

across the entrance of the bay to within a few hundred feet of the shore, where it is suddenly broken off by the passage of the waters that keep the channel open.

This latter part of the formation is due to a phenomenon peculiar to the easterly storm upon the Lake,—the almost invariable and often sudden shifting of the wind to the opposite direction, combined with the outset of the waters of the bay, already raised by the easterly gale above their natural level, consequently falling with the shift of wind.

It must be generally understood, that the N. E. wind raises the water at the west end of the lake more or less according to its violence, and vice versa with the S. W. wind.

Thus at the close of most of the easterly storms, whilst the lake is yet in commotion, and the seas ranging along the peninsula charged with alluvial matter; the wind shifts to the south and S. W. the charged waters are driven in upon the bay of York, whilst the waters of the bay are making outwards to regain the level of the lake, now lowering at the west, with the change of wind; and as the line of conflict betwixt the wave of the wind setting in, and the raised waters of the bay setting out, is at the verge of the bay, here is a consequent deposit. In other words, the waters of the lake charged with sand by the easterly storm, and driven back upon the bay by the shifting wind, are opposed at the entrance by the outseting waters, and there forced to depose their burthen.

This shoal, or bar, would stretch right across the entrance of the bay, and reduce the channel to a few feet in width and inches in depth, sufficient to dribble forth the puny waters of the Don, but for the continued varying levels of the lake (affected more or less by every wind) and the reciprocating action of the waters of the bay producing in the channel a constant oscillation, or flux and reflux, by which a good and deep channel is kept open, and in which I find as much water now as in the time of the oldest surveys, say fourteen and a half feet.

Why the waters make themselves a passage along shore, and consequently keep there the channel of the port, to me is obvious. It is, that being met by the brisk westerly or easterly gale in their attempted passage over the shoal (ever to windward) to assume the level of the lake, setting out with the west wind, setting in with the east, they are dammed back by the ripple of the wave or broken water, and the great body makes