

5 fathoms line, and bearing S.W.  $\frac{1}{2}$  S.  $1\frac{1}{2}$  cables from the Ferry wharf. The points on the eastern side of the Narrows in one, and bearing N.W.  $\frac{1}{2}$  N., lead half a cable to the westward of this rock.

**BEDFORD BASIN.**—There is a clear passage for the largest ships through the Narrows into Bedford basin, which has a depth of 36 fathoms, and is navigable quite to its head. The principal danger in the basin is the Wellesley rock, which has 13 feet on it at low water, and lies about one-third over from the eastern towards the western shore, with the outermost bare rock off the eastern shore in one with a house at the head of the basin, and bearing N.N.W. distant 3 cables. Immediately after passing the Wellesley, the channel is contracted by islets and rocks on either side, to the breadth of  $1\frac{1}{2}$  cables; but it has 9 fathoms in it, and leads to a secure anchorage off the entrance of Sackville river, in 7 fathoms mud.

**Navy Island Anchorage.**—On the eastern side of Bedford basin,  $1\frac{1}{2}$  miles from the narrows, there is a small but secure anchorage within Navy island. The entrance is to the northward of the island, and the only thing in the way is an old wreck, over which there is a depth of 18 feet at low water.

**TIDES.**—The mean of two years' observations, with a self-registering tide gauge at Halifax dockyard, gives as follows, viz. :—It is high water, full and change (the true Establishment) at 7h. 39m.; ordinary springs rise 6 feet; equinoctial springs, 7 feet; neap tides range, 3 feet, and rise to 4 feet above the level of low water springs.

The true Establishment (or time of high water on the day when the sun and moon are on the meridian together for) the year 1852 was 7h. 36m. after the moon's transit. The vulgar establishment (or time of high water on the full and change days) 7h. 49m., being the mean of fifty inferior and superior or a.m. and p.m. transits; but the diurnal inequality, aided probably by winds, caused the vulgar establishment to vary from 8h. 17m. to 7h. 20m. after the moon's transit.

The rise also is greatly influenced by the winds, southerly winds causing high, and northerly winds low tides; and if the winds chance to act in accordance with the diurnal inequality, the rise of the morning and evening tides of the same day may differ to the amount of a foot, or even more in extreme cases. From the above-named causes, the rise of spring tides varies from 5 to 7 feet, and of neap tides from 4 to 5 feet above the ordinary low water in spring tides. Extraordinary spring tides, aided by strong southerly winds, have risen 8 feet, and extraordinary neap tides only 3 feet, above the average low water in spring tides.

The ordinary rate of the tide stream nowhere exceeds half a knot.

**DIRECTIONS.**—The coast in the vicinity of Halifax is of moderate height, the hills near the shore being seldom 200 feet above the sea. To