

AND WHAT OF THE SHIP? by Edwin and Joyce Gifford



Saw Wulfing — a half-scale replica of the ship found in Mound 1 at Sutton Hoo, built by Edwin Gifford and the Saxon Ship Project, here seen under sail on the Solent (Photo: Jim Smith)

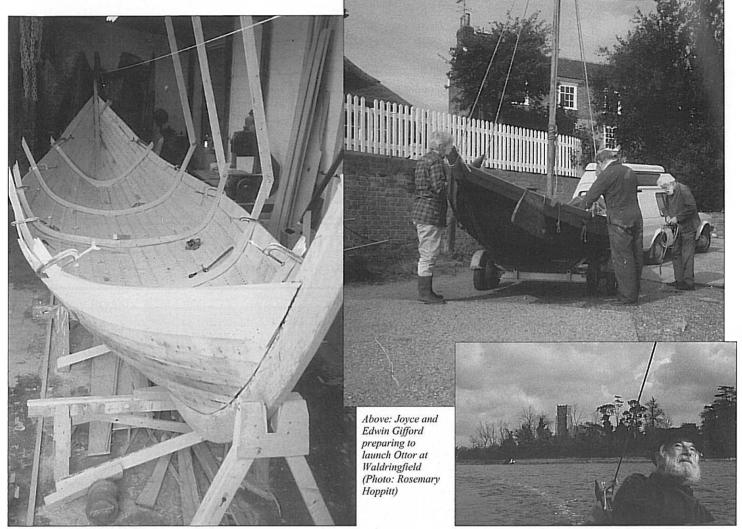
In the years since the publication of the British Museum's definitive work "The Sutton Hoo Ship Burial", much has been written about all aspects of the find and its context except for the biggest and most complex artefact of all – the ship itself!

Was it a sailing ship or a ceremonial rowing barge; what was its range and capability? Was it built only for burial or was it a part of a long tradition of maritime power? Was it buried as an extravagant gesture or as a transport to eternity or as the King's most treasured possession, or was it itself a god? If only the answers to some of these questions could be found it would greatly help our understanding of the Anglo-Saxons' thinking, travelling and power.

Perhaps the splendour of the treasure and the fascinating complexity of the burial rites have diverted attention from what, to a sailor's eyes, is the most astonishingly beautiful and subtle object of them all – the earliest and biggest long-ship in Northern Europe. Even without any timber to handle, the hull shape in the sand reveals a marvel of design for a fast, shallow-draft vessel.

Or perhaps it has been passed over because so little can be learned of the ship's performance in real conditions by theoretical analysis of the hull shape. Naval architecture is an empirical science dependant upon the analysis of data from previous vessels of similar form, of which there are none for shallow-keeled hulls of Saxon shape and very little for square sail rig. Nevertheless it is evident to experienced sailors' eyes that the combination of the firm, mid-ship section (which shows that it is stable and thus capable of carrying sail) with the sharp ends of the hull, should make it a good sailer and certainly much faster than under oars alone.

Practical objections to the possibility of it being a sailing ship have centred on the apparent weakness of the shallow keel, on the lack of lateral resistance and on the absence of sailing gear in the grave. But the vertical loads of mast and sail are so small that they can easily be transferred to the nearest frame by a small mast step, thereby relieving the keel, which, acting with the good planking structure, is adequate for the longitudinal



SæWulfing under construction: the planking is complete but not yet fastened to the frames. Note the two upper strakes in oak (Photo: Edwin Gifford)

Edwin Gifford sailing past Ikenho en route for Snape bridge, aboard Ottor (Photograph: Sam Newton)

strength of this long shallow hull. The sharp ends to the waterlines should give some lateral resistance to help sailing to windward, compensating in part for the lack of keel projection.

The only fully satisfactory way to answer questions about performance and structure is to build a full-size replica, but a 26m ship would be an expensive experiment, and it seemed prudent to start with a more modest craft. The building and testing of a half-scale model is a much simpler matter (1/2 length x 1/2 beam x 1/2 depth = approximately 1/8th of materials and effort), and as the laws that link models to full size vessels are reasonably clear (and applicable to Saxon ships!) this is the best first step.

The authors, living near Southampton, have long had an active interest in Hamwic, the 8thC Saxon town which is known to have had trade links with France. To learn more about this maritime trading, a half-scale model of the relatively beamy 10thC Graveney ship was built in 1988 and this boat, Ottor, has been tested with encouraging results. Much of the Graveney hull timber was preserved and the structure is generally clear, but unlike Sutton Hoo, there was no keel projection whatever below the bottom planking. However, since the keel plank had been carefully finished to a flat surface and has three vertical plugged trenail (wooden peg) holes along its length, it is suggested that it may originally have had a false keel, which had been removed towards the end of its 80 year life. Ottor was built as found and without

the false keel, and fitted with sailing gear of the Roman style which would have been known to the Saxons.

Ottor's first trials were very successful, the boat sailing and steering well and feeling safe and predictable. As expected, the leeway was high (at about 25°), but this was reduced a little by an increase of ballast. The addition of a 21/2" deep false keel reduced leeway to 10°, and speeds of 4.5 knots were measured. Tacking was easy and reliable. By a happy coincidence, a substantial part of a Saxon Tshaped keel was found in the City of London waterside excavations at that time, which was similar to that of the 4thC Nydam boat and this, we felt, justified the fitting of a false keel of the same shape and size. The fitting of a bowline improved performance by flattening the sail.

This year we brought Ottor to Suffolk and enjoyed two days exploring local rivers. We were greeted by Rosemary Hoppitt at Waldringfield before sailing up to Woodbridge and landing, with proper respect, at Sutton Hoo. Later we sailed from Slaughden Quay to Snape Bridge on the Alde, ably assisted by Robert Simper and Sam Newton.

We left Slaughden on the last of a Spring flood tide directly against a light to moderate NW wind. Most of the trip was made under sail, as rowing was needed only in the difficult parts of Troublesome Reach, and the journey took 2 hours 50 minutes. This gives a speed made good to windward (after deducting a generous ½ knot for the last of the tide) of 1 knot. The return, after lunch at

the Plough and Sail, with the wind free and the beginning of the ebb, took only an hour and a half (an average speed through the water of 3 knots). These voyages confirmed the practicality of sailing even full-sized Saxon ships in such rivers as the Deben and the Alde.

The earlier good results with Ottor had already encouraged us to look again at the Sutton Hoo find, which revealed strong similarities with the Graveney ship in methods of construction, the mid-ship section and the underwater shape; except that Sutton Hoo is approximately twice the length but has only 15% more beam. Such a hull would be faster but would probably make more leeway than Ottor and might be more difficult to tack.

Again, the only answer was to build a half-scale model, and this was started in February 1993 following the lines published by the British Museum. Once again we were delighted to see the emerging shape of the hull with its marked sheer at bow and stern. The fine entry and run, with the firm mid-ship section, indicated the probability of a good performance under sail.

Sæ Wylfing (the Sea-wolf's she-cub) was launched in May with a rowing crew of six in a moderate breeze. As expected, she rowed easily, but when we raised the reefed sail the boat leaped away, accelerating sharply to over 6 knots and an oarsman shouted "So now we know!". It is without doubt a sailing ship. Since then five trips have been made in conditions ranging from a flat calm to a fresh breeze, the ship always giving a performance

that exceeded our expectations, particularly in speed, stability and seaworthiness. Tacking was satisfactory in light winds (though not as quick as in Ottor). Leeway was only 12° in light to moderate conditions, but with increasing wind the boat broke out of its furrow in the water and the leeway nearly doubled to 20°. This may be improved by adding ballast and keeping the hull level. We have not yet tried tacking in fresh winds as it is safer and easier to wear round (turn downwind), and as Sæ Wylfing can turn in three boat-lengths, not much ground is lost.

Accurate measurements indicate that under oars (with a mixed ability crew) steady rowing will achieve 3 knots, and a sprint, 4½ knots. Against a fresh breeze with mast down 1½ knots can be achieved. Under sail, in a fresh breeze with one reef close-hauled 4.0 knots can be reached, with 20° leeway. With a wind free speed rises to 6.0 knots.

In these first trips we have sailed with caution, but before next season we plan to fit a strengthened rig that will enable the full crew to sit to windward when we expect to carry full sail in a fresh breeze. This should give us 7 knots, and perhaps 8, with the wind free and 5 knots close-hauled.

Sæ Wylfing has made good one knot direct to windward with full sail in a moderate breeze. With more experience in sail-setting and ballasting this should increase to 1½ knots, which is about the speed the boat can be rowed direct to windward for long spells against a breeze. Much more experience is required to obtain the best response from her (we have 1,400 years to catch up!) and we expect to learn a lot next season.

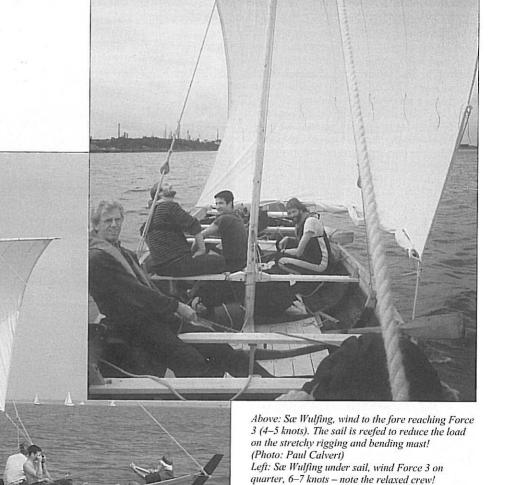
The speed of the full size ship should be approximately 50% more than the model; so it would be reasonable to predict speeds of more than 10 knots in a fresh breeze. Its seaworthiness would be excellent.

Meteorological historians believe that Northern Europe enjoyed relatively stable (hence predictable) weather conditions from about 600 to 1,000 AD, so that sailors could await favourable conditions of wind and tide before starting a voyage. With an experienced crew, an average journey speed of 7 knots could be expected, and the ship could drop down the Deben at dawn in the summer on the last of an ebb tide, catch the flood across to the Isle of Thanet, and be in the Wantsum Channel by mid-afternoon and in Canterbury by dusk, a total distance of about 70 miles. The journey could be continued across to France the next day. Direct voyages between Rendlesham and Ribe in Denmark could be made in three to four days.

So, after this first season of trials we conclude that the ship found in Mound 1 at Sutton Hoo was fast under sail and oars, easily steered and predictable in behaviour. Her very shallow draught was well suited to navigation amongst sandbanks and creeks but she was well able to ride the waves of the Channel and the southern part of the North Sea. She could even make some progress to windward under sail.

Such a subtle combination of characteristics could only have been achieved after a long period of development in regions like East Anglia and Jutland, the only places where this distinctive construction has yet been found.

Dr. Edwin Gifford is a civil engineer and naval architect with a long interest in marine archaeology who, together with his wife Joyce, a geographer, set up the Saxon Ship Project. Based in Southampton, the project has built and successfully sailed a full-size replica of the Saxon boat found in marshland near Graveney in Kent. This year a half-scale replica of the Sutton Hoo Mound 1 ship was completed, named Sæ Wulfing. Initial sea-trials took place in the summer, and we hope that we shall see Sæ Wulfing sailing up the Deben in the middle of June, 1994.



(Photo: Jim Smith)

A DRAMA IN THREE ACTS by Ivan Cutting

It had long been an ambition of mine to tell the story of our own forebears, the original East Angles, from whom we took our name. Not only would I hope to restore some pride in the notion of the Anglo-Saxon, who too often is synonymous only with bad language and racist bigots spreading myths of white supremacy, but also shed light on a period which saw the formation of a nation from a unique clash of peoples. The story of Sutton Hoo itself was clearly going to be central to such a tale, but as I grappled with the problem of presenting such arcane history to a modern audience, it soon became the lynchpin of such a project.

Two years ago the project, the timings, and the writers, began to fall into place. First would come *Hereward*, based around a famous figure and a date, 1066, that everyone could connect with. Second would come a play about the discovery of Sutton Hoo in 1939, a fascinating tale in itself, but which would also lay the foundations for the last play, set in the sixth century and featuring the Wuffings themselves.

Three plays would be written and produced, presented in reverse historical order to provide stepping stones, with each taking a very individual style and produced for a different scale of venue from village hall to mainhouse theatre.

How different could not be better illustrated than by our treatment of Hereward, written by Greg Lyons which toured theatres and town halls from September to November. The play features the last defiant Anglo-Saxon to hold out against the might of William the Conqueror's ruthless army who sank into the heavy bogs of Ely Isle. Since we did not want to sink under the weight of chainmail we have updated it, playing fast and loose with period and place in terms of accent and costume. Hereward himself has a Belfast brogue, James Dean-style jeans and t-shirt, and his allies sport Hells Angel denims and Che Guevara berets as they mix molotov cocktails to thwart a big-bang suited stockbroker William. We hope this gives an ironic portrayal of the kind of allegiances being struck at the time.

The second play, featuring the actual discovery of the Sutton Hoo ship, is being written by Peppy Barlow who lives in Woodbridge, and it will tour village halls after Christmas in Spring 1994. The play stemmed from hearing a talk by Bob Markham (of Ipswich Museum) about the personalities involved in the finding of the treasure. If ever a real situation screamed out as stage drama it was this one. The ingredients are as priceless as the treasure itself: Basil Brown - the local man - doggedly pedalling out each day; Mrs Pretty the spiritualist owner of the site proclaiming she had seen a warrior standing over the mound; the naked ambition of Ipswich Museum; the intervention of the British Museum, the arrival of the bluff Phillips and the loud echoes of toes being trodden upon; the deals made and broken with newshounds of the local and national papers; all happening under the looming shadow of European war. Shadows In The Sand was a



Scene from the Eastern Angles' recent production of "Hereward the Wake"; Martin Belville, Suzanne Rayner and William Haden (Photo: Mike Kwasniak)

provisional title but sounded a bit heavy. We swung the other way and tried Carry On Digging, from the instruction to Basil at the spiritualist meeting. The connotations of farce then overwhelmed the delicate story and interesting characters. Ultimately we opted for the more gentle feel of the Ealing Films with

The Sutton Hoo Mob. We hope it will not offend anyone.

Unlike the authors of the other two plays, Peppy has been able to talk to those who remember the events, and people of the time and their views have helped us to sketch in the real figures of the story. Yet it is a play we are



Basil Brown, who discovered the ship burial, in the Sutton Hoo ship trench during the 1939 excavations (Photo: Ipswich Borough Council Museum & Galleries)

producing not a documentary and so some characters have had to take on details and deeds of others in order to summon up the spirit of adventure and drama that typify the whole story. The most intriguing facts unearthed were connected with the different motives and ambitions of the principle players. Was it the knowledge or the treasure they were hunting? How important was the fact that Mrs Pretty was a widow of only three years and had brought back her husband's body to England in the hold of a ship? To what extent was Basil looking for the child that he and his wife had not produced? How well did the so far unmarried Phillips function outside the confines of an all-male Cambridge college? The complex web of threads seemed to grow as we delved behind the simple story. Moreover the role of this play within the whole project seemed to grow, asking questions about why many of us enjoy digging around in history so much.

The climax to the sequence will be a play written by Kevin Crossley-Holland featuring the Wuffings themselves and the deeds behind the actual sixth century funeral rites that created Sutton Hoo. Professor Carver's theory, so brilliantly outlined in his lectures, that the original ship burial was the last-ditch attempt of a beleaguered dynasty to assert its pagan roots against the growing Christian orthodoxy, provides the drama that matches the theatre in three acts. The Wuffings' desperate act of political flag-waving to assert their identity echoes through the years although Saxon readers might be relieved to hear that we will be performing the play in its proper period and not updating Raedwald into a Gadaffi or an Ian Paisley! Nevertheless, we expect it to have as many modern resonances as the plays of the ancient Greeks still do in our world today.





Ivan Cutting is Director of the Eastern Angles Theatre Company. Based at the Sir John Mills Theatre in Ipswich, the company was founded in 1982 and has established itself as one of Britain's top regional theatre companies. It has a reputation for innovative and imaginative work, and a unique feature of the company is its commitment to taking theatre into the region. The recent production of Hereward has been seen not only in Ipswich, but at nearly forty other towns and villages across Eastern England. The company's other major contribution to theatre is its policy of commissioning new works - and this trilogy of plays covering ground from the sixth century to the Norman Conquest is such an example.

The Sutton Hoo Mob will be opening at Woodbridge Community Hall on 17th February 1994.

The Wuffings (provisional title) will be touring in Autumn 1995.

For regular details of the Eastern Angles' productions and tours, please fill in the enclosed mailing list form or ring 0473 211498.

Left: Mrs Pretty watches the progress of the excavations from her chair (Photo: Ipswich Borough Council Museum & Galleries)

SOCIETY EVENTS

TRIP TO NORTHERN SUFFOLK

by Dr Sam Newton

Our 1993 Excursion began with a visit to Burgh Castle, the Roman Saxon Shore fortress overlooking the great estuary of the Yare, Waveney and Bure rivers. This impressive fortress was known as *Gariannorum*, from which the name of the River Yare is derived. It was a major military base for naval and cavalry forces, part of a chain of Imperial coastal defences set up in the latter part of the third century to protect Britain from North Sea raiders.

The fortress is surprisingly well-preserved, with three almost complete bastioned walls still standing nearly to their original height and enclosing an area the size of several rugby pitches. The absence of the western wall, facing the estuary, is due to its removal by barge for use as building stone. The other walls all show signs of stone removal but original Roman outer facing can still be seen near the south-eastern corner.

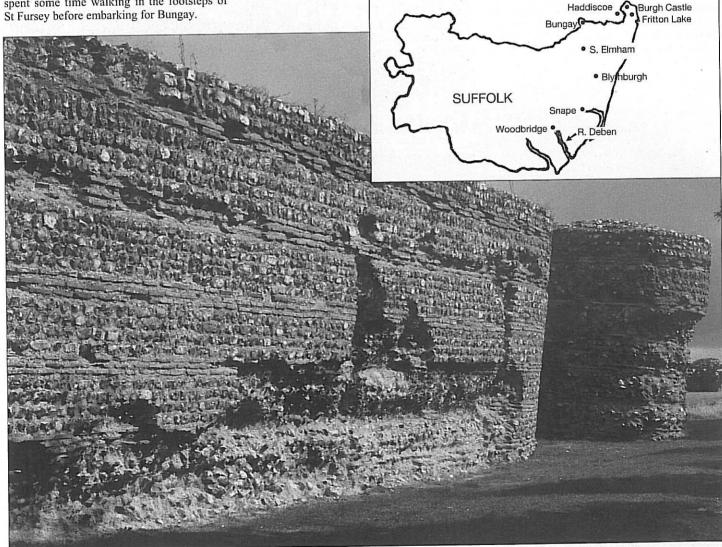
Burgh Castle is of interest to the Society because it was almost certainly known as *Cnobheresburh* during the early Anglo-Saxon period, named by Bede as the site of the minster of the famous Irish mystic St Fursey. This was established around the year 630 under the auspices of King Rædwald's stepson, Sigeberht, who ruled c.630–635. We spent some time walking in the footsteps of St Fursey before embarking for Bungay.



The remains of the former Saxon Shore Fort of Gariannorum (Burgh Castle) lie as a line on the distant horizon (Photograph Sam Newton)

On the road to Bungay, we passed Fritton Lake (formerly known as Gunnhilda's Mere, after the sister of Sweyn Forkbeard), which is overlooked by the site of the Ashby Dell shipburial. We then crossed St Olave's Bridge (named after Olaf Haroldsson, one of the Norse kings who imposed Christianity on Norway), passed the Anglo-Saxon churchtower at Haddiscoe, and arrived at the Waveney fortress town of Bungay.

The ruins of Bungay Castle consist of a pair of thirteenth-century gate towers linked to the



The south-east wall at Burgh castle (Photograph Sam Newton)

remains of an eight-sided curtain wall which surrounds the massive base of an eleventh-century tower-keep. There are also some surviving earthworks from the castle's outer defences, which still dominate the town's street-plan. The Tower of Bungay was one of the main castles of the formidable Norman baron Hugh Bigod who even at the age of eighty was still pugnacious enough to take on King Henry II in the rebellion of 1173–1174.

Bungay was probably one of the strongholds of the Anglo-Saxon earls of East Anglia, whose authority the Bigods inherited as Dukes of Norfolk. Bungay lies at the head of the seven-parish block of Wangford Hundred known as the Duke of Norfolk's Liberty, a territorial unit which appears to have been formed in the Anglo-Saxon period.

The Duke of Norfolk's Liberty lies adjacent to the rectangular group of nine parishes which form the ancient Ferding of Elmham (a farthing or quarter-hundred of the Hundred of Wangford). This territory may represent part of the original endowment of the Wuffing kings to their bishops. The place-name *Flixton* in the north corner of the Ferding seems likely to be derived from the name of the first East Anglian bishop, St Felix.

Deep within the Ferding of Elmham are the mysterious ruins of South Elmham Minster, one of the possible sites of the seventh-century episcopal minster of *Helmham*. The Minster is open to visitors, thanks to Mr and Mrs J. Sanderson, via the delightful St Cross Farm Walks at South Elmham Hall. At this moated former country palace of the Bishops of Norwich, we were welcomed by local archaeologist Mr Mike Hardy. He invoked the erstwhile glories of the fourteenth-century Bishop's Palace before guiding us down to the valley west of the Hall.

Here the ruined Minster stands in a clearing within a large wooded square enclosure protected on all four sides by a rampart and ditch. Mr Hardy told of the excavations he had conducted on the site and argued convincingly that this romantic ruin is the remains of an eleventh-century minster-church built by the Norman Bishop Herbert de Losinga in an attempt to reclaim something of Elmham's earlier Anglo-Saxon episcopal prestige. This Norman attempt to appropriate Anglo-Saxon history seems to have been ill-founded for the site was vulnerable to floodwater from the nearby Beck, which may partly explain the need for the rampart and



Thirteenth-century gate towers mark the former entrance to Bungay Castle (Photograph Sam Newton)



Romantic silvan setting of the ruins of South Elmham Minster (Photograph Sam Newton)

ditch. Moreover, this was almost certainly not the site of the original seventh-century minster, which has been identified by Mr Hardy in the course of extensive fieldwalking research on the higher ground to the east.

The Society is indebted to Mike Hardy and to Mr and Mrs Sanderson for a fascinating afternoon.

The final visit of the day was to Blythburgh

Church. We approached Blythburgh from the north via Bulcamp, where King Rædwald's nephew Onna, father of saints, was killed in battle by Penda of Mercia. A seventeenth-century traveller's rest now stands on the site where Onna is believed to have fallen. He was buried across the river at Blythburgh, most probably in the church, where his bones were venerated for centuries.

SOCIETY EVENTS

GUIDING AND MEMBERSHIP 1993

by Andrew Lovejoy

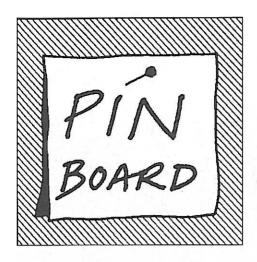
Membership of the Society stands at 166 Ordinary members, 73 Life members and 11 overseas members. Numbers fell when the excavations terminated in 1991; since then there has been a recovery and correspondence that I receive shows that the Society generates a lot of interest. It has been nice to see so many members of the Society visiting the site this summer.

Sutton Hoo is looking very pretty these days. The grass has been regularly mown and a rabbit-proof fence now encloses the royal cemetery. The weather this summer has not been subject to extremes and indeed the word mild is a fit description for those perhaps

expecting something different at such an exposed place. Into this setting nearly 2000 people came between Easter and September. an increase of about 200 on last year. The season was noted for the even distribution of visitors throughout the summer. May and June are usually quiet but this year numbers were up whilst July and August, though quite busy showed a drop on last year. The majority of visitors seemed to enjoy their visit, and credit for that goes to the Society's panel of Guides and Helpers, which at present stands at about eleven active participants. Visiting groups included the Berkshire Archaeological Society, Bedford Modern School, and the University of Nottingham; from overseas there were parties from the University of Mississippi and Germany.

My own high point of this summer was taking a party from St John's School, Horsham round the site. Following a short talk we measured the size of the Sutton Hoo ship on Mound 1 with a trundle wheel, counted the mounds and then said a prayer over the skeletons! The visit ended with everyone completing a short worksheet.

The guides and helpers do a marvellous job at the site. We need more Guides to ease the workload and especially to cover if anyone is indisposed or unavoidably absent. Guiding and helping at Sutton Hoo is enjoyable and very rewarding. If you would like to help, either by taking parties of visitors round the site or by manning the ticket office at weekends, then let me know (address on the back page), and I will do the rest!



DIARY

SUTTON HOO SOCIETY AGM

The next Annual General Meeting will be held on Friday 4 February 1994 at 7.30pm, in the Sixth Form Centre at Woodbridge School (see location map).

AGENDA

- 1. Apologies.
- 2. Minutes of last AGM.
- 3. Reports and Accounts.
- 4. Election of auditors.
- 5. Election of Officers.
- 6. Committee nominations.

The meeting will be followed by an illustrated lecture on "Sutton Hoo and the Sea" by Prof. Martin Carver.

COMMITTEE NOMINATIONS

Nominations for new Committee members should be sent to the Chairman of the Sutton Hoo Society (address below). Nominees should be members, willing to stand for election, and able to attend three or four meetings a year. Please contact any committee member if you are interested in standing.

SPRING LECTURE

Dr Sam Newton will give an illustrated lecture on Beowulf and Sutton Hoo in St John's Hall, Woodbridge, on Thursday 24 March. The lecture is open to members and friends, and will start at 7.30pm.

SALES

BULLETIN No 8 is here...containing results of the last seasons of fieldwork at the site, an account of the environmental research and a review of the East Anglian Kingdom Survey.

You can read about the intact grave under Mound 17, prehistoric earthworks which may have influenced the placing of Anglo-Saxon mounds, and how environmental analysis may help to establish the relative dates of the mounds. Copies can be obtained from Madeleine Hummler at the Department of Archaeology, University of York (address below).

SUTTON HOO SLIDE PACKS

Slides of the treasures and current excavations are available in packs of 24. These popular packs are selling fast – order yours now! Details and order forms available from Nigel MacBeth, 30 St Mary's Road, Creeting St Mary's Road, Ipswich IP6 8LZ.

ACKNOWLEDGEMENTS

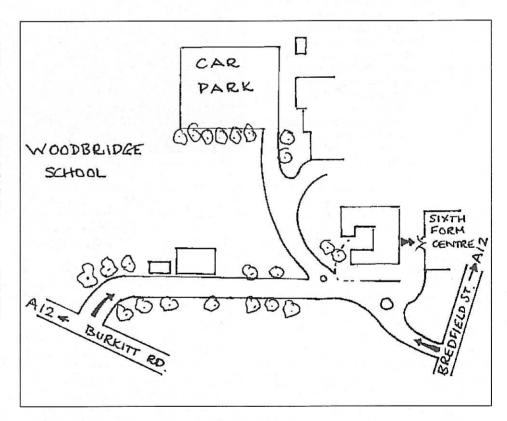
Once again our warmest thanks go to the Societys guides and helpers, who have completed another successful season at Sutton Hoo, providing an enjoyable afternoon for the hundreds of visitors still finding their way to the site.

Peter Berry continues to look after the site, which is really beginning to reward his efforts. Many people have commented on its improved appearance, and the healthy turf now covering the excavated area.

DON'T FORGET!

Book your tickets for the Eastern Angles Theatre Company's performance of "The Sutton Hoo Mob" from the Company itself (0473 211498) or from Woodbridge Books, Thoroughfare, Woodbridge. Tickets are £5. Performances (the first and second nights of this new play) will be at the Community Hall in Woodbridge on 17th and 18th February 1994.

PLEASE NOTE: , DUE TO BUILDING WORK AT WOODBRIDGE SCHOOL IT IS POSSIBLE THAT ONE OF THE TWO MAIN SCHOOL GATES MAY BE CLOSED – IN WHICH CASE USE THE OTHER



Contact Addresses:

Sutton Hoo Research Project, Department of Archaeology, University of York, Micklegate House, Micklegate, York YO1 1JZ.
The Sutton Hoo Society, c/o NatWest Bank plc, Cumberland Street, Woodbridge, Suffolk IP12 1JD.
A. Lovejoy, Membership Secretary Sutton Hoo Society, 28 Pembroke Road, Framlingham, Suffolk IP13 9HA.

Who's Who - Sutton Hoo Society Committee Members

Chairman: Robert Simper Hon. Secretary: Jenny Glazebrook Hon. Treasurer: Colin Moore

Membership and Site Guides Secretary: Andrew Lovejoy Research Director: Martin Carver Publicity: John Le Mare Publications: Rosemary Hoppitt
Sue Banyard Nigel MacBeth Malcolm Miles John Newman Sam Newton Pearl Simper