

# RAINFALL AT *Southend Corporation Observatory*

Lat. *51.30*

Lon. *0.45 E*

County of *Essex*

Rain Gauge, by

Observer, *E. J. Elford Esq. Cl.*

*Crouch - 3.*

*Southend Corporation*

|              |      |      |      |       |       |      |       |       |       |       |        |
|--------------|------|------|------|-------|-------|------|-------|-------|-------|-------|--------|
| Diameter ..  |      |      |      | 8     |       |      |       |       |       |       |        |
| Height ....  |      |      |      | 0 6   |       |      | 1 0   |       |       |       |        |
| Altitude ..  |      |      |      | 89 ft |       |      | 90    |       |       |       |        |
| Year ....    | 1900 | 1901 | 1902 | 1903  | 1904  | 1905 | 1906  | 1907  | 1908  | 1909  | MEANS. |
| January ..   |      |      |      | 1.55  | 2.14  |      | 2.92  | 1.14  | .83   | .80   |        |
| February ..  |      |      |      | 1.03  | 1.63  |      | 1.49  | 1.00  | 1.28  | .90   |        |
| March ....   |      |      |      | 1.00  | .92   |      | 1.15  | .73   | 1.65  | 2.66  |        |
| April .....  |      |      |      | 1.18  | .48   |      | .57   | 2.03  | 2.39  | 1.38  |        |
| May .....    |      |      |      | 2.27  | 1.08  |      | 1.78  | 2.04  | 1.34  | 1.04  |        |
| June .....   |      |      |      | 6.36  | 1.15  |      | 2.00  | 1.73  | 1.05  | 3.12  |        |
| July .....   |      |      |      | 4.62  | 1.98  |      | 1.12  | 1.14  | 3.00  | 3.11  |        |
| August ....  |      |      |      | 2.36  | 1.49  |      | .35   | 1.55  | 2.05  | 2.34  |        |
| September .. |      |      |      | 1.36  | 1.02  |      | 1.56  | .32   | .98   | 1.82  |        |
| October .... |      |      |      | 2.41  | 1.87  |      | 3.58  | 2.88  | 1.28  | 4.18  |        |
| November ..  |      |      |      | 2.63  | 1.19  |      | 4.09  | 1.84  | .99   | 1.67  |        |
| December ..  |      |      |      | .90   | 2.14  |      | 1.83  | 2.09  | 1.99  | 2.66  |        |
| TOTALS ..    |      |      |      | 27.67 | 17.12 |      | 22.44 | 18.49 | 18.83 | 25.68 |        |

1903 St. Johns Church 900 yards E

1 Tilbury Station 660 NE

1904 Printed for Press Cuttings but behind Prof. Obey Records

1908 Open wood fence 4' 6" high 20 ft

1908 ? Small

RAINFALL at Southend Corporation ObservatoryCounty of EssexObserver E. J. Elford Esq. C.E.River Basin Crouch 3F. W. Venables (7)Met. off letter Rain Gauge, by R. G. Beck

|              |       |       |       |       |       |       |       |       |       |       |        |  |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--|
| Diameter ... | 8     |       |       |       |       |       |       |       |       |       |        |  |
| Height ..... | 10    |       |       |       |       |       |       |       |       |       |        |  |
| Altitude ... | 90    |       |       |       |       |       |       |       |       |       |        |  |
| Year ...     | 1910  | 1911  | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 1919  | MEANS. |  |
| January ...  | 1.32  | .89   | 3.01  | 2.29  | .50   | 2.00  | .72   | 1.20  | 2.71  | 2.28  |        |  |
| February ... | 2.09  | .71   | 1.05  | .57   | 1.14  | 1.51  | 3.44  | .54   | .68   | 2.29  |        |  |
| March .....  | 1.16  | 2.08  | 1.64  | 1.89  | 2.82  | .98   | 3.34  | 1.49  | .76   | 2.54  |        |  |
| April .....  | .87   | 1.69  | .04   | 2.01  | .71   | .75   | 1.06  | 1.83  | 1.99  | 2.80  |        |  |
| May .....    | 3.40  | .93   | .57   | 1.41  | 1.02  | 2.62  | 1.37  | 1.36  | 1.41  | .25   |        |  |
| June .....   | 2.44  | 1.77  | 2.86  | .48   | .50   | .52   | 1.92  | 1.58  | .89   | 1.03  |        |  |
| July .....   | 1.63  | .35   | 1.35  | 2.05  | 1.37  | 2.70  | .97   | 4.29  | 3.72  | 1.90  |        |  |
| August ..... | 1.67  | 1.60  | 3.01  | .26   | .45   | 2.37  | 2.10  | 3.48  | 1.82  | 1.75  |        |  |
| September .. | .82   | 1.00  | 1.87  | .76   | .55   | 1.92  | .81   | .70   | 3.04  | .54   |        |  |
| October ...  | 1.49  | 2.78  | 1.66  | 4.02  | 1.49  | 1.76  | 1.85  | 2.01  | 1.85  | .62   |        |  |
| November ..  | 2.64  | 3.02  | 1.40  | 2.49  | 2.65  | 3.45  | 3.99  | 1.55  | 1.57  | 1.89  |        |  |
| December ... | 2.54  | 2.86  | 2.04  | .77   | 4.65  | 3.97  | 2.02  | 1.95  | 1.35  | 3.02  |        |  |
| TOTALS ...   | 22.07 | 19.68 | 20.50 | 19.00 | 18.85 | 24.55 | 23.59 | 21.98 | 21.79 | 20.91 |        |  |

1910 Corrected for wrong day  
flagstaff 90 ft high 10 ft 3

| Date. | Lat. N. | Long.  | Railway Station. | Distance. | Direction. | Church.   | Distance. | Direction. |
|-------|---------|--------|------------------|-----------|------------|-----------|-----------|------------|
| 1910  | 51.30   | 0.45 E | L.T. & S.R.      | 1/2 mile  | NE         | St John's | 1/2 mile  | E          |





RAINFALL at SOUTHEND (THE CLIFFS) M. W.R.

County of ESSEX Observer The Corporation (The Pier Master)

River Basin 2 - Thames, Roding &c.

Type of Gauge.....

Annual Average 19.7 in. based on 35 years obs. ~~un~~-weighted. Period of average 1881-1915 Ref No. Working Sht.

|                 |   |      |      |      |      |      |      |       |       |       |       |
|-----------------|---|------|------|------|------|------|------|-------|-------|-------|-------|
| Diameter .....  |   |      |      |      |      |      |      | 8"    |       |       |       |
| Height .....    |   |      |      |      |      |      |      | 1'    |       |       |       |
| Altitude .....  |   |      |      |      |      |      |      | 90'   |       |       |       |
| Year .....      | 1931  | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938  | 1939  | 1940  | Means |
| January .....   |   |      |      |      |      |      |      | 2.19  | 3.18  | 1.83  |       |
| February .....  |   |      |      |      |      |      |      | .70   | .88   | 1.22  |       |
| March .....     | Station previously numbered 1268<br>- altered owing to revision of<br>river division lines. 4/39. |      |      |      |      |      |      | .37   | 1.54  | 2.51  |       |
| April .....     |   |      |      |      |      |      |      | .28   | 1.84  | 1.45  |       |
| May .....       |   |      |      |      |      |      |      | 2.17  | 1.83  | .79   |       |
| June .....      |   |      |      |      |      |      |      | .52   | 1.24  | .34   |       |
| July .....      |   |      |      |      |      |      |      | 1.21  | .65   | 3.67  |       |
| August .....    |   |      |      |      |      |      |      | 2.02  | 2.22  | .11   |       |
| September ..... |   |      |      |      |      |      |      | 1.30  | .41   | #     |       |
| October .....   |   |      |      |      |      |      |      | 1.71  | 7.87  |       |       |
| November .....  |   |      |      |      |      |      |      | 1.23  | 3.70  |       |       |
| December .....  |   |      |      |      |      |      |      | 2.74  | 1.17  |       |       |
| TOTALS .....    |   |      |      |      |      |      |      | 16.44 | 26.58 | npump |       |

1940 Station terminated for alteration  
1947 Imp. New gauge 1946 as old one was in v. poor condition.

36.37.38.39.

|  |         |       |                  |                     |                      |                   |                      |
|--|---------|-------|------------------|---------------------|----------------------|-------------------|----------------------|
| Position of Station on reduced Ordnance Survey Map, }<br>1 mile to 1 inch Series |         |       |                  | No. of Map.....     |                      | Reference No..... |                      |
| Date.  | Lat. N. | Long. | Railway Station. | Distance from gauge | Direction from gauge | Parish Church.    | Distance from gauge. |
|  |         |       |                  |                     |                      |                   |                      |

RAINFALL at Southend (The Cliffs)

M.W.R.

County of EssexThe Corporation  
Observer (The Pier Master)River Basin Crouch - 3

Type of Gauge

Annual Average 19.7 in. based on 35 years obs. ~~un~~ weighted. Period of average 1881/1915 Ref. As Working Sheet

| Diameter  | 8.    |       |       |       |       |       |       |      |   |      |       |
|-----------|-------|-------|-------|-------|-------|-------|-------|------|---|------|-------|
| Height    | 1.0.  |       |       |       |       |       |       |      |   |      |       |
| Altitude  | 90.   |       |       |       |       |       |       |      |   |      |       |
| Year      | 1931  | 1932  | 1933  | 1934  | 1935  | 1936  | 1937  | 1938 | 1939  | 1940 | Means |
| January   | 1.27  | .65   | 1.31  | 1.14  | 1.26  | 3.57  | 3.67  | 2.19 |   |      |       |
| February  | 1.45  | .44   | .80   | .21   | 2.16  | 1.84  | 3.41  | .70  |   |      |       |
| March     | .35   | 1.13  | 1.02  | 1.81  | .53   | .74   | 2.59  | .37  |   |      |       |
| April     | 2.85  | 1.91  | .86   | 1.48  | 2.12  | 1.13  | 2.81  | .28  |   |      |       |
| May       | 2.80  | 2.75  | 1.40  | .57   | 1.07  | .35   | 3.13  | 2.17 | Station renumbered<br><u>1254/4</u><br>owing to revision<br>of river div. lines<br>- 4/39 |      |       |
| June      | .94   | .92   | 2.04  | 1.13  | 2.45  | 2.27  | 3.28  | .52  |   |      |       |
| July      | 2.69  | 1.61  | 2.40  | 1.66  | .45   | 2.81  | 1.53  | 1.21 |   |      |       |
| August    | 3.00  | .90   | .49   | 1.34  | 2.37  | .89   | 1.03  | 2.02 |   |      |       |
| September | 1.32  | 1.24  | 2.69  | .95   | 2.19  | 1.86  | 1.28  | 1.30 |   |      |       |
| October   | .42   | 5.38  | 1.11  | 1.29  | 1.74  | 1.85  | 1.44  | 1.71 |   |      |       |
| November  | 1.71  | .64   | 1.14  | 1.22  | 3.39  | 3.06  | 1.78  |      |   |      |       |
| December  | .48   | .25   | .66   | 2.96  | 1.82  | 1.20  | 3.68  |      |   |      |       |
| TOTALS    | 19.28 | 17.82 | 15.62 | 15.76 | 21.55 | 21.27 | 29.63 |      |   |      |       |

1936. New rain gauge brought into use. (14/3/36.)

Position of Station on reduced Ordnance Survey Map. }  
1 mile to 1 inch Series

No. of Map.....

Reference No.....

| Date. | Lat. N. | Long. | Railway Station. | Distance from gauge | Direction from gauge | Parish Church | Distance from gauge | Direction from gauge |
|-------|---------|-------|------------------|---------------------|----------------------|---------------|---------------------|----------------------|
|       |         |       |                  |                     |                      |               |                     |                      |
|       |         |       |                  |                     |                      |               |                     |                      |
|       |         |       |                  |                     |                      |               |                     |                      |

BRITISH RAINFALL ORGANIZATION, EXHIBITION ROAD, LONDON, S.W.7.

Station No. 1254/4RAINFALL at Southend (The Cliffs) (M.W.B. 112)

41

County of EssexObserver The Pier-MarketRiver Basin Thames-Roding & C 2

Type of Gauge.....

Annual Average 20.8 in. based on 5 years obs. un-weighted. Period of average 1881-1915 Ref. AWS

File No. ....

|           |      |      |                                      |      |                            |                          |                          |                          |                          |                          |       |
|-----------|------|------|--------------------------------------|------|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------|
| Diameter  |      |      | <u>236</u> <sup>523</sup> <u>197</u> |      | <u>8</u>                   |                          |                          |                          |                          |                          |       |
| Height    |      |      | <u>1</u>                             |      | <u>0</u> <sup>8</sup>      |                          |                          | <u>1</u> <sup>0</sup>    |                          |                          |       |
| Altitude  |      |      | <u>41</u>                            |      | <u>90</u>                  |                          |                          |                          |                          |                          |       |
| Year      | 1941 | 1942 | 1943                                 | 1944 | 1945                       | 1946                     | 1947                     | 1948                     | 1949                     | 1950                     | Means |
| January   |      |      |                                      |      |                            | .83                      | 2.10                     | 2.12                     | .73                      | 1.34                     |       |
| February  |      |      |                                      |      |                            | 2.03                     | 1.35                     | 1.35                     | .39                      | 2.13                     |       |
| March     |      |      |                                      |      |                            | 1.27                     | 3.95                     | .61                      | .78                      | .44                      |       |
| April     |      |      |                                      |      |                            | 1.64                     | 1.12                     | 1.83                     | 1.10                     | 1.43                     |       |
| May       |      |      |                                      |      |                            | 2.15                     | 1.07                     | 1.36                     | 1.71                     | 1.58                     |       |
| June      |      |      |                                      |      | .89                        | 1.99                     | 1.77                     | 1.62                     | .42                      | 1.02                     |       |
| July      |      |      |                                      |      | 2.02                       | 2.09                     | 1.65                     | .83                      | .32                      | 2.14                     |       |
| August    |      |      |                                      |      | 2.10                       | 4.59                     | .05                      | 3.26                     | .86                      | 1.29                     |       |
| September |      |      |                                      |      | .65                        | 2.05                     | 1.31                     | .98                      | .96                      | 2.79                     |       |
| October   |      |      |                                      |      | 2.33                       | 1.06                     | .36                      | 1.13                     | 5.30                     | .29                      |       |
| November  |      |      |                                      |      | .70                        | 2.84                     | .88                      | 1.79                     | 1.88                     | 3.62                     |       |
| December  |      |      |                                      |      | 2.59                       | 2.26                     | 2.08                     | 1.72                     | .89                      | 1.45                     |       |
| TOTALS    |      |      |                                      |      | <u>n.p.</u><br><u>imp.</u> | <u>24.80</u><br><u>D</u> | <u>17.69</u><br><u>D</u> | <u>18.10</u><br><u>D</u> | <u>15.34</u><br><u>D</u> | <u>19.82</u><br><u>D</u> |       |

Inspected 13.10.47 D.R. Wilson. New gauge (No. 12), situated 5 ft. above high water mark, 9 ft. above ground level, 1 ft. from sea. Authority asked to fix more suitable site.

Inspected M. W. L. Baxter 30.8.49. Moved since last inspection to site selected. Satisfactory. Gauge now at 1 ft.

Previously 1268 to 1938

Position of Station on reduced Ordnance Survey Map, 1 mile to 1 inch Series

No. of Map.....

Reference No.....

| Date. | Lat. N. | Long. | Railway Station. | Distance from gauge | Direction from gauge | Parish Church. | Distance from gauge. | Direction from gauge. |
|-------|---------|-------|------------------|---------------------|----------------------|----------------|----------------------|-----------------------|
|       |         |       |                  |                     |                      |                |                      |                       |

BRITISH RAINFALL ORGANIZATION



Station No. 1254/4RAINFALL at Southend (The Cliffs)

(MWR 117) 51

County of EssexObserver The PiermasterRiver Basin Thames-Roding B-2Pier-MasterType of Gauge M.O.Annual Average 20.9 in. based on 5 years obs. un-weighted.Period of average 1881-1915 Ref. AWS21.09 " " 8 " " 1949-19561916-1950

File No. ....

|               |       |       |       |       |       |       |       |       |       |       |       |  |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Diameter ...  | 8"    |       |       |       | 236   | 523   |       |       |       |       |       |  |
| Height ...    | 1' 0" |       |       |       |       | 147   |       |       |       |       |       |  |
| Altitude ...  | 90'   |       |       |       |       | 51    |       |       |       |       |       |  |
| Year ...      | 1951  | 1952  | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  | 1959  | 1960  | Means |  |
| January ...   | 1.54  | 1.30  | .81   | 1.37  | 2.60  | 3.48  | .93   | 1.90  | 1.39  | 2.23  |       |  |
| February ...  | 3.91  | .93   | 1.24  | 1.82  | 1.66  | .68   | 1.89  | 2.10  | .08   | 1.37  |       |  |
| March ...     | 1.86  | 2.83  | .26   | 2.01  | 1.10  | .68   | .84   | .92   | .90   | 1.36  |       |  |
| April ...     | 1.94  | .57   | 1.55  | .32   | .20   | 1.43  | .13   | 1.36  | 1.55  | .47   |       |  |
| May ...       | 2.22  | 1.17  | 1.18  | 1.65  | 4.15  | .41   | 1.24  | 1.81  | 1.01  | 2.48  |       |  |
| June ...      | 1.14  | 1.45  | 1.60  | 2.49  | 1.88  | 1.81  | 1.04  | 5.03  | 1.22  | 1.74  |       |  |
| July ...      | 2.50  | .73   | 2.42  | 2.25  | .63   | 2.94  | 2.28  | 2.44  | 1.00  | 2.39  |       |  |
| August ...    | 2.17  | 1.99  | 1.39  | 2.72  | 1.83  | 3.23  | 2.02  | 3.71  | .90   | 3.37  |       |  |
| September ... | 3.60  | 4.28  | 2.01  | .89   | 3.02  | 1.66  | 2.59  | 3.39  | .12   | 3.24  |       |  |
| October ...   | .81   | 1.46  | 2.02  | 1.29  | 4.11  | 1.24  | 1.27  | 2.51  | 1.88  | 5.65  |       |  |
| November ...  | 2.56  | 4.50  | .89   | 2.71  | .54   | .46   | 2.08  | 1.21  | 2.41  | 3.01  |       |  |
| December ...  | 1.03  | 1.79  | .66   | .63   | 1.39  | 1.60  | 1.73  | 2.78  | 2.35  | 2.10  |       |  |
| TOTALS ...    | 25.28 | 23.00 | 16.03 | 20.15 | 22.91 | 19.62 | 18.04 | 29.16 | 14.81 | 29.41 |       |  |

1957. Inspected by R.M. Fowler 30/5/57. Instruments in good condition. Station in attractive situation on cliffs approx 1/2 mi from Piermaster's Office. Exposure as good as can be expected, trees to S.W. afford the necessary shelter & are kept well cut back. Observer, Mr. Calverton - very attentive & keen.

Inst. 4.8.59 Mr. G.L. Comming - Outer can rusted & to be repaired. Tree to West cut down. Tree to S.E. may cause overshelter in a year or two. Oct 1959 - Outer can replaced.

Position of Station on Ordnance One-Inch map :

No. of Map .....

National Grid Reference TX 51 878858

| Date. | Lat. N. | Long. | Railway Station. | Distance Direction from gauge | Parish Church. | Distance Direction from gauge. |
|-------|---------|-------|------------------|-------------------------------|----------------|--------------------------------|
|       |         |       |                  |                               |                |                                |

Summary of Earlier Records from 10-year Sheets :

1916-1950, P - accepted

| Record D, or d | 1910-19      | 1920-30 | 1931-40 | 1941-50       | 1951-60 |
|----------------|--------------|---------|---------|---------------|---------|
|                | c about 1900 |         | no →    | C. imp 1.55 ✓ |         |