

of "light," according to extent "in excess of light," affect the efficiency of vessels carrying cargoes from the port, so are the dredges—efficient operation of which is so necessary to the maintenance of satisfactory working depths—hampered in such necessary work.

The year under review, from point of view of climatological conditions, was the worst experienced for many years. Summer, as it is known, was not experienced on the West Coast this last year. Weather of a northerly aspect predominated, and from such aspect rain and seas largely occur.

For the year rain totalled 92.43 in., falling on 235 days. Such total was the highest for many years; was fifty per cent. in excess of the total fall during the preceding year, and unfavourably compares with the mean of 75 in. over the preceding seven years. Apart then from bar conditions, with, on the average throughout the year, of 20 days per month with rain, such consistently wet conditions greatly hindered loading of vessels, with consequently noticeable delays in despatch on many occasions.

On no less than 227 days during the year sea conditions on the bar were in excess of light swells, as against similar circumstances on 186 days only during the preceding year, an appreciable factor which materially detracted from the better depths of water which otherwise obtained during last year as against the previous year. As further instance, we had last year 98 days of rough to very rough seas, as against 71 days the previous year.

The reflex on dredging operations of the circumstances described in the foregoing was that the suction dredger "Eileen Ward," the prime vessel of the Department's dredging fleet, was only able to lift from the bar during the year some 352,000 cubic yards of material, as compared to 509,000 cubic yards the previous year. However, early in the year another dredge crew was added to the Department's staff, and the smaller bar dredger "Rubi Seddon" was operated in supplementation, and assisted the "Eileen Ward" by lifting some 138,000 cubic yards from the entrance area, making a total for the year of 490,000 cubic yards, as against 560,000 cubic yards the previous year, and a total exceeded only on two occasions during the previous thirteen years.

On the other hand, the dredgers mentioned, on all other occasions when they were able to, worked in the river fairway, and lifted together therefrom just on an additional 200,000 cubic yards of dredgings, together with some 76,000 cubic yards lifted by the bucket dredger "Maui" from the upper river fairway.

The total quantity dredged from the harbour and bar areas during the year was 765,000 cubic yards, as compared with 675,000 cubic yards during 1943-44, and again, except for one occasion, the highest yearly dredging result for fifteen years. It is to be appreciated, then, that, bearing in mind the conditions adverse to favourable prosecution of operations, nevertheless every endeavour per medium of dredging was made to obtain and maintain satisfactory working depths at the entrance and in the harbour.

The following tabulation indicates the number of days during the year on which the various depths at high water obtained on the bar, with the comparative figures of some previous years:—

Number of Days on which Depth obtained on the Bar at High Water

Depth.	1917.	1924.	1927.	1931.	1939.	1942.	1943.	1944.	1945.
14' to 16'	1	..
16' to 18'	25	2	1	9	39	23
18' to 20'	..	4	..	132	88	33	56	96	69
20' to 22'	..	110	26	165	149	181	152	150	142
22' to 24'	..	22	162	43	115	143	125	75	87
24' to 26'	..	143	86	125	..	11	7	23	5
26' to 28'	..	137	4	70	..	..	..	..	43
Over 28'	..	63	..	32	..	..	..	..	1
Mean for year	26' 3"	23' 2"	24' 10"	20' 2"	21' 3"	21' 9"	21' 8"	20' 8"	21' 4"

NOTES.—In the foregoing tabulation the years quoted are as at 31st March. In the history of the port 1917 was the year of best depth conditions. This was during the year following completion of the last breakwaters extension plus a period of very intensive dredging.

The good return of working depths for 1927 was the result of many floods in the river in that year, topped by the exceptionally great flood of 5th November, 1926.

The figures for 1931, except for 1934 (depression circumstances), represent the poorest working depth conditions for over forty years.

During the past year a total of 301 vessels, aggregating 211,449 tons net register, worked the port, as against 309 vessels for 220,824 tons the previous year, representing little difference comparatively.

Similarly, there was little difference between the two years in the quantity of coal shipped from the port, which is primarily the working trade of the port.

At the above 301 vessels such represented the least number which have ever worked the port in any one year, but the average net tonnage per vessel is well above the average, even though such fact was not assisted by the larger class of overseas vessels which, until two or three years ago, used to visit the port for supplies of bunker coal, and on occasions overseas cargoes. The indication is that year by year the smaller class of coastal vessels which for so long worked the port are disappearing from the trade.