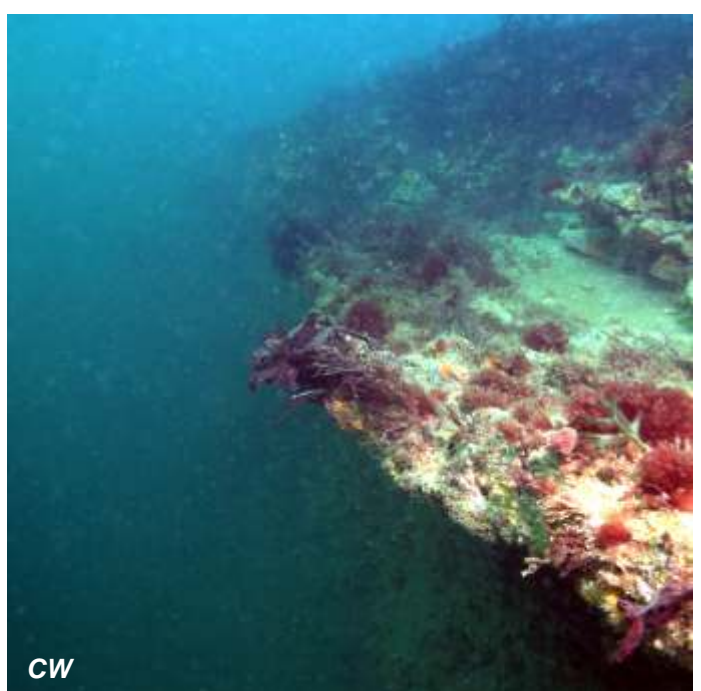
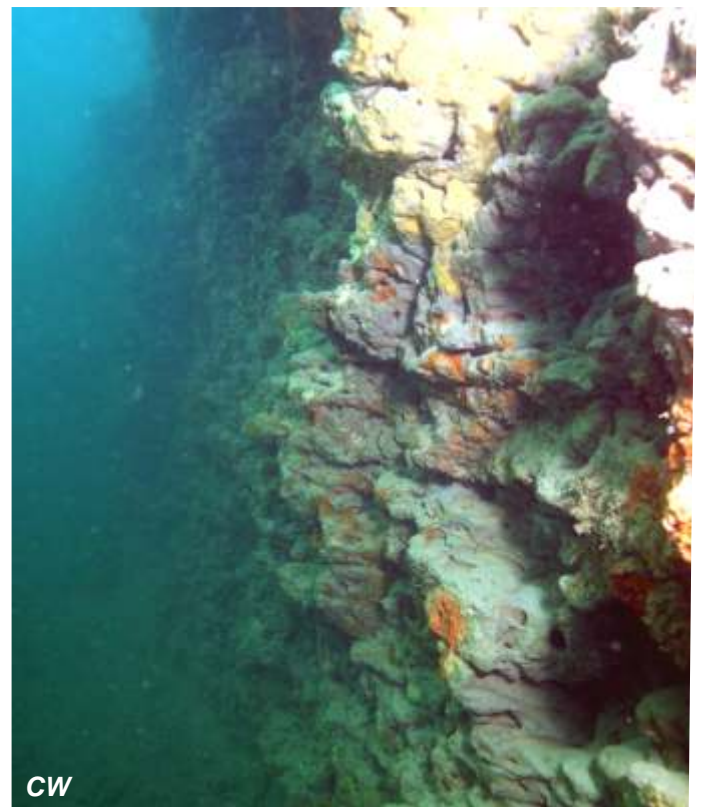
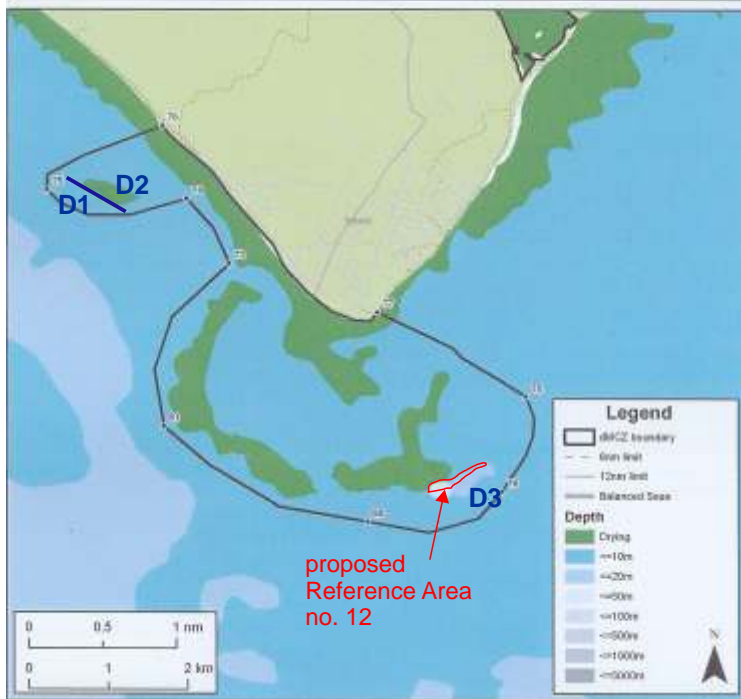


Selsey Bill and the Hounds draft MCZ Mixon Hole draft Reference Area

Seasearch Site Surveys 2012

This report summarises the results of surveys carried out in the proposed MCZ and Reference Area by Seasearch divers during the spring and summer of 2012. The aim of the surveys was to add detail of the habitats and species found within the area to support the designation process. Particular attention was paid to the Habitat and Species FOCI identified in the Ecological Guidance on the designation of MCZs. Surveys were carried out covering the two main features of the area, The Mixon Hole and The Hounds reef but unfortunately poor weather conditions prevented survey of any other features within the area.

Selsey Bill and the Hounds dMCZ no 25.2



Physical features of the Area

The boundary of the two proposed conservation zones is drawn tightly around the rocky features immediately off Selsey Bill. The geology consists of limestone overlying grey clay and the Mixon Hole represents the north side of a drowned river gorge which is kept open by the strong tidal currents through it. The north face of the hole is a clay cliff, vertical in its upper parts, from 5 -20 metres below sea level (photo above right). At the top of the cliff there is an overhanging limestone cap which juts out over the softer clay beneath (photo right).

At the base of the hole is a mixture boulders and cobbles of both clay and limestone fallen from the cliff above. As you move away from the cliff the seabed is increasingly dominated by empty slipper limpet shells.

The Hounds is a similar clay and limestone feature at a smaller scale with the cliff face generally about 2m high.

Features of the marine life

At both the Mixon Hole and the Hounds the shallow, upward facing, surfaces of the limestone cap are covered in a rich turf of red and brown seaweeds and sponges (photo right). There are few kelps and the largest seaweed is the non-native, invasive wireweed, *Sargassum muticum*, together with pod weed *Halidrys siliquosa*. There is a wide variety of smaller red seaweeds including branching coralline species. Amongst the seaweed turf are breadcrumb, sulphur and goosebump sponges.



At the base of the Mixon Hole the fallen limestone and clay boulders and cobbles are quite different. The clay remains bare and uncolonised whilst the upward facing parts of the harder limestone are covered in a mixed turf of sponges, hydroids and bryozoans (below).



The face of the clay cliff at both sites is often relatively bare as it is constantly eroding. This is exacerbated by the presence of piddocks, bivalve molluscs which bore into soft rock and weaken it, eventually causing peices to break off and fall onto the flatter surfaces below. The piddock holes can be seen in the photo to the left, which is from The Hounds. Here the cliff also has carrot sponge and a short hydroid turf, growing on it. Elsewhere there are encrusting bryozoans and worms either forming a complex mass of tiny tubes over the surface or other species boring into the soft clay. Most of the encrusting life is on the upper part of the cliff. Lower down the surfaces are largely bare, with the piddock siphons evident (below).



At The Hounds, where the lower surfaces are much shallower, there are pavements of grey clay with piddocks burrowing vertically downwards.

The piddock shells themselves are not often seen as they are within the clay when alive and are extremely fragile so do not last long as empty shells. In the photo to the right a dead shell can be seen partly emerging from a burrow. This is the common piddock, *Pholas dactylus*.

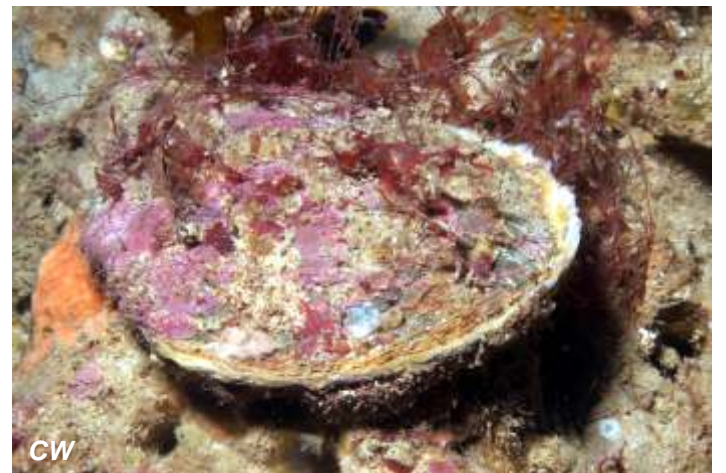


The lower surfaces of the clay, where it is less cliff like, does provide a habitat for mobile species. These include edible crabs (photo right), velvet swimming crabs (below), spider crabs (both large and small) and other smaller crabs and squat lobsters. We did not see any larger lobsters and these and the edible crabs are exploited by potting, particularly at the Hounds where tidal conditions are less extreme.



Also present at both sites in small numbers were native oyster, *Ostrea edulis* (below), one of the priority species to be protected within pMCZs. These are only frequently seen by divers in the eastern English Channel and never in large numbers.

In the bottom of the Mixon Hole, lesser spotted catsharks (below) were frequently recorded. Other fishes present included ballan wrasse, corkwing wrasse, and smaller species making use of borings and crevices, such as tompot blennies, black gobies and long-spined sea scorpion.



Other mobile species present included painted topshells, common whelk (below), stingwinkles, netted dogwhelks, arctic cowrie and cuttlefish.

Two rarely seen fishes in these waters were recorded. In April there was a male lumpsucker at the Hounds. Lumpsuckers are seen inshore during the spring breeding season but rarely outside it. In September there were up to 6 grey triggerfish, *Ballistoides capricus* (below right), seen along the overhanging lip at the top of the Mixon Hole cliff. These are a southerly species which occurs in our waters in late summer but probably does not breed here.



Human Uses:

The main uses of the area are potting for crabs and lobster, angling and scuba diving. All are limited by the exposure and tidal streams. The Hounds reef was extensively potted at the time of both of our surveys in April and July 2012. There is much broken clay at both sites but it is not possible to say how much of this is due to natural erosive processes and how much to human activities.



Benefits of Protection:

The area contains what appears to be unique habitat in the English Channel in the form of the 20m high clay cliff on the northern side of the Mixon Hole. This feature is already prone to natural erosion (left) due to piddock borings and strong tidal streams but since it contains soft rock could be easily physically damaged by bottom fishing activities. The same can be said for the, less dramatic, clay features at The Hounds. The boundary has been tightly drawn and does not include any seabed that would be suitable for trawling or dredging. It excludes a number of other sites which have previously been identified as of conservation interest - the Bracklesham Balls and the Outer Mulberry and excludes most of the area of geological interest, the fossil beds in Bracklesham Bay. In terms of species it does not include sites from which FOCI species such as seahorse and native oyster have been recorded close to the shore on the eastern side of Selsey Bill. There would be benefit in extending the area, but the core area currently proposed would be a start in recognising its importance..

This report has been written by Chris Wood based on Seasearch survey records made by Chris Wood, James Lucey, Charlotte Bolton and Fiona Ravenscroft, and observation records made by Belinda Vause and Tim Mapstone. Photos by Chris Wood and James Lucey. Seasearch would like to thank the volunteer divers for their records and also Mulberry Divers for taking us to the sites. Report published by Marine Conservation Society for Seasearch www.seasearch.org.uk



Snakelocks anemone in current



Sulphur sponge and red seaweeds



Bottom of the Mixon Hole with slipper limpets and barnacles



Hydroid turf