POOLE HARBOUR

AN IRON AGE PORT

Mike Markey, Eileen Wilkes & Timothy Darvill

Before the Romans, it is assumed that there were no ‘built’ ports in Britain, and that when ships arrived, they beached on the sea shore or river bank. Now however, an artificial Iron Age mole or jetty has been discovered at Poole Harbour, the first ever found.

In the Iron Age, several major ports were developed along Britain’s southern coast, all involved in trade with Gaul. The best known is Hengistbury Head, on the south side of Christchurch Harbour, which was excavated by Barry Cunliffe in the 1980s. Professor Cunliffe later excavated what was probably a similar site at Mount Batten, Plymouth, while Wheeler once suggested that there might have been an Iron Age harbour at Lulworth Cove.

Less attention has been paid to Poole Harbour, despite the numerous finds and extensive occupation areas recorded since the 1950s. Much came to light when the south Dorset oilfields were scaled up by British Petroleum in the later 1980s. Recent work provides a clearer context for these finds, and shows the existence of major prehistoric harbour constructions on a scale hitherto unknown along the Channel coast.

Poole Harbour lies about half way along the south coast. It provides a starting point for the shortest crossing to the northern coast of France; Normandy is just 110km away as the gull flies. Today, Poole boasts of being one of the largest natural harbours in the world. But in later prehistoric times sea level was as much as three metres lower than today, with corresponding differences in the position of the shoreline. To promote new research, the Poole Maritime Trust in 1998 established the Poole Harbour Heritage Project (PHHP) with the aim of producing a new history of the harbour.

One of the first jobs was a re-assessment of the Cleavel Point area in the southern part of the harbour. Here a submerged structure known as the Green Island Causeway rather tantalisingly linked the archaeology of the modern shore with South Deep, one of the main channels in the harbour.

The Green Island Causeway has in the past generated a great deal of speculation but little...
Aerial view of Cleavel Point and the south end of Green Island with the recorded lengths of mole shown in red and geophysical anomalies superimposed. Base photo, Dorset County Council.

fact. Back in the late 18th century, the Dorset antiquary John Hutchins was perhaps looking at the causeway when he wrote of the remains of a bridge linking Green Island with the mainland. In local folklore the causeway is commonly associated with a chapel said to have existed on the Island, although no trace of a chapel has ever been found. The approximate position of the causeway is shown on Admiralty Charts, and being a submerged feature, many small boats have fouled their rudders and propellers on it. In the summer of 1959, a group of Boy Scouts and divers from the Taunton Sub-Aqua Club made a survey of the causeway and excavated three small trenches. They showed it to have a fairly level surface and that it was in fact two structures, one projecting north from Cleavel Point, the other south from Green Island, with a gap of about 230 feet (70m) between. More significant still, they found cut tree-trunks within its stone and rubble core. Sadly, these early investigations were not followed up.

The present campaign began in 2000 with a new survey by divers from the Poole Bay Archaeological Research Group. After two seasons of intensive probing and measuring, the main features of the structure can now be understood. The two parts, technically moles, face each other across South Deep where the channel has up to ten metres of water. The moles are not on exactly the same alignment, but close. In both cases the top is about one metre below the level of modern Mean Low Water Spring tides. The southern mole is about 8m wide, has a flat upper surface 160m long, and stands 7.4m above the seabed adjacent to South Deep. It ends 40m short of the modern shore, but with a lower sea level, would have abutted an earlier shoreline. The northern mole is similar and runs for 55m. It stops well short of the modern Green Island shore, but again probably linked with an earlier shoreline. One remarkable feature of this mole is that the western (in-shore) side is more or less vertical with a depth of at least two metres alongside.

Visually these moles are impressive. But to find out more about how they were constructed required an excavated cross-section. With only a short interval between tides the only way was to use heavy machinery. Through the kind offices of PHHP member Peter Burt, a Hi-Mac fixed to a floating pontoon was brought onto the causeway for a weekend in August 2001. Guided by markers set up by the diving team, the pontoon was floated over the causeway at high tide and secured by its legs to give a stable working platform. Once the tide had fallen the digging began, and a ten metre wide section was cut across the southern mole about 20m from its end on Cleavel Point.

The cutting showed that the mole was robustly constructed. Wooden piles formed from tree trunks 12–25cm in diameter and up to 1.6m long had been driven into the harbour floor. Irregularly spaced, singly, in pairs, and sometime in threes, these gave an average density of 1.2 piles per square metre. More than a dozen were recovered, and identifications by Nigel Nayling of St David’s College, Lampeter, show that most were of oak, although three were of yew and two of birch. Layers of clay, coarse sand, and flint rubble intermixed with lenses of brushwood, were built up between and around the piles. The surface was made of stone slabs typically 5–10cm thick and 20–40cm across. Some rested directly on the squarered-off tops of the piles. Most of the stone is Purbeck Limestone, but iron-cemented sandstone and chalk is also present. Flint and stone gravel was used as grouting.

Below: August 2001 – view northwards from Cleavel Point towards Green Island with the excavation pontoon in position.
Few finds were associated with the causeway. No pottery was found, but animal bones, some with butchery marks, were identified by Ellen Hambleton of Bournemouth University, including cow, sheep or goat, horse and dog. Part of the upper jaw of an adult human was found in the coarse sand at the very base of the structure. Dendrochronology failed to match samples from the timbers with available tree-ring sequences, so radiocarbon dates were obtained with a grant from the Valentine Trust kindly organized by another member of the PHHP, Sheila Cox. These were very revealing. Samples from the outer wood of three piles yielded dates of 350 BC–AD 50, 410–180 BC, and 360 BC–AD 10 (all 2σ calibration). Together these suggest a construction date for the southern mole around 250–200 BC.

Elsewhere in Poole Harbour, the period 300 BC to cAD 10 is well represented. The main activity at a 10ha site on Cleavel Point, known through geophysical surveys and excavations by Peter Woodward, dates to the later Iron Age, with numerous square ditched enclosures connected by tracks. Similar features were found by Peter Cox and Carrie Hearne on Furzey Island. On-going work by Eileen Wilkes on Green Island shows widespread industrial activity, including shale working and iron smelting. With a lower sea level, Furzey Island and Green Island would have been one large island.

At Hengistbury Head, Barry Cunliffe suggested that boats were hauled onto the beach for loading and unloading. Present evidence suggests that at Cleavel, arrangements were altogether different. Moles were built to a deep-water channel allowing boats to be sailed into sheltered water and tied-up alongside at a well-built quay. The presence of a substantial quay at Cleavel allows the possibility that the remains of seagoing vessels lie buried in the silts and this is one of the targets for future work. At present, we know of one later prehistoric logboat, probably for inland navigation, found in 1964 east of Brownsea Island. Radiocarbon dated to 397–176 BC, it is almost the same age...
and construction as the Hasholme Boat from Humberside (CA 99 and 115).

The scale of the facilities now revealed around Cleavel suggests that here is Britain's first really substantial cross-channel port - the predecessor of today's busy cross-channel ferry terminal. One of the many questions needing further investigation is what happened in the 1st century AD? It has been suggested that activity switched to Hengistbury Head after about 50 BC, but other possibilities must be considered. As water levels in Poole Harbour rose, the facilities at Cleavel would have become more difficult to use. Locally, the solution would have been to move operations northwestwards, farther into the harbour. Finds from Hamworthy, west of modern Poole, have long indicated major activity here from the mid 1st century AD, and this is supported by finds brought to light by recent developer-funded investigations. By the later 1st century AD, this may well be Cleavel's successor, important by then for Roman trade and connected by road to nearby settlements at Lake Farm and Dorchester.
Further Details

Finds from Poole Harbour are exhibited in the Waterfront Museum, High Street, Poole. See also www.poole.gov.uk

There is little to see on the ground or in the waters of Poole Harbour, although fine views over the Harbour can be had from the viewpoint beside the B3351 at NGR S2 004818. A Romano-British villa has been reconstructed in Upton Country Park beside the A35/A3049 on the north side of Holes Bay, Poole (for opening arrangements contact the Waterfront Museum in Poole).

Excavations at and around Cleavel Point and Ower are reported in N Sunter and P.J. Woodward, Romano-British Industries in Purbeck (Dorchester: Dorset Natural History and Archaeological Society, 1987) and P. Cox and C. Heame, Redeemed from the Heath. The Archaeology of the Wytch Farm Oilfield (Dorchester: Dorset Natural History and Archaeological Society, 1991). The wider background to later Iron Age cross-channel trade in central southern England is well summarized by Barry Cunliffe in Hengistbury Head, Dorset, Volume I: the Prehistoric and Roman Settlement, 3500 BC–AD 500 (Oxford: Oxford University Committee for Archaeology, 1987).

The Poole Harbour Heritage Project web-site is available at www.poolemaritime.org/index.html

Bournemouth University's website for work on the Early History of the English Channel is at http://csweb.bournemouth.ac.uk/consci/ehec/

Authors

Mike Markey is an amateur diver with an interest in archaeology. Mike.markey@virgin.net

Eileen Wilkes is a postgraduate research student at Bournemouth University, currently investigating later prehistoric coastal trading sites along the English Channel coast. ewilkes@bournemouth.ac.uk

Timothy Darvill is Professor of Archaeology at Bournemouth University and chairman of the Poole Harbour Heritage Project steering committee. tdarvill@bournemouth.ac.uk

Below: The section string line marks the position of the upper surface of the mole.