

10 per cent for contingencies is £337,035 4 4.—The excavation and embankment together amount to £65,562 4 5,—10 per cent to be added for contingencies. The cost of the Locks, which is the heaviest item is £224 282 11 0, but it ought to be borne in mind that 12 of them are Double. The estimated cost of a Single Lock, with gates &c. &c. is £3,217 2 6. The various items forming all these estimates have been carefully calculated.—The amount of pressure external and internal.—The specific gravity of the materials &c. &c. have been computed, and the formation of the walls (shewn on the Drawing) is such as to require the least quantity of material and labour consistent with absolute security.

It may be noticed here that these Locks raise the Canal to the elevation of 279 feet, therefore 6 Locks more—2 of 9 feet lift, and 3 of 8 feet lift would raise the Canal to the level of Lake Erie. Or that the sum of £37,302 15 0 would complete this system of Lockage from the level of Lake Ontario to the level of Lake Erie.

The other items put down under the designation of subordinate expenses, do not in several cases furnish data for very accurate estimates, but I feel confident that the sums specified £14,450 17 8 with 10 per cent to meet contingencies (see appendix No. 3) will be sufficient for these necessary works.

In framing the estimates I have not put any value upon the stone to be obtained from the Rock excavation on the hill—should the lower beds of that Rock prove fit for building the Locks, a saving of several thousand pounds will be effected, whether this should be the case or not the stone even of the upper beds is suitable for the mason work Races &c. comprehended under the designation of subordinate expenses.

As nearly all the proprietors on the line have given up their title to the land required for the use of the Canal, it is unnecessary to estimate its value.

Before I close this Report I conceive it to be a duty incumbent upon me to draw your attention to two things by which the usefulness of the Welland Canal is greatly abridged, and consequently the value of your work will be proportionably lessened, as in the southern part it is intended to use that Canal. These are 1st. The flood-water which is allowed to flow into the Canal and 2nd. The immense body of water which constantly flows through it for the purpose of driving machinery. A full supply of water is absolutely necessary in every well regulated Canal, but this supply ought to be entirely under the controul of the persons having charge of that Canal, and ought not to be increased by