

Assume then that the following are the approximate areas :—

	Square Feet.
Inner Harbour (108 acres) assumed	4,705,000
Outer Passage (scaled measurements from map)	6,500,000
Assumed present depth 30 feet	11,205,000
To obtain 40 feet therefore this amount must be multiplied by 10, thus making in cubic feet	112,050,000
Silting up of Inner Harbour at 6 inches per annum (see Report 8th May, 1903), say for 4 years, 2 feet	9,410,000
Silting up of Outer Passage 1 foot per annum (same report) for say 4 years, i.e., 4 feet	26,000,000
(Say 148,00,000 cubic feet)	147,460,000

Assume weight of 1 cubic foot of solid silt is 105 lbs., so that the said number of cubic feet would work out **6,937,500** tons. The saving on this of 3.56 pence per ton as previously shown runs into the sum of **£102,906**.

But besides this there has to be taken into account the profits accruing from the earnings of the steam barge in carrying silt to sea at 2.1 per ton, thus :—

These figures are supplied for illustration on the assumption that two trips per day will be made.

Total quantity carried as above, 6,937,500 tons ; proportion carried by barge, thus, 6,880 tons (carried by dredge and barge) ; 5,200 tons carried by barge : 6,937,500 tons, i.e., 5,243,459 tons at 2.1 per ton	45,880
Deduct working expenses same as Tug " Lyttelton " (see Annual Report, 1912, page 43), £2,770 , 4 years	11,080
Interest on barge (assumed cost £25,000), 4 years at $4\frac{1}{2}\%$	4,500
	<u>15,580</u>
Balance being profit	£30,300
Thus the barge is paid for.	

153 HEREFORD ST., CHRISTCHURCH,
SEPTEMBER 17TH, 1913.

I have checked the various calculations set out in the foregoing statement, and certify them to be correct.

GEORGE W. HULME,
FELLOW PUBLIC ACCOUNTANT.

