

may probably be accounted for by the fact that when the tidal water ascends the winding streams leading to the bogs, it washes off a considerable portion of the sediment, with which it becomes more densely charged, from the soft muddy banks of those streams in its upward course.

Whether this hypothesis be true or not, there is no doubt, however, that more or less sediment will be deposited in the canal; but as the latter is to be fed from reservoirs, sufficient time may be generally allowed for the deposit of the sediment on the bottom of the reservoirs, before the water is introduced into the canal, so that any obstruction to the navigation that might be apprehended from that source, is not likely to be serious, especially as it can easily be removed by dredging.

Further details respecting the water supply will be found in the appended table under that heading.

LOCKS AND BASINS.

Their number will of course depend on the decision that will be made, whether the canal is to be a whole-tide one or not, and on the extent of the accommodation to be given to vessels. The number and lifts of the locks required for a whole-tide canal are shown in my original report.

Their relative position and arrangement on the located line are nearly the same as originally represented by the full *red lines* at the western terminus and the *red dotted lines* at the eastern terminus. By this disposition of the locks, the upper reach of the canal, as before stated, will extend almost from shore to shore; this arrangement of the locks was originally intended and would have been adhered to, if an error had not been committed in the calculation of the quantity of excavation for placing the locks otherwise, near the river Tidnish post-road bridge, for obtaining a rock foundation. This error, to which Mr. Keefer makes special reference in his memorandum, dated 27th August, 1872, was only discovered after my report had been printed for the use of the House of Commons, and your attention has been called to it by me since then; I can, however, be scarcely held responsible for it, as the calculation was made at a time when my life was despaired of; my original report was prepared and written before I had completely recovered, and it was not possible for me under the circumstances to verify the accuracy of all the calculations.

The error in question, coupled with the fact that the original calculations were for a whole-tide canal of the same sectional area through earth and rock, and for locks of 18 feet draught of water, with extensive basins between them, together with dredged channels at each terminus, 300 feet in width and 16 feet in depth at extreme low water, swelled the quantities considerably above what was actually required, and greatly to the advantage of the half-tide canal scheme on the La Planche and Weeks' Point location line, especially as the calculations for the latter make no provision for ditching, dredging, and mucking under the seats of the canal banks, nor any for the rock excavation at the Weeks' Head and La Planche termini.

Judging from the appearance of the beach at Tidnish Head, where solid rock appears near high water surface, it is highly probable that a suitable foundation will be found for the entrance locks at La Planche, on the line as now located.

EXCAVATION.

The probable quantity of excavation required to be done for the construction of a canal, including the cuts and new river channels across the heads of the Tidnish, also the