

engineer employed on the Canal, before the sum of eighty five thousand pounds had been sunk in excavating this stupendous ravine. Had more pains been taken to ascertain by deep-boring at short distances, the nature and quality of the sub-stratum on which the banks were intended to rest, and which was to form the bottom level of the canal, a vast saving would have been effected to the Colony, and the canal by this time probably open for ships from Erie to Ontario. I visited the Deep Cut so late as Tuesday last, and found it open and almost clear of every obstruction.

GRAND RIVER DAM.

The idea of obtaining an ample supply of water from the River Ouse for a ship canal to connect Lakes Erie and Ontario, is not a new one. It occurred to the Commissioners of Internal Navigation as far back as 1823, as appears by their valuable report made to Your Excellency's predecessor in the month of February in that year, and lately republished at Kingston under the direction of the gentleman who had been President of the Board. The same means of obtaining a supply for the Welland Canal was proposed to the Board of Directors in 1827, by Mr. Barrett, then Engineer, but was not then acted on.

The Dam thrown across the Grand River, is nine chains in length, and raises the waters about five feet above the former level. The Dam is said to have gradually settled down twelve to sixteen inches since last June. The soil is favorable, being a clay bottom. The base of the Dam is an hundred feet; and for a foundation, whole trees, were cut down, drawn and laid lengthways into the stream with their branches on; gravel and stone were next thrown in; and the work finished with alternate layers of brush and gravel. It is well timbered throughout; and the timbers in the abutment at its south end are well framed, and the workmanship substantial. The north wing of the dam is in want of repairs; it should be filled in, to prevent the river breaking round, and raised with a breastwork of timber, brush and stone.

Two or three hundred cords of small stones and gravel, if thrown on the top, would mix with the brushwood, and greatly strengthen the dam.

South of the dam, an embankment has been raised; its height is nine feet; twelve feet at top, with a slope of two to one; its length is 22 chains. I consider the top unsafe in its present state, and would recommend that it be faced with timber, and raised three or four feet higher than the summit level of the river above the dam, at highwater mark.

South of this embankment is an artificial channel which is to be filled up. There are also two waste weirs on the same side of the river, the apron of one of which is 180 feet, and of the other 200 feet. The waste wear farther down stands in need of repairs.

Persons residing at Dunnville, informed me that the river rises from two to three feet, that being the range between high and low water level above the dam. Last winter's ice did no material injury either to the dam or the embankment.

At this season of the year, the waters of the river flow over the dam, but it is believed that about one fourth of the stream is lost in the dry season—a great part of which waste water could be retained, were the dam tightened.

According to the best information I could procure, the space open in the dam at low water, last year, through which the stream passed, was two and a half rods wide and the average depth ten or twelve feet, with a current of five miles an hour. Thence may be inferred the immense extent and value of the water privileges on the canal in a dry season.

Below the dam the river forms one vast harbor four or five miles in length; six hundred feet average width, and of a mean depth of twelve or fifteen feet.

At the village of Dunnville, (so named in honor of the President of the Canal Board, who has greatly exerted himself to bring the undertaking to a successful termination,) the company have already rented water privileges to three saw mills and one grist mill. Arks loaded with flour, pork, and whiskey had arrived from Brantford on the 15th instant at the feeder, and were awaiting the opening of the navigation to cross the peninsula to Port Dalhousie.

The erection and maintenance of this great dam across the Ouse is unauthorised by any Legislative act of this Province. The lands of individuals situated on the banks of the river, for a distance of about ten miles, are overflowed without the consent of the owners, and without recompence having been afforded them, according to the award of a jury of the country; fish are prevented from ascending the river, and neither ark gap, lock nor apron has been constructed or maintained of a sufficient width and depth to admit boats, arks and rafts.

Application might have been made to the Legislature before or since the building of this dam for authority to maintain it during the pleasure of Parliament, and to regulate the mode of compensation to persons aggrieved, &c., but it has not been done. It will be for the Legisla-