

*Burga Water* (see Plate CI.) lies about 3 miles south-east of Sandness. It is shaped roughly like the letter T, the stem of the letter running nearly north-west to south-east, the cross-stroke at right angles to it at the south end. There are low hills to the north-east, and higher hills south-westward. *Burga Water* is one of an extensive chain of lochs, forming one of the largest lake-systems in Shetland, of which, however, only two lochs could be surveyed. Its length is fully half a mile, and the greatest width, across the cross-piece of the T, is very little less, viz. five-twelfths of a mile. The contours of the bottom are somewhat irregular, the 10-foot contour only nearly following the shore line. The 20-foot contour zigzags from side to side of the loch, unless we regard the various soundings on which it depends as isolated. Near the south end is the maximum depth of 31 feet.

The superficial area is 78 acres, the mean depth nearly 13 feet, and the contents 42 millions of cubic feet. The chief sources of the loch are the Burn of Cattikismires from the west, and the burn from Mousavord Loch (not surveyed). Gibbie Laws burn flows from the east corner,  $1\frac{1}{2}$  miles south-eastward into Voxterby Loch. The area draining into the loch slightly exceeds 2 square miles. The islands at the south end are all of rock; there is rock exposed on the promontory on the west shore, and the channel leading to the little loch on the east is choked by rock and stones, so that it could not be entered.

On the date of the survey, July 21, 1903, the surface was 115·65 feet above sea-level, the water being low at the time, and liable to rise 3 feet higher. On August 27, 1877, the Ordnance Survey officers found the elevation to be 116·8 feet above the sea. The range of temperature was 2°·4 Fahr. :—

Surface ... ..	56°·8 Fahr.
5 feet .. ..	56°·1 ..
10 „ . . . .	54°·8 ..
15 „ . . . .	54°·6 ..
25 „ . . . .	54°·4 ..

*Loch of North-house* (see Plate C.) is a loch of moderate size in Aithsting, about a mile north of Aithsting church. Its general form is peculiar. There is a main triangular body, with the apex to the south, from which a narrow arm runs to the north-west. The two portions are separated by a gravel bar, at the north end of which there is rock. There is also a bar of rocks near the outflow. The narrow portion west of the bar has a depth of 7 feet, and is almost flat-bottomed. In the main loch the maximum depth of 13 feet is at the north end, close to the gravel bar, and from there it gradually shoals to the south. The total length is five-sixths of a mile, the greatest breadth one-fifth of a mile. The mean depth is  $6\frac{1}{2}$  feet, the area about 58 acres, and the volume 16 millions of cubic feet. The drainage area measures about half a square