

Near-surface sea temperatures in coastal waters of the North Sea, English Channel and Irish Sea

S. R. Jones and T. M. Jeffs



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1. INTRODUCTION

In the early 1960s, it became apparent to fisheries oceanographers at Lowestoft that very little information was available on a synoptic basis concerning sea temperatures in inshore waters around England and Wales. Requests had come from fisheries biologists for such data and, except in isolated cases, it had not proved possible to meet them.

Accordingly, enquiries and investigations were undertaken culminating in the setting up, in the mid-1960s, of a network of observers to measure sea temperatures at a number of coastal locations. The present network now includes, in addition to 21 stations operated by MAFF, a further 21 stations which are operated by various authorities outside MAFF.

This report presents tabulations of Monthly, Annual and Grand Monthly mean sea surface temperatures for each of the locations held on the data base. Annual means are not given for years where the data coverage is incomplete.

The locations of the stations used in the investigations are shown in Figures 1 to 3, and they are numbered to correspond with Tables 1 to 99, in which the monthly and annual data are presented.

2. OBSERVING STATIONS

When the programme was originally conceived, the intention was to get a coverage as complete as possible around the coasts of England and Wales. Initially, the MAFF District Inspectors of Fisheries were able to suggest suitable individuals for taking the observations. It was inevitable, therefore, that in some cases the availability of observers dictated the locations of stations.

Once the programme got underway, a start was made in trying to fill gaps in areas where stations were thinly spread. Towards this end, a number of local authorities were helpful in providing very long time series of observations.

More recently, data have become available from a number of electricity generating stations by courtesy of the Central Electricity Generating Board (CEGB).

The frequency of observations varies considerably and may not be recorded for much of the early data. At present, for the stations operated by MAFF, observations are taken between 8 and 12 times per month, usually close to the time of high water. For some of the non-MAFF stations, the frequency is even better being, in some cases, as good as one reading per day.

3. EQUIPMENT

Initially, MAFF observers used simple Negretti and Zambra reversing thermometers in a metal frame on a hand-held line, which were later replaced by a thermistor thermometer designed and built in-house. Currently, MAFF observers are being gradually equipped with a commercially available portable thermistor. This equipment is calibrated at Lowestoft to an accuracy of $\pm 0.1^{\circ}\text{C}$. The accuracy of observations from non-MAFF sources is not known, but is thought to be generally at least as good as $\pm 0.2^{\circ}\text{C}$. For data collected in the years before 1939, readings were nearly always to the nearest whole degree Fahrenheit. These data have since been converted to degrees Celsius which gives an accuracy of approximately $\pm 0.5^{\circ}\text{C}$.

4. THE DATA BASE

The data base held at Lowestoft has expanded in recent years, to include data from a large number of non-MAFF sources. In particular, data from the Meteorological Office for a number of lighthouses and offshore lightvessels have been included, because they are often of long duration, and therefore provide very useful time series.

Data sets, varying widely in completeness, are now held for 99 locations and total over 3100 years of data. A data base has been set up using an Apricot microcomputer and tabulations of data can be generated for any part of the complete record which is held for a given location.

So far as we are aware, none of the inshore sampling points has varied significantly in location. Users interested in long-term variability and its causes are advised to check (via ourselves or the original source of the data) whether any changes in land use have occurred on a given stretch of coastline which may have contributed to these long-term variations.

Although the data presented here are in the form of monthly mean values, data from some of the stations are also available in the form of daily values. These are indicated in Figures 1-3 by a line drawn under the station number.

For certain offshore stations, time series of monthly anomalies (deviations from the long-term means) have been plotted and are presented as Figures 4 to 13, to give an indication of the variations seen over long time scales. The Grand Monthly means used for these calculations are shown in Table 100.

Acknowledgements

The authors are grateful to the many non-MAFF establishments who have freely given permission for their data to be included in this report.

**Table 1. Monthly and annual mean sea surface temperatures at LONGSTONE LH,
55° 38'N 01° 36'W (Source: Met. Office and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1924				5.0	6.7	8.3	11.1	11.7	11.7	11.1	9.4	8.9	
1925	7.2	6.1	5.6	6.7	7.8	10.0	12.2	12.2	11.7	11.1	9.4	7.2	8.9
1926	6.1	5.6	6.1	6.7	7.8	10.0	12.2	13.3	12.2	10.6	7.8	7.2	8.8
1927	6.7	5.6	6.1	6.7	7.8	9.4	10.6	12.2	12.2	11.1	9.4	7.8	8.8
1928	6.1	5.6	5.6	5.6	6.7	8.9	11.1	11.7	11.7	10.6	9.4	7.8	8.4
1929	6.1	5.0	4.4	6.1	6.7	9.4	11.1	12.2	12.2	11.1	9.4	7.8	8.4
1930	6.7	5.6	5.6	5.6	7.2	8.9	11.1	12.2	12.2	11.7	9.4	7.8	8.6
1931	6.1	5.0	4.4	5.6	7.2	8.9	11.7	12.2	11.7	11.1	10.0	8.9	8.5
1932	7.2	6.7	6.1	6.7	7.8	9.4	11.7	12.8	12.8	11.1	9.4	8.3	9.1
1933	7.2	6.1	5.6	6.7	7.2	8.9	11.7	13.9	13.3	12.8	10.6	8.3	9.3
1934	7.8	6.7	5.6	6.1	7.8	9.4	12.2	12.8	11.7	11.1	9.4	8.9	9.1
1935	7.2	6.1	6.1	7.2	7.8	8.9	11.7	12.8	12.8	11.7	10.0	8.3	9.2
1936	7.2	5.6	5.6	6.1	7.2	9.4	12.2	12.8	12.8	12.2	10.0	7.8	9.0
1937	6.7	5.6	4.4	5.6	6.7	8.3	9.4	11.1	11.1	11.1	10.0	8.3	8.1
1938	7.2	5.0	5.6	6.1	7.2	8.9	10.0	12.8	12.2	11.7	11.1	8.9	8.8
1939	6.7	6.1	6.1	6.1	7.2	8.9	12.2	12.8	13.3	12.2	11.1	8.3	9.2
1940	6.7	4.4	4.4	5.6	6.7	8.9	11.7	12.8	12.8	11.7	10.0	8.9	8.7
1941	6.1	5.6	4.4	5.0	6.1	8.3	10.6	12.2	12.8	12.2	10.0	8.3	8.4
1942	6.1	5.0	5.0	5.0	6.7	10.0	11.7	12.2	12.2	11.7	10.0	8.3	8.6
1943	6.7	6.1	6.7	7.2	8.3	10.0	11.7	12.2	12.8	11.1	9.4	8.3	9.2
1944	6.7	6.1	5.6	6.1	7.2	9.4	10.6	11.7	11.7	11.1	9.4	7.2	8.5
1945	6.1	5.0	5.6	7.2	7.8	10.0	11.7	12.2	13.3	12.2	11.7	9.4	9.3
1946	6.7	6.7	5.6	6.7	7.8	9.4	11.7	12.2	12.2	11.1	10.0	8.9	9.0
1947	6.7	4.4	3.9	4.4	6.7	8.9	11.1	12.2	13.9	11.7	10.0	8.3	8.5
1948	7.2	6.1	6.1	6.7	8.3	10.0	11.7	13.3	12.8	11.1	10.0	10.0	9.4
1949	7.8	6.7	6.1	6.1	7.8	10.0	12.2	12.8	12.2	11.7	10.0	8.9	9.3
1950	7.2	6.1	6.1	6.7	7.8	10.6	11.7	12.2	11.7	11.1	8.9	7.2	8.9
1951	5.6	5.0	5.0	5.6	6.7	8.3	11.1	11.7	11.7	10.6	10.0	8.3	8.3
1952	6.1	5.0	5.0	5.6	7.2	10.0	11.7	12.8	12.8	11.7	10.0	7.8	8.8
1953	6.1	5.6	6.1	6.7	7.2	9.4	11.7	12.2	12.8	12.2	9.4	7.2	8.8
1954	6.7	5.6	5.6	6.1	8.3	10.0	11.1	12.2	12.8	11.7	10.0	7.2	8.9
1955	6.7			5.6	6.7	8.3	11.1	12.8	12.2	11.1	10.0	8.9	
1956	6.7	5.0	5.0	6.1	7.8	9.4	11.1	12.2	12.2	11.7	10.0	8.3	8.7
1957	7.2	6.1	6.7	7.2	7.8	11.1	11.7	12.8	12.2	11.1	10.0	8.3	9.3
1958	6.7	5.6	4.4	5.0	6.7	7.8	12.2	12.8	12.2	11.7	10.0	8.9	8.6
1959	6.1	5.6	6.1	7.2	8.3	10.6	12.2	12.2	12.8	11.7	10.0	8.3	9.2
1960					7.8	10.0	12.2	13.3	13.3	11.7	10.6	8.3	
1961	6.7	6.4	6.9	7.3	8.5	10.3	11.4	12.6	12.2	11.4	9.9	8.1	9.3
1962	6.2	5.6	4.9	5.4	6.6	8.6	10.2	11.4	11.7	10.7	9.4	7.7	8.2
1963	5.4	4.2	4.6	5.3	6.7	9.5	10.8	11.8	11.6	10.6	9.6	8.1	8.1
1964	7.1	6.2	5.8	6.2	7.7	9.7	11.4	12.2	11.9	11.3	10.2	8.6	9.0
1965	6.3	5.4	5.3	6.0	7.3	9.1	10.8	11.8	11.8	11.5	10.0	7.2	8.5
1966	5.8	5.2	5.4	5.4	6.9	8.4	11.1	12.5	12.6	11.8	10.1	7.5	8.5
1967	6.2	6.1	5.7	6.2	7.5	9.4	11.2	12.1	12.5	11.7	9.9	8.1	8.8
1968	6.3	5.4	5.1	5.9	7.4	8.9	11.2	12.1	12.4	11.8	10.2	8.4	8.7
1969	6.8	5.9	5.2	5.5	6.4	8.3	11.1	11.8	13.0	10.5	9.2	7.1	8.4
1970	5.6	5.0	5.0	5.0	6.7	10.0	10.6	11.7	12.4	11.5	9.4	8.3	8.4
1971	6.7	6.1	6.1	6.7	7.3	8.7	11.7	12.5	12.6	10.9	9.4	7.9	8.8
1972	7.1	6.3	5.8	6.2	7.3	9.4	10.7	11.5	11.2	10.9	9.7	8.2	8.6
1973	7.1	5.7	5.9	6.4	7.5	9.5	11.0	12.0	12.2	11.1	9.5	7.4	8.7
1974	6.3	5.9	5.4	5.8	7.4	9.9	11.2	12.2	11.9	11.1	9.6	7.7	8.7
1975	6.9	6.2	5.7	5.6	7.0	8.7	11.5	12.5	12.0	12.8	10.2	8.5	8.9
1976	7.0	5.9	5.9	6.5	7.6	9.6	11.1	13.0	12.7	12.3	10.5	8.0	9.1
1977	6.4	5.8	5.8	6.5	7.5	9.4	12.1	12.8	12.3		9.8	7.8	
1978	6.6	5.7	5.5	6.2	7.1	9.7	11.2	12.2	12.2	11.2	10.1	7.0	8.7
1979	5.1	4.4	4.4	4.4	5.9		10.6	12.1	11.2	10.5	9.4	7.9	
1980	6.3	5.6	5.9	6.4	7.1	10.5	11.8	12.7	12.4	11.2	9.3	7.3	8.8
1981	6.1	5.3	5.3	5.8	7.2	9.5	11.8	12.3	12.2	11.1	9.3	6.9	8.5
1982	5.3	5.3	5.4	6.1	7.0	9.0	11.2	12.4	11.3	10.8	9.4	7.8	8.4
1983	6.4	5.5	5.4	5.7	7.2	9.4	10.9	12.4	11.9	11.0	9.7	8.1	8.6
1984	6.5	5.0	5.5	5.6	7.4	9.5	12.0	13.4	12.9	11.6	10.3	8.9	9.0
1985	6.9	5.4	5.2	6.2	7.4	9.4	11.4	11.8	11.7	11.2	9.3	7.7	8.6
1986	6.1	4.7	4.8	5.3	6.8	9.2	11.3	11.2	11.7	11.6	9.4	8.1	8.3
1987	5.7	5.2	4.8	5.7	8.1	9.3	11.2	12.2	12.5	11.3	10.0	8.5	8.7
1988	8.0	6.6	6.0	6.7	8.3	10.5	12.5	12.6	12.3	11.5	9.8	8.5	9.4
1989	8.0	7.0	6.3	6.7	8.1	10.4	11.8	12.9	12.2	11.1	9.8	8.3	9.3
obs	64	63	63	65	66	65	66	66	66	65	66	66	
mean	6.6	5.6	5.4	6.0	7.3	9.4	11.3	12.3	12.2	11.3	9.8	8.1	8.8

**Table 2. Monthly and annual mean surface temperatures at BLYTH PS, 55° 08'N
01° 32'W (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1978	6.2	5.1	5.8	7.1	8.7	10.4	13.1	13.2	13.8	12.6	11.6	7.9	9.6
1979	5.7	4.4	4.9	5.4	7.7	10.0	12.1	12.6	12.9	11.6	9.3	8.7	8.7
1980	6.0	3.7	4.0	4.9	7.4	12.0	13.7	14.1	13.7	11.9	9.6	8.3	9.1
1981	6.3	6.2	5.4	7.7	8.5	10.4	13.3	15.2	15.0	11.8	10.0	7.9	9.8
1982	4.3	6.0	6.6	7.9	9.6	12.2	13.9	13.1	11.3	10.0	9.8	7.1	9.3
1983	5.5	5.0	5.5	6.5	8.4	11.0	12.8	13.9	13.4	11.2	9.0	7.1	9.1
1984	5.6	5.9	5.4	7.0	9.5	11.6	13.2	14.6	14.1	11.6	9.9	7.7	9.6
1985	5.7	5.7	5.6	6.6	8.2	10.8	12.5	13.5	12.0	11.5	9.0	6.5	8.9
1986	6.5	5.1	6.0	6.5	7.5	11.7	13.5	12.5	11.5	11.0	9.0	6.9	8.9
1987	6.0	6.1	6.8	7.0	9.7	11.2	14.0	13.5	13.0	10.5	10.0	8.9	9.7
1988	9.0	7.2	6.5	8.9	10.0	12.0	14.5	13.3	13.0	11.5	9.0	8.5	10.2
1989	8.0	7.5	7.1	8.5	10.5	11.5	15.1	14.5	14.0	11.5	8.1	7.8	10.3
obs	12	12	12	12	12	12	12	12	12	12	12	12	
mean	6.2	5.6	5.8	7.0	8.8	11.2	13.4	13.6	13.1	11.3	9.5	7.7	9.4

**Table 3. Monthly and annual mean sea surface temperatures at REDCAR, 54° 38'N
01° 05'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	4.6	4.9	5.7	5.5	7.6	11.0	13.1	13.9	13.6	12.2	8.5	6.5	8.9
1967	5.5	5.7	5.9	6.8	9.0	11.5	12.8	13.0	12.5	11.6	8.7	7.0	9.1
1968	5.2	4.9	5.5	6.8	8.2	11.4	12.2	14.5	13.4	11.8	9.2	7.6	9.2
1969	6.0	4.2	4.4	6.1	7.3	9.7	12.6	13.4	13.3	12.5	8.8	6.0	8.6
1970	5.0	4.4	5.0	5.8	8.4	12.2	12.6	13.1	12.5	11.9	8.9	6.9	8.8
1971	5.8	6.2	6.1	6.7	9.0	12.2	14.9	14.1	13.3	11.8	7.9	7.2	9.6
1972	6.1	6.0	6.2	7.4	9.2	11.0	13.6	13.8	12.8	11.6	8.5	7.1	9.4
1973	6.4	6.1	6.0	7.4	9.8	11.3	13.4	13.8	14.0	11.2	9.4	6.7	9.6
1974	5.9	5.9	5.8	6.9	9.2	10.9	12.8	13.9	12.6	10.4	8.8	7.8	9.2
1975						11.7	14.1	15.1	13.1	11.3	9.8	7.0	
1976	6.1	5.5	5.9	7.4	8.4	11.8	13.0	15.2	13.4	12.1	8.3	7.1	9.5
1977	5.2	5.4	5.8	6.4	8.8	11.2	13.0	14.4	13.0	11.4			
1978					9.5	12.5	13.6	14.3	13.4	12.0	9.6	7.5	
1979	4.4	4.0	4.6	6.7	8.1	11.1	13.6	13.5	13.1	11.6	8.5	8.0	8.9
1980	5.1	5.7	5.8										
1981 - 1984													
1985					9.3	11.8	12.8	13.0	12.3	11.5	8.1	7.0	
1986	4.7	3.1	3.9	5.2	7.4	10.6	12.7	12.7	11.8	11.0	8.6	7.3	8.2
1987	4.7	4.5	4.6	6.3	8.4	10.3	13.1	13.8	13.3	11.4	9.6	7.5	8.9
1988	7.2	6.3	6.2	8.0	9.6	12.1	13.6	13.5	13.1	11.4	8.5	8.1	9.8
1989	7.6	7.2	6.6	7.4	10.2	12.4	14.6	13.6	13.7	11.5	9.6	6.8	10.1
obs	17	17	17	16	18	19	19	19	19	19	18	18	
mean	5.6	5.2	5.5	6.6	8.7	11.4	13.2	13.8	13.0	11.5	8.8	7.1	9.2

**Table 4. Monthly and annual mean sea surface temperatures at WHITBY, 54° 30'N
00° 37'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966					6.7	9.1	12.9	13.1			9.6	7.1	
1967	6.0	5.8	6.0	6.5	8.0	10.9	13.6	12.9	12.9	11.5	10.2	7.3	9.3
1968	6.1	5.3	5.4	6.9	8.5	11.4	12.8	14.0	13.9	12.3	9.9	7.7	9.5
1969	6.7	5.0	4.4	5.2	6.9	8.5	12.6	13.7	13.2	12.6	9.6	7.0	8.7
1970	5.5	4.9	4.4	5.2	7.4								
1971					8.3	10.8	12.7	13.8	13.8	12.2	8.3	7.2	
1972	6.1	5.4	5.8	7.0	8.3	9.6	12.1	13.6	12.6	11.4	9.1	7.0	9.0
1973	6.3	5.4	5.8	6.5	8.1	11.1	12.4		13.7	11.4	8.6	5.5	
1974	5.2							13.6	13.4				
1975		5.9	6.0	6.3	8.4	10.7	13.0	14.4	13.7	11.5	9.2	7.8	
1976	6.8	5.9	5.7	7.1	9.2	12.3	13.4	15.1	13.7	12.3	9.8	7.0	9.8
1977	5.5	5.9	6.3	7.1	9.1	11.3							
1978	4.9	4.6	5.7	6.3	8.6	11.1	13.0	13.7	13.7	12.1	10.2	7.5	9.2
1979	4.9	4.0	4.3	5.0									
obs	11	11	11	11	12	11	10	10	10	9	10	10	
mean	5.8	5.2	5.4	6.2	8.1	10.6	12.8	13.7	13.4	11.9	9.4	7.1	9.2

**Table 5. Monthly and annual mean sea surface temperatures at SCARBOROUGH,
54° 17'N 00° 22'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1970			5.0	6.1	8.2	10.8	11.9	12.9	12.4	11.5			
1971	6.1	6.0	5.8	6.8	8.1	9.8	12.7	13.8	14.1	12.2	8.7	6.5	9.2
1972	6.0	5.1	5.5	7.2		10.7	11.8						
1973	7.6	6.8	6.9	8.0	9.8	11.2	11.4	13.3		11.9		5.3	
1974	3.9										7.8	7.4	
1975	6.7	5.9	6.6	6.4	8.3	11.1	12.6	13.2	13.4	11.7			
1976	6.7	4.8	5.5	6.9	8.8	10.5	11.2						
1977	5.0	5.3	5.6	6.5	8.4	10.6	12.9	14.2	13.4	11.9	9.3	6.9	9.1
1978	5.6	4.7	6.0	6.1	7.9	11.2	12.5						
1979	3.6	3.4	4.0	5.1	6.9	9.4	12.5	12.5	11.4	11.0	8.2	6.9	7.9
1980	5.0	5.3	5.2	6.4	8.2	10.9	12.1	14.0	13.8	11.3			
1981		4.5	5.0	6.0	9.2	10.4	13.0	14.5	13.6	10.7	9.0	5.8	
1982	4.3	5.2	5.6	7.1	8.8	10.7	13.2	14.2	13.4	11.4	9.4	6.4	9.1
1983	5.9	4.5	5.5	6.2	7.6	10.0	12.6	13.9	12.5	10.7			
1984	5.9	5.0	5.2	6.5	8.6	10.8	13.7	14.4	14.4	12.2	10.5	8.0	9.6
1985	5.7	5.4						12.7	12.2	11.7	8.1	6.9	
1986	5.1	3.5	4.0	5.4	7.4	9.2	12.3	12.0	11.4	10.9	8.9	6.8	8.0
1987	4.6	4.6	4.5	5.9		10.3	12.4	13.6					
1988	6.4	5.7	5.6	7.1	8.4	12.4	13.4	13.7	13.1	11.7	9.2	7.6	9.5
1989	6.8	6.5	6.4	7.2	9.6	11.9	14.1	14.7	13.8	12.6	10.3	8.2	10.1
obs	18	18	18	18	16	18	18	16	14	15	12	12	
mean	5.6	5.1	5.4	6.4	8.3	10.6	12.5	13.6	13.0	11.5	9.0	6.8	9.1

**Table 6. Monthly and annual mean sea surface temperatures at BRIDLINGTON,
54° 05'N 00° 11'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	3.6	4.2	6.6	6.4	9.3	11.9	14.5	14.4	14.5	11.8	8.2	5.4	9.2
1967	4.7	5.4	6.8	7.3	9.8	13.4	15.7	15.4	14.4	8.3	7.5	6.0	9.5
1968	4.9	4.6	6.3	7.2	10.0	13.6	14.6	14.3	14.4	12.7	9.5	7.5	9.9
1969	5.7	4.4	4.4	6.1	8.6	12.9	14.7	15.4	14.2	13.1	9.1	6.0	9.5
1970	4.9	4.2	4.7	5.8	8.5	12.1	13.7	13.7	12.4	11.4	8.4	6.6	8.8
1971			6.2	7.8	9.2	11.0	13.4	14.6	14.5	12.4	10.3	9.8	
1972		1.9					16.3	15.6	14.2	10.8	6.5	5.0	
1973	3.7	2.8	4.1	4.3			12.1	12.6	12.2	11.0	8.6	3.2	
1974	3.0	3.5	4.4	6.3	6.5	12.5	12.8						
1975			5.6	7.8			12.0	12.3	11.6				
1976	4.6	4.3	4.2	3.9						10.3	3.4	2.6	
1977	2.5												
obs	9	9	10	10	7	7	10	9	9	9	9	9	
mean	4.1	3.9	5.3	6.2	8.8	12.4	13.9	14.2	13.6	11.3	7.9	5.7	9.4

**Table 7. Monthly and annual mean sea surface temperatures at HUMBER LV,
53° 37'N 00° 21'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1880	3.9	4.4	5.6	7.2	9.4	11.7	14.4	15.0	15.0	10.6	7.2	6.1	9.2
1881	2.8	3.3	3.9	5.0	8.3	12.2	13.9	13.3	12.8	10.0	7.2	5.6	8.1
1882	5.0	5.0	6.1	7.2	10.0	11.7	13.9	14.4	13.3	11.7	7.8	5.0	9.2
1883	5.0	5.0	4.4	6.1	8.3	11.7	12.8	13.3	13.3	11.1	8.3	6.1	8.7
1884	5.6	5.0	6.1	7.2	9.4	11.7	14.4	15.0	13.3	11.1	8.3	6.1	9.4
1885													
1886													
1887	3.9	5.0	5.0	6.1	8.3	12.2	13.9	13.3	12.8	10.0	7.2	5.6	8.6
1888	4.4	3.3	3.3	5.0	8.3	11.1	12.8	13.9	13.3	11.7	9.4	7.2	8.6
1889	5.0	4.4	5.0	6.7	9.4	12.8	13.9	15.0	13.9	11.1	8.9	5.6	9.3
1890	5.6	5.0	6.1	7.2	10.0	12.8	13.9	14.4	15.0	11.7	8.3	4.4	9.5
1891	2.8	4.4	5.0	6.1	8.9	12.2	13.9	14.4	14.4	11.7	8.9	6.1	9.0
1892	4.4	4.4	3.9	6.1	8.9	12.2	13.3	14.4	12.8	9.4	8.3	5.0	8.5
1893	3.3	4.4	6.1	7.2	10.6	12.8	15.0	16.1	14.4	11.7	8.3	6.1	9.6
1894	3.9	5.0	6.1	8.3	9.4	12.2	15.0	14.4	13.3	11.7	9.4	7.8	9.7
1895	4.4	2.8	4.4	6.7	9.4	12.8	14.4	15.0	15.0	11.1	8.3	6.1	9.2
1896	5.0	5.6	6.1	7.8	10.0	13.9	15.6	15.0	14.4	11.1	7.8	6.7	9.9
1897	4.4	5.0	6.1	7.8	9.4	13.3	15.0	16.1	13.9	11.7	10.0	7.2	9.9
1898													
1899													

Table 7. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1900	5.0	3.3	5.0	6.7	8.9	12.8	15.0	15.0	14.4	11.7	8.9	7.8	9.5
1901	5.6	4.4	5.0	6.7	10.0	12.8	16.1	16.1	14.4	12.8	8.9	6.1	9.9
1902	5.6	3.3	5.0	6.7	8.9	11.7	13.9	13.9	13.9	11.1	8.9	5.6	9.0
1903	5.0	6.1	6.1	6.7	8.9	11.7	13.3	13.9	12.8	11.7	8.9	5.6	9.2
1904	4.4	4.4	4.4	6.7	8.9	11.7	14.4	14.4	13.3	11.7	8.9	6.1	9.1
1905	4.4	5.0	5.6	6.7	8.9	12.2	15.0	15.6	13.3	10.0	7.8	6.1	9.2
1906	5.0	4.4	5.0	6.1	8.9	11.1	14.4	15.0	14.4	12.2	9.4	6.1	9.3
1907	4.4	3.3	5.0	6.7	8.9	11.1	12.8	13.9	13.3	12.2	9.4	6.7	8.9
1908	3.9	4.4	4.4	6.1	8.9	12.2	14.4	14.4	13.3	12.8	9.4	6.7	9.2
1909	4.4	3.9	3.9	6.7	8.9	12.2	13.3	15.0	13.3	12.2	8.3	5.6	8.9
1910	5.0	3.9	5.0	6.7	8.9	12.2	13.9	15.0	13.3	12.2	7.2	6.1	9.1
1911	5.0	5.0	5.6	6.1	8.9	12.2	14.4	17.2	15.0	11.7	8.9	6.1	9.6
1912	5.0	3.9	6.1	7.2	10.0	12.8	15.0	13.9	12.2	10.6	8.3	6.7	9.3
1913	5.6	5.0	5.6	6.7	9.4	12.2	13.3	14.4	15.0	12.8	10.0	7.2	9.7
1914	4.4	6.1	6.1	8.3	10.0	12.8	15.0	15.6	14.4	12.2	9.4	6.7	10.0
1915	5.0	5.0	5.0	6.1	9.4	12.8	13.9	15.0	13.9	11.7	7.2	5.6	9.2
1916	6.1	5.0	3.3	6.1	9.4	10.0	12.8	15.0	13.3	11.7	8.3	5.0	8.8
1917	3.9	2.2	2.8	4.4	8.3	12.2	13.9	15.0	14.4	10.6	7.8	5.0	8.3
1918	3.3	4.4	5.0	6.1	9.4	12.2	13.9	15.6	12.8	10.6	8.3	6.7	9.0
1919	4.4	3.9	5.0	6.1	8.9	12.2	12.8	14.4	13.3	10.6	6.7	5.6	8.6
1920	5.0	5.0	5.6	7.2	9.4	12.2	13.9	13.9	13.9	12.2	8.3	6.7	9.4
1921	7.8	6.1	6.7	7.8	10.6	12.8	15.0	15.0	14.4	13.3	8.3	7.2	10.4
1922	5.6	3.9	5.0	6.1	8.9	11.7	12.2	13.3	12.8	11.1	8.3	7.8	8.8
1923	6.1	5.6	5.6	7.2	7.8	10.0	13.3	13.9	12.8	11.1	8.3	5.6	8.9
1924	3.9	3.9	3.9	5.6	7.8	9.4	11.1	12.8	12.2	11.1	8.9	7.8	8.2
1925	6.1	6.1	5.6	6.7	9.4	11.7	13.3	15.0	12.8	11.7	8.9	5.6	9.4
1926	5.0	5.6	6.1	7.2	8.9	11.7	14.4	15.0	15.0	11.7	8.3	6.7	9.6
1927	5.6	5.6	6.1	7.2	8.9	11.1	12.8	14.4	12.8	11.7	8.9	5.6	9.2
1928	4.4	5.6	5.6	6.7	8.9	10.6	13.3	13.9	13.3	11.1	9.4	6.1	9.0
1929	3.9	2.8	3.9	5.6	7.8	10.6	12.8	13.9	14.4	12.2	8.9	6.7	8.6
1930	6.1	5.0	5.6	6.7	8.9	11.7	13.3	14.4	13.9	11.7	8.3	6.7	9.3
1931	6.1	4.4	4.4	5.6	7.8	11.7	13.3	13.3	12.8	11.7	10.6	8.3	9.1
1932	6.7	5.6	5.6	6.7	8.9	11.7	13.9	15.0	13.9	11.1	8.9	6.7	9.5
1933	5.6	5.0	5.6	7.2	9.4	12.2	15.0	15.6	15.6	13.3	9.4	5.6	9.9
1934	5.6	5.6	5.6	6.7	8.9	11.7	14.4	15.0	15.0	12.2	9.4	8.3	9.8
1935	7.2	6.1	6.1	7.2	9.4	12.2	14.4	16.1	14.4	11.7	8.9	6.1	9.9
1936	5.6	5.0	5.0	6.7	8.9	11.1	13.3		12.2	11.7	10.0	7.2	
1937	6.1	5.0	5.0	6.7	8.9	11.1	12.8	14.4	13.3	11.7	9.4	7.2	9.3
1938													
1939	5.6	5.0	5.6	7.2	8.9	11.7	14.4	15.0	15.0	11.7	10.0	7.2	9.7
1940	3.9	2.2	4.4	6.1	9.4	12.8	13.9	13.9	13.3	12.2	9.4	6.7	9.0
1941 - 1947													
1948	6.1	5.0	5.6	7.2	8.9	11.7	13.3	14.4	13.9	11.7	10.0	7.8	9.6
1949	6.1	6.1	5.0	7.2	8.9	11.7	13.9	15.0	15.0	13.3	9.4	7.2	9.9
1950	5.6	5.6	6.1	7.2	9.4	11.7	13.3	13.9	12.2	10.6	8.3	5.0	9.0
1951	5.0	4.4	4.4	5.6	7.8	10.6	12.8	13.9	12.8	12.2	10.0	7.2	8.8
1952	5.6	4.4	5.6	6.1	9.4	11.1	13.3	14.4	13.3	11.1	7.8	6.1	9.0
1953	5.0	4.4	5.6	6.7	9.4	11.1	13.3	14.4	13.9	12.2	10.0	8.9	9.5
1954	5.6	2.8	4.4	6.1	8.3	10.6	12.2	13.3	13.3	11.7	9.4	7.8	8.7
1955	5.0	4.4	3.3	5.6	7.2	10.6	12.8	15.0	14.4	12.2	9.4	7.8	8.9
1956	6.1	3.3	4.4	6.1	8.3	10.6	12.8	12.8	13.3	11.7	8.9	7.2	8.7
1957	6.1	5.6	6.1	7.8	9.4	11.7	13.9	14.4	13.3	12.2	9.4	7.2	9.7
1958	5.6	5.0	3.9	5.6	7.8	10.6	12.2	13.3	13.9	11.7	9.4	7.8	8.9
1959	5.6	5.0	6.1	7.2	10.0	12.2	14.4	15.6	15.6	14.4	10.0	7.8	10.3
1960	6.1	5.0	5.6	6.7	9.4	11.7	13.3	14.4	13.9	12.8	10.0	7.8	9.7
1961	5.6	6.1	6.4	7.8	9.7	11.7	13.3	14.1	14.7	13.2	9.2	6.9	9.8
1962	5.6	5.1	4.2	5.5	7.4	10.4	11.8	12.9	12.6	12.0	9.3	6.6	8.6
1963	1.8	1.1	3.4	4.9	7.3	10.7	12.6	13.1	12.8	11.7	9.8	6.9	8.0
1964	5.2	4.9	4.1	5.7	8.6	11.2	12.9	14.4	15.1	12.2	10.1	7.2	9.3
1965	5.7	4.8	4.6	6.3	8.6	10.8	12.1	13.6	12.9	12.4	9.2	6.2	8.9
1966	4.3	4.4	5.2	5.8	8.3	10.9	12.4	14.1	14.3	12.2	9.7	7.3	9.0
1967	5.4	5.4	6.1	6.9	8.5	11.2	13.8	14.2	12.8	11.7	9.3	7.2	9.3
1968	5.4	4.8	5.1	6.8	8.8	11.4	12.6	13.7	14.1	12.3	9.4	6.9	9.2
1969	6.1	4.2	3.2	5.2	7.5	11.3	12.7	14.2	14.2	13.1	10.0	6.2	8.9
1970	4.7	4.3	4.4	5.4	7.8	11.4	12.4	14.0	13.2	11.6	9.7	8.0	8.9
1971	5.7	5.7	5.9	6.9	9.3	10.9	13.2	14.3	14.4	12.8	9.5	7.8	9.7
1972	5.7	4.9	5.3	6.6	8.7	10.7	12.6	13.8	13.5	12.3	10.1	7.3	9.2
1973	6.2	5.7	6.2	6.6	8.7	11.5	13.3	14.4	14.3	11.8	9.1	6.7	9.5
1974	6.0	6.0	5.5	6.4	8.8	11.2	12.9	14.4	13.2	10.5	8.7	7.3	9.2
1975	6.7	5.7	5.6	6.1	8.0	10.5	13.1	14.5	13.8	11.8	9.9	7.8	9.4
1976	6.6	4.7	5.1	6.1	8.1	10.9	13.6	14.4	14.2	12.7	10.1	7.2	9.4
1977	5.1	5.0	5.8	6.4	8.5	10.5	12.5	14.3	13.8	12.4	9.7	7.1	9.2
1978	5.5	4.3	5.0	6.1	7.6	10.1	11.5	13.6	13.0	12.5	10.9	7.2	8.9
1979	4.3	2.3	3.2	5.0	6.6	9.4	11.1	12.5	12.3	11.1	8.6	7.2	7.8
1980	4.7	4.8	4.8	6.1	8.0	10.3	11.8	13.7	13.7	11.7	8.6	7.0	8.7
1981	5.3	4.9	5.0	6.9	8.4	10.4	12.9	14.3	14.7	11.5	9.3	6.0	9.1
1982	4.1	4.8	5.1	6.5	8.3	11.0	12.9	14.2	13.7	12.4	10.2	7.5	9.2
1983	6.2	4.5	4.9	6.1	8.1	10.5	13.0	14.4	13.3	11.5	9.6	8.4	9.2
1984	5.9	5.0	4.9	6.1	8.0	10.3	12.6	14.8	13.8	12.9	11.1	8.4	9.4
1985	6.0	4.0	5.0	6.3	7.8	10.0	12.7	13.4	13.0	12.2	8.7	7.2	8.8
1986	4.8	3.5	3.0	4.3	7.3	9.3	11.7	13.7	11.9	11.0	9.8	8.6	8.2
1987	6.0	4.7	4.2	5.8	7.6	9.6	12.1	13.4	13.9	11.8	10.5	8.4	9.0
1988	6.9	5.8	5.3	6.2	8.6	10.8	13.5	13.7	13.0	12.0	9.8	8.5	9.5
obs	97	97	97	97	97	97	97	96	97	97	97	97	
mean	5.1	4.6	5.0	6.4	8.7	11.4	13.4	14.3	13.6	11.7	9.0	6.7	9.2

**Table 8. Monthly and annual mean sea surface temperatures at SPURN POINT,
53° 35'N 00° 07'E (Source: MAFF)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1966	3.1	4.2	6.1	6.8	11.1	13.7	14.8	15.4	15.0	12.9	8.0	5.3	9.7
1967	3.9	5.4	6.3	7.1	10.0	13.8	16.4	15.9	14.4	11.5	7.8	4.8	9.7
1968	3.9	4.1	4.6	8.1	11.3	14.2	14.9	15.4	14.9	12.7	8.9	5.6	9.8
1969	4.8	2.6	3.0	6.9	9.5	13.2	15.7	16.4	14.0	13.2	7.8	4.7	9.3
1970	3.7	3.4	3.6	6.6	10.1	15.1	15.3	15.3	14.7	11.3	8.4	6.0	9.4
1971	4.4	4.8	5.6	7.7	11.0	13.3	16.1	16.4	15.7	12.6	7.5	6.0	10.0
1972	4.8	4.1	5.6	7.8	10.8	12.7	14.7	16.3	14.5	11.6	7.9	6.6	9.7
1973	5.5	5.1	5.9	7.0	10.2	14.9	16.3	16.9	15.6	11.4	6.0	3.7	9.8
1974	6.0	6.4	6.1	7.7	12.7	12.0		18.1	13.0				
1975				7.4	9.9	13.7	17.0	18.2	14.8	11.2	8.3	5.4	
1976	5.2	4.0	5.2	8.1	10.6	14.9	18.7	18.1	14.9	13.0	8.8	4.6	10.5
1977	3.5	3.6	6.4	7.7				15.9	14.5	12.7	7.7	5.8	
1978	4.6	3.4	6.4	7.4	10.7	14.1	15.0	16.5	14.8	11.6	9.9	6.6	10.0
1979	3.0	2.5	4.4	7.2	9.4	13.6	15.8	16.0	14.8	12.9	8.0	7.1	9.5
1980	4.3	5.8	6.1	7.9	11.4	14.1	15.4	16.4	15.5	11.6	7.9	5.3	10.1
1981	4.5	4.6	6.0	8.2	10.4	14.7	16.5	17.4	15.6	11.7	8.2	4.5	10.1
1982	3.4	4.9	5.7	8.4	11.5	14.6	16.2	16.6	14.9				5.2
1983	4.9	3.6	5.0	6.7	9.4	13.2	16.7	18.3	14.5	11.3	7.8	5.7	9.7
1984	4.3	4.1	4.8	7.4	10.8	13.6	16.8	17.7	14.9	11.9	10.0	6.9	10.2
1985	3.0	2.4	4.5	7.6	8.8	13.1	16.2	15.4	14.5	12.5	7.1	6.1	9.2
1986	4.4	1.5	3.0	5.8	9.7	13.7	15.6	15.1	12.9	11.2	8.1	6.4	8.9
1987	3.2	3.5	4.4	7.4	10.9	13.6	15.4	15.3	14.9	12.0	8.8	5.8	9.6
1988	5.7	5.4	5.0	7.4	11.2	13.9	15.6	15.1	13.7	11.4	8.2	6.3	9.9
1989	6.3	5.9	6.6	7.5	11.1	14.7	17.5	17.3	15.4	12.7	9.1	6.3	10.8
obs	23	23	23	24	23	23	22	24	24	22	22	23	
mean	4.3	4.1	5.2	7.4	10.5	13.8	16.0	16.4	14.6	12.0	8.1	5.6	9.8

**Table 9. Monthly and annual mean sea surface temperatures at DOWSING LV,
53° 35'N 00° 50'E (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1880	5.0	4.4	5.0	6.1	8.9	11.1	13.3	14.4	15.6	11.7	8.9	7.2	9.3
1881	4.4	3.3	3.9	5.0	7.8	10.6	13.3	13.9	12.8	10.6	8.3	7.2	8.4
1882	6.1	5.6	6.1	7.2	8.9	11.1	13.9	15.0	13.9	12.8	8.9	6.7	9.6
1883	6.1	5.6	5.0	6.1	7.8	11.1	12.8	13.3	13.3	11.1	9.4	7.2	9.0
1884	6.7	5.6	6.1	7.2	8.9	11.7	13.9	15.0	14.4	11.7	9.4	6.7	9.7
1885	5.0	4.4	4.4	6.1	7.2	10.0	12.8	12.8	12.8	10.6	8.9	6.7	8.4
1886	5.0	3.9	3.9	5.6	7.2	10.0	11.7	13.3	13.9	12.8	10.0	7.2	8.7
1887	4.4	4.4	5.0	6.1	7.8	10.6	13.9	15.0	13.3	11.1	8.3	6.7	8.8
1888	5.0	4.4	2.8	4.4	7.2	10.0	11.1	12.8	12.8	11.1	8.9	7.2	8.1
1889	6.1	5.0	4.4	5.6	8.3	11.1	13.3	13.9	13.3			7.8	
1890	6.7	5.6	5.6	7.2	8.9	11.7	13.3	13.9	13.9	12.8	10.0	7.2	9.7
1891	3.9	5.6	5.6	6.1	8.3	11.7	12.8	13.3	13.9	12.8	10.0	8.3	9.3
1892	6.1	5.0	4.4	5.6	7.8	10.6	11.7	13.9	13.3	11.1	9.4	6.7	8.8
1893	4.4	5.0	5.6	7.2	10.0	12.2	14.4	15.0	14.4	12.8	9.4	7.2	9.8
1894	5.0	5.0	5.6	7.2	8.9	10.6	13.3	13.9	13.3	12.2	10.6	8.3	9.4
1895	5.6	3.3	4.4	6.1	8.3	11.1	13.9	14.4	15.0	12.2	9.4	6.7	9.2
1896	5.6	5.6	5.6	7.2	8.9	12.2	13.9	14.4	13.9	12.2	9.4	7.2	9.6
1897	5.6	5.0	6.1	6.7	8.9	11.1	13.3	15.0	13.3	11.7	10.0	7.8	9.5
1898	7.8	6.7	6.1	7.8	9.4	11.1	13.3	15.0	15.0	13.3	11.1	8.3	10.4
1899	7.2	6.7	6.1	7.2	8.9	11.7	14.4	15.6	15.0	11.7	10.6	7.8	10.2
1900	6.7	5.6	6.1	7.2	8.9	11.7	13.9	14.4	13.9	11.1	8.3	7.8	9.6
1901	5.6	4.4	5.0	6.7	9.4	12.2	13.9	15.6	15.0	11.7	8.3	6.1	9.4
1902	5.6	3.9	5.6	6.7	7.8	11.1	13.9	13.9	12.8	11.7	10.0	6.7	9.1
1903	6.1	6.1	6.7	6.7	8.9	11.1	12.8	13.9	12.8	11.7	9.4	6.7	9.4
1904	5.6	5.6	5.0	7.2	8.9	11.1	13.3	14.4	13.9	12.2	10.0	7.8	9.5
1905	5.6	5.0	5.6	6.7	8.3	11.1	13.9	14.4	13.9	10.6	8.9	7.2	9.2
1906	6.1	5.6	5.0	6.7	8.9	11.1	13.3	15.0	15.0	13.3	10.0	7.2	9.7
1907	5.6	4.4	5.0	6.7	8.3	10.0	12.2	13.3	13.3	12.8	10.6	7.8	9.1
1908	4.4	5.0	5.0	6.1	8.3	11.1	13.3	13.9	13.3	12.8	10.6	7.8	9.3
1909	5.6	5.0	4.4	6.1	8.3	11.1	12.2	13.9	13.3	12.2	8.9	6.7	8.9
1910	5.6	5.0	5.6	6.7	8.3	11.1	12.2	13.9	13.9	12.8	8.9	7.2	9.2
1911	6.1	5.6	6.1	6.1	8.3	11.7	13.9	16.1	15.0	12.8	9.4		
1912	5.6	5.0	6.1	7.8	10.0	12.2	13.9	13.9	12.8	11.7	9.4	7.8	9.6
1913	6.1	5.6	5.6	6.7	8.9	10.6	12.2	13.9	13.9	13.9	11.1	8.3	9.7
1914	6.1	6.1	6.1	7.8	9.4	11.7	13.9	15.0					

Table 9. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1915 - 1949													
1950	6.1	6.1	6.1	7.2	8.9	11.7	13.3	14.4	12.8	11.1	8.9	7.2	9.4
1951	5.6	5.0	5.0	6.1	7.8	10.6	12.8	13.9	13.9	12.2	10.6	7.8	9.2
1952	6.1	5.0	5.6	6.7	9.4	11.1	12.8	14.4	13.9	11.7	8.9	6.7	9.3
1953	6.1	5.0	5.6	6.7	8.9	11.1	12.8	14.4	13.9	12.8	10.6	9.4	9.7
1954	6.1	3.3	4.4	6.1	8.3	10.6	12.2	13.3	13.3	12.2	10.0	7.8	8.9
1955	5.6	5.0	3.3	5.6	7.2	10.0	12.2	14.4	14.4	12.2	10.0	7.8	8.9
1956	6.7	3.9	4.4	6.1	8.3	10.6	12.2	12.8	13.3	11.7	8.9	7.8	8.8
1957	6.7	6.7	6.7	7.2	9.4	11.7	13.9	14.4	13.3	12.2	10.0	7.8	10.0
1958	6.1	5.6	4.4	5.0	7.8	10.0	12.2	12.8	13.9	11.7	10.0	8.3	8.9
1959	6.1	5.0	6.1	7.2	9.4	12.2	13.9	15.0	15.6	14.4	10.0	8.3	10.2
1960	6.7	5.6	5.0	6.1	8.9	11.1	13.3	13.9	13.9	12.8	10.6	8.3	9.6
1961	6.3	5.4	6.2	7.6	9.4	11.1	12.9	13.8	14.9	13.8	9.9	7.3	9.8
1962	5.6	4.8	4.2	4.8	7.0	9.6	11.6	13.2	12.7	12.2	10.4	7.5	8.6
1963	3.4	1.3	3.0	5.1	7.3	10.4	12.1	12.9	12.4	11.3	10.3	7.8	8.1
1964	5.7	5.7	4.4	5.4	8.3	10.6	12.8	14.2	14.3	12.8	10.6	8.1	9.4
1965	6.4	5.3	4.7	6.1	8.0	10.4	11.6	13.2	12.9	12.3	9.3	7.2	8.9
1966	4.9	4.3	5.2	5.6	8.1	10.6	12.0	13.3	13.9	12.8	10.1	7.4	9.0
1967	5.4	5.3	5.6	6.7	8.2	10.8	13.4	13.9	13.3	11.9	9.7	7.7	9.3
1968	5.4	5.0	4.7	6.5	8.6	10.9	12.6	13.8	14.2	12.2	9.8	7.9	9.3
1969	6.2	4.9	3.8	4.8	6.9	10.3	12.2	14.1	13.7	13.1	10.4	7.1	8.9
1970	5.4	4.7	4.4	5.2	7.6	10.9	12.0	13.9	13.1	11.8	10.1	8.1	8.9
1971	5.9	5.7	5.6	6.6	9.1	10.8	12.9	14.3	14.3	13.0	9.9	7.9	9.6
1972	6.1	4.8	5.3	6.5	9.0	10.5	12.6	14.2	14.1	12.7	10.7	8.3	9.5
1973	6.3	6.1	6.1	6.9	8.2	11.4	13.7	14.2	14.9	13.1	9.8	7.2	9.8
1974	6.2	6.0	6.0	6.8	8.7	11.4	12.5	14.4	13.1	10.8	9.3	7.5	9.3
1975	6.9	6.0	5.8	6.1	8.1	10.2	13.4	14.7	14.6	12.7	10.3	8.8	9.8
1976	7.1	5.0	5.0	5.8	8.1	11.1	13.9	14.9	15.4	13.5	11.0	8.0	9.9
1977	6.4	6.0	6.1	7.0	8.5	11.0	12.7	14.1	14.3	12.9	9.2	7.8	9.6
1978	6.4	4.8	5.0	6.2	7.7	10.7	11.7	13.9	13.6	13.0	11.7	8.7	9.4
1979	5.9	3.8	4.0	5.1	7.2	10.0	12.1	13.3	14.4	12.9	10.2	8.1	8.9
1980	6.0	5.7	5.1	6.4	8.2	11.1	12.2	13.9	14.0	12.6	9.3	7.1	9.3
1981	6.1	5.4	5.3	6.6	8.2	10.8	12.1	14.2	14.9	12.7	9.7	7.0	9.4
1982	4.3	4.8	5.1	6.5	7.9	10.9	12.8	14.4	14.2	13.0	10.4	7.3	9.3
1983	6.7	5.0	5.2	6.1	8.4	10.1	12.6	14.1	14.1	12.4	9.7	8.4	9.4
1984	7.2	5.0	4.2	5.4	7.7	9.2	12.5	15.1	15.0	12.8	11.5	8.5	9.5
1985	6.2	3.8	4.7	5.8	6.6	9.8	12.5	13.7	13.3	12.8	8.9	7.9	8.8
1986	6.3	4.6	2.9	4.7	6.2	9.5	12.3	13.7	12.6	11.9	9.7	8.7	8.5
1987	5.4	4.0	4.1	5.8	7.8	9.5	12.5	13.4	14.1	12.8	10.8	8.3	9.0
1988	7.7	5.9	5.5	6.5	7.5	10.0	13.2	14.2	14.0	12.0	9.7	8.2	9.5
obs	74	74	74	74	74	74	74	74	73	72	72	72	
mean	5.8	5.0	5.1	6.3	8.3	10.8	12.9	14.1	13.8	12.2	9.8	7.6	9.3

Table 10. Monthly and annual mean sea surface temperatures at LEMAN and OWER LV, 53° 11'N 01° 56'E (Source: MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	5.5	5.0	5.5	6.5	9.0	12.0	16.0	16.0	14.0	11.0	8.5	7.0	9.6
1906	5.5	5.0	5.5	5.5	9.0	11.5	14.5	16.0	16.0	14.0	11.0	7.0	10.0
1907	5.5	4.5	5.0	7.0	9.0	11.0	13.5	14.5	14.5	13.5	11.0	8.0	9.7
1908	5.5	5.0	5.0	6.0	9.0	12.0	14.5	15.5	14.0	13.5	11.0	8.0	9.9
1909	6.0	5.0	4.0	6.0	9.0	11.5	13.5	15.0	14.0	13.0	9.5	6.5	9.4
1910	5.5	5.0	5.5	6.5	9.0	13.0	14.0	15.0	14.5	13.5	9.0	6.5	9.7
1911	5.5	5.0	5.5	5.5	8.5	13.0	14.5	17.0	16.0	13.5	9.5	7.0	10.0
1912	5.5	5.0	6.0	7.0	9.5	13.0	15.0	14.5	13.0	11.0	9.0	7.0	9.6
obs	8	8	8	8	8	8	8	8	8	8	8	8	
mean	5.5	4.9	5.2	6.2	9.0	12.1	14.4	15.4	14.5	12.8	9.8	7.1	9.7

**Table 11. Monthly and annual mean sea surface temperatures at SKEGNESS,
53° 09'N 00° 21'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	4.6	5.6	7.5	7.4	11.1	15.6	16.3	16.5	15.5	13.0	7.7	6.2	10.5
1967	4.0	5.0	6.6	7.8	11.6	15.2	18.4	17.3	15.3	11.9	7.8	4.8	10.4
1968	3.9	3.9	6.2	9.3	11.4	15.6	16.7	16.7	16.2	13.5	8.6	4.6	10.5
1969	4.2	2.4	3.3	7.1	10.9	15.5	18.0	17.3	15.6	13.0	7.6	4.7	9.9
1970	3.4	3.1	3.8	6.6	11.6	16.8	17.0	17.1	15.0	11.7	8.0	5.8	9.9
1971	4.0	4.5	5.2	8.1	12.7	13.7	17.7	17.1	15.8	12.7	7.8	5.5	10.4
1972	4.5	3.7	5.1	8.1	11.9	13.6	16.2	16.6	14.0	11.5	7.8	5.4	9.8
1973	4.6	4.5	6.0	7.2	11.1	16.6	17.5	17.6	16.4	10.9	8.2	3.8	10.3
1974	4.9	5.5	5.4	8.1	11.7	14.9	16.1	16.9	15.0	10.4	7.2	6.1	10.1
1975	6.0	5.3	5.4	7.3	10.8	15.0	15.6	20.6	15.5	12.0	8.0	5.7	10.6
1976	6.0	3.8	5.2	9.2	13.3	17.7	20.4	19.0	15.2	13.5	9.3	4.4	11.4
1977	3.2	5.7	9.0	10.9	11.9	14.0	16.5	16.6	14.7	11.4	9.1	5.8	10.7
1978		6.6				14.2	16.6						
1979	3.3		3.8	7.8	12.2		16.3	17.2	16.1	14.2		7.8	
obs	13	13	14	13	13	13	14	13	13	13	12	13	
mean	4.3	4.5	5.5	8.0	11.7	15.2	17.0	17.4	15.4	12.2	8.0	5.4	10.4

**Table 12. Monthly and annual mean sea surface temperatures at LYNN WELL LV,
53° 01'N 00° 26'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1963												6.5	
1964	4.5	4.0	4.4	6.3	10.6	14.0	15.5	17.1	16.0	12.6	9.7	6.7	10.1
1965	4.6	4.2	4.3	7.3	10.2	13.2	14.6	15.7	14.5	13.0	8.7	5.1	9.6
1966	3.6	4.3	5.2	6.0	9.9	13.4	15.3	16.8	15.5	13.2	8.6	5.6	9.7
1967	4.1	4.9	6.1	7.3	10.6	13.5	16.7	17.0	14.9	12.2	8.9	6.0	10.1
1968	3.9	4.0	4.4	7.2	10.1	13.6	15.4	15.5	15.1	13.4	9.5	5.3	9.7
1969	4.5	3.4	3.0	5.6	9.5	14.4	16.5	17.0	15.1	14.0	8.1	4.8	9.6
1970	3.7	3.6	3.8	6.0	10.2	14.6	15.7	16.4	14.5	12.5	9.7	6.0	9.7
1971	5.0	5.1	5.5	7.7	11.6	13.1	16.6	17.1	16.2	15.0	10.1	6.5	10.7
1972	5.5	4.3	5.1	8.0	10.5	12.7	15.1	16.6	14.8	12.8	9.4	6.8	10.1
1973	5.7	5.2	6.0	7.3	10.7	15.0	17.2	18.9	17.2				
obs	10	10	10	10	10	10	10	10	10	9	9	10	
mean	4.5	4.3	4.7	6.8	10.3	13.7	15.8	16.8	15.3	13.1	9.1	5.9	9.9

**Table 13. Monthly and annual mean sea surface temperatures at BRANCASTER,
52° 58'N 00° 38'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	2.7	4.4	5.7	7.2	12.9	16.1	16.5	16.4	15.6	12.7	7.8	5.1	10.2
1967	3.7	5.0	6.4	7.2	11.1	15.0	18.9	17.9	15.2	11.8	7.4	4.2	10.3
1968	3.5	3.5	4.9	8.4	11.0	15.7	16.5	16.2	15.2	12.8	8.0	5.1	10.0
1969	4.6	2.6	2.9	6.4	11.6	14.9	17.9	18.5	15.9	13.5	7.4	3.4	9.9
1970	3.8	2.5	4.4	7.4	11.6	16.1	16.2	17.4	15.4	11.7	7.6	5.4	9.9
1971	4.3	4.7	5.2	8.3	12.3	14.2	17.7	17.6	16.2	13.0	7.4	6.3	10.6
1972	4.6	3.9	5.9	8.7	12.0	14.3	16.4	16.6	14.5	11.6	7.6	6.0	10.1
1973	4.6	3.8	6.0	7.5	11.6	16.8	17.9	17.7	17.0	10.8	5.9	4.1	10.3
1974	4.9	5.2	6.0	8.0	12.1	15.2	16.4	17.6	13.8	9.5	6.8	5.9	10.1
1975	5.9	4.8	5.6	7.5	11.2	15.1	18.1	20.4	15.6	11.7	7.9	5.1	10.7
1976	5.4	3.8	5.0	8.6	12.0	17.6	20.3	19.2	16.0	12.9	8.0	3.7	11.0
1977	3.1	4.4	6.5	6.9	11.3	13.2	15.8	17.0	15.1	12.2	7.9	5.8	9.9
1978	3.4	2.2	5.6	6.6	10.7	15.1	15.7	16.8	14.4	12.3	9.8	4.9	9.7
1979	1.7	1.8	3.7	7.4	10.5	15.1	17.0	17.1	15.0	13.0	7.4	5.6	9.6
1980	2.9	5.0	5.3	8.6	11.5	15.6	14.8	17.5	15.7	10.4	7.9	4.8	10.0
1981	3.9	3.6	6.8	8.2	11.5	14.6	16.6	18.0	16.7	10.6	7.9	3.4	10.1
1982	2.3	4.4	5.4	8.4	12.7		18.8	17.6	15.4	11.1	8.3	5.2	
1983	4.5	2.5	5.5	7.6	10.9	15.6	18.0	19.7	13.9	11.0	7.4	5.5	10.1
1984	2.9	3.1	4.6	8.3	10.9	15.4	17.7	18.7	14.7	11.9	9.4	6.0	10.3
1985	2.9	2.1	4.1	8.7	11.0	13.8	18.1	15.9	15.4	11.4	6.4	6.1	9.6
1986	3.8	1.1	3.8	7.4	11.6	15.1	18.3	16.0	15.6	11.4	7.5	5.9	9.7
1987	1.3	3.0	4.6	8.5	11.7	14.7	16.9	16.8	15.4	11.1	8.1	6.1	9.8
1988		3.6				13.4	15.6	17.2	17.1	14.4	11.6	7.7	
1989	5.9	5.0	7.3	8.4	13.8	16.6	19.5	19.1	16.7	16.9	12.2	10.4	12.6
obs	23	24	23	23	24	23	24	24	24	24	24	24	
mean	3.7	3.5	5.2	7.8	11.7	15.2	17.3	17.6	15.3	11.9	7.9	5.4	10.2

**Table 14. Monthly and annual mean sea surface temperatures at BLAKENEY,
52° 58'N 01° 00'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	3.2	5.5	5.9	7.0	12.5	16.4	17.0	17.0	15.2	12.3	7.2	4.9	10.3
1967	6.9	6.9	8.1	8.5	10.6	13.6	16.1	17.9	15.6	12.1	7.6	4.6	10.7
1968	4.2	3.4	4.7	8.7	11.6	15.5	16.4	15.4	14.7	12.3	7.3	6.0	10.0
1969	5.7	2.7	4.3	6.5	11.1	14.4	17.5	18.0	15.5	11.7	7.6	4.2	9.9
1970	4.7	3.9	4.6	5.9	12.1	16.5	16.7	17.1	14.4	11.8	8.6	6.9	10.2
1971	5.0	5.6	5.5	8.1	11.6	15.0	17.7	17.4	16.1	13.4	9.6	7.9	11.0
1972	6.2	3.7	6.4	9.1	10.9	14.4	16.7	17.7	15.9	14.2	11.7	6.4	11.1
1973	5.4	5.0	6.6	7.7	11.9	15.0	17.3	18.3	16.9	10.8	8.0	4.4	10.6
1974	5.1	4.9	6.4	8.2	11.0	13.9	16.4	17.3	14.9	9.8	5.9	5.3	9.9
1975	6.2	5.8	5.0	7.4	10.4	13.6	17.8	19.1	16.7	12.0	8.7	6.6	10.7
1976	5.5	3.6	4.7	7.8	11.1	16.4	18.6	18.3	15.9	13.5	8.7	4.6	10.7
1977	4.6	5.2	7.1	8.0	11.4	12.6	14.8	17.1	14.8	13.6	10.3	7.6	10.5
1978	5.8	5.0	7.9	8.2	11.1	14.9	15.7	16.6	14.4				
1979	2.5	3.0	5.1	7.6	11.3	14.2	17.7		13.4	13.1	8.1	6.0	
1980	3.8	6.2	6.4	8.1	11.6	15.6	15.9	17.6	16.0	10.9	6.7	4.8	10.3
1981	4.9	4.7	7.7	8.0	10.4	14.6	15.9	17.6	15.6	8.4	8.4	3.3	9.9
1982	3.5	4.9	7.0	9.2	11.9	16.8	17.0	17.7	15.2	12.2	8.7	4.4	10.7
1983	5.5	3.3	5.2	8.2	11.3	14.8	18.4	19.2	14.7	11.3	8.6	6.0	10.5
1984	4.1	4.0	4.6	9.3	10.8	14.3	18.0	18.3	14.5	12.3	9.6	5.9	10.4
1985	2.3	2.2	5.4	9.8	12.0	14.5	18.0	16.2	14.4	13.1	6.3	6.1	10.0
1986	3.5	1.7	6.0	6.5	12.2	14.3	18.4	16.3	13.7	11.8	8.4	6.0	9.9
1987	2.1	4.4	5.5	10.4	11.1	15.1	18.0	17.2	15.2	11.8	7.9	6.7	10.4
1988	5.4	4.7	6.3	9.5	13.0	15.3	16.9	17.8	14.5	11.8	7.0	6.3	10.7
1989	5.7	4.9	7.8	7.7	14.5	17.4	19.4	17.7	16.5	12.5	7.4	6.4	11.4
obs	24	24	24	24	24	24	24	23	24	23	23	23	
mean	4.6	4.3	6.0	8.1	11.5	14.9	17.1	17.5	15.1	12.0	8.1	5.7	10.4

**Table 15. Monthly and annual mean sea surface temperatures at CROMER,
52° 56'N 01° 18'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966			6.2	6.9	10.5	13.4	15.9	16.4	15.4	12.2	7.6	5.9	
1967	4.7	5.3	6.4	7.4	11.0	14.6	17.3	18.2	15.6	12.3	7.7	4.9	10.4
1968	3.6	3.7	4.9	7.7	12.0	15.1	16.1	15.7	15.2	13.1	8.3	4.7	10.0
1969	5.3	3.6	3.4	6.1	10.7	14.8	16.4	16.6	15.7	13.3	7.9	4.1	9.8
1970	3.5	4.0	3.9	5.9	11.6	15.7	17.4	18.9	13.9	13.5	9.2	6.6	10.3
1971	4.4	5.1	5.5	8.6	12.6	14.4	17.3	17.3	15.1	13.6	8.2	5.9	10.6
1972	4.0	3.5	6.9	8.7	10.7	13.4	16.0	16.6	14.6	12.0	9.9	9.2	10.4
1973	7.0	6.9	7.3	7.0	10.8	15.8	17.6	17.1	15.6	11.7	7.4	4.3	10.7
1974	4.4	5.7	6.6	7.4	9.5	15.4	16.5	17.5	14.8	9.9	7.2	5.4	10.0
1975	6.2	5.2	5.4	6.7	9.6	15.6	17.8	19.9	12.7	12.1	8.3	5.1	10.3
1976	3.7	5.3	4.6	6.3	10.8	17.3	19.1	19.2	16.4	13.7	7.5	4.2	10.6
1977	3.0	4.3	5.7	7.0	11.1	13.2	15.2	17.0	14.9	12.4	9.9	6.1	9.9
1978	4.5	3.2	5.1	6.9	10.7	15.4	16.1	15.8	14.3	14.2	9.0	7.8	10.2
1979	2.7	2.5	4.5	5.6	9.3	15.8	19.4	17.4	14.5	13.6	8.7		
1980		4.4	5.6	9.4	9.3	15.8	16.5	19.5	17.2	16.8	7.7	5.7	
1981	3.7	4.5	6.4	8.7	10.6	16.6	17.0	18.1	16.5	10.7	7.3	4.7	10.4
1982	3.1	4.2	5.6	8.0	10.6	16.3	17.4	16.6	14.3	12.2	9.3	6.4	10.3
1983	7.2	4.9	5.4	5.7	10.4	15.0	17.8	18.0	13.8	11.1	7.6	5.2	10.1
1984	3.9	3.2	4.7	7.7	10.3	13.1	16.8	17.2	16.2	14.4	10.7	5.3	10.2
1985	2.8	1.9	4.4	7.5	9.7	13.2	16.0	15.7	16.4	14.5	7.7	6.8	9.7
1986	3.8	3.3	5.0	6.6	10.8	13.6	16.7	17.3	14.1	11.7	8.2	6.3	9.7
1987	3.9	2.5	3.2	6.3	10.5	13.5	16.6	16.2	15.7	12.8	10.0	9.5	10.0
1988	7.2	5.4	5.4	8.0	11.8	14.9	15.6	16.4	14.0	10.6	7.8	6.2	10.2
1989	5.2	5.7	6.6	7.2	12.2	15.3	18.6	18.4	16.3	13.3	9.7	6.9	11.2
obs	22	23	24	24	24	24	24	24	24	24	24	23	
mean	4.4	4.2	5.3	7.2	10.7	14.8	16.9	17.3	15.1	12.7	8.4	5.9	10.2

**Table 16. Monthly and annual mean sea surface temperatures at NEWARP LV,
52° 48'N 01° 55'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1880	3.3	3.9	5.0	6.7	8.9	12.2	15.0	16.1	16.7	13.9		6.7	
1881	5.0	2.8	3.3	5.6	8.3	11.7	15.0	15.6	13.9	11.1	8.9	7.2	9.0
1882	5.6	5.0	6.1	7.8	10.0	12.8	14.4	16.1	15.0	12.8	9.4	6.1	10.0
1883	5.6	4.4	4.4	5.6	6.7	11.7				12.2	9.4	6.1	
1884	5.6	5.6	6.1	6.7	9.4	12.2	15.6	17.2	16.1	12.8	9.4	6.7	10.2
1885	4.4	4.4	5.0	6.7	8.9	11.7	14.4	15.0	14.4				
1886													
1887	3.9	3.9	4.4	6.1	8.3	11.7	15.0	16.1	14.4	11.1	8.3	5.6	9.0
1888	4.4	3.3	2.8	4.4	7.8	11.1	12.8	13.9	14.4	11.1	8.9	7.2	8.5
1889													
1890	5.0	3.9	5.0	6.7	9.4	12.2	13.9	15.6	15.0	13.3	8.9	5.6	9.5
1891	3.9	5.0	5.0	5.6	8.3	11.7	15.0	15.6	15.6	13.9	9.4	7.2	9.6
1892	5.6	5.6	3.9	6.7	8.9	11.7	13.3	13.3	13.9	11.7	10.0	7.2	9.3
1893	3.9	4.4	5.0			13.3	15.6	16.1	15.6	13.3	8.3	6.7	
1894	4.4	4.4	5.6	7.2	9.4	12.2	15.0	15.6	13.9	12.8	10.0	7.8	9.8
1895	5.0	3.3	4.4	6.1	10.0	11.7	15.0	15.6	16.1	12.8	10.0	5.0	9.5
1896	6.1	6.1	6.7	8.3	9.4	12.8	16.7	15.6	16.1				
1897	3.3	3.3	5.6	7.2	10.6	13.3	15.6	16.1	15.0	11.1	10.0	6.7	9.8
1898	6.7	6.1	5.6	7.2	9.4	12.8	14.4	16.7	17.8	13.3	10.0	7.8	10.6
1899	6.7	6.1	6.1	6.7	8.9	12.2	15.6	16.7	16.1	12.8	10.6	7.2	10.4
1900	5.6	4.4	4.4	5.6	8.9	12.2	15.0	16.1	15.0	12.2	9.4	7.8	9.7
1901	6.1	3.9	4.4	6.1	8.9	12.2	15.0	17.2	15.0	12.8	10.6	6.7	9.9
1902	5.6	5.6	6.7	6.7	8.3	12.2	14.4	15.0	14.4	12.2	10.0	7.2	9.8
1903	5.6	5.6	6.7	7.2	8.9	11.7	13.9	15.6	14.4	13.3	10.0	6.7	9.9
1904	5.0	4.4	5.0	6.7	8.9	11.7	13.9	16.1	14.4	12.8	10.0	7.2	9.6
1905	5.5	4.5	5.0	6.5	8.0	12.0	16.0	17.0	15.5	11.5	9.0	7.0	9.7
1906	5.0	4.5	5.0	6.0	9.0	11.5	14.5	16.0	16.0	14.5	10.5	7.0	9.9
1907	5.0	4.0	5.0	6.5	9.0	11.5	14.0	15.0	14.5	14.0	11.0	8.0	9.7
1908	5.0	4.0	4.5	5.5	7.0	13.0	14.5	15.5	14.0	13.5	10.5	8.0	9.5
1909	5.5	5.0	3.5	5.5	9.0	11.0	14.0	15.0	14.0	13.5	9.5	4.5	9.1
1910	5.0	4.0	4.5	5.5	8.5	12.0	14.0	15.0	14.5	13.5	9.0	6.0	9.2
1911	5.0	5.0	5.0	6.0	9.0	13.0	15.0	18.0	17.0	13.0	10.0	7.0	10.2
1912	6.0	4.5	5.5	8.0	10.0	13.0	15.5	15.5	13.5	11.5	10.0	7.0	10.0
1913	6.0	5.5	6.0	6.5	8.0	13.0	14.0	15.0	15.5	14.5	11.5	8.5	10.3
1914	5.0	5.5	6.0	8.0	10.0	12.0	16.5	16.5	16.5	13.5	11.0	9.0	10.7
1915	5.5	5.0	5.5	6.5	9.0	12.0	15.0	16.0	15.5	13.0	9.0	6.5	9.8
1916	6.0	5.0	4.5	6.0	9.0	11.0	13.5	15.0	15.0	13.0	10.0	6.5	9.5
1917	4.5	3.5	3.5	4.5	8.0	12.0	15.0	16.0	15.0	11.5	8.5	6.0	9.0
1918	3.5	4.5	5.0	6.0	9.0	13.0	15.0	16.0	15.0	11.5	9.5	8.0	9.6
1919	6.0	4.5	4.5	5.5	9.0	13.0	13.5	14.5	14.5	11.5	7.0	5.0	9.0
1920	4.5	4.5	5.5	7.0	9.5	13.0	14.5	14.5	14.0	13.5	10.0	7.0	9.7
1921	6.0	5.5	6.0	8.0	10.0	13.5	15.0	16.5	16.0	14.5	10.0	8.0	10.7
1922	5.5	4.0	4.5	5.0	9.0	13.0	14.0	14.5	14.5	12.0	9.0	7.0	9.3
1923	5.5	5.5	5.5	7.0	9.0	10.5	14.5	16.0	14.5	12.0	9.0	5.5	9.5
1924	4.0	4.0	4.0	5.5	9.0	11.5	14.5	15.5	15.0	13.0	10.5	8.5	9.5
1925	6.5	5.5	5.5	6.5	9.5	13.0	14.5	16.0	14.5	12.0	9.5	5.5	9.8
1926	4.5	5.0	5.5	7.0	9.5	12.0	15.0	16.5	16.5	13.5	10.0	6.5	10.1
1927	5.5	5.0	5.5	7.0	9.5	12.0	14.0	15.5	15.0	12.0	10.0	6.0	9.7
1928	4.5	4.5	5.0	6.5	9.0	11.5	15.0	16.0	15.5	13.5	10.5	7.0	9.8
1929	4.5	2.0	3.0	6.5	7.0	12.0	14.0	15.5	16.0	14.0	9.5	8.0	9.3
1930	6.0	5.0	5.0	6.5	9.0	13.0	15.0	15.5	15.0	13.5	10.0	7.0	10.0
1931	6.0	5.0	4.5	6.0	8.5	12.0	15.0	15.5	14.0	13.0	10.5	8.0	9.8
1932	6.5	6.0	5.5	6.0	8.5	11.5	15.0	16.5	16.0	13.0	10.0	7.0	10.1
1933	5.5	4.5	5.0	7.0	9.5	13.0	16.0	17.0	16.5	14.5	10.0	6.0	10.3
1934	5.0	5.0	5.5	6.5	10.0	12.0	15.5	16.5	15.5	14.0	10.0	8.5	10.3
1935	7.0	6.0	5.5	7.0	9.5	13.0	16.0	17.0	16.5	13.0	9.5	7.0	10.5
1936	5.0	5.0	4.5	6.5	9.5	12.0	15.0	16.0	16.0	13.0	10.0	6.0	9.8
1937	6.0	5.0	4.5	6.0	9.0	12.0	15.0	15.5	15.5	13.5	10.5	7.0	9.9
1938 - 1947													
1948	6.0	5.0	5.0	7.0	10.0	13.0	14.0	15.5	15.0	13.5	10.5	8.5	10.2
1949	5.5	5.5	5.0	7.0	9.5	12.0	15.0	16.5	17.0	15.5	10.5	7.0	10.5
1950	6.0	5.0	5.5	7.0	9.5	13.0	15.0	16.5	15.5	12.0	9.0	6.0	10.0
1951	4.5	4.5	4.5	5.5	8.5	11.5	14.0	15.5	15.5	13.5	10.5	8.0	9.6
1952	5.5	4.0	5.0	6.5	9.5	13.0	15.0	16.0	14.5	11.5	8.0	6.0	9.5
1953	4.5	4.5	5.0	7.0	9.0	11.5	14.5	16.5	15.5	14.0	11.0	6.5	9.9
1954	6.5	3.5	4.0	6.0	9.0	11.5	14.0	14.5	14.5	13.0	11.0	7.0	9.5
1955	5.0	3.9	3.3	5.0	8.3	10.6	13.3	15.6	16.1	12.8	10.0	7.8	9.3
1956	6.1	3.3	3.9	5.6	8.9	11.7	13.9	15.0	14.4	12.8	9.4	7.2	9.3
1957	6.1	5.6	6.1	7.8	9.4	12.8	15.6	16.7	14.4	12.8	10.0	7.8	10.4
1958	5.6	4.4	4.4	5.0	8.3	11.1	13.3	15.6	15.6	13.3	10.0	7.8	9.5
1959	5.6	4.4	5.6	7.2	9.4	12.8	15.6	16.7	16.7	15.0	10.6	7.8	10.6

Table 16. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1960	6.1	5.0	5.0	6.1	8.9	12.2	14.4	16.1	15.6	13.3	10.6	7.8	10.0
1961	5.5	5.0	6.2	7.7	10.1	12.4	14.6	14.9	14.9	14.1	10.2	7.2	10.2
1962	5.0	4.6	4.0	5.1	7.4	10.7	13.2	14.6	14.2	12.9	9.8	7.1	9.0
1963	3.4	1.7	2.3	4.8	7.7	10.9	14.0	14.9	14.5	12.3	10.7	7.9	8.7
1964	5.3	4.6	4.4	5.1	8.6	11.9	14.2	15.9	15.8	13.0	10.5	7.8	9.7
1965	5.4	4.5	4.7	7.2	8.6	11.2	13.6	14.9	14.6	13.5	10.7	6.3	9.6
1966	4.7	4.1	4.8	5.7	8.2	11.5	13.9	14.7	15.1	14.1	10.4	7.0	9.5
1967	5.1	5.1	5.7	6.8	8.9	11.3	14.5	16.4	15.7	13.2	9.8	7.3	9.9
1968	5.2	4.8	4.9	6.4	8.7	11.7	14.1	14.8	15.0	13.8	10.8	7.7	9.8
1969	5.8	4.9	4.2	5.1	7.7	11.3	14.5	16.3	15.2	14.1	11.0	7.2	9.7
1970	5.2	4.5	4.3	5.4	8.4	12.1	14.2	15.4	15.3	13.3	10.3	8.3	9.7
1971	5.8	5.5	5.6	6.9	9.8	11.7	14.5	16.2	16.0	14.4	10.7	8.0	10.4
1972	6.1	4.9	5.3	6.9	8.6	11.3	13.9	14.5	14.5	12.9	10.5	7.5	9.7
1973	6.2	5.6	6.1	7.0	8.7	12.8	15.5	15.9	15.9	13.5	10.0	6.5	10.3
1974	5.1	5.5	5.9	6.8	8.8	11.9	13.9	15.3	15.4	12.4	8.9	7.4	9.7
1975	6.9	6.0	6.0	6.3	8.2	10.8	14.3	17.3	16.7	13.7	10.7	7.9	10.4
1976	6.9	5.5	5.0	5.8	8.7	12.5	15.6	17.3	16.2	14.9	11.9	8.0	10.6
1977	5.5	5.1	5.7	6.3	8.6	11.1	13.7	15.1	15.5	13.9	11.8	8.3	10.0
1978	6.3	4.0	4.9	6.3	7.8	11.4	12.5	14.9	15.0	13.8	11.9	8.8	9.8
1979	5.6	2.9	3.5	5.1	7.7	11.0	14.3	15.9	15.6	14.1	10.6	8.5	9.5
1980	4.8	4.7	5.0	6.3	8.1	12.4	13.5	15.2	16.0	13.2	9.2	7.1	9.6
1981	5.3	4.7	5.3	6.6	8.7	11.2	14.4	15.6	15.7	13.6	10.2	6.6	9.8
1982	4.2	4.1	4.9	6.4	8.2	10.8	14.7	16.4	15.7	14.1	12.3	8.7	10.0
1983	5.7	4.6	4.1	5.6	8.2	11.6	14.3	15.9	16.0	13.9	11.5	7.7	9.9
1984	5.1	5.0	5.0	5.5	8.3	10.9	13.4	16.1	16.1	13.7	11.5	9.4	10.0
1985	5.7	3.5	3.8	5.8	8.2	11.1	14.4	15.9	15.1	14.6	11.0	7.0	9.6
1986	5.8	4.1	3.2	4.5	7.5	11.1	13.8	15.5	14.5	13.4	11.1		
obs	95	95	95	94	94	95	94	94	94	93	92	92	
mean	5.3	4.6	4.9	6.3	8.8	11.9	14.5	15.7	15.2	13.1	10.0	7.1	9.8

**Table 17. Monthly and annual mean sea surface temperatures at SMITH'S KNOLL
LV, 52° 43'N 02° 18'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1910				7.1	7.6		14.1	15.3	15.4	14.6	9.0	7.6	
1911	5.5	5.0	5.5	5.5	8.5	12.0	14.5	17.0	16.5	13.0	10.5	8.0	10.1
1912	6.0	4.5	5.5	7.0	10.0	13.0	15.0	16.0	13.5	11.0	9.0	8.0	9.8
1913	7.0	6.0	5.5	6.0	9.5	12.0	14.0	15.0	15.5	14.5	12.0	9.0	10.5
1914	5.5	5.0	5.5	7.0	10.0	12.0	15.5	16.5	16.0	14.5	11.5	8.0	10.5
1915 - 1919													
1920				8.2	10.4	12.9	15.2	15.7	14.3	13.8	10.7	7.8	
1921	6.7	6.2	6.6	8.0	10.5	13.3	15.3	17.5	16.9	15.4	11.0	7.7	11.2
1922	5.3	4.2	4.9	5.5	8.4	12.2	14.2	15.1	14.6	12.7	9.4	7.7	9.5
1923	6.0	5.4	5.8	6.9	8.9	10.6	14.2	16.3		13.1	9.8	6.4	
1924	4.4	4.0	3.8	5.1	7.9	11.7	14.6	16.2	15.7	14.1	10.6	8.7	9.7
1925	7.4	6.0	5.6	6.5	9.1	12.7	14.6	16.5	15.1	13.1	10.5	6.5	10.3
1926	4.8	4.7	6.3	7.5	9.6	12.6	15.5	16.6	16.8	14.1	10.0	7.6	10.5
1927	5.8	4.7	5.8	7.6	9.5	12.5	14.1	16.3	16.1	13.9	11.0		
1928	5.1	5.3	5.4	6.9	8.6	11.4	14.6	16.2	16.4	14.1	11.5	8.3	10.3
1929	5.6	3.5	2.8	5.0	7.5	11.0	13.8	15.8	16.4	14.6	10.8		
1930	7.4	5.5	5.4	6.5	8.7	12.0	15.1	16.0	16.1	14.1	11.0	8.7	10.5
1931	6.6	5.1	4.4	5.6	8.1	11.4	15.0	15.8	14.6	13.1	11.0	9.2	9.9
1932	7.3	6.4	5.4	6.0	8.4	11.6	14.7	16.6	16.8	14.2	10.4	7.6	10.4
1933	6.5	4.8	5.0	6.9	9.2	12.6	15.7	17.8	17.6	15.5	10.5	7.5	10.8
1934	5.6	4.8	5.2	6.4	8.8	12.1	15.5	17.2	17.2	15.0	10.9	9.4	10.6
1935	7.8	6.1	5.9	7.0	9.0	12.3	16.0	17.6	17.0	14.2	10.8	7.6	10.9
1936	6.1	5.2	4.9	6.5	9.1	11.8	15.2	16.6	16.7	14.4	11.0	8.0	10.4
1937	6.8	5.7	5.4	6.5	8.5	12.0	15.1	16.3	16.0	14.4	11.6	8.5	10.5
1938	7.0	6.1	6.4	7.8	9.4	12.4	15.2	17.1	16.4	14.7	12.0	9.1	11.1
1939	5.8	5.6	5.8	7.1	9.2	12.5	15.0						
1940 - 1946													

Table 17. Continued

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1947	5.6	2.5	1.7	3.8	7.8	11.6	15.4	17.3	18.1	16.5	11.9	8.3	10.0
1948				7.0	9.6	12.5	13.9	16.0	16.1	14.5	11.9	9.9	
1949	7.1	5.9	5.3	7.3	9.4	12.0	15.0	16.8	17.4	16.4	12.1	8.7	11.1
1950	6.8	5.3	5.6	7.2	9.1	12.2	15.3	17.4	17.0	14.1	10.2	6.6	10.5
1951	5.1	4.7	4.9	5.8	7.8	11.3	14.0	16.4	16.6	15.0	12.2	9.3	10.2
1952	6.3	4.1	4.6	6.0	9.4	12.8	15.2	16.8	15.8	12.6	9.4	6.0	9.9
1953	4.8	4.8	5.4	6.4	9.0	12.4	14.9	16.8	16.6	14.7	12.4	10.1	10.6
1954	7.0	3.9	3.4	5.8	8.4	11.7	14.0	15.2	15.4	13.6	11.6	9.1	9.9
1955	5.9	4.2	3.2	4.9	7.8	10.3	13.8	15.9	16.6	14.1	10.7	8.4	9.6
1956	6.0	3.9	3.4	5.2	8.5	11.7	13.8	15.2	14.8	13.3	9.9	7.8	9.4
1957	6.5	5.8	6.2	7.8	9.4	12.4	15.5	17.3	15.9	13.2	11.2	8.1	10.7
1958	6.1	5.2	4.4	4.9	7.7	9.8	14.2	16.2	16.8	15.3	11.5	10.0	10.1
1959	8.3	6.8	7.6		10.9	13.6	16.2	18.3	18.4	17.0	13.4	11.6	
1960	8.3	6.8	6.4	5.6	9.8	13.2	16.4	17.5	17.2	15.7	13.8	10.9	11.8
1961	7.5	7.5	8.5	9.4	10.8	13.8	15.8	16.8	16.9	13.1	11.3	8.1	11.6
1962	5.8	5.2	4.2	5.2	7.7	10.6	13.2	15.0	15.1	13.9	10.7	7.7	9.5
1963	3.8	1.9	2.3	4.4	7.2	11.8	13.9	16.6	16.0	14.9	13.7	10.4	9.7
1964	7.1	5.9	5.2	5.2	9.8	12.0	15.5	17.2	17.8	15.9	12.8	9.3	11.1
1965	7.2	5.8	5.8	7.1	8.8	11.9	13.6	16.3	16.0	13.7	11.5	7.7	10.4
1966	6.2	4.5	5.9	6.2	8.4	11.4	14.4	15.3	15.4	14.8	11.1	7.8	10.1
1967	5.2	5.1	5.7	6.8	8.9	12.1	14.7	16.9	16.9	14.9	11.2	7.7	10.5
1968	5.4	5.2	5.0	6.6	9.2	12.3	14.7	15.1	15.6	14.8	11.3	8.6	10.3
1969	6.6	5.0	4.0	4.8	7.9	11.4	14.7	16.9	15.9	14.7	11.5	7.5	10.0
1970	5.1	4.3	4.4	5.2	8.1	12.2	14.7	16.0	16.1	13.9	10.8	8.5	9.9
1971	6.0	5.5	5.3	6.8	9.2	12.0	14.7	16.7	16.6	15.1	11.1	8.3	10.6
1972	6.9	5.4	5.3	6.7	9.1	11.8	14.3	15.7	15.4	13.6	10.6	8.3	10.2
1973	6.6	5.6	5.8	7.0	9.0	12.6	15.9	16.6	16.6	13.6	10.3	6.7	10.5
1974	5.4	6.3	5.9	7.0	9.0	12.2	14.4	16.0	16.2	12.2	9.2	7.6	10.1
1975	6.8	5.9	5.7	6.2	8.5	11.8	15.2	17.6	16.9	14.4	10.8	8.0	10.6
1976	6.3	5.3	5.1	6.0	8.9	12.8	16.3	17.8	16.7	15.4	12.1	8.4	10.9
1977	5.5	4.9	5.9	6.5	8.6	11.7	14.1	15.8	15.5	14.4	11.9	7.9	10.2
1978	6.7	4.4	4.6	6.3	8.0	11.3	13.5	15.6	15.4	13.8	11.7	8.1	9.9
1979	4.9	3.2	3.5	5.5	7.6	11.6	14.7	16.2	15.9				
1980	5.7	5.3	5.4	6.9	8.9	12.3	14.2	16.0	16.1	13.9	9.4	6.9	10.0
1981	5.1	4.2	5.8	6.0			14.4	16.1	16.6	14.5	10.5	6.7	
1982	4.9	4.9	5.6	6.5	8.8	12.2	15.4	17.2	16.9	15.4	12.5	9.6	10.8
1983	6.5	5.1	5.3	6.2	8.8	11.7	14.7	16.8	16.4	14.5	11.2	8.2	10.4
1984	6.4	5.0	4.7	6.0	8.5	11.0	13.6	16.4	16.5	14.7	12.2	9.8	10.4
1985	5.8	4.3	3.7	5.8	8.4	11.0	14.4	16.3	15.9	15.2	10.4	7.9	9.9
1986	6.0	4.0	3.0	4.5	7.6	11.6	15.0	16.2	14.5	13.3	11.4	8.6	9.6
1987	4.3	3.9	3.8	5.6	8.5	11.1	14.7	15.8	15.9	14.2	12.1	8.8	9.8
1988	7.4	7.0	5.7	7.1	9.6	12.5	15.0	16.4	16.0	14.3			
obs	64	64	64	66	66	65	67	66	65	65	64	62	
mean	6.1	5.0	5.0	6.3	8.8	11.9	14.7	16.4	16.1	14.2	11.1	8.3	10.3

Table 18. Monthly and annual mean sea surface temperatures at CROSS SAND LV, 52° 38'N 01° 57'E (Source: Met. Office)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1913	5.5	5.0	5.5	6.5	9.0	13.0	14.0	15.5	16.0	14.0	11.5	8.0	10.2
1914	5.0	5.0	5.5	8.5	10.0	13.0	16.0	16.5	16.0	13.0	10.5	7.0	10.5
1915	5.5	5.0	5.0	6.0	8.5	12.0	14.5	16.0	15.5	13.5	10.5	7.0	9.9
1916	5.5	5.0	4.5	6.0	9.0	11.5	14.0	15.5	15.0	13.5	10.0	6.5	9.6
1917	5.0	3.0	3.5	4.5	8.0	13.0	15.5	17.0	15.5	13.0	9.0	6.0	9.4
1918	3.5	4.0	5.0	6.0	9.0	13.0	15.0	16.5	15.0	11.5	10.0	8.0	9.7
1919	6.0	4.0	4.5	5.5	9.0	13.0	14.0	15.0	15.0	12.0	8.5	5.5	9.3
1920	5.0	5.0	6.0	8.0	10.5	13.0	15.5	15.5	14.0	14.0	10.0	7.0	10.2
1921	6.0	6.0	6.5	8.5	10.5	14.0	16.0	18.0	16.5	15.0	10.0	7.0	11.1
1922	5.0	4.0	5.0	5.5	9.0	13.0	14.5	14.5	14.5	12.0	9.0	7.0	9.4
1923	5.5	5.5	5.5	6.5	9.0	10.5	15.0	16.0	15.0	12.0	9.0	5.5	9.5
1924	4.0	4.0	4.0	5.0	9.0	12.0	15.0	15.5	15.0	13.0	10.0	8.0	9.5
1925	6.0	5.5	5.5	6.5	9.5	13.0	15.0	16.5	14.5	12.0	9.5	5.5	9.9
1926	4.5	4.5	6.0	7.0	9.5	13.0	15.5	16.0	16.5	13.5	9.0	6.5	10.1
1927	5.0	4.5	5.5	8.0	9.5	12.0	14.5	16.0	15.5	12.0	9.0	6.5	9.8
1928	4.5	4.5	5.0	6.5	9.0	11.5	15.0	16.0	16.0	13.5	10.5	7.0	9.9
1929	4.5	2.0	3.0	5.0	8.5	11.5	14.5	16.0	16.0	14.0	9.5	8.0	9.3
1930	6.0	5.0	5.0	6.5	9.0	13.0	15.5	16.0	15.5	13.5	10.0	7.0	10.1
1931	5.5	4.5	4.5	6.0	9.0	13.0	15.5	15.5	14.5	13.0	10.5	8.5	10.0
obs	19	19	19	19	19	19	19	19	19	19	19	19	
mean	5.1	4.5	5.0	6.4	9.1	12.5	14.9	15.9	15.3	13.0	9.7	6.9	9.9

**Table 19. Monthly and annual mean sea surface temperatures at GT YARMOUTH
PS, 52°35'N 01°44'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	4.0	4.0		7.0	12.3	15.3	17.3	18.5	16.3	11.8	8.5	5.0	
1965	3.5	4.0	4.0	7.8	12.0	12.0	16.0	17.0	15.0	13.0	8.0	6.0	9.8
1966	3.0	4.0	6.0	7.0	11.0	15.0	16.0	17.0	16.0	13.0	8.0	5.0	10.0
1967	4.0	5.0	7.0	8.0	10.5	14.1	18.0	19.0	16.0	13.0	8.0	6.0	10.7
1968	4.0	4.0	5.0	9.0	13.0	15.0	16.0	17.0	16.0	14.0	10.0	8.0	10.9
1969	5.0	4.0	5.0	8.0	12.0	15.8	18.0	19.0	17.0	15.0	10.0	5.0	11.1
1970	5.0	4.0	4.0	7.0	12.0	17.0	17.0	18.0	16.0	13.8	10.0	8.0	10.9
1971	6.0	6.0	8.0	8.6	12.9	15.9	18.0	20.0	19.0	14.0	10.0	8.0	12.2
1972	5.9	4.7	6.6	9.7	10.7	14.0	18.6	18.0	17.0	14.3	10.3	7.3	11.4
1973	6.3	6.5	6.5	8.3	11.0	18.0	19.0	19.3	18.3	13.3	9.7	6.3	11.8
1974	7.0	6.0	5.3	9.0	11.3	14.7	16.7	17.7	16.0	11.0	8.3	6.7	10.8
1975	6.3	6.3	5.7	7.7	10.0	13.5	18.0	20.0	18.3	12.7	9.2	5.7	11.1
1976	5.1	3.2	4.0	7.6	10.5	14.0	20.0	19.3	16.3	15.0	10.2	5.3	10.8
1977	3.3	3.8	6.6	7.1	10.4	13.7	15.7	17.0	15.4	13.0	9.7	6.3	10.1
1978	4.2	3.0	6.0	8.0	9.4	14.3	15.5	16.1	15.3	13.2	11.0	6.7	10.2
1979	2.0	2.1	4.0	7.0	10.3	14.3	16.8	17.4	16.5	13.8	9.0	7.3	10.0
1980	3.3	4.0	5.2	8.0	10.0	15.0	15.0	17.0	17.0	11.7	8.3	5.7	10.0
1981	4.0	5.0	4.0	8.0	9.5	15.0	16.0		17.0	12.0	9.3	5.5	
1982	3.5	4.5	5.0	5.0		15.8	16.9	17.4	16.4	13.3	10.3	5.9	
1983	6.0	5.0	5.0	7.0	10.2	13.5	17.9		14.9	12.0	8.3	7.0	
1984	5.1	4.0	4.7	9.5	10.8	14.3	17.0	19.0	16.3	12.8	10.3	7.0	10.9
1985	2.6	2.5	4.0	7.0									
obs	22	22	21	22	20	21	21	19	21	21	21	21	
mean	4.5	4.3	5.3	7.7	10.9	14.7	17.1	18.0	16.4	13.1	9.3	6.3	10.7

**Table 20. Monthly and annual mean sea surface temperatures at LOWESTOFT,
52° 27'N 01° 45'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	3.1	4.2	5.6	6.8	10.4	14.7	16.2	16.4	15.9	14.2	8.6	5.6	10.1
1967	4.0	4.7	6.3	7.7	11.6	14.6	17.8	18.4	16.1	13.9			
1968		3.8	4.1		12.2		16.1	16.8	16.5	14.2			
1969					10.5	13.9	17.8	18.6	16.2	14.3	8.7	4.8	
1970	2.9	3.4	4.9	5.2	10.5	14.7							
1971	4.5	5.3	5.5	8.0	12.3	14.9	18.0	18.5	17.4	13.8	8.4	6.6	11.1
1972	5.2	4.7	6.4	8.4	11.7	14.0	16.8	17.2	15.1	11.8	8.7	6.6	10.5
1973	4.4	4.7	5.6	7.7	12.2	16.0	18.2	18.7	17.3	12.1	8.0	4.5	10.7
1974	4.7	6.4	6.2	8.2	12.0	14.4	16.3	17.8	15.6	10.5	8.1	6.6	10.5
1975	6.4	5.6	5.9	7.5	10.6	14.8	17.8	20.5	17.5	12.6	9.0	5.8	11.1
1976	5.8	4.1	5.0	8.2	12.1	16.8	20.5	19.8	16.5	14.5	9.8	5.4	11.5
1977	4.1	5.1	6.8	7.6	11.2	13.6	16.0	17.1	15.8	13.6	9.4	6.4	10.5
1978	4.3	3.0	5.4	7.7	10.7	14.5	15.7	17.1					
1979	2.2	2.2	4.3	7.4	10.7	15.0	17.1	17.6	16.2	13.7	9.0	7.0	10.2
1980	4.0	5.2	5.7	8.4	11.6	15.6	16.0	17.8	16.6	12.4	5.2	5.8	10.3
1981	4.3	4.2	6.3	8.5	11.6	15.0	16.7	18.4	17.2	12.0	8.8	4.0	10.5
1982	3.1	4.4	6.2	8.8	12.6	16.2	18.2	18.4	17.1	13.4	10.3	6.3	11.2
1983	5.7	3.9	6.2	7.9	12.1	14.9	18.8	19.2	16.0	13.2	9.3	6.5	11.1
1984	4.7	4.3	5.6	8.1	11.3	14.3	16.8	19.0	16.4	13.5	10.8	7.5	11.0
1985	3.2	2.8	5.0	7.8	10.5	13.6	17.5	17.2	16.2	14.1	7.8	6.6	10.1
1986	4.2	1.9	3.7	6.4	11.8	15.5	18.4	17.3	14.6	13.0	9.6	7.1	10.2
1987	3.4	3.5	3.8	8.3	11.4	14.2	17.8	17.4	16.1	12.8	9.5	6.5	10.3
1988	6.3	5.3	5.7	8.2	12.7	15.0	16.7	17.7	15.5	12.8	8.5	6.6	10.9
1989	6.0	5.8	7.0	8.0	13.0	16.0	19.0	18.9	17.3	13.8	9.6	6.9	11.7
obs	22	23	23	22	24	23	23	23	22	22	20	20	
mean	4.3	4.2	5.5	7.7	11.5	14.8	17.4	18.0	16.3	13.1	8.8	6.1	10.7

**Table 21. Monthly and annual mean sea surface temperatures at SOUTHWOLD,
52° 19'N 01° 41'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	3.1	4.5	5.6	6.0	10.2	13.4	16.1	16.2	16.3	14.0	8.5	5.7	9.9
1967	3.6	5.2	6.6	7.6	11.6	14.5	17.7	18.2	16.4	13.7	8.9	5.5	10.7
1968	3.8	3.7	5.0	7.9	11.2	14.8	16.3	16.2	16.3	14.3	10.0	6.1	10.4
1969	4.8	3.7	3.3	6.3	10.8	14.5	17.0	19.4	16.3	14.5	9.3	5.0	10.4
1970	4.0	3.6	3.5	6.0	9.9	14.8	16.5	17.4	16.3	13.1	9.8	7.0	10.1
1971	4.7	5.0	4.7	7.4	11.5	13.7	16.6	17.9	15.4	13.8	9.2	6.7	10.5
1972	5.8	4.6	5.4	7.9	10.9	13.5	16.2	16.7	15.1	12.0	9.0	7.1	10.3
1973	5.4	4.7	5.9	7.3	10.8	16.2	17.8	18.2	16.9	12.1	8.4	5.0	10.7
1974	5.2	6.4	5.9	7.9	11.1	14.6	15.8	17.3	15.8	10.7	8.2	7.1	10.5
1975	6.4	5.4	5.7	6.8	9.0	14.9	16.2	18.6	16.3	12.9	8.2	5.9	10.5
1976	5.8	4.2	4.7	7.6	11.1	15.8	18.8	18.5	16.0	13.5	9.4	5.6	10.9
1977	5.1	5.3	7.0	7.8	11.4	14.0	15.0	16.3	15.2	13.2	9.2	7.1	10.5
1978	4.1	3.0	5.2	6.6	10.7	14.2	15.1	16.6	14.5	13.5	11.2	5.6	10.0
1979	2.2	2.2	4.4	6.7	10.5	15.0	16.9	17.1	15.0	13.3	8.5	7.2	9.9
1980	4.1	5.4	5.7	8.1	11.0	15.0	15.4	16.8	16.3	12.3	8.6	5.5	10.3
1981	4.0	4.6	5.7	7.7	11.0	14.3	16.5	17.2	16.8	12.3	9.7	4.5	10.3
1982	3.3	4.2	5.4	7.4	11.5	16.3	18.0	17.5	16.1	13.4	10.4	5.4	10.7
1983	5.4	3.8	4.9	6.6	11.1	14.1	18.5	18.6	14.9	13.0	10.3	6.0	10.6
1984		4.3	5.0	7.4	10.3	13.8	16.3	18.5	16.0	13.2	10.7	7.9	
1985	3.2	3.6	3.9	7.5	9.8	13.2	16.9	16.7	15.9	14.1	6.3	6.8	9.8
1986	4.5	1.6	3.6	6.3	11.0	14.1	17.2	16.8	14.0	13.1	9.7	7.1	9.9
1987	3.3	3.7	3.7	7.5	10.3	13.4	16.5	16.3	15.7	12.9	9.8	6.5	9.9
1988	6.6	5.4	5.7	7.9	11.9	14.4	16.5	17.1	15.5	12.9	8.6	6.8	10.7
1989	6.4	6.2	7.2	7.7	12.0	15.0	18.0	18.7	17.2	13.9	10.1	7.3	11.6
obs	23	24	24	24	24	24	24	24	24	24	24	24	
mean	4.5	4.3	5.1	7.2	10.8	14.4	16.7	17.4	15.8	13.1	9.2	6.2	10.4

**Table 22. Monthly and annual mean sea surface temperatures at SIZEWELL PS,
52° 13'N 01° 38'E (Source: CEBB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1967	4.0	4.7	5.2	7.0	10.0	13.5	16.0	17.0	16.0	13.5	8.3	5.6	10.0
1968	3.2	3.1	4.3	7.9	10.7	14.7	16.5	16.5	16.4	14.4	9.5	6.7	10.3
1969	4.3	3.0	3.0	6.5	11.0	14.2	17.0	17.0	16.3	15.2	10.1	5.5	10.2
1970	4.5	4.3	4.1	6.0	10.5	15.5	16.5	17.6	15.8	14.0	10.4	7.2	10.5
1971	5.5	5.6	5.7	8.5	12.0	15.6	18.3	18.7	17.6	14.2	10.0	7.1	11.5
1972	5.6	4.9	6.2	9.0	11.2	13.9	17.0	17.7	15.6	12.8	9.8	6.8	10.8
1973	6.3	6.0	6.0	7.4	10.3	15.4	18.0	18.0	17.9	13.6	9.5	4.9	11.1
1974	5.1	6.9	6.3	8.4	10.7	14.1	15.9	17.0	15.7	12.2	8.4	6.9	10.6
1975	5.9	6.2	6.1	7.0	9.9	13.2	17.4	19.5	18.4	14.1	10.9	7.3	11.3
1976	7.0	4.7	5.6	8.1	11.1	14.7	19.9	19.6	18.0	15.5	12.1	7.3	11.9
1977	4.7	5.5	7.2	7.9	11.3	14.0	16.7	17.6	16.4	14.2	10.6	7.0	11.0
1978	5.1	3.7	5.6	7.2	10.0	13.9	16.1	17.8	16.6	14.0	12.4	7.4	10.8
1979	4.0	3.0	4.3	7.0	9.8	14.9	17.2	18.0	17.2	14.4	10.7	8.2	10.7
1980	5.1	5.8	6.1	7.6	10.8	14.3	15.8	18.1	17.1	13.9	9.5	6.4	10.8
1981	5.1	5.0	5.5	8.1	9.9	14.1	16.0	17.7	17.6	13.5	10.5	6.4	10.7
1982	3.1	4.3	5.8	8.0	11.0	15.7	17.8	18.5	16.9	14.2	11.4	7.5	11.1
1983	6.4	3.9	5.4	7.2	11.2	14.6	18.8	19.3	16.9	14.0	10.3	7.3	11.2
1984	5.6	4.5	4.6	7.1	10.0	11.1	16.7	18.6	16.8	13.5	11.6	8.7	10.7
1985	3.8	2.8	4.0	7.6	9.3	13.1	16.6	16.8	16.4	15.5	9.9	7.2	10.2
1986	5.0	2.8	2.9	5.6	10.4	14.0	17.6	17.9	15.4	14.0	10.2	7.7	10.2
1987	4.4	4.0	4.0	7.5	10.1	13.0	17.1	16.8	17.1	14.1	11.7	7.5	10.6
1988	6.7	5.6	5.5	7.9	12.1	14.8	16.9	17.9	16.4	13.6	10.2	7.4	11.2
1989	7.0	6.5	6.9	8.1	12.3	15.5	18.8	19.2	17.9	14.9	11.6	8.0	12.2
obs	23	23	23	23	23	23	23	23	23	23	23	23	
mean	5.1	4.6	5.2	7.5	10.6	14.2	17.1	17.9	16.8	14.0	10.4	7.0	10.9

**Table 23. Monthly and annual mean sea surface temperatures at SHIPWASH LV,
52° 02'N 01° 42'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1880	2.8	3.9	6.1	7.8	9.4	12.2	16.1	17.2	17.2	13.3	8.3	7.2	10.1
1881	3.3	3.9	5.0	6.1	8.9	12.8	16.7	16.7	15.0	11.1	9.4	7.2	9.6
1882													
1883	6.7	6.1	3.9	6.7	9.4	13.3	16.1	16.7	16.1	12.8	10.0	6.1	10.3
1884	5.6	6.1	7.2	7.8	10.6	13.3	16.7	18.3	16.7	13.3	8.9	6.7	10.9
1885	4.4	5.6	6.1	7.2	10.6	13.9	16.1	16.7	15.6	12.2	9.4	6.7	10.3
1886	4.4	3.9	3.9	7.2	10.0	12.8	15.6	16.7	16.7	14.4	10.0	6.1	10.1
1887	3.9	3.9	3.9	6.1	8.3	12.8				11.1	7.8	5.6	
1888	3.3	2.2	2.2	3.9	8.3	12.2	14.4	15.6	14.4	11.1	9.4	7.8	8.7
1889	5.0	3.3	3.9	6.1	10.6	13.9	15.6	16.7	15.6	11.7	10.0	6.1	9.8
1890	5.6	5.0	5.0	7.2	10.0	13.9	16.1	17.2	16.7	13.9	10.0	5.0	10.4
1891													
1892													
1893	3.3	3.9	5.6	6.1	10.0	13.9	16.7	17.8	16.7	13.3	8.3	6.1	10.1
1894	3.9	5.0	6.1	8.3	10.0	12.2	16.1	16.7	15.0	12.8	10.6	7.8	10.3
1895	3.9	1.1	3.3	5.6	8.9	12.8	16.1	17.2	17.2	13.3	10.6		
1896			7.2	7.8	10.0	13.9	16.7	17.2	16.7	12.2	8.3	6.1	
1897	3.9	3.9	6.1	7.8	9.4	13.9	16.1	18.3	15.6	13.3	11.1	7.8	10.6
1898	7.8	6.1	5.6	7.2	10.0	12.8	15.6	17.2	17.2	14.4	11.7	8.3	11.1
1899	7.2	6.1	6.1	7.2	10.0	12.8	16.7	18.3	16.7	12.8	11.1	7.2	11.0
1900	5.6	4.4	5.0	6.7	9.4	12.8	16.7	17.2	16.1	13.9	10.6	7.2	10.4
1901	6.1	4.4	5.0	6.1	8.9	12.8	16.1	17.2	16.7	13.9	10.0	6.7	10.3
1902	5.6	3.3	5.6	6.7	8.3	12.2	15.6	16.1	16.1	12.8	10.0	6.7	9.9
1903	6.1	5.6	7.8	7.8	10.0	12.2	15.0	16.7	15.6	13.3	10.0	7.2	10.6
1904	5.0	5.0	4.4	7.2	9.4	12.2	16.1	18.9	16.1	13.3	10.6	7.2	10.4
1905	5.0	3.9	6.1	7.8	10.0	13.3	17.2	17.8	15.6	11.1	8.9	6.7	10.2
1906	5.6	4.4	4.4	6.1	8.9	12.2	15.6	17.8	16.7	14.4	11.1	6.7	10.3
1907	3.9	3.3	4.4	6.7	9.4	12.8	14.4	16.1	15.6	13.9	11.1	7.8	9.9
1908	3.9	3.9	4.4	6.1	9.4	13.3	15.6	16.7	15.0	14.4	10.0	6.7	9.9
1909	5.0	3.9	3.3	6.7	10.0	12.8	15.0	16.7	15.6	13.9	8.9	6.1	9.8
1910	5.0	5.0	6.1	7.2	10.0	13.3	15.0	16.7	15.6	13.9	9.4	7.2	10.3
1911	5.0	5.0	5.6	6.7	10.6	13.9	17.2	19.4	18.3	12.8	9.4	7.8	10.9
1912	6.1	6.1	7.8	8.9	10.6	15.0	17.8	16.7	13.9	12.2	10.0	8.3	11.1
1913													
1914	5.0	5.6	7.2	8.9	10.6	11.1	13.3	14.4	14.4	13.9	11.1	8.9	10.3
1915	6.7	5.6	5.0	6.1	8.9	12.8	15.0	16.7	17.2	14.4	8.9	6.7	10.3
1916	7.2	5.6	5.0	6.7	11.1	12.2	15.0	16.7	16.1	13.3	10.6	7.8	10.6
1917	3.3	3.3	3.3	4.4	8.3	12.8	16.1	16.7	16.1	12.2	10.0	7.2	9.4
1918	4.4	5.0	5.0	6.7	8.3	12.8	15.6	17.2	16.1	12.2	10.6	8.9	10.2
1919	7.2	4.4	5.0	6.1	7.8	12.8	13.9	16.1	15.6	13.9	8.3	6.1	9.7
1920	6.1	6.7	6.7	8.9	11.1	14.4	16.1	17.2	15.6	14.4	10.6	7.8	11.3
1921	7.2	6.1	6.7	7.8	10.6	13.3	16.1	18.3	17.2	16.1	11.1	7.8	11.5
1922	5.6	6.1	6.1	6.1	8.9	12.8	15.0	16.1	15.6	13.3	9.4	7.8	10.2
1923	6.7	6.7	7.2	8.3	10.6	11.7	15.0	17.2	15.6	13.3	10.0	6.1	10.7
1924	5.0	3.9	3.9	5.6	10.0	13.9	16.7	16.7	15.6	13.9	11.1	10.0	10.5
1925	7.8	7.2	6.7	7.2	10.6	14.4	16.1	17.8	16.1	13.9	11.1	7.2	11.3
1926	6.7	7.2	7.2	8.3	10.0	13.9	16.7	17.8	17.8	14.4	11.1	8.3	11.6
1927	5.6	5.6	7.2	8.9	10.6	12.8	15.6	17.2	16.1	13.9	10.6	7.2	10.9
1928	5.0	6.1	6.1	8.3	9.4	12.2	16.7	17.2	16.7	13.9	11.7	7.8	10.9
1929	5.0	2.8	2.8	4.4	7.8	11.7	14.4	16.7	17.8	13.9	10.0	8.9	9.6
1930	8.3	6.1	5.0	6.1	8.9	12.8	15.0	16.1	16.1	13.3	10.0	7.8	10.4
1931	5.6		5.0	6.7	10.0	13.9	16.7	16.7	15.0	13.3	11.1	8.9	
1932	7.8	6.1	5.6	7.8	9.4	12.2	15.6	17.8	17.2	13.3	9.4	7.2	10.7
1933	6.1	4.4	6.1	7.2	10.0	13.3	16.7	18.3	17.8	14.4	10.6	5.6	10.8
1934	5.0	4.4	5.0	6.1	10.6	13.3	16.7	17.8	17.2	14.4	10.6	10.0	10.9
1935	7.8		6.1	6.7	9.4	12.8	17.2	17.8	17.2	13.3	11.7	7.2	
1936	6.1	5.0	5.0	6.7	8.9	12.8	13.9	17.2	17.2	13.3	10.0	7.2	10.2
1937	6.1	7.2	6.7	7.2	9.4	13.3	15.6	17.2	16.1	13.9	10.6	7.2	10.8
1938													
1939	5.6	5.6	6.1	7.2	9.4	12.8	16.1	18.3	17.8	13.3	10.0	7.2	10.7
1940	3.9	2.2	3.9	6.1	10.0	13.9	16.1	17.2	15.6	13.3	9.4	7.2	9.9
1941 - 1947													
1948	6.7	5.6	5.6	8.3	10.6	13.9	14.4	16.7	16.1	13.9	10.6	8.9	10.9
1949	6.1	5.6	5.0	7.8	10.0	13.3	16.1	17.2	18.3	16.1	10.6	8.3	11.2
1950	6.1	6.1	6.1	7.8	9.4	13.9	17.2	18.9	16.7	13.3	10.0	6.1	10.9
1951	4.4	5.0	5.0	6.7	8.9	12.8	16.1	17.2	16.7	14.4	11.7	8.3	10.6
1952	6.1	3.9	5.6	6.7	11.1	14.4	16.7	17.8	16.1	12.8	8.9	5.6	10.4
1953	3.9	3.9	4.4	6.7	10.0	13.3	16.1	17.8	16.7	14.4	11.1	10.6	10.7
1954	6.1	3.9	4.4	6.7	9.4	13.3	15.0	16.1	15.6	13.9	11.1	8.9	10.3
1955	5.0	3.9	2.8	5.6	8.9	12.2	15.0	17.2	17.2	13.9	11.1	8.3	10.0
1956	6.1	2.8	3.3	5.0	8.9	12.2	15.6	16.1	15.6	13.9	8.9	7.8	9.6
1957	6.7	6.7	7.8	8.3	10.0	13.3	16.7	17.2	15.6	13.3	10.6	7.8	11.1
1958	5.6	5.0	4.4	5.6	9.4	13.3		17.2	17.2	14.4	11.7	8.9	
1959	6.1	4.4	6.1	8.3	10.6	13.9	17.2	18.9		16.1	12.2	9.4	

Table 23. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1960	6.7	5.6	6.7	7.8	10.6	13.9	16.1	17.2	16.7	13.9	11.1	7.8	11.1
1961	6.0	6.6	7.2	8.7	11.8	13.9	16.1	16.9	17.1	15.3	10.6	7.6	11.4
1962	5.9	5.2	3.9	5.8	8.6	12.1	14.2	16.2	15.6	14.1	10.1	6.8	9.8
1963	2.5	1.2	3.0	5.9	9.5	12.7	15.7	16.8	15.6	13.6	11.8	7.6	9.6
1964	4.9	4.4	4.1	5.7	10.8	14.1	16.2	17.6	16.9	13.7	10.6	7.5	10.5
1965	5.3	4.1	4.1	6.2	9.8	12.8	15.2	16.6	15.6	14.4	10.0	6.4	10.0
1966	4.7	4.9	5.8	6.3	10.4	14.2	15.8	16.5	16.8	15.2	10.8	7.1	10.7
1967	5.1	5.5	6.7	7.0	10.4	13.6	16.7	18.1	16.7	14.3	10.4	6.8	10.9
1968	4.6	4.2	4.6	6.9	10.4	13.4	15.8	16.1	16.4	14.8	11.1	7.8	10.5
1969	6.3	4.2	4.1	5.8	10.2	13.0	16.1	17.4	16.4	15.5	11.5	7.0	10.6
1970	5.1	5.1	3.9	5.3	8.9	13.1	15.7	16.9	16.4	14.4	11.1	8.6	10.3
1971	5.8	5.9	5.1	6.6	9.8	12.7	15.6	17.4	17.2	15.1	10.8	8.1	10.8
1972	6.6	5.3	6.5	8.1	9.2	12.9	15.7	17.0	16.2	14.0	10.8	8.6	10.9
1973	6.7	6.0	6.2	7.0	8.1	12.1	16.0	17.7	18.0	15.1	11.9	8.3	11.0
1974	6.8	7.9	7.1	7.9	10.0	12.3	14.8	16.5	15.8	12.8	9.9	8.6	10.8
1975	9.0	8.3	6.9	6.5	9.3	11.4	14.8	18.1	18.0	14.7	10.5	7.4	11.2
1976	5.2	4.4	5.0	6.3	9.3	13.5	16.6	18.0	16.9	15.7	13.5	8.5	11.1
1977	7.1	7.2	8.0	8.0	9.7	11.3	14.8	16.0	16.0	14.9	12.7	8.4	11.1
1978	7.5	5.3	5.2	7.0	8.6	12.2	14.5	15.9	16.7	14.4	13.1	11.0	10.9
1979	5.3	3.1	3.8	5.1	8.3	12.6	16.1	17.2	16.7	15.7	12.3	10.7	10.5
1980	7.1	6.1	6.0	6.5	7.6	12.5	14.3	16.7	17.0	14.2	9.9	6.3	10.3
1981	4.8	5.0	5.2	7.6	9.2								
obs	89	87	90	90	90	89	87	88	87	89	89	88	
mean	5.6	4.9	5.3	6.8	9.6	13.0	15.7	17.1	16.3	13.7	10.4	7.5	10.5

Table 24. Monthly and annual mean sea surface temperatures at IPSWICH PS, 52° 02'N 01° 10'E (Source: CEEB)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964				16.6	16.8	19.3	20.6	20.8	18.4	14.0	10.7	7.7	
1965	6.4	6.2	7.9	11.0	15.8	18.7	19.3	20.0	17.7	16.5	10.1	7.1	13.0
1966	6.2	8.1	9.2	10.3	15.0	19.6	19.7	20.4	19.6	16.4	10.2	7.9	13.5
1967	7.1	8.5	9.3	11.0	15.6	18.7	22.8	21.7	19.4	16.1	10.6	7.5	14.0
1968	6.3	7.3	8.6	12.8	16.3	20.0	20.0	18.9	18.3	16.7	12.2	8.9	13.8
1969	7.0	5.7	7.0	15.2	16.1	20.0	21.7	21.5	19.7	18.0	10.8	7.2	14.1
1970	7.2	6.6	7.2	10.2	17.0	21.7	20.8	22.4	19.6	16.6	11.9	8.9	14.1
1971	8.3	8.7	9.4	11.6	17.0	18.3	20.9	21.1	19.4	15.8	9.9	9.1	14.1
1972	7.6	7.3	9.3	12.2	15.3	16.3	20.3	19.1	17.5	15.5	12.6	10.1	13.5
1973	8.7	9.0	11.3	12.6	15.5	20.5	22.4	22.4	18.7	14.6	11.7	7.6	14.5
1974	8.8	9.9	10.5	12.8	16.7	20.4	22.0	22.6	19.7	13.6	10.3	8.1	14.6
1975	8.2	9.0	9.5	9.5	14.7	17.5	20.9	23.8	21.0	16.3	13.0	8.8	14.3
1976	7.9	5.7	7.4	11.5	14.4	20.3	23.8	20.8	17.4	15.9	12.1	7.5	13.7
1977	5.5	6.7	7.9	9.2	12.8	16.3	20.4	18.8	17.4	13.8	11.6	8.4	12.4
1978	5.7	4.5	7.6	9.3	12.7	16.9	16.4	18.7	16.5	13.6	11.6	6.8	11.6
1979	3.2	3.2	6.1	9.6	13.2	17.9	19.2	19.7	17.6	16.0	10.3	8.0	12.0
1980	4.4	7.0	8.6	10.8	14.6	18.1	18.0	20.4	18.7	14.9	9.4	6.8	12.6
1981	4.7	5.4	4.9	10.9	12.9	17.3	18.9	20.3	18.3	11.8	10.4	5.9	11.8
1982	4.2	6.0	6.2		15.2	20.2	21.5	21.3	18.9	14.8	11.6	7.0	
1983	7.3	5.8	7.9	10.7	15.1	18.8	23.3		16.5	13.4	10.4	7.6	
1984	5.5	6.2	7.4	10.8	13.8	13.0						8.1	
1985	3.1	3.5	4.7										
obs	21	21	21	20	21	21	20	19	20	20	20	21	
mean	6.3	6.6	7.9	11.4	15.0	18.5	20.6	20.7	18.5	15.2	11.0	7.8	13.4

Table 25. Monthly and annual mean sea surface temperatures at HARWICH, 51° 57'N 01° 17'E (Source: MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966	4.1	4.6	4.9	7.4	12.5	17.7	18.6			13.8	8.9	7.2	
1967	3.0	7.2	8.6	9.6	11.1	15.2	18.5	19.1	16.5	12.3	8.8	5.7	11.3
1968	2.4	2.5	4.6	7.7	11.9	14.2	17.2	17.0	17.4	14.3	11.6	5.4	10.5
1969	4.0	3.2	3.9	7.1	13.2	15.3	18.1	18.3	17.1	15.0	8.5	3.7	10.6
1970	3.6	3.6	3.7	4.8	8.0	15.9	16.0	15.9	16.0	12.4	8.7	8.5	9.7
1971	7.3		6.9	8.4	14.2	15.3	20.2	17.3	17.2	13.7	7.8	6.7	
1972	5.2	4.6	6.7	9.6	12.8	14.7	18.3	18.8	16.5	12.3	8.9	7.0	11.2
1973	5.5	6.0	7.0	8.6	12.1	16.8	18.4	19.7	18.6	15.5	7.8	4.7	11.7
1974	5.9	6.3	7.0	8.6	10.9	15.0	15.4	15.6	15.1	12.1	8.0	6.5	10.5
1975	6.4	5.7	6.3	6.7	11.2	15.2	18.2	20.3	17.1	11.7	8.5	8.5	11.3
1976	5.7	3.9	4.7	8.5	12.9	17.4	19.7	19.0	15.7	14.1	9.1	4.5	11.2
1977	3.2	6.0	7.7	8.2	11.5	14.3	17.2	16.9	16.9	13.8	8.3	6.1	10.8
1978	4.3	3.0	5.5	8.0	12.5	15.1	16.1	17.4	15.6	12.6	9.2		
obs	13	12	13	13	13	13	13	12	12	13	13	12	
mean	4.6	4.7	5.9	7.9	11.9	15.5	17.8	17.9	16.6	13.3	8.7	6.2	10.9

**Table 26. Monthly and annual mean sea surface temperatures at GALLOPER LV,
51° 44'N 01° 58'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1949	8.2	7.2	5.9	8.0	9.8	12.0	15.1	16.8	18.0	16.3	11.7	9.0	11.5
1950	7.8	6.2	6.6	7.0	8.2	12.4	15.8	17.3	16.8	14.7	11.9	9.2	11.1
1951	7.9	7.0	7.0	7.8	9.5	12.6	15.3	17.0	16.3	14.6	13.2	10.3	11.5
1952	8.4	5.7	6.4	7.7	10.8	13.8	16.3	17.2	16.7	14.0	11.4	8.1	11.3
1953	7.0	4.8	4.8	6.8	9.8	12.7	15.3	16.8	16.7	15.6	13.6	11.9	11.3
1954	8.8	5.6	6.9	7.9	9.5	12.3	14.7	15.6	16.0	14.6	13.2	10.9	11.3
1955	7.8	6.5	4.6	5.5	8.7	11.6	14.5	16.8	17.8	15.4	12.1	10.3	10.9
1956	8.7	6.3	4.4	5.6	8.6	12.0	14.5	15.7	15.7	14.8	11.6	9.2	10.5
1957	8.7	8.2	8.4	9.3	10.2	13.0	16.1	17.0	16.0	14.5	13.0	9.7	12.0
1958	8.1	7.4	6.3	6.9	9.2	12.4	15.1	16.3	17.0	15.5	13.1	11.0	11.5
1959	8.9	7.2	7.1	9.2	11.0	13.8	17.1	18.6	18.6	16.9	13.8	11.7	12.8
1960	9.4	7.9	8.3	9.0	10.6	13.6	15.7	17.1	16.9	15.2	13.0	11.8	12.3
1961	8.5	8.2	8.4	9.6	11.6	14.1	16.5	17.1	17.7	17.0	13.2	9.8	12.6
1962	8.2	7.3	4.8	6.6	8.7	11.7	14.4	15.8	16.0	15.1	12.3	8.6	10.7
1963	4.7	2.2	3.6	6.0	9.0	11.8		16.0	15.4	14.4	12.4	10.0	
1964	7.2	6.0	5.6	6.9	10.4	13.5	15.8	17.6	17.2	15.4	12.4	9.9	11.4
1965	8.0	6.1	5.2	7.7	10.1	12.7	15.0	16.3	16.2	15.3	12.2	9.7	11.2
1966	8.6	8.2	8.6	8.4	11.2	13.6	15.7	16.6	17.3	16.2	12.6	8.7	12.1
1967	7.0	8.1	8.3	8.7	10.4	12.8	16.2	17.4	16.9	15.6	12.9	9.8	12.0
1968	7.0	6.7	5.7	7.6	10.1	12.7	14.8	16.2	16.6	15.5	12.8	10.3	11.3
1969	9.0	7.2	6.2	7.2	10.0	12.8	15.7	17.9	17.4	16.4	13.8	9.6	11.9
1970	8.3	7.9	6.2	6.6	9.6	13.3	15.2	16.7	16.6	15.3	13.6	11.9	11.7
1971	8.8	8.8	6.9	7.2	9.4	12.4	15.0	17.0	17.3	16.8	12.9	9.8	11.8
1972	8.5	8.1	7.7	8.7	10.1	12.5	14.6	16.4	16.1	14.6	11.8	10.2	11.6
1973	8.9	7.8	7.3	7.4	9.7	12.8	16.4	17.3	17.8	15.2	13.2	8.9	11.8
1974	8.7	9.2	8.2	8.6	10.4	13.1	15.0	16.5	15.9	13.5	10.6	9.2	11.5
1975		8.4	7.7	7.0	9.4	14.3	14.7	17.2	17.7	15.1	12.0	9.3	
1976	7.5	5.2	6.0	7.9	9.4	13.2	16.9	18.4	17.8	17.0	13.3	10.1	11.8
1977	7.7	7.9											
obs	28	29	28	28	28	28	27	28	28	28	28	28	
mean	8.0	7.0	6.5	7.6	9.8	12.8	15.4	16.8	16.8	15.3	12.6	9.9	11.6

**Table 27. Monthly and annual mean sea surface temperatures at BRADWELL PS,
51° 45'N 00° 54'E (Source: CEBG)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	4.0	4.5	5.0	8.5	15.0	17.5	19.5	19.5	16.5	12.5	9.5	6.5	11.5
1965	4.0	4.5	5.5	10.5	14.0	16.0	17.0	17.5	16.0	14.0	8.5	5.5	11.0
1966	4.3	5.7	7.8	8.5	13.4	18.5	18.0	18.0	18.0	14.0	8.5	6.0	11.7
1967	4.0	5.5	7.5	9.0	13.0	17.5	20.5	19.5	17.5	13.5	8.5	5.5	11.7
1968	4.5	4.5	6.5	10.6	13.8	16.7	17.8	17.6	16.4	14.8	9.7	6.8	11.6
1969	5.5	3.7	4.7	8.6	13.5	16.8	20.3	20.2	17.2	15.2	9.9	3.7	11.6
1970	3.2	4.5	4.4	6.5	13.6	18.2	18.5	19.1	16.9	13.5	9.4	7.0	11.2
1971	4.8	6.3	6.5	9.2	12.3	15.8	19.5	18.9	17.2	13.5	9.1	6.8	11.6
1972	5.5	4.7	6.5	9.6	12.5	15.0	18.6	17.8	15.0	12.5	9.3	7.0	11.1
1973	5.8	5.4	7.2	8.4	12.3	18.0	19.0	19.5	17.5	12.1	9.4	4.8	11.6
1974	6.0	7.0	6.9	10.2	12.8	16.3	18.5	18.7	15.6	10.4	7.5	6.5	11.3
1975	6.7	5.5	5.9	7.8	11.9	15.7	18.5	21.1	17.8	13.2	9.9	6.2	11.6
1976	6.8	3.5	5.9	9.7	12.6	17.6	21.8	19.6	17.4	15.3	10.9	5.5	12.2
1977	5.0	6.5	9.0	9.1	13.0	15.7	19.0	18.5	17.0	14.0	10.0	7.0	11.9
1978	4.5	3.7	7.5	8.4	12.1	17.4	17.1	18.5	16.7	13.2	12.1	6.5	11.4
1979	2.3	2.6	6.0	9.2	11.5	16.4	18.4	18.4	16.6	14.4	9.1	7.3	11.0
1980	3.3	4.4											
1981													
1982		6.3	8.2	11.7	14.7	19.1	19.5	19.5	17.2	13.7	11.1	6.4	
1983	6.4	3.5	6.9	8.5	13.3	17.4	21.5	20.5	15.7	12.6	9.3	6.9	11.8
1984	5.5	5.0	5.8	9.3	12.2	16.5	18.8	21.2	16.9	13.4	10.9	7.7	11.9
1985	3.3	2.5	3.8	9.4	11.4	15.5	19.2	17.6	16.7	15.5	8.6	7.0	10.8
1986	4.5	2.6	3.9	7.4	12.8	16.0	20.2	18.8	14.9	14.1	10.2	8.2	11.1
1987	2.6	3.2	4.9	10.2	13.6	15.7	20.3	18.3	18.6	14.0	11.1	7.5	11.6
1988	7.6	6.2	7.5	9.7	14.4	16.9	18.2	18.9	16.6	14.1	9.6	7.4	12.2
1989	7.8	7.6	8.2	9.4	15.3	17.4	19.9					8.0	
obs	24	25	24	24	24	24	24	23	23	23	23	24	
mean	4.9	4.7	6.3	9.1	13.1	16.8	19.1	19.0	16.7	13.6	9.6	6.5	11.5

**Table 28. Monthly and annual mean sea surface temperatures at MID BARROW LV,
51° 35'N 01° 10'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964						15.4	16.5	18.2	16.8	12.7	10.4	7.3	
1965	5.8	4.2	4.7	6.9	10.6	13.1	15.4	16.4	15.4	13.4	11.4	5.9	10.2
1966	3.8	5.8	7.1	7.3	11.5	14.7	16.7	16.9	17.0	14.5	8.4	6.8	10.8
1967	4.8	6.2	7.6	7.7	11.2	13.9	17.7	18.2	16.6	13.6	10.3	6.1	11.1
1968	4.9	4.5	3.7	7.6	12.5	14.1	17.2	17.4	16.6	16.4	10.8	10.2	11.3
1969	7.8	7.1			11.2	17.0	17.6	18.1	17.7	17.1	13.6	7.2	
1970		5.7		7.0		15.6		18.4	17.6	16.0	11.0		
1971	6.7		7.0	8.6	12.0	14.8	16.6	18.5	17.5				
obs	6	6	5	6	6	8	7	8	8	7	7	6	
mean	5.6	5.5	6.0	7.5	11.5	14.8	16.8	17.7	16.9	14.8	10.8	7.2	10.9

**Table 29. Monthly and annual mean sea surface temperatures at EDINBURGH LV,
51° 31'N 01° 20'E (Source: Met Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1921	7.0	6.0	7.0	9.0	11.5	14.5	17.0	18.0	17.0	16.0	9.5	7.0	11.6
1922	5.5	5.5	6.5	6.5	10.5	14.5	15.0	16.0	15.0	12.0	8.5	7.0	10.2
1923	5.5	6.0	7.0	9.0	10.5	12.0	16.5	18.0	15.5	13.0	9.0	6.5	10.7
1924	5.0	5.0	5.0	6.5	10.5	14.0	16.5	16.5	15.5	14.0	10.0	9.0	10.6
1925	8.0	6.5	6.0	7.0	11.0	14.0	16.5	17.0	15.0	13.5	9.5	5.0	10.7
1926	5.5	6.5	7.0	8.5	10.5	14.0	16.5	18.0	18.0	14.0	10.0	7.0	11.2
1927	5.0	5.5	7.0	9.0	11.5	13.5	15.5	17.0	16.0	13.5	10.0	6.5	10.8
1928	5.0	6.5	9.0	8.5	10.5	14.0	17.0	17.0	16.5	13.5	10.0	8.0	11.2
1929	4.5	3.5	4.0	6.0	9.5	13.5	16.0	17.0	17.0	13.0	10.0	8.5	10.2
1930	7.0	5.5	5.0	5.5	9.0	11.5	16.0	16.0	16.0	13.0	8.5	6.0	9.9
1931	5.0	5.0	4.5	6.5	10.0	14.0	16.5	16.0	15.0	13.5	10.0	8.0	10.3
1932	6.5	5.0	4.5	6.5	9.0	13.5	16.5	17.0	16.0	13.5	9.0	7.0	10.3
1933	5.0	5.0	5.5	8.5	10.0	14.5	16.5	18.5	17.0	14.5	9.0	5.5	10.7
1934	5.0	4.5	5.0	7.0	10.0	14.0	17.0	18.0	17.0	14.0	9.5	9.5	10.8
1935	8.0	5.5	5.5	8.0	11.0	13.0	16.5	18.0	16.0	14.0	10.5	6.0	11.0
1936	6.0	5.0	5.5	6.5	9.5	13.0	18.0	16.5	16.5	13.5	11.0	9.0	10.8
1937	6.5	6.0	5.5	8.0	10.5	14.5	16.5	18.0	16.5	14.5	10.5	6.5	11.1
obs	17	17	17	17	17	17	17	17	17	17	17	17	
mean	5.8	5.4	5.8	7.4	10.2	13.6	16.4	17.2	16.2	13.7	9.6	7.1	10.7

**Table 30. Monthly and annual mean sea surface temperatures at TONGUE LV,
51° 31'N 01° 23'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1975		6.3	6.4	6.1	8.3	12.1	14.9	17.6	17.3	15.1	11.2	8.3	
1976	7.3	4.5	5.9	6.7	9.5	13.5	17.3	18.2	16.8	15.5	12.2	9.3	11.3
1977	6.1	7.0	7.6	8.5	9.8	12.3	14.7	16.0	15.9	15.0	12.8	8.2	11.1
1978	6.5	5.5	6.5	8.0	9.3	12.8	14.3	16.5	16.4	14.7	12.8	9.9	11.1
1979	7.6	4.5	4.6	7.3	9.1		15.3	16.7	16.0	14.9	12.7	10.4	
1980	7.3	6.6	7.1	8.5	9.6	12.6	14.2	15.9	16.2	14.8	11.3	8.1	11.0
1981	5.6	5.5	6.3	9.9	9.4	12.5	14.9	17.0	17.0	14.3	11.7	7.1	10.9
1982	6.0	6.3	6.6	8.0	9.6	13.9	15.3	17.9	17.0	14.9	12.4	10.4	11.5
1983	8.6	5.9	5.3	6.5	9.3	11.9	16.0	18.2	14.8	14.8	11.6	9.3	11.0
1984	7.9	7.0	6.1	7.1	9.4	12.2	15.2	17.0	16.2	14.3	12.7	11.4	11.3
1985	7.2	4.8	4.8										
obs	10	11	11	10	10	9	10	10	10	10	10	10	
mean	7.0	5.8	6.1	7.6	9.3	12.6	15.2	17.1	16.3	14.8	12.1	9.2	11.1

**Table 31. Monthly and annual mean sea surface temperatures at LEIGH ON SEA,
51° 32'N 00° 39'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966		5.9	7.4	9.5	13.3	17.6	18.8	18.2	17.0	14.1	8.1	5.5	
1967	3.9	5.6	7.1	8.9	13.0	15.9	19.4	19.3	15.4	12.2	8.8	6.2	11.3
1968	4.6	3.7	5.1	10.4	12.8	17.2	18.2	17.6	16.5				
1969	6.2	3.8	4.9	8.7	14.4	17.3	20.0	18.7	17.4	15.1	9.4	4.6	11.7
1970	4.1	4.8	5.0	8.6	14.9	18.6	18.6	18.7	16.7	13.1	8.9	6.4	11.5
1971	4.7	6.2	6.1	9.4	14.7	16.7	18.4	17.6	17.0	14.5	8.4	7.0	11.7
1972	6.2	5.2	7.5	9.8	13.4	15.1	18.5	18.1	14.6	12.3	8.9	6.9	11.3
1973	5.8	6.6	8.0	9.8	13.4	18.1	20.3	19.4	16.0	12.2	8.1	5.6	11.9
1974	6.8	7.6	7.8	10.4	12.2	14.3	16.8	18.9	15.3		8.3	6.8	
1975	7.2	7.3	5.9	7.5	13.4	16.0	18.7	21.4	17.1	12.0	9.8	6.5	11.9
1976	7.3	4.9	5.8	10.5	14.6	17.1	18.5	20.0	17.8	14.1		6.0	
1977	4.4	6.0	8.1	8.1	12.1	15.7		18.3	15.1	12.6	7.2	6.3	
1978	3.8	3.9	6.8	8.5	12.9	15.0	15.9	17.3	16.3	13.1	8.9	6.5	10.7
1979	2.2	4.2	6.5	10.1	11.7	16.3	18.8	18.5	16.7	13.8			
1980	3.6	5.5	7.3	9.9	12.9	16.5	16.0	19.7	17.4	12.5	7.4	5.1	11.1
1981	4.9	7.2	8.8	9.3	11.4	15.5	17.7	17.4	17.0	11.5	9.5	3.4	11.1
1982	2.6	5.4		9.8	14.8	16.1	19.4	19.3	18.2	13.5	7.5	6.5	
1983	6.5	3.8		7.4	13.1	16.1	21.6	19.8	15.7	12.0	7.0	5.8	
1984	4.9		5.5	9.2	12.4	17.4	19.2	20.3	16.7	12.6	11.7	7.8	
1985	2.7		6.7	11.1	13.8	16.0	20.5	18.0	17.0	14.9	8.5	7.6	
1986	4.3		3.3	7.6	12.5	15.9	19.8	18.1	14.7	14.1	9.7	6.5	
1987	3.6		5.0	8.5	13.1	14.2	19.2	19.7	18.7	12.7	9.1	7.5	
1988	7.0		8.2	9.0	13.6	17.5	18.2	17.7	16.0	12.9		6.4	
1989	7.2	6.9		10.1	16.3	19.2	20.2	20.5	17.3		10.3	7.1	
obs	23	19	21	24	24	24	23	24	24	21	20	22	
mean	4.9	5.5	6.5	9.2	13.3	16.4	18.8	18.8	16.5	13.1	8.7	6.2	11.4

**Table 32. Monthly and annual mean sea surface temperatures at BARKING PS,
51° 31'N 00° 07'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	9.7	10.1	9.6	11.0	17.2	19.7	21.6	22.0	20.3	16.9	14.2	12.0	15.3
1965	9.9	10.1	11.1	13.7	16.7	19.1	19.4	19.9	18.6	17.5	13.2	9.2	14.8
1966	8.2	10.2	11.4	12.2	15.9	19.2	20.3	20.8	20.7	16.8	11.7	9.6	14.7
1967	9.4	10.6	10.8	12.2	16.1	19.0	22.3	21.5	20.2	15.0	11.5	11.5	15.0
1968	10.2	10.1	10.9	14.3	17.5	20.3	20.6	19.7	18.2	17.4	13.5	11.8	15.3
1969	9.2	8.6	9.4	13.4	17.4	20.0	23.0	22.9	20.5	19.3	14.2	11.2	15.7
1970	9.9	9.2	9.9	12.4	17.5	21.8	21.5	22.2	20.9	18.1	14.1	11.8	15.7
1971	10.2	10.4	10.8	12.8	17.4	17.8	21.4	20.7	19.8	17.7	13.6	11.8	15.3
1972	11.0	9.2	11.5	13.5	16.0	17.0	20.3	21.0	18.7	16.3	14.2	10.9	14.9
1973	10.8	10.5	11.9	13.3	15.7	20.4	21.9	20.7	20.2	15.5	13.8	10.4	15.4
1974	10.3	10.7	11.4	13.9	15.3	19.5	20.9	20.9	19.2	13.0	11.9	10.5	14.7
1975	10.6		8.3	10.5	13.5					15.3	12.5	9.7	
1976	8.2	6.4	8.9	11.9	12.0						12.1	6.9	
1977	5.8	7.1	9.6	10.7	13.0	17.0			18.0	17.0	12.7	10.3	
1978	9.7	7.2	10.0	12.0	13.6	16.0	17.0		18.0	16.6	15.4	10.4	
1979	6.3	6.0	9.0	12.0	14.5					14.5	12.0	12.0	
obs	16	15	16	16	16	13	12	11	13	15	16	16	
mean	9.3	9.0	10.2	12.4	15.5	18.9	20.8	21.1	19.4	16.4	13.1	10.6	15.2

**Table 33. Monthly and annual mean sea surface temperatures at BELVEDERE PS,
51° 30'N 00° 10'E (Source: CEEB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964				11.7	16.7	20.0	21.1	21.1	19.4	16.7	13.9	11.7	
1965	9.4	9.4	10.5	12.8	16.1	18.3	19.5	20.0	18.9	17.8	12.8	8.9	14.5
1966	8.3	10.0	10.6	11.7	15.6	18.3	19.4	19.4	19.4	16.1	11.7	9.4	14.1
1967	9.4	10.6	10.6	12.8	16.1	18.9	21.7	21.1	19.4	16.7	11.7	10.6	14.9
1968	8.3	8.9	10.4	13.6	15.9	19.2	20.1	19.4	18.2	16.9	13.7	9.4	14.5
1969	8.0	7.5	8.5	11.6	16.0	18.8	22.0	21.8	19.6	18.5	13.3	10.4	14.6
1970	9.2	8.6	9.4	11.9	16.8	21.3	20.6	21.4	20.2	17.5	13.9	11.2	15.1
1971	9.5	9.8	10.3	12.3	16.3	17.0	21.3	20.6	19.8	18.1	14.0	12.3	15.1
1972	11.1	8.7	11.5	14.9	16.6	17.3	20.9	20.9	18.6	16.3	14.5	10.9	15.1
1973	10.7	10.5	12.1	14.0	16.1	20.1	22.3	21.8	20.7	16.7	15.5	9.6	15.8
1974	10.0	10.2	11.6	15.4	16.7	20.1	21.3	21.9	19.7	14.6	12.1	11.1	15.3
1975	10.9	9.4	9.4	11.1	15.0	18.0	20.8	23.0	20.8	16.9	15.3	10.7	15.1
1976	10.3	8.1	10.2	13.1	14.9	19.6	23.7	22.5	20.1	18.3	14.5	8.1	15.2
1977	6.1	7.9	9.5	10.9	13.1	16.0	19.3	18.9	17.3	15.9	13.8	9.4	13.1
1978	7.1	5.9	9.2	10.6	13.6	18.4	18.3	21.0	19.3	16.6	14.3	8.8	13.5
1979	7.0	4.8	6.9	9.1	12.9	16.8	19.0	19.5	18.3	16.7	12.8	10.6	12.8
1980	5.5	6.8	8.9	11.1	14.2	18.5	17.8	20.1	19.4	15.5	11.0	9.5	13.1
1981	7.6	8.0	7.6	10.8	10.1		17.8			14.6	11.3	6.9	
1982	5.3	8.0	8.7	12.7	15.5	21.0	20.6	20.8	19.7	15.2	12.6	8.2	14.0
1983	8.7	6.4	9.2	10.6	15.1	17.8			16.0	14.0	12.1	10.1	
1984	7.4	7.4	7.9	11.2	15.5	19.1	22.3	23.4	21.0	16.7	15.1	10.7	14.8
1985	6.3	6.2	8.0	9.3	13.8	17.8			18.6	17.4	12.5	9.3	
1986	6.1	5.0	5.4	8.4	13.2	18.9			16.2	16.9			
obs	22	22	22	23	23	22	20	19	22	23	22	22	
mean	8.2	8.0	9.3	11.8	15.0	18.6	20.4	20.9	19.1	16.5	13.2	9.9	14.5

**Table 34. Monthly and annual mean sea surface temperatures at LITTLEBROOK
PS, 51° 28'N 00° 15'E (Source: CEEB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964				11.0		19.7	21.8	21.5	20.3	17.0	14.3	11.8	
1965	10.0	9.4	9.8	12.9	15.8	18.9	19.3	19.9	18.7	17.8	13.1	9.6	14.6
1966	8.5	10.6	11.5	11.7	15.5	19.5	19.0	20.3	20.0	19.0	13.0	10.5	14.9
1967	9.6	9.8	10.8	12.3	15.7	19.7	21.2	20.9	19.2	17.3	12.6	10.9	15.0
1968	8.3	9.8	9.6	12.2	16.8	20.2	21.0	20.0	19.7	17.7	13.0	12.0	15.0
1969	9.3	8.7	10.1	12.2	16.0	16.2	22.5	23.0	20.2	19.6	15.2	13.2	15.5
1970	11.8	11.0	10.9	12.2	18.0	22.0	22.8	22.4	20.4	17.8	14.7	11.4	16.2
1971	9.8	10.2	10.6	12.7	16.8	18.0	20.5	20.5	19.6	18.1	13.8	11.6	15.1
1972	10.8	9.9	12.1	14.2	16.1		21.1	21.6	19.0	15.7	14.4	10.9	
1973	10.4	10.6	11.4	12.9	14.8	19.5	21.5	21.5	20.1	16.4	13.2	8.9	15.1
1974	10.4	10.5	11.4	13.2	13.4	18.9	20.9	20.8	20.2	14.3	12.0	11.4	14.7
1975	11.1	9.8	9.6	9.7					18.5	15.8	12.8	12.0	
1976	12.7	10.0							19.6		15.4	11.7	
1977	9.5	10.9	11.2	10.2	13.8	17.3	20.2		17.6	18.5	13.7	11.0	
1978	9.6	8.7	10.3	9.9	12.0				16.9	12.1	14.4	11.0	
1979	8.0	9.4	9.6	10.1	12.8				18.0	18.0	16.2		
1980													
1981													
1982				10.8	14.1	20.0	20.5	20.5	18.7	14.9	12.2	8.0	
1983	8.2	6.1	8.4	10.3	13.8	17.5	22.3	22.1	17.7	15.1	12.8	7.8	13.5
1984	6.6	6.3	7.1	10.7	15.2	18.7	21.7	22.8	20.8	16.8	15.6	11.3	14.4
1985	6.2	6.7	8.1	10.5	12.5	16.7	20.2	19.5	19.0	17.8	12.1	9.3	13.2
1986	6.3	4.6	4.3	8.2	12.4	16.0	20.5	19.1	16.4	15.6	11.9	9.2	12.0
1987	5.1	5.2	6.3	9.2	14.2	16.0	20.5	19.7	19.6	15.2	12.1	8.6	12.6
1988	8.3	6.9	8.6	11.0	14.8	17.1	18.5	19.3	17.0	14.2	11.6	8.7	13.0
1989	9.1	8.9	9.2	10.9	14.4	20.0	21.7	21.2	19.3	16.4	13.3	10.4	14.5
obs	22	22	21	23	21	19	20	19	24	23	24	23	
mean	9.0	8.8	9.5	11.2	14.7	18.5	20.8	20.8	19.0	16.5	13.4	10.4	14.3

Table 35. Monthly and annual mean sea surface temperatures at WEST THURROCK PS, 51° 28'N 00° 18'E (Source: CEGB)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	8.4	9.5	11.2	12.7	17.1	18.9			18.3	14.4	12.2	9.4	
1965	8.2	7.2	7.2	10.9	15.0	17.4	19.0	18.6	17.7	17.0	10.6	9.2	13.1
1966	7.1	9.7	10.2	11.4	15.0	17.0	19.4	19.1	19.6	18.0	12.3	9.4	14.0
1967	8.5	10.0	10.1	12.0		18.2	23.1	22.0	20.0	17.1	12.1	10.7	
1968	9.9	10.6	9.8	12.4	16.1	18.9	19.6	19.7	19.0	17.1	13.7	9.2	14.6
1969	8.1	6.8	7.0	9.3	13.7	17.4	20.9	20.5	19.6	17.7	13.1	9.5	13.6
1970	8.5	8.6	8.6	10.7	14.8	20.1	20.1	20.0	19.0	16.9	13.8	11.6	14.3
1971	9.3	9.7	10.1	11.6	16.6	17.8	20.3	21.2	19.5	15.8	11.6	9.6	14.4
1972	8.9	12.0	12.7	13.2	15.2	16.0	21.9	21.4	20.1	17.8	15.0	12.0	15.5
1973	10.6	10.6	9.7	12.5	14.4	20.0	21.7	21.1	20.7	16.3	14.1	9.6	15.1
1974	10.0	9.6	10.6	13.7		19.5	20.5	21.7	19.3	12.9	9.6	9.7	
1975	10.3	9.9	9.6	10.5	14.2	17.0	21.5	23.4	20.5	15.8	13.2	9.3	14.6
1976	9.3	7.6	8.9	11.5	14.7	19.1	24.3	22.0	19.1	17.5	13.6	8.1	14.6
1977	7.1	8.1	9.8	10.1	13.6	16.6	19.2	19.9	17.8	15.7	13.6	9.4	13.4
1978	7.6	6.0	8.9	10.3	13.5	17.9	18.2	19.6	18.6	15.8	14.0	9.1	13.2
1979	5.5	5.0	6.9	10.2	13.3	16.8	19.7	19.5	18.0	16.2	11.2	7.8	12.5
1980	5.8	7.7	8.8	10.8	13.7	17.4	17.5	19.8	18.8	16.0	10.9	8.6	12.9
1981	6.7	6.7	7.9	10.8	12.2	15.7	17.7	19.4	19.5	15.2	11.2	7.3	12.5
1982	5.6	8.5	8.8	11.6	14.3	19.6	20.6	20.7	19.2	15.6	12.5	8.1	13.7
1983	7.9	6.4	7.8	9.5	13.5	17.3	21.7	21.3	17.4	14.9	11.5	8.6	13.1
1984	6.9	6.5	7.0	9.5	14.3	18.5	21.2	22.1	20.8	16.7	15.6	11.5	14.2
1985	6.9	6.4	8.3	10.6	12.8	17.2	20.2	19.8	18.8	17.9	12.2	9.0	13.3
1986	5.8	5.0	5.0	7.9	11.8	16.8	20.6	19.3	16.0	15.7	11.6	9.5	12.0
1987	5.3	5.0	6.4	9.5	13.3	15.6	19.8	19.3	18.9	14.9	11.9	8.4	12.3
1988	8.1	6.7	8.0	10.9	14.5	16.9	18.3	19.4	17.1	14.4	12.2	8.2	12.8
1989	8.5	8.2	9.0	10.5	14.7	18.4	21.1	21.2	19.1	15.6	12.5	9.7	14.0
obs	26	26	26	26	24	26	25	25	26	26	26	26	
mean	7.8	8.0	8.7	10.9	14.2	17.7	20.3	20.4	18.9	16.1	12.5	9.3	13.6

Table 36. Monthly and annual mean sea surface temperatures at NORTHFLEET PS, 51° 27'N 00° 21'E (Source: CEGB)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964				10.0	14.6	19.2	20.2	20.9	18.8	15.8	12.8	10.1	
1965	8.3	7.8	8.5	11.9	14.9	16.9	19.0	19.7	17.9	16.4	11.5	9.1	13.4
1966	7.2	9.8	10.6	11.6	13.8	19.3	17.9	20.2	19.4	18.0	10.7	9.0	13.9
1967	8.6	9.6	10.1	11.1	14.8	18.3	21.3	20.6	18.8	16.2	11.4	9.8	14.2
1968	7.9	8.4	8.8	11.9	15.3	17.9	20.3	19.6	18.4	16.7	13.1	9.9	14.0
1969	8.4	7.5	8.0	10.5	15.2	17.8	21.2	21.7	19.5	17.8	13.7	9.6	14.2
1970	8.7	8.4	8.5	10.7	16.0	20.0	19.9	20.8	19.0	16.5	13.4	10.6	14.3
1971	8.9	9.5	9.6	11.4	15.4	17.2	20.3	20.3	19.0	15.9	11.0	9.8	14.0
1972	9.2	8.1	10.1	13.4	15.1	17.0	20.2	20.4	18.0	15.3	12.7	11.6	14.2
1973	10.8	10.6	11.3	12.8	15.2	19.4	21.2	20.9	19.9	15.3	12.6	8.8	14.9
1974	9.2	9.9	10.5	13.0	14.3	18.3	19.7	20.2	18.6	13.8	11.2	9.9	14.0
1975	10.4	8.9	8.9	9.6	13.8	17.6	20.0	22.3	19.6	15.0	12.5	9.4	14.0
1976	8.9	6.9	8.7	10.8	13.9	18.0	23.1	21.4	18.9	16.8	12.3	8.0	13.9
1977	6.0	6.7	9.5	10.0	13.3	16.8	19.8	19.6	18.0	15.8	13.1	9.7	13.1
1978	8.0	6.7	9.2	10.6	13.7	17.7	17.7	19.1	18.4	15.7	13.5	9.0	13.2
1979	5.1	4.9	7.2	10.3	13.2	17.1	20.0	19.0	17.1	15.7	12.4	11.0	12.7
1980	6.9	7.1	8.3	10.4	13.0	18.2	17.5		19.4	13.5	9.3	8.5	
1981	6.0	6.0	5.5	10.6	11.0	16.7	15.8			11.9	10.2	7.1	
1982	5.1	7.7					20.0	20.0	19.1	15.0	10.2	8.8	
1983			5.4	9.1	13.4				16.1	12.8	10.4	8.3	
1984	6.0	6.8		10.3	14.5	18.0	20.4	21.8	20.0	16.5	15.7	12.2	
1985	7.6	6.9	7.0	10.0	11.8	16.1	19.2			19.1	11.9	8.3	
1986	8.8	5.9	6.1	7.4	13.5	19.2	22.1	20.2	17.0	16.8	13.9	11.6	13.5
obs	21	21	20	22	22	21	22	19	21	23	23	23	
mean	7.9	7.8	8.5	10.7	14.0	17.9	19.8	20.4	18.6	15.7	12.1	9.5	13.8

**Table 37. Monthly and annual mean sea surface temperatures at TILBURY PS,
51° 27'N 00° 24'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	7.9	8.5	8.6	11.3	16.4	19.3	20.9	21.1	19.6	15.9	13.1	10.8	14.4
1965	8.6	8.2	8.7	10.3	15.4	18.2	19.3	19.8	17.4	16.0	10.8	8.3	13.4
1966	6.7	9.1	9.9	10.9	14.7	18.0	19.0	18.9	18.5	17.2	11.2	9.4	13.6
1967	8.3	9.8	10.2	10.9	14.4	18.0	21.3	21.1	19.0	16.6	12.2	9.7	14.2
1968	8.0	8.4	9.2	12.1	15.5	18.3	19.5	19.0	19.0	17.4	13.3	10.5	14.1
1969	8.6	7.2	8.2	11.0	15.7	18.6	21.9	22.3	19.7	18.7	14.3	10.0	14.6
1970	9.3	7.4	8.3	10.6	16.6	20.8	21.0	21.7	20.0	16.6	13.6	10.7	14.7
1971	9.4	9.7	9.9	11.4	16.3	17.9	21.1	21.2	19.0	17.7	12.4	10.4	14.7
1972	9.7	8.2	11.5	13.2	14.6	16.9	19.7	20.8	18.3	15.6	13.2	10.9	14.3
1973	10.1	9.7	10.1	11.3	14.7	16.9	21.3	20.6	20.7	15.5	12.8	8.4	14.3
1974	8.5	9.8	10.7	12.2	14.7	18.1	20.5	21.2	18.9	13.7	11.4	10.2	14.1
1975	10.5	9.2	8.8	8.9	14.4	17.6	20.6	23.6	20.3	16.2	13.3	10.1	14.4
1976	9.1	7.4	8.9	11.6	14.0	19.1	23.4		18.1	17.0	13.0	8.8	
1977	7.4	7.9	10.4	10.7	12.9	16.4	19.7	20.2	19.0	15.9	13.3	9.0	13.5
1978	7.4	5.6	8.2	10.2	13.1	17.8	18.1	19.5	18.4	16.5	14.5	9.2	13.2
1979	5.4	5.0	6.9	10.8	14.1	16.5	19.5	19.6	18.2	16.4	12.1	10.3	12.9
1980	6.0	7.3	8.5	10.5	13.5	17.4	17.5	20.0	18.7	15.2	10.0	8.3	12.7
1981	6.6	6.7	8.3	11.3	12.3	16.3	18.7	20.3	20.3	15.7	12.1	7.1	12.9
1982	5.2	7.5	8.0	11.1	14.2	19.2	19.9	19.4	18.6	14.8	12.4	8.4	13.2
1983	8.2	6.0	7.3	9.7	13.3	17.4	22.0	21.6	17.6	14.7	11.1	8.6	13.1
1984	7.0	6.7	7.1	9.7	15.2	18.7	21.1	22.2	19.7	16.1	15.2	11.9	14.2
1985	7.1	6.6	7.4	10.7	12.8	16.7	20.3	19.5	18.6	17.4	12.0	9.0	13.1
1986	6.4	5.2	3.9	7.9	11.5	15.8	20.7	19.1	16.5	15.6	11.9	9.8	12.0
1987	5.5	5.2	6.1	8.6	12.7	15.8	19.5	19.2	18.8	15.1	12.1	8.6	12.2
1988	8.7	6.9	8.0	11.2	15.0	16.9	18.6	19.6	17.3	14.4	10.3	9.0	12.9
1989	8.7	8.7	9.2	10.4	14.7	18.4	21.3	20.8	19.7	15.7	12.1	10.2	14.1
obs	26	26	26	26	26	26	26	25	26	26	26	26	
mean	7.8	7.6	8.5	10.7	14.3	17.7	20.2	20.4	18.8	16.0	12.4	9.5	13.6

**Table 38. Monthly and annual mean sea surface temperatures at KINGSNORTH
PS, 51° 25'N 00° 36'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1971	8.0	6.2	6.2	8.2	13.4	15.0	19.4	18.8	17.3	14.1	7.6	7.2	11.7
1972	5.5	5.5	8.0	10.3	12.2	14.3	17.9	17.7	15.7	12.1	9.3	7.1	11.3
1973	6.4	6.6	7.1	8.6	12.6	17.8	20.4	19.1	15.6	11.6	9.4	5.6	11.7
1974	7.6	8.2	8.3	11.6	13.3	16.5	18.2	20.2	16.9	12.1	8.7	8.1	12.4
1975	8.1	7.3	7.2	8.5	12.6	15.2	18.8	22.4	18.3	13.3	11.0	7.1	12.4
1976	7.1	3.9	6.3	10.3	12.7	17.5	22.1	19.5	17.5	15.2	11.1	6.4	12.4
1977	6.0	8.2	10.0	10.3	14.0	16.3	19.4	19.1	16.7	14.2	10.6	6.7	12.6
1978	5.5	4.3	7.2	9.6	12.8	18.2	18.3	19.7	17.5	15.0	13.3	8.0	12.4
1979	3.6	3.6	5.5	9.6	13.1	17.7	20.3	19.7	18.0	16.0	10.6	9.0	12.2
1980	5.0	6.9	7.9	10.5	14.4	17.5	17.8	20.9	18.8	14.7	9.7	7.4	12.6
1981	5.7	6.5	7.7	11.4	12.8	16.4	18.6	20.7	19.6	14.0	11.0	6.4	12.5
1982	5.6	6.7	6.8	11.0	14.8	19.8	20.6	20.5	18.7	14.3	11.8	7.3	13.1
1983	7.5	4.5	6.9	9.2	13.5	17.5	22.6	21.8	17.3	14.3	11.2	7.2	12.7
1984	5.6	5.6	6.4	9.7	13.9	18.0	21.2	22.1	19.1	14.8	12.6	9.4	13.2
1985	4.1	4.0	6.3	9.2	10.9	14.9	19.2	16.8	16.5	15.3	8.2	4.7	10.8
1986	4.0	3.4	3.5	7.5	11.6	16.3	21.5	19.5	15.9	15.1	12.1	8.6	11.5
1987	4.7	4.8	6.7	8.4	15.2	15.9	21.0	19.2	18.8	14.1	12.0	8.2	12.4
1988	7.5	6.6	7.8	10.8	14.7	17.0	18.1	18.7	16.4	14.1	10.5	7.9	12.5
1989	8.2	8.1	9.0	10.5	15.5	18.8	21.8	20.8	18.6	14.8	11.5	7.5	13.7
obs	19	19	19	19	19	19	19	19	19	19	19	19	
mean	6.0	5.8	7.0	9.7	13.3	16.8	19.8	19.8	17.5	14.1	10.6	7.3	12.3

**Table 39. Monthly and annual mean sea surface temperatures at GRAIN PS,
51° 26'N 00° 43'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1979								18.5	17.2	15.8	8.8	9.4	
1980	4.7	6.0	7.0	8.6	11.8	15.4		16.9	13.5	8.2	6.2		
1981	4.7	5.7	6.1	10.1	10.7	15.7		19.2	18.6	10.5	10.3	3.2	
1982	4.2	6.0	6.9	9.9	13.8	18.3	19.2	20.1	17.6	14.3	11.8	7.6	12.4
1983	7.3	4.4	6.4	8.1	12.2	17.5	20.9	21.0	15.2	11.9	9.4	7.7	11.8
1984	4.6	5.0	5.1	9.7	12.4	16.1	19.0	20.1	17.8	14.1	12.5	9.2	12.1
1985	4.2	3.7	5.5	9.3	10.3	15.0	18.7	17.2	16.1	15.5	9.7	6.4	10.9
1986	4.5	2.4	2.5	6.0	11.5	14.3	19.2	18.1	14.0	14.0	10.1	8.3	10.4
1987	2.2	3.4	3.7		11.2	14.4	18.5	18.0	17.5	12.8	10.1	6.3	
1988	6.0	5.4	4.6	8.3	12.8	15.3	16.1	16.3	14.8	12.9	8.3	6.1	10.5
1989	6.3	6.2	6.7	8.1	14.7	17.4	19.6	19.6	18.0	14.1	10.9	7.1	12.3
obs	10	10	10	9	10	10	8	10	11	11	11	11	
mean	4.8	4.8	5.4	8.6	12.1	15.9	18.9	18.8	16.7	13.5	10.0	7.0	11.5

**Table 40. Monthly and annual mean sea surface temperatures at WHITSTABLE,
51° 22'N 01° 00'E (Source: Seasalter Oyster Co.)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1936			5.9	8.3	12.1	16.1	18.1	18.2	17.3	12.0	8.7	6.2	
1937	5.8	5.6	5.2	6.7	11.9	17.0	17.4	18.4	16.9	13.4	9.1	4.9	11.0
1938	5.1	4.4	6.8	9.0	10.8	15.6	17.8	18.8	16.8	12.4	10.6	5.8	11.1
1939	4.4	5.2	6.1	8.6	11.9	15.9	17.4	19.4	18.3	11.9	9.1	5.9	11.1
1940	1.2	1.2	5.0	8.0	13.7	17.7	18.4	18.1	16.4	12.2	8.6		
1941	0.0	2.0	5.1				20.0	15.8	15.2	11.7	5.4	4.8	
1942	0.6	-0.8	2.2	7.4	10.2	13.7	16.3	16.7	15.6	11.6	5.9	5.2	8.7
1943	2.8	4.1	4.8	8.8	12.4	16.3	17.0	18.8	15.9	12.8	7.7	4.2	10.4
1944	4.4	3.3	3.9	9.3	11.4	14.2	16.9		14.9	10.3	6.9	4.8	
1945	1.6	5.0	7.4	10.9	12.3	16.0	17.7		15.9	12.8	8.8	5.2	
1946	3.4	5.1	4.1	9.7	10.8	13.9	17.4	16.7	14.8	12.0	8.3	4.0	10.0
1947	2.8	-0.2	2.5	9.2	12.9	17.2	19.3	20.8	18.0	13.1	8.1	4.5	10.6
1948	4.7	4.6	6.4	10.0	13.3	15.3		18.0	15.7	12.8	8.7	5.4	
1949	2.3	2.4	2.6	7.8	10.2	15.0	17.6	17.1	16.9	12.8	4.8	2.8	9.3
1950	1.9	1.9	4.1	5.4	8.9	15.7	18.3	18.1	14.6	11.1	5.6	1.6	8.9
1951	2.6	2.9	4.1	6.6	9.9	15.1	18.2	17.5	15.3	11.4	8.2	5.4	9.7
1952	2.7	1.4	4.7	7.6	14.0	16.7	18.3	17.9	13.6	9.2	4.3	1.4	9.3
1953	1.3	1.8	3.6	6.9	12.1	13.6	16.9	16.8	14.2	11.1	7.0	5.7	9.2
1954	1.1					14.9	16.1	16.4	14.9	12.2	8.9	6.1	
1955	3.1	3.4	3.0	7.7	10.4	14.3	17.8	18.7	16.1	11.3	7.7	5.6	9.9
1956	3.9	5.2	5.2	7.8	11.9	13.7	17.3	16.6	15.6	12.2	6.9	6.1	10.2
1957	4.4	5.2	7.1	9.3	11.1	15.2	18.3	16.8	13.3	11.0	7.8		
1958	3.4	4.6	4.2	5.3	11.9	14.2	17.3	17.4	17.2	12.4	9.2	6.5	10.3
1959	2.8	2.6	5.7	8.3	11.0	15.6	18.8	18.6	15.7	13.4	7.7	5.8	10.5
1960													
1961	2.8	4.3	6.7	9.3	10.9	15.1	18.6	17.6	17.1	14.1	8.3	5.6	10.8
1962	2.2	4.2	3.3	7.6	11.1	14.9		16.7	15.2	12.5	7.3	3.3	
1963	-0.6	-1.1	4.3	7.8	11.2	15.6	16.8	16.7	14.9	11.8	9.6		
obs	26	25	26	25	25	26	25	25	27	27	27	24	
mean	2.7	3.1	4.7	8.1	11.5	15.3	17.7	17.7	15.7	12.0	7.7	4.8	10.0

**Table 41. Monthly and annual mean sea surface temperatures at FALLS LV, 51° 18'N
01° 48'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1972	7.7	7.8	8.1	9.1	10.1	11.5	14.3	15.9	15.6	14.1	11.6	9.7	11.2
1973	8.3	7.4	6.4	7.2	10.3	12.9	16.0	16.7	17.1	14.6	11.3	8.3	11.3
1974	8.0	8.9	8.0	8.9	10.1	13.2	15.0	16.4	15.7	13.7	10.9	9.8	11.5
1975	9.1	8.5	7.9	7.5	9.4	12.3	14.9	16.9	17.3	15.1	12.1	9.1	11.6
1976	7.5	5.7	6.8	7.1	9.5	12.9	16.7	18.2	17.7	16.0	13.2	9.6	11.7
1977	7.3	7.3	8.0	8.3	9.9	12.3	14.7	16.2	16.4	15.1	13.1	9.3	11.4
1978	8.4	6.2	6.7	7.8	9.2	12.9	14.3	15.4	16.4	14.6	13.2	11.3	11.3
1979	8.4	5.7	5.2	7.3	8.8	11.4	14.6	16.1	16.3	15.6	13.1	11.3	11.1
1980	7.9	7.5	8.0	8.2	9.4	12.0	14.0	15.9	16.8	15.2	12.4	9.3	11.3
1981	7.0	5.6	6.2	8.4	9.4	12.2	14.4	16.6	16.8	14.9	12.3	9.0	11.0
1982	7.1	7.5	8.0	8.1	10.1	13.3	15.3	17.5	17.0	15.8	13.8	10.8	12.0
1983	8.7	6.8	5.1	7.7	9.5	12.0	15.3	17.6	16.8	15.4	12.8	9.6	11.4
1984	9.0	7.7	6.5	7.0	9.1	10.9	15.8	16.0	16.0	14.2	14.0	11.7	11.4
1985	8.2	6.3	5.3	8.1	9.4	11.8	13.6	15.1	16.0	15.6	12.5	9.0	10.9
1986	9.0	6.9	4.7	5.0									
obs	15	15	15	15	14	14	14	14	14	14	14	14	
mean	8.1	7.0	6.7	7.7	9.5	12.2	14.9	16.4	16.5	14.9	12.5	9.8	11.4

**Table 42. Monthly and annual mean sea surface temperatures at EAST GOODWIN
LV, 51° 13'N 01° 36'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1880	3.9	5.6	7.2	8.3	10.0	12.8	15.0	17.2	17.2	13.9	10.6	9.4	10.9
1881	4.4	6.1	7.2	7.2	9.4	12.8	15.6	16.1	15.6	13.9	11.7	9.4	10.7
1882	7.8	6.7	7.8	8.9	11.1	12.8	14.4	16.1	15.0	13.9	11.1	8.9	11.2
1883	7.8	8.3	6.1	7.2	10.0	13.3	14.4	16.1	15.6	13.9	12.2	7.8	11.0
1884	7.2	7.8	8.3	8.9	10.6	13.9	15.6	17.2	17.2	15.6	11.7	6.7	11.7
1885	6.1	7.8	6.7	7.8	9.4	12.8	15.6	16.7	15.6	12.8	10.6	7.8	10.8
1886	6.1	5.6	4.4	7.8	9.4	12.2	15.0	16.1	16.7	15.0	12.2	8.9	10.7
1887 - 1891													
1892	6.7	6.1	5.0	6.1	8.9	12.2	15.0	16.7	16.1	13.3	11.7	8.3	10.5
1893	4.4	6.1	6.7	8.3	11.7	14.4	16.1	17.8	17.2	15.0	10.0	8.3	11.3
1894	6.7	6.7	7.2	8.9	11.1	12.8	15.6	16.1	15.6	13.3	11.7	8.3	11.1
1895	5.6	1.7	3.3	6.1	9.4	11.7	13.9	16.1	16.7	13.9	11.7	8.3	9.8
1896	7.2	6.7	7.2	7.8	10.0	12.2	15.0	17.2	16.1	13.3	8.9	7.2	10.7

Table 42. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1897	5.6	5.0	7.2	8.3	10.0	13.3	16.1	16.7	15.0	13.9	11.7	8.3	10.9
1898	7.8	6.7	5.6	7.2	10.0	12.8	15.0	16.7	16.7	15.0	12.8	11.1	11.4
1899	9.4	7.8	7.2	7.8	10.0	12.8	15.6	18.3	17.2	14.4	12.8	8.9	11.8
1900	6.7	6.1	6.1	7.2	10.0	12.8	16.1	17.2	17.2	15.0	12.8	11.1	11.5
1901	8.3	5.6	5.6	7.8	10.6	13.9	16.7	17.8	17.2	15.0	11.1	7.8	11.4
1902	7.2	4.4	6.1	7.8	9.4	11.7	15.0	15.6	16.1	13.9	12.2	8.3	10.6
1903	7.2	6.7	7.8	7.8	10.0	12.8	15.6	16.1	15.6	14.4	11.1	8.9	11.1
1904	6.7	6.7	5.6	6.7	8.9	12.2	15.0	16.7	15.6	13.9	11.1	8.9	10.6
1905	6.5	5.5	6.0	8.5	10.5	14.0	16.5	16.5	16.0	12.0	10.5	8.5	10.9
1906	7.0	5.5	5.5	6.0	9.5	12.0	15.5	16.5	16.5	15.0	11.5	7.0	10.6
1907	5.0	4.0	4.5	7.0	9.5	11.5	14.0	15.5	16.0	14.5	13.0	10.0	10.3
1908	5.0	5.0	6.0	7.0	10.0	13.5	15.5	17.0	15.5	15.0	11.0	9.5	10.8
1909	7.0	5.0	4.5	7.0	10.0	13.0	14.0	16.0	15.5	14.5	10.5	7.0	10.3
1910	6.5	5.0	6.5	8.0	10.0	13.5	14.5	15.5	15.5	15.0	11.0	9.0	10.8
1911	6.0	5.0	6.5	6.0	9.5	13.5	16.0	18.5	18.5	14.5	12.0	10.5	11.3
1912	9.0	7.0	8.5	9.0	11.0	13.5	16.0	15.5	14.5	12.0	10.0	9.5	11.2
1913	9.0	8.0	8.0	8.0	11.0	13.5	15.5	16.0	16.0	15.0	13.5	9.0	11.8
1914	5.5	7.0	8.0	9.0	11.0	14.0	16.0	16.5	17.0	14.5	12.0	8.0	11.5
1915 - 1919													
1920				9.8	11.2	14.2	15.5	15.7	15.3	14.7	11.5	9.3	
1921	9.0	7.0	7.0	9.0	11.5	14.0	16.5	16.5	17.0	16.0	12.0	9.5	12.0
1922	7.0	8.5	8.0	8.0	10.5	14.0	14.5	15.5	15.5	13.0	9.0	8.5	11.0
1923	7.0	6.5	7.0	9.0	10.5	11.5	15.0	16.0	15.5	14.0	11.0	7.0	10.8
1924	6.5	5.5	5.0	6.0	9.5	13.0	15.5	16.0	15.5	14.5	11.5	10.5	10.7
1925	9.0	8.0	6.5	8.0	10.5	14.0	16.0	16.5	15.5	14.0	11.0	7.0	11.3
1926	7.0	7.0	8.0	9.0	10.0	13.0	17.0	16.5	17.0	15.0	11.5	8.0	11.5
1927	6.5	6.5	8.0	9.0	12.0	13.5	15.5	16.5	15.5	14.0	11.5	7.0	11.2
1928	6.0	6.5	8.0	8.5	10.5	13.0	16.0	17.0	16.5	15.0	12.0	9.5	11.5
1929	5.5	5.0	4.5	6.0	9.0	12.0	15.5	16.0	17.0	15.0	11.5	10.0	10.5
1930	9.0	6.5	6.0	8.0	10.0	13.5	15.5	16.0	16.5	14.5	11.5	9.5	11.3
1931	8.0	6.5	5.5	7.0	9.5	13.0	15.0	16.0	15.5	13.5	12.0	9.5	10.9
1932	9.0	6.0	5.0	8.0	9.5	13.0	15.5	17.0	16.5	14.5	11.0	9.0	11.1
1933	8.0	5.5	7.0	9.0	11.0	14.0	16.0	18.0	18.0	15.5	11.0	6.0	11.5
1934	6.0	5.0	5.5	7.0	10.0	14.0	16.5	16.5	17.0	15.0	11.0	10.5	11.1
1935	8.0	6.0	6.5	8.5	10.0	12.0	16.5	18.5	17.0	15.0	13.0	9.0	11.6
1936	8.5	6.5	7.0	8.0	10.5	13.5	15.0	16.0	16.5	14.0	11.5	8.5	11.2
1937	8.5	8.5	6.5	8.5	10.5	13.5	15.5	17.0	16.5	14.5	11.5	8.5	11.6
1938													
1939	7.0	6.5	6.0	7.0	9.0	12.0	15.0	16.5	17.0	14.0	10.0	7.0	10.5
1940 - 1947													
1948	6.5	6.5	6.5	9.0	11.5	14.0	15.0	16.0	16.0	14.5	12.0	10.5	11.5
1949	7.8	6.9	5.7	8.2	10.3	13.1	16.1	17.3	18.1	16.8	12.8	10.1	11.9
1950	8.2	7.8	7.9	8.9	10.6	14.0	16.3	17.4	16.6	14.4	11.4	7.6	11.7
1951	7.2	6.5	6.8	7.8	9.5	12.9	15.7	16.6	16.5	14.7	12.8	10.1	11.4
1952	8.0	5.1	6.8	7.8	11.3	13.8	16.7	17.2	15.9	13.7	10.6	7.0	11.1
1953	6.3	4.6	4.8	7.3	10.2	13.0	15.3	17.0	16.6	15.1	13.1	11.7	11.2
1954	7.6	4.9	6.6	8.1	10.1	12.5	14.4	15.7	15.8	14.6	12.3	9.9	11.0
1955	6.4	5.8	4.6	5.8	8.9	11.9	15.5	17.6	17.2	14.7	11.7	9.5	10.8
1956	8.0	3.2	4.1	6.5	9.9	12.5	14.6	15.5	15.6	13.9	10.0	8.6	10.2
1957	7.8	7.9	8.4	9.1	10.5	13.8	16.2	16.8	15.8	14.2	12.0	8.6	11.7
1958	7.3	7.3	6.3	7.0	9.4	12.4	14.7	15.9	16.5	14.6	11.5	9.8	11.0
1959	7.3	5.9	7.0	8.7	11.2	13.5	16.8	18.2	18.2	16.5	11.4	10.8	12.1
1960	8.0	7.3	7.4	8.4	10.4	13.8	15.1	16.7	16.6	14.5	12.4	9.5	11.6
1961	7.6	7.8	8.7	9.6	11.6	14.0	16.3	16.6	17.0	15.4	13.6		
1962	6.8	5.8	4.1	6.4	8.8	12.0	14.6	15.1	15.2	14.5	11.0	6.8	10.0
1963	2.9	1.6	3.5	5.8	8.7	11.9	14.0	15.6	15.2	13.6	12.5	8.3	9.4
1964	5.6	4.9	4.8	6.4	9.9	13.3	15.9	16.9	16.3	14.2	10.9	8.9	10.6
1965	7.1	4.9	4.6	7.2	9.7	12.3	14.7	15.9	15.4	14.3	11.4	9.1	10.5
1966	6.6	6.6	7.7	8.3	10.9	13.8	15.6	16.6	16.9	15.5	11.2	8.3	11.5
1967	6.5	7.4	7.8	8.3	10.7	13.5	16.5	16.9	16.4	15.1	11.6	8.0	11.5
1968	5.5	5.6	5.5	7.2	9.7	12.6	14.8	16.1	16.2	15.3	12.3	9.7	10.8
1969	7.6	5.7	5.3	7.0	9.8	12.9	16.0	17.8	17.0	15.7	12.3	8.5	11.3
1970	7.3	6.6	5.6	6.8	10.2	13.7	15.2	16.6	16.3	14.9	12.7	9.8	11.3
1971	7.2	7.2	6.4	7.3	10.1	12.8	15.6	16.3	16.5	15.3	11.6	8.7	11.2
1972	7.6	7.5	7.7	8.6	10.3	12.2	14.8	16.5	15.9	13.4	11.1	9.7	11.2
1973	8.3	7.1	6.4	7.1	9.5	12.8	15.2	17.0	16.7	14.5	11.3	7.5	11.1
1974	7.6	7.9	7.6	8.8	10.2	12.6	14.8	16.1	16.1	13.1	10.3	10.0	11.2
1975	9.5	8.6	7.9	7.5	9.4	12.1	14.9	16.6	17.3	14.7	11.0	8.6	11.5
1976	6.9	6.1	6.5	7.4	9.6	12.6	16.8	18.2	17.5	16.1	13.0	9.1	11.6
1977	7.5	7.2	8.2	8.2	9.9	12.6	15.0	16.3	16.1	15.0	12.9	8.5	11.4
1978	7.8	5.7	6.9	7.1	9.3	13.1	14.5	15.8	16.0	15.1	13.7	10.7	11.3
1979	7.5	5.3	5.3	7.2	9.3	11.9	14.9	15.9	16.5	15.0	13.4	11.2	11.1
1980	7.0	7.0	7.4	9.0	9.6	11.9	14.0	15.8	16.5	14.8	12.4	7.9	11.1
1981	6.6	5.5	5.7	8.6	9.5	12.4	14.4	16.4	16.9	14.4	11.6	8.9	10.9
1982	7.2	6.9	7.1	8.1	10.4	13.6	15.4	17.3	17.0	15.6	13.7	10.1	11.8
1983	8.5	6.2	5.5	7.5	9.9	12.9	15.5	17.6	16.6	15.2	11.5	11.3	11.5
1984	8.9	7.1	6.3	7.5	9.6	11.5	14.3	16.5	16.4	14.6	13.5	11.4	11.4
1985	7.0	6.0	5.0	8.0	9.5	12.0	14.5	15.0					
obs	86	86	86	87	87	87	87	87	86	86	86	85	
mean	7.0	6.2	6.3	7.7	10.0	12.9	15.3	16.5	16.3	14.5	11.6	8.9	11.1

**Table 43. Monthly and annual mean sea surface temperatures at DOVER, 51° 07'N
01° 21'E (Source: District Council and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1926					10.7	10.8	16.2	17.1	17.6	14.3	10.7	7.4	
1927	6.1	6.6	7.5	9.2	11.7	13.6	15.9	16.7	16.2	13.7	11.4	7.6	11.3
1928	6.1	7.1	7.5	8.8	10.7	13.7	16.3	17.4	16.8	14.1	11.6	8.5	11.5
1929	4.8	4.1	4.1	6.3	9.7	13.1	16.0	17.1	17.7	14.1	10.4	9.0	10.5
1930	8.2	6.3	6.3	8.6	10.7	14.2	15.9	16.6	16.6	14.2	10.9	9.1	11.4
1931	7.2	6.1	5.5	7.4	10.3	13.3	15.8	16.6	15.4	13.3	10.8	8.5	10.8
1932	7.4	5.4	5.0	7.7	10.1	13.2	15.8	17.3	16.8	13.5	9.8	7.3	10.7
1933	6.2	5.2	7.4	9.2	11.9	14.3	16.8	18.3	17.7	15.1	10.2	5.4	11.4
1934	5.6	4.9	5.4	7.7	10.4	14.3	17.2	17.3	17.3	14.7	11.0	10.3	11.3
1935	8.0	6.2	6.7	8.6	10.7	13.3	17.0	18.6	16.8	13.7	10.8	7.3	11.4
1936	7.3	5.9	7.1	8.3	10.8	13.7	16.0	17.1	17.2	13.2	9.7	7.8	11.1
1937	7.7	7.7	7.1	9.6	11.8	14.4	16.3	17.8	17.1	14.5	11.0	8.0	11.9
1938	6.7	6.2	6.7	8.5	10.4	13.3	15.4	17.3	16.6	14.3	12.3	7.9	11.3
1939	6.7	6.3	6.7	8.3	10.7	14.1	15.7	17.4	17.6	13.3	11.2	8.3	11.3
1940	4.2	3.7	6.4	7.6	10.9	14.5	16.3	16.9	16.2		10.4	7.2	
1941	3.8	5.0	6.4	7.3	9.3	12.3							
1942 - 1946													
1947					10.9	13.9		18.7	19.1	15.4	12.0		
1948					12.1	14.2	15.3	17.1	16.5	15.0	12.0	10.2	
1949	7.1	6.3	5.6			13.9	16.8	17.8	18.5	16.9	13.2		
1950		6.8	7.8	8.9	11.1	14.5	16.6	17.7	16.7	14.3	10.5	8.1	
1951													
1952	6.9	5.2	6.4	8.0	11.2	13.9	16.9	17.3	16.0	13.0	9.7	5.9	10.8
1953	5.8	4.4	4.7	7.2	10.6	13.1	15.6	17.2	16.7	15.0	12.2	11.1	11.1
1954	6.2		6.1	8.1	10.4	12.8	14.9	15.8	15.8	13.9	11.9	9.4	
1955	5.6	5.6	4.4	6.1	9.4	12.3	15.6	17.8	17.2	14.4	10.6	8.3	10.6
1956	6.9			6.6	9.9	12.4	14.7	15.9	15.7	14.1	9.4	8.1	
1957	7.2	7.8	8.3	9.4	11.1	14.4	16.7	17.2	16.1	13.9	11.1	7.8	11.7
1958	6.7	6.7	5.6	6.7	10.0	13.3	15.6	16.7	16.7	14.4	11.7	8.3	11.0
1959	7.1	5.8	7.1	9.0	11.7	14.4	17.4	18.4	18.4	16.4	12.6	9.7	12.3
1960	6.9	6.5	7.1	8.9	11.1	14.1	16.3	17.3	17.1	13.9	11.8	9.6	11.7
1961	7.3	7.7	8.6	9.9	12.4	14.7	16.9	17.1	17.4	15.8	10.8	8.2	12.2
1962	6.2	5.9		6.7	9.5	12.6	14.8	16.1	16.1	14.6	10.8	7.3	
1963	1.7	0.9	3.4	6.1	9.2	12.8	14.5	16.4	15.9	14.3	12.2	7.9	9.6
1964	5.6	4.7	4.5	6.7	10.8		16.4	17.7	16.6	14.2	10.8	7.7	
1965	6.0	4.4	4.4	7.5	10.5	13.1	15.1	16.4	15.6	14.1	10.1	7.6	10.4
1966	5.0	6.7	7.6	8.4	11.3	14.2	15.9	16.4	16.3	16.0			
1967				8.3	10.7	13.7	16.5	17.2	16.2	14.4	10.8	6.9	
1968	4.8	5.1	5.3	7.7	10.1	13.0	15.2	16.4	16.5	14.6	10.8	8.7	10.6
1969	6.7	5.1	5.5		11.2	13.5	16.1	17.8	17.0	15.7	11.0		
1970	6.4	5.9	5.2	6.8	10.3	14.1	15.6	16.8	16.4	14.2	11.6	8.5	10.9
1971	6.2	6.9	6.0	7.5	10.5	13.3	16.1	17.0	16.6	15.0	10.2	7.9	11.1
1972	6.6	6.5	6.9	8.8	10.9	13.0	15.5	15.4	15.3	13.1	10.6	9.0	10.9
1973	7.7	6.9	6.6	7.6	10.9	13.9	16.4	17.2	17.0	13.4	10.2	6.3	11.1
1974	7.5	7.5	7.3	9.1	11.5	14.0	15.8	17.0	15.6	11.4	9.4	9.0	11.2
1975	8.4	7.1	6.9	7.4	10.4	14.0	15.8	18.0	16.8	13.5	10.3	7.4	11.3
1976	6.7	5.1	5.9	8.0									
1977							15.5	16.5	15.8	14.3	11.2	8.3	
1978	6.5	5.0	6.8	7.4	9.9	13.6	14.9	16.5	16.5	14.3	12.0	8.8	11.0
1979	5.2	3.8	4.9		9.2	12.9	15.4	16.2	16.1	14.7	11.6	9.7	
1980	6.0	7.2	6.9		10.8	13.3	14.7	16.9	16.9	13.9	9.5	6.8	
1981	5.7	5.1	7.0	8.8	10.7	13.2	15.2	16.8	16.9	13.7	10.9	6.8	10.9
1982	5.4	6.2	6.7	8.3	10.8	14.5	16.9	17.8	17.1	14.6	12.1	9.1	11.6
1983	7.9	4.5	6.1	7.7	10.5	13.7	16.7	18.3	16.9	14.4	10.9	9.1	11.3
1984	7.5	6.4	5.7	7.5	10.0	12.7	15.3	16.8	16.3	14.2	12.5	9.9	11.2
1985	4.8	4.3	5.4	8.0	9.9	13.2	15.5	16.2	16.3	15.1	9.4	9.0	10.5
1986	7.2	3.2	3.3	6.1	9.8	13.1	16.0	16.3	14.8	14.0	11.4	8.6	10.3
1987	4.2	3.7	4.6	7.4	10.5	12.9	15.7	16.7	16.7	14.1	11.4	7.4	10.4
1988	8.2	6.8	6.1	8.2	11.0	13.2	15.2	16.7	15.8	14.0	9.8	8.1	11.0
1989	8.0	7.4	8.1	8.9	12.2	14.9	17.6	18.3	17.8	14.9	9.9	8.9	12.2
obs	52	51	51	50	55	55	55	56	56	55	55	52	
mean	6.3	5.7	6.1	7.9	10.6	13.5	15.9	17.0	16.6	14.3	10.9	8.2	11.1

**Table 44. Monthly and annual mean sea surface temperatures at VARNE LV,
51° 01'N 01° 24'E (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905		6.2			10.8					12.9	11.0	9.6	
1906	8.6	7.0	6.9	6.3	8.9	11.3	14.2	16.0	16.3	15.5	13.1	8.8	11.0
1907	6.8	4.5	5.5	7.4	9.5	11.6	13.7	15.2	15.9	15.0	13.2	10.8	10.7
1908	7.3	5.1	6.5	7.1	9.5	12.9	14.8	16.6	15.7	15.7	12.7	10.6	11.2
1909	8.5	5.7	6.2	7.4	9.8	12.2	13.5	15.5	15.7	15.0	12.5		
1910		7.4	7.5	8.6	9.1	13.1	13.9	16.7	15.9	14.9	12.1	10.1	
1911	7.3	5.8	6.8	6.3	9.3	12.2	14.6	17.3	17.8	15.0	12.6	11.3	11.3
1912	9.5	8.3	8.6	9.2	11.1	13.1	15.7	15.7	14.6	12.9	10.8	9.7	11.6
1913	9.4	8.7	7.8	8.0	9.7	12.1	14.3	16.0	16.0	15.3	13.5	10.3	11.7
1914	6.1	6.7	8.3	9.6	10.9	13.2	15.9	16.6	16.7	14.8	12.9	10.3	11.8
1915	7.8	5.0	4.6	4.9	7.2	9.9	11.5	13.7	13.7	12.1	8.8	7.1	8.8
1916	7.0	5.9	4.8	5.7	7.5	9.7	11.4	13.4	13.5	12.7	10.4	7.2	9.1
1917	5.3	1.3	2.5	3.4	5.7	9.1	11.9	13.3	13.5	11.8	9.3	5.4	7.7
1918	3.1	4.5	4.0	5.4	7.0	10.0	12.1	13.8	14.5	12.7	11.3	10.0	9.0
1919													
1920	7.8	7.9	8.1	9.6	10.0	12.3	15.5	16.4	15.7	14.9	12.4	8.9	11.6
1921	8.8	7.6	8.6	9.2	11.9	12.9	16.2		17.4	16.7	10.4	9.9	
1922	7.7	8.2	8.4	7.9	10.0	12.9	14.0	15.4	15.5	13.9	10.3	9.1	11.1
1923	8.1	8.3	8.7	9.5	10.7	12.0	14.5	16.3	15.9	14.7	12.1	9.0	11.6
1924	8.0	6.7	6.3	6.9	9.5	12.5	14.7	16.0	16.0	15.0	12.4	11.4	11.2
1925	9.6	9.4	8.0	8.7	10.4	13.8	15.8	16.8	16.2	14.7	11.9	8.8	12.0
1926	8.6	8.7	8.7	9.5	10.7	13.0	15.3	16.8	17.6	15.7	13.0	9.9	12.2
1927	7.6	8.1	8.4	9.5	11.3	12.8	15.0	16.3	16.4	14.9	13.0	10.3	11.9
1928	8.3	8.3	8.2	9.3	10.6	12.6	15.0	16.3	16.9	15.3	13.4	10.3	12.0
1929	7.1	6.5	5.0	6.1	8.5	11.4	13.9	15.6	17.1	15.7	13.2	11.3	10.9
1930	10.0	8.0	7.1	7.9	10.1	12.6	14.8	15.9	16.6	15.4	12.8	11.1	11.8
1931	8.9	7.9	7.0	7.3	9.5	12.0	14.8	16.4	15.7	14.8	12.6	10.6	11.4
1932	9.6	7.5	5.8	7.5	9.0	11.5	14.4	16.0	16.6	15.2	12.4	9.6	11.2
1933	8.4	6.9	7.2	8.6	10.4	13.0	15.1	17.3	17.9	16.6	12.4	7.9	11.8
1934	6.8	5.7	5.7	7.4	9.9	12.3	15.3	17.2	17.3	15.5	12.8	11.7	11.4
1935	9.9	8.1	7.7	7.8	9.9	12.1	15.2	18.1	17.0	15.1	13.1	10.0	12.0
1936	8.8	7.9	7.9	8.6	10.3	12.8	14.8	16.6	16.7	14.6	12.2	10.0	11.7
1937	9.5	9.0	8.1	9.0	10.5	13.5	15.3	16.9	17.3	16.0	13.6	11.3	12.5
1938	8.8	8.8	7.6	8.1	9.4	12.4	14.6	16.3	16.6	15.9	14.0	10.9	11.9
1939	8.7	8.0	7.7	8.5	10.0	12.8	14.7	16.6	17.8	15.5	12.5		
1940 - 1948													
1949								17.8	18.2	17.6	14.3	11.5	
1950	9.7	8.9	8.5	9.0	10.8	13.4	15.8	17.1	16.7	15.0	12.6	9.8	12.2
1951	8.2	7.8	7.4	8.2	9.4	12.2	14.7	16.4	16.4	15.4	13.6	11.5	11.7
1952	9.1	6.2	7.3	7.9	10.5	12.9	15.6	16.8	16.7	14.4	11.5	8.4	11.4
1953	7.7	5.2	4.9	7.4	9.6	12.1	14.5	16.3	16.7	15.5	13.9	12.4	11.3
1954	8.8	6.2	7.1	8.2	9.6	11.9	13.9	15.4	15.8	15.0	13.6	11.2	11.3
1955	7.6	7.6	4.7	5.9	8.7	11.2	14.4	17.2	17.1	15.4	12.6		
1956	9.3	6.1	5.2	7.2	9.4	11.4	13.7	15.3	15.7	14.8	11.3	9.8	10.7
1957	9.0	8.6	8.6	9.6	10.5	13.3	15.5	16.8	16.2	14.8	12.9	10.2	12.1
1958	8.8	7.9	6.9	7.3	9.4	11.9	14.2	15.8	16.6	15.4	13.0	10.8	11.5
1959	9.6	7.9	8.1	9.4	11.3	13.9	16.3	18.0	18.8	17.5	14.3	12.2	13.1
1960	9.7	8.6	8.5			15.4	15.8	17.0	17.2	15.7	13.9	11.5	
1961	9.6	9.3	9.2	9.8	12.1	14.2	16.4	16.8	17.9	16.7	13.3	10.7	13.0
1962	8.6	7.9	6.1	7.9	9.4	12.4	14.3	16.2	16.3	15.8	12.3	9.0	11.3
1963	4.1	2.3	4.6	6.7	8.9	11.8	13.8	15.8	15.9	14.9	13.7	10.0	10.2
1964	7.7	6.4	6.2	7.0	10.0	12.6	15.0	16.4	16.8	14.9	12.1	10.3	11.2
1965	8.7	6.7	5.6	8.8	9.9	12.6	14.5	16.6	16.9	15.4	12.8	10.2	11.5
1966	8.7	8.4	8.8	9.1	10.7	13.4	15.4	16.5	16.9	16.2	12.5	10.0	12.2
1967	8.0	8.6	9.2	9.3	10.8	13.2	16.6	17.2	17.1	15.4	12.0	9.1	12.2
1968	7.2	7.0	5.8	8.0	9.8	12.4	14.5	16.1	16.1	15.4	13.8	11.9	11.5
1969	10.2	7.9	6.8	7.9	11.2	13.2	16.8	18.0	18.2	17.9	14.8	10.1	12.7
1970	9.0	9.1	7.7	8.0	11.1	14.6	16.6	18.3	17.4	16.8	14.6	12.2	12.9
1971	10.1	10.1	9.4	9.9	12.1	14.4	15.7	16.8	17.4	16.4	12.6	8.8	12.8
1972	8.2	8.5	8.8	9.2	10.6	12.5	15.6	16.9	16.8	14.5	12.9	10.6	12.0
1973	9.8	8.4	8.0	8.8	11.0	13.5	16.5	17.9	17.7	15.4	12.9	8.6	12.3
1974	9.4	8.3	9.6	9.9	11.1	14.1	15.5	16.8	16.6	13.7	12.6	10.6	12.3
1975	9.8	8.4	7.8	7.6	9.9	12.4	14.9	17.5	17.6	15.8	12.8	9.8	12.0
1976	8.3	8.0	7.1	7.9	10.0	13.3	16.6	18.3	17.7	16.1	13.3	10.5	12.2
1977	8.4	7.7	8.5	8.6	10.6	12.9	15.0	16.2	16.2	14.6	12.7	9.5	11.7
1978	8.3	6.3	7.8	7.6	9.7	12.9	14.4	16.0	16.4	15.2	13.7	11.3	11.6
1979	7.7	5.8	6.5	7.6	9.6	11.8	14.5	16.0	16.4	15.6	13.1	12.0	11.3
1980	8.2	8.0	8.0	8.5	10.2	12.3	14.0	16.5	17.0	14.8	13.4	8.6	11.6
1981	6.2	5.8	6.9	9.1	9.8	12.1	14.5	17.1	16.9	14.4	12.0	9.8	11.2
1982	7.8	7.1	7.6	8.5	10.1	13.8	15.8	17.4	17.3	15.6	13.8	10.6	12.1
1983	9.2	6.4	5.8	7.6	9.8	12.5	15.8	17.7	16.8	15.2	11.9	9.7	11.5
1984	8.8	7.3	6.7	8.0	9.7	11.7	15.0	16.4	16.2	15.0	13.9	11.3	11.6
1985	6.5	5.4	6.3	8.3	9.7	12.5	14.9	16.1	16.3	15.8	11.7		
obs	68	70	69	68	69	69	69	69	70	71	71	67	
mean	8.2	7.2	7.1	8.0	9.9	12.5	14.8	16.4	16.5	15.1	12.6	10.1	11.5

**Table 45. Monthly and annual mean sea surface temperatures at DUNGENESS PS,
50° 55'N 00° 58'E (Source: CEGB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1968	8.0	8.0	7.0	9.5	11.9	14.0	16.2	16.9	17.5	14.7	10.9	8.6	11.9
1969	8.4	7.3	6.7	7.6	8.9	12.8	15.9	18.0	17.7	16.4	12.2	7.7	11.6
1970	6.6	6.4	5.9	6.6	8.8	12.4	15.1	16.3	16.0	13.9	11.3	8.5	10.6
1971	6.6	7.2	6.7	7.7	9.9	13.4	16.6	17.5	17.8	15.1	10.6	8.2	11.4
1972	7.0	6.7	7.2	9.2	9.8	12.2	14.5	16.3	16.6	13.6	11.2	9.6	11.1
1973	8.6	7.9	8.3	9.4	11.4	15.2	17.5	18.8	18.4	14.3	11.5	7.1	12.3
1974	7.4	7.7	7.8	9.9	11.0	14.6	15.9	17.4	16.8	12.9	10.1	8.8	11.6
1975	8.8	8.1	7.7	9.7	9.7	14.2	17.1	19.2	18.6	15.5	12.5	8.3	12.4
1976	7.8	5.6	6.9	8.8	10.7	13.7	16.3	17.8	17.0	15.3	12.1	7.9	11.6
1977	6.0	6.4	7.3	7.7	10.0	13.0	15.8	16.4	15.9	14.5	11.5	8.2	11.0
1978	6.3	4.5	4.4	4.6	8.6	12.1	14.7	16.2	16.3	14.5	13.0	9.4	10.3
1979	5.7	4.6	5.4	7.3		12.4	15.8	16.9	16.9	15.8	11.8	9.9	
1980													
1981													
1982	5.6	6.7	6.8	9.1	11.1	14.5	16.8	18.3	17.4	14.5	12.1	8.8	11.8
1983	7.8	5.1	6.2	7.5	10.1	13.2	16.3	18.1	16.7	14.2	10.9	8.8	11.2
1984	7.2	6.4	5.8	7.9	10.1	12.2	15.6	16.7	16.5	14.1	12.6	10.1	11.2
1985	5.4	4.9	5.5	7.7	9.6	12.7	15.3	16.6	16.5	15.5	11.2	8.9	10.8
1986	6.9	4.2	3.3	6.3	9.0	12.3	15.3	16.5	15.4	14.2	11.9	9.4	10.3
1987	5.1	3.8	4.7	7.5	10.5	12.4	15.4	16.7	17.3	15.2	12.6	8.2	10.7
1988	8.3	7.2	6.5	8.5	11.0	13.9	15.8	17.3	16.4	14.4	11.6	9.0	11.6
1989	8.8	8.3	8.4	9.3	11.8	14.9	17.6	18.9	18.4	16.4	13.8	10.6	13.1
obs	20	20	20	20	19	20	20	20	20	20	20	20	
mean	7.1	6.3	6.4	8.0	10.2	13.3	15.9	17.3	17.0	14.7	11.7	8.8	11.4

**Table 46. Monthly and annual mean sea surface temperatures at ROYAL
SOVEREIGN LV, 50° 43'N 00° 27'E (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1880	5.0	5.0	7.2	8.3	10.6	12.8	15.0	16.7	17.2	14.4	11.1	10.0	11.1
1881	6.7	5.6	6.7	7.2	9.4	12.2	15.0	16.1	15.6	13.3	11.1	9.4	10.6
1882	8.3	7.2	8.3	9.4	11.7	13.3	15.6	16.7	15.6	14.4	11.1	8.3	11.6
1883	7.8	7.8	6.1	7.8	10.6	13.9	16.1	17.2	16.1	13.3	11.1	9.4	11.4
1884	8.3	7.8	7.8	8.3	10.6	12.8	15.6	17.2	17.2	14.4	12.2	10.0	11.8
1885	6.1	7.2	7.2	8.3	10.6	13.3	15.6	16.1	15.6	13.3	10.6	8.3	11.0
1886	6.1	5.6	5.0	6.7	10.6	12.2	15.6	16.7	17.2	15.0	12.2	10.0	11.0
1887	6.7	5.6	6.1	6.7	9.4	12.2	15.6	17.2	16.1	12.8	11.1	8.3	10.6
1888	6.7	5.0	3.9	6.1	8.3	11.7	13.9	15.6	15.6	11.7	11.7	10.6	10.0
1889	7.8	6.1	5.6	7.2	10.6	13.9	15.6	16.7	16.1	13.9	12.2	8.9	11.2
1890	8.3	6.7	6.1	7.8	10.6	13.3	15.0	16.7	16.7	15.0	12.2	7.8	11.3
1891	5.0	5.6	5.6	6.7	8.9	12.2	15.0	16.1	16.7	14.4	11.7	9.4	10.6
1892													
1893	6.1	6.1	7.2	9.4	11.7	14.4	16.7	17.8	16.7	15.0	10.6	7.2	11.5
1894	6.1	6.7	7.2	9.4	11.1	12.2	15.6	16.1	15.6	13.9	12.2	9.4	11.2
1895	6.1	2.2	2.8	6.1	9.4	12.2	15.0	16.1	16.7	14.4	11.7	9.4	10.1
1896	7.8	7.2	7.2	8.9	10.6	13.9	16.1	16.7	16.7	13.3	10.6	7.8	11.4
1897	6.1	5.6	6.7	8.3	10.6	12.8	16.1	16.7	16.1	14.4	12.8	10.0	11.3
1898	9.4	7.8	6.7	7.2	10.0	12.8	15.0	16.7	17.2	15.6	13.9	11.7	12.0
1899	8.9	8.3	7.8	8.3	10.6	13.3	16.1	18.3	17.2	15.0	13.3	10.0	12.2
1900	8.3	7.2	6.7	7.8	10.0	12.8	15.0	15.6	15.6	14.4	12.8	10.6	11.4
1901	8.3	6.7	6.7	7.2	10.0	12.8	15.6	16.7	16.1	15.0	12.2	9.4	11.3
1902 - 1911													
1912	8.0	7.0	8.5	9.5	11.5	14.0	16.5	16.0	14.5	12.0	10.5	9.0	11.4
1913	8.0	8.0	7.0	8.0	10.5	13.0	15.0	16.5	16.0	15.0	13.5	10.0	11.7
1914	6.0	6.0	8.0	9.5	11.0	13.0	15.5	17.0	17.0	14.5	11.5	10.0	11.5
1915	8.5	7.0	7.0	8.0	10.0	12.0	15.0	16.0	16.0	14.5	10.5	9.5	11.1
1916	8.5	8.0	7.0	8.0	10.5	13.0	14.5	16.5	16.0	15.0	12.0	8.5	11.4
1917	6.0	3.5	4.5	5.5	8.5	12.0	14.0	16.0	16.0	14.0	11.5	8.0	9.9
1918	5.0	6.5	6.0	8.0	10.0	13.0	14.0	16.0	15.5	13.0	11.0	10.0	10.6
1919	8.0	6.0	6.5	7.0	10.0	13.0	14.5	16.0	16.5	13.5	9.5	8.5	10.7
1920	7.0	7.0	8.0	9.5	11.5	13.5	15.0	15.5	15.5	15.0	13.0	9.5	11.6
1921	9.0	8.0	8.0	9.5	11.5	14.0	16.0	18.0	17.0	16.5	11.5	10.0	12.4
1922	6.5	7.0	8.0	7.0	10.5	14.0	15.5	16.0	15.5	14.0	9.5	8.5	11.0
1923	7.0	8.0	8.0	9.5	11.0	12.0	15.5	16.0	15.5	14.5	11.5	8.5	11.4
1924	7.0	6.0	5.5	6.5	10.0	13.0	15.5	16.5	16.0	14.5	12.0	10.5	11.0
1925	9.0	8.0	5.5	6.5	9.5	13.0	15.0	16.0	14.5	13.5	10.0	6.0	10.5
1926	5.5	6.0	6.0	7.0	8.5	11.0	14.0	15.5	16.0	15.0	11.5	9.5	10.4
1927	6.5	7.0	8.0	9.0	11.0	13.5	15.0	16.5	16.0	14.5	13.0	9.0	11.5
1928	6.5	6.5	7.0	9.0	10.5	13.5	16.0	17.0	17.0	15.0	12.0	8.0	11.5
1929	6.5	5.0	5.0	6.5	9.0	12.0	15.0	16.5	17.0	15.0	13.0	10.0	10.8
1930	8.5	6.0	6.5	8.5	10.5	13.5	15.5	16.5	16.5	14.5	11.5	11.0	11.5
1931													
1932	6.5	5.0	5.0	6.5	9.5	12.0	15.0	17.0	16.0	14.5	11.0	8.5	10.5
1933	7.0	6.0	7.0	9.5	11.5	14.0	16.5	18.5	18.5	16.0	11.5	6.5	11.8
1934	6.7	5.0	5.6	7.8	10.6	13.3	16.1	17.8	17.8	15.6	12.2	11.1	11.6
1935	9.4	7.2	7.2	8.3	10.6	12.8	16.1	17.8	17.2	14.4	12.2	8.9	11.8
1936	7.8	7.2	7.2	7.8	10.6	12.8	15.6	16.7	17.2	14.4	11.1	8.9	11.4
1937	8.3	7.2	7.2	8.3	11.1	13.3	16.1	16.7	16.7	15.0	11.7	9.4	11.7

Table 46. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1938													
1939	7.2	7.2	7.2	8.3	10.6	12.8	15.6	17.2	16.7	12.2	11.7	8.9	11.3
1940 - 1947													
1948	8.9	7.2	7.2	8.9	11.7	13.9	15.6	16.7	16.7	15.0	12.8	10.0	12.0
1949	8.9	7.2	6.7	8.9	11.1	13.3	16.7	17.8	18.3	16.7	13.3	10.6	12.4
1950	8.9	7.8	8.3	8.9	11.1	14.4	16.1	17.8	16.7	14.4	11.7	8.3	12.0
1951	7.2	6.1	6.7	7.8	10.0	12.8	15.0	16.7	16.7	15.0	12.8	10.0	11.4
1952	7.8	6.1	7.2	8.3	11.1	13.9	16.1	16.7	16.1	13.9	10.6	7.8	11.3
1953	7.2	5.0	5.6	7.2	10.0	12.8	15.0	17.2	16.7	15.0	13.3	11.7	11.3
1954	7.2	5.6	7.2	8.3	10.6	12.8	14.4	16.1	16.1	14.4	12.2	10.0	11.2
1955	7.2	6.7	4.4	6.1	8.9	12.2	15.0	16.7	16.7	15.0	11.7	10.0	10.8
1956	8.3	4.4	3.9	6.7	9.4	12.2	15.0	15.6	15.0	13.9	10.0	8.3	10.2
1957	7.2	7.2	7.8	8.9	10.6	13.9	16.1	16.7	16.1	14.4	12.8	9.4	11.7
1958	7.8	7.2	6.7	7.2	9.4	12.2	15.0	16.1	17.2	15.6	13.3	10.0	11.4
1959	8.9	6.7	7.2	8.3	10.6	13.9	16.1	18.3	18.3	17.2	13.3	10.6	12.4
1960	8.3	7.2	7.8	8.9	11.1	13.3	16.1	16.7	17.2	15.6	12.2	10.0	12.0
1961	7.7	7.2	8.5	9.3	11.6	13.9	16.3	16.9	17.2	16.9	13.4	9.9	12.4
1962	7.9	7.3	5.1	6.6	8.9	11.1	13.7	15.8	15.8	14.9	12.3	9.7	10.7
1963	4.7	1.6	3.4	5.6	8.7	12.1	13.8	15.9	15.7	14.2	12.6	10.4	9.8
1964	7.8	6.7	5.4	6.4	10.1	12.4	15.1	16.5	16.7	15.1	12.7	10.3	11.2
1965	8.0	6.1	4.7	7.5	9.3	12.4	14.1	15.4	15.7	14.8	11.9	8.9	10.7
1966	6.8	6.8	7.5	8.3	9.8		15.3	16.8	16.9	16.7	15.0	10.0	
1967	7.9	7.5	7.9	8.7	10.2	12.1	15.4	17.0	16.6	14.9	12.4	8.8	11.6
1968	6.4	6.6	5.4	7.4	9.2	11.9	14.1	15.7	16.3	15.3	13.7	10.3	11.0
1969	8.3	7.1	6.1	7.1	9.7	12.7	15.2	16.7	16.5	16.0	13.9	9.2	11.5
1970	7.0	7.0	6.8	7.3	9.4	12.6	14.6	16.3	16.2	14.8	12.1	10.3	11.2
1971	7.2	7.5	6.9	7.8	9.9	12.5	15.0	16.4	16.7	15.6	12.1	9.2	11.4
1972	8.7	8.0	8.2	8.9	10.5	12.5	14.8	16.5	16.5	14.6	12.5	10.1	11.8
1973	9.1	7.4	7.4	8.1	10.2	13.3	16.2	17.3	17.6	15.1	12.0	7.5	11.7
1974	8.5	8.4	8.3	9.5	10.8	13.8	15.3	17.4	16.6	13.5	10.7	9.5	11.8
1975	9.1	8.3	8.2	8.1	9.9	12.1	15.5	16.5	17.7	15.5	12.5	9.9	11.9
1976	7.8	6.5	6.1	8.3	9.5	13.6	17.1	18.6	18.0	16.3	13.0	10.4	12.1
1977	7.9	7.0	8.0	8.0	10.1	12.8	15.1	16.3	16.4	14.9	12.7	10.0	11.6
1978	7.7	6.3	6.5	7.3	9.7	12.4	14.6	16.6	16.9	15.1	13.4	10.2	11.3
1979	7.5	5.8	6.0	7.4	9.3	12.6	15.1	16.8	16.8	15.7	13.1	11.4	11.4
1980	8.0	7.0	7.0	8.3	10.1	12.9	14.9	16.8	17.3	15.1	12.1	9.0	11.5
1981	7.1	6.0	6.7	8.5	9.9	12.9	14.7	15.9	17.1	15.6	13.6	9.9	11.4
1982	7.0	7.0	6.8	8.2	10.3	13.7	15.8	17.9	16.2	15.5	14.8	10.3	11.9
1983	9.0	7.7	6.0	7.2	9.5	13.0	15.5	17.0	17.0	15.8	12.6	11.7	11.8
1984	8.1	7.0	6.4	7.4	9.9	11.9	14.3	17.1	16.8	14.9	12.9	11.9	11.5
1985	6.0	6.0	5.0	7.0	9.9	12.2	15.5	16.1	16.5	15.2	12.4	9.9	10.9
1986	7.6	5.6	3.7	5.8	8.5	12.1	15.4	16.0	15.3	14.9	12.4	10.1	10.6
1987	5.8	4.6	4.2	7.0	10.6	12.8	15.5	16.7	16.9	15.1	13.0	9.3	10.9
1988	8.7	7.5	6.3	7.9	10.7	13.2	15.0	17.0	16.6	14.6	12.9	9.9	11.6
obs	88	88	88	88	88	87	88	88	88	88	88	88	
mean	7.4	6.5	6.5	7.8	10.2	12.8	15.3	16.6	16.5	14.7	12.1	9.5	11.3

**Table 47. Monthly and annual mean sea surface temperatures at EASTBOURNE,
50° 46'N 00° 18'E (Source: Borough Council)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1892	4.6	4.4	4.3	7.7	11.3	14.3	16.8	17.5	16.3	12.2	9.2	6.6	10.4
1893	4.6	5.7	7.2	10.0	13.2	15.9	17.9	18.8	16.1	13.7	8.3	6.8	11.5
1894	4.3	5.6	6.9	10.3	11.6	14.3	17.3	16.8	14.9	12.2	10.9	7.9	11.0
1895	4.1	0.4	3.3	7.0	11.5	14.8	16.7	17.8	17.6	13.3	10.8	7.5	10.4
1896	6.4	5.8	7.7	9.4	12.4	15.8	17.7	17.3	16.1	11.9	7.6	6.3	11.2
1897	4.7	4.8	6.8	8.4	11.4	15.0	17.6	18.1	15.2	13.3	10.7	8.0	11.1
1898	7.9	6.7	5.6	8.2	11.2	14.2	16.7	18.2	17.8	14.3	11.6	9.7	11.8
1899	7.6	6.5	6.4	8.9	11.9	15.6	18.1	19.7	17.4	13.1	11.3	7.1	11.9
1900	6.8	5.4	6.2	8.1	11.1	14.7	17.7	17.7	16.8	13.6	10.8	9.1	11.5
1901	6.2	3.8	5.0	8.1	12.4	15.1	17.8	18.4	16.3	13.8	9.6	7.4	11.1
1902	6.7	3.0	6.4	8.3	10.2	13.9	16.8	17.1	16.6	12.4	10.2	7.2	10.7
1903	6.0	6.7	7.7	8.1	11.5	14.0	16.6	16.7	15.7	13.9	9.8	7.0	11.1
1904	5.3	5.7	5.5	8.5	11.4	14.5	17.7	18.1	15.7	13.0	9.7	8.2	11.1
1905	5.7	5.9	7.0	8.7	11.8	15.0	17.9	17.9	15.1	10.7	8.9	7.1	10.9
1906	6.4	5.1	5.7	7.3	10.6	14.0	17.1	18.0	16.7	14.6	11.1	6.6	11.1
1907	4.6	2.7	5.3	8.2	10.8	13.9	16.0	16.8	16.4	13.9	10.9	8.0	10.6
1908	4.6	5.0	5.6	7.5	11.2	15.3	17.2	17.4	15.3	14.5	10.3	8.0	10.9
1909	5.2	3.9	3.8	8.1	11.6	13.8	15.9	17.8	15.4	14.2	8.6	6.5	10.4
1910	6.2	5.6	6.9	8.2	11.5	15.1	15.9	17.4	15.2	13.9	8.9	8.2	11.0

Table 47. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1911	5.3	4.6	6.7	6.6	11.9	15.3	18.2	19.4	18.1	13.4	10.2	8.2	11.4
1912	7.2	5.9	7.8	9.6	12.9	15.4	18.1	16.1	13.8	11.8	9.2	8.2	11.3
1913	7.5	6.2	6.8	8.4	11.9	15.2	16.6	17.1	16.6	14.7	12.1	8.1	11.7
1914	3.7	6.0	7.2	9.8	12.2	15.4	17.4	18.2	16.7	13.2	10.0	8.1	11.4
1915	6.2	6.2	6.1	7.8	11.6	14.4	16.2	17.2	15.9	12.6	8.2	8.2	10.8
1916	7.8	6.5	5.6	8.2	12.3	13.6	16.1	18.1	15.9	13.9	10.1	6.5	11.2
1917	4.6	1.7	3.6	5.4	10.9	14.5	16.2	16.7	16.2	12.5	9.7	5.7	9.8
1918	3.6	5.7	5.9	7.7	11.7	14.6	16.4	17.8	15.8	12.4	9.6	9.2	10.8
1919	6.7	4.2	5.9	7.3	11.8	14.7	15.2	17.2	16.6	11.4	6.9	7.1	10.4
1920	6.6	6.8	7.5	9.7	12.3	15.3	16.4	16.3	15.3	13.6	10.1	6.8	11.3
1921	8.3	6.2	7.7	9.4	13.0	15.3	18.0	18.2	16.9	15.7	9.6	8.2	12.2
1922	6.4	6.2	6.7	6.9	11.3	15.0	15.4	16.3	14.9	11.7	7.8	6.8	10.4
1923	5.8	6.8	7.2	9.3	11.3	13.0	16.7	17.4	15.4	13.0	8.4	6.2	10.8
1924	6.1	4.9	5.0	6.6	11.2	14.3	16.7	16.7	15.5	13.4	10.1	8.8	10.7
1925	7.4	7.2	6.3	8.1	11.6	15.4	17.4	17.8	14.8	13.0	8.9	4.9	11.0
1926	5.8	6.9	7.1	8.9	11.0	14.0	16.9	17.6	17.7	13.1	10.1	6.4	11.2
1927	5.2	5.4	7.4	9.1	12.5	14.4	16.3	17.3	15.9	12.9	9.8	5.8	11.0
1928	5.8	6.4	6.7	8.7	11.6	14.4	17.7	17.8	16.4	13.7	10.9	7.5	11.4
1929	3.8	2.6	4.3	7.1	10.7	14.0	16.6	17.4	17.9	13.9	10.3	9.1	10.6
1930	7.9	5.4	6.0	8.4	11.6	15.3	16.9	17.1	16.7	13.2	10.2	8.3	11.4
1931	6.1	5.6	4.9	7.7	10.9	14.4	16.4	16.7	14.5	12.6	10.6	7.9	10.6
1932	7.7	4.9	4.7	7.4	10.6	14.1	16.4	18.2	16.5	12.9	9.6	6.6	10.8
1933	5.8	4.9	6.8	9.3	12.5	15.7	18.1	18.8	17.3	14.3	9.2	3.8	11.3
1934	5.1	3.9	5.2	7.9	11.7	15.1	18.2	17.8	17.3	13.9	9.6		
1935	7.0	5.9	6.4	8.7	10.9	14.4	18.0	18.7	16.6	13.3	10.8	6.8	11.4
1936	6.8	4.9	6.6	7.8	11.9	14.8	16.8	17.6	17.1	12.1	9.7	7.3	11.1
1937	7.2	6.9	6.1	8.8	11.6	15.1	16.8	18.2	16.7	13.8	9.9	7.1	11.5
1938	6.7	5.3	6.9	8.5	10.4	14.1	16.3	18.1	16.3	13.3	11.8	7.4	11.2
1939	6.3	5.9	6.6	8.5	11.6	15.1	16.5	17.9	17.2	12.3	10.7	7.2	11.3
1940	2.1	3.4	5.4	7.9	12.3	15.9	17.0	17.4	16.1	12.8	10.4	6.1	10.5
1941	2.8	3.4	6.6	7.6	10.1	14.3	17.9	16.7	16.3	13.7	9.2	7.9	10.5
1942 - 1946													
1947	5.2	1.7	3.9	7.7	11.3	15.0	17.1	19.4	18.0	14.1	10.9	7.6	10.9
1948	7.8	5.9	6.7	9.6	13.2	15.2	16.1	17.5	16.2	13.9	10.7	8.5	11.7
1949	7.1	6.3	6.1	9.7	12.1	15.6	18.2	19.0	18.8	16.0	10.8	8.6	12.3
1950	6.9	6.7	7.8	9.2	12.2	16.3	17.9	18.2	16.4	13.1	9.7	5.8	11.6
1951	5.7	5.4	6.1	7.9	10.9	14.5	17.2	17.4	16.2	13.2	11.4	8.6	11.2
1952	6.2	4.4	6.4	8.6	12.8	15.6	17.6	17.8	14.8	12.0	8.1	5.4	10.8
1953	4.7	4.3	5.4	8.4	12.3	14.7	16.8	18.1	16.3	13.8	11.4	9.8	11.3
1954	4.9	3.1	6.6	8.5	11.3	14.2	15.8	16.5	15.9	13.9	11.2	8.9	10.9
1955	5.2	4.9	3.6	7.3	10.4	14.2	16.9	18.5	17.1	13.3	9.7	7.9	10.7
1956	6.6	2.3	4.4	7.6	11.6	13.9	16.4	16.3	15.8	12.9	8.2	7.6	10.3
1957	6.8	7.2	8.2	9.8	11.6	15.5	17.6	17.7	15.6	13.5	9.8	7.1	11.7
1958	6.2	6.4	5.3	7.3	11.5	14.9	16.7	17.4	17.3	14.3	10.4	8.1	11.3
1959	6.4	5.1	7.2	9.9	13.1	16.0	18.6	19.4	17.8	15.6	11.2	8.8	12.4
1960	6.3	5.9	7.1	9.0	12.4	15.8	16.8	17.9	16.3	13.3	11.1	8.3	11.6
1961	6.4	7.2	8.2	10.6	13.1	15.6	17.5	17.5	17.7	14.6	9.8	7.4	12.1
1962	6.2	5.6	3.9	7.6	10.3	13.8	16.1	16.9	15.6	13.6	9.5	5.9	10.4
1963	0.6	0.6	3.4	6.7	10.2	14.2	16.2	16.9	15.7	13.6	11.7	5.9	9.6
1964	5.2	5.0	4.6	7.4	12.2	14.9	17.2	17.9	16.6	12.7	10.1	7.4	10.9
1965	5.6	4.1	4.4	8.1	11.4	14.0	16.1	17.1	15.3	13.3	9.1	7.3	10.4
1966	4.7	6.6	9.7	8.4	11.7	15.4	16.9	17.1	16.6	14.6	9.2	7.5	11.5
1967	5.6	6.4	7.6	8.8	11.6	14.9	17.5	17.8	16.2	14.2	9.5	6.7	11.4
1968	5.3	5.1	5.6	8.4	11.2	14.7	16.6	17.0	16.7	14.8	10.2	7.1	11.0
1969	6.5	4.2	5.0	7.7	11.5	14.2	17.3	18.1	16.9	14.9	10.8	6.3	11.1
1970	5.9	5.6	5.3	7.1	11.8	15.7	16.1	17.4	16.4	13.7	11.1	7.6	11.1
1971	5.2	6.5	5.8	8.3	11.9	14.2	17.4	17.9	16.7	14.6	9.8	7.6	11.3
1972	5.9	6.0	6.8	8.9		13.8	16.4	17.0	15.0	12.5	9.8	8.4	
1973	6.4	6.0	6.7	8.0	11.2	15.6	17.5	18.2	17.1	12.7	10.1	6.5	11.3
1974	7.3	7.2	7.0	9.9	12.0	14.8	16.6	17.7	16.0	11.4	9.4	8.4	11.4
1975	8.3	7.3	6.9	7.6	11.1	14.7	17.0	18.6	16.9	12.5	9.9	6.6	11.4
1976	7.1	4.6	5.8	8.7	12.2	16.1	19.3	19.4	16.5	14.9	10.4	7.1	11.8
1977	6.1	6.7	8.0	8.3	11.5	14.0	16.7	17.8	15.5	14.0	10.5	7.6	11.3
1978	6.2	4.6	6.3	7.5	11.0	14.9	16.0	17.4	16.4	13.9	12.2	6.8	11.1
1979	4.4	4.1	5.5	7.8	10.8	14.2	16.9	16.9	16.2	14.4	11.0	8.7	10.9
1980	5.4	6.7	6.8	9.2	11.7	14.7	16.0	17.8	16.8	13.4	8.9	6.9	11.1
1981	5.7	5.0	6.6	9.4	11.5	14.2	16.2	18.1	17.1	12.9	10.2	5.9	11.0
1982	4.6	5.8	6.7	9.3	12.1	16.2	18.1	18.6	17.0	14.0	11.6	7.2	11.7
1983	7.6	4.5	5.4	7.7	11.2	14.6	18.0	19.1	17.3	14.4	10.1	6.9	11.4
1984	7.0	6.0	4.9	7.9	11.5	14.3	16.8	18.2	16.9	13.4	12.0	9.3	11.5
1985	3.7	3.8	4.9	8.0	10.7	13.9	17.1	16.8	16.3	14.8	9.5	8.2	10.6
1986	7.0	3.4	2.8	6.5	10.2	14.2	16.7	16.6	14.5	13.9	11.1	9.2	10.5
1987	5.3	3.4	4.5	7.4	11.4	14.5	17.0	17.4	17.0	14.1	11.4	9.2	11.0
1988	8.0	6.8	6.9	8.6	11.7	14.8	15.9	17.8	16.7	14.9	12.6	8.2	11.9
1989	8.0	7.7	7.8	8.6	11.2	15.3	17.7	19.4	18.1	15.6	13.2	10.0	12.7
obs	93	93	93	93	92	93	93	93	93	93	93	92	
mean	5.9	5.2	6.0	8.2	11.5	14.7	16.9	17.7	16.3	13.5	10.1	7.4	11.1

**Table 48. Monthly and annual mean sea surface temperatures at BRIGHTON,
50° 49'N 00° 08'W (Source: Borough Council)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1948	6.8	6.1	6.7	5.0	9.4	14.4	16.1	16.8	15.6	13.4	9.9	7.9	10.6
1949	5.8	6.1	5.5	8.7	11.6	15.6	18.8	19.0	18.7	15.7	10.3	8.5	12.0
1950	6.5	6.7	8.3	9.1	11.8	16.4	18.3	17.9	13.6	13.3	10.4	7.1	11.6
1951	4.6	4.8	6.7	8.6	10.6	15.1	17.9	17.7	15.7	12.8	10.9	8.4	11.1
1952	6.1	4.8	6.9	9.4	13.1	16.1	17.8	18.1	14.5	11.7	8.3	5.6	11.0
1953	4.7	4.7	5.8	8.6	12.1	15.3	17.4	18.8	16.6	14.1	11.7	10.3	11.6
1954	7.2	4.4	6.7	7.8	10.9	14.4	16.3	16.4	15.3	13.9	10.7	8.9	11.0
1955	7.2	7.0	6.9	8.1	8.3	14.2	17.2	18.0	16.8	13.2	9.8	7.9	11.2
1956	6.5	2.0	4.9	7.6	10.8	13.4	16.3	15.9	15.9	12.8	7.6	7.8	10.1
1957	5.7	7.7	9.1	10.2	12.0	15.3	18.2	17.9	15.2	13.1	9.8	5.6	11.6
1958	6.4	6.9	5.7	7.7	12.4	15.4	18.7	19.6	17.7	15.4	10.9	8.9	12.1
1959	6.3	5.1	8.3	11.7	12.8	16.1	18.7	19.6	17.7	15.4	10.9	8.9	12.6
1960	5.9	6.1	7.1	9.3	12.9	16.3	18.7	17.6	16.1	12.9	10.9	8.4	11.8
1961	6.2	7.2	8.3	10.6		14.7	17.4	17.8	17.6	15.9	9.9	6.8	
1962	5.7	5.7	4.1	7.1	10.3	10.6	16.1	16.2	15.1	13.3	10.0	6.8	10.0
1963	0.9	0.6	4.2	7.3	11.7	14.9	16.6	17.2	16.1	13.8	12.0	7.0	10.1
1964	5.4	5.8	6.1	9.3	12.7	15.1	17.9	18.6	17.1	13.7	10.9	8.5	11.7
1965	6.2	4.7	4.8	8.9	12.2	14.7	16.6	17.6	16.2	13.9	9.1	7.6	11.0
1966	6.1	6.9	7.9	7.8	12.8	15.7	17.4	17.5	17.0	14.4	9.4	7.4	11.6
1967	5.6	6.7	7.8	8.8	11.4	14.9	17.4	16.4	14.6	13.7	8.3	6.2	10.9
1968	5.3	5.1	5.7	8.6	10.8	14.0	16.4	16.4	16.4	14.4	10.6	7.1	10.9
1969	5.9	4.9	5.5	8.1	11.8	14.2	17.1	17.4	17.1	15.5	12.1	7.0	11.3
1970	6.4	6.7	5.8	7.5	11.9	15.9	17.0	17.8	16.3	14.4	11.0	9.2	11.6
1971	6.0	7.2	6.7	8.8	11.9	14.4	17.7	18.4	17.1	15.5	10.7	9.2	11.9
1972	7.0	6.8	7.4	10.0	12.3	14.6	16.8	17.7	15.8	13.9	10.8	8.9	11.8
1973	7.0	7.4	7.4	8.6	11.4	15.8	18.0	18.5	17.4	13.6	11.3	8.0	12.0
1974	7.9	7.9	7.7	9.9	12.2	15.7	17.3	18.1	15.6	11.8	10.2	8.9	11.9
1975			7.4	8.6	11.7	15.8	17.7	19.7	17.7	13.6	10.9	7.9	
1976	8.1	5.6	6.7	9.6	12.5	16.7	19.5	19.1	17.4	14.6	11.6	8.4	12.4
1977	6.1	7.2	8.9	9.6	12.0	14.3	17.1	17.9	16.4	15.0	11.2	7.7	11.9
1978	6.9		7.5	8.7	11.4	15.5	16.5	18.0	17.0	14.7	12.8	8.7	
1979	6.1	4.8	6.3	8.6	11.8	15.5	17.4	18.1	16.7	15.0	11.5	9.2	11.7
1980	5.8	7.7	7.3	9.4	11.7	15.2	16.5	18.4	17.1	13.9	10.0	7.7	11.7
1981	6.1	5.7	7.3										
obs	33	32	34	33	32	33	33	33	33	33	33	33	
mean	6.0	5.8	6.7	8.7	11.6	15.0	17.4	17.8	16.3	14.0	10.4	7.9	11.4

**Table 49. Monthly and annual mean sea surface temperatures at SHOREHAM BY
SEA, 50° 50'N 00° 15'W (Source: MAFF)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1966					12.6	16.3	17.3	17.1	16.9	15.8	13.6	7.2	
1967	5.9	7.3	8.3	9.7	12.6	15.7	18.7	18.6	16.9	14.2	9.9	6.9	12.0
1968	5.4	5.3	6.6	9.4	12.1	15.8	17.8	17.4	17.3	14.7	10.8	7.5	11.6
1969	6.5	4.8	5.7	8.6	13.0	15.6	18.2	18.7	17.4	15.8	10.3	6.7	11.7
1970	6.3	5.3	5.7	8.0	12.3	16.5	17.2	18.3	16.7	14.5	10.7	8.1	11.6
1971	5.9	6.6	6.7	8.8	12.4	14.6	18.4	18.4	17.2	16.2	9.2	8.5	11.9
1972	6.6	6.6	7.8	9.4	12.0	15.0	16.7	17.6	15.2	13.1	9.8	8.2	11.5
1973	6.8	6.2	7.2	8.1	12.0	16.3	18.1	18.7	17.2	12.5	9.5	7.0	11.6
1974	6.8	6.8	7.4	9.4	12.2	15.3	17.1	18.1	15.6	11.4	9.6	8.3	11.5
1975	7.9	7.0	7.2	8.5	10.9	14.0	17.7	19.8	17.1	12.8	10.4	6.8	11.6
1976	6.8	5.1	6.3	8.7	13.3	17.4	19.8	19.5	17.4	15.5	10.5	7.3	12.3
1977	6.1	6.5	8.1	9.0	13.0	15.2	17.5	17.9	17.1	15.5	11.3	7.7	12.0
1978	6.0	5.0	7.3	8.3	11.8	15.4	17.2	17.5	16.3	13.2	11.4	6.8	11.3
1979	2.7	2.8	4.6	7.9	11.3	14.9	16.3	17.2	15.9	12.4	7.3	5.9	9.9
1980	2.6	5.2	5.3	6.9	10.0	13.2	14.3	17.6	13.8	8.0	6.1	3.5	8.8
1981	4.0	4.3	6.2	9.6	11.9	15.2	17.1	18.5	18.1	12.4	9.9	5.3	11.0
1982	5.4	6.5	7.4	9.9	14.7	17.8	19.3	19.1	18.0	13.8	11.2	7.8	12.5
1983	7.6	5.0	6.3	8.4	13.0	16.1	20.1	20.1	16.4	13.9	10.7	8.3	12.1
1984	7.0	6.6	7.1	9.5	12.6	13.6	15.9	16.3	13.3	11.8	7.5	5.6	10.5
1985	3.6	4.8	6.8	10.4	12.6	15.8	20.0	17.4	17.3	15.0	9.3	9.2	11.8
1986	6.0	3.3	4.7	8.0	12.7	15.6	19.8	18.0	16.0	14.8	10.8	8.0	11.4
1987	4.8	4.2	5.9	10.8	12.8	12.7	15.9	18.7	17.5	13.1	10.4	7.3	11.1
1988	6.8	5.0	6.6	9.5	13.4	15.2	16.9	16.7	13.5	13.3	8.8	8.5	11.1
1989	8.1	7.1	8.7	11.3	15.4	17.5	19.6	19.7	17.5	14.6	10.6	8.0	13.1
obs	23	23	23	23	24	24	24	24	24	24	24	24	
mean	5.8	5.5	6.6	9.0	12.5	15.4	17.7	18.2	16.4	13.6	9.9	7.2	11.5

**Table 50. Monthly and annual mean sea surface temperatures at OWERS LV,
50° 37'N 00° 41'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	8.0	7.0	7.0	8.5	10.5	13.5	16.5	17.0	16.0	13.5	10.5	9.0	11.4
1906	7.0	6.5	6.5	7.0	9.5	12.0	15.0	17.0	16.5	15.5	12.0	9.5	11.1
1907	7.0	5.5	6.0	8.0	10.0	13.5	14.5	16.0	16.0	15.0	12.0	9.5	11.0
1908	7.0	7.0	6.5	7.0	9.5	13.0	15.5	16.5	16.0	15.5	13.0	10.0	11.3
1909	8.5	7.0	6.0	7.0	10.0	13.0	15.0	16.5	16.0	15.0	12.0	8.5	11.2
1910	7.0	6.5	7.0	8.5	10.0	13.5	15.0	16.0	15.5	14.5	11.0	9.0	11.1
1911	8.0	7.0	6.5	7.0	9.5	13.5	15.5	18.0	18.0	15.0	11.0	9.0	11.5
1912	8.5	7.0	8.0	9.0	11.5	14.0	16.0	16.0	15.0	13.5	11.0	9.5	11.5
1913	8.0	8.0	7.0	8.5	10.5	13.5	14.5	16.0	16.0	15.5	13.0	10.0	11.7
1914	8.0	8.0	8.0	9.0	11.0	13.5	16.0	16.5	16.5	15.0	12.0	9.0	11.8
1915	8.0	6.5	7.0	8.0	10.0	12.0	15.0	16.0	16.0	14.5	10.5	8.5	11.0
1916	8.5	8.0	6.5	8.0	10.5	13.0	15.0	16.0	16.5	14.5	11.5	8.5	11.3
1917	6.5	4.5	4.5	5.5	9.0	13.0	15.0	16.5	16.0	14.0	11.0	9.0	10.3
1918	6.0	6.0	6.5	7.0	10.0	13.0	15.0	16.5	16.0	14.0	11.5	10.0	10.9
1919	8.0	5.5	3.5	5.5	6.5	10.0	13.5	16.0	16.5	14.5	10.5	8.5	9.8
obs	15	15	15	15	15	15	15	15	15	15	15	15	
mean	7.6	6.6	6.4	7.5	9.8	12.9	15.1	16.4	16.1	14.6	11.5	9.1	11.1

**Table 51. Monthly and annual mean sea surface temperatures at LANGSTONE
HARBOUR, 50° 48'N 01° 02'W (Source: MOD(N), Portsmouth).**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1977					7.0	10.0	14.0	15.5	14.0	13.0	8.0	4.5	
1978	4.0	2.0	5.0	6.5	13.0	18.0	14.0	15.0	14.0	11.0	7.5	4.5	9.5
1979	2.0	5.0	4.0	6.5	10.5	13.5	15.5	14.0	13.0	12.5	10.0	8.5	9.5
1980	4.5	6.0	6.5	9.0	12.5	16.5	17.0	18.5		13.0	8.0	7.0	
1981	6.0	5.5	6.5	10.0	12.5	15.0	18.0	19.5	17.0	11.0	10.0	5.0	11.3
1982	5.0	5.5	7.0	10.5	10.5	17.0	18.0	19.0	17.5		13.5	9.0	
1983	7.0	8.0	5.0	8.5	14.0	17.0	21.5	20.5	17.0	12.5		9.0	
1984				8.3	12.0	16.0	18.3	20.0	17.5	15.0	12.3	10.0	
1985	4.4	4.0	5.7	9.8	12.6	15.0	18.7		16.0	14.4		9.4	
1986				8.5	13.5	17.3	19.3	18.0	16.8	14.0		10.5	
1987													
1988													
1989	7.5	7.5	9.5		15.0	17.2	20.8	20.1	17.8	15.5	11.1		
obs	8	8	8	9	11	11	11	10	10	10	8	10	
mean	5.0	5.4	6.1	8.6	12.1	15.6	17.7	18.0	16.0	13.1	10.0	7.7	10.1

**Table 52. Monthly and annual mean sea surface temperatures at CALSHOT, 50° 49'N,
01° 18'W (Source: ABP)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1961											10.9	6.0	
1962	3.7	5.8	4.0	7.6	11.3	15.0	17.3	17.3	16.8	13.9	9.6	6.2	10.7
1963	0.7	0.0	3.4	7.3	11.7	16.0	17.4	18.2	16.2	14.4	12.5	7.0	10.4
1964	5.2	5.4	5.7	7.8	13.0	16.3	19.3	20.6	17.7	14.3	10.6	8.1	12.0
1965	5.4	4.8	5.3	9.5	12.6	15.7	17.7	18.4	16.1	14.8	10.0	7.3	11.4
1966	5.3	6.7	8.1	9.0	13.3	17.3	18.7	17.9	18.1	15.2	9.2	7.2	12.1
1967	6.3	7.0	8.4	9.4	12.1	16.2	19.3	19.0	17.1	14.4	9.7	6.7	12.1
1968	5.4	5.0	5.2	8.4	11.4	16.2	17.2	17.8	17.8	15.0	10.5	7.5	11.4
1969	6.1	4.7	4.8	8.5	12.1	16.1	21.0	20.8	18.3	16.6	12.3	7.3	12.3
1970	5.9	6.2	5.9	8.3	13.7	17.7	17.4	18.6	17.1	13.8	11.1	8.3	12.0
1971	5.2	6.2	6.7	9.2	12.9	15.5	19.3	19.0	18.0	16.0	11.0	8.8	12.3
1972	7.9	6.5	7.5	9.7	12.4	14.3	17.0	18.9	16.4	13.7	11.0	9.0	12.0
1973	7.8	6.9	7.8	9.3	12.1	16.4	19.1	19.4	18.7	13.7	10.3	7.0	12.3
1974	7.2	7.9	7.3	10.0	12.6	15.6	16.8	17.7	16.3	12.2	10.1	9.2	11.9
1975	8.5	7.0	6.6	7.5	11.6	14.6	17.6	19.8	17.9	12.8	9.9	7.2	11.7
1976	7.0	4.7	6.2	8.9	12.1	16.8	21.6	20.6	17.4	15.0	10.9	7.5	12.3
1977	5.7	6.7	8.1	8.7	12.2	14.5	17.7	18.2	16.6	14.8	11.6	8.1	11.9
1978	7.0	4.9	6.7	7.9	11.8	16.3	16.3	18.3	17.7	14.9	12.9	7.9	11.8
1979	4.8	4.2	5.7	8.0	11.3	15.0	18.1	18.2	17.5	15.6	11.0	9.5	11.5
1980	5.1	6.6	6.7	9.5	12.3	15.4	16.5	18.5	17.3	13.4	9.1	6.9	11.4
1981	6.0	6.6	7.7	9.8	11.5	14.4	17.8	19.2	18.0	13.0	9.8	6.0	11.6
1982	4.3	6.5	8.1	10.7	13.6	19.1							
obs	21	21	21	21	21	21	20	20	20	20	21	21	
mean	5.7	5.7	6.4	8.8	12.2	15.9	18.1	18.8	17.3	14.3	10.6	7.5	11.7

**Table 53. Monthly and annual mean sea surface temperatures at BOURNMOUTH,
50° 44'N 01° 52'W (Source: Borough Council)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1970							16.6	17.2	16.0	13.5	11.4	8.4	
1971	6.5	6.9	6.4	8.5	11.5	13.9	17.7	18.2	17.2	14.3	10.2	7.0	11.5
1972	7.2	6.4	6.9	9.0	10.9	13.2	15.6	17.2	16.3	12.7	10.8	9.1	11.2
1973	6.2	6.4	7.5	8.8	11.5	15.2	17.3	17.8	16.8	13.2	11.0	8.6	11.6
1974	9.2	9.4	9.2	10.3	12.8	16.6	18.4	18.6	15.9	12.6	11.7	10.9	12.9
1975	10.7	9.6	9.3	10.1	13.0	16.2	20.2	21.4	19.1	15.6	13.0	9.7	13.9
1976	10.4	9.4	10.7	13.2	15.3	18.0	21.4	21.3	19.0	16.9	13.2	10.2	14.9
1977	8.8	9.8	10.8	10.3	10.6	12.2	15.6	16.6	15.2	13.8	10.4	7.6	11.8
1978	6.4	4.7	6.2	7.5	10.4	14.1	15.4	16.8	15.8	13.6	12.0	7.4	10.8
1979	4.7	4.3	5.7	7.5	9.9	13.6	16.7	16.4	15.5	13.9	10.5	9.7	10.7
1980	5.6	7.0	6.7	8.4	11.0	14.0	15.2	17.1	16.3	12.9	9.8	7.8	10.9
1981	6.6	5.7	7.7	8.8	10.5	13.0	15.3	17.1	17.0	12.8	10.8	6.9	11.0
1982	5.5	6.1	7.2	9.0	11.9	15.9	17.5	18.2	16.9	14.1	11.0	8.6	11.8
1983	8.3	5.5	6.3	7.8	11.2	15.5	19.4	20.2	16.7	13.8	10.9	8.6	12.0
1984	7.1	5.7	5.6	8.2	10.7	14.9	17.2	18.6	16.5	13.7	11.3	9.2	11.5
1985	4.6	4.0	4.6	7.6	10.7	13.3	16.2	15.7	15.6	14.0	9.2	7.9	10.2
1986	6.4	3.4	3.2	5.8	10.1	13.3	16.4	15.6	13.7	12.8	9.6	6.9	9.7
1987	3.1	2.6	3.1	5.9	10.0	13.1	16.5	17.3	16.8	12.8	9.2	5.6	9.6
1988	6.3	5.3	4.7	8.8	12.6	14.9	16.2	16.8	15.7	13.7	10.2	8.2	11.1
1989	8.5	8.4	9.9	9.6	13.0	16.2	19.1	19.0	17.8	15.3	12.6	9.7	13.2
obs	19	19	19	19	19	19	20	20	20	20	20	20	
mean	6.9	6.3	6.9	8.6	11.4	14.5	17.1	17.8	16.4	13.8	10.9	8.4	11.6

**Table 54. Monthly and annual mean sea surface temperatures at POOLE, 50° 42'N
01° 59'W (Source: Poole Harbour Commission)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1950							17.8	17.8	15.1	12.1	8.6	5.0	
1951	4.7	5.2	5.8	8.2	11.3	16.3	19.0	17.6	15.9	13.0	10.1	9.0	11.3
1952	6.1	5.1	8.1	9.9	14.7	17.2	19.2	18.9	14.5	10.6	6.9	5.0	11.3
1953	4.2	3.3	5.8	8.6	12.6	15.2	16.5	17.8	15.3	12.1	9.6	8.8	10.8
1954	4.4	3.7	7.2	10.5	12.6	16.2	16.4	16.9	16.2	14.8	11.2	9.1	11.6
1955	5.8	4.8	4.7	10.1	12.4	16.2	19.4	19.9	17.7	13.3	10.1	8.3	11.8
1956	6.8	3.9	6.8	9.2	13.7	15.8	18.2	17.0	17.0	13.6	8.8	8.3	11.5
1957	7.2	6.8	9.3	11.1	12.9	17.8	18.8	18.0	15.9	13.5	9.1	6.8	12.2
1958	6.2	7.5	5.8	8.6	13.3	16.2	18.3	17.9	17.4	13.6	10.3	7.6	11.8
1959	5.7	4.3	8.2	10.8	14.4	16.8	19.6	19.9	17.2	14.7	9.8	8.0	12.4
1960	5.7	5.3	7.0	9.4	14.1	17.6	17.3	17.1	15.7	12.8	10.0	7.2	11.6
1961	5.0	7.0	8.6	11.3	13.5	16.3	18.3	17.2	16.2	13.6	8.7	6.2	11.8
1962	4.8	5.8	3.8	8.5	11.5	15.7	17.2	16.6	15.3	12.7	7.9	5.0	10.4
1963	-0.3	0.3	4.9	8.5	11.5	15.6	16.6	16.8	15.1	13.1	10.5	5.8	9.8
1964	4.7	5.1	5.6	7.7	12.7	14.5	16.2	16.8	15.4	10.3	7.3	5.4	10.1
1965	2.0	1.0	4.1	8.6	12.5	15.4	16.5	14.8		13.8	8.5	6.8	
1966	4.8	6.1	7.9	9.1	12.9	16.9	17.8	16.7	14.2	7.3	6.8		11.5
1967	6.4	5.9	8.3	9.4	12.8	16.6	19.0	18.3	15.9	13.9	9.0	6.5	11.8
1968	5.8	4.8	6.0	9.3	12.1	16.1	17.3	16.7	15.8	13.9	9.4	7.0	11.1
1969	6.0	4.5	5.6	8.9	11.9	15.7	19.5	18.4	16.7	14.4	10.1	6.2	11.4
1970	5.8	6.1	6.0	8.0	13.6	18.1	16.9	17.6	16.2	12.6	9.9	6.1	11.4
1971	4.9	5.7	5.7	8.3	13.2	14.1	19.2	16.7	15.8	13.0	7.2	6.6	10.8
1972	5.3	4.6	6.3	8.8	10.7	13.0	16.6	16.7	13.4	11.0	8.1	7.1	10.1
1973	4.9	4.9	6.0	7.8	11.2	16.1	17.8	18.2	15.8	10.8	8.1	4.8	10.5
1974	5.7	6.4	6.4	9.5	10.6	15.2	16.4	16.7	15.4	11.4	8.6	6.8	10.7
1975	7.1	5.5	5.7		14.0	16.1	18.7	20.3	17.6	13.2	10.0	6.2	
1976	7.0	4.2	5.6	8.6	13.2	17.7	21.6	19.8	16.7	14.0	9.3	6.7	12.0
1977	3.7	5.4	7.8	9.1	12.2	15.2	17.9	18.3	15.7	13.6	10.9		
1978		4.2	7.4	8.0	13.2	17.2	17.7	17.5	16.0	13.4	12.2	7.9	
1979	3.5	3.7	5.8	8.8	11.7	15.8	18.2	16.7	15.8	13.3	9.1		
1980	4.3	6.3	6.3	9.2	13.9	15.7	14.5	15.2	13.4	10.8	7.2	6.4	10.2
1981	5.8	6.4	7.8	10.2	13.2	15.7	17.5	18.9	16.8	11.3	9.6	4.6	11.4
1982	5.3	7.0	8.2	12.2	12.9	17.0	18.5	18.7	17.6	13.7	10.1		
1983	8.8	4.0	6.4	9.0	12.4	15.3							
obs	32	33	33	32	33	33	33	34	32	33	33	30	
mean	5.2	4.9	6.5	9.2	12.7	16.0	17.8	17.6	15.9	12.9	9.1	6.7	11.2

**Table 55. Monthly and annual mean sea surface temperatures at SWANAGE,
50° 37'N 01° 57'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966					12.8	15.7	17.0	17.4	17.4		9.7	8.6	
1967	6.9	7.5	8.3	8.4	11.3	15.3	17.7	18.0	16.3	14.5	10.3	7.6	11.8
1968	6.3	5.5	6.0	8.2	11.3	15.0	16.7	16.8	16.2	15.2	10.6	8.1	11.3
1969	7.4	4.8	5.7	7.8	11.0	14.3	17.6	18.0	16.6	15.9	11.2	7.4	11.4
1970	6.8	6.5	6.0	7.7	11.7	15.6	16.3	17.4	16.7	14.2	12.0	7.6	11.5
1971	7.0	6.9	6.7	7.5	11.6	14.6	18.1	18.1	17.0	14.2	9.6	8.0	11.6
1972	8.2	6.4	7.2	9.5	11.2	14.3	16.2	17.5	15.9	13.2	11.1	8.8	11.6
1973	7.4	6.4	7.2	8.9	11.8	15.8	17.1	18.1	16.6	12.7	10.8	7.9	11.7
1974	9.0	8.4	8.3	9.9	12.0	14.9	16.2	17.4	15.8	12.1	10.5	10.1	12.0
1975	9.3	7.7	7.6	8.7	12.1	15.8	17.2	18.9	16.6	13.9	11.3	7.9	12.2
1976	7.8	7.0	7.8										
1977		7.2	8.0	9.2	11.6	13.4	16.1	17.0	15.6	14.5	10.5	6.6	
1978	5.3	3.4	5.0	5.9	8.9	13.4	14.4	15.5	14.9	13.2	10.8	7.1	9.8
1979	3.9	2.5	4.1	5.7	7.3	12.2	15.1	15.3	14.7	12.8	8.3		
1980	4.0	5.5	4.9	6.8	10.8								
1981			9.2	9.9	10.7	11.8	12.8	17.2	17.0	12.6	10.8	6.9	
1982	5.3	6.8	7.3	9.1	12.4	15.7	17.7	18.1	18.1	14.6	12.4	9.3	12.2
1983	8.9	6.4	7.2	8.5	11.4	15.1	18.7	19.4	16.8	15.6	13.9	10.8	12.7
1984	8.4	7.2	6.9	8.2	11.3	15.4	18.4	19.8	17.1	14.3	12.4	10.4	12.4
1985	6.2	5.2	5.9	8.8	11.3	14.0	16.8	16.4	16.1	14.6	10.1	9.8	11.2
1986	7.2	3.5	4.6	7.1	10.4	13.5	16.9	17.0	15.1	14.3	11.8	10.0	10.9
1987	5.6	5.4	5.6	8.4	11.0	14.0	17.5	17.9	17.6	14.3	11.2	8.3	11.4
1988	8.4	7.4	7.3	9.3	12.3	15.2	16.6	17.1	16.2	14.3	11.5	9.9	12.1
1989	9.4	9.0	9.2	9.6	13.6	16.2	19.1	19.2	18.1				
obs	21	22	23	22	23	22	22	22	22	20	21	20	
mean	7.0	6.2	6.7	8.3	11.2	14.6	16.8	17.6	16.4	14.0	10.9	8.5	11.6

**Table 56. Monthly and annual mean sea surface temperatures at SHAMBLES LV,
50° 31'N 02° 20'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1881	6.7	6.1	6.7	7.2	9.4	12.2	15.0	15.6	15.6	13.9	11.7	10.6	10.8
1882	9.4	8.3	8.9	10.0	11.7	13.3	15.0	16.1	15.6	14.4	11.7	9.4	11.9
1883	8.9	8.3	7.2	7.8	9.4	12.8	14.4	16.1	15.6	13.9	11.7	9.4	11.2
1884	8.3	8.3	8.3	8.9	10.0	12.8	15.6	17.2	16.7	15.0	12.2	9.4	11.8
1885	7.2	7.8	7.2	7.8	10.0	13.3	15.0	16.1	15.6	13.3	11.1	8.9	11.1
1886	7.2	6.1	5.6	7.2	9.4	12.2	14.4	16.1	16.1	14.4	11.7	9.4	10.8
1887	7.8	7.2	6.7	7.2	9.4	12.2	15.0	16.7	16.1	13.3	10.6	8.3	10.8
1888	7.2	6.1	5.0	6.1	8.9	11.1	12.8	13.9	14.4	13.9	12.2	11.1	10.2
1889	8.9	7.2	6.7	7.8	10.0	12.8	14.4	15.6	15.6	13.3	12.2	10.0	11.2
1890	8.9	8.3	7.2	8.3	10.6	12.8	13.3	15.6	16.1	14.4	11.7	7.8	11.2
1891	5.6	5.6	5.6	7.2	9.4	12.8	14.4	15.6	15.6	13.9	11.7	7.8	10.4
1892	7.8	7.2	6.1	7.2	9.4	12.2	14.4	15.0	15.6	13.3	11.7	9.4	10.7
1893	6.7	7.2	7.8	8.9	11.7	13.9	15.6	17.2	17.2	15.0	11.7	9.4	11.8
1894	7.8	7.8	8.3	10.0	11.7	12.8	15.0	16.1	16.1	14.4	12.8	10.6	11.9
1895	7.2	3.9	4.4	6.7	9.4	12.8	14.4	16.1	17.2	15.0	12.8	10.0	10.8
1896	8.3	8.3	8.3	9.4	11.7	14.4	16.1	17.2	16.1	13.3	10.0	8.3	11.7
1897	7.2	6.7	7.2	8.9	10.6	13.3	15.0	17.2	16.1	14.4	12.8	10.6	11.6
1898	9.4	7.2	7.8	8.3	10.6	13.3	15.0	17.2	17.2	15.6	13.3	11.7	12.2
1899	9.4	8.9	8.3	8.9	11.1	13.9	16.1	18.3	17.8	15.0	13.3	10.6	12.6
1900	8.9	7.2	7.8	8.3	10.0	12.8	15.0	16.7	16.7	15.0	12.8	11.1	11.8
1901	9.4	7.2	6.7	7.8	10.6	12.8	15.0	16.7	16.7	15.0	12.2	9.4	11.6
1902 - 1911													
1912	8.9	7.8	8.9	9.4	11.7	13.9	16.1	15.6	15.0	13.3	11.7	10.6	11.9
1913	9.4	8.3	8.3	8.9	10.6	13.3	15.0	16.7	16.1	15.6	13.3	10.6	12.1
1914	7.8	7.8	8.3	10.0	11.7	13.9	16.1	16.7	17.2	15.0	12.8	10.0	12.2
1915	8.3	7.2	7.2	7.8	10.0	12.8	13.9	15.6	16.1	14.4	11.1	8.9	11.1
1916	9.4	8.3	6.7	7.8	10.0	12.2	14.4	16.1	16.1	14.4	11.7	8.9	11.3
1917	6.7				9.4	11.7	14.4	15.6	15.6	13.3	11.1	8.9	
1918	6.7	7.8	7.8	8.3	10.6	12.8	15.0	16.7	16.1	13.9	11.7	11.1	11.5
1919	8.9	7.2	7.2	8.3	10.6	13.3	15.0	16.7	16.7	13.9	10.0	9.4	11.4
1920	8.3	8.3	8.9	10.0	11.7	13.9	15.6	16.1	16.1	15.0	11.7	9.4	12.0
1921	9.4	8.3	8.3	9.4	11.1	13.9	16.7	17.2	17.2	16.7	12.8	11.1	12.6
1922	9.4	8.3	8.3	8.3	10.6	15.0	14.4	15.6	15.6	13.9	11.1	9.4	11.6
1923	8.3	8.3	8.9	9.4	10.6	12.8	15.6	16.1	15.6	13.9	11.1	8.9	11.6
1924	8.3	7.8	7.2	7.2	10.0	12.8	15.0	15.6	15.6	14.4	12.2	11.1	11.4
1925	10.0	8.9	7.8	8.3	10.6	13.9	15.6	16.7	16.1	14.4	11.7	8.9	11.9
1926	8.3	8.9	8.9	9.4	10.6	13.3	16.1	17.2	17.2	14.4	12.2	9.4	12.1
1927	7.8	7.8	8.3	9.4	11.7	13.3	15.6	16.1	16.1	14.4	12.2	8.9	11.8
1928	7.8	8.3	8.3	9.4	11.1	13.3	15.6	16.7	16.7	15.0	12.8	10.6	12.1
1929	7.8	6.7	6.1	7.8	10.0	12.8	15.0	16.1	17.2	15.0	12.2	10.6	11.4
1930	8.9	7.2	7.2	8.3	10.0	13.3	15.6	16.1	16.1	14.4	12.2	10.0	11.6
1931	8.3	7.8	6.7	7.8	10.6	12.8	14.4	16.1	15.6	14.4	12.2	11.1	11.4
1932	10.0	7.2	6.7	7.8	9.4	12.8	15.0	16.7	16.1	14.4	11.7	9.4	11.4
1933	8.3	6.7	8.9	8.9	8.9	13.9	16.1	17.8	17.2	16.1	12.2	8.3	11.9
1934	7.2	6.7	6.7	7.8	10.6	12.8	16.1	16.7	16.7	15.0	12.2	10.6	11.5
1935	8.3	7.2	7.8	8.9	10.6	12.8	15.6	17.2	16.7	14.4	12.2	9.4	11.7
1936	8.3	7.2	7.8	8.3	10.6	12.2	15.0	16.1	16.7	14.4	11.7	10.0	11.5
1937	9.4	8.9	7.2	8.3	11.1	13.9	16.1	17.2	16.7	15.6	12.8	9.4	12.2
1938	8.3	7.8	7.8	8.9	10.6	12.8	14.4	16.7	16.1	13.9	13.3	10.6	11.7
1939	8.3	7.2	7.8	8.3	11.1	13.9	15.0	17.2	17.2	14.4	12.2	10.0	11.8

Table 56. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1940 - 1951													
1952	8.9	7.2	7.2	8.3	10.6	13.3	15.6	17.2	16.1	13.9	11.7	7.8	11.4
1953	7.2	6.1	6.7	7.8	10.0	11.7	14.4	16.1	16.7	15.0	12.8	12.2	11.3
1954	9.4	6.7	7.2	8.9	10.6	12.8	14.4	15.6	15.6	15.0	13.3	11.1	11.7
1955	7.2	6.1	6.1	6.7	8.9	11.7	15.0	16.7	17.2	15.6	12.8	10.6	11.2
1956	9.4	6.7	6.1	7.2	10.0	12.2	14.4	15.6	15.0	15.0	12.2	10.0	11.1
1957	8.9	8.3	8.9	10.0	11.7	13.9	15.6	16.7	16.1	15.6	13.3	10.6	12.4
1958	8.3	7.8	7.8	7.8	8.9	12.2	13.9	15.6	16.7	15.0	12.8	11.1	11.4
1959	8.9	7.2	7.8	9.4	11.1	13.3	15.6	17.8	18.3	17.2	13.9	11.7	12.6
1960	8.9	7.8	8.3	9.4	11.1	13.9	16.1	16.7	16.7	15.0	13.3	10.6	12.3
1961	8.5	8.4	9.2	10.2	11.7	14.0	16.1	17.1	17.2	16.2	12.9	10.3	12.6
1962	8.1	8.0	6.1	7.3	9.3	11.7	14.3	15.6	15.4	14.7	12.3	9.6	11.0
1963	5.1	3.2	4.3	6.6	9.3	11.9	14.0	15.9	15.2	14.4	13.2	10.1	10.2
1964	8.1	7.0	6.7	7.6	10.3	12.8	15.2	16.8	16.6	14.9	12.4	10.4	11.5
1965	8.1	6.6	5.9	7.9	10.1	12.3	14.6	15.8	15.4	14.7	12.3	9.6	11.1
1966	8.0	8.0	8.3	8.8	10.9	13.7	15.5	16.4	16.8	15.8	12.4	9.8	12.0
1967	8.6	8.3	8.2	8.9	10.3	12.5	15.2	16.7	16.5	14.8	12.1	9.3	11.7
1968	7.8	7.1	6.3	7.6	9.7	12.4	14.3	15.8	16.1	15.3	13.2	10.6	11.3
1969	8.5	7.4	6.4	7.4	9.8	12.1	15.0	16.5	16.3	15.9	13.8	10.1	11.6
1970	7.9	7.2	7.1	7.7	9.8	12.3	14.6	15.6	15.8	15.1	12.7	10.7	11.3
1971	8.2	8.2	7.8	8.6	10.0	12.4	15.0	16.4	16.5	16.1	14.4		
1972													
1973						13.5	15.1	16.6	16.6	15.0	12.9	10.3	
1974	9.2	9.0	9.0	9.5	10.2	13.1	14.7	16.3	16.3	13.5	11.2	10.0	11.8
1975	9.7	8.7	8.0	8.1	9.8	12.1	14.8	16.7	17.3	15.1	12.8	10.1	11.9
1976	9.0	7.0	8.0										
obs	72	71	71	70	71	72	72	72	72	72	72	71	
mean	8.2	7.4	7.3	8.3	10.3	12.9	15.0	16.3	16.2	14.6	12.2	9.9	11.6

Table 57. Monthly and annual mean sea surface temperatures at WEYMOUTH, 50° 37'N 02° 27'W (Source: MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966					12.0	14.2	16.3	17.3	16.4	15.9	13.4	9.8	
1967	8.1	6.6	7.9	9.8	11.0	12.3	16.0	17.2	16.7	14.7	12.0	7.0	11.6
1968	7.2	7.1	6.2	7.8	10.9	13.9	15.9	16.6	16.9	15.7	13.8	9.9	11.8
1969	7.1	6.5	6.5	7.8	8.9	11.2	15.3	16.4	16.5	15.6	13.1	8.7	11.1
1970	6.4	6.7	7.2	7.7	8.9	10.3							
1971	6.7	7.2	7.4	8.4	10.8	13.3	15.2	17.2	17.6	15.7	12.0	9.5	11.7
1972	9.0	8.3	8.7	9.4	11.3	13.0	15.0	16.5	16.0	13.9	11.9	9.9	11.9
1973	8.6	8.4	8.2	8.6	10.8	13.2	16.4	17.5	17.6	15.3	11.8	9.0	12.1
1974	8.4	8.0	8.0	8.9	10.3	12.9	16.0	17.5	16.0	13.5	11.5	10.8	11.8
1975	8.5	6.6	7.2	8.6	10.6	13.0	15.4	17.0	16.5	14.4	12.0	10.4	11.6
1976	7.5	6.2	6.9	8.2	10.4	12.7	15.2	16.6	16.2	14.7	12.3	10.4	11.4
1977	7.6	5.8	6.8	7.9	10.3	12.9	15.6	16.8	16.4	14.8	12.9	10.0	11.4
1978	7.5	6.2	6.8	8.2	11.1	12.7	14.9	16.5	16.6	14.5	12.4	9.9	11.4
1979	7.3	5.9	6.7	8.8	11.1			17.1	16.8	14.6	12.4	10.4	
1980	7.4	6.0	6.6	7.9	10.2	13.3	15.3	16.4	16.6	14.8	12.7	10.2	11.4
1981	7.0	6.0	7.1	8.8	11.6	12.8	15.2	16.4	16.2	14.6	12.9	10.2	11.5
1982	7.3	5.8	7.1	8.9	10.6		15.1	16.9	16.8	15.1	12.9	10.1	
1983	7.9	6.2	7.1	8.4	10.7	13.0	15.2	16.9	17.0	15.0	12.3	10.2	11.6
1984	7.6	6.3	7.1	8.6	10.8	13.5	15.6	16.9	16.9	15.3	13.0	10.6	11.8
1985	8.0	6.1	6.8	9.1	10.9	13.6	15.5	17.3	16.8	15.0	13.0	10.6	11.8
1986	7.8	6.2	7.2	8.5	10.9	12.8	14.9		15.5	14.1	12.1	10.6	
1987	8.2	6.8	7.3	8.7	10.4	12.9	15.0	16.5	16.8	15.0	12.4	10.1	11.6
1988	8.9	8.0	7.7	8.9	11.1	13.4	15.1	15.9	15.8	14.9	12.7	11.0	11.9
1989				9.8	13.3	15.3	17.9	18.3	17.2	15.4			
obs	22	22	22	23	24	22	22	22	23	23	23	22	
mean	7.7	6.6	7.2	8.5	10.7	13.0	15.5	16.8	16.6	14.8	12.5	9.9	11.6

**Table 58. Monthly and annual mean sea surface temperatures at CHANNEL LV,
49° 54'N 02° 54'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1979	10.7	8.5	9.0	9.0	9.7	11.3	13.9	14.5	14.8	15.0	14.2	11.7	11.8
1980	8.9	9.0	8.7	9.2	10.6	11.9	13.2	14.9	15.0	14.4	13.7	11.9	11.7
1981	9.5	8.9	9.7	10.0	10.1	12.1	13.7	15.7	15.6	14.4	12.9	10.5	11.9
1982	10.0	10.0	9.9	10.0	10.5	12.6	14.7	15.9	16.0	14.9	13.5	11.6	12.4
1983	9.9	8.9	8.2	9.0	10.3	11.6	14.8	15.5	15.0	14.3	13.5	12.1	11.9
1984	10.3	9.0	9.0	9.3	10.0	11.7	14.5	15.7	15.7	14.4	13.4	12.0	12.0
1985	10.0	9.0	9.0	9.4	10.4	11.6	13.9	14.7	15.0	14.6	13.4	11.9	11.9
1986	10.3	8.0	7.0	8.0	9.1	11.5	12.8	14.2	14.4	13.0	12.2	12.0	11.0
1987	9.6	8.2	8.0	9.4	10.1	12.2	14.2	14.9	15.0	14.6	12.8	10.8	11.6
1988	10.0	10.0	9.6	9.0	10.4	12.4	14.8	15.0	15.0	15.0	13.8	12.5	12.2
obs	10	10	10	10	10	10	10	10	10	10	10	10	
mean	9.9	8.9	8.8	9.2	10.1	11.8	14.0	15.1	15.1	14.4	13.3	11.7	11.8

**Table 59. Monthly and annual mean sea surface temperatures at PLYMOUTH,
50° 22'N 04° 10'W (Source: Plymouth City Council)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1957	9.3	9.2	10.1	11.0	12.3	14.7	15.8	15.6	15.2	14.4	11.7	9.9	12.4
1958	9.0	8.7	7.9	8.6	11.3	13.5	15.1	15.5	16.2	14.2	12.9	10.4	11.9
1959	9.2	8.2	9.0	10.2	12.4	14.4	15.9	17.1	17.4	15.6	13.7	10.9	12.8
1960	9.4	8.4	8.0	9.6	12.7	15.2	15.5	16.0	15.7	14.4	12.1	10.3	12.2
1961	8.7	9.2	10.0	11.2	12.3	14.7	16.3	16.1	16.4	15.0	12.1	9.7	12.6
1962	8.1	8.8	6.9	8.7	10.5	13.2	15.1	15.1	15.0	14.2	11.4	9.6	11.3
1963	5.4	4.7	6.4	8.3	10.2	13.3	14.5	15.0	14.3	13.4	12.0	9.4	10.5
1964	8.1	8.0	7.9	9.1	12.1	14.9	15.6	15.8	16.1	14.1	11.8	8.9	11.8
1965	8.2	7.2	7.4	9.2	11.5	13.9	15.2	15.3	14.4	14.2	11.1	9.7	11.4
1966	8.5	9.1	9.5	10.0	11.6	14.8	15.2	15.6	16.3	14.8	11.8	9.2	12.2
1967	9.0	8.6	9.1	9.5	11.1	13.8	16.0	15.8	15.1	13.9	10.5	9.4	11.8
1968	8.3	7.1	7.0	8.7	10.5	13.7	15.0	15.6	15.2	14.3	10.4	9.6	11.2
1969	9.4	7.4	6.9	9.2	10.0	14.1	15.5	15.9	15.5	15.3	12.2	9.5	11.7
1970	8.3	7.4	7.8	8.9	10.8	14.7	14.7	15.5	15.1	13.7	11.9	10.0	11.5
1971	8.2	8.0	8.3	9.6	11.1	13.3	16.0	16.0	15.7	15.1	11.7	10.9	11.9
1972	9.4	8.8	8.4	9.2	11.1	12.1	14.1	15.4	14.8	13.6	12.1	10.5	11.6
1973	9.4	8.9	8.6	9.3	10.8	13.4	15.2	15.7	15.3	13.9	12.3	9.7	11.8
1974	9.1	8.3	8.0	9.7	11.1	13.0	15.5	16.3	15.3	12.5	10.2	10.2	11.6
1975	9.4	8.6	8.9		10.0	14.9	16.2	17.5	15.5	13.5	11.8	10.9	
1976	9.4	7.5	7.8	9.4	11.3	14.3	16.8	17.4	15.6	14.1	11.0	9.3	11.9
1977	6.6	7.5	8.3	9.3	11.6	14.3	15.3	16.1	15.1	14.3	11.8	9.8	11.6
1978	9.0	7.0	7.4	8.0	10.8	13.3	14.1	15.3	15.4	13.9	12.7	10.2	11.4
1979	7.4	6.7	7.1	8.3	10.3	12.9	15.1	15.5	14.5	14.5	11.4	10.8	11.2
1980	8.6	8.7	8.9	9.6	11.5	13.4	14.1	15.1	13.5	13.0	10.8	9.6	11.4
1981	8.3	7.7	8.8	10.1	10.8	11.9	14.1	15.7	16.5	13.0	11.7	9.8	11.5
1982	7.8	8.2	8.5	9.9	11.5	14.2	15.6	16.3	15.6	14.0	12.2	9.8	11.9
1983	9.3	7.6	7.2	8.3	10.7	12.9	16.0	17.2	15.7	13.8	12.0	9.9	11.7
1984	8.9	8.1	7.7	8.8	10.5	12.8	15.0	16.7	15.6	13.6	12.0	10.3	11.6
1985	10.3	8.2	7.8	9.7	11.2	13.7	15.7	14.9	14.8	14.5	11.4		
1986	7.1	4.4	4.3	5.8	8.4	11.3	13.3	14.0	13.6	13.1	10.6	9.0	9.5
1987	6.6	5.0	6.3	9.0	10.2	12.3	16.0	16.4	15.3	13.4	10.6	8.0	10.7
1988	7.0	7.6	7.2	9.1	11.1	13.7	14.7	15.2	14.8	13.1	11.3	10.9	11.3
1989	9.6	9.1	9.1	9.9	12.4	14.8	17.0	17.8	16.7	15.0	11.9	9.7	12.7
obs	33	33	33	32	33	33	33	33	33	33	33	32	
mean	8.4	7.8	7.9	9.2	11.0	13.6	15.3	15.8	15.3	14.0	11.6	9.8	11.6

Table 60. Monthly and annual mean sea surface temperatures at MBA STATION E1, 50° 02'N 04° 22'W (Source: Plymouth Marine Laboratory)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1960	10.4	9.1	9.6	10.7	12.6	14.6	16.6	18.3	16.0	14.5	13.4	11.5	13.1
1961	10.0	10.0	10.4	11.4	12.8	14.7	16.1	15.7	15.8	14.7	13.3	11.9	13.0
1962	10.3	9.0	8.2	7.9	10.5	13.9	15.2	15.4	15.1	14.3	13.0	11.4	12.0
1963	8.0	6.7	7.0	8.5	10.2	12.1	14.9	15.1	13.7	13.0	12.6	11.5	11.1
1964	9.7	9.0	8.9	9.4	11.6	14.1	15.7	16.0	16.0	14.4	13.3	11.8	12.4
1965	10.2	8.9	8.0	8.8	10.9	13.5	14.8	15.1	14.7	14.1	12.6	10.9	11.8
1966	9.7	9.5	9.9	10.6	11.8	14.3	15.8	16.6	16.3	15.1	13.2	11.4	12.8
1967	10.0	9.5	9.6	9.7	11.0	13.5	15.9	16.3	15.4	13.8	12.2	10.6	12.2
1968	9.7	8.7	8.0	9.3	10.9	13.0	15.2	16.1	15.2	13.9	13.1	12.4	12.1
1969	11.1	9.5	9.4	9.8	10.8	13.4	16.0	17.8	16.8	14.7	13.1	11.7	12.8
1970	10.5	9.6	8.6	8.8	12.1	14.3	13.5	16.3	14.8	13.7	12.7	11.7	12.2
1971	10.2	8.9	9.1	9.3	11.6	13.7	17.0	17.0	16.1	15.0	13.8	12.0	12.8
1972	10.6	9.8	9.3	9.6	10.3	11.6	13.5	15.5	14.6	13.9	13.6	12.2	12.0
1973	10.4	9.4	9.0	9.4	10.4	13.3	16.9	17.4	16.0	14.3	12.2	11.8	12.5
1974	10.8	9.9	9.4	9.6	11.2	13.4	14.3	16.6	14.7	13.0	11.9	10.9	12.1
1975	10.2	9.9	9.8	9.4	11.0	14.1	16.3	18.2	15.4	13.8	13.1	11.8	12.7
1976	10.4	9.4	9.3	9.9	11.7	14.7	16.6	18.6	14.3	13.4	12.5	11.1	12.6
1977	9.7	9.1	9.2	9.6	11.9	13.8	14.9	15.4	14.7	13.6	12.4	11.3	12.1
1978	10.2	9.1	8.6	8.9	11.1	13.4	14.8	16.2	15.1	13.9	13.7	11.9	12.2
1979	11.2	9.2	8.4	9.2	10.6	13.2	16.1	16.7	15.1	14.3	13.1	11.6	12.3
1980	10.2	9.6	9.2	10.0	11.3	13.3	14.9	16.4	16.3	14.2	12.7		
1981	9.7	8.9		9.7		12.6	14.6	16.5	15.8	12.6		11.9	
1982		9.7		10.1	10.8	15.2	17.2	15.9		13.7			
1983	9.8		8.9	9.6	10.6	15.4	19.2					12.2	
1984													
1985		8.7	9.6	10.3	12.3	14.0		15.0	15.4	14.4	12.4	11.3	
obs	23	24	23	25	24	25	24	24	23	24	22	23	
mean	10.1	9.2	9.0	9.5	11.2	13.7	15.6	16.4	15.3	14.0	12.9	11.6	12.3

Table 61. Monthly and annual mean sea surface temperatures at FOWEY, 50° 20'N 04° 38'W (Source: MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966					11.9	14.0	14.6	16.2	15.7	14.7	11.8	13.3	
1967	9.1	8.7	9.4	9.7	11.2	13.1	15.2	15.7	14.8	13.4	11.4	10.0	11.8
1968	7.5	6.5	7.5	9.5	10.7	13.2	14.1	15.4	14.9	13.5	11.4	10.7	11.2
1969	9.8								15.8	15.3	12.6	10.1	
1970	8.7	8.7	8.1	8.8	10.9	14.1	14.3	15.0	14.9	13.7	12.0	10.5	11.6
1971	8.5	8.6	8.4	9.3	11.4	12.9	16.1	15.4	15.9	14.9	12.5	10.7	12.0
1972	9.2	8.5	8.7	9.5	10.3	10.9	13.0	15.2	15.4	13.8	12.1	10.3	11.4
1973	10.3	10.8	11.4			12.9	15.0	16.4	16.5	14.3	12.3	11.0	
1974	10.2	9.4	9.0	10.2	11.5	13.3	14.1		14.4	12.6	11.2	10.4	
1975	9.6	9.0	8.8	9.3	11.2	13.2	16.0	16.6	15.5	13.8	12.2	10.4	12.1
1976	9.6	7.8	8.2	9.3	10.6	13.0					11.6	9.9	
1977	8.2	8.4	8.7	9.4	11.0	12.4	15.2	16.1	15.7				
1978		7.6	7.7	8.8	11.2	13.3	14.3	15.1	15.0	14.1	13.2	10.2	
obs	11	11	11	10	11	12	11	10	12	11	12	12	
mean	9.1	8.5	8.7	9.3	11.0	13.0	14.7	15.7	15.3	14.0	12.0	10.6	11.7

**Table 62. Monthly and annual mean sea surface temperatures at NEWLYN,
50° 06'N 05° 32'W (Source: IOS, Proudman Laboratory)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1920				10.1	11.5	14.3	14.2	14.3	14.9	14.3	12.2	9.3	
1921	10.4	8.9	9.6	10.1	12.3	14.3	17.2	15.7	15.7	15.7	13.3	11.5	12.8
1922	9.4	9.0	9.4	9.1	12.1	15.8	13.2	14.2	14.3	12.9	11.0	10.8	11.7
1923	9.7	9.3	9.0	9.9	10.8	12.0	14.7	14.9	14.0	13.1	10.9	9.4	11.4
1924	9.3	8.3	8.0	8.7	10.7	12.7	13.8	14.0	14.0	13.2	11.7	11.2	11.3
1925	10.2	9.9	8.9	9.8	10.8	13.9	15.6	15.6	14.3	14.0	11.2	9.3	11.9
1926	9.5	9.1	9.4	9.9	11.4	15.2	15.8	15.9	16.0	14.6	11.7	9.6	12.3
1927	9.1	8.3	9.1	9.8	12.3	13.4	14.3	15.1	14.5	13.6	11.9	9.6	11.7
1928	8.9	9.2	9.2	10.3	11.9	13.4	14.4	15.3	15.6	14.1	12.3	10.5	12.0
1929	7.7	7.8	7.2	9.5	10.8	12.5	14.8	14.7	16.2	14.1	12.0	10.7	11.5
1930	9.2	7.8	7.7	9.1	10.9	13.6	14.3	13.7	15.3	13.6	12.1	10.6	11.4
1931	9.6	9.1	8.1	9.1	10.7	13.2	14.2	14.5	14.6	14.1	12.5	10.8	11.7
1932	10.3	8.3	8.0	9.4	10.7	14.0	15.2	15.4	15.9	15.6	11.7	10.2	12.0
1933	9.1	8.2	8.8	10.2	11.7	13.9	15.3	16.3	16.7	15.0	11.8	8.3	12.1
1934	9.3	8.1	8.2	8.8	10.8	14.3	16.2	15.0	15.3	13.5	11.1	11.2	11.8
1935	10.2	9.4	8.9	10.0	11.4	12.8	15.3	16.3	15.4	13.2	11.7	9.4	12.0
1936	9.0	8.1	8.8	9.6	11.5	13.3	14.0	14.6	15.6	13.9	11.9	10.4	11.7
1937	9.9	9.2	9.0	9.7	12.0	14.0	14.4	16.5	15.8	14.7	12.0	10.5	12.3
1938	9.7	8.5	9.4	10.2	11.3	12.7	13.8	15.6	15.2	13.9	13.0	10.4	11.9
1939	9.5	8.8	9.2	10.1	12.7	14.7	14.7	15.7	17.1	13.6	12.3	10.2	12.3
1940	7.6	8.1	8.5	10.4	12.6	15.5	15.0	15.7	15.5	13.5	12.1	9.9	12.0
1941	6.4	8.1	8.2	8.9	10.5	13.3	15.4	14.2	15.3	14.5	11.6	11.1	11.4
1942	8.9	8.0	7.9	10.1	11.3	13.4	14.6	15.8	16.7	14.0	11.3	11.0	11.9
1943	10.1	10.0	9.7	11.4	12.3	13.9	15.6	15.9	15.3	14.1	12.2	9.4	12.4
1944	10.0	8.5	8.5	10.3	11.6	13.1	14.8	17.3	15.1	13.2	11.2	10.1	11.9
1945	7.0	8.6	9.3	11.0	12.2	13.6		15.8	16.6	14.9	12.7	11.3	
1946	9.1	9.9	8.2	10.7	12.0	12.8	14.6	14.4	14.5	13.7	12.2	10.0	11.8
1947	10.0	5.3	6.5	9.4	10.2	13.5	14.2	17.8	17.5	15.2	13.0	10.6	11.9
1948	10.3	9.2	8.9	10.4	12.2	13.1	13.6	15.8	15.1	14.4	12.5	10.9	12.2
1949	9.6	9.7	9.5	10.7	12.4	15.0	17.6	17.4	17.8	16.2	12.0	10.6	13.2
1950	9.6	9.0	10.2	10.8	12.4	16.0	15.2	15.4	14.4	13.6	11.0	9.1	12.2
1951	7.7	8.1	8.1	9.3	10.7	13.9	14.6	15.0	14.2	13.9	12.3	10.9	11.5
1952	9.3	7.7	9.3	8.4	10.4	14.0	16.0	15.6	14.7	12.8	11.4	9.3	11.5
1953	7.9	7.5	8.6	9.6	11.6	13.1	14.3	14.8	14.6	13.3	12.3	11.5	11.5
1954	9.6	7.5	9.2	10.1	11.8	12.9	14.2	15.4	14.2	13.5	12.2	10.3	11.7
1955	8.7	7.5	6.6	8.7	11.0	13.5	15.3	17.5	16.6	13.6	11.5	11.3	11.8
1956	9.7	6.8	7.8	9.9	11.3	12.9	14.3	14.6	14.3	14.1	11.5	10.8	11.5
1957	9.1	9.4	10.0	11.3	12.3	14.7	15.4	15.6	14.6	14.1	11.8	9.8	12.3
1958	9.4	9.3	8.0	9.1	11.7	13.8	14.5	14.5	15.6	14.2	12.1	10.2	11.8
1959	9.5	8.5	9.4	10.4	13.6	14.9	15.4	16.0	17.1	15.4	12.7	11.4	12.8
1960	8.5	8.2	9.2	9.8	12.4	15.1	14.9	15.1	14.8	14.0	12.4	9.8	12.0
1961	9.0	9.4	9.8	10.9	12.9	14.2	14.0	15.0	16.2	14.6	11.4	10.2	12.3
1962	9.0	9.5	6.4	8.3	10.5	12.9	14.2	14.3	14.4	13.9	11.4	9.9	11.2
1963	5.5	4.9	6.0	8.2	10.5	13.1	13.6	15.0	13.7	13.3	12.7	9.5	10.5
1964	8.3	7.9	7.8	8.6	11.5	13.8	14.4	15.0	15.2	14.2	12.3	10.3	11.6
1965	8.8	6.6	6.9	9.8	10.8	12.4	13.9	14.4	14.0	13.4	11.5	10.6	11.0
1966	8.2	9.0	9.4	10.1	11.8	13.9	14.4	15.2	15.6	14.8	11.2	10.2	11.9
1967	8.6	8.9	9.2	9.5	11.9	13.9	14.4	14.9	15.0	14.1	11.6	9.9	11.8
1968	9.6	8.4	7.7	8.8	11.0	13.9	14.9	16.3	15.5	14.1	12.1	11.4	11.9
1969	9.8	8.2	8.5	9.8	11.3	13.8	15.0	16.1	15.9	15.5	13.2	11.2	12.3
1970	9.1	9.6	8.8	9.2	12.1	14.8	14.1	14.8	14.9	14.0	12.5	10.4	12.0
1971	8.8	8.7	8.4	9.3	12.1	13.3	16.4	16.1	16.1	15.6	12.7	11.2	12.3
1972	9.4	9.3	9.5	10.2	11.4	12.0	14.2	14.9	15.4	13.9	12.4	10.3	11.9
1973	8.6	9.0	8.9	9.1	10.5	12.9	14.6	15.6	15.5	13.5	12.1	9.7	11.6
1974	9.6	8.8	8.4	10.4	11.5	13.0	14.0	14.4	13.9	11.7	10.9	9.3	11.3
1975	9.4	8.6	8.3	8.5	10.6	13.4	15.4	15.9	14.6	13.0	11.6	9.7	11.5
1976	10.2	8.5	8.6	9.8	10.7	13.6	16.0	16.9	15.8	13.8	11.3	10.0	12.1
1977	8.7	9.0	9.4	9.6	11.5	13.1	15.3	16.3	15.2	14.2	12.1	10.1	12.0
1978	9.6	8.0	8.4	9.0	11.4	13.7	13.5	14.6	15.3	13.7	13.2	10.6	11.7
1979	8.1	7.4	8.1	9.0	10.4	12.8	14.0	14.1	14.4	14.3	12.5	11.1	11.3
1980	8.6	9.2	9.0	10.0	11.8	12.9	13.8	15.6	15.2	13.2	11.1	10.2	11.7
1981	9.4	9.0	8.8	10.2	10.8	13.0	13.8	15.7	16.2	12.9	11.3	10.1	11.7
1982	8.6	8.7	9.4	10.2	11.9	14.7	15.4	16.3	15.3	13.6	12.1	10.0	12.1
1983	9.7	7.6	8.8	9.3	11.0	13.8	17.0	17.9	15.3	13.8	11.8	10.9	12.2
1984	10.1	8.3	8.1	9.4	11.1	12.5	14.0		14.6	12.9	11.6	10.5	
1985	7.9	7.6	7.6	9.9	10.9	12.3	13.3	13.1	13.9	13.9	11.3	10.7	11.0
1986	9.5	6.0	6.6	7.4	9.6	11.5	13.3	13.7	13.6	13.7	11.9	10.6	10.6
1987	7.6	7.2	7.6	9.4	10.9	11.9	14.0	14.1	14.9	13.0	11.1	8.9	10.8
1988	9.4	8.4	8.1	9.2	10.5	12.7	12.8	14.3	14.2	13.3	11.7	11.2	11.3
1989	10.2	9.9	9.8	10.0	12.2	14.1	15.3	14.6	14.6	13.5	10.2	8.8	11.9
obs	69	69	69	70	70	70	69	69	70	70	70	70	
mean	9.0	8.4	8.5	9.6	11.4	13.5	14.6	15.3	15.2	13.9	11.9	10.2	11.8

**Table 63. Monthly and annual mean sea surface temperatures at MOUSEHOLE,
50° 05'N 05° 32'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1966					11.4	14.1	14.6	15.4	16.0	14.9	11.5	10.6	
1967	9.4	9.2	9.7	10.2	11.7	13.4	15.1	15.9	14.8	13.6	11.2	9.7	11.9
1968	9.0	8.0	8.0	10.1	11.4	13.6	15.4	16.3	15.8	14.2	11.8	10.7	12.0
1969	10.2	9.3	8.7	9.4	11.4	14.6	15.7	16.3	15.8	15.2	12.6	10.7	12.4
1970	9.1	8.9	8.4	9.0	10.7	14.4	14.0	15.1	14.2	12.7	11.5	9.8	11.4
1971	9.1	8.8	8.3	9.6	11.9	13.4	16.8	15.9	15.6	14.8	12.6	11.2	12.3
1972	9.3	8.8	9.0	10.0	11.5	12.0	14.5	15.2	15.5	13.7	11.6	10.6	11.8
1973	9.2	8.1	7.8	10.2	10.9	13.6	15.3	16.2	16.3	13.8	12.2	10.2	11.9
1974	9.9	9.4	8.9	10.8	11.2	13.3	14.3	15.2	14.4	12.2	11.0	10.1	11.7
1975	9.5	9.1	8.8	9.5	11.4	15.1	16.5	16.6	15.4	13.6	11.9	10.3	12.3
1976	9.9	8.6	9.2	10.2	12.1	14.4	16.4	17.8	16.2	13.8	11.5	9.7	12.4
1977	8.4	8.8	8.8	10.3	12.7	14.2	16.2	16.6	15.4	14.2	12.1		
1978		8.2	8.9	9.7	12.2	14.1	14.5	14.8	15.5	14.0	13.2	11.0	
1979	8.6	7.8	8.5	9.4	11.9	13.6	15.2	15.1	15.3	14.6	13.3	11.3	12.0
1980	8.6	9.3	9.1	10.3	12.8	13.6	14.4	15.8	15.8	14.5	12.5	10.4	12.2
1981	9.0	8.4	8.6	10.2	11.2	13.7	14.7	16.9	16.2	13.0	11.7	9.3	11.9
1982	8.2	8.4	9.4	10.8	12.6	14.8	16.4	16.1	15.4	14.1	12.3	9.7	12.3
1983	9.2	7.1	8.4	8.8	10.9	14.2	17.1	18.0	15.1	13.1	11.8	10.5	12.0
1984	9.4	9.0	8.5	10.3	11.3	13.4	15.7	16.5	14.7	12.6	11.3	9.6	11.8
1985	7.9	7.6	8.2	9.1	11.3	12.2	15.0	14.3	15.0	14.0	11.2	10.9	11.3
1986	9.2	5.5	7.4	8.2	10.6	13.2	14.8	14.7	14.2	14.0	11.8	10.4	11.1
1987	8.1	7.9	8.3	9.7	10.5	12.5	15.5	15.6	16.0	13.6	11.8	8.1	11.4
1988	8.9	8.9	8.9	10.6	12.4	14.4	13.7	14.9	14.3	13.1	11.7	11.1	11.9
1989	10.5	9.7	10.0	10.1	13.0	15.0	17.4	16.7	16.7		13.0	10.0	
obs	22	23	23	23	24	24	24	24	24	23	24	23	
mean	9.1	8.4	8.6	9.8	11.6	13.7	15.3	15.9	15.4	13.7	11.9	10.2	11.9

**Table 64. Monthly and annual mean sea surface temperatures at SEVEN STONES
LV, 50° 04'N 06° 04'W (Source: Met. Office and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1877	10.6	10.0	9.4	9.4	10.6	13.3	15.0	15.0	14.4	13.3	12.2	10.6	11.9
1878	10.0	9.4	9.4	10.0	11.7	13.9	16.1	16.7	16.1	13.9	11.7	10.0	12.4
1879	8.9	8.3	8.9	9.4	10.0	12.2	13.3	14.4	13.9				
1880				10.0	11.1	12.2	15.0	16.1	15.6	12.8	11.7	11.1	
1881	10.0	9.4	8.9	9.4	11.1	12.8	15.0	15.0	14.4	13.3	12.8	11.1	11.9
1882													
1883	10.0	9.4	8.9	10.0	11.1	12.8	13.9	15.0	13.9	12.8	12.2	11.1	11.7
1884	10.0	9.4	9.4	10.0	11.1	12.8	15.6	16.1	15.0	13.3	12.2	11.1	12.1
1885	9.4	9.4	8.9	9.4	10.0	12.2	15.0	16.7	16.1	12.8	12.2	11.1	11.9
1886	9.4	8.9	8.3	8.9	10.6	12.8	15.6	15.0	15.0				
1887													
1888													
1889	10.6	9.4	9.4	9.4	11.1	12.8	15.0	15.0	14.4	12.8	12.2	11.1	11.9
1890	10.0	9.4	8.9	10.0	10.6	12.2	13.9	15.0	15.0	13.9	12.2	10.6	11.8
1891	9.4	8.9	8.3	8.9	10.0	12.2	14.4	14.4	13.9	12.8	11.7	10.6	11.2
1892	9.4	8.9	8.3	9.4	10.6	12.8	14.4	16.1	15.0	12.8	11.7	11.1	11.7
1893	10.0	9.4	10.0	10.6	12.8	15.0	16.7	16.7	16.1	13.9	12.2	10.6	12.8
1894	9.4	9.4	9.4	10.0	11.1	12.8	15.0	15.0	14.4	13.9	12.8	11.7	12.0
1895	9.4	8.3	8.3	8.3	10.6	12.8	15.0	14.4	15.6	13.9	12.8	11.7	11.7
1896	11.1	10.6	10.6	10.6	12.2	15.0	16.1	16.1	15.0	12.8	11.1	10.6	12.6
1897	9.4	9.4	9.4	9.4	10.6	13.9	16.1	16.7	14.4	13.3	13.3	11.7	12.3
1898	11.1	10.6	9.4	10.0	11.1	12.2	16.1	16.7	16.7	14.4	12.8	11.7	12.7
1899	10.6	10.0	10.0	10.0	11.1	13.9	16.1	18.3	16.7	12.8	12.8	11.7	12.8
1900	11.1	9.4	9.4	9.4	10.6	13.3	15.6	16.1	15.6	14.4	12.2	11.1	12.3
1901	10.0	8.3	8.3	8.9	10.6	13.3	15.0	15.6	14.4	13.3	12.2	11.1	11.7
1902	10.0	8.3	8.9	9.4	10.6	11.7	14.4	15.0	15.0	13.3	12.8	11.1	11.7
1903	10.0	9.4	9.4	10.0	11.1	12.2	15.0	15.0	14.4	12.8	12.2	11.1	11.8
1904	10.0	9.4	8.9	9.4	10.6	12.8	15.6	15.6	15.0	13.9	11.7	11.7	12.0
1905	10.6	10.0	9.4	10.0	10.6	13.3	16.7	15.6	14.4	12.8	11.7	10.6	12.1
1906	10.1	9.0	8.5	8.9	10.3	12.5	15.0	16.7	14.9	13.8	12.3	11.2	11.9
1907	9.7	7.5	8.4	8.9	9.6	11.6	14.6	15.5	14.9	13.1	12.0	10.7	11.3
1908	9.8	9.3	7.5	8.0	10.0	13.2	15.7	15.6	13.6	13.8	12.6	12.0	11.7
1909	10.5	9.7	9.2	10.4	11.2	12.4	14.2	16.6	14.2	13.0	11.9	10.4	11.9
1910	9.6	9.1	9.2	9.7	9.7	13.0	14.8	15.2	15.6	13.6	11.8	10.6	11.8
1911	9.8	9.3	8.7	9.2	12.1	14.3	16.2	18.0	16.3	13.6	11.3	10.5	12.4
1912	10.6	10.2	10.5	11.0	12.2	14.1	15.0	14.4	14.2	13.5	12.4	11.6	12.4
1913	10.9	10.2	9.6	9.5	9.7	11.0	13.8	15.7	14.3	12.6	11.5	10.4	11.6
1914	9.1	9.2	9.4	10.3	11.3	13.1	14.8	15.6	15.4	13.8	12.5	10.9	12.1
1915	9.6	8.8	8.9	8.9	11.2	13.5	14.2	15.4	15.4	13.5	11.7	11.1	11.8
1916	10.5	10.2	9.3	9.4	10.4	12.1	14.4	16.5	14.6	13.3	11.6	10.1	11.8
1917	9.1	8.2	8.1	8.4	10.4	12.0	13.8	14.2	13.0	12.2	11.5	10.4	10.9
1918	8.8	10.3	10.9	9.8	11.3	12.7	13.8	14.7	14.0	12.2	11.1	11.1	11.7
1919	10.0		8.8	9.3	10.8	13.6	14.6	16.0	15.1	13.0	11.2	10.0	

Table 64. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1920	9.2	9.1	9.2	9.5	10.6	13.1	14.2	15.2	14.4	13.7	12.6	11.6	11.8
1921	10.9	10.4	10.2	10.6	11.2	13.5	18.0	16.5	15.1	14.7	13.5	12.6	13.1
1922	11.3	9.9	9.6	9.6	11.3	13.3	13.7	14.9	13.7	12.8	11.6	10.9	11.8
1923	9.8	9.4	9.6	9.6	10.3	12.2	16.0	15.9	14.2	12.8	10.9	9.8	11.7
1924	9.5	9.0	8.6	8.9	10.5	13.1	14.4	14.8	14.1	13.1	12.0	11.2	11.6
1925	11.0	10.0	9.2	9.8	10.4	13.1	15.4	15.4	14.0	13.5	11.9	11.1	12.0
1926	10.0	9.8	9.7	10.7	11.3	13.3	16.3	17.3	16.4	14.2	12.0	10.9	12.6
1927	9.8	9.2	9.2	10.0	11.6	13.5	15.3	16.3	14.6	13.4	12.1	11.1	12.1
1928	10.3	9.8	9.9	10.6	12.2	13.1	15.7	16.4	15.7	14.2	12.5	11.1	12.6
1929	9.9	9.6	9.3	9.9	10.8	13.4	15.5	16.4	16.3	13.8	12.1	10.5	12.2
1930	10.0	9.2	9.1	9.8	11.3	14.2	15.4	15.0	15.0	13.4	12.5	11.3	12.1
1931	10.1	9.3	8.8	9.7	10.7	13.3	15.1	14.9	14.1	13.8	12.5	11.6	11.9
1932	10.7	9.7	9.5	9.5	10.6	14.2	15.5	17.6	16.3	13.2	12.2	11.2	12.5
1933	10.4	9.6	9.6	10.4	11.8	13.7	16.5	17.3	16.1	14.2	12.4	10.8	12.7
1934	9.9	9.3	9.1	9.3	10.4	14.7	17.0	15.7	14.8	13.3	11.9	11.2	12.2
1935	10.3	9.6	9.4	9.9	10.5	12.5	15.5	16.6	14.9	13.4	12.0	10.6	12.1
1936	9.9	9.6	9.6	10.3	11.3	13.8	15.2	15.3	16.2	14.0	12.6	11.1	12.4
1937	10.2	9.9	9.3	9.8	11.7	14.4	15.8	17.7	15.7	13.6	12.2	11.0	12.6
1938	10.0	9.4	9.5	9.8	10.9	12.7	14.0	15.4	14.4	13.6	12.9	11.2	11.9
1939	10.0	9.6	9.1	9.6	10.9	13.7	14.5	15.2	15.7	13.5			

1940 - 1946

1947			9.1	10.0	10.7	12.7	14.7	17.5	17.8	14.6	13.5	12.0	
1948	10.7	9.7	10.0	10.2	11.7	13.1	13.9	16.0	14.8	14.0	12.8	11.9	12.4
1949	10.5	10.0	10.0	10.5	11.5	14.0	17.0	17.0	16.5	15.5	13.0	11.5	13.0
1950	10.5	10.0	10.0	10.0	11.0	14.0	16.0	16.5	15.0	13.5	11.5	9.5	12.2
1951	9.5	9.0	8.5	9.0	10.0	13.0	15.5	15.5	14.5	13.5	13.0	11.0	11.8
1952	10.0	9.0	9.5	10.0	12.0	14.0	15.5	16.0	14.0	13.0	11.5	10.5	12.0
1953	9.5	9.0	8.5	9.5	11.0	14.5	15.5	16.5	15.0	13.0	11.5	11.5	12.0
1954	10.0	9.0	9.0	10.5	10.5	13.5	14.0	15.0	14.5	14.0	12.0	10.5	11.8
1955	10.6	9.2	8.6	9.1	10.5	12.6	16.2	17.7	16.5	13.7	12.4	11.8	12.4
1956	10.7	9.4	9.0	9.5	10.7	13.1	14.2	15.2	13.8	13.4	12.3	11.4	11.8
1957	10.3	9.6	9.9	10.5	11.4	14.0	15.9	15.6	15.1	13.5	12.2	11.1	12.4
1958	10.2	9.7	9.5	10.0	11.8	13.6	15.2	15.8	16.4	14.6	13.8	12.7	12.7
1959	11.3	10.6	10.7	10.7	12.0	15.0	16.7	17.6	16.1	15.3	13.7	11.8	13.4
1960	10.7	9.9	10.1	10.6	13.0	15.3	16.4	16.1	15.5	14.5	12.9	11.6	13.0
1961	10.1	10.2	10.5	12.0	12.8	14.6	16.3	15.9	15.7	13.8	12.5	11.7	13.0
1962		11.7	10.2	10.5	11.3	13.4	15.4	16.0	15.8	15.4	14.2	12.1	
1963	10.4	10.4	9.8	10.3	11.1	14.2	14.9	16.4	15.4	14.2	13.2	12.4	12.7
1964	11.8	11.1	11.3	10.8				16.4	16.1	14.8	13.5	12.5	
1965	11.1	9.9	9.5	10.6	11.4	13.6	16.1	15.7	13.8	13.9	13.1	11.0	12.4
1966	10.1	10.2	10.7	11.0	12.2	14.6	15.4		16.3	14.6	12.8	11.6	
1967	10.6	10.1	10.0	10.1	11.5	13.6	15.7	16.0	14.9	13.5	11.3	10.6	12.3
1968	10.0	9.5	9.1	9.4	10.6	13.8	15.5	16.2	14.7	14.1	14.0	13.3	12.5
1969	12.6	11.0	11.1	10.9	11.3	13.7	14.8	16.6	16.0	14.8	13.7	12.1	13.2
1970	10.9	10.4	9.8	9.8	11.6	14.2	15.1	15.5	15.0	14.5	12.9	11.8	12.6
1971	10.6	10.3	10.0	9.9	10.5	12.6	15.0	16.1	16.5	14.6	12.8	12.7	12.6
1972	11.3	10.7	9.9	10.0	10.6	11.7		15.4	14.6	13.1	12.0	11.4	
1973	10.2	9.4	9.4	9.8	10.1	13.0	15.3	16.3	14.8	13.1	12.0	11.1	12.0
1974	10.5	9.9	9.4	9.8	10.7	13.0	15.2	16.0	13.9	12.6	11.6		
1975	10.1	9.9	9.9	9.6	10.7	13.1	16.0		14.6	13.4	12.7	11.3	
1976	10.6	9.7	9.6	10.0	10.9	14.2	16.6	17.2	14.9			10.4	
1977	9.4	9.4	9.5	10.0	10.9	12.1	14.4	15.1	14.9	13.8			
1978	10.3		9.5	9.4	10.3			16.2	16.1	13.9	12.5	11.7	
1979	9.5	9.2	9.0	9.1	10.8	13.1	14.9						
1980			9.4	9.9	10.3				15.0	13.6	13.3	11.0	
1981	10.4	9.5	9.6	9.9	10.2	11.9	14.2	16.3	16.2	12.1	11.5	10.4	11.8
1982	10.0	10.0	9.9	10.2	11.1	13.7	15.8	16.4	14.8	13.0	11.4	10.0	12.1
1983	9.4	8.8	8.7	8.8	10.1	12.8	16.7	17.7	14.9	13.4	12.4	10.9	12.0
1984	10.1	9.5	8.9	9.3	10.4	12.1	15.0	16.1	15.5	13.0	11.9	10.3	11.8
1985	9.7	9.1	9.4	9.7	10.6	12.3	14.1	14.5	14.5	13.6	12.2	10.6	11.6
1986	9.3	7.9	7.4	8.5	9.9	12.0	14.5	15.0	14.0	12.9	12.0	10.4	11.1

obs	96	95	99	100	99	97	96	96	99	96	94	94	
mean	10.1	9.5	9.3	9.7	10.9	13.2	15.2	15.9	15.0	13.5	12.3	11.1	12.1

Table 65. Monthly and annual mean sea surface temperatures at MINEHEAD, 51° 13'N 03° 28'W (Source: MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1972								16.9	15.7	13.2	10.8	8.8	
1973	7.7	7.2	7.4	8.6	10.9	14.7	16.9	17.9	17.4		10.5	7.9	
1974	7.4	7.5	7.6	9.7	11.8	15.9	16.5	17.3	15.2	11.9	9.7	8.9	11.6
1975	8.2	7.2	7.2	8.2	11.3	15.2	17.2	19.0	16.7	13.7	10.6	8.1	11.8
1976	7.4	5.4	6.4	8.4	12.5	16.6	18.5	19.1	16.7	14.2	9.8	6.7	11.8
1977	5.3	6.8		8.9	11.7	15.6	17.0	17.9	15.8	13.9	9.6	7.6	
1978	6.7	4.9	6.8	10.2	11.1	15.6	16.7	17.9	16.6	14.2	12.2		
1979 - 1987													
1988		6.9	7.4	9.0	12.1	14.6	15.9	16.5	15.7	13.6	11.5	10.0	
1989	8.3	7.7	7.9	9.0	12.1	15.6	18.4	18.5	17.3	14.6	11.2	8.0	12.3
obs	7	8	7	8	8	8	8	9	9	8	9	8	
mean	7.2	6.7	7.2	9.0	11.6	15.4	17.1	17.8	16.3	13.6	10.6	8.2	11.9

**Table 66. Monthly and annual mean sea surface temperatures at HINKLEY POINT
PS, 51° 13'N 03° 07'W (Source: CEEB)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1976										15.2	11.0	7.7	
1977	5.7	7.4	8.3	10.9	13.7	15.7	18.5	18.5	16.9	14.5	11.0	8.8	12.4
1978	7.1	7.2	5.2	7.3	8.5	12.2	15.6	16.4	18.4	17.5	14.8	12.8	11.9
1979	4.4	3.6	5.7	8.9	11.4	14.9	18.5	17.7	17.6	15.9	11.7	8.7	11.5
1980	6.3	7.2	8.3	11.1	12.5	16.5	16.7	18.4	18.3	13.0	8.9	7.8	12.0
1981	7.6	7.5	9.7	10.8	12.8	17.0	18.1	19.8	19.0	16.3	11.0	8.1	13.1
1982	5.5	7.1	8.3	10.1	12.5	17.5	19.4	19.6	17.6	13.7	12.5	8.2	12.6
1983	7.6	5.3	6.4	7.9	11.5	15.5	21.3	21.1	16.9	14.3	11.3	9.6	12.3
1984	7.9	7.7	6.7	8.9	12.7	17.2	20.0	21.2	18.3	14.7	11.9	9.2	13.0
1985	5.4	4.3	5.7	8.9	12.4	15.8	18.9	18.1	17.1	15.9	9.9	8.4	11.7
1986	6.3	4.9	5.0	7.2	9.1	15.3	19.2	18.2	15.5	15.3	11.3	9.1	11.3
1987	5.9	4.5	6.2	9.4	13.3	15.4	18.1	18.8	18.4	14.6	11.8	7.7	12.0
1988	7.6	6.8	8.1	10.6	15.7	17.2	17.7	17.7	16.6	14.8	11.3	9.6	12.8
1989	9.7	8.0	9.5	10.5	14.0	17.5	20.5	20.8	18.8	16.0	12.0	8.0	13.7
obs	13	13	13	13	13	13	13	13	13	14	14	14	
mean	6.6	6.2	7.1	9.4	12.3	15.9	18.6	18.9	17.6	15.1	11.4	8.8	12.3

**Table 67. Monthly and annual mean sea surface temperatures at ENGLISH and
WELSH GROUNDS LV, 51° 27'N 03° 00'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1912	6.0	5.0	8.0	9.5	13.0	15.0	17.0	15.5	14.0	11.5	9.5	7.0	10.9
1913	6.5	5.5	6.5	8.0	11.5	15.0	16.5	18.0	16.0	14.5	11.0	8.5	11.4
1914	5.0	6.0	6.5	9.5	12.0	15.0	18.0	18.0	16.5	13.5	10.0	6.5	11.3
1915	5.0	5.5	6.0	8.0	11.5	15.5	16.5	17.0	16.0	13.5	8.0	5.5	10.6
1916	7.0	6.5	4.5	6.5	11.5	14.0	16.0	19.0	16.0	14.0	9.0	6.0	10.8
1917 - 1920													
1921	7.0	6.5	7.0	9.0	13.0	15.5	19.5	16.5	16.5	15.5	10.0	7.0	11.9
1922	6.0	5.0	5.5	6.5	11.5	16.0	15.5	16.0	15.0	12.0	8.5	7.0	10.3
1923	6.0	7.0	7.0	9.0	11.0	13.5	17.0	18.0	15.0	13.0	9.0	8.0	11.1
1924	5.5	5.5	5.0	7.0	11.5	15.0	16.5	16.5	15.0	13.0	10.0	8.5	10.7
1925	7.0	7.0	6.0	8.5	11.5	16.5	18.5	18.0	15.0	13.5	9.0	5.0	11.2
1926	5.5	6.5	8.0	9.0	10.5	14.0	18.0	18.5	17.0	13.0	9.0	7.0	11.3
1927	5.5	5.0	6.5	9.0	12.0	14.5	16.5	17.0	15.5	13.0	9.5	5.5	10.7
1928	5.0	6.0	6.0	9.0	11.5	14.0	17.0	18.0	16.0	13.0	9.5	6.5	10.9
1929	4.0	3.5	4.5	6.0	11.0	15.0	17.0	17.0	18.0	13.5	9.5	8.0	10.5
1930	6.5	5.0	5.0	8.0	11.5	16.0	17.0	17.0	17.0	13.5	9.5	7.0	11.0
1931	6.0	5.5	5.0	8.0	11.5	15.5	18.0	17.0	15.0	14.0	10.5	8.5	11.2
1932	8.0	6.0	5.5	8.5	11.5	15.0	18.0	19.0	17.0	13.0	9.5	7.0	11.5
1933	5.5	5.0	7.0	10.0	13.0	17.0	19.0	19.5	18.0	14.5	9.5	5.0	11.9
1934	5.0	4.5	6.0	8.5	11.5	16.0	19.0	18.0	16.0	13.5	9.0	9.0	11.3
1935	6.5	6.0	6.5	9.0	11.0	14.0	19.0	19.5	16.5	14.0	9.0	5.5	11.3
1936	5.5	4.5	6.0	7.0	11.5	14.5	16.5	17.0	17.0	13.0	9.5	6.5	10.7
1937	6.5	6.0	5.5	8.5	13.0	16.0	17.0	19.0	17.0	14.0	9.5	5.5	11.4
1938	5.5	5.5	6.5	9.5	11.0	14.5	16.5	18.0	16.0	13.5	11.0	6.5	11.1
1939	5.0	5.5	6.5	9.0	11.5	15.5	16.0	18.0	17.0	12.0	8.5	6.5	10.9
1940													
1941	3.0	4.0	5.5	7.0	10.0	14.5	18.5	17.0	16.5	14.0	9.5	8.5	10.6
1942	5.0	3.0	4.5	9.0	11.5	15.0	16.0	18.0	16.5	13.5	9.5	8.5	10.8
1943	6.5	6.5	7.0	10.5	12.0	15.5	18.0	18.0	16.5	14.0	10.0	6.0	11.7
1944	6.0	6.0	5.5	9.5	13.0	15.0	17.0	19.0	16.0	12.0	9.0	7.0	11.2
1945	4.0	5.0	7.0	11.0	13.0	15.5	17.0	18.0	16.5	14.5	11.0	8.0	11.7
1946	5.5	6.5	5.5	9.5	11.5	15.0	16.5	16.5	15.0	13.5	10.0	6.0	10.9
1947	5.0	1.0	3.0	8.0	11.5	15.5	18.0	20.0	18.5	15.0	10.5	6.5	11.0
1948	6.0	6.0	6.5	9.5	13.5	15.0	16.0	18.0	16.0	14.0	10.0	8.0	11.5
1949	6.0	6.0	6.5	9.5	13.0	16.0	19.5	19.0	18.5	15.5	10.0	7.0	12.2
1950	6.5	6.0	7.0	9.0	11.5	16.0	18.0	18.0	15.5	13.0	9.0	5.0	11.2
obs	34	34	34	34	34	34	34	34	34	34	34	34	
mean	5.7	5.4	6.0	8.6	11.7	15.1	17.3	17.8	16.2	13.5	9.5	6.8	11.1

**Table 68. Monthly and annual mean sea surface temperatures at BARRY, 51° 24'N
03° 15'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1978				7.9	11.1	15.1	15.9	17.3	16.8	14.2	12.5	8.2	
1979	4.2	3.1	5.0	8.8	10.9	13.8	16.6	17.2	15.5	15.3	11.0	8.7	10.8
1980	5.7	6.6	7.1	8.8	11.5	14.4	15.8	17.4	17.2	13.1	9.5	7.6	11.2
1981	6.6	6.1	7.4	9.6	11.2	14.3	16.1	18.0	17.6	13.2	10.4	6.8	11.4
1982	4.2	5.9	7.1	9.4	12.5	16.3	17.7	18.0	16.8	14.0	11.3	7.8	11.7
1983	7.8	5.5	6.6	8.4	11.4	14.6	18.4	20.2	16.9	14.2	11.3	8.9	12.0
1984	6.8	6.3	6.8	8.3	11.7	15.5	18.2	19.2	17.4	14.3	11.2	8.8	12.0
1985	5.5	4.0	5.5	8.7	11.7	14.7	17.1	17.3	16.5	15.0	10.2	8.6	11.2
1986	6.5	3.5	4.7	7.7	11.3	15.1	17.7	16.8	14.9	13.4	10.6	8.6	10.9
1987	5.3	5.0	5.8	8.7	12.4	14.8	17.9	18.3	17.4	13.8	10.3	6.8	11.3
1988	7.3	6.7	7.5	9.8	12.8	16.1	17.0	17.3	16.2	13.7	10.6	9.2	12.0
1989	8.6	8.4	8.1	9.4	13.4	16.5	19.9	20.5	18.0	15.2	11.6	7.9	13.1
obs	15	15	15	16	16	16	16	16	16	16	16	16	
mean	6.2	5.3	6.2	8.6	11.8	15.0	17.5	18.0	16.7	14.1	10.8	8.1	11.5

**Table 69. Monthly and annual mean sea surface temperatures at PORTHCAWL,
51° 28'N 03° 42'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1972								17.1	15.8	13.2	10.4	8.5	
1973	7.1	6.8	7.2	8.9	11.7	15.5	16.7	18.2			9.4	8.0	
1974	7.2	7.6	7.3	9.7	11.6	14.9	16.3				9.6	8.4	
1975	8.2	6.9	7.3	8.7	12.7	16.7	18.0	19.1	16.6	13.5	10.5	8.5	12.2
1976	7.2	5.3	5.9	8.5	12.1	16.2	19.2	18.7	16.5	13.9	10.5	7.0	11.7
1977	5.2	6.4		9.6	12.1	14.7	17.5	18.2	16.4	13.6	10.4	7.8	
1978		4.6	6.8	8.6	10.8	14.6	15.9	17.1	16.4	13.7	11.5	8.5	
1979	4.0	4.1	5.3										
obs	6	7	6	6	6	6	6	6	5	5	7	7	
mean	6.4	5.9	6.6	9.0	11.8	15.4	17.2	18.0	16.3	13.5	10.3	8.1	11.9

**Table 70. Monthly and annual mean sea surface temperatures at SWANSEA,
51° 36'N 03° 56'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1976			6.5	9.0	12.3	16.1	19.3	19.3	16.4	13.8	10.6	7.3	
1977	5.5	6.4	7.6	8.6	12.0	14.4	17.0	17.8	16.0	13.9			
1978	5.8	4.8	5.8	8.2	11.8	14.9	15.5	17.1	16.3	14.1	12.1	8.3	11.2
1979	4.9	3.9	5.6	7.7	10.8	14.7	17.2	16.9	16.1	15.1	11.1	8.6	11.0
1980	5.4	7.0	6.8	9.4	12.1	14.4	15.5		16.1	13.5	10.3	8.1	
1981	7.0	6.2	7.3	9.7	11.5	14.7	17.0	18.0	17.1	12.4	9.8	5.8	11.3
1982	3.3	4.9	6.3	8.9	11.7	15.9	17.4	17.5	16.2	12.9	10.2	6.6	10.9
1983	6.4	3.8	5.1	7.4	10.7	13.9	18.5	19.7	16.6	14.0	11.4	8.8	11.3
1984	6.9	5.8	6.4	8.8	12.1	15.5	18.7	19.8	17.5	14.0	11.6	9.1	12.1
1985	5.6	4.4	5.8	8.3	11.7	14.5	17.2	16.6	16.4	14.7	9.7	8.7	11.1
1986	6.8	3.4	4.7	7.0	10.9	14.4	17.2	16.7	15.2	13.9	11.1	9.0	10.8
1987	5.5	5.3	5.8	9.0	12.2	14.0	17.0	17.7	16.8	13.1	10.1	6.9	11.1
1988	7.4	6.4	7.2	9.8	12.3	15.0	16.1	16.5	15.8				
1989		8.0	7.9	9.1	13.1	15.9	18.8	19.1	17.2	14.5	11.0	7.4	
obs	12	13	14	14	14	14	14	13	14	13	12	12	
mean	5.8	5.4	6.3	8.6	11.8	14.8	17.3	17.9	16.4	13.8	10.7	7.8	11.2

**Table 71. Monthly and annual mean sea surface temperatures at CARMARTHEN
BAY PS, 51° 41'N 04° 14'W (Source: CEGB)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1974				12.0	14.0	14.0	17.0	18.0	17.0	13.0	12.0	11.0	
1975	9.0	9.0	9.0	9.0	13.0	17.0	19.0	22.0	17.0	15.0	11.0	9.0	13.2
1976	9.0	6.0	7.0										
1977													
1978				10.0	13.0	16.0	16.0	17.0	16.0	14.0	13.0	9.0	
1979	5.0	4.0	6.0	9.0	11.0	16.0	18.0	17.0	17.0	15.0	11.0	10.0	11.5
1980	6.0	8.0	8.0	10.0	13.0	16.0	16.0	18.0	17.0	13.0	10.0	9.0	12.0
1981	7.0	7.0	7.0	10.0	12.0	15.0	17.0	18.0	18.0	13.0	11.0	8.0	11.9
1982	5.0	8.0	8.0	11.0	13.0	18.0	19.0	18.0	16.0	13.0	11.0	7.0	12.2
1983	8.0	4.0	7.0	8.0	11.0	15.0	20.0	20.0	16.0	14.0			
obs	7	7	7	8	8	8	8	8	8	8	7	7	
mean	7.0	6.5	7.4	9.8	12.5	15.8	17.7	18.5	16.7	13.7	11.2	9.0	12.2

**Table 72. Monthly and annual mean sea surface temperatures at ST. GOWAN LV,
51° 30'N 05° 00'W (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1952							15.0	16.4	15.0	13.0	11.2	8.7	
1953	7.5	6.7	6.9	8.1	10.6	12.4	14.7	16.2	15.9	14.6	12.4	11.3	11.4
1954	9.2	7.2	7.7	8.8	10.3	12.5	13.6	14.4	14.9	14.0	12.3	10.7	11.3
1955	8.6	6.9	6.5	7.5	9.4	12.3	15.3	16.8	16.3	14.0	12.2	10.7	11.3
1956	8.9	6.6	6.9	7.9	10.0	12.2	14.7	14.7	15.0	13.8	11.6	10.0	11.0
1957	8.8		8.6	9.2	10.8	13.6	15.3	16.1	14.8	13.3	11.5	9.8	
1958	8.4	7.6	7.1	7.4	9.2	11.9	14.1	14.9	15.6	13.9	12.2	10.2	11.0
1959	7.9	7.2	7.8	8.9	10.9	13.4	14.7	16.8	16.8	15.3	12.7	10.2	11.8
1960	9.0	7.5	7.7	8.9	11.4	14.0	15.3	15.8	15.8	14.5	12.0	9.7	11.8
1961	7.8	8.3	8.9	9.9	11.8	13.5	15.0	15.8	16.0	14.7	12.3	9.4	11.9
1962	7.8	7.9	6.5	7.5	9.6	12.2	14.2	15.0	15.0	14.0	11.6	9.4	10.8
1963	5.7	3.9	4.8	6.7	9.0	12.5	14.3	14.8	14.8	13.4	12.6	9.4	10.1
1964	7.4	7.3	6.9	7.8	10.4	12.9	14.3	15.8	15.9	13.8	12.1	10.4	11.2
1965	8.6	7.3	6.7	8.2	10.0	12.8	14.3	15.6	14.3	13.8	11.4	9.2	11.0
1966	7.4	7.1	8.1	8.6	11.0	13.8	15.3	15.7	16.0	15.0	11.9	10.2	11.6
1967	8.3	7.8	8.1	8.6	10.1	13.1	15.0	15.6	15.5	14.4	11.3	9.8	11.4
1968	8.2	6.9	7.0	8.0	9.7	12.4	14.8	15.9	15.2	14.5	12.7	10.1	11.2
1969	8.8	7.6	6.4	7.7	9.8	12.9	15.2	15.8	15.4	14.9	12.8	10.3	11.4
1970	8.4	7.4	7.1	7.6	10.2	12.7	13.3	15.4	15.3	13.7	12.1	10.3	11.1
1971	8.4	8.1	7.6	8.5	10.5	12.2	15.3	16.2	16.4	15.1	12.2	10.6	11.7
1972	9.0	7.2	7.6	8.9	9.9	11.7	14.1	15.1	14.7	13.0	11.4	9.0	10.9
1973	8.0	8.2	8.1	9.0	10.0	12.7	14.4	15.5	15.0	13.1	12.1	10.5	11.3
1974	8.7	8.0	8.0	9.1	10.6	12.8	14.3	15.4	14.8	12.4	10.8	9.4	11.1
1975	9.0	8.2	7.5	8.1	10.5	12.4	14.9	16.1	15.5	14.3	12.0	10.3	11.5
1976	9.5	7.9	7.4	8.7	10.1	13.1	15.4	16.2	14.7	14.0	11.7	9.6	11.5
1977	7.5	6.8	7.6	7.8	9.9	12.0	14.4	15.2	14.7	13.8	11.7	9.3	10.8
1978	7.4	6.0	6.4	7.6	9.8	12.0	13.2	14.7	14.5	13.9	12.8	10.2	10.7
1979	8.1	6.0	6.0	7.1	9.0	11.8	14.1	15.0	15.0	14.4	11.6	10.7	10.7
1980	8.0	7.5	7.4	8.6	10.2	12.1	13.7	15.5	15.1	13.7	10.5	9.4	10.9
1981	8.1	7.4	7.1	8.9	10.0	12.0	13.8	15.1	15.5	13.5	11.5	9.2	11.0
1982	6.4	7.0	7.3	8.6	10.1	13.5	15.1	15.7	15.1	14.1	11.9	9.9	11.2
1983	8.7	7.4	6.6	7.0	8.9	11.5	15.1	16.5	15.1	14.2	11.9	10.5	11.1
1984	8.9	7.2	6.7	7.5	9.5	11.4	14.4	16.0	15.7	13.6	12.3	10.3	11.1
1985	8.0	6.0	7.0	7.1	9.5	11.5	13.5	15.2	15.0	14.7	12.1	9.9	10.7
1986	8.8	6.6	5.4	6.3	8.2	11.3	13.4	14.8	14.2	13.0	11.0	9.9	10.2
1987	7.8	6.8	7.0	7.7	9.7	11.3	14.3	15.2	15.0	14.1	12.1	9.4	10.8
obs	35	34	35	35	35	35	36	36	36	36	36	36	
mean	8.2	7.1	7.1	8.1	10.0	12.4	14.4	15.5	15.2	13.9	11.9	9.9	11.1

**Table 73. Monthly and annual mean sea surface temperatures at PEMBROKE
DOCK, 51° 42'N 04° 58'W (Source: MAFF)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1978				9.0	11.5	14.4	14.6	16.2	16.3	14.6	13.1	10.1	
1979	7.8	6.4	6.9	8.5	10.4		15.9	16.2	15.6	14.5	12.0	10.5	
1980	8.0	8.1	8.3		12.1	14.4	15.5	16.5	16.0	13.4	10.8	9.5	
1981	8.4	7.8	8.2	9.5	11.0	14.5	15.9	16.6	16.1	12.8	11.2	8.6	11.7
1982	7.3	7.8	8.3	9.5	11.1	14.7	16.3	16.8	15.9	13.5	12.6	10.8	12.0
1983	10.7	6.8	7.1	8.4	10.8	13.8	16.6	17.0	15.6	13.7	11.0	11.1	11.8
1984	11.0	8.3	7.1	10.1	11.8	14.5	17.0	17.8	17.1	13.3	11.6	9.9	12.4
1985	6.6	4.6	6.1	9.0	11.8	14.2	16.0	16.3	15.8	14.0	10.2	10.2	11.2
1986	8.0	5.4	6.0	7.6	10.1	13.2	15.4	15.3	14.5	13.6	10.8	9.9	10.8
1987	7.4	6.4	7.0	9.0	10.7	13.4	15.6	16.2	15.9	13.2	11.0	9.9	11.3
1988	8.4	7.5			12.1				15.3	13.4	11.5	10.3	
1989	9.6	9.4		9.6		14.5	17.3	17.6	16.4				
obs	11	11	9	10	11	10	11	11	12	11	11	11	
mean	8.4	7.1	7.2	9.0	11.2	14.1	16.0	16.5	15.8	13.6	11.4	10.0	11.6

**Table 74. Monthly and annual mean sea surface temperatures at SKOMER ISLAND,
51° 44'N 05° 17'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1985				8.2	10.0	12.4	13.9	15.0	15.0	14.3			
1986			6.2	6.8	8.8	11.6	13.5	14.4	13.8	13.1	11.4		
1987				8.4	10.0	11.5	13.8		14.9	14.0	12.2	9.8	
1988			8.1	9.2	10.8	12.7	13.9	15.1	14.9	13.7	12.3		
1989				9.0	11.0	12.5	14.2	15.8	15.6	14.8	12.4		
obs			2	5	5	5	5	4	5	5	4	1	
mean			7.1	8.3	10.1	12.1	13.8	15.0	14.8	13.9	12.0	9.8	

**Table 75. Monthly and annual mean sea surface temperatures at DAUNT ROCK LV,
51° 43'N 08° 16'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	9.0	8.5	9.0	9.0	11.5	13.0	15.5	15.0	13.5	12.0	10.0	9.5	11.2
1906	9.0	8.0	8.5	8.5	10.0	13.5	14.0	14.0	15.0	13.5	11.0	9.0	11.1
1907	8.0	6.5	8.0	8.5	10.0	10.5	14.0	13.0	14.5	13.0	10.5	9.5	10.5
1908	8.0	8.5	8.0	8.5	10.5	13.0	13.5	14.5	12.0	13.5	11.5	10.0	10.9
1909	9.0	8.5	7.0	9.0	10.5	13.0	12.0	15.0	14.0	12.0	10.0	8.5	10.7
1910	8.5	8.0	8.5	8.5	10.5	13.0	13.5	14.0	14.5	13.5	10.0	9.0	10.9
1911	8.5	8.0	8.0	8.0	10.5	14.0	15.5	16.0	15.5	13.5	9.5	8.5	11.2
1912	8.5	8.0	9.0	10.0	11.5	11.5	15.0	13.5	14.0	12.0	10.5	9.5	11.0
1913	9.0	8.5	8.5	9.0	10.5	12.0	14.5	16.0	15.0	14.0	11.0	9.0	11.4
1914	8.0	9.0	8.5	10.0	11.0	13.5	14.5	15.5	14.5	11.5	9.5	6.0	10.9
1915	5.5	5.0	5.5	6.0	9.0	11.5	11.5	14.0	14.5	13.5	10.0	6.5	9.3
1916	6.5	5.5	4.5	5.5	7.0	9.0	13.0	14.0	11.5	12.0	8.5	5.0	8.5
1917	4.0	2.0	4.0	5.0	9.0	10.0	14.0	13.5	11.5	9.0	6.0	5.0	7.7
1918	4.0	5.5	5.0	6.0	8.5	11.0	11.5	13.0	11.0	9.0	8.5	7.0	8.3
1919	6.0	5.0	5.5	8.0	10.5	13.0	14.0	14.5	13.5	13.0	9.0	9.0	10.0
1920	8.5	9.0	8.5	9.0	10.5	13.5	13.5	14.0	14.0	13.5	11.5	9.0	11.2
1921	10.0	9.0	9.0	9.5	10.5	14.5	16.5	14.5	14.5	14.5	13.0	11.0	12.2
1922	9.0	9.0	8.5	8.5	10.0	13.5	13.5	13.5	14.0	12.0	10.0	9.5	10.9
1923	9.0	9.0	9.0	9.5	10.5	12.0	14.5	14.0	13.0	11.5	9.5	8.0	10.7
1924	8.5	8.5	6.5	7.0	9.5	11.5	11.5	13.0	13.0	11.0	9.5	9.5	9.9
1925	9.0	8.0	8.0	9.0	9.5	13.5	14.0	14.0	13.5	13.0	10.0	8.5	10.8
1926	8.5	8.5	8.5	9.5	10.5	11.5	15.0	15.0	15.0	13.0	10.0	9.0	11.1
1927	8.5	8.0	8.5	7.0	11.0	12.0	14.5	13.0	11.5	11.0	10.0	9.0	10.3
1928	8.5	9.0	8.5	9.0	11.5	12.0	13.0	14.5	15.0	13.5	10.5	9.5	11.2
1929	7.0	8.0	8.5	9.5	10.5	12.0	15.0	15.0	15.0	13.0	10.5	9.5	11.1
1930	8.5	7.0	8.0	9.0	10.5	13.5	14.0	14.0	15.0	12.0	10.0	9.0	10.8
1931	8.5	8.5	7.0	8.5	9.5	12.0	13.0	14.5	14.0	12.0	10.0	9.0	10.5
1932	9.0	7.0	6.5	8.0	10.0	14.0	14.0	15.0	14.5	12.0	10.0	9.5	10.7
1933	8.5	8.0	8.5	9.5	11.0	13.5	15.0	15.0	15.5	14.5	11.0	9.0	11.5
1934	9.0	8.5	8.5	8.5	10.0	14.0	15.5	14.0	13.5	12.0	10.0	10.0	11.1
1935	9.5	9.0	9.0	9.5	11.0	12.0	14.5	15.5	14.0	14.0	10.0	8.5	11.3
1936	8.0	8.0	8.5	9.0	11.0	13.5	14.0	14.5	14.5	13.5	10.5	9.5	11.2
1937	7.0	8.5	7.0	8.5	11.5	13.0	13.0	15.0	14.0	13.0	10.0	9.0	10.7
1938	8.5	8.5	8.5	9.5	10.5	11.5	13.0	14.5	14.5	11.5	10.5	9.5	10.8
obs	34	34	34	34	34	34	34	34	34	34	34	34	
mean	8.0	7.7	7.7	8.4	10.2	12.4	13.9	14.3	13.8	12.5	10.0	8.7	10.6

**Table 76. Monthly and annual mean sea surface temperatures at CONINGBEG LV,
52° 02'N 06° 40'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	9.0	8.5	8.5	9.0	10.5	13.0	14.5	14.5	14.0	13.0	10.5	9.5	11.2
1906	9.0	8.0	8.0	8.0	9.0	11.5	13.0	13.5	13.5	13.5	11.5	9.5	10.6
1907	8.5	7.0	8.0	8.5	9.5	11.5	13.0	13.5	14.0	13.0	11.0	9.5	10.5
1908	8.0	8.0	7.0	8.0	9.5	11.5	13.0	14.0	13.5	13.5	12.0	10.5	10.7
1909	9.5	8.5	8.0	9.0	10.5	12.0	13.0	14.0	14.0	13.5	10.5	8.5	10.9
1910	8.0	7.0	8.0	8.5	9.5	11.5	13.0	13.5	14.0	14.0	12.0	10.5	10.7
1911	9.5	8.5	8.0	8.5	10.5	12.0	14.0	15.5	15.5	14.0	11.0	9.0	11.3
1912	9.0	8.5	9.0	9.5	11.0	13.0	14.0	14.0	14.0	13.0	11.0	9.5	11.2
1913	9.0	8.5	8.5	9.0	10.0	12.0	13.5	14.5	14.5	14.0	12.0	10.0	11.2
1914	8.5	8.5	8.5	9.5	11.5	12.0	14.0	14.5	15.0	14.0	12.0	9.5	11.4
1915	8.5	7.0	7.0	8.0	9.5	12.0	13.0	14.0	14.5	14.0	11.0	9.5	10.6
1916	9.0	8.5	7.0	8.0	9.0	10.5	13.0	14.5	14.0	14.0	11.0	9.0	10.6
1917	8.0	6.5	6.5	6.5	9.0	11.5	14.0	14.5	14.0	12.0	10.5	9.0	10.1
1918	8.0	8.5	8.0	9.0	10.5	12.0	13.5	14.0	14.0	11.5	10.5	10.0	10.7
1919	8.5	8.0	7.0	8.0	9.5	11.5	12.0	14.0	14.0	13.0	10.0	8.5	10.3
obs	15	15	15	15	15	15	15	15	15	15	15	15	
mean	8.6	7.9	7.8	8.4	9.9	11.8	13.3	14.1	14.1	13.3	11.1	9.4	10.8

**Table 77. Monthly and annual mean sea surface temperatures at BARRELS LV,
52° 10'N 06° 36'W (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1905	8.0	7.0	8.0	9.0	10.5	12.0	15.0	14.5	14.0	12.0	10.5	9.5	10.8
1906	8.5	7.0	7.0	8.0	9.5	11.5	14.0	14.5	15.0	13.5	11.0	9.0	10.7
1907	8.0	7.0	8.0	8.5	9.5	11.5	13.0	14.0	14.0	13.0	11.5	9.5	10.6
1908	7.0	8.0	7.0	7.0	9.5	11.5	13.5	14.0	13.5	13.5	12.0	10.5	10.5
1909	8.5	8.0	7.0	8.5	10.0	14.5	13.5	14.5	14.0	13.0	10.5	8.5	10.8
1910	8.0	7.0	8.0	8.0	9.0	12.0	13.0	13.5	14.0	13.5	10.5	9.5	10.5
1911	8.0	8.0	7.0	8.0	9.5	12.0	14.0	15.0	15.0	13.5	10.5	9.0	10.7
1912	8.5	8.0	8.5	9.5	11.0	12.0	14.0	14.0	13.5	13.0	11.0	9.5	11.0
1913	8.5	8.0	8.0	8.5	10.0	11.0	13.5	15.0	15.0	14.0	11.5	9.5	11.0
1914	8.0	8.5	8.5	9.5	10.5	12.0	13.5	14.5	14.5	14.0	11.5	9.0	11.1
1915	8.0	7.0	7.0	8.0	9.5	11.5	13.0	14.0	14.5	11.5	11.0	9.5	10.3
1916	9.0	8.5	7.0	9.5	9.0	10.5	12.0	14.0	14.5	13.5	11.0	9.0	10.6
1917	8.0	6.5	6.5	7.0	8.5	11.0	13.0	14.0	14.0	12.0	10.5	9.0	10.0
1918	8.0	8.5	8.0	8.5	10.0	11.5	13.0	14.0	14.0	12.0	10.5	10.0	10.6
1919	8.5	7.0	7.0	7.0	8.5	10.0	13.0	14.0	13.5	12.0	9.5	8.5	9.8
1920	8.0	8.0	8.5	8.5	9.5	11.5	13.5	14.0	13.5	13.5	11.5	9.0	10.7
1921	8.5	8.5	9.0	9.5	10.5	11.5	14.5	14.5	14.5	14.5	13.0	11.5	11.6
1922	9.0	8.5	8.5	8.5	9.5	11.5	12.0	13.5	13.5	13.0	10.5	9.0	10.5
1923	8.5	8.5	8.5	8.5	9.5	11.0	13.0	13.5	13.5	12.0	9.5	8.5	10.3
1924	8.5	8.0	7.0	8.0	9.5	11.5	13.5	14.0	14.0	13.0	11.0	9.5	10.6
1925	9.0	8.5	8.0	8.5	9.5	11.5	13.5	14.0	14.0	13.5	11.0	8.5	10.7
1926	8.0	8.5	8.5	9.0	10.0	12.0	14.0	14.5	15.0	14.0	11.0	9.0	11.1
1927	8.5	8.0	8.0	8.5	10.0	11.5	13.5	14.5	14.0	13.5	11.0	9.5	10.8
1928	8.0	7.0	8.0	9.0	10.0	11.5	13.5	14.5	14.5	14.0	12.0	10.0	11.0
1929	8.5	8.5	8.5	9.0	10.0	13.0	14.0	14.5	15.0	14.0	11.5	10.0	11.3
1930	8.5	7.0	8.0	8.5	10.0	11.5	13.0	13.5	14.0	13.0	11.0	9.5	10.6
1931	8.5	8.0	7.0	8.5	9.5	11.5	13.0		14.0	13.0	11.5	10.5	
1932	9.5	8.5	8.0	8.5	9.5	12.0	13.5	14.5	15.0	13.5	11.0	9.5	11.0
1933	8.5	8.0	8.5	9.5	10.5	13.0	14.5	14.5	15.5	14.5	11.5	9.5	11.5
1934	8.5	8.5	8.5	8.0	9.5	11.5	14.0	14.0	14.0	13.5	10.5	10.0	10.8
1935	9.5	8.5	8.5	9.0	10.5	12.0	14.0	15.0	14.5	13.5	11.0	9.0	11.2
1936	8.5	7.0	8.0	8.5	9.5	11.5	13.5	14.0	14.5	14.0	11.5	9.5	10.8
1937	9.0	8.5	8.0	8.5	10.0	12.0	13.0	14.5	14.5	13.5	12.0	9.5	11.0
1938	8.5	8.0	8.5	9.5	10.0	11.5	13.0	14.0	14.0	13.5	11.5	10.0	11.0
obs	34	34	34	34	34	34	34	33	34	34	34	34	
mean	8.4	7.8	7.8	8.5	9.7	11.6	13.4	14.2	14.2	13.2	11.0	9.4	10.8

**Table 78. Monthly and annual mean sea surface temperatures at BLACKWATER
LV, 52° 26'N 06° 05'W (Source: Met. office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1905	7.0	7.0	8.0	8.5	10.5	13.0	15.0	14.5	14.0	11.5	10.0	9.0	10.6
1906	8.0	6.0	6.5	7.0	8.5	11.0	13.5	14.5	14.5	13.5	10.5	8.5	10.1
1907	7.0	6.0	6.5	8.0	9.0	10.5	12.0	13.5	13.5	12.0	10.0	8.0	9.6
1908	6.5	7.0	6.5	7.0	9.5	11.5	13.5	14.0	13.5	13.5	11.5	10.0	10.3
1909	8.5	7.0	6.5	8.0	10.0	11.5	13.5	15.0	14.0	13.0	10.5	8.0	10.4
1910	7.0	6.5	7.0	8.0	9.5	11.5	13.5	14.0	14.5	13.0	10.0	9.0	10.2
1911	8.0	8.0	7.0	8.0	10.0	13.0	14.0	15.0	15.0	13.5	10.5	9.5	10.9
1912	8.5	8.5	9.0	9.0	11.0	13.5	14.5	14.5	14.0	12.0	10.5	9.5	11.2
1913	8.5	8.0	8.0	8.5	10.0	12.0	14.0	15.5	15.0	14.0	11.5	9.5	11.2
1914	8.0	8.5	9.0	10.0	11.0	13.0	14.5	15.5	15.0	14.0	11.0	9.0	11.5
1915	8.0	7.0	6.0	7.0	9.5	11.5	13.0	14.0	14.5	13.5	10.5	9.0	10.2
1916	9.0	8.5	6.0	7.0	9.0	11.0	13.5	15.0	14.5	13.5	10.5	8.5	10.5
1917	6.5	5.0	6.0	6.0	8.5	11.0	13.5	14.5	14.5	12.0	10.0	9.0	9.7
1918	6.5	8.5	7.0	8.5	10.0	12.0	13.5	14.5	14.0	12.0	10.5	9.5	10.5
1919	7.0	6.5	6.0	6.5	9.0	11.0	13.5	15.0	14.5	13.0	10.0	8.5	10.0
1920	7.0	8.0	8.0	8.5	10.0	13.0	13.5	14.5	14.5	13.5	12.0	10.0	11.0
1921	9.5	9.0	8.5	8.5	10.5	13.0	15.0	15.5	15.0	15.0	12.0	10.5	11.8
1922	9.0	8.5	8.0	8.0	9.5	12.0	13.0	14.0	14.0	13.0	10.5	9.5	10.7
1923	8.0	7.0	8.0	8.5	9.5	11.5	14.0	14.5	13.5	13.0	10.0	8.5	10.5
1924	8.0	7.0	6.5	7.0	9.0	11.5	13.5	14.5	14.0	13.0	11.0	10.0	10.4
1925	9.0	8.5	7.0	8.0	9.5	12.0	14.5	14.5	14.0	13.5	11.0	8.0	10.7
1926	6.5	8.0	8.0	9.0	10.0	12.0	14.5	15.0	15.0	13.5	10.5	9.0	10.9
1927	8.0	7.0	8.5	8.5	10.0	12.0	14.0	15.0	15.0	13.5	11.5	9.0	11.0
1928	7.0	7.0	8.0	8.5	10.0	11.5	13.5	14.5	15.0	14.0	11.5	10.0	10.8
1929	8.0	7.0	7.0	8.5	9.5	12.0	14.0	15.0	15.5	14.0	11.5	9.5	10.9
1930	8.5	7.0	7.0	8.0	9.5	12.0	14.0	14.0	14.0	15.0	11.0	9.5	10.7
1931	8.0	7.0	6.5	8.0	9.5	12.0	14.0	14.5	14.5	13.5	11.5	10.5	10.7
1932	9.5	8.5	7.0	8.0	10.0	12.0	14.0	15.0	15.0	13.5	11.0	9.5	11.0
1933	8.5	7.0	8.0	9.0	11.0	13.5	15.0	16.0	16.0	15.0	11.5	9.0	11.6
1934	8.5	8.0	7.0	8.0	10.0	12.0	14.5	15.0	15.0	14.0	11.0	10.5	11.1
1935	9.0	8.0	8.0	9.0	10.5	12.0	14.5	16.0	15.0	13.5	11.0	9.0	11.2
1936	8.0	6.5	6.5	8.0	9.5	11.5	14.0	15.0	15.5	14.0	11.5	10.0	10.8
1937	9.0	8.0	7.0	8.0	10.0	12.0	14.0	15.0	15.0	14.0	11.5	9.5	11.0
1938	8.5	8.0	8.5	9.5	10.5	12.0	14.0	15.0	15.0	13.5	12.0	9.5	11.3
obs	34	34	34	34	34	34	34	34	34	34	34	34	
mean	7.9	7.4	7.2	8.1	9.7	11.9	13.8	14.7	14.5	13.4	10.9	9.2	10.7

**Table 79. Monthly and annual mean sea surface temperatures at SOUTH ARKLOW
LV, 52° 39'N 05° 58'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1906	10.5	7.0	6.5	7.0	9.0	11.0	13.0	14.5	15.0	13.5	11.5	9.0	10.6
1907	8.0	6.5	7.0	8.0	9.0	10.5	12.0	14.5	14.5	11.5	10.5	8.5	10.0
1908	7.0	7.0	6.5	6.5	8.5	11.0	13.0	14.0	13.0	13.5	11.5	10.5	10.1
1909	8.5	7.0	6.5	7.0	9.5	11.5	13.5	14.5	14.5	14.0	10.5	7.0	10.3
1910	8.0	6.0	7.0	8.0	9.0	11.5	13.5	14.5	14.5	13.5	10.5	9.0	10.4
1911	8.0	7.0	7.0	6.0	9.5	13.0	14.0	15.5	15.5	14.0	11.5	9.5	10.8
1912	8.5	8.0	8.5	9.0	10.5	12.0	14.0	14.0	14.0	13.0	11.0	9.5	11.0
1913	8.5	8.0	7.0	8.0	9.5	11.0	13.5	14.5	14.5	14.0	12.0	10.0	10.8
1914	8.0	8.0	8.0	9.0	10.5	11.5	14.0	15.0	15.0	14.5	12.0	9.5	11.2
1915	8.0	6.5	6.5	7.0	8.5	11.0	13.0	14.0	14.5	14.0	11.5	9.5	10.3
1916	9.0	8.0	6.0	6.5	8.5	10.5	13.0	14.5	14.5	13.0	11.0	9.0	10.2
1917													
1918	6.5	7.0	7.0	8.0	9.5	11.0	13.0	14.0	14.0	13.0	11.0	9.5	10.2
1919	8.0	6.5	6.5										
obs	13	13	13	12	12	12	12	12	12	12	12	12	
mean	8.1	7.1	6.9	7.5	9.2	11.2	13.2	14.4	14.4	13.4	11.2	9.2	10.5

**Table 80. Monthly and annual mean sea surface temperatures at NORTH ARKLOW
LV, 52° 52'N 05° 58'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	7.0	7.0	7.0	8.0	10.0	13.0	14.5	14.5	14.0	11.0	9.5	9.0	10.3
1906	8.0	6.5	6.5	7.0	8.5	11.5	13.5	15.0	15.0	13.5	10.5	9.0	10.3
1907	8.0	6.0	6.5	8.0	9.5	11.5	13.5	14.5	14.0	13.0	10.5	9.0	10.3
1908	6.5	7.0	6.5	7.0	9.5	12.0	14.0	14.5	13.5	13.5	11.5	10.0	10.4
1909	8.5	8.0	6.5	8.0	10.0	11.5	14.0	14.5	13.5	13.0	9.5	7.0	10.3
1910	6.5	6.0	6.5	7.0	8.5	11.0	13.5	14.5	14.5	13.0	9.5	8.5	9.9
1911	7.0	7.0	7.0	7.0	10.5	13.5	15.0	16.5	15.0	13.0	10.5	8.5	10.8
1912	8.0	7.0	8.0	9.0	10.5	13.0	14.5	14.5	13.5	12.0	10.5	9.0	10.7
1913	8.0	7.0	7.0	8.5	9.5	12.0	14.0	15.0	15.0	14.0	11.0	9.5	10.8
1914	8.0	8.0	8.0	9.0	11.0	13.0	15.0	15.5	15.5	13.5	11.0	9.0	11.3
1915	7.0	6.0	6.0	7.0	9.0	12.0	13.5	14.0	14.5	13.5	10.0	8.5	10.0
1916	8.0	7.0	5.5	6.0	8.5	11.0	13.5	15.0	14.0	13.0	10.5	8.0	10.0
1917	6.5	5.0	5.5	6.0	9.5	12.0	14.0	15.0	14.5	12.0	10.5	8.5	9.9
1918	6.5	7.0	8.0	8.0	10.0	13.0	14.0	14.5	14.0	12.0	10.5	10.0	10.6
1919	7.0	6.0	6.5	7.0	9.5	12.0	13.5	14.5	14.0	11.5	8.5	8.0	9.8
obs	15	15	15	15	15	15	15	15	15	15	15	15	
mean	7.3	6.7	6.7	7.5	9.6	12.1	14.0	14.8	14.3	12.7	10.2	8.7	10.4

**Table 81. Monthly and annual mean sea surface temperatures at KISH LV, 53° 19'N
05° 55'W (Source: Met. Office and U. Liverpool)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	6.5	6.5	8.0	8.0	10.0	12.0	14.0	14.0	13.5	11.0	9.0	9.5	10.1
1906	8.5	6.5	6.5	7.0	8.5	11.5	13.0	13.5	13.5	13.0	10.5	8.5	10.0
1907	8.0	6.5	6.5	7.0	9.0	10.5	13.0	13.5	13.5	12.0	10.0	8.5	9.8
1908	7.0	7.0	6.0	7.0	9.0	11.5	13.5	14.0	13.5	14.0	11.5	10.5	10.3
1909	9.0	8.0	6.0	8.0	9.5	12.0	13.5	14.0	13.5	13.0	9.0	7.0	10.2
1910	7.0	5.5	6.5	7.0	8.5	11.5	13.5	14.0	14.0	12.0	9.5	8.0	9.7
1911	7.0	7.0	7.0	8.5	9.5	13.5	14.0	15.0	14.5	13.0	10.5	9.0	10.7
1912	8.0	6.5	8.0	9.0	11.0	13.0	14.0	13.5	13.5	12.0	10.0	9.0	10.6
1913	8.5	7.0	7.0	8.0	9.0	11.5	13.5	15.0	14.5	13.5	11.5	9.5	10.7
1914	8.0	8.5	7.0	9.0	10.5	12.0	14.0	15.0	14.5	13.5	11.0	8.5	10.9
1915	8.0	6.5	6.5	7.0	9.5	13.0	14.0	14.5	14.0	13.0	9.5	8.0	10.2
1916	8.5	7.0	5.5	7.0	9.0	11.0	13.5	14.5	14.0	13.0	10.5	8.0	10.1
1917	6.5	5.0	6.0	6.0	9.0	11.0	13.5	14.5	14.0	11.5	10.0	8.5	9.6
1918	6.0	7.0	7.0	8.0	10.0	11.5	13.0	14.0	13.0	11.5	10.0	9.5	10.0
1919	7.0	6.0	6.0	7.0	9.5	11.5	13.0	14.5	13.5	11.5	9.0	8.5	9.7
1920	7.0	7.0	7.0	8.0	9.5	12.0	13.0	13.5	14.0	13.5	11.5	9.0	10.4
1921	9.0	8.5	8.0	8.5	10.5	13.0	15.0	14.5	14.5	13.5	11.0	10.5	11.3
1922	8.5	8.0	7.0	6.5	10.0	12.0	13.0	13.5	13.0	11.5	9.0	9.0	10.0
1923	8.5	8.0	8.0	8.5	9.0	11.0	13.5	14.0	13.0	11.5	9.5	7.0	10.1
1924	6.5	6.5	6.0	6.5	9.0	11.0	12.0	13.5	13.0	12.0	10.5	9.5	9.6
1925	8.5	8.0	7.0	7.0	9.5	11.5	14.5	14.5	14.0	13.0	10.5	8.5	10.5
1926	7.0	7.0	8.0	8.5	9.5	11.5	14.5	15.0	14.5	12.0	10.0	8.5	10.5
1927	8.0	7.0	8.0	8.5	9.5	11.5	13.5	14.5	14.0	13.0	10.5	8.5	10.5
1928	8.0	7.0	7.0	8.0	9.5	11.5	13.0	14.0	14.0	13.0	10.5	9.5	10.4
1929	6.5	6.5	6.5	8.0	9.5	11.5	13.5	14.0	14.0	12.0	10.5	9.5	10.1
1930	8.0	6.0	6.0	7.0	10.0	13.0	13.5	14.0	14.0	13.0	10.5	9.0	10.3
1931	8.0	6.5	5.5	7.0	9.0	11.5	13.0	14.0	14.0	13.0	11.0	10.0	10.2
1932	9.0	8.0	6.5	8.0	9.5	13.0	14.5	15.0	14.5	12.0	10.5	9.0	10.7
1933	8.0	6.5	7.0	9.0	10.0	12.0	14.5	14.5	15.0	13.5	10.5	9.0	10.7
1934	8.5	8.0	6.5	8.0	9.5	12.0	14.5	14.5	14.0	13.0	10.0	9.5	10.6
1935	8.5	8.0	8.0	9.0	10.5	12.0	14.5	15.0	14.5	13.0	10.5	8.5	11.0
1936	6.5	6.0	6.0	8.0	9.5	12.0	14.0	14.5	14.5	13.0	10.5	9.5	10.3
1937	9.0	7.0	7.0	8.0	10.5	12.0	13.5	14.5	13.5	12.0	8.5	8.0	10.2
1938	7.0	8.0	8.5	9.0	10.0	11.5	13.0	14.5	14.0	12.0	10.5	8.5	10.5
1939	7.7	7.6	7.1	8.1	9.8	11.8	13.2	14.7	14.6	13.0	9.9	9.8	10.6
1940	8.3	6.8	6.7	7.7	9.5	12.3	13.0	14.3	13.4	12.3	11.6	9.9	10.4
1941	6.7	6.0	6.3	6.7	8.5	11.3	12.6	13.4	13.8	13.0	11.6	10.5	10.0
1942	9.0	7.3	7.3	8.0	9.5	11.8	13.2	13.7	13.6	12.7	11.3	10.1	10.6
1943	9.2	8.9	8.3	8.9	9.7	11.6	13.6	14.1	13.8	13.2	11.6	10.1	11.0
1944	9.2	7.8	7.3	8.4	9.8	11.0	12.9	14.7	13.7	12.4	10.6	9.6	10.6
1945	7.6	7.7	7.8	8.6	9.8	11.6	13.1	14.6	14.7	14.0	13.2	11.4	11.1
1946	9.1	8.6	7.5	8.4	10.2	11.4	13.0	13.3	13.7	13.1	11.8	9.2	10.7
1947	7.9	6.5	5.7	6.8	8.9	11.3	12.2	14.5	14.0	13.1	11.4	9.3	10.1
1948	8.2	7.8	9.0	8.1	9.8	11.0	12.8	14.1	13.5	12.5	12.0	10.6	10.7
1949	8.5	8.8	8.0	8.4	10.1	13.8	14.8	14.4	15.1	14.0	12.1	10.1	11.5
1950	9.3	8.4	8.3	7.9	9.4	12.3	13.5	13.8	13.1	12.4	10.7	8.3	10.6
1951	7.2	6.5	6.4	6.6	8.1	10.4	13.4	13.4	13.8	13.7	11.9	10.5	10.1
1952	8.4	7.1	7.7	7.6	9.1	11.8	13.5	14.2	13.4	12.0	10.6	8.7	10.3
1953	8.0	7.7	7.5	7.7	9.4	11.5	13.5	13.8	14.0	13.4	12.2	11.4	10.8
1954	9.7	8.3	7.5	8.3	9.5	11.2	12.3	13.3	13.4	12.8	11.5	10.2	10.6
1955	8.2	7.0	6.4	7.2	8.9	10.9	13.9	15.5	14.4	12.5	11.6	10.2	10.5
1956	8.8	6.8	6.9	7.8	9.1	10.6	12.5	13.4	13.8	12.1	11.0	10.1	10.2
1957	9.1	8.4	8.9	9.7	10.1	12.9	13.9	14.5	14.1	13.4	11.4	10.4	11.4
1958	8.5	7.9	6.9	6.9	8.9	10.9	13.2		14.3	13.4	12.2	10.6	
1959	8.2	6.9	8.3	8.9	10.3	12.2	14.4	14.9	15.2	14.2	12.2	10.4	11.3
1960	9.2	7.5	7.3	8.0	10.0	11.9	13.8	14.5	14.7	13.5	11.7	10.0	11.0
1961	9.1	8.0	9.1	8.8	10.4	11.8	12.9	13.8	13.7	13.4	12.4	9.5	11.0
1962	7.1	8.5	6.3	7.0	8.9	10.4	11.9	13.4	12.4	12.5	10.6	9.5	9.8
obs	58	58	58	58	58	58	58	57	58	58	58	58	
mean	8.0	7.2	7.0	7.8	9.5	11.7	13.4	14.1	13.9	12.7	10.7	9.3	10.4

**Table 82. Monthly and annual mean sea surface temperatures at BARDSEY, 52° 45'N
04° 48'W (Source: U. Liverpool and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1934					10.2	12.2	14.2	15.3	15.4	13.8	11.6	10.6	
1935	9.4	7.9	8.4	9.1	10.5	12.4	14.4	15.4	15.1	13.5	11.3	9.4	11.4
1936	7.8	6.8	7.2	8.2	9.9	11.5	14.2	15.3	15.6	13.9	11.4	9.6	10.9
1937	8.6	7.7	7.2	8.6	10.9	12.6	13.7	15.1	14.8	13.8	12.0	10.0	11.2
1938	8.6	7.8	8.0	9.2	9.6	12.1	14.0	15.2	15.1	13.8	12.2	10.0	11.3
1939	8.2	8.3	7.9	8.9	10.2	12.5	14.5	15.7	15.9	13.6	11.4	9.8	11.4
1940	7.5	6.2	6.9	8.0	10.3	13.1	14.3	15.4	14.8	13.4	11.6	9.7	10.9
1941	7.2	6.4	6.9	7.5	9.3	11.7	13.7	14.4	15.0	14.2	11.7	10.6	10.7
1942	8.7	7.4	7.4	8.4	10.1	12.2	14.0	15.1	15.2	13.7	11.9	10.6	11.2
1943	10.0	9.1	8.9	9.7	10.5	12.8	13.9	15.6	15.3	14.2	12.2	10.1	11.8
1944	9.1	8.5	7.8	8.8	11.1	12.0	13.9	15.1	14.8	13.7	11.4	9.7	11.3
1945	7.4	6.9	7.7	9.0	10.0	11.9	13.8	15.0	15.9	14.5	12.5	10.8	11.2
1946	8.3	7.8	7.4	9.1	10.5	11.6	14.4	13.7	13.0	11.9	10.3	7.6	10.4
1947	6.1	3.6	3.4	5.2	7.7	10.5	11.5	13.3	13.7	13.0	10.4	8.4	8.9
1948	6.9	6.1	6.5	8.2	10.7	11.8	13.3	14.1	14.4	13.6	12.2	10.6	10.7
1949	9.1	8.6	7.8	9.2	11.2	13.0	15.1	16.0	16.3	15.4	12.5	10.6	12.0
1950	8.6	7.9	9.2	9.2	10.2	12.5	14.9	15.2	14.9	13.4	11.1	8.8	11.3
1951	7.2	6.7	6.9	7.6	8.9	11.7	13.8	14.9	15.0	13.8	11.5	10.0	10.6
1952	8.4	7.1	7.3	8.2	9.9	12.3	13.6	15.4	14.7	12.7	10.5	8.5	10.7
1953	7.5	7.0	7.5	8.6	9.8	11.3	14.4	15.6	15.1	14.0	12.7	11.4	11.2
1954	9.0	7.2	7.8	9.4	10.3	11.7	13.5		14.9	14.2	12.6	9.7	
1955	8.4	7.4	6.9	8.1	9.5	11.4	14.0	15.1	15.3	13.0	12.1	10.3	10.9
1956	8.9	7.3	7.6	8.7	10.5	12.0	13.8	14.7	14.5	13.8	11.9	11.0	11.2
1957	8.8	8.1	9.1	10.1	11.8	12.8	14.5	15.4	14.6	13.9	12.1	9.8	11.7
1958	8.5	7.5	7.1	6.1	10.5	12.4	14.2	14.9	15.4	14.2	12.2	11.0	11.1
1959	8.0	8.6	9.3	10.5	11.6	13.5	15.4	16.0	16.3	15.4	12.0	10.2	12.2
1960	9.5	8.0	8.1	9.0	10.9	13.2	14.6	15.4	15.5	13.8	11.7	9.9	11.6
1961	8.3	8.0	9.3	10.5	12.1	14.8	14.9	15.4	16.2	11.9	11.1	9.5	11.8
1962	6.7	6.7	5.8	7.8	10.4	12.0	13.6	14.2	14.4	13.8	11.3	10.6	10.6
1963	6.8	5.1	5.0	6.9	8.8	11.1	12.5	14.3	13.9	13.0	12.2		
1964	8.2	8.1	7.7	8.3	10.5	12.0	14.0	15.3	15.3	13.5	12.3	9.9	11.2
1965	5.8	7.3	7.0	8.4	9.9	12.2	13.8	14.8		13.4	10.5	8.7	
1966	7.2	7.2	8.3	8.3	9.5	12.9	13.7		15.6	14.6	11.3	9.5	
1967	8.1	7.9	8.2	8.7	9.8	11.9	14.8	15.1	14.5	13.0	11.4	9.6	11.0
1968	8.3	7.3	7.0	8.0	9.9	12.4	13.2	15.5		14.2	11.8	9.7	
1969	8.4	7.0	6.7	8.1	9.8	12.5	14.2	14.9	14.5	13.8	11.7	9.0	10.8
1970	8.3	5.5	5.8	8.4	10.0	15.8	15.0	15.2	15.2	14.0	10.3	9.2	11.0
1971	8.2	8.1	8.4	10.0	10.9	13.7		16.0	15.3	14.2	12.2	10.6	
1972	8.6	8.1	8.4	8.8	10.6	12.4	14.0	14.2	14.5	13.7		9.7	
1973	8.9		8.1	8.9	10.2	11.9	14.2	14.7	14.8	14.0	11.4	10.5	
1974		7.8	8.4		11.2	12.5	13.6	15.2	14.7	12.4	10.2		
1975	8.8	8.3	8.2	8.3	9.8	12.0	14.4	15.6	15.1	13.6	12.0	10.2	11.3
1976	9.3	7.9	7.9	8.7	9.0	12.0	14.0	14.8	14.7	13.1	11.1	9.6	11.0
1977	7.8	7.6	8.1	8.2	10.4	12.1	14.3	15.6	14.9	14.0	11.6	9.6	11.1
1978	8.4	7.2	7.6	8.3	9.9	12.0	13.9	15.2	14.2	13.9	12.3	9.9	11.0
1979	7.8	6.8	7.5	8.0	10.1	12.3	15.4	14.2	15.6				
1980	8.2	8.0	7.5	11.2	12.0	13.7	15.6	15.0	16.0	13.7	10.7	9.1	11.7
1981	8.4						15.1	15.1		11.9	11.1	8.4	
1982		7.3	8.1	10.5	14.0	16.5		15.8	15.4				
1983				10.2	10.8	13.5	14.4	15.6	15.0	13.6	11.9	10.0	
1984	7.9	7.2	7.6	9.2	11.4	14.5	15.0	16.3	15.6	12.7		9.6	
1985	7.2	6.3	7.2	9.0	10.6	12.6	15.4	15.3	15.1	14.0	10.9	9.7	11.1
1986	8.2	5.6	6.3	7.4	10.7	11.5	13.6	15.1	14.3	13.3	11.6	9.7	10.6
1987	8.0	7.3	6.8										
obs	50	50	51	50	52	52	51	51	50	51	49	49	
mean	8.1	7.3	7.5	8.6	10.3	12.4	14.1	15.1	15.0	13.6	11.5	9.8	11.1

**Table 83. Monthly and annual mean sea surface temperatures at CAERNARVON LV,
53° 08'N 04° 25'W (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1905	9.0	8.0	8.0	8.5	10.0	11.5	13.5	14.0	14.5	11.5	11.0	10.0	10.7
1906	9.0	8.0	7.0	7.0	8.5	10.5	11.5	13.0	14.5	13.5	11.5	10.0	10.3
1907	8.0	7.0	6.5	8.0	9.0	10.0	12.0	13.0	14.0	13.0	12.0	10.0	10.2
1908	8.0	7.0	6.5	7.0	8.5	10.5	13.0	14.0	13.5	13.5	12.0	11.0	10.3
1909	9.0	7.0	7.0	8.5	9.5	11.0	13.0	13.5	14.0	13.0	11.0	9.5	10.5
1910	8.5	7.0	7.0	8.5	9.5	11.0	12.0	13.5	14.0	14.0	11.0	9.5	10.4
1911	8.5	8.5	8.0	8.0	9.5	11.0	13.5	15.0	14.5	13.5	11.5	10.0	10.9
1912	9.0	8.0	8.0	9.0	10.5	11.5	14.5	14.5	14.0	13.0	11.0	10.5	11.1
1913	9.0	8.0	8.0	8.5	9.0	11.0	13.0	14.0	14.5	14.0	12.0	10.0	10.9
1914	9.0	9.5	9.5	9.5	11.0	13.0	14.0	15.0	15.0	14.0	12.0	10.0	11.7
1915	8.5	8.0	7.0	7.0	9.0	11.0	12.0	14.0	14.5	14.0	10.5	9.5	10.4
1916	9.0	8.0	6.5	7.0	9.5	10.5	13.0	15.0	14.5	13.0	11.0	9.5	10.5
1917	7.0	6.5	6.0	6.0	8.5	10.5	13.5	14.0	14.5	13.0	11.0	9.0	9.9
1918	7.0	8.0	7.0	8.0	9.5	11.5	13.0	14.5	14.0	12.0	11.5	10.5	10.5
1919	8.5	7.0	7.0	8.0	9.5	11.0	13.5	14.0	14.0	12.0	10.0	8.5	10.2
1920	8.5	7.0	7.0	8.5	9.5	11.5	13.0	14.0	14.0	13.5	12.0	10.0	10.7
1921	9.5	9.0	8.5	9.0	10.0	12.0	14.5	15.0	15.0	14.5	13.0	11.0	11.7
1922	9.0	8.5	8.5	8.0	9.5	11.5	13.0	14.0	14.0	13.5	11.0	10.0	10.8
1923	9.0	8.5	8.5	9.0	9.5	10.5	13.0	14.0	13.5	13.0	10.5	9.5	10.7
1924	8.5	7.0	7.0	7.0	9.5	10.5	13.0	14.0	14.0	13.5	11.5	10.5	10.5
1925	9.5	8.5	7.0	8.0	9.5	11.5	13.5	14.5	14.5	13.5	11.0	9.5	10.8
obs	21	21	21	21	21	21	21	21	21	21	21	21	
mean	8.6	7.8	7.4	8.0	9.4	11.0	13.0	14.1	14.2	13.2	11.3	9.9	10.6

**Table 84. Monthly and annual mean sea surface temperatures at WYLFA PS,
53° 25'N 04° 29'W (Source: CEEB)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1967								13.9	16.0	10.9	11.0		
1968	7.0	6.3	6.6	7.3	9.2	12.3	14.0		14.2	13.2	10.8	9.6	
1969	7.2	5.2	5.1	7.2	9.4	11.5	13.8	15.1	15.4	14.6	10.8	8.3	10.3
1970	7.2	6.5	6.5	7.2	10.2	12.8	13.8	14.9	14.6	13.4	11.0	8.9	10.5
1971	7.8	6.9	7.1	9.0	11.1	13.2	14.8	15.4	16.5	13.5	11.3	9.9	11.3
1972	8.1	7.2	7.9	9.1	10.3	12.6	14.1	15.3	15.2	13.8	11.6	9.3	11.2
1973	8.6	8.1	8.1	8.6	10.1	12.6	14.9	15.9	15.7	13.5	11.3	9.3	11.3
1974	8.6	8.4	8.2	9.4	10.8	13.2	14.9	15.8	15.0	12.5	10.3	9.5	11.3
1975	9.1	8.2	8.4	8.2	10.3	13.0	14.6	16.2	14.8	12.6	11.3	9.9	11.3
1976	9.3	6.9	7.7	9.3	11.0	13.6	16.0	16.9	15.6	14.3	11.5	8.9	11.7
1977	6.8	7.3	7.6	8.6	10.9	13.1	15.2	16.1	15.5	14.4	10.6	9.5	11.3
1978	8.3	6.9	8.0	8.3	10.5	12.9	13.9	14.8	14.8	14.0	12.8	10.1	11.2
1979	7.1	5.6	6.3	7.5	9.0	11.9	13.6	14.8	14.9	13.9	11.3	9.4	10.4
1980	7.3	7.2	7.6	9.1	11.1	13.3	14.3	15.2	15.3	13.8	10.6	8.5	11.1
1981	8.1	7.6	7.7	9.3	10.2	12.8	14.4	16.0	15.6	13.3	11.1	9.0	11.2
1982	6.3	7.3	8.0	9.1	10.6	13.1	14.6	16.2	15.8	14.5	12.2	9.4	11.4
1983	8.8	7.4	7.7	8.3	9.8	11.0	14.2	15.6	14.9	13.6	11.4	9.8	11.0
1984	8.3	7.2	7.0	8.4	10.4	12.6	14.7	16.3	15.6	14.1	11.7	9.2	11.2
1985	7.3	5.9	6.3	7.4	8.9	12.0	14.0	14.2	14.4	13.6	10.7	9.2	10.3
1986	7.6	5.8	5.7	6.8	9.9	12.2	14.3	14.8	13.7	13.8	11.1	9.7	10.4
1987	7.1	7.0	7.1	9.0	10.9	12.9	14.9	15.8	16.0	13.9	12.0	9.9	11.3
1988	8.9	7.3	8.0	9.0	10.8	13.3	14.8	15.7	15.2	14.1	13.2	10.7	11.7
1989	8.8	8.0	7.8	8.4	10.4	12.9	15.0	15.9	15.2	14.2	11.5	9.1	11.4
obs	22	22	22	22	22	22	22	22	23	23	23	22	
mean	7.8	7.0	7.2	8.3	10.2	12.6	14.4	15.4	15.2	13.6	11.3	9.4	11.1

**Table 85. Monthly and annual mean sea surface temperatures at AMLWCH, 53° 25'N
04° 20'W (Source: The Associated Octel Co. Ltd.)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1964	6.8	6.5	5.9	7.0	9.9	12.1	14.0	15.4	15.0	13.2	11.0	9.0	10.4
1965	7.0	5.6	5.4	7.3	9.3	11.8	13.7	14.8	14.2	13.4	10.0	8.1	10.0
1966	6.3	6.1	6.9	7.0	8.9	12.0	14.2	15.0	15.0	13.6	10.0	8.0	10.2
1967	6.6	7.0	7.3	7.5	9.1	11.6	13.8	15.0	14.8	13.3	10.5	8.3	10.4
1968	7.0	6.3	6.5	7.3	9.4	11.7	13.8	15.3	15.2	14.0	10.9	8.8	10.5
1969	7.0	5.5	4.8	6.3	8.6	11.2	13.7	15.2	15.3	14.4	11.3	7.9	10.1
1970	6.6	6.3	5.9	6.7	9.0	11.9	13.4	14.6	14.5	13.2	11.0	9.1	10.1
1971	7.5	6.9	6.8	7.8	10.0	11.8	14.0	15.1	15.7	14.6	11.2	9.4	10.9
1972	7.8	6.7	6.6	8.2	9.7	11.4	13.3	14.8	15.0	13.6	11.3	9.3	10.6
1973	8.1	7.6	7.3	7.9	10.0	12.0	14.2	15.3	15.4	13.2	10.9	8.5	10.8
1974	8.0	7.5	7.1	8.4	9.8	12.2	14.1	15.2	14.6	12.9	9.0	8.8	10.6
1975	8.2	7.1	6.9	7.1	9.3	12.5	14.2	15.7	15.3	13.2	11.1	8.8	10.7
1976	8.2	6.0	6.5	8.0	9.9	12.4	15.0	16.3	15.5	13.7	11.2	8.5	10.9
1977	6.3	6.5	6.5	7.7	9.6	11.9	13.9	15.3	15.1	13.7	12.3	8.2	10.5
1978	6.9	5.6	6.3	7.2	8.9	11.6	13.0	14.4	14.6	13.5	12.3	9.1	10.2
1979	5.9	4.4	5.3	6.5	8.4	10.8	13.2	14.4	14.4	13.4	11.0	9.4	9.7
1980	6.8	6.9	6.9	7.8	9.9	12.0	13.6	15.0	15.0	12.7	10.8	8.5	10.4
1981	7.2	6.6	6.9	8.5	9.6	11.7	13.7	15.1	15.4	12.8	10.7	8.0	10.5
1982	6.0	6.7	6.9	8.0	9.6	12.3	14.4	15.3	15.1	13.4	11.5	8.8	10.6
1983	7.9	5.5	6.1	6.9	8.8	11.1	13.8	15.7	15.0	13.5	11.3	9.6	10.4
1984	7.8	6.5	6.1	7.4	9.7	11.9	14.3	16.1	15.9	13.8	11.9	10.0	10.9
1985	7.1	5.5	6.0	7.3	8.9	11.4	13.5	14.3	14.5	14.0	10.4	8.9	10.1
1986			5.3	6.6	10.0	13.0	14.5	14.3	13.0	12.5	11.4	9.2	
1987	6.1	5.8	5.9	7.3	9.4	11.2	13.5	14.8	14.9	13.0	10.9	8.2	10.0
1988	7.8	6.7	6.3	7.7	9.7	12.2	13.9	14.7	14.4	12.8	10.9	9.5	10.5
1989	8.5	8.0	7.6	8.3	10.7	13.0	15.3	16.3	15.9	14.6	11.9	9.2	11.6
obs	25	25	26	26	26	26	26	26	26	26	26	26	
mean	7.1	6.3	6.3	7.4	9.4	11.8	13.9	15.1	14.9	13.4	11.0	8.8	10.5

**Table 86. Monthly and annual mean sea surface temperatures at MOELFRE,
53° 21'N 04° 14'W (Source: MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1965				7.9	9.8	12.6	14.8	16.4	14.7	13.9	8.8	7.6	
1966	5.3	4.9	6.5	6.5	9.1	11.9	14.2	15.1	15.2	13.1	9.4	7.7	9.9
1967	6.2	6.3	7.2	7.6	9.0	13.3	14.4	15.0	14.7	12.8	10.0	7.3	10.3
1968	6.0	5.4	6.1	7.9	9.7	12.3	14.1	16.0	15.6	14.6	9.9	6.6	10.3
1969	6.0	4.6	4.0	6.0	9.1	12.2	14.1	15.6	15.6	14.0	10.3	6.2	9.8
1970	5.5	5.5	5.6	6.7	9.3	13.1	14.3	14.7	15.3	13.1	10.4	7.6	10.0
1971	5.9	6.3	6.3	7.5	9.6	12.7	15.2	16.1	15.5	13.8	9.9	8.1	10.5
1972	6.4	5.6	5.9	8.6	10.1	12.1	13.8	14.7	14.3	13.1	10.2	8.3	10.2
1973	6.5	6.9	7.8	9.3	10.2	12.9	15.8	15.7	15.0	12.9	11.4	7.6	11.0
1974	7.1	6.9	6.9	8.4	10.7	13.1	14.4	15.0	15.0	11.3	9.2	8.3	10.5
1975	7.2	7.3	6.8	7.4	12.3	14.2	15.8	16.0	15.3	12.9	10.0	8.0	11.1
1976	7.9	5.4	6.8	10.1	11.6	14.3	17.8	19.7	16.8	12.1	6.5	3.8	11.0
1977	5.0	5.4	6.4	8.1	11.6	14.2	15.3	16.3	14.6	13.1	10.0	7.8	10.6
1978	6.2	5.0	6.3	7.7	9.6	13.0	14.8	15.4	14.7	13.4	11.8	7.7	10.4
1979													
1980					11.0	13.8	14.9	14.6	12.9	10.0	9.5	8.2	
1981	7.0	6.5	7.8	9.2	10.2	13.3	14.8	16.1	15.1	11.4	9.5	6.4	10.6
1982	4.8	5.0	6.9	8.2	10.4	14.6	16.1	16.2	14.2	11.8	9.2	7.3	10.3
1983	6.6	4.3	6.0	7.2	9.2	12.0	16.3	16.7	14.3	12.0	7.9	7.4	9.9
1984	6.0	5.3	5.4	7.5	11.3	14.1	12.1	11.6	9.5	5.9		4.8	
1985	4.2	3.3	5.3	8.4	9.1	10.2	12.4	13.1	14.6	13.8	9.3	7.9	9.3
1986	6.0	3.3	4.4	6.2	9.2	12.6	14.2		14.0	12.8	10.2	8.5	
1987	5.3	5.6	5.8	7.8	10.2	11.8	14.9	15.9	15.5	12.6	10.4	7.6	10.2
1988	7.5	6.4	6.3	8.4	10.7	13.7	14.6	15.7	14.0	12.0	9.7	8.7	10.6
1989	7.8	7.4	7.3	8.0	11.4	14.1	16.1	16.8	15.8	13.7	10.8	7.3	11.3
obs	22	22	22	23	24	24	24	23	24	24	23	24	
mean	6.2	5.5	6.2	7.8	10.1	13.0	14.8	15.5	14.6	12.5	9.7	7.3	10.4

**Table 87. Monthly and annual mean sea surface temperatures at MENAI BRIDGE,
53° 14'N 04° 09'W (Source: Marine Sciences Laboratory, UCNW)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1954	6.9	4.7	6.2	8.7	10.8	13.0	14.4	14.8	14.4	13.2	10.6	8.8	10.5
1955	5.4	5.1	4.5	7.8	9.6	12.9	16.0	17.7	15.3	12.0	9.0	7.4	10.2
1956	5.8	3.1	5.1	7.1	10.2	13.2	15.8	15.1	14.8	12.5	9.5	8.6	10.0
1957	7.1	6.4	7.6	9.0	11.0	14.3	15.5	15.6	14.2	12.6	10.1	7.9	10.9
1958	6.2	6.4	5.2	7.0	10.0	13.0	15.1	15.4	15.7	13.1	10.9	8.4	10.5
1959	5.7	5.6	7.5	8.9	11.3	14.5	16.6	17.2	16.6	14.7	10.0	7.5	11.3
1960	6.3	5.7	6.9	8.6	12.1	15.0	16.2	15.9	14.7	11.6	9.0	7.3	10.7
1961	5.0	6.0	7.1	8.6	10.7	13.1	14.8	15.0	15.1	12.3	8.4	7.1	10.2
1962	4.4	5.1	3.4	6.1	9.8	12.8	14.2	14.9	14.2	12.8	8.9	7.0	9.4
1963	1.5	1.3	4.9	7.1	9.7	12.8	14.2	15.3	14.2	12.4	10.2	6.3	9.1
1964	5.5	5.4	5.1	7.2	11.0	13.5	15.6	16.3	15.4	12.4	10.0	8.1	10.4
1965	5.0	4.6	5.0	7.7	10.4	13.7	14.9	15.7	14.0	12.9	8.4	7.4	9.9
1966	4.8	5.5	6.7	6.7	10.2	13.4	15.5	15.9	15.5	13.1	8.8	7.5	10.3
1967	6.1	6.3	7.1	7.6	9.8	13.6	15.6	15.8	14.8	12.8	9.1	6.9	10.4
1968	5.9	5.1	6.0	7.9	10.1	13.5	15.4	16.5	15.4	13.6	10.1		
1969	5.8	4.2	4.1	6.7	9.7	13.1	15.5	16.6	15.5	14.3	9.7	6.2	10.1
1970	5.6	5.5	5.6	7.1	10.6	14.4	14.8	15.9	14.7	12.6	10.0		
1971 - 1976													
1977					11.4	13.0	15.3	16.3	14.7	13.0	9.5	6.8	
1978	5.8											8.0	
1979	4.3	3.0	5.5	7.3	10.2	12.9	15.1	16.0	15.6				
1980	5.6	7.2	7.2	9.3	12.5	13.9	15.6	17.0	15.6	12.2	9.3	7.4	11.0
1981	6.7	6.3	7.7	9.4	11.4	13.5	15.8	16.9	16.4	11.6	10.0	6.2	10.9
1982	5.4	6.2	6.7	8.7									
obs	22	21	21	21	21	21	21	21	21	20	20	19	
mean	5.4	5.1	5.9	7.8	10.5	13.4	15.3	15.9	15.0	12.7	9.5	7.4	10.3

**Table 88. Monthly and annual mean sea surface temperatures at NORTH WEST LV,
53° 31'N 03° 32'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	6.5	6.0	6.0	7.0	10.0	13.0	15.5	16.5	15.5	11.5	9.5	8.5	10.4
1906	6.5	5.5	5.5	7.0	9.0	13.0	15.0	16.0	16.0	14.0	10.5	7.0	10.4
1907	5.5	4.5	5.5	7.0	9.5	11.0	13.5	14.5	14.5	13.0	10.5	8.0	9.7
1908	5.5	5.5	5.0	6.0	9.5	13.0	14.5	15.0	13.0	12.0	10.0	6.0	9.5
1909	6.0	5.5	5.0	6.5	10.0	12.0	14.5	15.5	14.5	13.5	9.0	7.0	9.9
1910	5.5	5.5	6.5	7.0	9.5	12.0	14.5	15.0	14.5	13.0	9.0	7.0	9.9
1911	6.0	5.5	6.0	6.0	9.5	13.5	15.5	16.0	15.0	13.5	9.0	8.5	10.3
1912	7.0	5.5	6.5	8.5	10.5	13.0	15.0	14.5	13.5	11.5	9.5	8.5	10.2
1913	6.5	6.5	6.5	7.0	9.0	12.0	14.5	16.0	15.5	13.5	11.0	8.5	10.5
1914	6.0	6.0	6.5	8.5	10.5	13.5	15.5	16.5	15.5	13.5	10.5	8.5	10.9
1915 - 1919													
1920	6.5	6.5	6.5	7.0	9.5	13.5	14.0	15.0	15.0	13.5	11.0	8.0	10.5
1921	7.0	6.5	7.0	8.5	10.5	13.5	16.0	16.0	16.0	14.5	10.5	9.0	11.2
1922	6.5	6.0	6.0	6.5	9.5	13.0	14.0	15.0	14.5	12.0	9.5	8.5	10.0
1923	7.0	6.5	7.0	8.0	9.5	11.5	14.5	15.5	14.0	11.5	9.0	6.5	10.0
1924	6.0	5.5	5.0	6.0	9.5	12.0	14.5	15.5	14.5	13.0	10.5	9.5	10.1
1925	8.0	6.5	6.0	8.0	10.0	13.5	16.0	16.5	14.5	13.0	9.5	6.5	10.6
1926	6.5	6.5	7.0	8.5	10.0	13.0	16.0	16.5	16.0	11.5	10.0	8.0	10.7
1927	7.0	6.0	6.5	8.0	10.0	12.0	14.5	15.5	15.0	13.0	10.5	10.0	10.6
obs	18	18	18	18	18	18	18	18	18	18	18	18	
mean	6.4	5.8	6.1	7.2	9.7	12.6	14.8	15.6	14.8	12.8	9.9	7.9	10.3

**Table 89. Monthly and annual mean sea surface temperatures at LIVERPOOL BAR
LV, 53° 32'N 03° 19'W (Source: U. Liverpool and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1928	5.6	6.1	6.7	7.8	10.6	12.8	15.6	16.1	15.6	12.8	10.0	7.2	10.5
1929	5.0	3.9	3.9	6.7	10.0	13.9	16.1	16.7	16.1	12.2	9.4	8.3	10.1
1930	7.2	5.0	5.0	7.2	10.6	13.9	16.1	16.1	15.6	12.2	9.4	7.8	10.5
1931	6.1	5.6	4.4	6.7	10.0	13.3	16.1	15.6	14.4	12.2	10.6	8.3	10.2
1932	7.2	6.1	5.6	7.2	10.6	13.3	16.1	16.1	15.6	11.1	8.9	7.2	10.4
1933	6.1	5.6	6.1	8.3	11.1	14.4	17.2	17.8	16.7	13.3	8.9	5.0	10.8
1934	6.1	5.6	5.0	7.2	10.4	14.3	17.8	17.1	15.6	12.5	8.6	9.0	10.7
1935	6.9	6.1	6.5	8.4	10.6	13.4	17.4	18.5	15.6	12.2	9.6	6.0	10.9
1936	5.5	4.1	5.0	7.3	10.9	13.7	16.4	16.9	16.4	12.5	9.1	7.0	10.4
1937	7.1	5.6	4.7	7.4	11.1	14.4	16.2	17.9	16.0	13.4	9.2	5.8	10.7
1938	5.8	5.9	7.1	9.5	11.3	14.0	15.9	16.6	15.5	12.7	10.5	7.4	11.0
1939	5.3	5.5	6.2	7.9	11.1	15.4	16.0	17.4	16.6	12.4	9.5	7.0	10.8
1940	4.4	2.8	4.4	7.4	11.4	16.3	16.5	16.6	14.8	11.9	9.1	6.4	10.1
1941	3.6	3.6	4.8	6.1	9.3	13.4	17.0	16.4	16.0	13.4	9.4	8.0	10.0
1942	5.3	3.9	4.0	6.9	9.4	14.4	15.9	16.5	15.4	12.5	9.3	8.2	10.1
1943	5.8	6.6	6.9	9.4	11.6	14.6	16.7	16.8	15.2	12.9	9.2	6.2	10.9
1944	6.0	5.3	5.0	8.1	11.2	13.5	15.8	17.4	14.8	11.6	8.2	6.4	10.2
1945	4.1	4.9	6.5	9.2	10.9	14.0	16.6	17.3	16.0	13.9	10.7	7.9	11.0
1946	6.3	6.2	5.4	8.6	10.9	13.5	16.5	16.4	13.5	12.5	9.3	6.7	10.4
1947	5.5	2.4	2.0	6.2	10.4	13.8	16.1	18.4	16.9	13.8	10.4	7.0	10.2
1948	6.2	6.0	6.0	8.7	12.2	13.9	15.7	16.4	15.0	13.1	9.6	8.0	10.9
1949	6.1	5.9	5.7	8.0	11.5	14.8	17.3	17.3	16.8	14.7	10.2	7.2	11.2
1950	6.2	5.7	7.1	8.2	11.1	15.0	16.6	16.5	14.4	11.8	8.4	5.3	10.5
1951	4.8	4.7	4.8	6.9	9.6	13.3	16.8	16.6	15.6	12.7	10.1	7.4	10.2
1952	4.8	4.1	5.9	8.0	11.5	14.3	16.4	16.6	14.4	10.9	8.1	5.1	10.0
1953	4.8	4.4	5.8	7.8	11.0	14.5	16.3	17.3	15.6	13.1	10.8	9.4	10.9
1954	6.6	4.3	5.3	8.8	11.1	13.6	15.2	15.3	14.2	12.8	10.0	8.0	10.4
1955	5.0	4.1	3.8	7.2	10.0	12.6	16.7	19.1	16.6	12.5	9.8	7.5	10.4
1956	5.5	3.6	5.0	7.7	13.2	13.8	15.8	15.8	14.9	12.6	9.1	7.3	10.3
1957	6.4	6.4	7.6	9.3	11.3	15.7	17.1	17.0	14.2	12.4	9.7	7.3	11.2
1958	5.6	5.4	4.7	6.6	10.2	13.6	15.6	16.6	16.4	12.9	10.3	7.8	10.4
1959	5.0	4.5	6.5	8.8	12.2	15.6	17.9	18.4	17.5	14.4	10.2	8.3	11.6
1960	6.5	5.4	5.9	8.5	12.6	16.3	17.3	17.3	16.0	12.2	10.4	7.8	11.3
1961	5.9	6.8	7.8	9.1	12.0	14.5	16.2	16.4	16.2	13.5	9.4	6.7	11.2
1962	5.1	5.3	4.4	6.4	10.9	13.1	15.6	15.8	14.7	12.1	8.7	6.3	9.8
1963	2.1	1.4	3.6	6.8	10.5	13.5	14.8	16.0	14.7	12.3	9.8	7.4	9.4
1964	5.4	4.8	4.8	7.2	11.2	13.8	16.2	17.2	15.5	12.5	9.5	7.4	10.4
1965	5.7	4.8	4.9	8.0	10.9	14.1	15.7	16.3	14.6	12.4	8.7	5.8	10.1
1966	4.9	5.2	6.4	6.2	9.3	14.4	16.8	16.4	15.9	13.6	9.4	7.0	10.4
1967	6.0	6.4	6.9	7.4	9.4	14.8	15.9	16.5	15.2	13.0	9.3	7.0	10.6
1968	5.7	4.8	5.6	8.5	10.8	13.8	15.9	16.6	15.5	13.4	10.1	7.2	10.6
1969	5.4	4.4	4.1	6.2	10.2	12.5	15.4	16.7	15.2	13.7	8.0	6.1	9.8
1970	5.3	5.4	5.3	7.0	11.1	14.2	15.2	17.1	15.1	12.7	10.0	7.8	10.5
1971	7.1	6.1	6.1	8.1		13.6	16.7	16.5	16.3	14.6	9.9	8.2	
1972	7.0	5.7	6.5	8.4	10.3	12.6	14.9						
obs	45	45	45	45	44	45	45	44	44	44	44	44	
mean	5.6	5.0	5.4	7.7	10.8	14.0	16.2	16.8	15.5	12.7	9.5	7.1	10.5

**Table 90. Monthly and annual mean sea surface temperatures at MORECAMBE BAY
LV, 53° 55'N 03° 29'W (Source: U. Liverpool and MAFF)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1934					9.5	13.7	17.2	16.7	15.6	12.6	9.4	8.5	
1935	7.3	6.4	6.2	7.8	10.5	13.3	16.6	17.2	15.4	12.2	9.5	6.7	10.7
1936	5.1	3.8	4.7	6.7	10.5	12.0	16.2	16.2	16.2	13.1	9.4	7.4	10.1
1937	6.7	5.2	4.4	6.9	11.0	13.6	15.4	16.9	15.7	13.7	10.1	6.4	10.5
1938	5.4	5.6	6.8	8.6	11.0	13.4	15.3	16.8	15.5	12.8	10.7	7.9	10.8
1939	6.0	5.3	6.0	7.5	10.8	14.4	16.2	17.3	16.6	12.9	9.9	7.3	10.8
1940	4.8		4.5	7.2	10.6	15.7	16.0	15.9	14.9	12.1	9.4	7.0	
1941	4.4	3.4	4.6	6.0	8.9	13.1	16.2	15.8	15.8	13.8	9.7	7.7	9.9
1942	7.0	4.6	4.4	7.3	9.7	13.7	15.3	16.3	15.6	12.9	10.4	9.1	10.5
1943	7.3	7.3	8.0	9.4	11.2	14.5	16.3	16.9	15.5	13.0	10.6	6.9	11.4
1944	5.9	6.0	5.8	7.8	10.4	13.0	15.7	17.0	15.2	12.3	9.1	6.8	10.4
1945	5.2	4.8	6.3	9.0	10.5	13.7	15.8	16.8	16.1	14.1	11.1	8.1	10.9
1946	5.6	5.7	5.2	7.7	10.4	13.2	16.0	16.1	14.9	12.7	10.0	7.0	10.3
1947	6.2	3.4	2.7	5.7	9.5	13.4	15.4	17.7	16.9	14.2	11.0	7.4	10.2
1948	6.1	6.1	6.3	8.8	11.7	13.6	15.2	16.4	15.1	13.5	10.1	8.9	10.9
1949	6.3	6.0	6.1	8.0	11.6	14.6	16.8	17.0	17.1	14.8	10.1	7.9	11.3
1950	6.5	5.6	6.5	8.1	10.7	14.5	16.5	16.7	14.7	12.1	9.2	6.2	10.6
1951	4.2	4.7	5.1	6.8	8.9	12.8	15.6	16.5	15.5	13.4	10.4	7.8	10.1
1952	5.8	4.4	5.6	7.6	11.1	13.5	15.9	16.6	14.8	11.4	9.1	5.6	10.1
1953	4.4	4.8	5.6	7.5	11.1	13.2	16.1	16.9	15.6	13.5	10.9	9.3	10.7
1954	7.3	4.3	5.1	7.9	10.5	13.1	14.6	15.3	14.5	12.9	10.3	8.3	10.3
1955	5.7	4.3	3.7	6.9	9.5	12.6	16.2	17.7	16.6	13.2	9.8	7.4	10.3
1956	5.7	4.0	4.4	7.0	10.6	12.9	15.4	15.4	14.7	12.8	9.7	7.7	10.0
1957	6.6	6.0	6.9	9.0	11.1	14.3	16.7	17.4	14.5	12.5	10.1	7.8	11.0
1958	5.8	5.0	4.6		10.1	13.6	15.6	16.3	16.4	13.2	10.7	7.7	
1959	5.5	3.8	5.8	8.2	11.8	14.8	17.2	17.6	17.0	14.6	10.5	8.3	11.2

Table 90. Continued

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1960	6.9	5.4	5.5	7.8	11.1	15.2	16.2	16.8	15.9	12.8	10.3	7.7	10.9
1961	6.4	6.2	7.3	8.7	11.5	13.3	15.5	15.8	16.0	13.4	10.0	6.7	10.9
1962	5.2	5.2	4.5	6.9	10.1	13.3	14.7	15.4	14.6	13.1	10.0	7.0	10.0
1963	3.9	1.8	2.9	6.0	9.4	14.0	15.1	15.5	14.4	12.6	10.9		
1964	5.2	4.7	4.5	6.7	10.5	13.0	15.3	16.8	16.4	12.6	10.2	7.9	10.3
1965	8.0	5.2	4.5	7.3	10.5	14.1	14.9	16.0	15.1	13.1	8.4	6.2	10.2
1966	4.8	4.6	6.0	6.3	9.9	13.8	15.4	15.6	15.5	13.6	10.4	7.3	10.2
1967	5.5	5.7	6.2	6.9	9.0	13.7	15.6	16.0	15.5	13.1	9.6	7.7	10.3
1968	5.7	4.8	5.2	7.3	10.2	14.0	15.4	16.2	15.8	13.8	10.2	8.0	10.5
1969	5.9	5.9	4.0	6.0	9.4	13.4	15.2	16.6	15.8	14.2	10.4	6.6	10.2
1970	4.7	5.4	4.7	6.1	10.1	14.2	14.5	16.0	14.8	13.1	9.9	8.1	10.1
1971	6.5	5.9	5.7	7.4	10.7	12.7	15.5	16.5	16.2	14.3	10.7	8.2	10.8
1972	6.5	5.2	5.5	7.6	9.9	12.1	15.2	15.7	14.8	13.0	10.6	8.3	10.3
1973	6.4	5.6	6.0	7.3	9.7	13.3	16.0	16.9					
obs	39	38	39	38	40	40	40	40	39	39	39	38	
mean	5.8	5.0	5.3	7.4	10.3	13.6	15.7	16.4	15.5	13.1	10.0	7.5	10.5

Table 91. Monthly and annual mean sea surface temperatures at HEYSHAM, 54° 02'N 02 50'W (Source: NW and N Wales SFC)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1955	2.5	2.0	2.2	8.6	11.3	14.0	18.9	18.4	14.7	10.9	6.2	5.1	9.5
1956	3.8	0.9	5.1	7.1	12.0	13.7	15.4	12.9	12.1	9.1	6.5	4.7	8.6
1957	3.2	3.4	6.1	8.2	10.3	14.9	16.8	15.6	11.3	9.4	5.6	3.6	9.0
1958	2.3	2.6	2.1	6.0	11.9	14.8	16.3	15.8	15.9	11.1	8.6	4.3	9.3
1959	2.1	4.2	6.9	9.5	13.7	15.8	17.8	17.4	16.2	12.5	7.4	5.1	10.7
1960	3.3	2.8	4.8	9.7	15.0	16.4	15.4	15.3	13.3	9.0	5.4	3.2	9.4
1961	3.8	6.1	6.8	9.1	12.6	14.1	14.7	14.6	13.9	10.1	5.6	5.0	9.7
1962													
1963	-0.6	0.0	4.4	7.1	10.9	14.6	15.1	14.4	13.9	10.6	8.3	3.7	8.5
1964	2.9	4.2	5.0	9.0	12.8	15.4	17.1	16.1	14.0	7.3	6.7	4.6	9.5
1965	2.8	2.9	5.2	7.9	12.9	15.2	15.4	15.1	13.2	12.6	3.3	2.3	9.0
1966	2.8	5.2	6.3	7.6	12.8	16.7	17.3	16.2	14.4	12.3	9.3	6.9	10.6
1967	5.8	5.3	6.2	9.8	13.7	16.9	18.2	17.3	15.2	12.1	6.1	3.9	10.8
1968	5.0	3.9	8.6	12.0	12.4	17.4	17.4	17.3	15.7	15.2	7.8	5.1	11.4
1969	5.4	2.5	3.9	9.3	11.4	16.3	18.2	17.7	14.9	12.3	5.2	4.4	10.1
1970	3.8	3.2	5.1	8.1	14.4	17.6	15.8	16.2	14.2	9.6	8.3	6.4	10.2
1971	4.3	4.8	5.8	9.9	13.8	15.8	19.4	16.0	15.1	12.1	7.2	5.2	10.7
1972	4.4	4.7	5.8	8.9	11.4	13.3	16.0	15.2	14.1	10.9	6.8	4.4	9.6
1973	3.9	5.6	6.6	8.4	12.4	16.2	18.2	18.1					
1974													
1975													
1976	5.3	4.3	5.7	8.4	11.3	19.4	19.9	19.0	13.5	11.3	7.3	4.1	10.7
1977	2.2	4.7	6.9	7.6	11.5	14.8	15.9	16.7	13.8	11.2	7.1	4.4	9.7
1978	3.8	1.8	7.0	9.7	11.3	11.8	14.8	15.4	12.9	12.8	10.3	3.0	9.5
1979	0.1	1.2	3.1	7.8	11.6	16.7	16.0	14.3	11.2	10.3	7.8	5.1	8.7
1980	2.6	5.6	5.4	9.7	11.2	15.6	15.3	17.2	14.6	9.7	7.4	4.8	9.9
1981	3.9	3.8	5.8	9.8	12.5	13.9	17.8	16.5	14.7	8.4	7.0	-3	9.4
1982	1.1	5.0	8.1	10.8	15.4	15.6							
obs	25	25	25	25	25	25	24	24	23	23	23	23	
mean	3.2	3.6	5.5	8.8	12.4	15.4	16.7	16.1	14.0	10.9	7.0	4.3	9.8

**Table 92. Monthly and annual mean sea surface temperatures at SELKER LV,
54° 16'N 03° 33'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1921	7.0	6.0	6.5	8.0	10.5	13.0	16.0	16.0	15.0	14.0	9.5	8.0	10.7
1922	5.5	5.0	6.0	6.5	9.5	12.0	13.5	14.0	14.0	11.5	9.0	8.0	9.5
1923	6.5	6.0	6.5	8.0	9.5	11.0	14.5	15.5	16.5	14.5	9.5	6.0	10.3
1924	5.0	5.0	5.0	6.0	9.0	12.0	14.5	14.5	14.5	12.0	9.5	8.5	9.6
1925	6.5	5.5	5.5	7.0	10.0	13.0	15.0	15.0	13.5	11.5	9.0	5.5	9.7
1926	5.0	5.5	6.0	8.0	9.5	13.5	16.0	16.0	15.0	12.0	8.5	7.0	10.1
1927	6.5	5.5	6.0	7.0	10.0	11.5	14.5	15.5	14.5	11.5	9.5	6.0	9.8
1928	5.0	5.5	5.5	7.0	10.0	11.5	14.0	15.0	14.5	12.0	10.0	7.0	9.7
1929	5.0	3.0	4.0	5.5	9.5	12.0	15.0	15.5	15.5	12.0	9.5	7.0	9.4
obs	9	9	9	9	9	9	9	9	9	9	9	9	
mean	5.7	5.2	5.6	7.0	9.7	12.1	14.7	15.2	14.7	12.3	9.3	7.0	9.9

**Table 93. Monthly and annual mean sea surface temperatures at CHICKEN ROCK
LH, 54° 02'N 04° 50'W (Source: U. Liverpool)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1934					9.0	10.7	12.9	13.9	13.9	12.8	11.1	10.8	
1935	9.5	8.4	7.8	8.1	9.4	11.2	13.2	14.2	13.8	12.8	11.4	9.2	10.7
1936	7.7	7.1	7.0	7.8	7.0	10.6	12.7	13.9	14.2	12.9	11.3	9.6	10.1
1937	8.6	7.6	6.6	8.0	9.4	11.9	12.8	13.8	14.0	13.0	11.6	9.2	10.5
1938	8.6	7.5	7.7	9.0	9.7	11.4	12.8	14.0	14.0	13.0	11.9	9.8	10.7
1939	8.4	7.8	7.4	7.9	9.5	11.5	13.1	14.3	14.5	13.0	11.9	12.4	10.9
1940	8.0	6.7	7.0	7.9	8.8	11.1	12.3	13.8	13.2	12.1	11.2	9.2	10.1
1941	6.9	6.4	6.4	6.9	8.2	10.1	12.6			11.0	11.1	9.9	
1942	8.4	6.2	6.1	7.7	8.8	10.3	12.6	13.8	13.7	12.7	11.3	10.5	10.1
1943	8.9	8.8	8.0	8.6	9.6	11.8	13.2	14.0	14.1	13.1	11.7	10.1	10.9
1944	8.9	7.8	7.0	8.0	9.4	10.9	12.7	14.0	13.4	12.0	10.8	9.2	10.3
1945	7.2	7.1	7.2	8.0	9.2	11.0	12.4	13.7	13.7	14.0	12.4	11.1	10.5
1946	9.6	8.5	7.6	8.1	9.0	10.7	13.1	13.6	13.6	12.9	11.7	10.3	10.7
1947	8.5	6.1	5.6	6.5	8.0	10.1	12.1	13.3	13.8	13.2	11.7	9.9	9.9
1948	8.8	7.6	7.5	8.0	9.5	11.1	12.3	13.5	13.6	13.0	11.7	10.4	10.5
1949	9.1	8.3	7.7	8.2	9.4	11.5	13.3	14.1	14.8	14.0	12.0	10.2	11.0
1950	9.0	8.2	8.3	8.4	9.4	10.7	13.6	14.4	13.8	12.6	11.2	8.8	10.7
1951	8.0	7.1	6.5	7.0	8.1	10.4	12.3	13.5	13.6	12.8	11.9	10.5	10.1
1952	8.2	7.2	7.4	7.7	9.0	10.8	11.3	14.4	13.0		9.3	8.7	
1953	8.2	7.1	7.3	7.6	9.0	10.4	12.8	14.0	13.8	13.5	12.3	11.0	10.5
1954	9.2	7.1	7.0	8.1	9.3	11.2	12.6	13.4	13.5	12.7	11.7	10.0	10.4
1955	7.9	6.6	6.2	7.4	8.0	10.4	12.7	14.2	14.6	12.8	11.6	10.2	10.2
1956	7.9	7.1	7.4	7.6	9.4	11.2	12.7	13.2	13.7	12.8	11.2	10.2	10.3
1957	8.7	7.5	8.0	9.1	9.9	11.6	14.0	14.5	13.5	12.4	11.1	9.6	10.8
1958	8.0	6.7	6.1	7.8	8.7	10.3	12.6	14.2	14.3	13.0	11.9	10.4	10.3
1959	8.8	8.2	8.5	9.0	10.1	12.0	14.2	14.8	15.0	14.0	12.3	10.1	11.4
1960	9.1	8.4	7.7	8.4	10.1	12.4	13.4	14.6	14.9	14.2	12.4		
obs	26	26	26	26	27	27	27	26	26	26	27	26	
mean	8.4	7.4	7.1	7.9	9.0	11.0	12.8	13.9	13.9	12.9	11.5	10.0	10.5

**Table 94. Monthly and annual mean sea surface temperatures at PORT ERIN,
54° 05'N 04° 46'W (Source: U. Liverpool)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1903	7.6	7.8	7.6	8.1	9.4	10.9	12.9	13.9	13.3	12.7	10.9	9.2	10.3
1904	8.3	7.5	7.0	8.0	9.1	11.1	13.5	14.2	13.9	12.7	11.2	9.7	10.5
1905	8.2	7.3	7.5	8.1	9.8	11.9	14.3	14.4	13.8	12.1	10.5	9.5	10.6
1906	8.3	6.9	6.9	7.6	8.7	11.2	13.1	14.3	14.1	12.9	11.1	9.3	10.3
1907	8.2	6.6	6.8	7.7	8.9	10.6	12.4	13.3	13.3	12.2	10.8	9.3	10.0
1908	7.6	7.1	6.6	7.2	9.0	11.0	12.8	13.8	13.0	12.8	11.3	9.8	10.1
1909	8.0	6.8	6.1	7.6	9.3	11.2	12.6	13.7	12.9	12.2	10.1	8.5	9.9
1910	7.4	6.6	7.0	7.5	8.9	10.9	12.6	13.8	13.4	12.1	9.8	8.8	9.9
1911	7.8	7.0	6.7	7.2	9.5	11.5	13.3	15.0	14.3	12.4	9.9	9.2	10.3
1912	7.9	6.9	7.6	8.4	10.1	11.9	13.3	13.5	12.8	11.8	10.3	9.1	10.3
1913	8.0	7.5	7.1	7.7	9.3	11.4	12.7	13.9	13.6	12.8	11.4	9.3	10.3
1914	7.7	7.9	7.6	8.6	9.8	11.5	13.9	14.7	14.3	13.0	11.1	9.3	10.7
1915	7.8	6.9	6.8	7.7	9.0	11.1	12.9	14.0	13.9	12.4	9.8	8.6	10.0
1916	8.4	6.7	5.6	7.1	8.8	10.6	12.6	14.2	13.4	12.1	10.5	8.8	9.9
1917	6.6	5.3	5.5	6.0	8.0	10.9	12.9	13.6	13.6	11.4	9.9	8.0	9.3
1918	6.4	7.4	6.4	7.4	9.4	11.7	13.0	14.2	13.0	11.5	10.2	9.4	10.0
1919	7.8	6.5	6.4	7.4	9.0	11.2	12.1	13.8	13.0	11.3	9.0	8.3	9.6
1920	7.2	6.6	6.6	7.4	9.2	11.3	12.9	13.3	13.2	12.3	10.9	8.9	9.9
1921	8.8	7.5	7.8	8.4	10.1	12.0	14.0	14.4	14.0	13.6	11.0	10.0	10.9
1922	8.1	7.7	7.2	7.6	9.6	11.6	12.6	13.2	13.0	11.8	10.4	9.7	10.2
1923	8.2	7.9	7.9	8.4	9.4	10.9	13.2	13.7	13.1	12.0	9.7	8.4	10.2
1924	7.8	7.0	6.6	7.4	9.0	11.5	13.1	13.7	13.4	12.3	11.2	10.7	10.3
1925	8.9	7.9	7.5	8.1	9.2	11.2	13.4	14.6	13.5	12.7	10.9	8.9	10.5
1926	8.4	7.9	7.6	8.4	9.5	11.9	13.5	14.7	14.5	12.9	11.2	9.1	10.8
1927	8.6	7.3	7.7	8.2	9.5	11.1	12.8	14.5	14.0	12.9	11.2	8.9	10.5
1928	7.8	6.8	6.6	7.4	9.2	10.6	12.5	13.5	13.9	12.6	11.2	8.9	10.0
1929	7.6	7.0	6.8	7.6	9.0	11.6	13.3	14.0	14.2	12.4	11.1	9.9	10.3
1930	8.6	7.1	7.0	7.6	9.2	11.6	13.4	13.9	13.8	12.6	10.9	9.8	10.4
1931	8.2	7.2	6.1	7.0	8.8	11.0	13.2	13.8	13.4	12.6	11.6	10.2	10.2
1932 - 1949													
1950	8.9	7.9	8.4	8.5	9.9	12.3	13.8	14.5	13.6	12.3	10.3	8.6	10.7
1951	7.6	6.9	6.7	7.1	7.9	10.4	13.0	13.5	13.4	13.0	12.2	10.8	10.2
1952	8.6	6.9	6.9	8.5	9.4	11.4	13.5	14.1	13.2	11.5	9.9	8.3	10.1
1953	7.6	6.7	7.3	7.8	9.4	11.3	13.2	14.5	14.0	13.3	12.0	10.8	10.6
1954	8.9	7.7	7.5	8.5	9.3	11.3	12.8	13.7	13.4	12.7	11.0	9.8	10.5
1955	7.8	6.3	6.2	7.6	8.9	10.6	12.9	14.2	14.3	12.9	11.7	10.0	10.2
1956	8.3	6.7	7.0	7.8	9.4	11.2	13.1	13.3	13.3	12.6	11.1	9.9	10.3
1957	8.4	7.7	8.3	8.9	9.9	12.1	13.8	14.6	14.0	12.9	10.7	9.3	10.8
1958	7.8	7.6	6.8	7.4	9.3	11.2	13.0	14.2	14.1	13.3	11.8	10.1	10.5
1959	8.4	7.9	8.4	9.1	10.4	12.5	14.5	15.2	15.0	14.4	12.5	10.5	11.5
1960	8.8	7.9	7.6	8.8	10.6	12.5	13.7	14.6	14.4	12.9	11.4	9.3	11.0
1961	8.1	8.3	8.2	8.8	10.4	12.1	13.6	14.1	13.9	12.9	10.6	9.1	10.8
1962	7.9	7.0	6.2	7.3	9.2	10.7	12.2	13.7	13.2	12.3	10.6	8.8	9.9
1963	5.7	4.5	5.8	6.8	8.4	10.5	12.2	13.0	12.8	11.9	11.0	8.8	9.2
1964	8.5	7.3	6.8	7.9	10.0	11.5	13.3	14.1	13.9	12.8	11.3	9.4	10.5
1965	7.8	6.5	6.5	8.1	9.4	11.8	12.9	14.0	13.2	12.5	9.9	9.1	10.1
1966	7.4	6.7	7.3	7.0	9.2	11.7	13.4	13.8	13.9	12.9	10.7	9.2	10.2
1967	7.9	7.7	7.3	7.3	8.6	11.5	13.3	14.0	13.7	12.3	10.3	8.9	10.2
1968	8.0	6.8	7.1	7.6	9.2	11.8	13.0	14.3	14.1	13.3	10.7	9.6	10.4
1969	8.5	6.6	5.6	7.3	8.9	11.5	13.5	14.1	13.7	13.4	11.2	9.2	10.2
1970	7.8	7.1	6.3	7.2	9.4	11.4	12.8	13.8	13.6	12.6	11.0	9.4	10.2
1971	8.5	7.9	7.4	8.3	10.2	11.5	13.3	14.4	14.2	13.5	11.2	10.6	10.9
1972	8.5	7.8	7.8	8.7	9.8	11.0	12.9	13.7	13.6	12.9	11.1	9.9	10.6
1973	8.9	7.9	8.0	8.4	9.7	12.4	13.8	14.3	14.3	12.6	11.0	9.4	10.8
1974	8.8	8.2	7.9	8.7	9.9	11.7	13.4	14.4	13.6	11.7	10.6	9.2	10.6
1975	8.4	7.5	7.5	8.0	9.4	11.9	14.3	15.2	14.3	13.0	11.3	10.0	10.9
1976	8.9	7.3	7.2	7.8	9.5	12.0	13.8	14.3	13.5	13.0	11.5	9.7	10.7
1977	7.7	7.5	7.5	7.8	9.2	11.0	13.3	14.0	13.6	12.8	10.7	9.3	10.3
1978	7.8	6.4	7.1	7.5	9.0	11.0	11.8	13.2	13.3	12.7	12.0	9.6	10.1
1979	7.5	6.0	5.9	6.8	8.3	11.2	13.0	13.4	13.3	12.6	10.6	9.7	9.8
1980	7.8	7.9	7.4	8.2	9.5	11.7	12.7	14.5	14.6	12.7	11.1	9.5	10.6
1981	8.0	7.1	7.4	8.1	9.4	11.7	13.0	13.8	14.1	11.7	10.6	8.2	10.2
1982	7.2	6.9	6.9	8.1	9.4	11.8	13.1	13.8	13.3	12.4	10.9	8.9	10.2
1983	7.8	5.6	6.7	7.2	8.8	11.0	13.3	14.2	13.5	12.4	11.4	9.9	10.1
1984	7.8	7.0	6.9	7.6	9.1	11.6	13.4	14.6	14.2	12.9	11.6	10.5	10.6
1985	8.2	6.8	6.8	7.7	8.9	11.0	13.4	13.6	13.4	13.2	10.4	10.0	10.2
1986	7.6	5.3	6.2	6.5	8.5	10.3	12.4	12.7	12.5	12.1	10.7	9.4	9.5
1987	7.2	6.9	6.5	7.7	9.1	10.9	13.1	13.8	13.7	12.3	11.0	9.3	10.1
1988	8.8	7.4	7.2	8.0	9.6	11.9	13.6	14.3	13.4	12.3	11.3	10.4	10.6
1989	9.5	8.5	8.0	8.1	9.9	11.4	13.9	14.7	14.3	13.5	11.7	10.0	11.1
obs	69	69	69	69	69	69	69	69	69	69	69	69	
mean	8.0	7.1	7.0	7.7	9.3	11.3	13.1	14.0	13.6	12.5	10.8	9.4	10.3

**Table 95. Monthly and annual mean sea surface temperatures at SOLWAY LV,
54° 31'N 03° 38'W (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1905	5.0	5.0	5.5	7.0	11.0	14.5	17.0	15.5	14.0	9.5	6.5	6.0	9.7
1906	5.0	4.0	4.5	7.0	9.5	14.0	15.5	16.0	15.0	11.5	8.5	5.5	9.6
1907	4.5	3.0	5.5	8.0	10.0	11.5	14.5	14.5	14.0	11.5	8.5	6.0	9.2
1908	4.5	5.0	5.0	6.5	10.5	14.0	15.5	15.5	13.5	13.5	9.5	6.5	9.9
1909	4.5	4.0	4.0	6.0	10.0	14.0	15.0	15.5	13.5	11.5	7.0	5.0	9.1
1910	4.5	4.5	6.0	7.0	10.5	14.5	15.0	15.5	14.0	11.5	6.5	6.0	9.6
1911	5.5	5.5	5.5	7.0	11.5	14.5	16.0	18.0	15.5	11.0	7.0	6.5	10.2
1912	5.5	4.5	6.5	9.0	11.0	14.0	16.0	14.0	12.0	10.0	8.0	6.0	9.7
1913	5.5	5.0	5.5	7.0	10.0	14.0	15.5	16.5	14.0	12.0	9.0	7.0	10.0
1914	4.5	6.0	6.0	9.0	11.0	14.5	16.5	16.5	14.5	11.5	8.0	5.5	10.2
1915	4.0	4.0	4.5	7.0	10.0	13.5	14.5	15.5	14.0	10.5	5.0	4.0	8.8
1916	5.5	4.5	3.5	6.5	9.5	11.5	14.0	16.5	14.0	10.5	7.0	4.5	8.9
1917	6.0	5.0	5.5	6.0	9.5	14.0	16.0	16.0	14.0	9.5	8.0	4.5	9.5
obs	13	13	13	13	13	13	13	13	13	13	13	13	
mean	4.9	4.6	5.1	7.1	10.3	13.7	15.4	15.8	14.0	11.0	7.5	5.6	9.6

**Table 96. Monthly and annual mean sea surface temperatures at WHITEHAVEN,
54° 39'N 03° 35'W (Source: MAFF)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1965				7.4	9.9	13.3	15.0				6.9	6.9	
1966	4.9		6.3	7.2	10.6	13.7	15.6	15.5	15.2	12.3	8.6	6.8	
1967	5.8	5.7	6.3	7.1	10.1	14.1	15.9	16.1	15.5	12.2	9.0	6.5	10.3
1968	5.2	4.4	5.4	7.2	9.8	14.2	15.2	15.0			8.8	6.7	
1969	5.8	4.5	4.4	6.2	10.0	13.6	15.5	16.6	15.1	13.1	9.3		
1970						13.1	13.8	14.6	12.7				
1971					10.6	12.9	15.4	16.1	15.6	13.8	6.7	4.2	
1972	3.4	2.9	6.4	8.0		11.9	15.5	16.0					
1973	5.6	5.5	6.2	7.5	10.8	15.1	16.1	16.1	14.9	11.4			
1974													
1975					9.9	13.7	16.7	16.5	15.0	11.9	9.7	7.9	
1976	5.7												
obs	7	5	6	7	8	10	10	9	7	6	7	6	
mean	5.2	4.6	5.8	7.2	10.2	13.5	15.4	15.8	14.8	12.4	8.4	6.5	10.3

**Table 97. Monthly and annual mean sea surface temperatures at SOUTH ROCK LV,
54° 24'N 05° 24'W (Source: Met. Office)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
Year													
1905	9.0	7.0	7.0	7.0	9.0	10.5	13.0	13.0	13.0	12.0	11.0	9.5	10.0
1906	8.0	7.0	6.5	7.0	8.0	9.5	11.0	12.0	13.0	13.0	11.5	9.5	9.6
1907	8.0	6.5	6.5	6.5	7.0	9.0	11.0	11.5	12.0	12.0	11.0	9.5	9.2
1908	8.0	8.0	6.5	7.0	8.0	10.0	11.0	12.0	11.5	13.0	11.5	10.5	9.7
1909	8.5	8.0	6.5	8.0	8.5	10.0	11.0	12.0	13.0	12.0	10.5	9.0	9.7
1910	8.0	6.5	6.5	6.5	8.0	10.0	11.5	12.0	13.0	12.0	10.5	9.5	9.5
1911	8.5	8.0	6.5	7.0	9.0	10.5	12.0	13.5	14.0	12.0	10.5	9.0	10.0
obs	7	7	7	7	7	7	7	7	7	7	7	7	
mean	8.2	7.2	6.5	7.0	8.2	9.9	11.5	12.2	12.7	12.2	10.9	9.5	9.7

**Table 98. Monthly and annual mean sea surface temperatures at SKULMARTIN LV,
54° 32'N 05° 26'W (Source: Met. Office)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1905	8.0	6.5	6.5	7.0	9.0	10.5	12.0	13.0	13.0	11.5	10.0	9.0	9.6
1906	7.0	6.5	6.0	7.0	8.0	9.5	11.5	13.0	13.5	13.0	11.0	9.0	9.5
1907	8.0	6.5	6.5	7.0	8.5	9.5	11.0	12.0	12.0	12.0	11.0	9.5	9.4
1908	8.0	7.0	6.5	7.0	8.0	10.0	11.0	12.0	12.0	12.0	11.5	10.0	9.5
1909	8.5	7.0	6.5	7.0	8.0	10.0	11.0	12.0	13.0	12.0	10.0	9.5	9.5
1910	8.0	6.5	6.5	7.0	8.0	9.5	11.0	12.0	13.0	12.0	10.0	9.5	9.4
1911	8.0	7.0	7.0	7.0	9.0	10.5	12.0	13.5	14.0	13.0	10.5	9.0	10.0
1912	8.5	7.0	8.0	8.5	9.5	10.5	12.0	13.0	13.0	11.5	10.5	9.5	10.1
1913	8.0	7.0	7.0	7.0	8.5	10.0	11.0	13.0	13.0	13.0	11.0	9.5	9.8
1914	8.0	7.0	7.0	8.5	9.5	10.5	11.5	13.5	14.0	13.0	11.0	9.0	10.2
1915	8.0	6.5	6.5	7.0	8.5	10.0	11.0	12.0	13.0	12.0	10.5	9.0	9.5
1916	8.5	7.0	6.0	7.0	8.0	9.5	10.5	12.0	13.0	12.0	10.5	9.0	9.4
1917	8.0	6.5	6.0	6.0	7.0	9.0	11.0	12.0	13.0	11.5	10.5	8.5	9.0
1918	7.0	6.5	6.5	7.0	8.5	10.0	11.5	13.0	12.0	11.5	10.5	9.5	9.4
1919	8.0	7.0	6.5	7.0	8.5	10.0	11.5	13.0	13.0	12.0	10.0	8.5	9.5
1920	7.0	7.0	7.0	7.0	9.0	10.5	11.0	13.0	13.0	13.0	11.5	10.0	9.9
1921	9.0	8.5	8.0	8.5	9.5	11.0	13.0	13.5	13.5	13.5	11.5	10.0	10.7
1922	8.5	8.0	7.0	6.5	8.5	10.0	11.0	11.5	13.0	12.0	10.5	9.5	9.6
1923	7.0	8.0	8.0	8.0	8.5	10.0	11.5	13.0	13.0	12.0	10.0	8.5	9.7
1924	7.0	7.0	6.5	7.0	8.5	9.5	11.5	12.0	13.0	12.0	11.5	10.0	9.6
1925	8.5	8.0	7.0	8.0	8.5	10.5	11.5	13.0	13.0	12.0	10.5	9.0	9.9
1926	8.0	6.5	6.5	7.0	8.5	10.5	12.0	13.5	13.5	12.0	10.5	9.0	9.7
1927	8.5	7.0	8.0	8.5	8.5	10.5	11.5	13.5	12.0	12.0	11.0	9.0	10.0
1928	8.0	6.5	7.0	7.0	8.5	10.5	11.5	13.0	13.5	12.0	11.0	9.5	9.8
1929	8.5	7.0	6.5	7.0	8.5	10.0	11.5	13.0	13.5	13.0	11.0	9.5	9.9
1930	8.0	7.0	7.0	8.0	9.0	10.5	11.5	13.0	13.5	12.0	11.0	9.5	10.0
1931	8.5	8.0	6.5	7.0	8.5	10.0	11.5	13.0	12.0	12.0	11.0	10.0	9.8
1932	9.0	8.5	8.5	8.5	9.5	11.0	12.0	13.0	13.0	13.0	11.0	10.0	10.5
1933	8.5	7.0	7.0	8.5	9.5	10.5	13.0	13.5	14.0	13.5	11.5	10.0	10.5
1934	9.0	8.0	7.0	8.0	8.5	10.5	12.0	13.5	13.5	13.0	11.0	10.5	10.3
1935	9.0	8.0	8.0	8.0	9.5	10.5	12.0	13.5	13.5	12.0	10.5	8.5	10.2
1936	8.0	7.0	7.0	7.0	9.0	10.0	11.5	13.0	13.5	13.0	10.5	9.0	9.8
1937	7.0	7.0	6.0	7.0	8.5	10.0	11.0	13.0	13.0	13.0	10.5	9.0	9.5
1938	8.0	6.5	8.0	9.0	10.0	10.5	11.5	13.5	13.5	12.0	11.5	10.0	10.3
1939	8.5	8.0	7.0	8.0	9.5	11.0	12.0	13.5	14.0	13.0	11.5	10.0	10.5
1940	8.5	7.0	6.5	7.0	8.5	10.5	11.5	13.0	13.5	12.0	10.5	9.5	9.8
1941	8.0	6.5	6.5	6.5	8.0	9.5	10.5	12.0	13.0	13.0	10.5	9.5	9.4
1942	8.5	7.0	6.0	7.0	8.5	10.0	11.5	13.0	13.5	13.0	11.5	9.5	9.9
1943	8.5	8.0	8.0	8.5	9.0	11.0	13.0	13.5	14.0	13.0	11.5	10.0	10.6
1944	9.0	8.0	7.0	8.0	9.0	10.0	11.5	13.5	13.5	12.0	11.0	9.5	10.1
1945	8.0	7.0	7.0	8.0	9.0	10.5	11.0	13.5	13.5	13.5	11.5	11.0	10.2
1946	9.0	8.0	7.0	8.5	9.0	10.5	11.5	11.5	13.0	11.5	11.0	9.0	9.9
1947	7.0	5.5	6.0	6.5	7.0	9.0	10.5	11.5	13.0	12.0	11.0	8.5	8.9
1948	8.5	7.0	8.0	8.5	9.5	10.5	11.5	12.0	13.0	12.0	11.5	10.5	10.2
1949	9.0	8.5	8.0	8.5	9.5	13.0	13.5	14.0	14.0	13.5	11.5	11.0	11.1
1950	9.0	7.0	8.0	8.0	10.0	12.0	12.0	13.0	13.0	13.0	10.5	8.5	10.3
1951	7.0	6.5	6.5	7.0	8.0	9.5	11.0	11.5	13.0	13.0	11.0	9.5	9.4
1952	9.0	7.0	8.0	8.0	9.0	10.5	11.5	13.0	13.0	11.5	9.5	8.0	9.8
1953	7.0	6.5	7.0	8.0	9.5	11.5	13.0	13.0	14.0	13.5	11.0	10.0	10.3
1954	8.5	8.0	7.0	8.5	9.0	10.5	11.5	12.0	13.0	11.5	9.5	9.5	9.8
1955	7.8	7.2	6.1	7.2	8.3	10.0	11.7	13.3	13.3	12.8	11.7	10.0	9.9
1956	8.3	6.7	7.2	7.2	8.9	10.6	11.7	12.8	12.8	12.2	10.6	9.4	9.8
1957	6.1	6.7	7.2	8.3	8.9	12.2	13.3	13.3	12.2	12.2		9.4	
1958	7.8	7.2	6.7	7.2	7.8	10.0	11.1	12.2	13.3	12.8	11.1	10.6	9.8
1959	8.3	8.3	8.3	8.3	9.4	11.1	12.8	13.9	14.4	13.9	11.7	10.0	10.8
1960	8.9	7.8	7.8	8.3	9.4	11.7	12.2	13.9	13.9	12.8	11.1	10.0	10.6
1961	8.2	7.7	7.9	8.3	9.2	10.9	12.2	12.9	13.3	12.9	11.1	9.3	10.3
1962	7.9	7.7	6.8	7.0	8.3	9.8	11.4	12.3	12.6	12.3	10.9	9.6	9.7
1963	7.9	5.8	5.8	6.1	7.4	9.4	10.8	11.6	12.2	11.9	11.0	9.2	9.0
1964	8.5	7.9	6.9	7.4	8.5	10.4	11.7	13.2	13.3	12.5	11.5	9.8	10.1
1965	8.1	7.2	6.6	7.2	8.2	9.9	11.4	12.6	12.5	12.5	10.6	8.2	9.5
1966	7.7	7.2	7.4	6.7	8.4	10.2	11.7	12.4	12.9	12.6	10.8	9.3	9.7
1967	8.1	7.7	7.1	7.5	8.1								
obs	63	63	63	63	63	62	62	62	62	62	61	62	
mean	8.1	7.1	6.9	7.5	8.6	10.3	11.6	12.8	13.1	12.4	10.8	9.4	9.9

Table 99. Monthly and annual mean sea surface temperatures at NORTH CHANNEL, 54° 55'N 05° 28'W (Source: U. Liverpool and MAFF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	mean
1935			7.3	7.6	8.7	10.7	12.6	13.6	13.7	13.2	10.6	9.0	
1936	8.1	7.0	6.7	7.2	8.4	9.7	12.0	12.8	13.5	12.9	11.3	9.2	9.9
1937	8.6	7.2	6.5	7.3	8.6	10.2	11.4	12.8	13.1	13.0	12.2	10.5	10.1
1938	8.8	7.8	7.6	8.0	9.2	10.7	12.1	13.5	13.6	13.1	12.1	10.1	10.5
1939	8.4	7.8	7.3	7.6	9.4	10.5	12.1	13.3	13.0	11.8	10.6	9.0	10.0
1940	7.3	5.4	5.5	6.0	7.4	10.4	12.0	12.8	12.9	12.4	10.5	9.4	9.3
1941	7.3	6.1	6.1	6.0	7.8	9.4	11.7	12.4	13.3	11.4	11.3	9.8	9.3
1942	7.9	6.8	6.0	6.6	8.3	10.0	12.0	12.8	13.1	12.2	10.8	9.8	9.6
1943	8.6	7.9	7.7	8.3	9.6	10.4	12.8	13.7	13.9	13.2	12.0	9.8	10.6
1944	8.6	7.6	7.1	7.3	8.5	10.8	13.4	13.3	13.4	13.3	11.8	9.5	10.3
1945	6.5	7.1	6.0	7.4	8.7	11.2	12.9	14.0	14.0	13.5	12.1	10.6	10.3
1946	9.6	8.1	6.7	8.2	9.2	10.5	12.2	13.4	13.4	12.1	11.2	8.6	10.2
1947	7.0	5.4	4.8	5.6	7.4	9.2	11.0	13.1	13.2	12.9	10.8	10.0	9.2
1948	8.6	7.1	7.2	7.6	8.8	10.4	11.8	13.1	13.3	12.3	10.6	8.8	9.9
1949	7.5	7.2	6.6	7.5	8.8	11.2	13.0	13.4	14.3	13.6	12.4	10.2	10.4
1950	9.0	7.7	7.5	7.9	8.7	11.8	12.6	13.5	13.7	12.4	11.0	9.1	10.4
1951	7.8	6.4	6.2	6.4	7.4	9.6	11.1	12.5	13.2	13.0	11.1	10.0	9.5
1952	8.2	7.2	6.8	7.1	8.5	10.1	11.8	13.4	13.0	12.1	11.0	9.4	9.8
1953	8.1		7.0	7.3	8.7	10.2	12.0	13.4	13.6	13.2	11.7	10.8	
1954	8.0	6.9	6.8	7.6	8.8	10.5	11.4	13.0	12.8	12.2	10.9	9.5	9.8
1955	7.7	6.7	6.1	7.1	8.1	9.6	11.8	13.1	13.7	13.2	11.9	10.2	9.9
1956	8.2	7.1	6.3	7.0	8.7	10.2	12.1	12.5	12.9	12.5	11.0	10.0	9.8
1957	7.7	7.4	7.7	8.2	9.3	11.2	12.9	13.5	13.4	12.5	11.3	9.7	10.4
1958	7.9	7.0	6.2	6.5	8.0	9.8	11.9	12.7	13.6	13.0	12.1	10.0	9.8
1959	7.1	7.8	7.9	8.4	9.2	11.6	13.6	14.2	14.4	14.3	12.4	10.3	10.9
1960	8.3	7.6	7.4	8.4	9.6	11.7	13.2	14.1	13.5	13.1	11.6	10.1	10.7
1961	8.3	7.2	7.9	8.2	9.7	10.9	11.8	12.4	13.7	13.8	11.6	11.2	10.5
1962	9.6	8.9	7.3	7.3	8.3	10.4	10.8	10.6	10.4	10.5	10.2	9.9	9.5
1963										12.4	11.7	10.4	
1964	8.9	8.3	7.4	7.8	8.5	10.5	11.4	13.8	13.7	13.0	11.7	10.0	10.4
1965	8.3	7.8	6.5	7.7	8.7	11.1	12.0	13.1	13.1	13.2	11.3	9.4	10.1
1966	7.9	6.6											
1967 - 1970													
1971	8.6	8.3	7.7	8.0	9.0	10.5	12.1	13.5	13.6	13.1	10.6	10.4	10.4
1972	9.2	7.6	8.3	9.0	9.3	10.3	12.0	13.1	13.2	12.9	11.8	8.9	10.4
1973	8.8	7.9	7.8	8.0	8.7	10.8	12.6	13.5	14.3	13.5	11.3	8.6	10.4
1974	8.4	7.7	7.8	8.5	9.1	11.1	12.6	13.7	14.1	13.0	11.1		
1975	8.6	7.9	7.8	7.8	9.0	11.3	13.1	14.6	14.5	14.1	13.0	10.4	11.0
1976	10.0	8.3	7.9	8.4	9.2	11.6	13.8	15.0	14.5	14.1	13.2	11.2	11.4
1977	6.7	7.1	8.4	8.4	9.5	9.3	12.9	14.3	14.5	14.4	13.3	11.4	10.8
1978	10.1		8.4	8.8	10.6	11.6	13.3	14.5	15.0	15.1	14.8	14.8	
1979	10.5		8.2	8.3	9.3	12.0	13.3	14.3	15.1	15.0	15.7	12.2	
1980	11.5	10.0	9.8	10.7	11.7	14.1	14.0	16.3	16.5	14.4	12.9	11.4	12.7
1981	9.9	9.5	9.0	9.6	9.7	10.5	12.4	14.0	15.4	14.6	13.7	11.3	11.6
1982													
1983													
1984	6.4	6.4	7.2	5.5	6.5	9.4	10.3	12.2	11.5	11.6	10.4	8.6	8.8
obs	42	39	42	42	42	42	42	42	42	43	43	42	
mean	8.3	7.4	7.2	7.6	8.8	10.6	12.2	13.4	13.6	13.0	11.7	10.0	10.2

Table 100. Grand monthly means (°C) for selected stations

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Longstone LH (1924-1987)	6.5	5.5	5.4	6.0	7.2	9.3	11.3	12.3	12.2	11.3	9.8	8.1
Humber LV (1880-1987)	5.1	4.6	5.0	6.4	8.7	11.4	13.4	14.3	13.6	11.7	9.0	6.7
Smith's Knoll LV (1910-1987)	6.1	5.0	5.0	6.3	8.8	11.9	14.7	16.4	16.1	14.2	11.1	8.3
Varne LV (1905-1985)	8.2	7.2	7.1	8.0	9.9	12.5	14.8	16.4	16.5	15.1	12.6	10.1
Royal Sovereign LV (1880-1987)	7.4	6.5	6.5	7.8	10.1	12.8	15.3	16.6	16.4	14.7	12.1	9.5
Shambles LV (1881-1976)	8.2	7.4	7.3	8.3	10.3	12.9	15.0	16.3	16.2	14.6	12.2	9.9
Seven Stones LV (1877-1986)	10.1	9.5	9.3	9.7	10.9	13.2	15.2	15.9	15.0	13.5	12.3	11.1
St Gowen LV (1952-1987)	8.2	7.1	7.1	8.1	10.0	12.4	14.4	15.5	15.2	13.9	11.9	9.9
Bardsey LH (1934-1986)	8.1	7.3	7.5	8.6	10.3	12.4	14.1	15.1	15.0	13.6	11.5	9.8
Liverpool Bar LV (1928-1972)	5.6	5.0	5.4	7.7	10.8	14.0	16.2	16.8	15.5	12.7	9.5	7.1
Morecambe Bay LV (1934-1973)	5.8	5.0	5.3	7.4	10.3	13.6	15.7	16.4	15.5	13.1	10.0	7.5
North Channel (1935-1981)	8.3	7.4	7.2	7.6	8.8	10.6	12.2	13.4	13.6	13.0	11.7	10.0

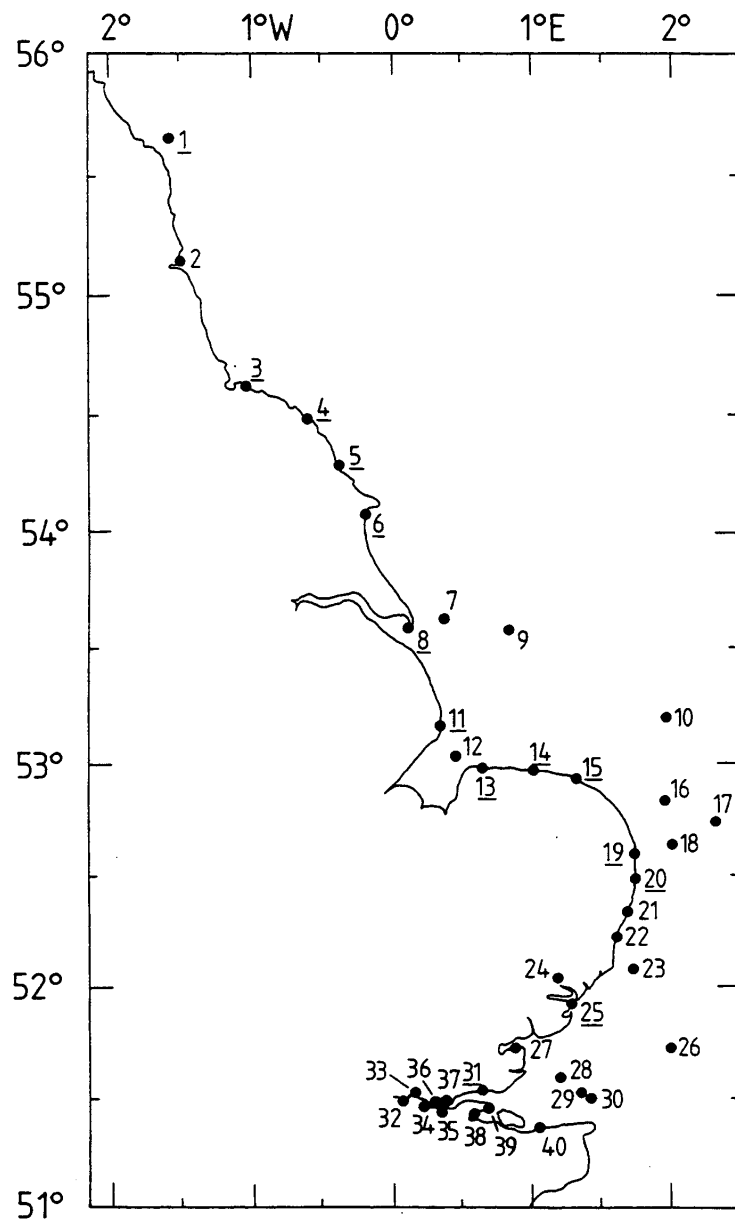


Figure 1. *Location of stations 1-40 (underlining indicates that daily values are available on the database held at Lowestoft)*

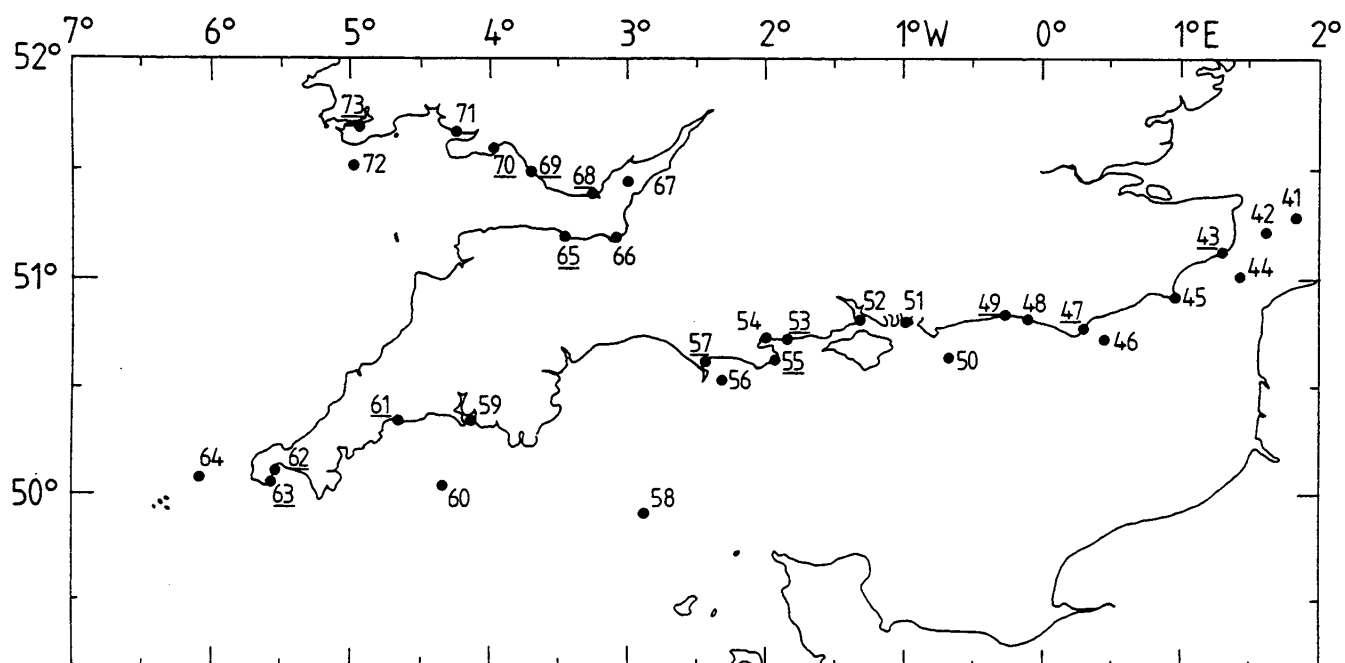


Figure 2. Location of stations 41-73 (underlining indicates that daily values are available on the database held at Lowestoft)

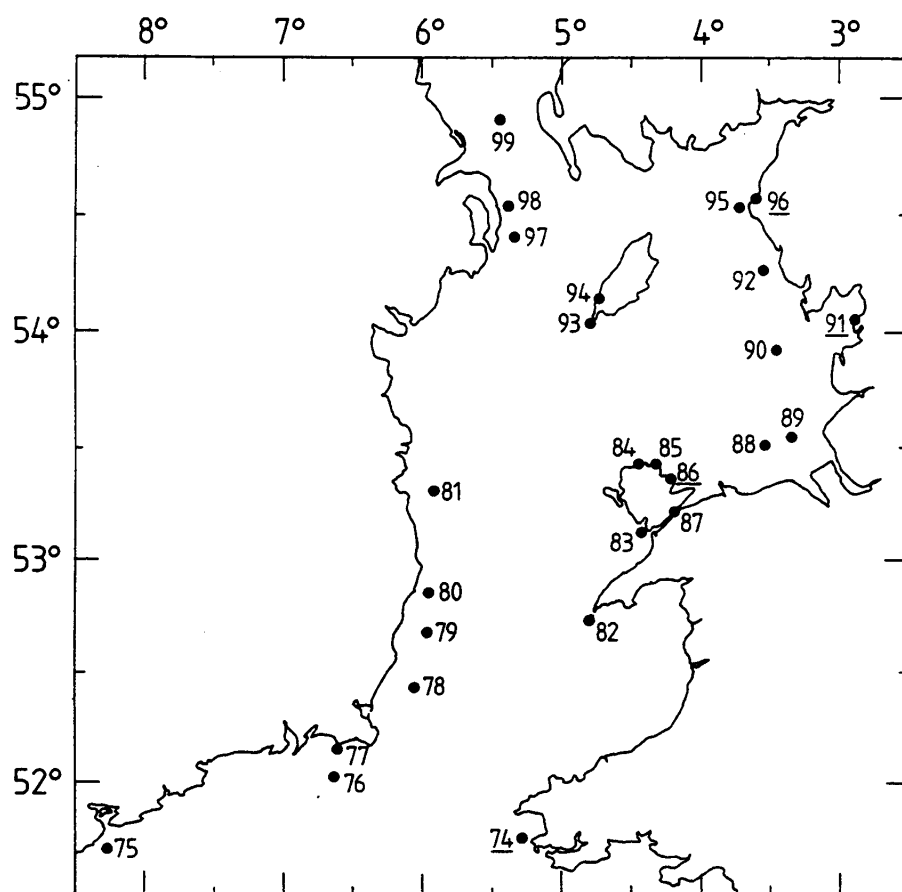


Figure 3. Location of stations 74-99 (underlining indicates that daily values are available on the database held at Lowestoft)

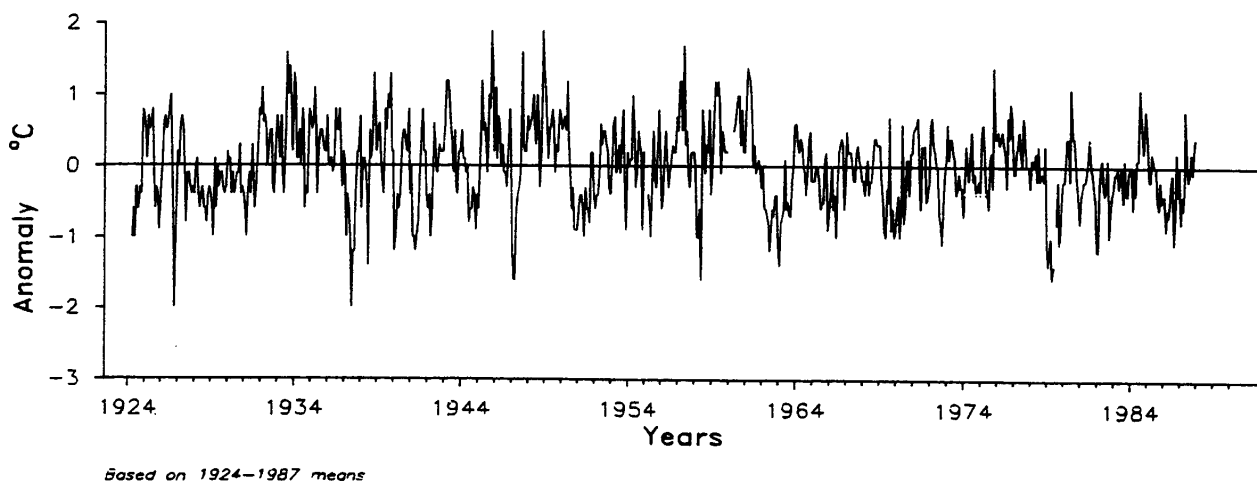


Figure 4. Sea surface temperature monthly anomalies for LONGSTONE LH, 1924-1987 (Table 1)

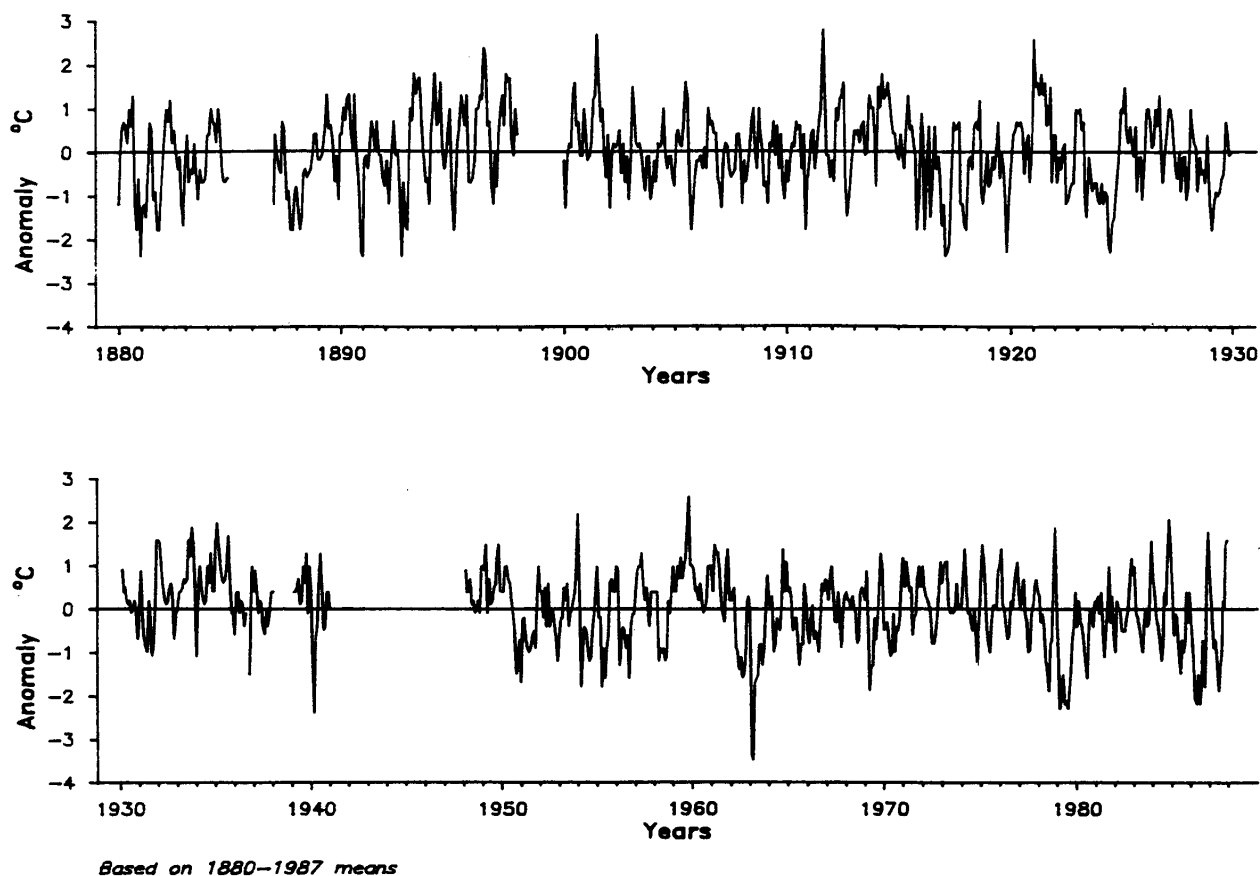
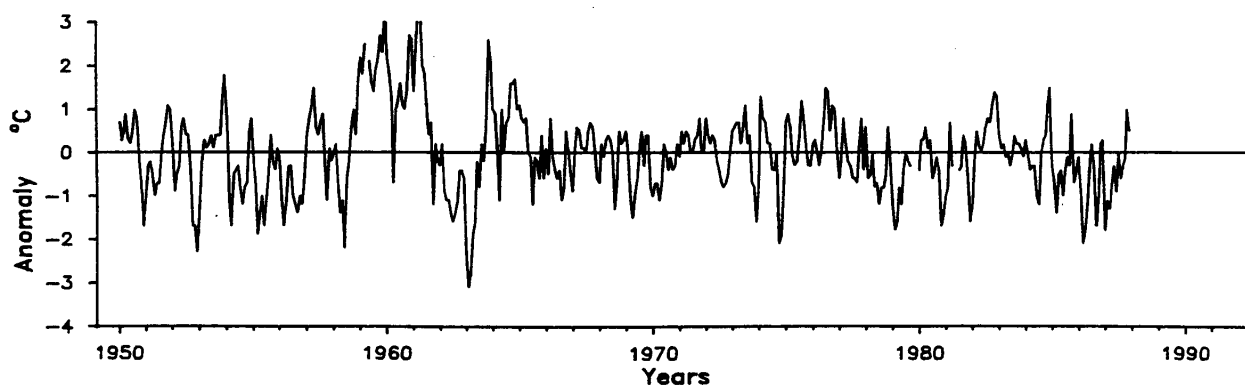
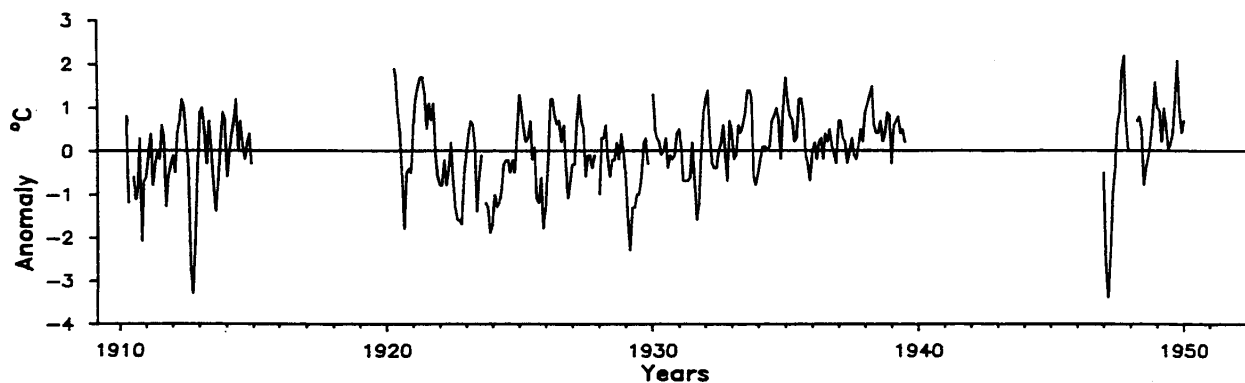
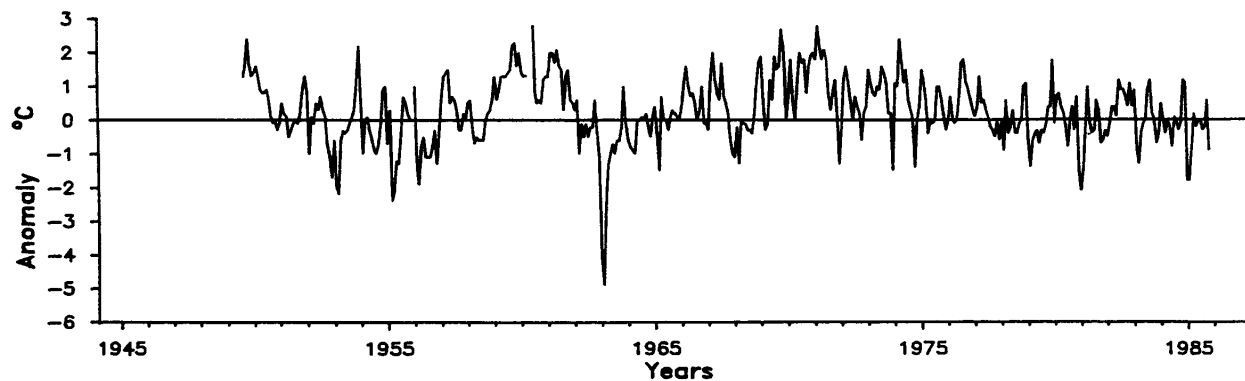
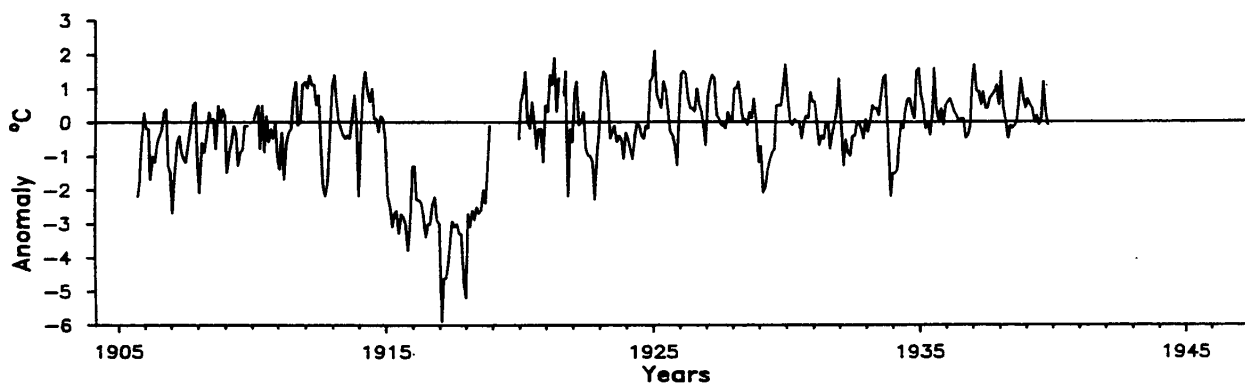


Figure 5. Sea surface temperature monthly anomalies for HUMBER LV, 1880-1987 (Table 7)



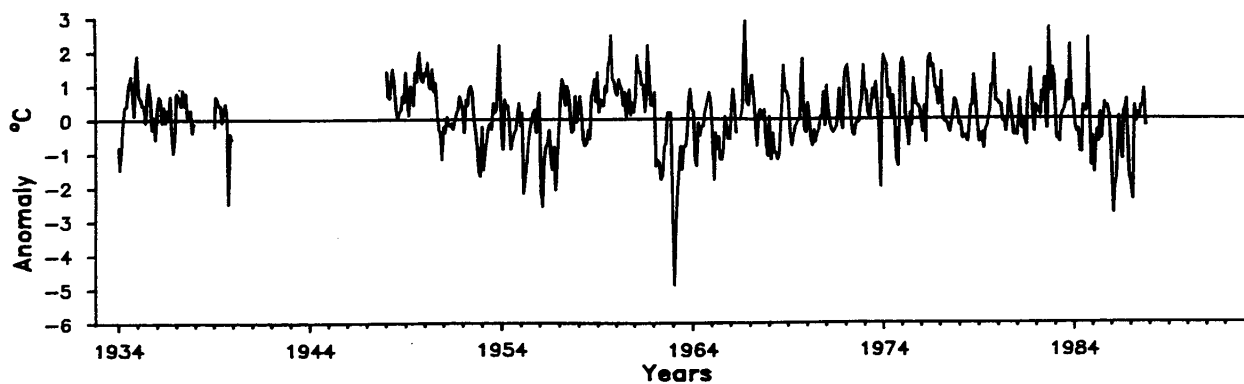
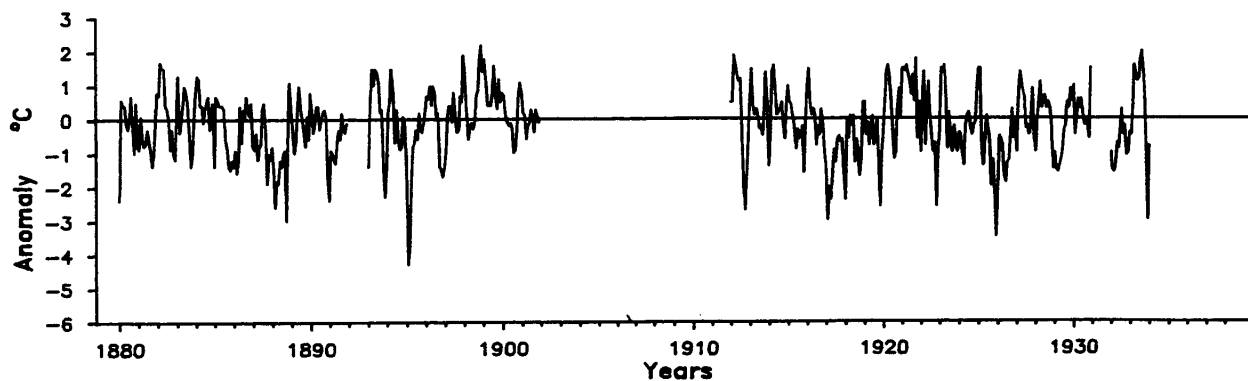
Based on 1910–1987 means

Figure 6. Sea surface temperature monthly anomalies for SMITH'S KNOLL LV, 1910-1987 (Table 17)



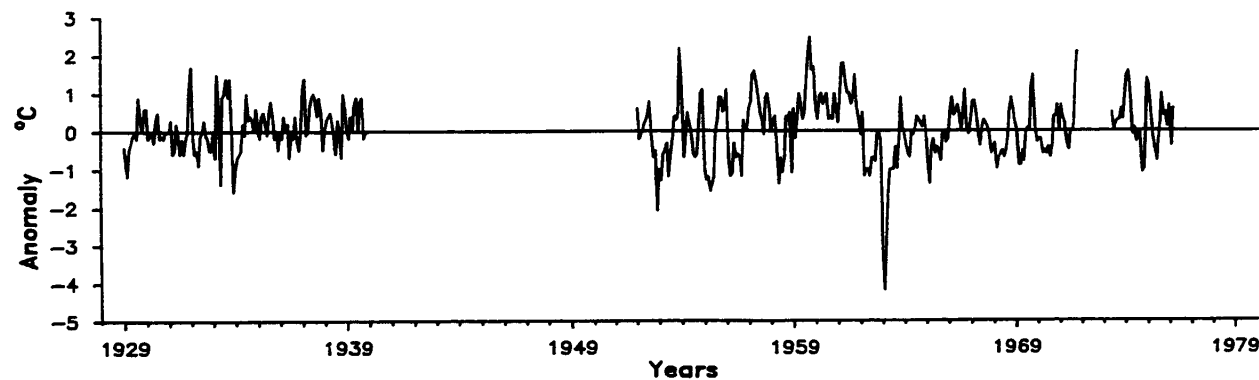
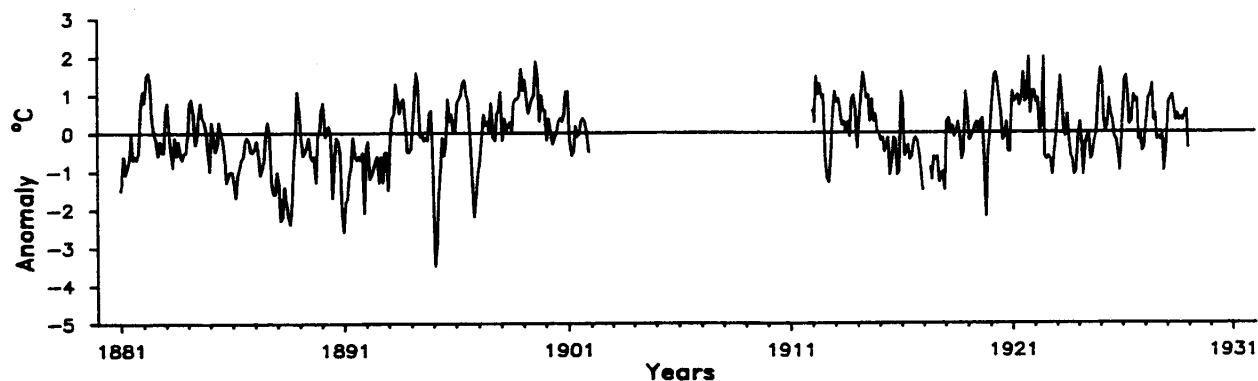
Based on 1905–1985 means

Figure 7. Sea surface temperature monthly anomalies for VARNE LV, 1905-1985 (Table 44)



Based on 1880-1987 means

Figure 8. Sea surface temperature monthly anomalies for ROYAL SOVEREIGN LV, 1880-1987 (Table 46)



Based on 1881-1976 means

Figure 9. Sea surface temperature monthly anomalies for SHAMBLES LV, 1881-1976 (Table 56)

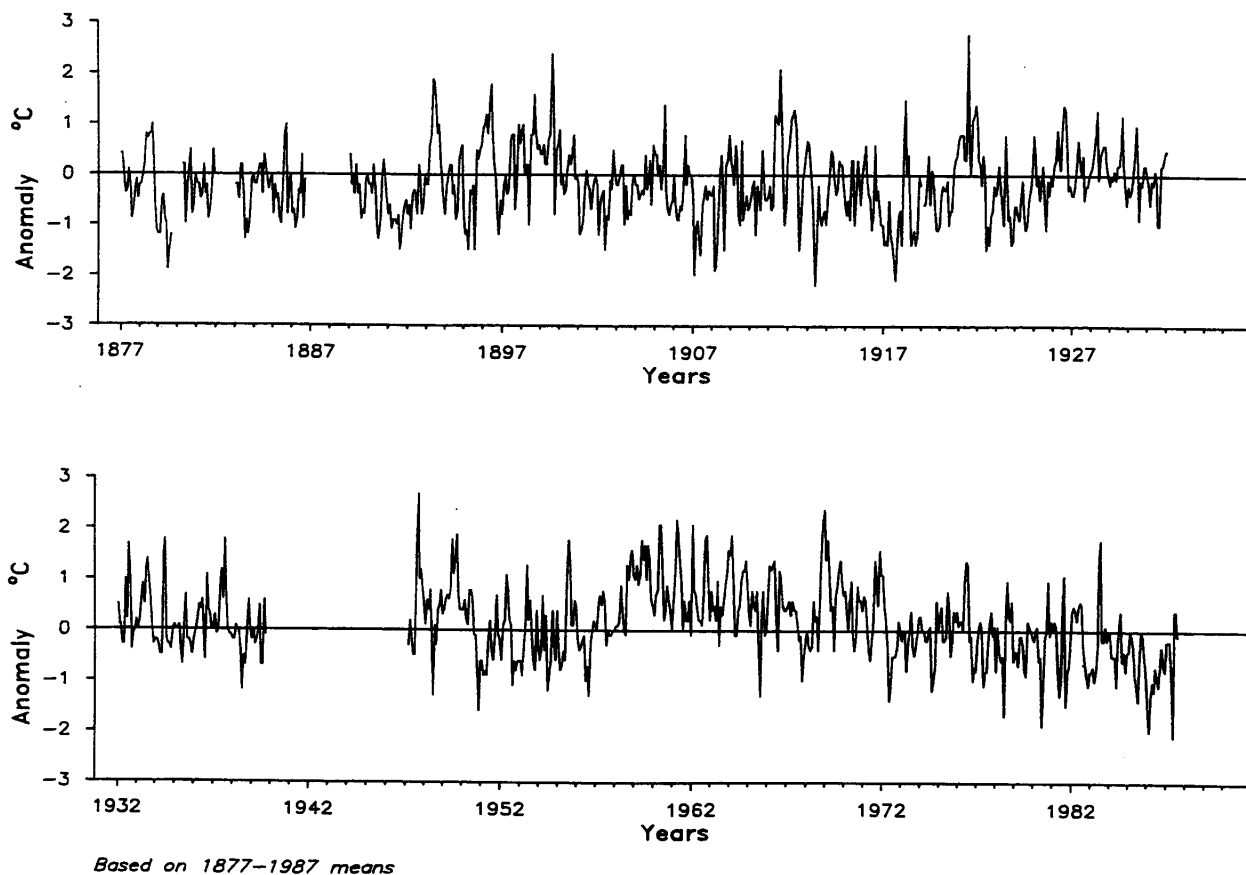


Figure 10. *Sea surface temperature monthly anomalies for SEVEN STONES LV, 1877-1987 (Table 64)*

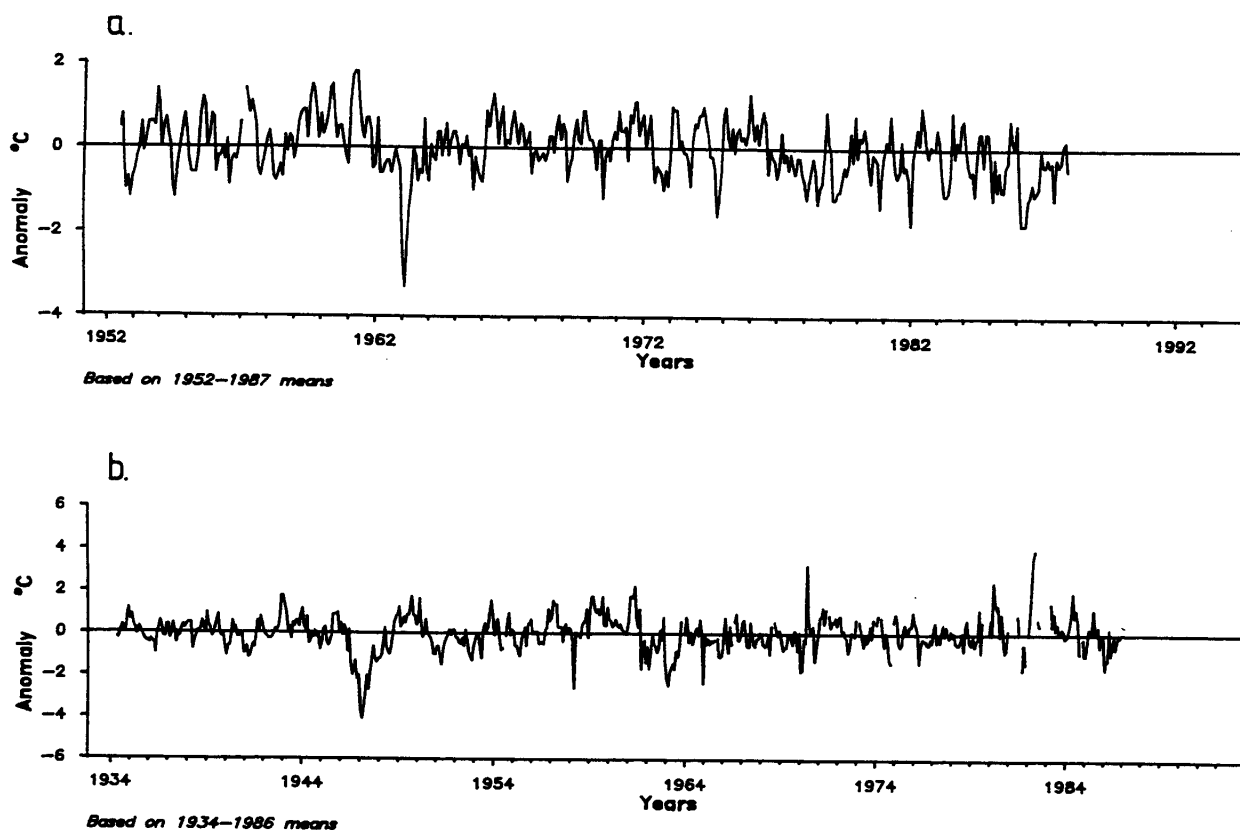
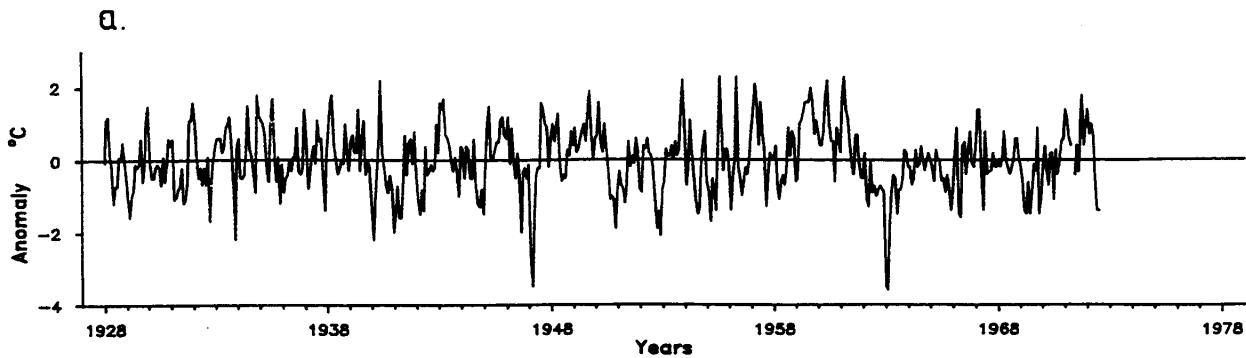
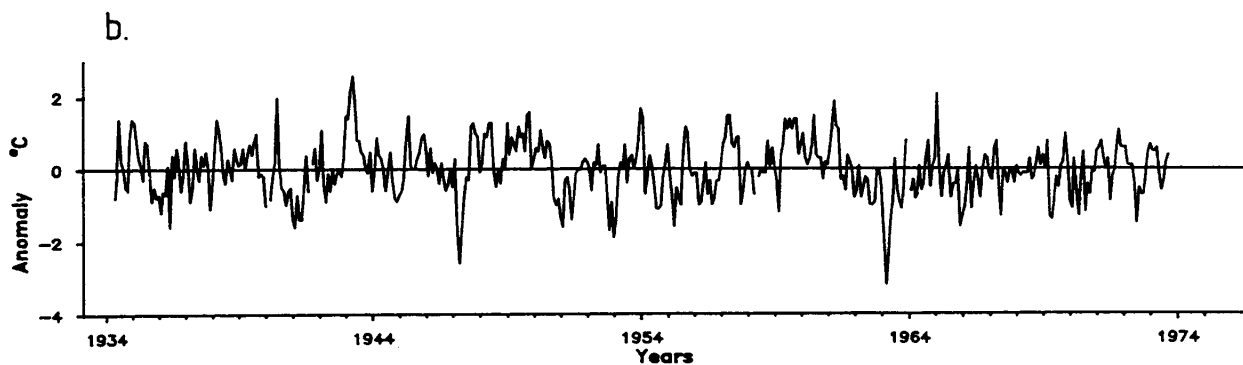


Figure 11. *Sea surface temperature monthly anomalies for: (a) ST GOWAN LV, 1952-1987 (Table 72); and (b) BARDSEY LH, 1934-1986 (Table 82)*

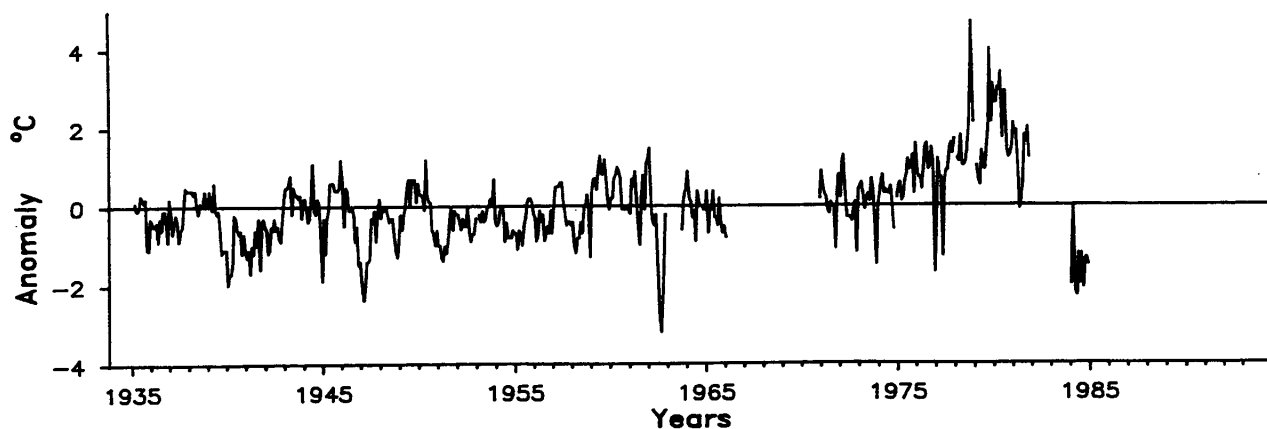


Based on 1928–1972 means



Based on 1934–1973 means

Figure 12. Sea surface temperature monthly anomalies for: (a) LIVERPOOL BAR LV, 1928–1972 (Table 89); and (b) MORECAMBE BAY LV, 1934–1973 (Table 90)



Based on 1935–1984 means

Figure 13. Sea surface temperature monthly anomalies for the NORTH CHANNEL, 1935–1984 (Table 99)



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**Near-surface sea temperatures in coastal waters
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