NOTE BY J. R. Meares

I have spoken to the forward planning officers at Dover District Council who confirm that the site is identified in the Dover and Western Parishes Plan as having Employment Allocation status. This however is being reviewed as the Dover-wide plan is being prepared and unless current permissions are taken up, or renewals requested, it is likely that the current permissions as they relate to Little Farthingloe will be omitted).

Any member who has a particular interest in this site is referred to the deposit plan para. refs. 3.27 and 3.28.

PETER CLARK on 2
THE DOVER BRONZE AGE BOAT

THE RESEARCH PROGRAMME

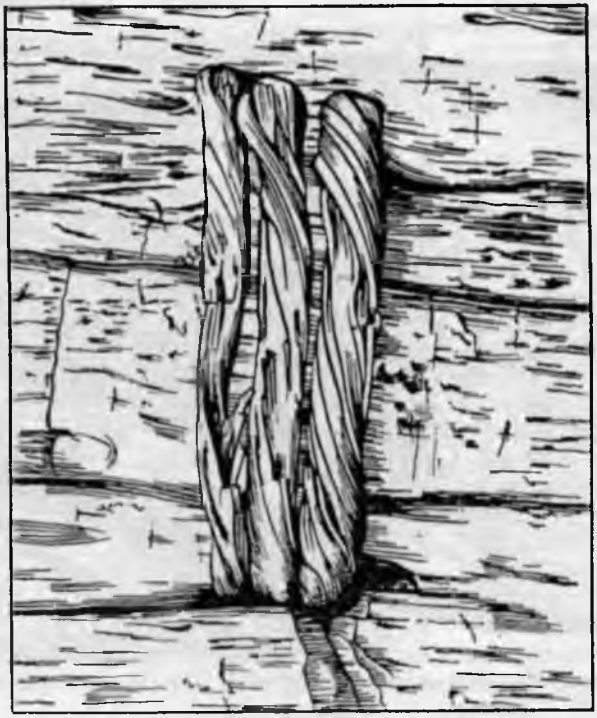
THE DISCOVERY of the Dover Bronze Age Boat in September 1992 was an unexpected and unprecedented find that captured the imagination of people around the world. Buried some seven metres below the streets of Dover, an oak boat nearly 3,000 years old, in a perfect state of preservation, was revealed during the construction of a pedestrian underpass under the A20 at the seaward end of Bench Street.

The story of its discovery and excavation is a dramatic one. A team of archæologists from the Canterbury Archæological Trust, working alongside the contractors and staff from Dover Museum, Dover Harbour Board, English Heritage and many others recorded and lifted the boat in just fifteen days, often working fifteen hour days to retrieve this unique and internationally important find.

Once the excitement of discovery was over, and the boat safely stored in a water tank to inhibit decay, I was asked to prepare a programme of study and research so that we might realise the potential of this remarkable find. This was not as easy as it might appear; no comparable finds had been made which could guide us, and techniques used on other ancient boats were not appropriate, as they were generally much later finds of very different construction. After a great deal of consultation and discussion with a wide range of experts, a six-year programme of study was agreed with English Heritage (who funded both the excavation and the research), involving a team of over thirty specialists. This work is expected to be completed in 1999 with the publication of a major academic monograph on all aspects of the discovery.

In essence, the boat consists of two broad, flat oak planks forming the base of the boat, with two flanking curved planks creating the beginnings of the boat's sides. Further side planks would have increased the depth of the boat, but these had been removed in antiquity. The end of the boat splayed out into a broad "V" which would originally have held a flat board – this, too, had been removed at the time of abandonment. As found, the boat was around 2.3 metres broad and about 9 metres long; the northern end of the boat was not recovered and we can only guess at its original length. Current estimates suggest that we have about two-thirds of the vessel, which would thus have been about 14 metres long. (46 feet).

No metal was used in its construction: the bottom planks were joined by a number of wedges and "transverse timbers" hammered through upstanding



Detail of one of the yew 'stitches' that held the planks together

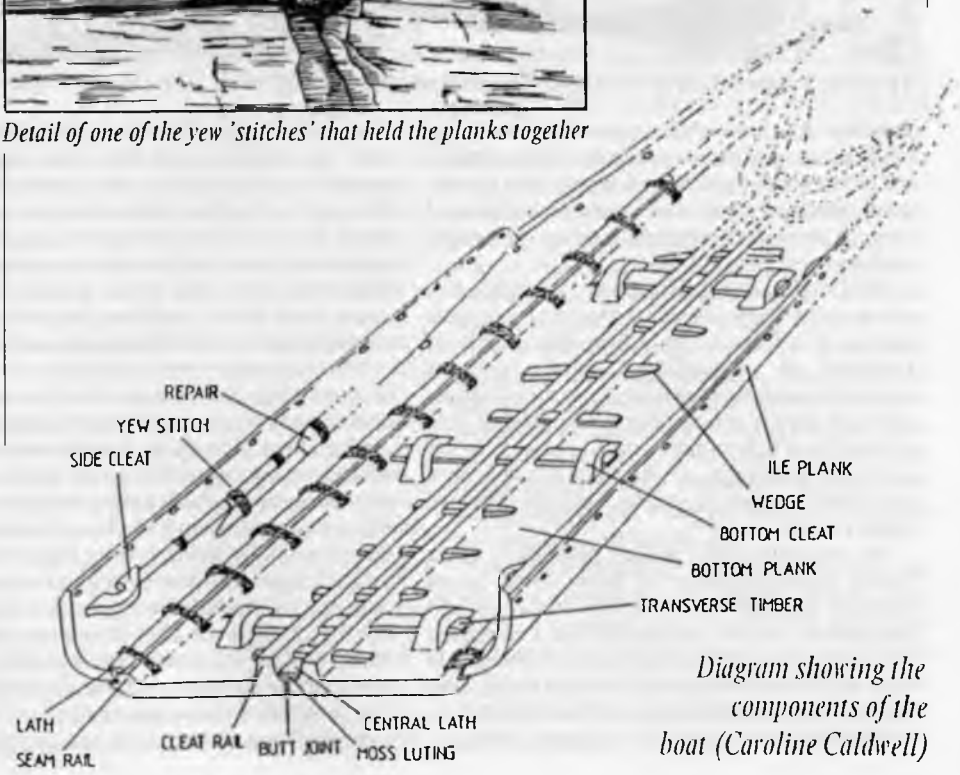
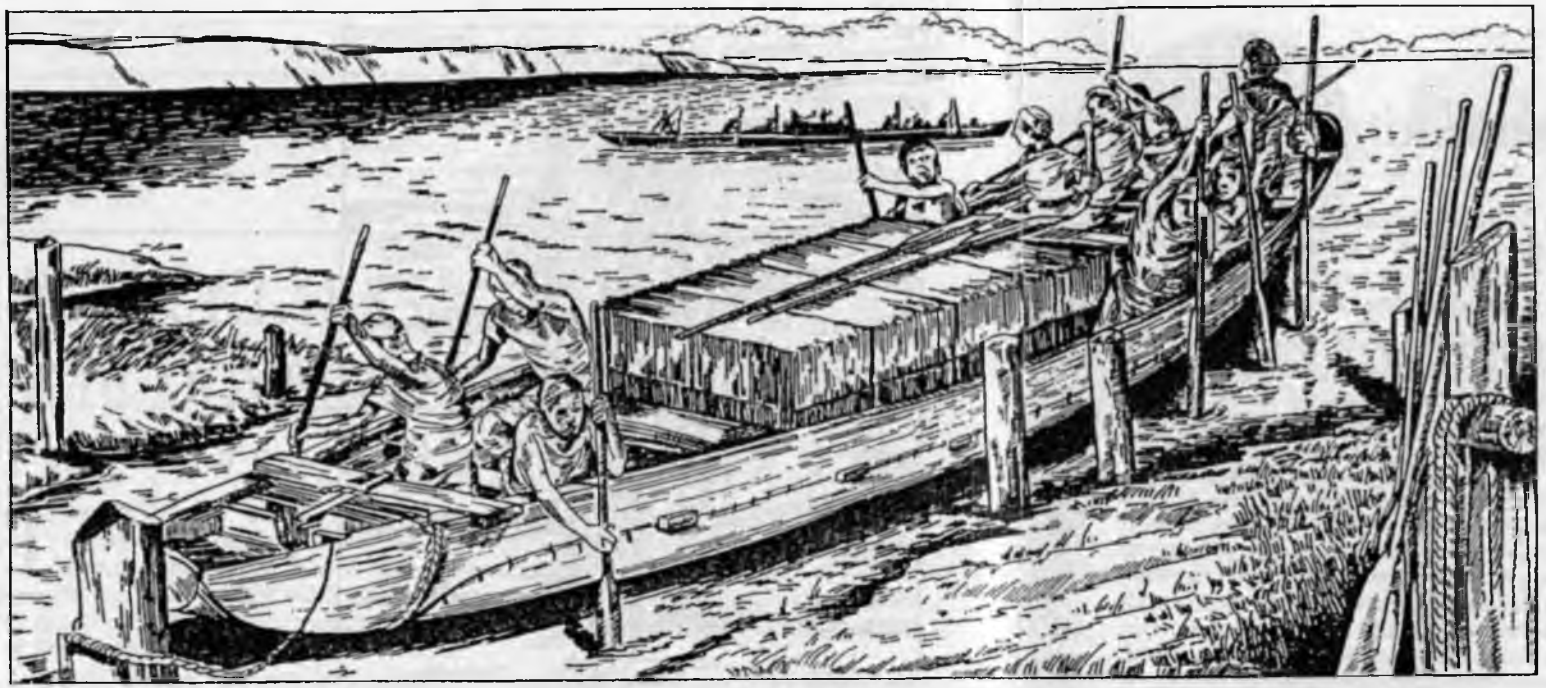


Diagram showing the components of the boat (Caroline Caldwell)



An artist's impression of the Dover Bronze Age boat, published in 'The Observer' (8th November 1992)

wooden rails and cleats, with the butt-joint between the planks covered with moss to make the seam watertight. The curving side planks were "stitched' to the flat bottom with twisted twigs of yew, the seams again made watertight with moss.

This method of construction, though it has some technological similarities with contemporary river boats found in the north of England, is unparalleled in the ancient world. To modern eyes it seems rather strange; the butt-joint running along the medial line of the boat's bottom would appear to be a line of weakness, at the very place where we would expect a strong keel on modern timber boats.

An important part of our study is to get a better understanding of how these joints worked, and how the boat was fashioned and assembled. For this we carried out a construction experiment in the summer of 1996 at Old Park Barracks at Whitfield, directed by Richard Darrah and Damian Goodburn, two of Britain's leading experts in ancient timber technology.

Our problem was to find a suitable tree for our raw materials; 3,000 years ago, tall, straight-grained oaks were commonplace throughout England, but today they are very hard to find even though we planned to reconstruct only a three metre section of the boat! We eventually tracked down suitable trees near Yeovil, and two large logs were transported the 200 miles to Dover by lorry.

Our intention was to reconstruct a mid-section of the Dover Boat using facsimiles of Bronze Age tools, including wooden wedges and mallets (or mauls), bronze axes, adzes, chisels and gouges. The metal tools were all copied from originals kindly loaned to us by Dover Museum, and set into wooden handles especially made for the experiment.

Both logs were first split into two by hammering in wooden wedges; the resultant four half-logs were then fashioned into two bottom planks and two curving side planks. Most of the timber was removed by cutting notches with bronze axes and then splitting off chunks of timber with wooden wedges. Once the crude shape of the planks had been achieved, they were finished off with bronze adzes and holes for the stitches and wedges cut with bronze chisels and gouges. The marks made by our copied tools matched exactly those found on the original boat, proving we were using the same type of tools as those used by the original boatbuilders.

The resultant planks were very thick and sturdy when compared to the original timbers found in 1992. This was because careful study had shown that the Dover boat had been compressed during its long burial, and that originally its timbers were up to 60% thicker; This had been taken into account in the reconstruction. The thickness and weight of the reconstructed planks served as a reminder of the scale and robustness of the original vessel. An interesting aspect of the reconstruction was that the team could achieve a much finer finish with their bronze tools than the original boat builders. We should not question the ability of Bronze Age craftsmen who were clearly great experts in building vessels of this type, but this suggests they were not interested in producing a fine finish; the Dover boat was a utilitarian craft.

When we finally assembled the planks, we could assess the size and weight of the original vessel in a way that could never be achieved by office- and laboratory-based study alone. We hope that the partial reconstruction will one day take its place in the new boat gallery alongside the original discovery, showing how the ancient timbers looked 3,000 years ago.

Of course, there are many other strands of research being pursued; analysis has started on the original form and capabilities of the boat; what water it could travel in, what cargoes it could carry and how many crew members did it require?

Slowly we are unlocking the boat's secrets; a small piece of unworked shale found inside it proves to have come from Kimmeridge Bay in Dorset; surely this is evidence for the range of operations? There is still a heated debate as to whether the boat was sea-going or whether it was just a river vessel. Looking at the size of the boat, and the nature of the River Dour today, it strongly suggests that it was a sea-going craft (and if so, the earliest example ever found in the world!) Wear patterns on the bottom of the boat show that it was regularly grounded; but does this mean that it was beached or did it simply operate in shallow water, occasionally rubbing on the river bottom? There is naturally a great desire to see the boat as sea-going – possibly the earliest cross-Channel ferry, but we must carefully weigh the pros and cons from a scientific point of view. Laboratory analysis of the pollen, molluscs, insect remains and other palæo-environmental evidence from soil samples taken from around the boat have all been proved to be freshwater species. If this was a sea-going boat, why was it abandoned in a fresh water environment? How far away was the sea three millennia ago?

We still have much work to do, but we are learning more with each passing month, finding new questions as we go! This wonderful find, and the vision of Bronze Age life that it willgive us, will be a star attraction of international importance for Dover, but we must wait a little longer for the final story to emerge!