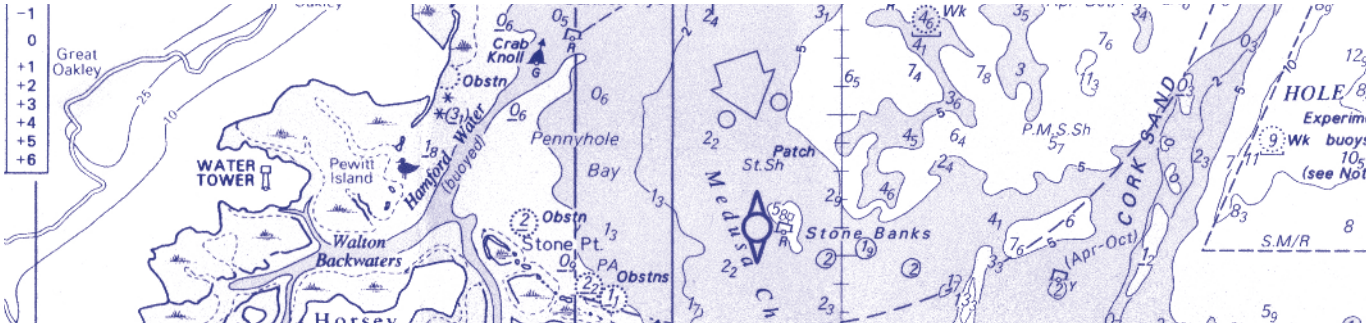
Seamanship Notes

Working out depths



What are all those little numbers on the chart, and why are some underlined?

The numbers (such as 3_5 and 4_2 etc.) show the depth at **low tide** in various places. The numbers used to be in fathoms and feet, but on modern charts they are in metres and tenths of metres. Underlined figures (like this: $\underline{1}_2$) show the drying **height** of a rock or a sandbank, when it is uncovered at low tide.

How can we find out how deep the water is exactly where we are?

We carry a lead-line which is a specially marked length of light rope with a lead weight at the end to take soundings of the depth. An echo-sounder is an electronic device giving the same information.

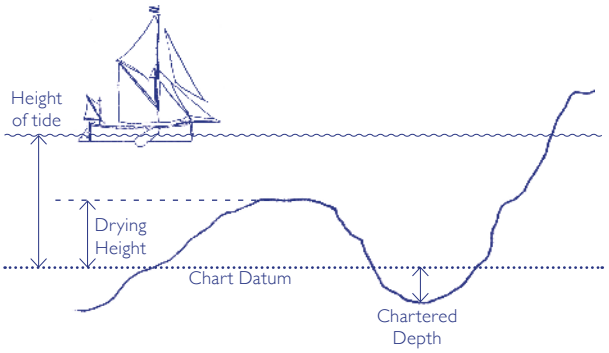


Chart Datum is the lowest sea level likely to occur under average conditions

How do we know if we can take a short cut over a sandbank at high tide?

The chart gives us a low-tide picture of the area, when the sandbanks are uncovered by water. At other times there might be several of metres of water over the sandbanks – which is easily enough for a barge to get safely across. But if we misjudge it we could run aground. We use a tide table to work out how much water there actually is over the sandbank when we want to cross it.

Tide tables tell us the height of every low and high water. With this information can work out how much water there will be over the sandbank at the time we want to cross it, for example at high water on Friday 14 June.

Friday 14 June

HW	LW	HW	LW
00:21	06:25	12:42	18:57
4.5m	0.6m	4.6m	0.2m

4.6m	–	$\underline{0}_6$	=	4m
Height of tide at high water		Drying height of sandbank		Amount of water over the sandbank

This shows that at high water there will be 4m of water over the sandbank, which will be plenty!

But remember that if you do run aground by taking a shortcut at exactly high water, it will be 12 hours before you can float again. If the tides are declining from 'springs' (very high and very low tides) to 'neaps' (more moderate tides) then you could wait a fortnight before there is enough water to get off the sandbank!

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