

Current Monitoring - Old Hall Point and Cobmarsh Island, 16 June 2015

Introduction

Measurements of current speed and direction, and overall water depth were taken on a spring tide on 16 June 2015 at: Old Hall Point, off the south shore, outside the North Channel (51°45,855- 000°53,494), and Cobmarsh Island, off the south shore at Mersea Fleet (51°46,181- 000°53,928) (see **Figure 1**). This was carried out to obtain baseline data prior to the proposed placement of recharge material at these locations. Immediately post placement, monitoring will be undertaken at 30 minute intervals to compare with the baseline measurements to monitor any changes in the recorded parameters. Thereafter, monitoring will be repeated annually over three years.

Survey method

A Valeport model 106 was deployed from the side of a boat at a depth 1 meter from the surface, between 09.30hrs and 15.00hrs. Figures were recorded manually.

Conditions

Conditions at the time of the survey were as follows: high tide at West Mersea 12:53; wind force 3 East South East; sunny.

Old Hall Point

The data shows that a maximum current speed during the flood tide was achieved at 12:15 at 0.243 M/S (0.472) Knots roughly 35 minutes before high water. The ebb tide as expected was a lot stronger and achieved a speed of 0.444 M/S (0.863) Knots at roughly 60 minutes after high tide. It was noted that the ebb tide in this location lost power very quickly as the existing recharge sand bank became dry roughly 300m to the west. See **Figure 2**.

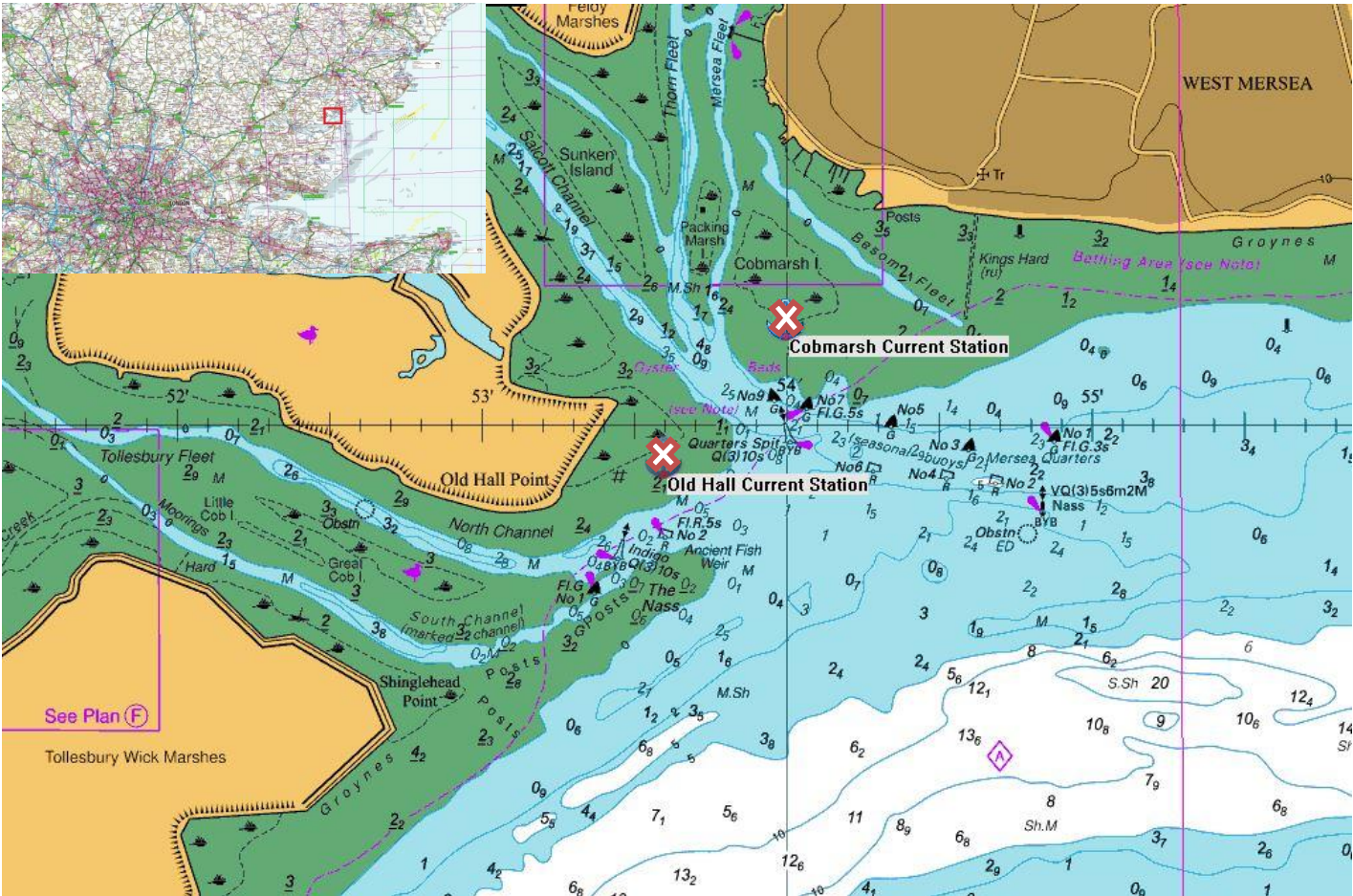
Cobmarsh Island

A relatively strong flood tide was observed at this location with a maximum speed logged at 45 minutes before high tide at 0.434 M/S (0.843) Knots.

A strong ebb tide was logged at 0.517 M/S (1.00) Knot, 70 minutes after high tide which was to be expected as several main channels drain close to the current meter location.

A marked current “edge” was observed 30 meters to the south of this current station.

Figure1



The above shows the current meter locations  for both Old Hall Point and Cobmarsh Island.

Figure 2

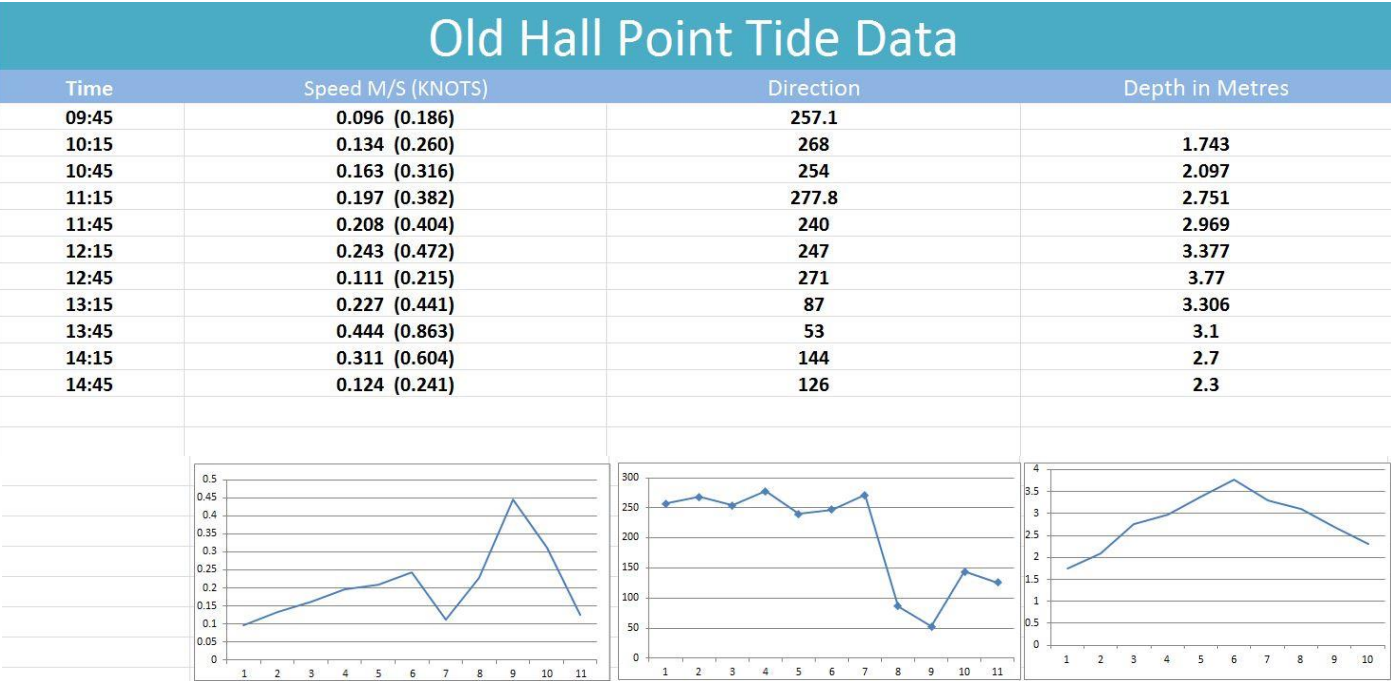


Figure 3

