Colchester Archaeological Group

Registered Charity No. 1028434

ANNUAL BULLETIN VOL. 16 1973

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GROUP NOTICES

The following social activities have been arranged:

Monday, 7th May	An evening outing to Great Cornard to meet the Stour Valley Group and to see their recently recovered barge. This is to be followed by a visit to Ballingdon Hall. Assemble at Sheepen Road Car Park at 6.20 to start at 6.30 p.m. sharp.
Saturday, 9th June	An all day excursion to Verulamium, St. Albans and the Waterways Museum at Stoke Bruerne, near Stony Stratford. Please apply for tickets as soon as possible on the enclosed leaflet.
Monday, 2nd July	An evening outing to Osea Island by kind invitation of Mr. & Mrs. Cole. After a walk round parts of the island, we are invited to their house for refreshments and a discussion on the history of the island. Meet at Maypole Green at 6.20 for departure at 6.30 p.m, sharp. *Lifts will be arranged for both evening outings for those without cars.*
Monday, 16th July	Cheese & Wine party at Threshelfords, Feering, by kind permission of Mr. & Mrs. Bonner. The party will begin at 8 p.m. Tickets at the door 50p to include one glass of wine.
Monday, 14th September	Holiday Slides Party at 8.00 p.m. at Ardleigh Church Hall. Coffee and biscuits will be served in the interval.

RELATIONS & FRIENDS OF MEMBERS ARE WELCOME AT ALL THESE ACTIVITIES

Monday, 15th October	Annual General Meeting and the beginning of the Winter season of weekly lectures.

EXCAVATIONS - the following have been arranged:

July 1973	A Red Hill at Peldon on the north shore of the channel facing the Ray. The site is near the Peldon Rose. By kind invitation of Mrs. K.A. Evans. (Numbers must be limited due to lack of space). Contact Mrs. K. de Brisay.
After Harvest	The Iron Age Site at Vinces Farm, Ardleigh. By kind invitation of Mr. F.H. Erith, F.S.A.
After Harvest	A Roman site north of the Colchester by-pass. Contact Mr. P.R. Holbert.

THE INVESTIGATION OF A MOUND AT MOUNT BURES, ESSEX, 1972

by P.R. Holbert

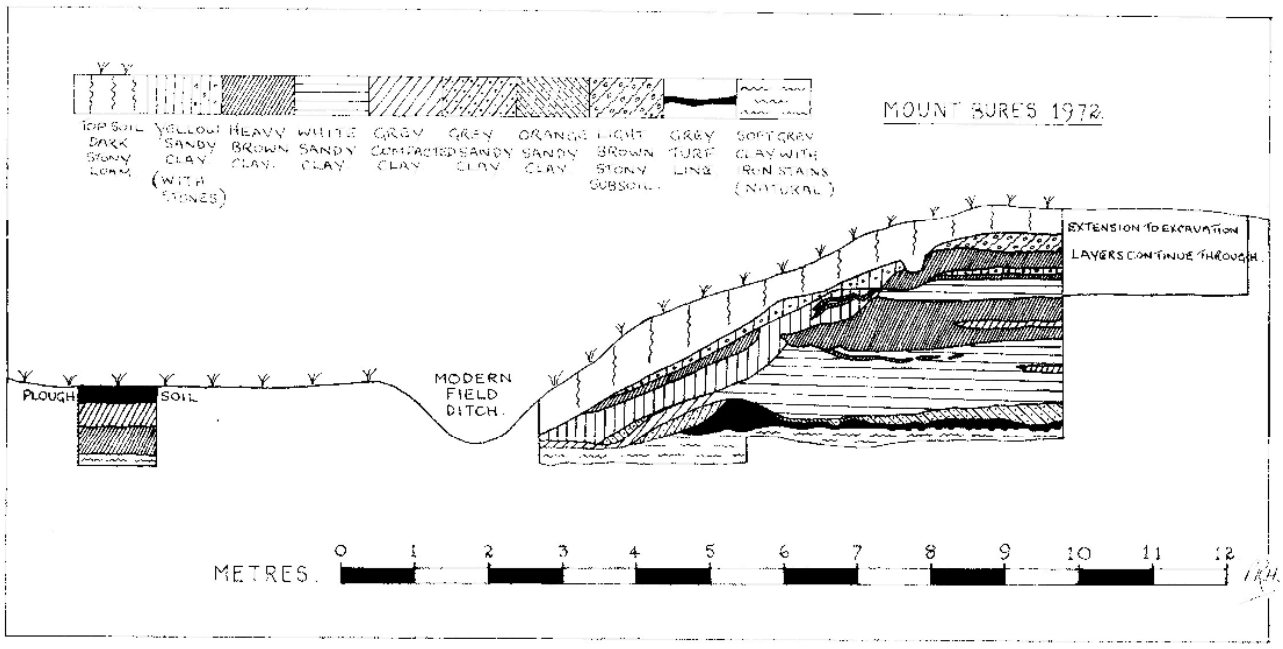
This long low tree covered mound is situated in the valley of Cambridge Brook, just to the north-west of the well known "Mount" or Norman Motte, Map Reference T.L.902327. The mound spans the valley bottom, mainly on the western bank of the brook, but there is some evidence that it may have extended on to the eastern side.

First noticed by Mr. Peter Leyden some years ago, it was not until the spring of 1972 that the Group was in a position to investigate further. In 1969, Mrs. McMaster had started to cut a trench, but working on her own, had found it very hard going.

With the object of finding out (a) whether the mound was a natural feature, or (b) whether it was man made, and if so, its purpose, it was decided to continue the trench as far as was practical in order to obtain a good section.

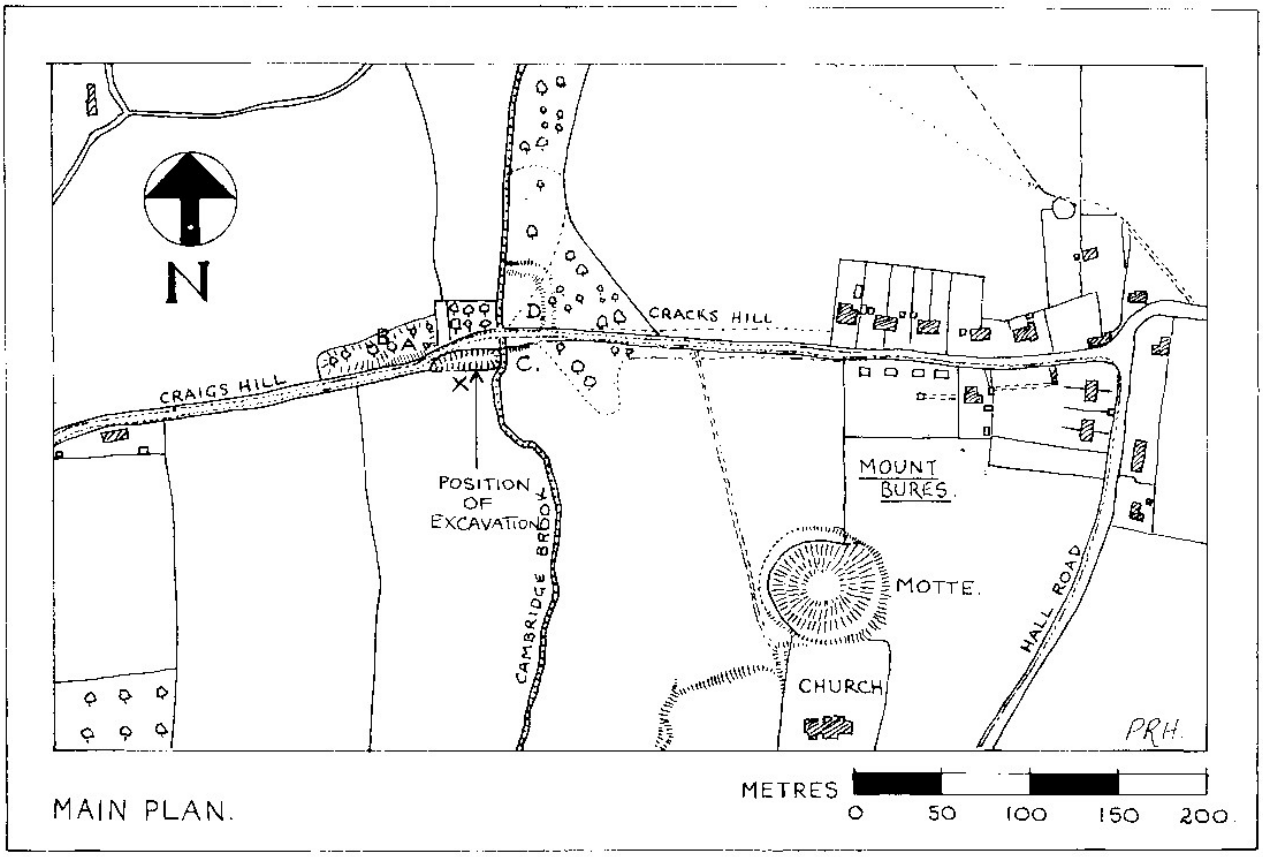
STRUCTURAL DETAILS

On studying the section drawing (below) it will be seen that the mound has been built up with horizontal layers of clay of different colours and consistencies and is quite obviously man made. Another feature that would support this supposition was seen in the baulk at the end of the trench, the lower layers followed the slope of the hillside but levelled up progressively towards the top of the mound.



The ancient ground surface, or turf line shows as a dirty grey layer at the base of the section directly on top of natural clay. This natural clay also shows at the same level in the small pit that was excavated some distance out into the field.

DIMENSIONS OF MOUND (X on Main Plan)



The approximate present day dimensions of the mound are as follows:

Length	45 Metres
Width	15 Metres
Height	3 Metres

There is some evidence that the mound was somewhat longer in its original form. At the western end it has been cut by the road, Craigs Hill, (see Main Plan, above), curving round to miss a large depression at this point. The roadside bank here is higher than normal (A) and was thought to be a remnant of the mound, perhaps its original extent. The larger depression (B), mentioned above must certainly be the source of material for the building of the mound.

There is some slight visible evidence for supposing that the mound extended over on to the eastern bank of the brook, where a fairly high length of roadside bank and disturbed ground appear at this point (C).

On the northern side of the road, (N.B. Cracks Hill on this side of the Brook), is a very distinct disused water course (D), which runs in a northerly direction and then turns to join the present brook.

SMALL FINDS

Small finds from the excavation amounted to one small piece only of Roman tile, found at about 50 cm below the surface of the top of the mound. This was thought to be of no significance, as fragments of Roman-material can be picked up on the surface of the surrounding fields, pointing to the occupation of this area in Roman times.

Our small fragment of tile was no doubt scooped up in the subsequent building of the mound which we certainly feel is Post Roman.

DISCUSSION OF THE EVIDENCE

Having firmly decided that our mound was man made, the questions that remain are: - (1) the period, and (2) the purpose.

The excavation of a Romano-British Tile Kiln (See C.A.G. Bulletin Vol. 15 March 1972), and also the famous "Belgic Vault" find beside the railway embankment confirm habitation of the area from early times.

Subsequent to this period there must have been some measure of Saxon occupation as evidenced by the early church.

This centre of occupation was certainly taken over at the time of the Conquest when the Motte and Bailey were constructed.

We think that our mound could well have been built pre Conquest or rather more probably just post Conquest to fit in with the building of the Motte and Bailey complex of which it would appear to be a part. (See Main Plan above).

THE PURPOSE

On studying the Main Plan, it will be seen that our site would be the obvious position for a mill, a very necessary requirement for the settlement on the hilltop centred upon the Motte.

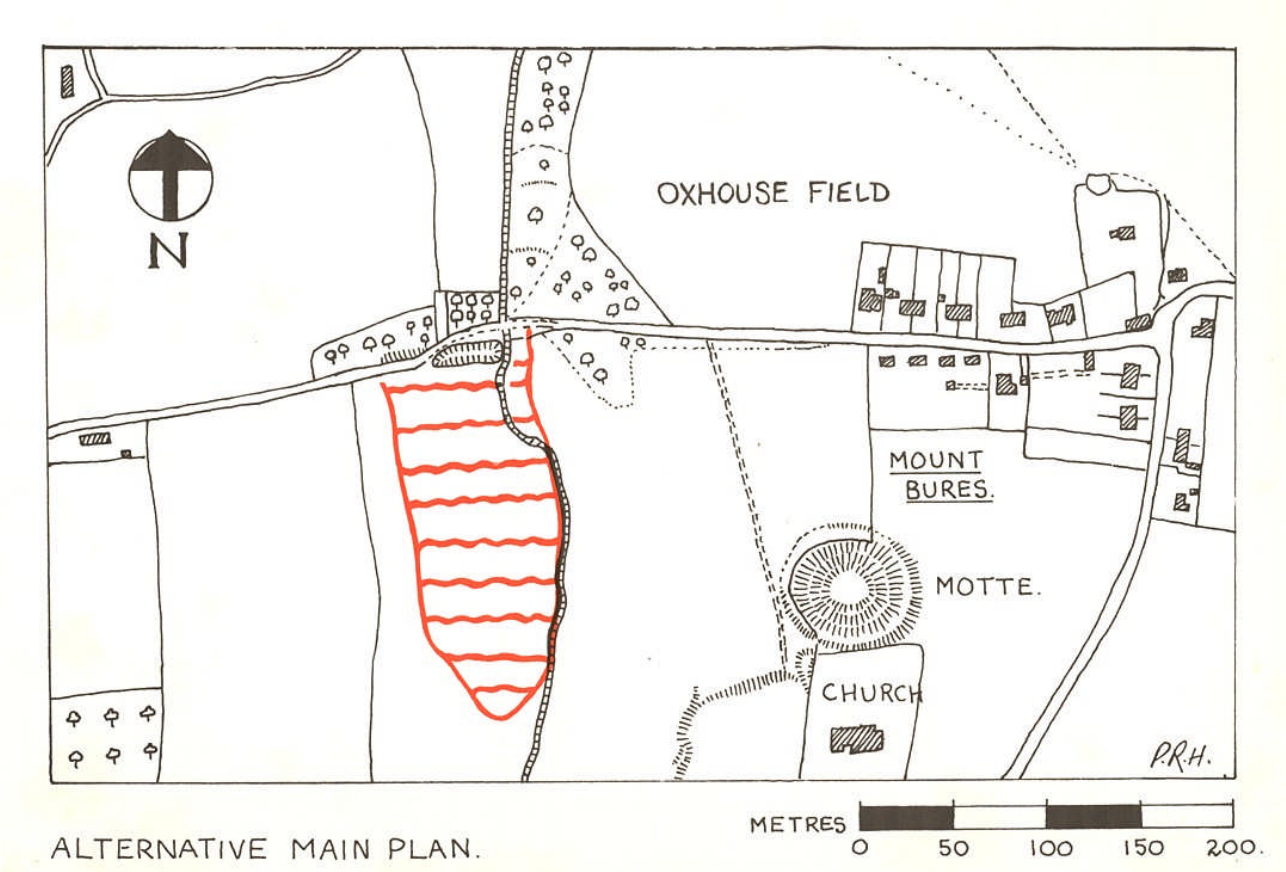
A mill situated close to the hub of things would make much more sense strategically, than if it had been placed on the Stour some two miles to the north.

Our theory is that the mound was built as a dam, across the valley of the brook in order to hold back sufficient water to drive a small mill.

Elaborating on this theory, it was suggested that it would be useful to do some exploratory surveying in order to find out how much water would be held back by such a dam.

With this in view, Mr. Peter Williams of Colchester Technical College, and also a Group member, was approached and kindly undertook to carry out this task.

Allowing for the water to rise within one metre of the top of the dam, Mr. Williams and two young helpers took levels and marked out the area of inundation of the valley, this can be seen indicated on the alternative Main Plan below. It will be seen that quite a large lake would be formed, enough water to run a small mill for a considerable period.



It was felt that there should somewhere be documentary evidence to prove the existence of a mill at Mount Bures in early times and to this purpose Mrs. McMaster has spent many hours in patient research into Domesday and other ancient documents and has managed to condense her findings into the following:

HISTORICAL BACKGROUND

The Lexden Hundred Saxon manor of Bura is firmly established as that general territory of Mount Bures parish which was granted c. 1120 to the Norman family of Sackville. Adjoining, but separated by the Hinkford Hundred boundary, lay another Bura now the parish of Bures Hamlet in Essex. Bures St. Mary across the river Stour, the final Bura in the locality, lay in yet a third Hundred.

Domesday records under the Mount Bures Bura entry -"always a mill here." Which leads at once to the conjecture that a late Saxon mill perhaps stood somewhere along the three quarters of a mile river frontage which Mount Bures parish possesses along the Stour. But was this in fact the case?

In 1682 along that exceedingly low lying, flood-prone stretch there was indeed a meadow called Curdmill Holme. A simple "Millfield" might have had more significance however.

In c 1200 Jordan, a member of the above Sackville family gave to St. Johns Abbey the gift of one mark rent from the revenue of his mill at Bures (Cartulary of St. John's Abbey).

In 1578, Thomas Sackville, Lord Buckhurst sold the manors of Mount Bures and West Bergholt - both had been in his family for four and a half centuries and under common ownership since Domesday. The sale included two mills. No further record of such a mill appears on manor manuscripts until the nineteenth century wind constructions and these lay, of course, at all the high points in Mount Bures.

The lane beside our excavation was a "hywaye" on 1645 court rolls, which certainly points to a far greater age for the supposed dam. Several other mills (not far distant) have operated on streams as small as Cambridge brook.

All indications point to the fact that the excavation site has been part of the manor demesne farmland for a very long time and the 1838 Tithe shows it as such, and also as **Mount Bures parish**. But today the parish boundary is altered and the "dam" now stands on Bures Hamlet territory, and also in the Hinkford Hundred (the brook forming the

boundary). The question is, whether the Hundred boundary lay along that stream at Domesday.

The record of a stone dated 1059, once on the church porch, attests the possibility of a sizeable late Saxon community which may have had need of their own milling equipment. There can be no doubt that even a small Norman holding force - as the Motte implies - would require similar facilities. And may even have used their garrison to build the dam during the immediate Conquest years. In this case if mottes and mills could be seen to have occurred together in the pre Conquest Normandy, then we might have a parallel at Mount Bures.

Mr. John Hedges, County Archaeologist has very kindly drawn our attention to an almost identical mill mound which he was able to recognise and record some while back at Littleworth in Warwickshire. There are obvious similarities between his mill complex and our site, and we feel sure that the two constructions would be contemporary or nearly so.

ACKNOWLEDGEMENTS

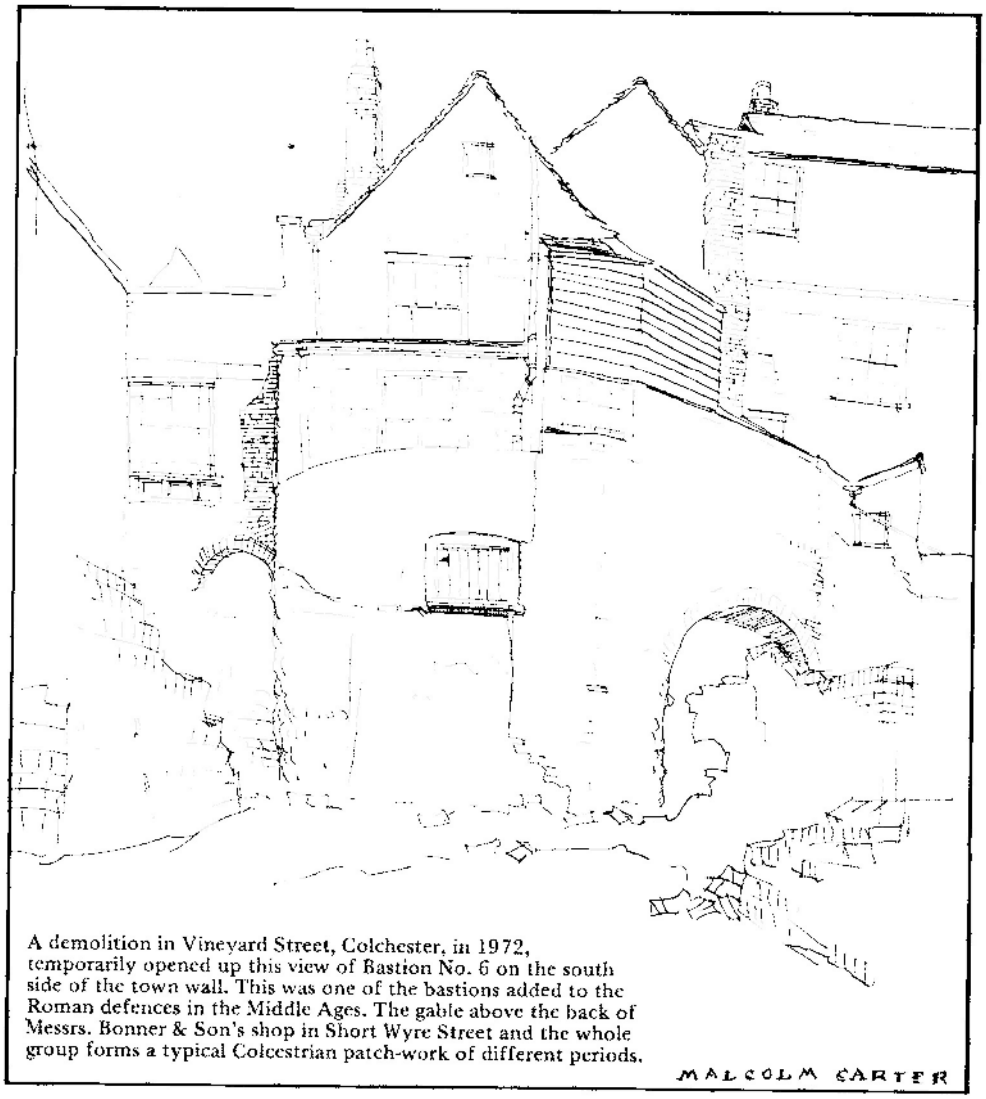
Our grateful thanks are due to Mr. and Mrs. McMaster for their help and co-operation, to Mrs. J.B. Priestley (Jacquetta Hawkes, M.A., F.S.A.) (who visited the site on one very wet day) for her useful comments, also to all the C.A.G. members who worked so hard on the excavation.

Since writing the above, Mrs. Jo-Ann Buck, of Colchester, has kindly investigated the earliest, almost illegible, court roll, and under an entry dated 27th May 1553 has found a probable reference to the field lying immediately north-east of the mill-mound which, to this day, is the only field in Mount Bures recorded as Oxhouse Field (perhaps in the vernacular pronounced Oxussfield). See alternative main plan above.

ESSEX RECORD OFFICE ref: D/DU 103.

"The tenant of the land called Oxesfeld (Oxeffeld?) is stopping up the water course into a certain pond on the highway against the same land, with the result that the water, in time of rain, overflows the highway there to the etc. (i.e. to the annoyance of the King's people there).'Therefore it is ordered that the same tenant should cause the aforesaid watercourse to have its passage above the head of the same pond, under penalty of a fine of 20 pence."

A COLCHESTER TOWN BASTION



A demolition in Vineyard Street, Colchester, in 1972, temporarily opened up this view of Bastion No. 6 on the south side of the town wall. This was one of the bastions added to the Roman defences in the Middle Ages. The gable above the back of Messrs. Bonner & Son's shop in Short Wyre Street and the whole group forms a typical Colcestrian patch-work of different periods.

MALCOLM CARTER

EXCAVATION IN A BELFRY

by A.J. Fawn, B.Sc.

The bells of East Bergholt are a popular local tourist attraction because they hang, not in the Church which lacks a tower, but in a picturesque roofed wooden cage in the Churchyard. During 1972 the cage was restored, the principal works being the replacement of the timbers of the tiled roof, the placing of proper foundations for the low brick walls on which the timber cage rests and repairs to the bells and frame. The work has been carried out with all the respect that is due to a registered historic monument.

The cage, dating from about 1531, was originally built to the east of the Church and was removed to its present site at the end of the 17th century.

In February, 1972 Mr. Peter Kirby on behalf of the Church Council asked the Group to undertake a limited examination of the earth floor inside the cage before the restoration. This entailed working beneath the five bells, which were then still hanging in their frame, and the platforms and surrounding walk-way from which they are rung.

As the massive timber frame rests directly on the ground with no foundation, the examination was restricted to excavation of the earth between the baulks of the frame and between the walk-way to a depth of about six inches, care being taken not to undermine the frame.

On February 20th, the bells were rung for the last time before the restoration and members of the Group had the

pleasure of observing the unique method whereby the ringers control the swing by pushing and pulling of the bell itself. Excavation then started immediately and lasted for three weeks, the dry powdery soil being removed to another part of the site and sieved.

Most of the expected rubbish proved to be modern and of little archaeological or intrinsic value, such as oyster shells, modern pottery including the ubiquitous willow pattern, animal bones, glass fragments, washers, nuts and bolts from the bell machinery, modern cigarette packets, a child's manicure set in a plastic case and a nail file, now put to good use.

The 39 coins found were nearly all pre-decimal and contributed to the equivalent of 39s/2p to the restoration fund. The oldest was an 1882 penny, the most interesting a silver threepenny piece and the highest denomination a half-crown. The majority were of recent date, no doubt reflecting the growing numbers of generous but butter-fingered tourists whose contributions somehow evaded the collecting boxes inside the cage.

The fragments of clay pipes, which Mr. Gant has kindly dated and which are now in the Ipswich museum, were of more interest. The earliest were pieces of stem from the period 1700 to 1750. Spur-marked pipe bowls were identified as being by James Pettitt of East Street, Colchester, 1820-1850 and by Stephen Rand of 23 George Street, Colchester about 1820. An earlier bowl was of the mid 18th century and an interesting curiosity was a black Victorian bowl, a patent made by Charles Cropp of London in the mid 19th century.

The sparseness of early finds suggests that the excavation was not the first time that the floor of the cage has been combed for lost or rejected property. The underside of the frame was only a few inches below the surface and very few finds were found below this level indicating that the existing build-up of soil and rubbish was quite small. Under the walk-way surrounding the cage a thin floor of poor quality cement was found only just beneath the surface and was a further confirmation that the rubbish had not been allowed to accumulate unchecked since the late 17th century.

The Group wishes to thank the Rector and Church Council of East Bergholt for the opportunity to make the examination and Mr. Kirby for his interest and help during the excavation.

AN ANTIQUE TABLE LIGHTER

by L.H. Gant, A.LA.C.

This is a very rare and interesting electric table lighter. The apparatus consists of two blue glass containers, one containing zinc and one carbon rods and the smaller vessel holding two wicks.

The electric current was generated by chemical action of sal ammoniac upon the zinc and carbon rods and the current was carried to a tiny filament crossing the main wick. When a knurled-capped rod was depressed, the battery was shorted and the filament glowed, igniting the main wick, from which a smaller pilot light was operated and the cap replaced mechanically over the main wick and filament by releasing the piston rod.

The lighter dates from about 1900 and the only other known example is to be found in the Bryant & May collection of fire making apparatus in the Science Museum, South Kensington, London.

The apparatus is described as "Luminum" - full of light, and the blue colour of the glass with white metal fittings makes it a very attractive exhibit.

HELP WANTED

We have become used to old things giving way to new. Some of these are small and insignificant but still have their place in history.

They could be called "Street Furniture" - that is to say such things as drinking fountains, village pumps, old milestones, direction signs, etc.

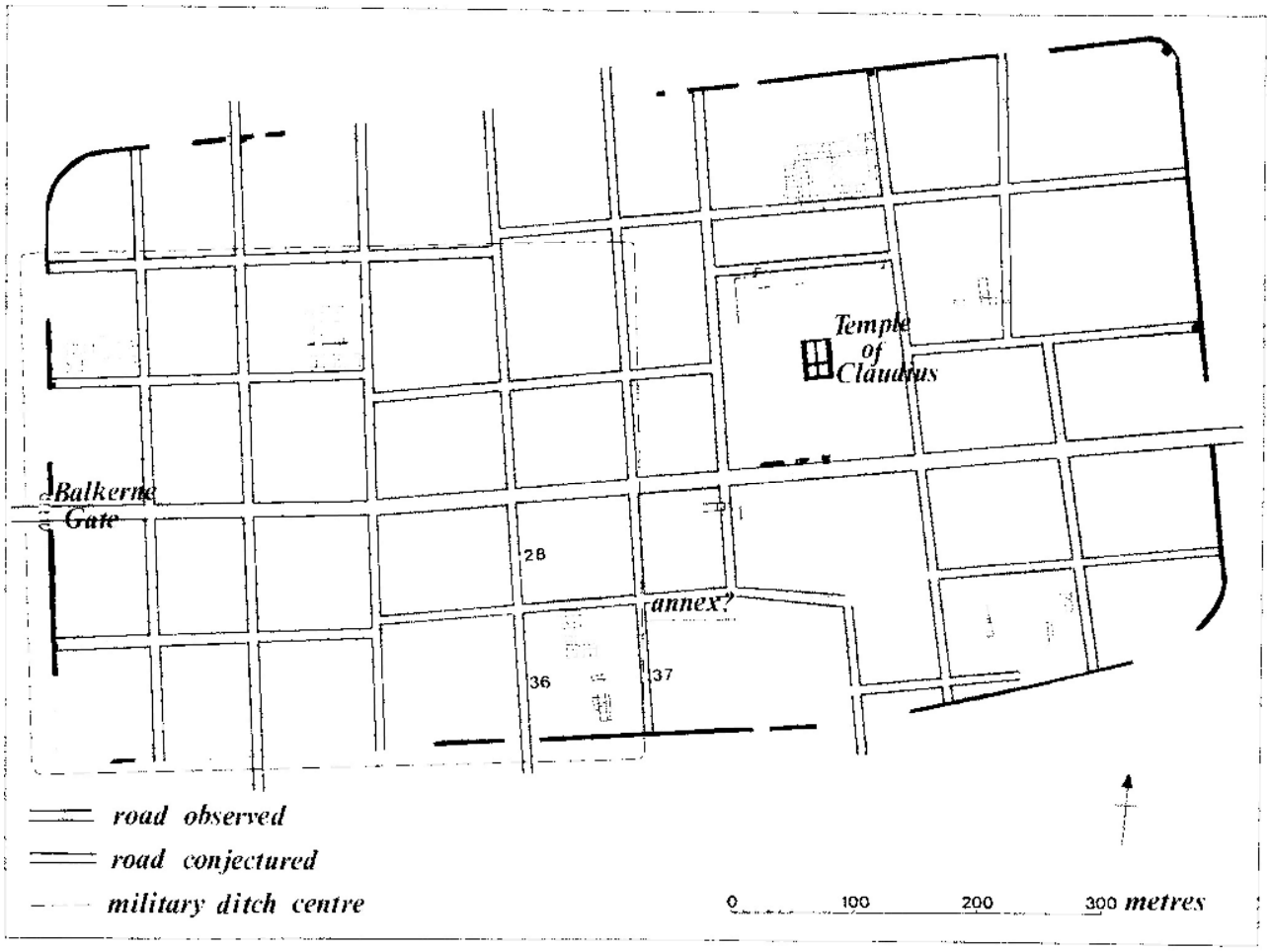
If any member knows of such objects, would they please inform the Secretary (see below) giving the location and, if possible, a drawing or photograph, so that they may be saved or at least not pass away unrecorded.

Mrs. K. de Brisay, Corner Cottage, Layer de la Haye, COLCHESTER, C02 OLE.

RECENT EXCAVATIONS IN COLCHESTER

by Philip Crummy, M.A.

Recent work has thrown much light on the origin and development of the modern town plan of Colchester. The early town street grid is principally of two periods on slightly different alignments and explains the irregular shape of the later walled town. Around 50 A.D. it was decided to withdraw the Colchester garrison, probably the twentieth legion, and build a Colonia. The old fortress presented a ready-made town, but apparently was considered too small. Consequently, the eastern part of the fortress was cleared and a new grid system set out, enlarging the occupied area. Expansion to the south was not possible because of a valley, and expansion to the north restricted because of the River Colne. The positions of the London Road and the military cemetery were perhaps the main reasons for setting out the new grid to the east of the fortress rather than to the west. The eastern end of the new grid system was swung slightly northwards in an attempt to compensate for the strategically poor S.E. corner. Even then, this was still considered a weak point in the medieval period when bastions were added here to strengthen the defences. (See plan below).

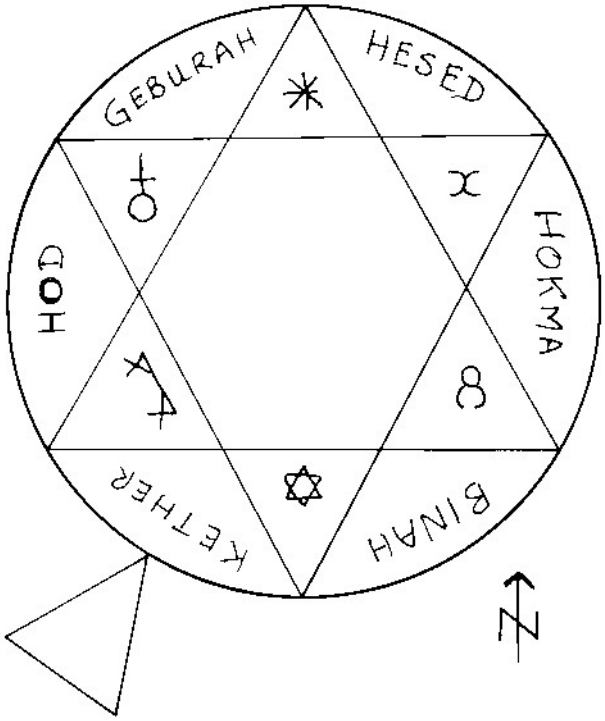


The military buildings had clay walls built on mortared sills. Previous work within the western part of the fortress at St. Mary's Rectory and North Hill has located buildings of this type clearly destroyed at the time of the Boudiccan rebellion, attesting to their re-use in the Colonia. At Lion Walk, however, parts of six barrack blocks and part of an adjacent courtyard building were shown to have been destroyed and replaced by wattle and daub buildings aligned on the new eastern street grid before 60/61A.D. The main east-west street of the fortress, the via praetoria, was the road that later entered through the Balkerne Gate. The location of the main north-south one, the via principalis, is not clear, depending on the interpretation of the Claudian building at North HIII. It probably was 30-50 metres to the east of North Hill/Head Street, so that most streets of the western part of the Colonia were post-Boudiccan in origin.

The legionary defences consisted of a V-shaped ditch and a rampart with two parallel clay walls retaining a bank of sand and clay. These have been located at Lion Walk and the ditch is presumably the one found at Lorgarth in 1964 and at 44 North Hill in 1967. Another ditch with a rampart to the north has been found at Lion Walk and is possibly part of an annex to the fortress rather than an earlier or later fort. The north south ditch found at the Telephone Exchange in 1966, on the other hand, may be part of an earlier auxiliary fort. If this is the case, then the legionary fortress was not built immediately after the invasion but perhaps a few years later.

STRANGE GOINGS-ON

by Kay de Brisay



This intriguing, possibly sinister, design was found in October 1972 on the concrete floor in the kitchen of a small deserted cottage in Layer de la Haye. The circles and triangles were in white chalk and the words and symbols in red. A similar device was found in the same place some months previously. The room has now been demolished and a new building put in its place; but we thought it should be recorded and that it might be of interest to some of our readers.

WINTER MEETINGS

The following are synopses of the last four lectures of the 1971/72 season which were excluded from Volume 15 for reasons beyond the Editor's control.

THE RED HILL AT OSEA ROAD *by Mrs. Kay de Brisay* (21.2.72)

Mrs. de Brisay gave news of the exploration of this site and full details of the first year's interesting work are given in her Preliminary Report in CAG Bulletin, Vol. 15 March 1972.

MORE ABOUT THE MUCKING, ESSEX, CROPMARKS *by Mr. and Mrs. W.T. Jones* (28.2.72)

Since September 1965 archaeological investigation has been carried out almost continuously. The crop-marks show such features as enclosures, ditches and pits. Work so far indicates that they have a time range of nearly 3,000 years, from Beaker to Saxon settlement. Flints extend occupation back to the Mesolithic period.

The sequence of human landscapes on this strategic terrain seems to be as follows.

Bronze Age farmland came first. Then about the 5th century B.C. the terrain was dominated by a circular bi-vallate hill fort of the Iron Age c.250 ft in overall diameter. Its main entrance overlooked the river. Later Iron Age settlement was again of peaceful farmers or herders, whose hut sites lie within penannular gullies. Two hut complexes had attached compounds of which the largest continued in use as a Romano-British cemetery. Most of the 80 graves it contained were inhumations, containing stains of `silhouettes' of body and nailed coffins. A complex of ditches forming protective banks belongs to the final pre-Roman occupation. At the time of the Roman conquest defensive earthworks were once more thrown up, almost exactly where the Iron Age hill fort had been.

Spread along half a mile of the seaward slope are dug out floors of Saxon huts. Mucking now has over 100 such huts, more than have been found at any other English site so far. Work in 1969 indicated that they were in two

groups, divided by two Saxon cemeteries. What was left of Cemetery 1 contained 60 inhumation graves, Cemetery 2 so far contains over 600 burials, cremations as well as inhumations. 5th to 7th century finds have come from both huts and graves, and the amount of early Saxon pottery is notable. 5th century military belt fittings which have come from huts as well as graves, raise the question: 'Were the original Saxon immigrants soldiers or settlers?'

These ancient landscapes are disappearing at the rate of 5 acres a year, but gravel quarrying is an agent of discovery as well as destruction.

CASTLE RISING, NORFOLK History and Recent Excavations *by M. Morley, M.Sc.* (6.3.72)

As members will remember from their visit to this unique stronghold, it was built by the second William d'Albini, c.1140. He had married the widow of King Henry I and it was not therefore surprising that the new castle should have been built on a similar pattern to the great royal palace at Falaise. It follows also the tradition of Colchester and the Tower of London. Many innovations were incorporated; the staircase was guarded by three successive doors and near each was constructed a murder hole through which stones could be dropped on Invaders. A wall ran around the top of the huge encircling banks. Only Old Sarum has larger earthworks than these. They are 70 ft. high from the bottom of the great ditch. By 1483 the building was said to be derelict and beyond repair, whilst a print of 1693 showed one of the corner towers falling into the ditch and the days of the castle were clearly over. It was rescued in 1958 by the Ministry and the excavations of 1970 and 71 surprisingly revealed the presence of Roman ditches - two beneath the castle keep and three beneath the flanking Medieval chapel. Roman material was in the fabric of the castle which had flint foundations with traces of Roman mortar and even painted plaster adhering to the re-used materials. Signs of extensive civil or military Saxo-Norman use were everywhere and the bulk of the pottery was of that period.

On one wall the Medieval chapel adjoining the defensive banks and a blocked doorway, on that side, together with evidence from the section through the bank proved that this rampart did in fact post date the chapel. A remarkable pit was uncovered revealing the site where they had sunk the clay mould before casting the bell. The castle keep was later than the chapel, and by Tudor times the floor levels had risen about a metre because of habitation debris. About this period another larger chapel was provided for the inmates.

EXCAVATIONS AT DOVER 1970/71 *by Brian Philp (13.3.72)*

Some of the millions of people who pass through Dover each year will shortly see some of the most extensive Roman painted wall plaster to be found in this country. Mr. Philp's truly magnificent dig has fired the imagination and conscience of the entire town so that a museum is now scheduled to be built in order to house the myriad of finds. There, within 15-20 feet of where Sir Mortimer Wheeler predicted it would be, they found the massive walls of the Saxon shore fort. And beneath these, wonder of wonders, was the second century Classis Britannica fort, built to house the elite of the Roman fleet - the marines as it were. Over 400 stamped tiles bearing the famous CLBR were found, and seldom has it been the lot of an excavator to uncover so many portions of structure in the face of advancing demolition. Such was the local press coverage - they made the front page each edition for fourteen weeks! - that eventually the powers that be arranged for the proposed road construction to pass 6 feet higher than intended. Now, buried safe beneath the new road to the docks, will lie all the historical evidence necessary for future generations.

Mr. Philp stressed the need for careful placing and disposal of spoil - in such a vast build up area it is very easy to dig yourself into a corner. But by the time he had finished he appeared to have a vast prairie of elegant Roman tufa and chalk building outlines. In one of these, a fine house which had been demolished into its own cavity to make way for the Saxon Shore fort, the painted wall plaster was found in several rooms. As the walls still remain to a height of between 5-6 feet, they have been very carefully covered with cloth, ply framework, earth infill and corrugated iron until such time as the museum arises around them and into which building they will be incorporated intact. A wonderful project which we shall all look forward to visiting. This was a heartening, impressive lecture with which to end our winter meetings.

A FURTHER REPORT ON THE EXCAVATION OF THE RED HILL AT OSEA ROAD, MALDON, ESSEX. 1972

by Kay de Brisay

We were fortunate to be able to follow up the exploration of this site which began in 1971. This was reported in the C.A.G. Bulletin Vol. 15. March 1972 pp 23/43 and the account given below should be read in conjunction with this. Once again our grateful thanks for this facility to the owner, Mrs. Burbridge, of Wolvey Hall, near Hinkley, Warwickshire, and particularly to Mr. Speakman and Mr. Bamber, J.P., for their hospitality kindness and co-operation. We occupied the field in which the excavation took place from July 23rd to November 5th,1972. A welcome grant from the Department of the Environment enabled us to hire a site hut and the necessary machinery.

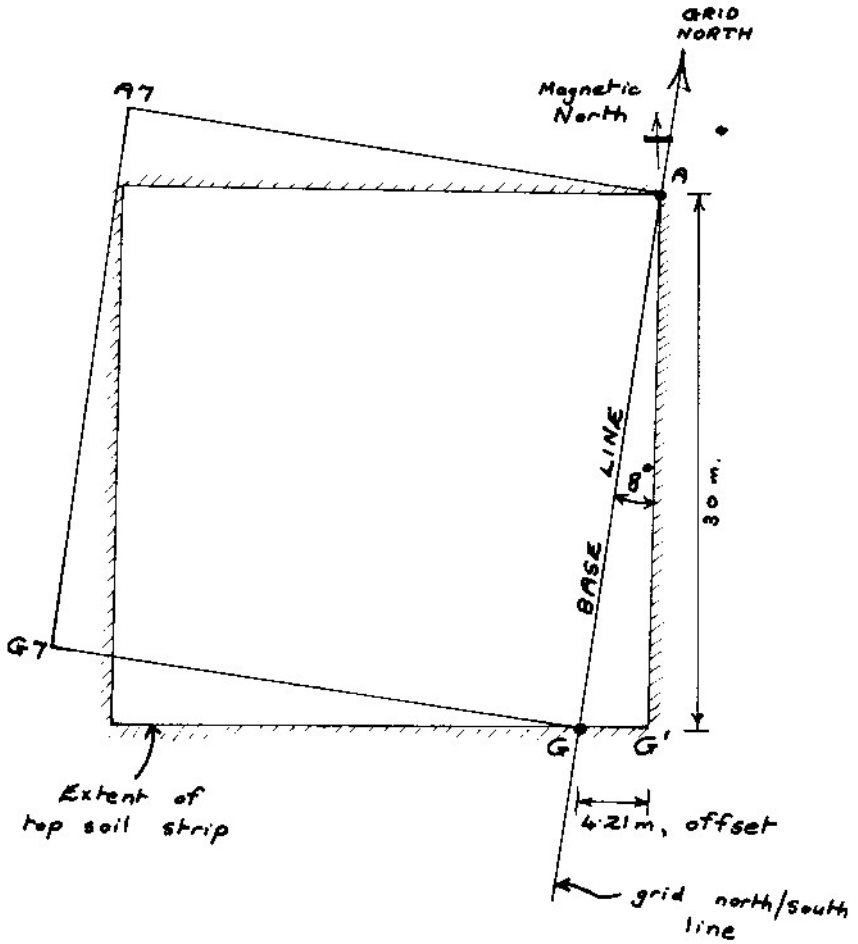
MARKING OUT

It was decided to follow up the trenches of the previous year with an open square to the west of trenches D.1 and D.2 (see site plan I below). Initially this was to be a 25 metre square and an area of top soil 30 x 30 metres was cleared by machine with the intention of laying out the square within. However, when cleared, this showed auspicious signs of clay in the north and south corners of the western boundary, so in order to take in these, it was necessary to mark out a 30 metre square and levels were taken to the Al peg in the north-east corner - O/S TL 8875 0745. We were fortunate to enlist the assistance of Mr. John Potter and his report follows - with full details for the uninitiated.

REPORT ON THE SURVEY *By J.P. Potter*

The object was to set out the four sides of a square grid with pegs at 5m intervals and all at the same level. One side of the grid, the base line A-G was to lie along the north/south grid line (see fig. 1 below). The base A-G was achieved by setting out the magnetic north/south line and turning an angle of 8° (the magnetic variation for the area at this time) to the east. The magnetic north/south line was set out using two ranging rods and a magnetic

Fig. 1



compass. One ranging rod was placed at A and lining G on a north/south line. The other end of the base line G was arrived at by calculating the offset for a deviation of 8° and a distance of 30 m. from A. The offset was then set out by using a tape measure and the base line A-G thus fixed. With a peg located at G exactly 30 m. from A, right angles were then set out at A and G using the 3-4-5 triangle method. Pegs G7 and A7 were located by measuring 30 m. along the lines at right angles to the base line A-G from G and A respectively. Using nails to give the exact positions of the grid co-ordinates, the pegs were all levelled in at 3.400 m. above Ordnance Datum. The intermediate nails were set out by stringing a line between each corner peg, setting in the nails at 5 metre intervals after levelling the pegs at 3.400 m. Then the intermediate pegs along A1-A7 and A7 -G7 were set out in a similar manner.

THE SQUARE

Later, the square surface measurements were taken from the south-east corner of the brick-built pumping station, situated close to the entrance to the field, to the corner pegs on the western boundary of the square. These were 73.10m to A7 and 80.06 m. to G7.

The 30 metre square having been marked out and levelled and the 5 metre pegs labelled as shown on the plan on pages 23/24 we established the Al peg as the key point from which all finds were to be related by using the reference pegs nearest to it. The signs of clay we have already mentioned were now in A6, B6 and F6. In addition we found three large circular clay outlines in F1, 2 & 3 together with two roughly rectangular slabs of clay on the south side.

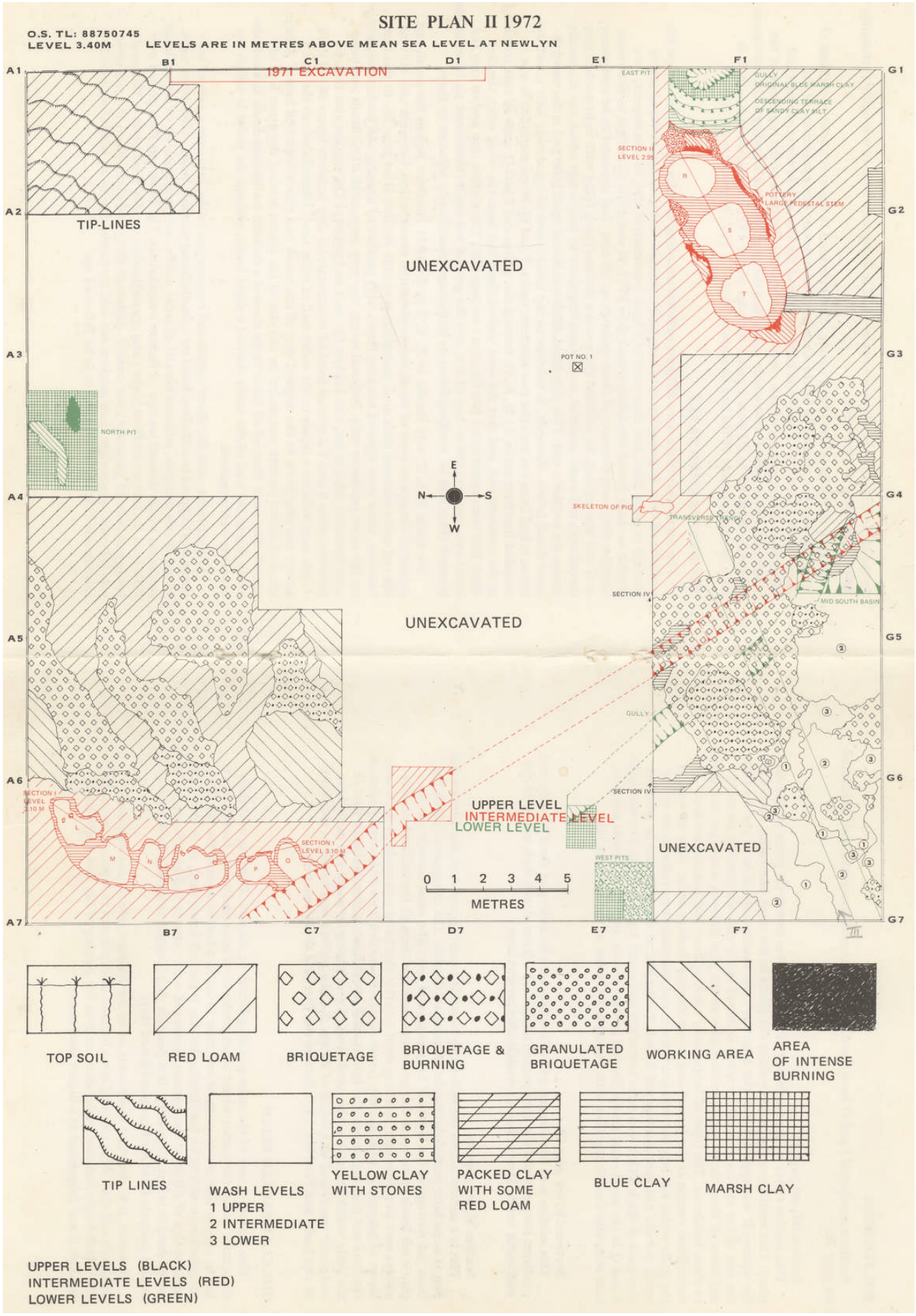
In view of the large size of the square, it was decided to uncover about two-thirds of it to take in what seemed to be the areas of most interest. The excavation of the upper levels of the F1-7 strip was carried out and the two sets of tanks cleaned and delineated. In the process of this clearing unmistakable tip lines in the red waste of the north east corner were found which confirmed the previous year's findings. On the eastern boundary from B1 to D1 plus 1 metre the edge of the 1971 excavation was found, in fact, the western side of the box containing tanks X, Y, Z, in trenches D1 and D2.

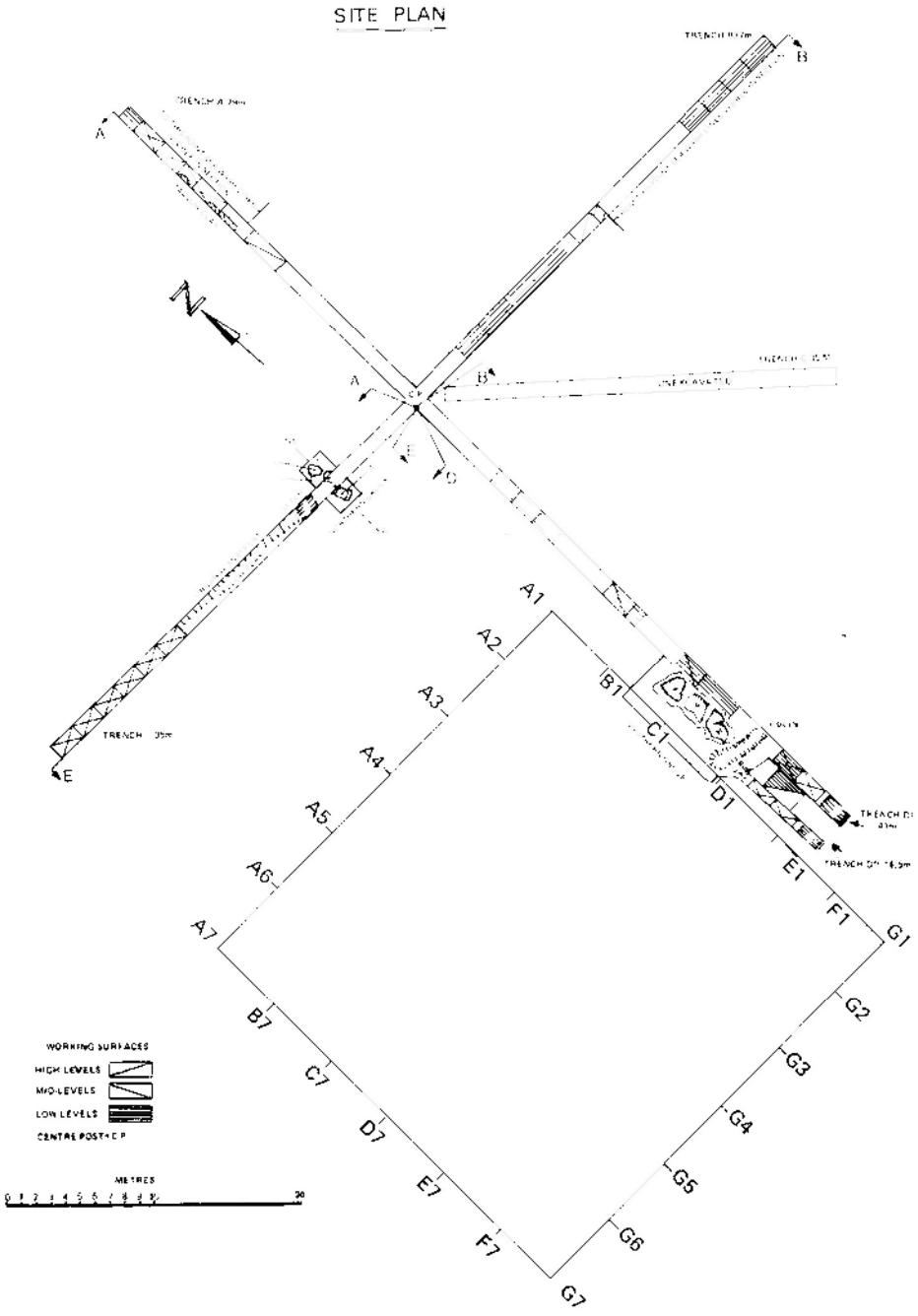
THE EVAPORATION TANKS

The north-west tanks were difficult to delineate owing to their shallowness below the surface and their fragmentary condition and it seemed that they had suffered severe damage at some time, but they were of a light construction and, in this respect, very similar to those found straddling trench E in 1971. It was difficult at first to determine whether they were two sets of three tanks as up till now had appeared to be customary, or if one was missing. In addition there was a shallow ditch filled with tight-packed clay mixed with red waste material, stones and fragments of briquetage which ran diagonally across the southern end. This clay filled ditch was found again later and is discussed in more detail below. However, in relation to the tanks it was of apparently later construction as it had been cut into the two southern tanks, P' and Q. When sectioned it was revealed that four tanks, L, M, N, O, formed one group and P and Q were all that remained at the southern end, and that the west wall of these had been cut away when the clay ditch had been constructed (see Section I below). The section also proved that the tanks were constructed on top of and into the general red waste; there were no foundations beneath them and no working floors or briquetage immediately adjacent to them.

The tanks R, S, T, very similar to X, Y, Z in the 1971 Southern Box, in the south-east corner of the square were of much more substantial construction, but were also set into the red waste material with no foundations as seen in Section II below. In this case, however, there were signs of working floors with patches of burning and broken briquetage on the outer perimeter only. Pedestal stems, one very large, with a few heads and bases were found in this scatter, also broken fire-bars and pottery. The section also showed between tanks S and T a second band of constructional clay between layers of red infill - this may indicate a repair to the outer wall at some time. Immediately to the east a square was dug down to the original clay of the marsh and this is described below. A large sherd of native pottery was sealed by the clay at the lowest level of the outer wall of tank S. The inner floor of all these tanks showed a definite inclination down towards the north where the wall of the tanks showed a slight bulge; perhaps the point at which the contents were removed.

In connection with the above mentioned evaporation tanks, just over a pint of sea water was exposed in a shallow bowl on a south-facing window ledge. After some eight weeks in this position, without benefit of wind action, only a centimetre of strong brine remained which showed no sign of further evaporation. The bowl was then placed over slow heat (in fact an oil-fired boiler) and crystallisation rapidly took place - the result being just over 28 grammes (one ounce). Although dirty and discoloured the salt taste was very strong; stronger than modern sun-salt, no doubt due to an admixture of other substances. This line of research is to be followed up.


SITE PLAN II 1972
O.S. TL: 88750745
LEVEL 3.40M
LEVELS ARE IN METRES ABOVE MEAN SEA LEVEL AT NEWLYN
1971 EXCAVATION
TIP-LINES
UNEXCAVATED
UNEXCAVATED
UNEXCAVATED
NORTH PIT
EAST PIT
POT NO. 1
SKELETON OF PIG
SECTION IV
GULLY
MID SOUTH BASIN
WEST PITS
UPPER LEVEL
INTERMEDIATE LEVEL
LOWER LEVEL
0 1 2 3 4 5
METRES
TOP SOIL
RED LOAM
BRIQUETAGE
BRIQUETAGE & BURNING
GRANULATED BRIQUETAGE
WORKING AREA
AREA OF INTENSE BURNING
TIP LINES
WASH LEVELS
1 UPPER
2 INTERMEDIATE
3 LOWER
YELLOW CLAY WITH STONES
PACKED CLAY WITH SOME RED LOAM
BLUE CLAY
MARSH CLAY
UPPER LEVELS (BLACK)
INTERMEDIATE LEVELS (RED)
LOWER LEVELS (GREEN)

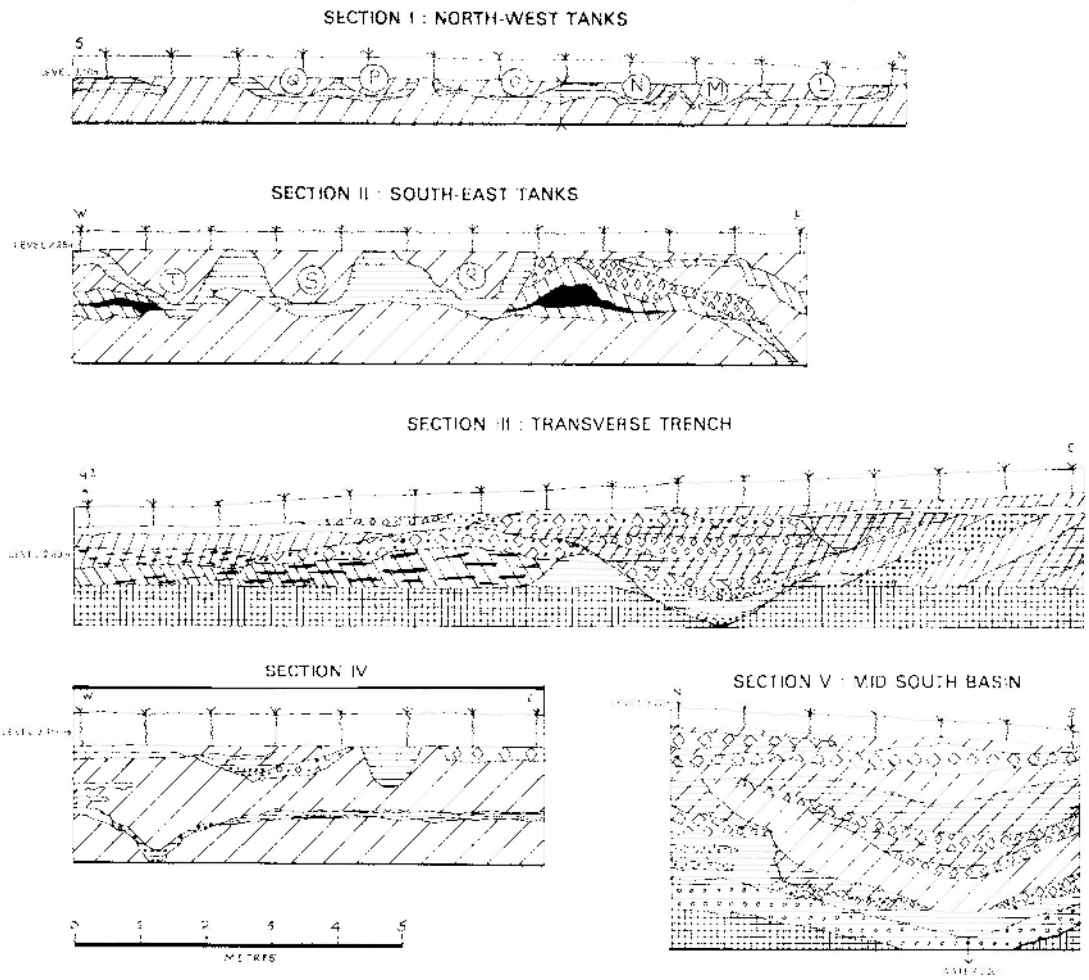


THE SECTIONS

Sections numbered I and II have already been discussed above; they are illustrated below

Section III, see below

This section refers to the north side of the transverse trench (in green on the site plan). This trench was designed to show the layers in the most interesting corner of the square. It was apparent that this area was more readily accessible to the sea than the rest of the site because of the many layers of sandy clay silt running across it and some of these show in the section, also on the plan in levels which are numbered to show incidence. The layer of briquetage, working floor and burning are level throughout except at the eastern end where sloping tip-lines occur. Also showing is the gully which ran into the mid-south basin and was picked up twice more to the north but the ultimate end was not



found. To the east of the gully can be seen the clay-packed ditch which also went across the mid-south basin and cut into the tanks P and Q in the north-west group. Several pottery sherds, broken pedestals and firebars were also found, together with a complete fire-bar of the later period.

Section IV

This section is at the western end of the northern boundary of the F/G strip and confirms the gully and the clay-packed ditch - of a lesser depth than nearer to the mid-south basin. Sandy clay sea-wash is also present here.

Section V

This is a section across the mid-south basin. It would appear that this feature was dug at some later period during the working of the site. The clay-packed ditch has been cut through as has layers of briquetage and clay. The most easterly of the clay wash levels come up to this point and continue through the infill which was always very wet. However, working went on after this basin was made as there were layers of briquetage with pottery (some of which was Belgic) with broken pedestals, fire-bars and burning above. The lowest level of the basin is identical with that of the gully which enters it at the north-west. A test boring by auger was made here and water was found at a depth of 23 cm. Roman pottery was found in the infill of this basin and Find No. 58, a Samian rim sherd, at the lowest point.

THE CLAY-PACKED DITCH

This feature is one of the most puzzling found on the site. Running as it does diagonally across the corner where much evidence of sea-activity was found, one is led to suggest that it was made at one time to act as a barrier against the sea. The construction seems to be man-made, the clay is packed down hard, all in one mass, with no sign of silting at the bottom. Some red waste, stones and broken briquetage were found in it but no pottery. It is possible that it might originally have been a double palisade filled with rammed-down clay.

However, it is clear that work went on to the seaward side of this supposed barricade and that these working areas became incorporated in layers of sea-wash silt, which might indicate a later date, as does the cutting of the mid-south basin through it and briquetage at a higher level above.

THE LONG GULLY

As described above this gully ran diagonally across the south west corner of the site on a similar line to the clay packed ditch but, instead of disappearing through the southern baulk, the gully runs into the lowest level of the mid-south basin. It was clearly an active water course with sandy clay silt and water washed stones at the lowest level. Time did not permit us to follow this gully to its north-west end, if indeed, it ends at all; it may well cross the site and connect again with the sea. No signs of artificial deepening were found. The depth of its lowest level was 3.50 m below datum level in the mid south basin and 2.20 m below in Section IV.

THE PITS. See site plan II above

The Eastern Pit

This was immediately adjacent to the east of the south-east group of tanks, R.S.T. and was connected to the working floors by a level of clay. This descended in terraces of sandy clay to the original marsh clay, cut into which was the semi-circular end of a gully with the usual silt of sandy clay and stones in the bottom. This gully disappeared under the south-east corner of the pit, the eastern side of which was aligned to the eastern perimeter of the square. It is possible that this had some connection with the water filled ditch found in 1971 at the southern end of trench D.

The Western Pit

This 4 m square box was opened in an attempt to find the long gully again with no success. It was aligned to the western perimeter to the south of E 7. All that was found was a mass, 40 cm thick, of working floor, briquetage and pottery, capped by sandy clay sea-wash which showed a slight slope down to the north. A small square was taken out through this level and original marsh clay was found at a depth of 2.11 m.

The Northern Pit

The area where this was opened on the northern perimeter was very wet and we had hoped to pick up the ditch in the 1971 Trench E but with no success. Several small bones were found in the infill and on the original marsh clay a working floor was found with some broken pedestals and firebars and beside it, immediately on the marsh clay was a large, intense patch of burning. This would seem to be one of the earliest working areas.

THE POTTERY

In all cases where references are given, these are taken from the two pegs nearest to peg Al at the north-east corner of the square. Levels are in relation to, that is to say subtracted from, the Newlyn mean sea level; i.e. 3.40 m.

No. 22 a rim sherd of British colour-coated ware, similar to the New Forest ware or that of the Oxford kilns. Diameter 15.30 cm. depth 3.05 m. The surface is hard and polished, colour dull red, the paste pale pink. The interior is similar to the outer surface but shows a few smoothed lumps. There are two lines of rouletting below the rim and above an incised cordon. Date 4th century approx.

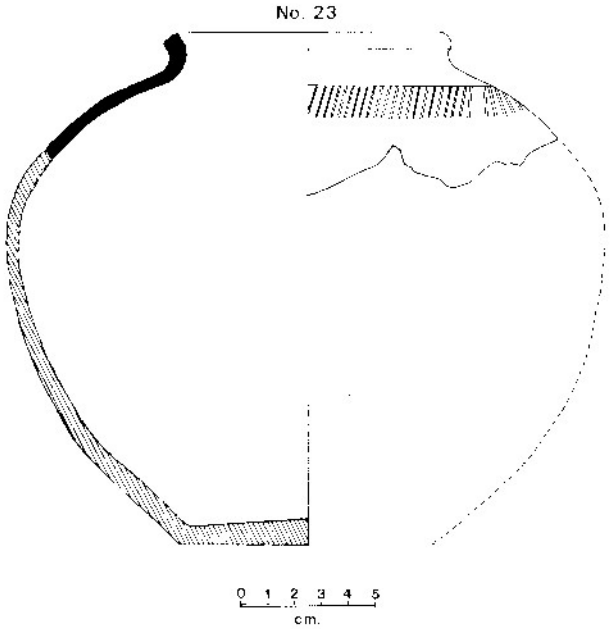
No.23 a cooking pot of which only part of the rim and shoulder were found. Diameter of the rim 10 cm and of the shoulder 22 cm; the height would be 22 cm approx. This is similar to Cam. Form 258 A. There is a bead rim with a distinctive cavity below, a smooth neck with no burnishing and immediately below, the decoration on the shoulder consists of close-set incised lines on the slant, just over 1 cm in length. The surface inside and out is rough and pitted as if grits had been eroded away. Found between two clay silt lines on top of a briquetage layer in F.5/6. Depth 2.80m.

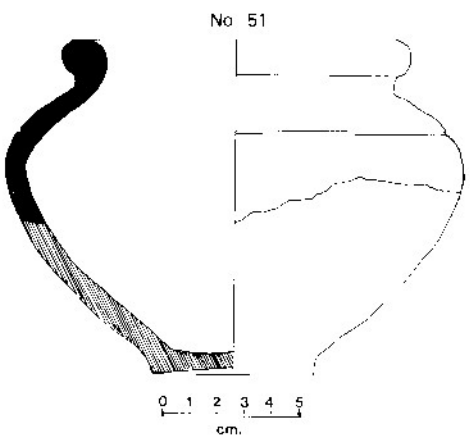
No. 51 part of a Belgic bowl apparently undecorated. A heavy vessel with a rough grey sandy surface, similar to Cam. Form 221A. Diameter of rim 14.50 cm and of the shoulder 11.50 cm approx. Found F.4/5. Depth 2.40 m.

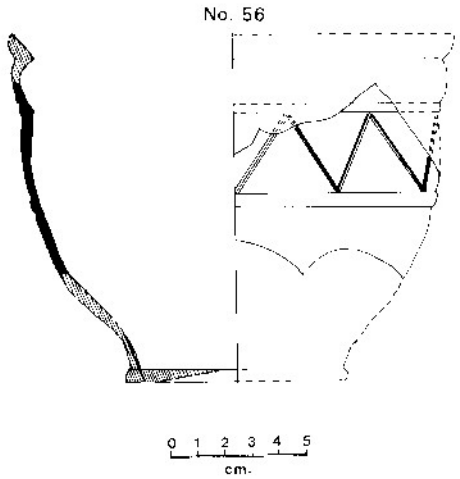
No. 51 part of a Belgic bowl apparently undecorated. A heavy vessel with a rough grey sandy surface, similar to Cam. Form 221A. Diameter of rim 14.50 cm and of the shoulder 11.50 cm approx. Found F.4/5. Depth 2.40 m.

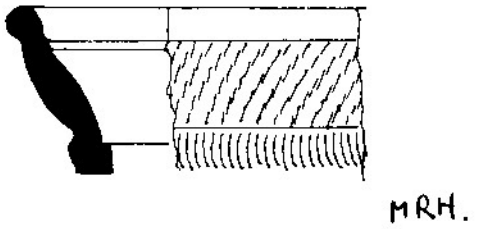
No. 56 only five body sherds were recovered but the vessel appears to have been a Gallo-Belgic or Native copy of a crater. Cam. Form 72A. The surface is hard and smooth with a polished chevron decoration between the two shoulder cordons. The body below the lower cordon is polished. Found F.5/6. Depth 2.90 m.

No. 58 a rim sherd of a Saurian bowl with a high gloss. Form Drag 29. Unfortunately none of the body decoration survived but the vessel appears to be similar to Camulodunum No. 7 Plate XXXII. This sherd was found at the lowest level of the mid-south basin - F.4/5. Depth 2.00 m. Date seems to be Claudius - Nero.

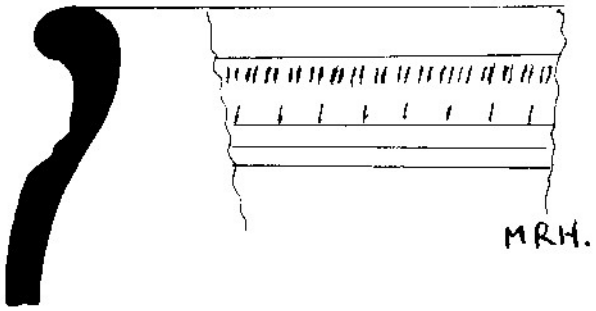








No. 58



No. 22

C/M

An analysis of the remaining pottery sherds was made. There were 119 in all and these are classified below:-

	Iron Age	Belgic	Native	Romano-Belgic	Early Roman	Roman	Totals
Stratified	3	22	19	4	17	12	77
Unstratified	-	25	1	1	10	5	42
Totals	3	47	20	5	27	17	119

Of these the following are worthy of mention:

No. 26 a sherd of a Belgic vessel found in the infill of Tank M in the north-western group. A 6/7. Depth 2.22 m.

No. 30 a sherd of Native ware in a clay silt level. A 3/4. Depth 2.24 m.

No. 34 two early Roman bases. F 4/5. Depth 2.75 m.

Nos. 37, 38, 65, 70. several sherds of Roman vessels in white paste. F4/5. Two at a depth of 2.76 m. and two at 2.70m.

No. 39 part of an Early Roman dish. E 4/5. Depth 2.80 m.

No. 42 several sherds of a Belgic pedestal urn. E 5/6 Depth 2.85 m.

Nos. 58, 62, 63, 64 several sherds of four different Roman jugs in various shades of pink or cream paste. Found in the lower levels of the infill of the mid-south basin..

Nos. 65, 66, 69, 70, all sherds of hard black Roman domestic vessels, one of which was burnished and one with a

line of stab marks round the shoulder. All found in the infill of the mid-south basin.

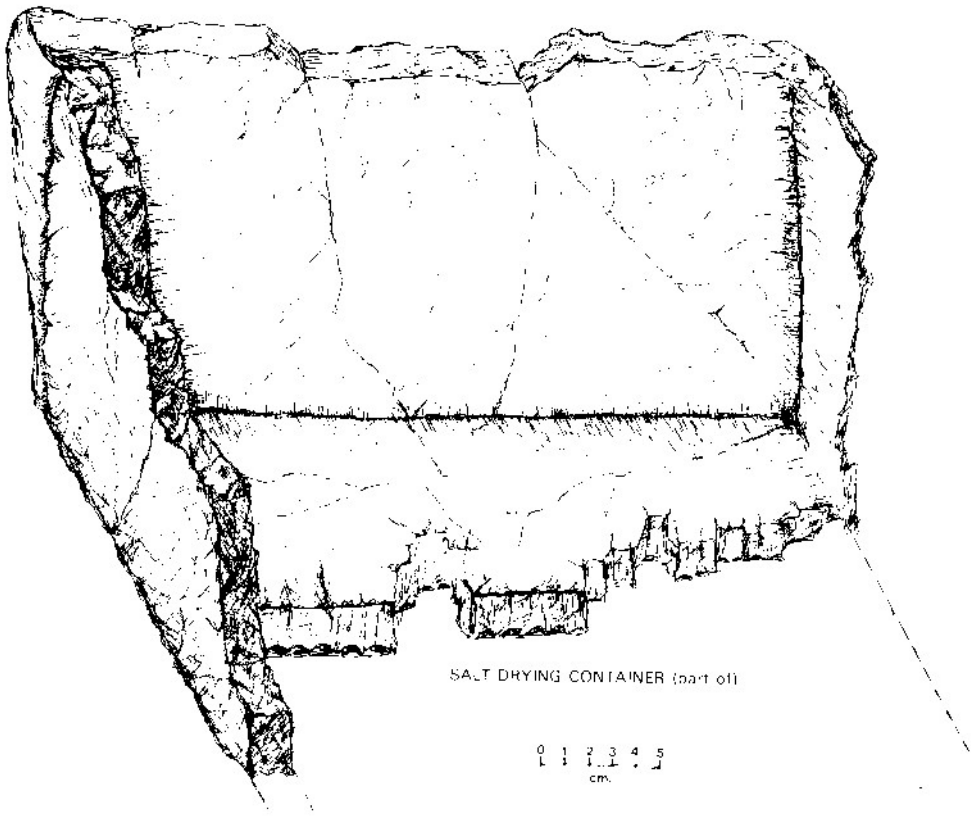
Nos. 71, 74 four large Belgic sherds from the infill of the transverse trench. All at a depth of 1.60 approx.

No. 75 a large sherd of Native ware found under the outer clay wall of Tank S in the south-eastern group. Depth 1.20 m.

Unstratified a body sherd of native storage jar in red ware with combed surface.

A Possible Container for salt drying was found in F 6/7 to the south of the transverse trench as a patch of small fragments measuring approximately 50 x 30 cm. This was encased in plaster and removed for examination the results of which are not yet known.

Briquetage Several large pieces of salt-drying containers were found. These were made of the usual coarse red porous material with an admixture of flint grits and organic matter. Many of these showed the turn of base and side with examples of wattling on the bases. Of the corners found, one was of particular interest as it showed the folding and joining of the clay. Some of these pieces were found together and, when joined, made a complete side of a vessel with the turn of the corners. It was also possible to join some of the other large pieces and with all of these it had been possible to reproduce a composite drawing which appears on page 32. As before many pieces showed green glazing, imprints of grain and finger prints, the white deposit on the inside and traces of burning on the bases.



THE WORKING EQUIPMENT

This was exactly similar to that found in the 1971 excavation and can be classified as follows:

THE PEDESTALS

There were 25 pieces of pedestal stems, the thickest 6 cm in diameter. The three complete stems had a length of 28 cm, and 26 cm and 27 cm including the head. Several of these showed signs of hand-moulding, the marks of the fingers and finger-tips being clearly defined and they fell quite naturally into the palm of the hand. Two of the larger pieces found appeared to have been bound with some organic material such as withy.

There were 15 pedestal heads, all with part of the stem attacked; the breadth from point to point varying from 8 cm to 13 cm - all were boat-shaped as were those found in 1971, but one was much wider throughout its

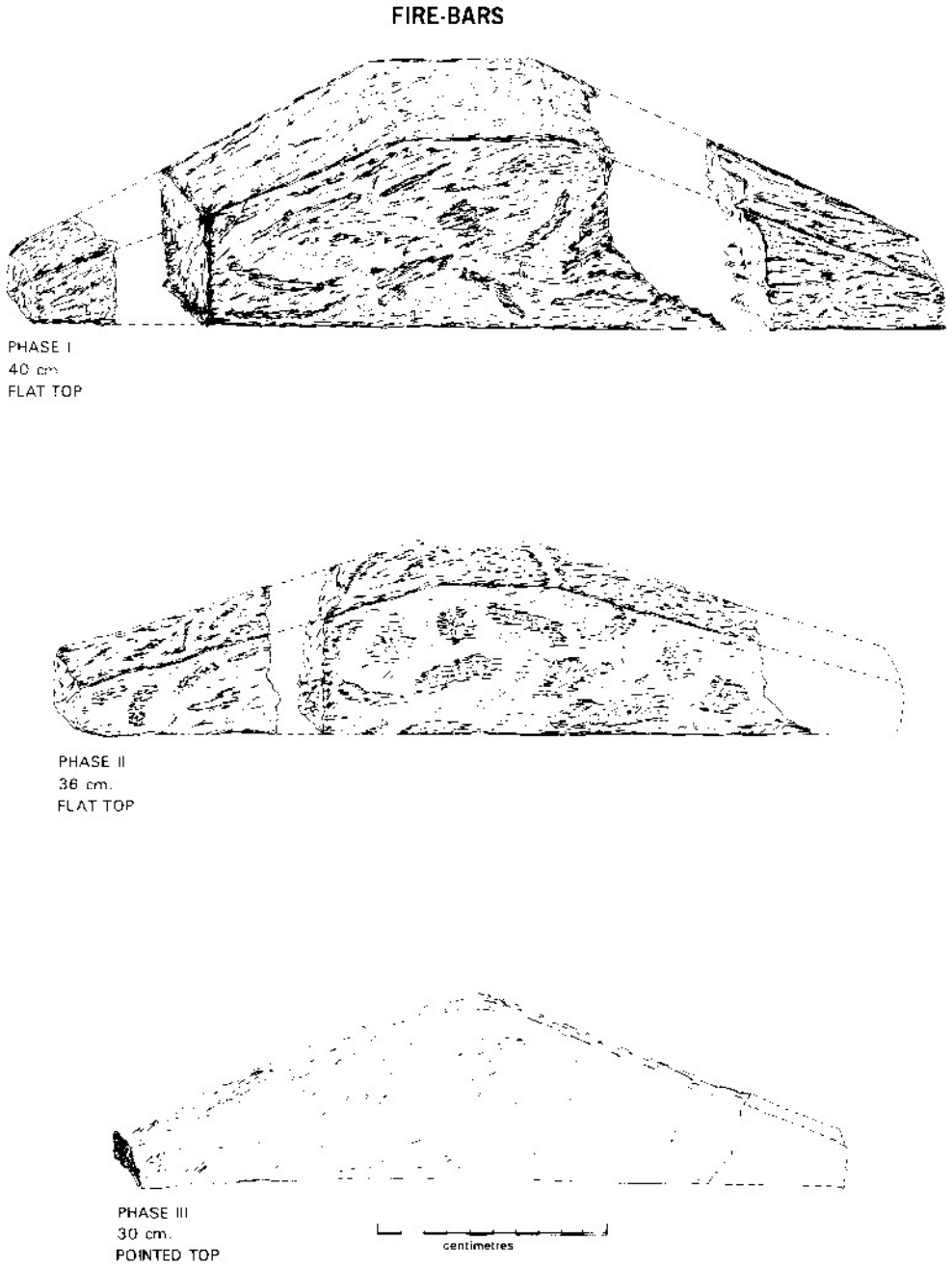
breadth. Two showed a smoother surface and were made of redder clay, possibly of a later manufacture.

There were nine mushroom bases; the smallest having a diameter of 9 cm and the largest and most massive, a diameter of 16 cm.

THE PEDESTAL SOCKETS

We did not find any pedestal sockets in situ as in 1971, but, from our experience of the previous year, we were able to recognise fragments when found and there were many of these in various stages of vitrification. It would seem that it was important to ensure that the pedestals were firmly set before the fire was lit to crystallise the brine in the containers. Judging by the weight of the parts of container which we have managed to piece together, this attention to detail can be well understood.

THE FIRE-BARS



We were able to make a clearer assessment of these as a development in the pattern became apparent. The early types, (phase 1) are of heavy construction and have a flat section at the top; phase 2 was of a similar pattern but lighter construction. Phase 3 of which we found one complete (except for one point) had no flat section but

came up to a point at the top. These three phases are illustrated on page 33. Numbers found were nine incomplete pieces of phase 1, ten incomplete pieces of phase 2 and 3 pieces and one complete of phase 3.

THE BONES

We are indebted to Mr. J. J. Heath of the Natural History Museum, Colchester, who identified the bones for us. These are as follows: -

1. The skeleton of a pig between 12 and 15 months of age, according to modern standards. Found E 4/5. Depth 2.60 m. The bones of the face are not fully developed but appear to be similar to recent skulls in the Museum collection.
2. The bones of a duck about the size of a Teal. Found in the infill of the North Pit. No. 29 A 3/4. Depth 2.45 m.
3. Several small bones in a fragmentary condition due to burning. They include remains of an animal about the size of a sheep and a smaller animal about the size of a hare. No. 29.b. Found in the infill of the North Pit. A 3/4. Depth 2.30 m.
4. The molar teeth of a sheep in the jaw-bone. No. 45. E 5/6. Depth 2.95 m.
5. Several bones from the general infill including the tooth of a cow, the toe bone of a pig and the limb bone of a sheep.

THE CHARCOAL

There was so much carbonised wood on the site that only the complete pieces of branch or twig were collected; this weighed over 2300 grammes (5 lb.) altogether. Several pieces showed where they had been chopped off - a surprisingly clean cut, often on the slant as if by a modern knife or billhook. Specimens of those from the 1971 excavations have been submitted to the authorities for the identification of the species but, so far, no report has been supplied. We hope to publish these later together with those from 1972. We also hope to obtain a radio-carbon dating which will also be published later.

THE FLINTS & STONES

In all thirteen pieces of flint were found which seem to be working slivers. Only four of these showed any signs of shaping.

Glacial erratics such as gabbro and limestone were recovered. We also found some large smooth sea-washed stones often in conjunction with areas of silvery sand reminiscent of beach surfaces.

PHOTOGRAPHY

A comprehensive record of colour slides and black and white photographs was made thanks to Mr. Tony Bonner. Our thanks also to Mr. Mike Astor not only for his contributions to the photographic record but particularly for his ingenious fabrication of a tripod to support a long ladder so that photographs could be taken from a height of eighteen feet. This was invaluable as it enabled us to make overall records of the features in relation to each other.

CONCLUSIONS

The 1972 excavation links up very satisfactorily with that of the previous year. The make-up of the Red Hill should be taken in conjunction with the aspect of the surrounding fields. From the air one can see here many convoluting dark and light marks - all that remains of the mud creeks of the original marsh before the construction of the sea wall. But the aerial photographs show no such marks in the Red Hill field - these have been blotted out by the red waste of the salt-making operations. We are very grateful to Mrs. Ida McMaster for this valuable contribution. The red waste in itself remains one of the major problems of the Essex Red Hills; either salt manufacture in Essex continued on a single site for a longer period of time than in other parts of the country or a different method in production methods produced more waste. When one remembers the formidable action of the sea during the 1953 floods when sea walls were in existence, one can well imagine what the many estuaries and inlets of the Essex coast would have been like with no sea defences; even though the land level in Belgic and early Roman times would have been some 51 cm. higher than today due to the intervening land shrinkage.

In observing the tip-lines in our 1971 excavation it was noticed that the direction of these was not consistent - that is, the material was not tipped only in the centre making regularly radial tip-lines. In the excavation under discussion where there was a 30 m. square of red waste to be studied, it became clear that the tip-lines sloped in all directions. Taking this into consideration when studying the question of the working areas, it would seem that there must have been a serried expanse of small mounds; each an individual working area which was used for a short time

only. During the occupation of the site the action of the sea and the weather would have eroded these so that the same places could have been used again at a higher level. After the final abandonment of the site this same erosion would have smoothed the whole area leaving the gentle contours as we know them today. The apparently haphazard deposits of material interlaced with clay silt confirm this and it is only when a definitive feature, such as the evaporation tanks, the mid-south basin or the clay packed ditch cut through or ate cut into by other features that we can get any relative time sequence.

In connection with the working floors we can report no definitive structural finds; as in the previous year these were simply pure clay surfaces, about 15 cm. in depth, baked a hard bright red or even vitrified on the top level only, beneath this of a more powdery substance and nearly raw beneath. Patches of burning, broken fire-bars, pedestals and pedestal sockets were always found in association with them.

We hope to continue this research and, particularly, to investigate sites some distance away in an attempt to find some variance of artifacts before publishing a full report on the subject. With this end in view and by kind invitation of Mrs. K. A. Evans, our next excavation of an Essex Red Hill begins in July 1973 at Peldon on the north shore of the channel opposite to Ray Island.

ACKNOWLEDGEMENTS

We should like to thank the following, all of whom visited the site and afforded us advice and encouragement:

Mr. M.R. Hull, M.A., F.S.A., Mr. R.A.H. Farrar, M.A., F.S.A., Dr. P.L. Gouletquer, Mr. LG. Robertson, M.A., A.M.A., Mr. G.M.R. Davies, M.A., Mr. J.B. Hedges, B.Sc., Mr. L.S. Harley, F.S.A., and Miss E. Roper, O.B.E.

The excavation was carried out entirely by members of the Group and their friends, nearly 60 in all; this included a hard core of fifteen who dug faithfully and regularly throughout in all weathers and without whom the results we achieved would not have been possible. To all these we are very grateful.

Appendix 1

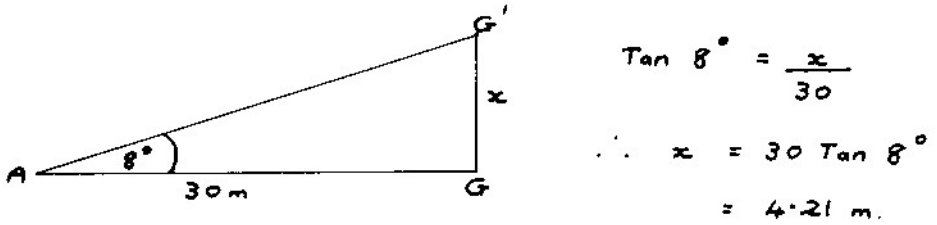
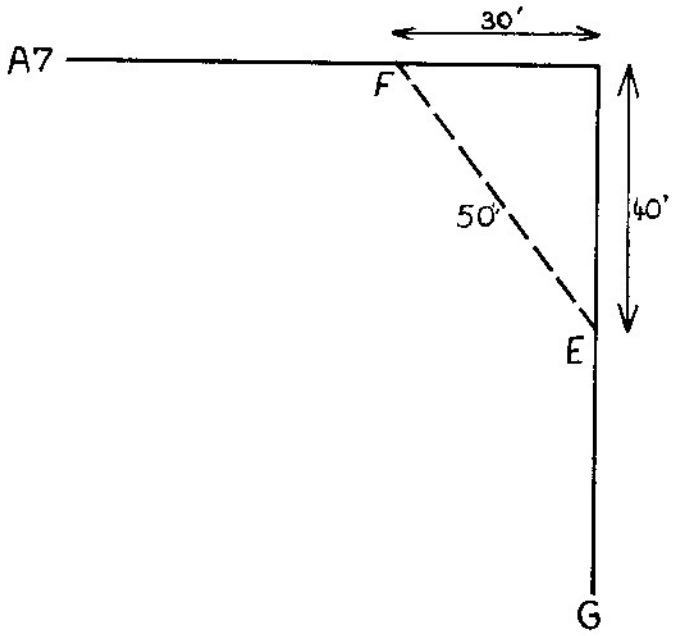


Figure 2.

Appendix 2

Setting out a right angle.
The included angle of a triangle with sides in the proportion 3 to 4 to 5 is a right angle (90^0)
- by Pythagoras.

By measuring 40 feet along AG and swinging an arc of 50 feet from E and an arc of 30 feet from A, then the intersection point F lies on A-- A7 which will be at right angles to AG.



Appendix 3

29th July, 1972 Excavation of a Red Hill at Osea Road, Nr. Maldon, Essex.

Back Sight	Inter-Mediate	Fore Sight	Colli-mation	Reduced Level	Distance	Remarks
1.225			5.157	3.932		Bench Mark Vaulty Manor Cottages (3.982 m.)
1.270		1.465	4.962	3.692		C.P.1 Change Point
1.450		1.810	1.602	3.152		C.P.2 " "
1.350		1.680	4.272	2.922		C.P.3 " "
0.900		0.840	4.412	3.432		Reference peg in excavation
	1.010			3.402		Original Ground Level
0.980			4.412	3.432		Temporary bench mark in excavation

4.412
3.400
1.012

Therefore reading required for level of 3.400 = 1.012

WINTER MEETINGS 1972/73

PLANS FOR THE FUTURE *by J.B. Hedges, B.Sc., (16.10.72)*

The newly appointed County Archaeologist stressed first and foremost the need for vast recording of all sites and finds. Only by this could a true picture of comparison and research be formulated, and preferably all resultant material would then be computerized to save endless searching in pamphlets and museums. In fact once the enormous task was accomplished students of the future would (or should) have the entire recorded County Archaeology at their disposal and for very little time expended by them. Forms were to be provided for this undertaking and further instruction given by Mr. Hedges on their correct completion procedure.

Various rescue excavation slides showed the horrific march of "destructive progress" and under the new recording it is plain that a category scheme for all sites would be in force, i.e. a first category site to be avoided by all development (new roads etc. would have to detour around), a second category site would need to be totally excavated and a third to be partly excavated and so on.

All sites will be placed on the 2½" and 6" maps and copies distributed to various public service departments. In that way no one would have the opportunity to plead ignorance about the presence of a vital site.

One of the interesting points raised was the difficulty of recognising peri-glacial features which, in excavations, might easily be mistaken for pits, ditches etc. Probably the most intriguing site shown was the rocky hill at Kenilworth into which had been cut rows of circular pits in an enclosure and with outside radiating grooved channels. Was this perhaps a Saxon sacred grove? Or was it the factory site for small early mill stones and masons' products such as stone columns etc?

GLOUCESTER - RECENT EXCAVATIONS *by Henry Hurst, M.A., F.S.A. (23.10.72)*

Gloucester has not only military links with Colchester but also the same problems with regard to town re-developments. North of Gloucester lies another supposed site of Glevum - at Kingsholme - a place to which the Ermine

Street access appears more direct. There is no cast iron evidence either way as to whether that vicinity or Gloucester was the initial Legionary fortress which Tacitus reported was needed to suppress the Silurian tribes. Sir Ian Richmond who excavated at Kingsholme found nothing there to indicate early military occupation, and the first fortress at Gloucester itself, appears to be of Flavian date.

The earth layers at Gloucester are much easier to interpret than the sandy gravel with some outstandingly visible foundation wall trenches which stood out, clearly orange, amidst the surrounding earth. Even the fact that supporting posts were bedded against the firm hard wall of the trench - with rubble infill in the front - was perfectly obvious. The buildings associated with these works were dated by coins to shortly after 64 A.D. and the occupation levels produced those of the 70's A.D.

A slightly later series of buildings had charred timber sleeper beams on which plaster could still be seen upon the earth covered bases. Remains of a very fine courtyard house c. 130 A.D. of a type not normally found in military situations was uncovered complete with colonnade, water cistern, fountains and paving. It was comparable to a house at Pompeii and contained two Hadrianic period mosaics. The first phase of Roman Gloucester was an area of some 40 acres enclosed by an earth bank and rampart.

Not surprisingly, perhaps, the forum of the eventual Colonia appeared to overlie the Military Headquarters building of the Fortress periods. The lecture was indeed of our own meat and wine!

THE PALACE OF DIOCLETIAN AT SPLIT, YUGOSLAVIA WITH SPECIAL REFERENCE TO RECENT EXCAVATIONS *by Dr. John Wilkes, B.A.* (30.10.72)

A complimentary follow on to last week's subject, Diocletian's magnificent retirement palace at Split in Dalmatia showed us Roman architecture par excellence. For those of us who have been lucky enough to see these remains in situ it was a nostalgic viewing. After 21 years in his newly formed taxation departments of the civil and military authorities, Diocletian reckoned he had earned a rest and might safely leave things in the hands of the "college of emperors" which he had been instrumental in founding. Autocratic, but also a born administrator, he did return once but, having looked and disliked what he saw, went back again to his well earned refuge. Fortress would be a better description. The palace was built of limestone from the island of Brattia and resembled Mumrils for size and design. (One of the camps on the Antonine Wall). Behind it lay that impregnable range of mountains rising to over 900 metres high which run the whole length of the coast. On the opposite side, to the south, the sea lapped the front walls of his galleried home. Entrance at that level led into the vaults below the palace which were constructed to take into account the upward slope of the terrain to the north.

In the 7th century the strength of the walls drew people needing refuge and their area, 170 x 200 metres, enclosed 7½ acres. Only during the 13th or 14th century did the town of Split move outside the palace precinct. The lay-out was substantially camp-like with main gates placed centrally on north, east and west walls plus the usual Via Principalis and other roads connecting. Most gate facades were partially obscured but the north gate - equivalent of the Porta Praetoria - still remained comparatively whole and resplendent with arches and twin niches.

Within the palace the great central colonnaded peristyle gives on to Diocletian's enormous tomb, now the present cathedral, and largely intact. Through the principal entrance to his private apartments one passes into a domed vestibule which is open to the sky. Apart from a little temple-like structure the remaining parts of the palace are sketchy but excavation is rapidly filling the gaps. Curious late mediaeval graffito-adorned pottery was most interesting from a manufacturing point of view - coloured slip being run into the incised design. Christian pottery complete with IHS was also featured. Perhaps many years hence the later ephemeral houses which have been built all along the top of the palace walls will disappear, together with the shops and windows let into the lower stories.

THE EVOLUTION OF SALT-MAKING IN EUROPE by Docteur P.L. Gouletquer (6.11.72)

The Group was privileged to hear the first lecture in English from Dr. P. L. Gouletquer, the well-known French archaeologist, of the Faculte des Lettres, Universite de Brest.

The theme of Dr. Gouletquer's lecture was the evolution of salt-making sites from proto-historic times to the end of the Roman period. This development was linked with the ethnographical growth of mankind and his need for salt; covering the period of the salt-springs of Wieliczka to the Red Hills of Essex and the Salterns and Red Mounds of Lincolnshire. A fascinating dissertation, so full of information that it is not possible to reproduce it here; but for those who wish to pursue this subject further, a full length article will appear in the forthcoming issue of the Essex Journal.

Dr. Gouletquer charmed his audience with his warmth and enthusiasm and the Group was very fortunate to be able to welcome him on his first lecturing engagement in England

RECENT HILL-FORT EXCAVATIONS IN THE WELSH MARSHES By S.C. Stanford, B.A., F.S.A., (13.11.72)

Land on the edge of Wales contains an enormous "rash" of hill-forts but three in particular were the subject of this week's lecture. Croft Ambrey, Midsummer Hill and Credon Hill Camp had all been excavated by Mr. Stanford's team and evidence obtained seemed to point to the belief that fortifications such as these were occupied permanently over several centuries. Large areas of the level ground within the ramparts could be seen to have successive small rectangular hut enclosures, some with, perhaps, normal village habitation; pasture or arable land might lie lower down in the valleys. The largest fort - Credon Hill - is more rounded in shape than the other two which are somewhat elongated.

All had timber gate posts which had been re-set often - one pair as many as twenty times. Given a mean life of 25 years at the shortest, these could span some five centuries, thus taking the hillforts back to circa 500 B.C. (Farm timbers or posts today last over fifty years in solid ground). A form of stone walled entrance way, culminating in twin guard chambers, was common. At Croft Ambrey the stone chamber on one side of the gate was narrower than that on the other for some reason, and this was paralleled at Danebury, though the latter was carried out in timber. Curiously, only a minute quantity of Iron Age pottery was found - and over 6 years digging produced a meagre 6 Roman sherds!

Successive hearths on the same sites pointed to economy and permanence in use of the land. Sloping terrain on Midsummer Hill was terraced to take 200 odd curious rectangular huts or granaries. Some of these appeared to be three walled, having perhaps the fourth wall open. No hinges were found for entrance gates so how were they hung? Perhaps by pivot or a form of portcullis, for there was no sign of scraping on the hard road surface which must have been the case had they dragged the 12 feet wide gates on their rather standardized 10-12 inch square posts. Another bearing on the life of the supporting posts was, of course, the weight of the gate itself. Facts and figures are emerging, however slight, from such painstaking work.

PARSON WOODFORDE'S SUFFOLK HOST, MAY 1775, by F.H. Erith, F.S.A.

Woodforde spent a week in a country house with a Captain Uvedale and his wife, near Needham Market. The famous diary has not been published in full and this episode was only mentioned in a precis. Mr. Erith produced the full text, and his researches on the persons and places mentioned in the Diary during this week in 1775 comprised the substance of his lecture.

Slides of the original places Woodforde visited - Shrubland Park, Coddenham Vicarage, and Captain Uvedale's house at Creeting were shown as well as the people he met - the Bacon clergymen brothers, the Reeves of Ipswich and Captain Uvedale's family.

Captain Uvedale's own life was traced - he had served with distinction in the Seven Years War as a frigate captain in the years prior to Woodforde's visit, and under Admiral Rodney as a captain of the "Ajax" man-of-war a few years after.

Mention was also made of Nathaniel Acton, an Oxford friend of Woodforde and a neighbour of the Uvedales. It was a coincidence that Acton was one time the owner of the jugs the C.A.G. excavated from the well at Bramford two years ago.

THE HISTORY OF ESSEX COUNTY HOSPITAL, COLCHESTER, by Dr. J.B. Penfold, M.B., B.S., F.R.C.Path. (27.11.72)

The Essex County Hospital was founded in 1820. Two years previously, Archdeacon Jefferson and his friends purchased a wing of the old military hospital which, together with the barracks, was auctioned on 25th August 1818. Because of legal tangles concerning the land and leasehold connections with St. Mary Magdalen hospital, the entire wing was moved to its present site in Lexden Road. There the Mayor and commonalty of Colchester gave up their grazing rights on the 3 acre field known as the Little Shoe (which cost a total of £400) in order to accommodate that earliest construction. In 1876 a further 1¼ acres was added to the site for extensions, mainly exercise yards (separate for the sexes!). The whole building cost £1,879 and with equipment, furniture etc., the price totalled around £5,000. The portico which is still substantially the same today accounted for £90 but gave dignity to the scene and still does.

As a pathologist Dr. Penfold was pleased to have a mortuary beneath the foundations in the shape of the well documented Roman burial ground. The Colchester Sphinx was found about a year after the hospital opened - roughly where the flower bed lies outside present Ward 2.

There were no patients for a week after the hospital opened as no one came. When they did the admissions book showed that they had to have a sponsor, as well as a doctor, in order to gain admission.

It was dirty, smelly and septic. Jail fever and gangrene were common. Nurses were constantly reprimanded for drunkenness and misbehaviour on the male wards. The drainage was non-existent and the muck heap was in front of the hospital. When a cesspit was finally dug that too was at the front. For 35 years water was hand pumped into buckets, but finally conditions improved. In 1890 the mattresses, which had in turn been straw and then chaff, were now changed for horse hair. Sheets had been known to remain unchanged for 10 weeks, but by 1900 the smoking chimneys, shaking windows and floor cracks were disappearing and medicine as we know it today was in sight with the first opening of the abdominal cavity and specialized use of anaesthetics. Small wonder that the alcoholic beverage purchases were so enormous before then. Before the introduction of modern drugs medicine certainly seemed a case of survival of the fittest where treatment was concerned.

Mr. A.D. McWhirr, B.Sc., M.A., F.S.A., was unable to lecture on RECENT EXCAVATIONS AT CIRENCESTER on 4th December and instead Mrs. Kay de Brisay, Mr. Peter Holbert and Mr. Felix Erith talked on Group Excavations for 1972. Full accounts of these excavations appear in this Bulletin.

On December 11th the Group held its traditional Christmas Party which was a great success, much credit for which must go to the ladies who supplied the excellent and varied table and worked so hard during the evening. We must also not forget our amateur bar tenders! A high light of the evening was a talk by Miss E. Roper, O.B.E., on THE MAKING OF CORN DOLLIES. Not only were we told of the way in which various types of corn dollies were made but we also learned of the various materials used in construction and the history and folk lore of the subject. Some members availed themselves of the opportunity to try their hands at working on the material. The completed items which Miss Roper brought along to illustrate her talk were most attractive.

RECENT EXCAVATIONS AT GRIMES GRAVES by R.J. Mercer of the Department of the Environment (15.1.73)

Every season we have several outstanding lectures and Mr. R.J. Mercer's excavations at Grimes Graves must certainly qualify as one of these. Enormous skill and concern for detail was apparent in every slide. Both he and his Department are to be congratulated for their work at this most important prehistoric site.

Within the twenty acre plot, near Brandon, Norfolk, are some 360 odd saucer shaped depressions. In between these the natural consists of sandy Breckland soil below which at 1 metre depth lies chalk. Since the area was scheduled in 1931 several pits have been excavated and closed again. The land here is sloping and prehistoric man soon exhausted the precious floor-stone flint which he excavated from the bottom of this slope and so he was forced to dig deeper, sometimes 12-14 metres down, when he reached the top of the slope. Many of the shafts were co joined, not necessarily by intent but simply because their galleries touched. The consistent, predictable floor-stone flint, vital for heavy edged tools such as axes, lay in nodules in comparatively thin seams. Slight staining showed where they had removed these and in consequence it was possible to estimate the tonnage removed from one shaft. During the 1971-72 excavations the "finds tray" was ignored -- it required "finds barrows" and 3 ton lorries to carry away the flint workings, some half a million flints all told! On one working floor, beside a shaft depression, were 13,000 flints of grooved ware period (late neolithic).

The aluminium tubing bridge placed over the selected shaft excavation site was a masterpiece of planning and the resultant surveying techniques - based on the horizontal bridge planks as a fixed datum line - were very painstaking.

All spoil was hand-hauled and sieved - a colossal task. Soil samples for future study were taken in a continuous descending column within the shaft. One quadrant, 2 metres deep, was removed from the chosen shaft at a time and in turn, and minutely recorded with the aid of plum-bobs from the bridge planks. Within the top layers was discovered an intrusive burial - one male one female, with an iron bead. Therefore possibly of Roman or Iron Age date. Very evenly laminated wash filled the whole pit down to its base - over 40 feet below. (At 30 feet were stake holes for a supposed platform). The miners had left their last layer of waste chalk and herein the last few centimetres was the grooved ware evidence again. Plastic was laid over this resultant cleared bottom so that no one should tread there since the time of the prehistoric diggers - a nice thought for future public display by the Ministry. Carbon dating will fill in the details but from evidence obtained over the whole area it appears that late neolithic people worked the shafts for flint and were followed, after about 100 years abandonment, by urn pottery people with bronze implements. These latter

people used a strange prismatic flint tool which appeared in quantity. Later came the above iron-using burials after which was negative silt up to the present time.

Mrs. Helen Brock, M.A. (Oxon) was unable to give her lecture "2000 YEARS OF PALMYRA" on 22.1.73 but group members very pleasantly filled the breach by showing personal travel slides. Mrs. L. Eshelby described the attractions of Pompeii, Herculaneum and Sorrento; Mrs. Kay de Brisay took us on a tour around Tangier and Lisbon whilst Mr. Bill McMaster gave us some of the best examples of Chinese ceramics.

MEMBERS' FINDS AND TREASURES (29.1.73)

This ever popular occasion took the place of a cancelled lecture. Members responded nobly and many interesting items were displayed, too numerous to mention in detail here. These included clay tobacco pipes from the East Bergholt bell-cage described on page 11, and an ancient lantern described on page 12. Others included samplers, coins, flints, glass, siege currency, a collection of Celtic coins and some beautiful and unique books which Mr. Clarke produced from the Castle safe. It was a most enjoyable evening and we are very grateful to all those who made it possible.

RECENT EXCAVATIONS IN LINCOLN by Christina Collyer, B.A. (5.2.73)

Both the Car Dyke and Fosse Dyke meet at Lincoln and here was the ideal site for a 41 acre legionary fortress which was established in around 61 A.D. in the aftermath of Boudicca's Rebellion. The famous IX Hispana Legion was garrisoned there until A.D. 71 and was replaced by the 2nd Legion Adiutrix. A new frontier system with fortresses at Chester, York and Caerleon then became established at which point, Lincoln, being strategically irrelevant, thus became a Colonia. The town flourished and the walled area was increased to enclose 97 acres, a city on two levels with the legionary fortress and early Colonia underlying that area of Lincoln which today retains much of its medieval character. The extended Colonia underlies the commercial section in the lower town.

The chief interest in the recent excavations is, of course, the gates. Particularly the North gate which is called today the Newport Arch. This had to be dismantled but has since been replaced and is now structurally safe. One of the semi-circular towers of the main East gate was uncovered and beneath it were the post holes of the timber gate belonging to the earlier fortress. The West gate was seen beneath the medieval castle mound in 1836 but when it collapsed almost at once they covered it over again. The South gate was visible until 1710. In the `Park' site of the lower town area, much work has gone into elucidating the defences. And it now appears that the original stone defences there were built not long after the first Upper Colonia stone wall. Thus three coloniae - Gloucester, Lincoln and our own Colchester appear to have received their walls early in the 2nd century, about the same time as the legionary fortresses were acquiring stone walls, with the major cantonal capitals following just around the end of the 2nd century.

THE DISPOSITION OF THE ROMAN ARMY IN BRITAIN by G.M.R. Davies, M.A. (12.2.73)

In this extremely detailed lecture we were taken with the Roman legions from their first supply base at Richborough, through a couple of skirmishes in Kent to the main battle on the Medway, perhaps near Rochester, where Claudian forces routed the major British defenders under Caratacus and Togodumnus. The latter shortly losing his life near the Lea tributary. Subsequently Claudius brought over many dignitaries to attend his triumph, one of whom was his doctor, a man curiously described as being in charge of the guild of smiths. Also present was the great army commander Vespasian who fought some 30 battles and conquered 20 hill forts before he, in turn, became the Emperor of Rome and its outlying provinces.

The Roman soldiers had things worked out for them very carefully. Particularly their pay with minute details such as the annual dinner being accounted for. Their fighting was organized to a regular pattern. In hill forts, for instance, they bombed the chiefs' huts with ballista missiles and filled in a part of the defensive ditches in order to walk easily into their opponents' stronghold. These, and many other little strategies no doubt accounted for their great military successes.

Auxiliary forts are being recognised in increasing numbers through detailed excavation and air photography. There is so much to be learned about the movements of the Roman legions and new information is constantly adding to the total. As our ex-Chairman remarked ‘one would wish to have Mr. Davies's complete grasp of the subject’.

RECENT EXCAVATIONS IN CIRENCESTER - A.D. McWhirr (19.2.73)

A fine aerial photograph of Cirencester which covered the main area of Mr. McWhirr's excavations, clearly showed the amphitheatre and the line of a supposed road leading to the latter was proved to veer away from the entrance. Possibly in order to encircle the building as has been the case with some other theatres. To the south of the road lay a cemetery and here, curiously, the land dipped in what might have been recent quarry workings. However, Mr. McWhirr found from the burial positions that the quarrying had occurred in Roman times, perhaps for building purposes.

On the Fosse Way leading out of Cirencester was another extensive cemetery with several stone coffin burials. In one of these was the skeleton of a male which, according to Dr. Wells, showed the earliest example of gout yet known in Britain. Three fine tombstones were found behind the town rampart and posed an interesting query as to why they were there.

In past years, on a large allotment area, had been noted many finds of Roman origin and here indeed proved to be a very substantial complex. A fine villa with several mosaics and a neighbouring building which contained the now famous "Hare" mosaic; and which, because of its bathhouse, was thought to be the service building for the villa.

Both buildings were joined by a connecting wall and the villa had a barn-like structure attached - almost certainly an iron working shop. In the yard adjoining was a rather nice feature - a pile of uncut sandstone stacked ready for repairs - just as it was left.

Extraordinary methods of hypocaust construction were used, some quite alcoholic in outline, but no doubt highly efficient. Some channels appeared to lead to outside walls where possibly couches or beds were situated on the inner sides.

The finds from this excavation should place the town high on the visiting list for archaeologists.

SAXON & MEDIEVAL OXFORD - by T. G. Hassall (26.2.73)

Mr. Hassall was appointed in 1967 for a five year period in Oxford and it is very plain to see why he is now on his second five year stint. His grasp of every aspect of collegiate and urban documentary history, not to mention the usual archaeological data which came his way, led us to a very detailed and interesting picture of Saxon and Medieval Oxford.

The town is surrounded on all sides except the north by rivers, thus providing a natural defensive position. There was no major Roman settlement in the locality but several habitation sites and kilns have been discovered. Traces of prehistoric occupation are also evident.

Static property boundaries in Oxford have been a feature of many old documents some remaining the same since the 13th century the Saxon Chronicle states that Edward the Elder captured Oxnaforda and a burial placed on carbon has been dated to the late 8th or early 9th century.

Pottery finds also corroborate a Middle Saxon occupation of the town.

However, where the burgh defences lay is still a matter of conjecture although one very small portion of a turf rampart has been noted.

The excavations around St. Ebbes church, where development is cutting underground roads to a depth of twenty-five feet, has, as at Colchester, meant total investigation where possible. The results were not disappointing, although what to do with 1,200 medieval leather boots proved quite a problem.

The rare 10th century Saxon halfpenny which was found is one of only four in the country.

Thermo-luminescent dating of a waterlogged fence which lined a soak-away gully produced a date of 780-830 A.D. Less than a hundred years after St. Frideswide is reputed to have lived and founded her religious house near the cathedral site at Oxford.

BRITISH HAMMERED COINS - by Dr. J.G. Parish (5.3.73)

British hammered coins came into being around 575 A.D. and ended in 1662. The upper and lower dies were fixed into over-lapped blocks of wood and given a sharp tap with a hammer. The surplus surrounding metal was then cut away with a pastry type cutter thus leaving the circular coin to which we are well accustomed.

Roman coins went out of use circa 430 A.D. and about a century later some gold coins were coming over from France under a limited overseas trade movement, perhaps as ornamental pieces for gifts etc. The Anglo-Saxon character of coins was acquired about 650 when winged centaurs, wolves' tongues entwined and bird designs all appeared on the well-known sceattas or skeats of that period.

One delightful example of Archbishop Vigand's mint had all the characteristics of Friday afternoon's hurried job where the operator had engraved several of the letters the wrong way round.

The invading Danes in East Anglia soon became Christian and a coin to commemorate St. Edmund was produced in 890. Under Athelstan, king of all England, certain rules of minting were laid down and a moneyer was liable to lose a hand as penalty if he infringed the rules or debased the coinage in any way.

No less than 4300 British coins have been found in Sweden alone and bear silent witness to the many Danegeld retribution payments that the luckless inhabitants of Saxon England were forced to pay.

This tribute continued even when a Danish king was placed upon the throne; now in form, a tax, even though the original reason for the levy had long been lost or forgotten.

In Canute's reign the dies for coins were changed every few years and, of course, the moneyer had to pay the king for each new design. Of necessity the old dies were deliberately destroyed and consequently early examples are seldom found. The Royal Mint has one only, of the reign of Edward 1**.**

A fine hoard of twelve coins of William the Conqueror was found in a roadside ditch at Felsted, Essex, in 1972. Unfortunately these were all privately disposed of before adequate records could be made.

The short-cross coin originated from a design by a Frenchman in 1180 and carried on through Richard and John's reign into that of Henry III. After many changes and devaluations, finally, in 1562 appeared the first milled coin. Strangely it did not last very long and for one more century the hammered type persisted in cruder form and of poor design until its final decease.

A very instructive ‘home’ lecture indeed!

THE DESERTED MEDIEVAL VILLAGE - by Guy Beresford (12.3.73)

Mr. Beresford, who is well-known for his meticulous study of this subject, began his lecture with some slides of aerial photographs of a deserted village in the clay-lands of Lincolnshire. The roads showed as hollow-ways and the dwellings as rectangular platforms; often with post holes round the edges and some inside indicating through passage ways dividing the two rooms and, later, chimney foundations. The earlier houses showed open hearths in the living quarters, with the cattle in the other room.

Mr. Beresford explained that the word 'toft' referred to the small area where the house stood and `croft' described the enclosed land at the back belonging to the occupier and which could be used for pasture to graze the cattle or for the growing of grain or fruit etc.

Some excellent slides of the various excavations revealed the extreme transience of these sites. The surfaces, which in many cases were immediately below the shallow top soil, could only be interpreted properly if they were kept damp enough to show the slightest changes of colour or texture indicating wall, drainage ditch, occupation level or hearth. Patches of worn cobbles showed where the paths and doorsills had been also the thresholds and steps into the rooms. The site of the blacksmith's shop at Goltho showed the pit which had been used as a forge with three large stones to support the melting pot. Another slide showed a road with a layer of pebble metalling with drainage ditches at each side and an earlier road beneath.

T

he development of the construction of the medieval buildings was explained by Mr. Beresford. The earlier house of the 10th and 1lth centuries used rough timbers cut from the forest and set into post holes. This type of dwelling might last twenty years with a certain amount of maintenance, but later, in the 11th and 12th centuries, prosperity had brought more wealth and the uprights were set on the top of the ground or on pad-stones. The richer people could even

buy a custom-built timber framework, known as a reverse assembly, designed in a workshop and re-erected on the site. Towards the end of the 14th century much larger houses were built which included second stories with drip channels to carry away the rain water. Many of these enclosed a cattle yard to which the cattle were brought during the winter months; in Lincolnshire this was called a 'crew-yard'.

These refinements probably became essential because it is known that the weather deteriorated considerably about this time and, in fact, was responsible for the desertion of many villages. Increasingly adverse conditions meant increasingly bad harvests and in some winters it would have been impossible to cultivate the land at all on these clay-lands; so the populations moved to sites better drained and kinder.

Other reasons for the desertion of these Medieval villages were the Norman conquest and the subsequent enclosure of Royal Parks and the establishment of the monasteries. Though local folk-lore might attribute desertion to wholesale deaths from the plague, in fact, the Black Death had very little effect on village migration.

Finally, Mr. Beresford showed slides of some of his finds; domestic and farm metal implements, beautifully worked pendants, buckles and belt ends and a delicately engraved scabbard with a duck swimming on the water, another in flight and a heron fishing.

The large audience thoroughly enjoyed Mr. Beresford's exposition on a fascinating subject of which many of us knew little. It made a fitting end to our winter season of lectures.

THE BRITISH BRICK SOCIETY

The British Brick Society was formed in 1972 to study, in all its aspects and in its own right, an artifact hitherto dealt with only as a part of structures noticed more generally.

The Society consists of nine Regional Groups throughout Britain, of which the Essex Group is one. The Essex Group held its inaugural meeting on 10th March 1973 in Colchester Castle, with Mr. L. S. Harley, F.S.A., the President of the Society, in the Chair.

He introduced Mr. G. Hines, co-founder of the Society, and explained in detail the Society's aims which were then discussed. In particular, the location of ancient brickfields, the geological and chemical examination of bricks in an endeavour to trace the provenance of their raw materials and the study of brick structures were included in the discussion.

Persons wishing to join the Essex Group of the British Brick Society, at an annual subscription of 50p (which includes a Bulletin of reports on brick research, to be issued several times a year) should apply to the Membership Secretary, Mr. M. A. Smith. The Building Research Station, Bucknalls Lane, Garston, Watford WD2 70R: