

## Playing the Tidal Streams off Cowes

One certainty for tidal streams in confined areas such as the Solent, where tidal streams are pretty fast compared to, say, the south coast of Ireland, is that the tide will run faster in deeper water. If at all possible one does not want to be fighting a contrary tide in the deep trenches left over from when the Solent was a river, a situation that could be likened to going the wrong way up an escalator. Thus roundabout routes in shallow water are often found to pay, especially in light airs. One of the great delights of sailing in the Solent is the possibility of riding a favourable eddy whilst others struggle against a contrary spring stream. One feels a sense of achievement as the others fade into the haze behind. In a race, the first yacht to pick up the eddy may be long gone by the time others discover it, so it is most helpful to know how and where eddies form.

In simple terms, an eddy will form on the downstream side of a promontory, moreover the larger the promontory and the faster the main stream, the more pronounced the eddy will be. Initially an eddy forms weakly close to the shore where the depth may be too shallow to take any advantage. As the main tide develops in strength as time passes the eddy will gradually strengthen and spread further out to sea. With very strong tides, and consequent very strong eddies, a second eddy can form inshore of the first that runs in the direction of the main tidal stream. The tide line, which is the interface between the main stream and the eddy, is usually recognisable as a stream of more turbulent water. Unlike sailing in a contrary tidal flow, when it pays to keep in as shallow water as possible, the strongest flow of the eddy will be nearer the tide line. It may be that the eddy that forms on a spring tide will not form at all at neaps, though for those beating against a foul tide there will still be an advantage in sailing in a slacker stream where the spring tide eddy develops. Finally one should not forget that the direction of the tidal stream changes along the shore first, so compounded by an eddy, the shore stream will run faster than the developing main stream for up to an hour after the main tide has changed.

Running aground can be a heavy price to pay for exploiting an eddy, so those with a penchant for using favourable currents near the shore need to know what hazards lie beneath the surface. In many cases a close watch on the echo sounder is all that is needed to avoid encountering the seabed but there are places where a little local knowledge is useful, and Cowes is definitely one of these.

Just west of the entrance to Cowes harbour, off The Green, there is an eddy that develops on the flood tide, which at one time was known as Uffa's Eddy after the old Solent master Uffa Fox. Once well developed, the eddy forms out in deeper water, however one may want or have to go close inshore, for example when going to windward. It is worth knowing that by keeping to seaward of the transit between the old Egypt Point light structure and the statue with a lion semi-rampant off the New Holmwood Hotel, one keeps clear of Grantham Rocks that pop up from otherwise quite deep water. Useful though Uffa's Eddy is, it comes to an abrupt end at Egypt Point, and those who have the option to start on the other side of the Solent may now have a significant advantage. It will usually pay to go on the north shore if the windward mark is further west than Saltmead.

Should circumstances dictate the use of the Island shore, less tide will be found inside Gurnard Ledge, but this can be a tricky route with a danger, towards low tide, of bigger yachts being unable to cross the ledge at its western end. Race officers usually set courses that do not allow this situation to occur, but from time to time they do. For example in 1981 about a quarter of the Admiral's Cup fleet went aground on Gurnard Ledge. To the west of Egypt Point on the Solent flood the tide is still strong and adverse nearly everywhere along the Island shore. However it should be remembered that the strongest tide of all in the central Solent, nearly four knots at extreme spring tides, is well offshore to the north of Gurnard Ledge buoy. Of course even stronger tidal streams can be found in the west Solent off Hurst Point.

At the height of a Solent ebb tide, an eddy or slack tide forms in Gurnard Bay and it will invariably pay to keep in the eddy when going to the east provided, of course, one can clear Gurnard Ledge. To achieve this one needs to be precisely sure of the location of Gurnard Ledge, as Gurnard Ledge buoy is too far out to provide anything more than a rough indication. A good strategy is to motor out to Gurnard Bay one calm day, perhaps when the start has been postponed through lack of wind, and establish one's own transits for the eastern end of the ledge. It has been known for lobster pot buoys to be laid on Gurnard Ledge and, when these are laid, the task of knowing the whereabouts of the ledge is made much easier. Permanent transits are, of course, more reliable. At the west end, Baxter's buoy marks the approximate position of deeper water, but the location of Baxter's buoy changes slightly from year to year as the buoy is re-laid every spring. To the east of the entrance of Cowes harbour the inshore tidal streams deserve a little attention as eddies form at the promontory. Towards the end of the main flood tide a west going eddy forms in the mouth of Cowes Harbour and occasionally advantage can be taken of it in spite of shallow water and course restrictions such as Prince Consort and Snowden buoys. These are designed to keep racing yachts away from the harbour entrance after the hefty racing yacht Prospect of Whitby creamed in and managed to dismast an X boat at her mooring!

In addition, as one should expect, an eddy forms in the shallow water to the east of Castle Point and gradually spreads out to deeper water as the rate of the tidal stream develops. On a flood tide the direction that the yachts anchored in Osborne Bay indicates when the eddy is running. The prevailing wind being what it is, one is often approaching Castle Point from the east against the wind. On closing the point, against the tide, the wind becomes more and more gusty, the lulls matching the gusts, and one has to balance the advantage of slacker tide against the disadvantage of a wind of erratic strength. The best solution is usually to sail just on the inshore side of the tide line between eddy and mainstream and at the point itself go in as close as one's draft allows. In the case of small sailing vessels with low rigs and shallow drafts it can be possible to sail too close to the trees and lose the wind altogether, especially at high tide. Going in close will lead to some stressful moments when the wind dies but overall one will come through on top, except when there is a deal of south or south east in the wind. In this situation there will never be sufficient wind inshore and it will always pay to stay out in the strong contrary tide. Once past Castle Point the wind steadies and the tidal stream becomes slacker, but when the view of Ryde Promontory is lost behind Castle Point on an inshore tack, someone's eye should be fixed on the echo sounder, as the Shrapel mud is not far off. Incidentally, when just laying Old Castle Point on port tack in a fresh breeze, it can often pay to change to a smaller headsail just for the short beat to the finish.

Some argue that, because of the whopping tidal stream, Cowes is a 'hell of a place to sail'. However, for those who have learnt to play the tide to their advantage it is a reason to keep coming back.

## ILLUSTRATIONS

1. Grantham Rocks need to be avoided when working Uffa's Eddy.
2. Egypt Point light structure in line with the semi rampant lion stature clears Grantham Rocks.
3. Gurnard Ledge, looking south.
4. A transit between the Woodvale Hotel and the Gurnard Sailing Club marks the east end of Gurnard Ledge.
5. A yacht with the spinnaker hoisted over the stern in a successful attempt to evade the clutches of Gurnard Ledge.
6. The Shrape in the foreground with Old Castle Point behind and the significant Ryde promontory in the distance.