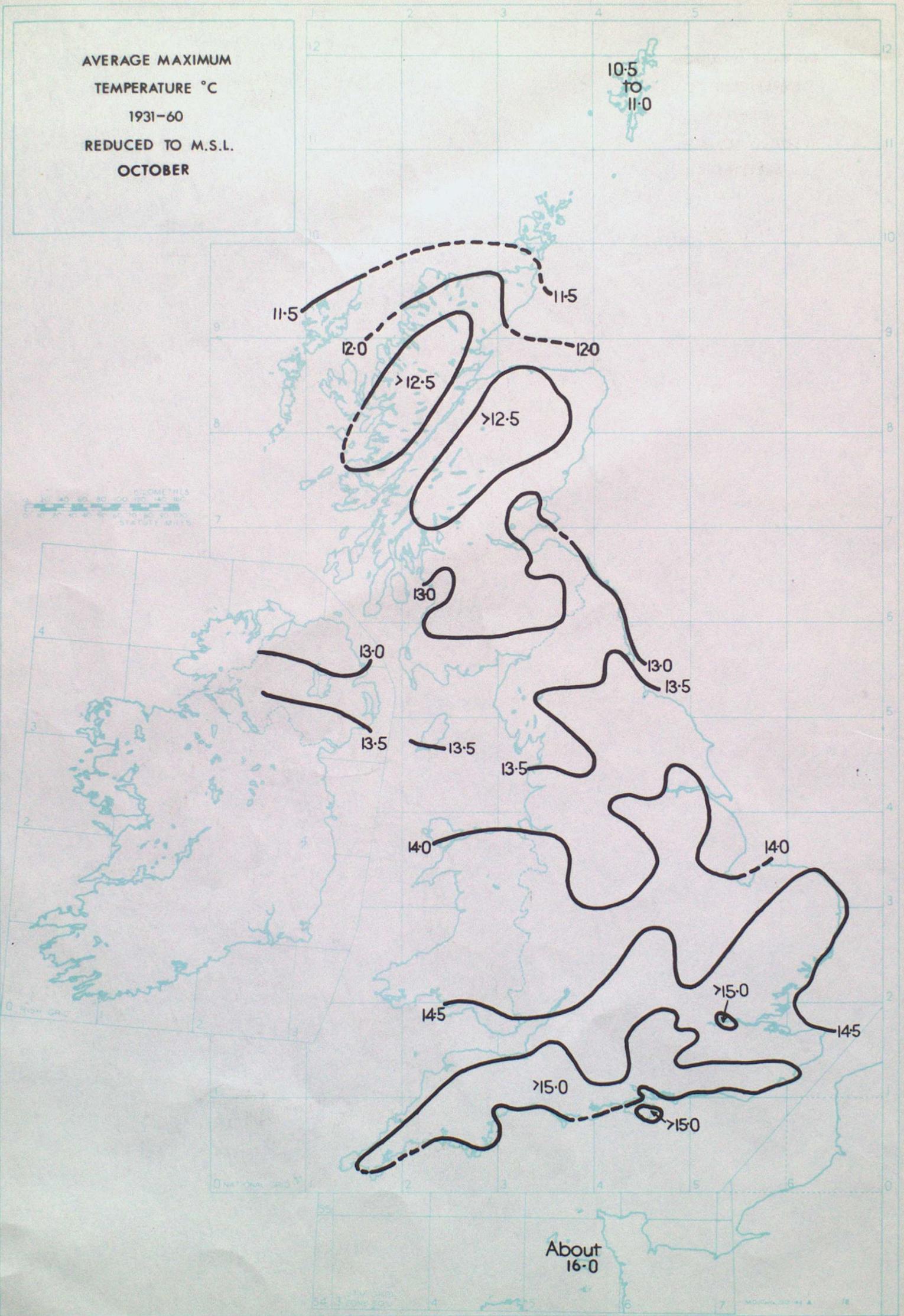


AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
SEPTEMBER

KILOMETRES  
0 20 40 60 80 100 120 140 160 180 200  
STATUTE MILES  
0 10 20 30 40 50 60 70 80 90 100



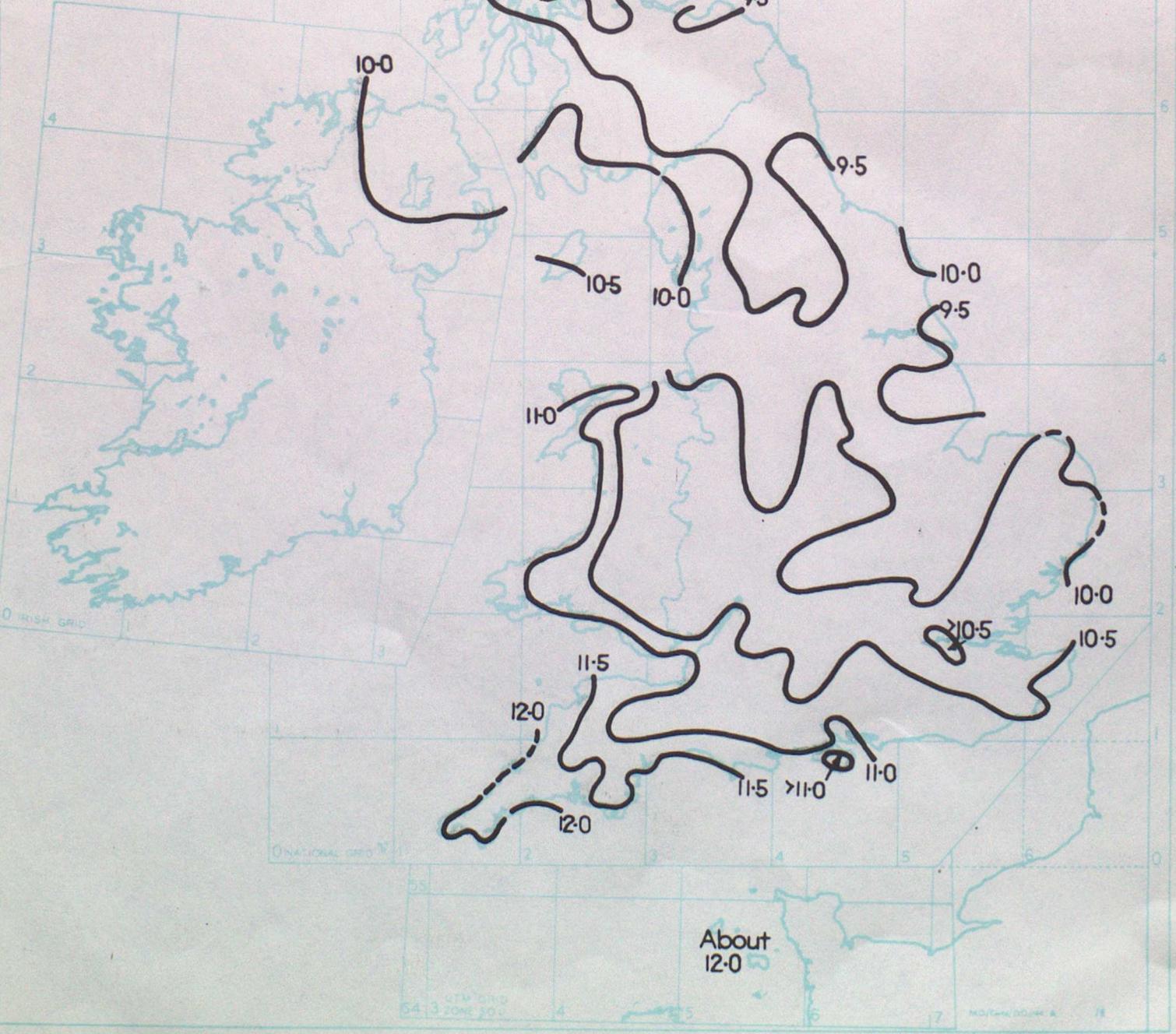
AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
OCTOBER



About  
16.0

AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
NOVEMBER

About  
8.5



About  
12.0

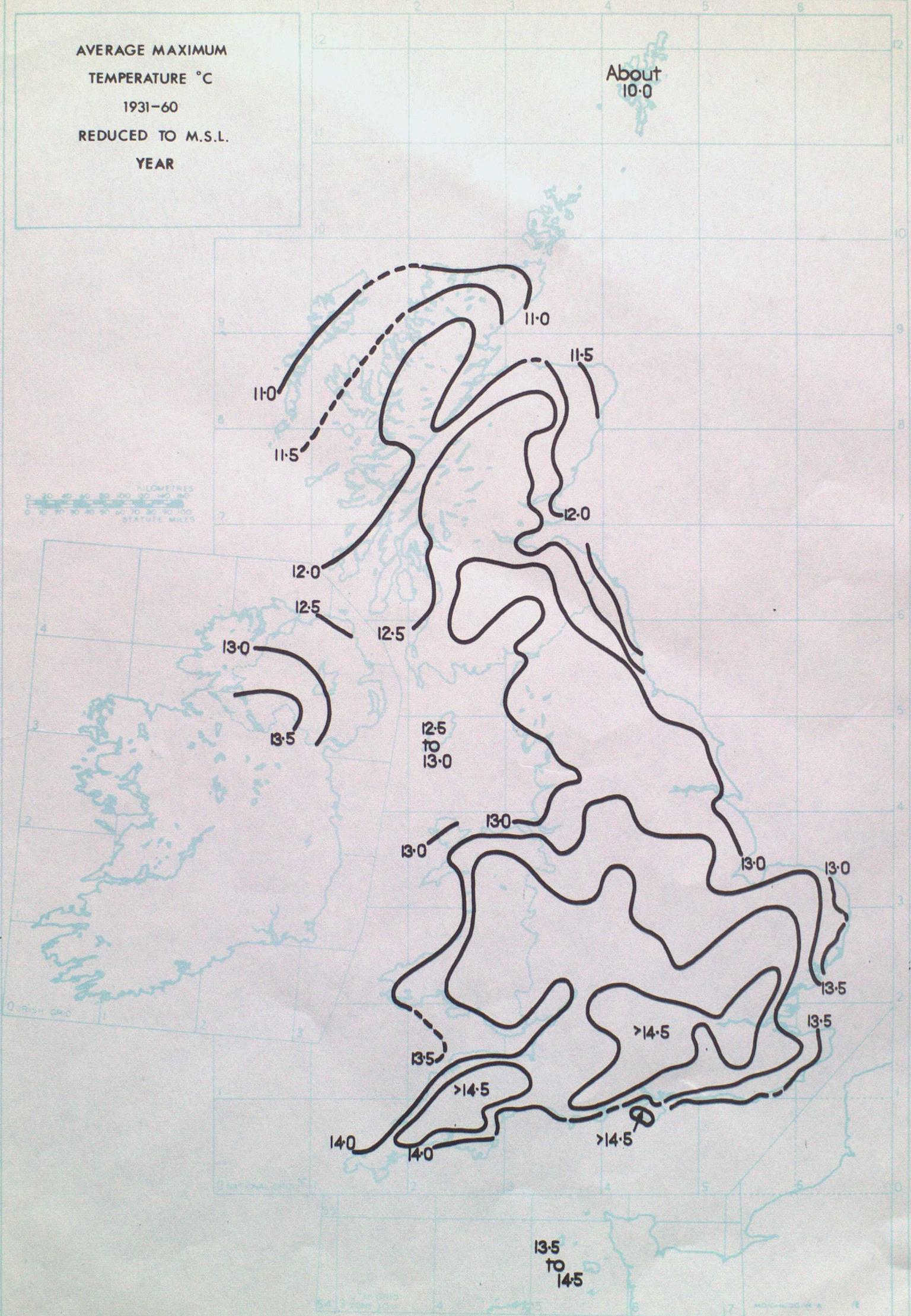
GTM GRID  
54 13 ZONE 20 U

AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
DECEMBER

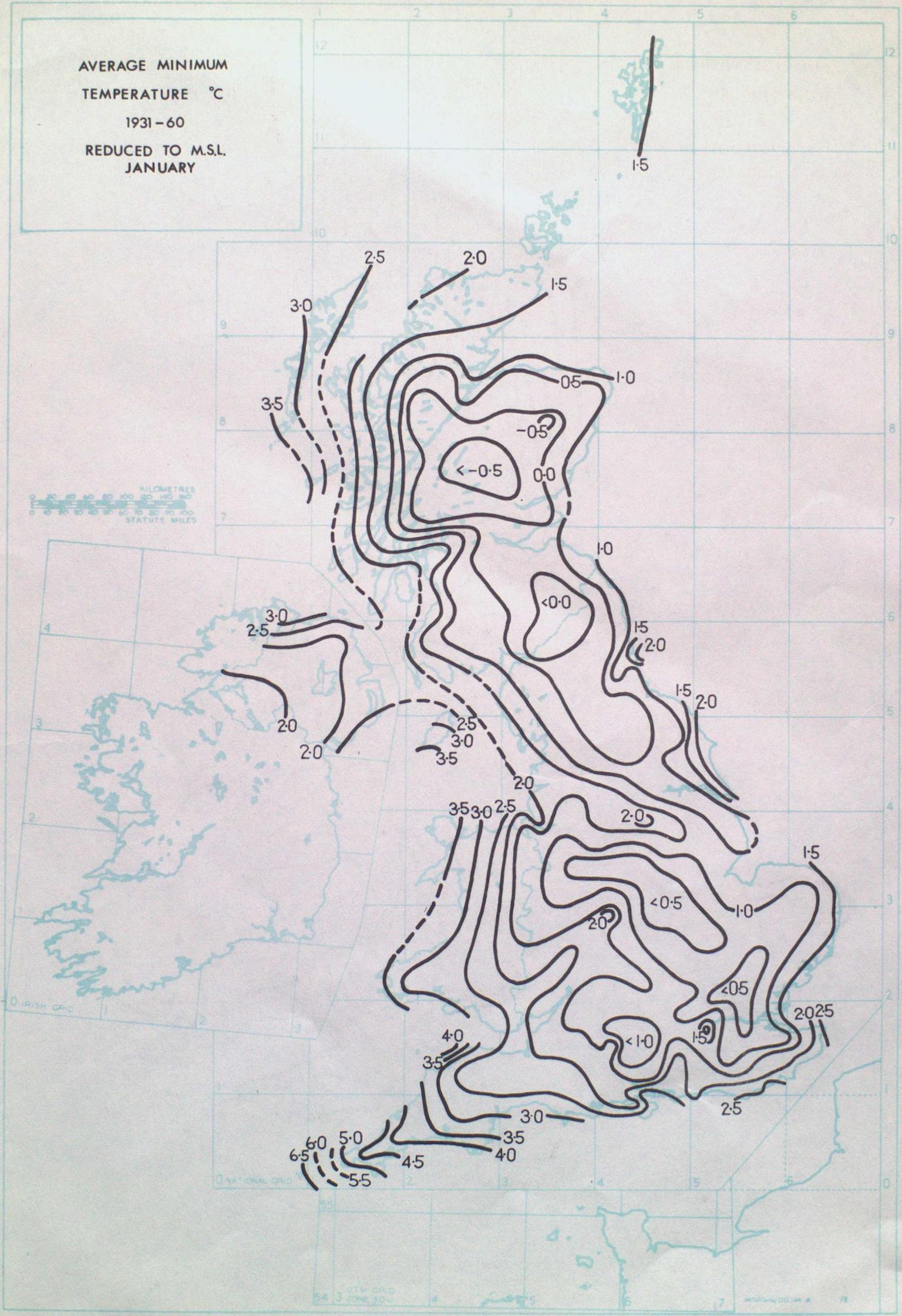


AVERAGE MAXIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
YEAR

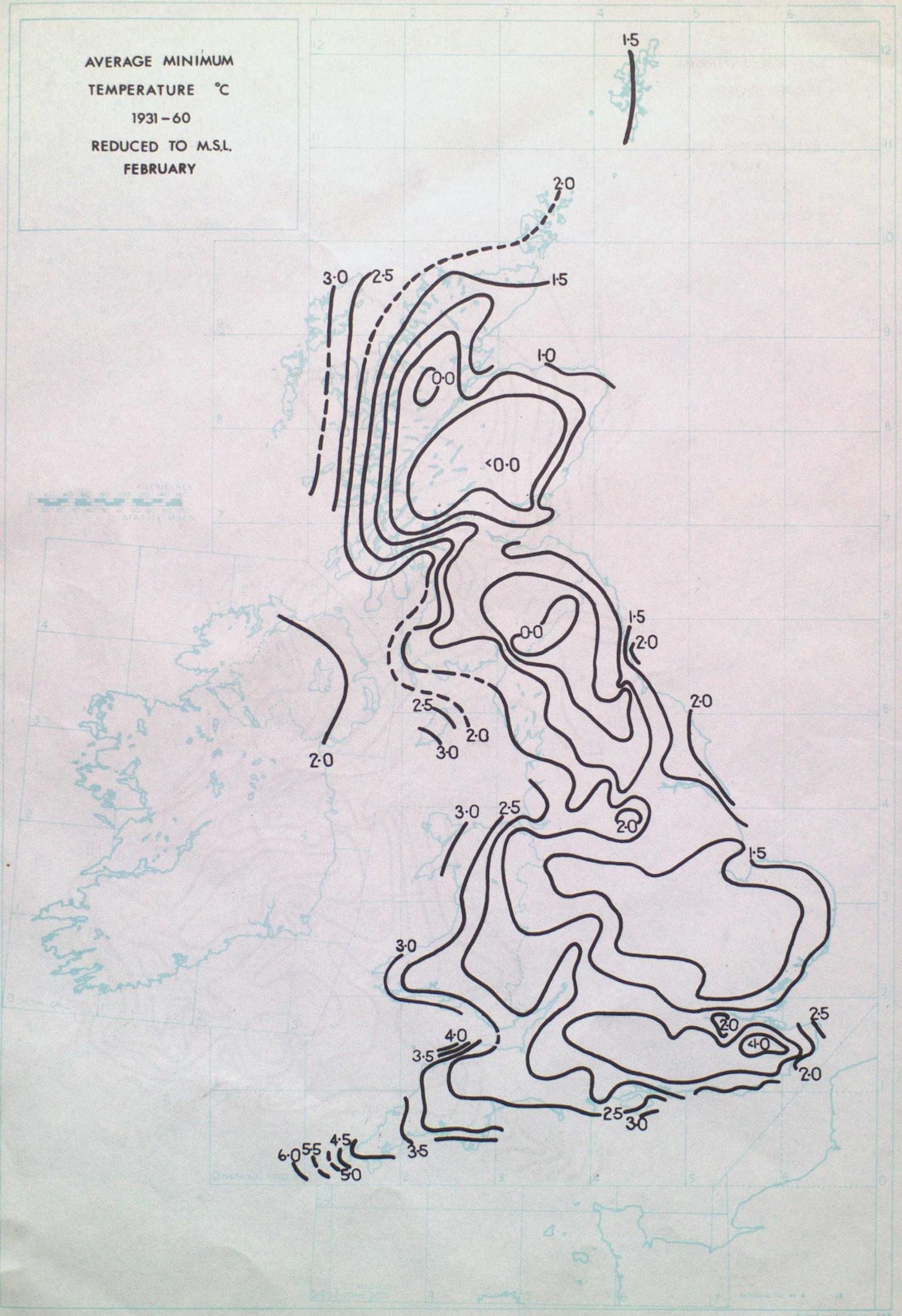
About  
10.0



AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
JANUARY



AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
FEBRUARY



AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
MARCH

20  
to  
25

2.5

4.0

3.5

3.0

<1.0

4.0

2.5

3.5

3.0

<1.5

3.0

3.0

3.5

4.0

3.5

4.0

3.5

3.0

<2.0

3.0

4.0

<2.0

3.5

3.5

5.0

4.0

5.0

4.5

7.0

6.5

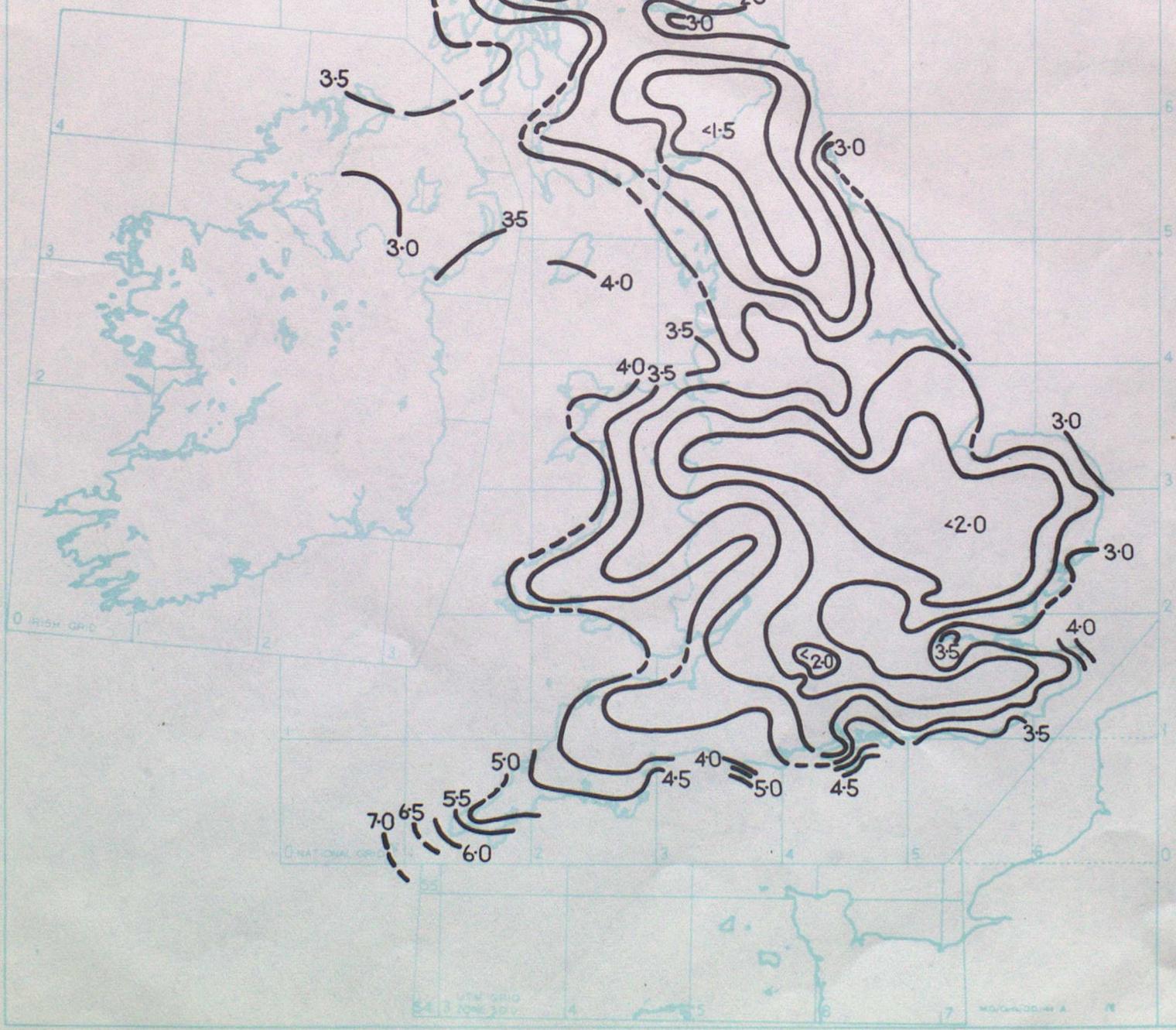
5.5

6.0

4.5

5.0

4.5



AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
APRIL

30  
to  
35



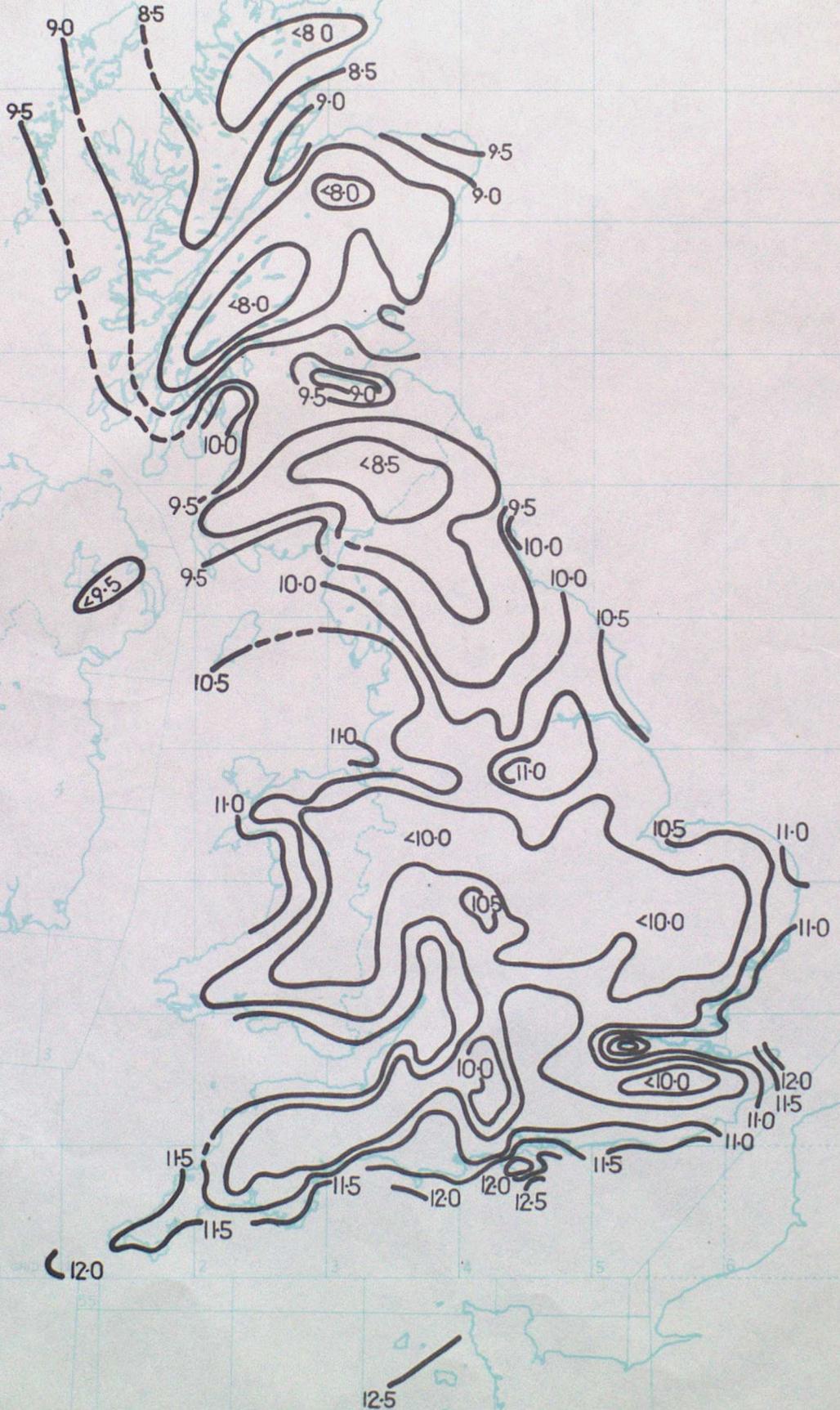
AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
MAY



AVERAGE MINIMUM  
 TEMPERATURE °C  
 1931-60  
 REDUCED TO M.S.L.  
 JUNE

7.5 to 8.0

8.0 to 8.5



KILOMETRES  
 0 20 40 60 80 100 120 140 160  
 STATUTE MILES  
 0 20 40 60 80 100 120 140 160

AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
JULY



10.5  
to  
9.5

10.5 10.5 11.0  
<10.5 11.0  
>11.5 11.5  
<11.0 12.0 12.5  
12.0 12.5 12.0  
13.0 12.5  
13.0 13.5  
<12.0 <13.0  
13.0 14.0 12.0 13.0  
13.5 13.5 <13.0 13.5 13.5  
13.5

13.5 to 14.0

IRISH GRID

NATIONAL GRID

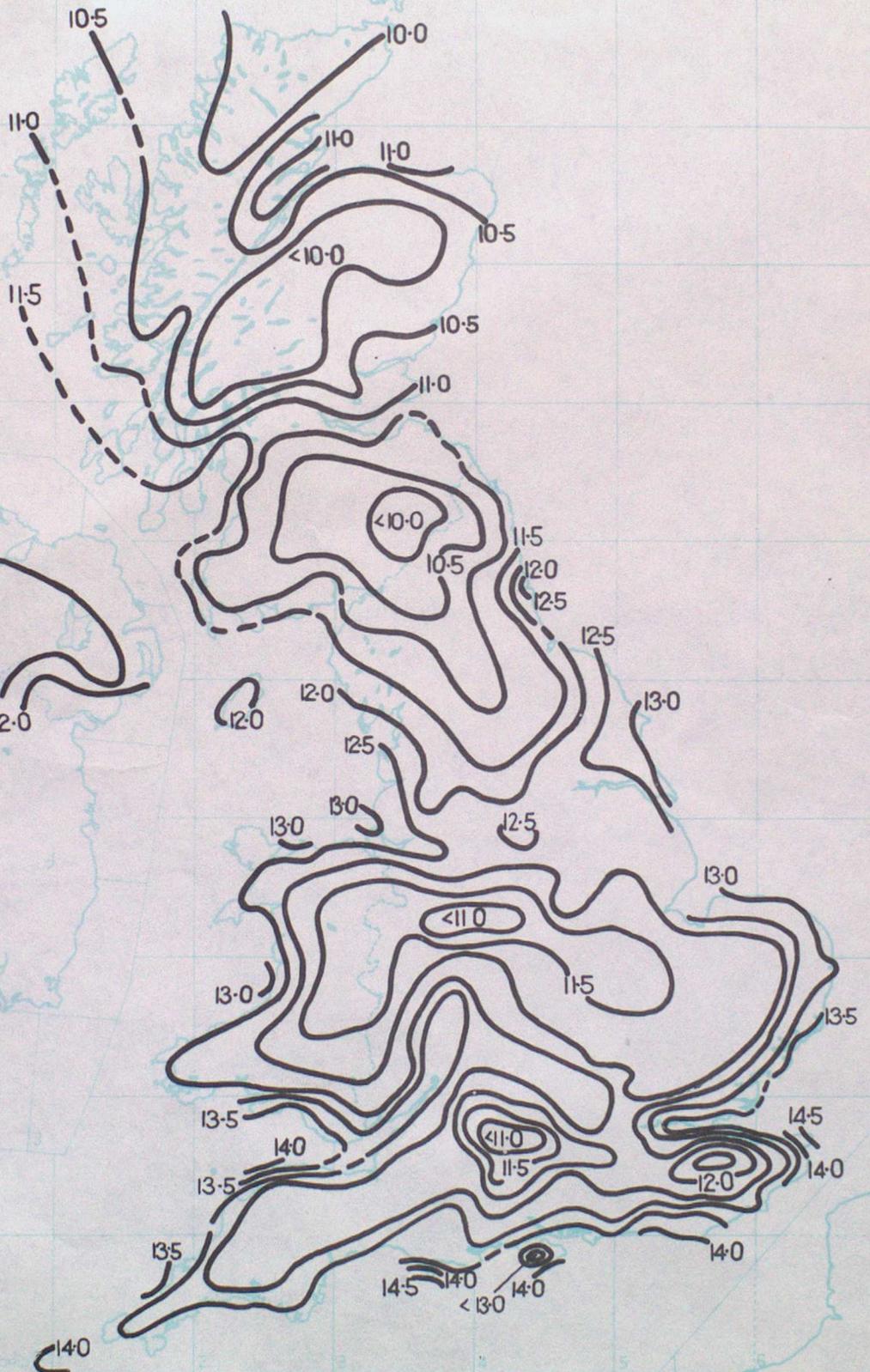
54 13 700 200

W.G./G.M./D.O. 1/1 A 78

Printed by Air Ministry 7-53

AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
AUGUST

About 10.0



About 15.0

AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
SEPTEMBER

KILOMETRES  
0 20 40 60 80 100 120 140 160  
STATUTE MILES  
0 20 40 60 80 100 120 140 160





AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
NOVEMBER

KILOMETRES  
0 10 20 30 40 50 60 70 80 90 100  
STATUTE MILES  
0 10 20 30 40 50 60 70 80 90 100

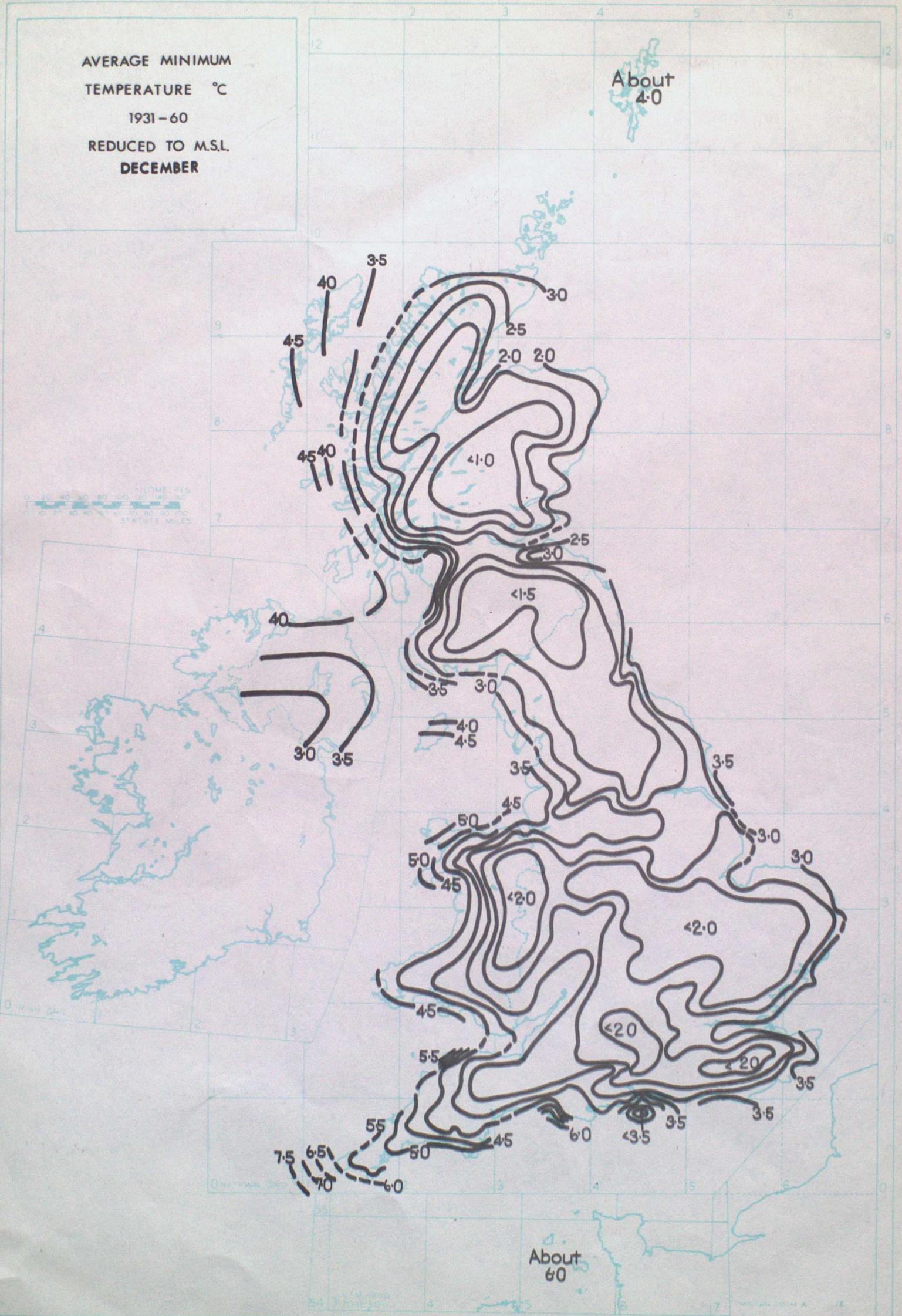


About  
4.5

9.0 8.5 7.5  
8.0

About  
8.0

AVERAGE MINIMUM  
TEMPERATURE °C  
1931-60  
REDUCED TO M.S.L.  
DECEMBER





SUMMER MEAN  
TEMPERATURE  
1931-60  
REDUCED TO M.S.L.

About  
12.0

KILOMETRES  
0 20 40 60 80 100 120 140 160  
STATUTE MILES  
0 10 20 30 40 50 60 70 80 90 100

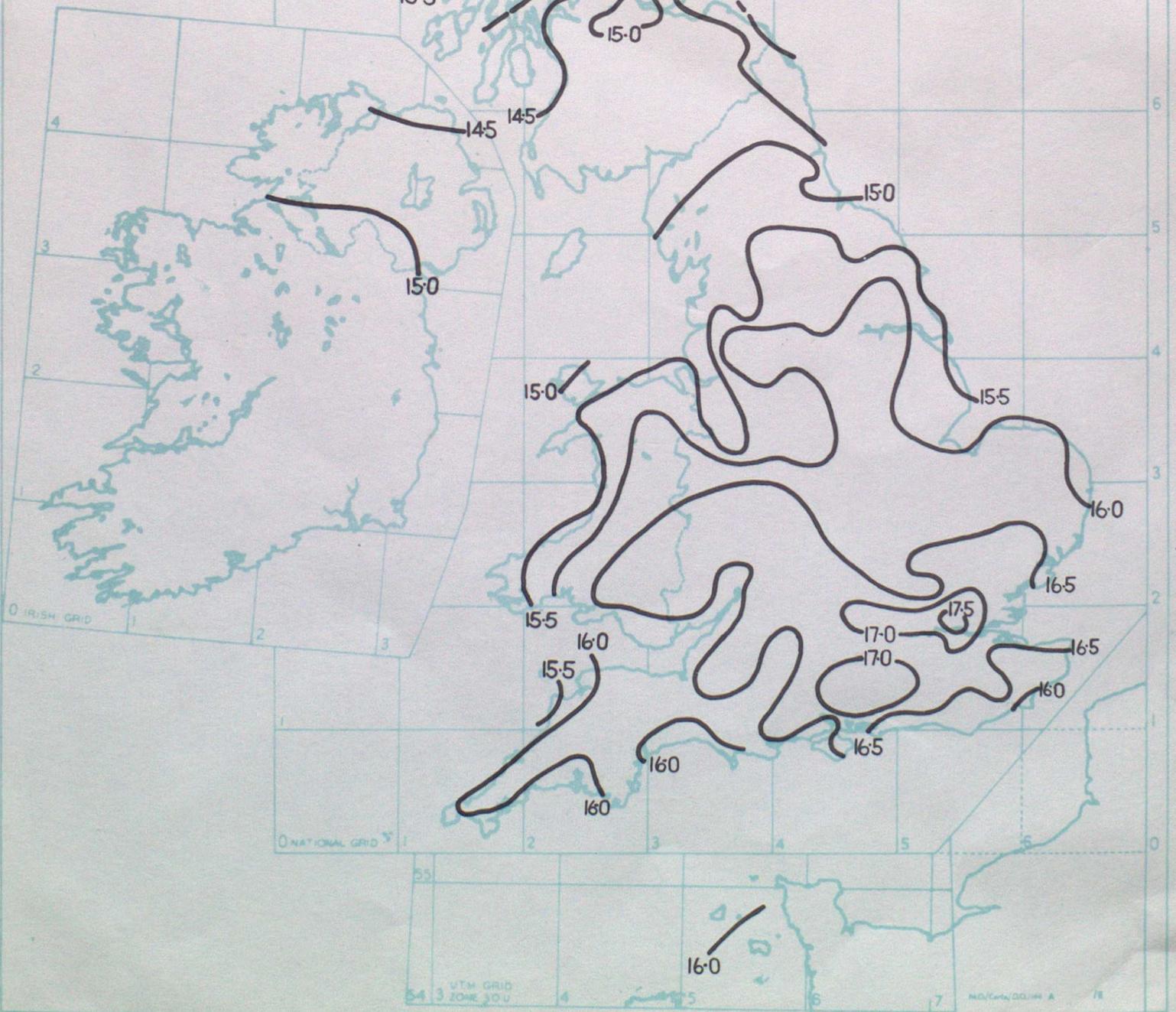




TABLE II

Conversion table for degrees Celsius to degrees Fahrenheit

	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
°C	°F									
24	75.2	75.4	75.6	75.7	75.9	76.1	76.3	76.5	76.6	76.8
23	73.4	73.6	73.8	74.0	74.1	74.3	74.5	74.7	74.8	75.0
22	71.6	71.8	72.0	72.1	72.3	72.5	72.7	72.9	73.0	73.2
21	69.8	70.0	70.2	70.3	70.5	70.7	70.9	71.1	71.2	71.4
20	68.0	68.2	68.4	68.5	68.7	68.9	69.1	69.3	69.4	69.6
19	66.2	66.4	66.6	66.7	66.9	67.1	67.3	67.5	67.6	67.8
18	64.4	64.6	64.8	64.9	65.1	65.3	65.5	65.7	65.8	66.0
17	62.6	62.8	63.0	63.1	63.3	63.5	63.7	63.9	64.0	64.2
16	60.8	61.0	61.2	61.3	61.5	61.7	61.9	62.1	62.2	62.4
15	59.0	59.2	59.4	59.5	59.7	59.9	60.1	60.3	60.4	60.6
14	57.2	57.4	57.6	57.7	57.9	58.1	58.3	58.5	58.6	58.8
13	55.4	55.6	55.8	55.9	56.1	56.3	56.5	56.7	56.8	57.0
12	53.6	53.8	54.0	54.1	54.3	54.5	54.7	54.9	55.0	55.2
11	51.8	52.0	52.2	52.3	52.5	52.7	52.9	53.1	53.2	53.4
10	50.0	50.2	50.4	50.5	50.7	50.9	51.1	51.3	51.4	51.6
9	48.2	48.4	48.6	48.7	48.9	49.1	49.3	49.5	49.6	49.8
8	46.4	46.6	46.8	46.9	47.1	47.3	47.5	47.7	47.8	48.0
7	44.6	44.8	45.0	45.1	45.3	45.5	45.7	45.9	46.0	46.2
6	42.8	43.0	43.2	43.3	43.5	43.7	43.9	44.1	44.2	44.4
5	41.0	41.2	41.4	41.5	41.7	41.9	42.1	42.3	42.4	42.6
4	39.2	39.4	39.6	39.7	39.9	40.1	40.3	40.5	40.6	40.8
3	37.4	37.6	37.8	37.9	38.1	38.3	38.5	38.7	38.8	39.0
2	35.6	35.8	36.0	36.1	36.3	36.5	36.7	36.9	37.0	37.2
1	33.8	34.0	34.2	34.3	34.5	34.7	34.9	35.1	35.2	35.4
0	32.0	32.2	32.4	32.5	32.7	32.9	33.1	33.3	33.4	33.6
<u>0</u>	32.0	31.8	31.6	31.5	31.3	31.1	30.9	30.7	30.6	30.4
<u>1</u>	30.2	30.0	29.8	29.7	29.5	29.3	29.1	28.9	28.8	28.6
<u>2</u>	28.4	28.2	28.0	27.9	27.7	27.5	27.3	27.1	27.0	26.8
<u>3</u>	26.6	26.4	26.2	26.1	25.9	25.7	25.5	25.3	25.2	25.0
<u>4</u>	24.8	24.6	24.4	24.3	24.1	23.9	23.7	23.5	23.4	23.2

Note: figures underlined are all negative values.