

FIG. 1.—OUTSIDE VIEW.



FIG. 2.—INSIDE VIEW.

DRAIN THROUGH ROMAN WALL.

EXCAVATIONS ON THE SITE OF THE ROMAN
FORTRESS AT PEVENSEY, 1907-08.

By L. F. SALZMANN.

As a result of the excavations carried on during the winter of 1906-7 in the vicinity of the north postern of the Roman castrum at Pevensey, it was decided to continue the exploration of the north-western quarter of the fortress. Accordingly the portion of the area within the walls lying between the west gate and the scene of the previous season's operations, and bounded on the south by the present pathway, was fenced in, and trenching was commenced in the third week of October, 1907 (see Plan). A careful examination of the wall from the outside had revealed the presence of a blocked drain built into the plinth (Plate I, Fig. 1), of which the lower member marks the original ground level, which is now some 12 inches above the present surface, owing mainly to the subsidence of the soil consequent upon the drainage of the marshes. The presumption being that this drain, the only one discernible throughout the course of the wall, drained some particular structure, this was selected as the starting point of the season's work. A shaft (No. I) was sunk against the inner face of the wall over the point at which the drain pierced the wall; at a depth of 10 feet the offset, corresponding to the upper member of the external double plinth, was struck and the top of the drain was found to be composed of a large slab of the green sandstone with which the wall is faced, forming part of the offset (Plate I, Fig. 2). The sides and bottom of the drain were also of green sandstone, and the aperture, which measured 12 inches wide by 10 inches high, was loosely blocked with other fragments of this material, some squared and some rough, and pieces of broken flints, below which were a few inches of black soil containing animal bones,

and just below the entrance to the drain, fragments of common pottery of the Roman period, also a coin of the Constantine family. The general appearance of the remains suggested that the drain had become blocked at an early date, soon after the building of the wall, and as no trace was found of any channel leading up to its mouth it seems probable that it was originally constructed to serve some intended structures (possibly, baths) which were never built; it need hardly be pointed out that if the scheme of the fortress-builders called for such a drain it should have been constructed during the building of the wall, as a subsequent cutting through of 12 feet of solid Roman masonry would be no simple task; the drain would, therefore, exist whether the purpose for which it was designed were carried out or not.

A trench (No. II) was next driven southwards from the drain and approximately in a line with its course through the wall. At a distance of 40 feet from the face of the wall, the surface of the natural, undisturbed clay, here 4 feet below the present ground level, dipped suddenly, the trench section showing that we had cut across a pit or trench in the natural clay, 2 feet 6 inches deep, 15 feet wide at the top, and narrowing to about 4 feet at the bottom. The sides of this depression were defined by a layer of black earth, the soil in the centre consisting of a filling of clay with some admixture of black earth and containing some fragments of Roman pottery and a coin of the Constantine period. To explore this hollow a trench (No. IV) was driven eastwards at right angles to the first trench. At a depth of 7 feet 9 inches from the present surface a horizontal timber was met with, and further excavation proved this to be the uppermost timber of a well (Plate II). When the superincumbent soil had been removed the well was found to be square with an aperture of a little over 3 feet, its sides composed of barks of timber notched into one another, the overlapping ends projecting on the south side as much as 1 foot 6 inches, but to a less extent on the north. Before opening the well a shaft was sunk on the outside at the south-east angle, to a depth of 8 feet from the top timber, or 15 feet 6 inches



ROMAN WELL FROM THE SOUTH-EAST SHOWING OVERLAPPING TIMBER AT THE ANGLE.

from the present ground level. It was evident that the well had been constructed by digging a large hole and building up the timbers against the clay wall on the north side of the hole, the clay here being in its natural undisturbed condition; the timbers were notched into one another and the space round filled up with clay as the work proceeded, the chips from the timbers being found at various levels in our angle shaft. The remains found in this clay filling were entirely of Roman date, consisting of a few fragments of red and black pottery, tile, and the above-mentioned chips of wood.

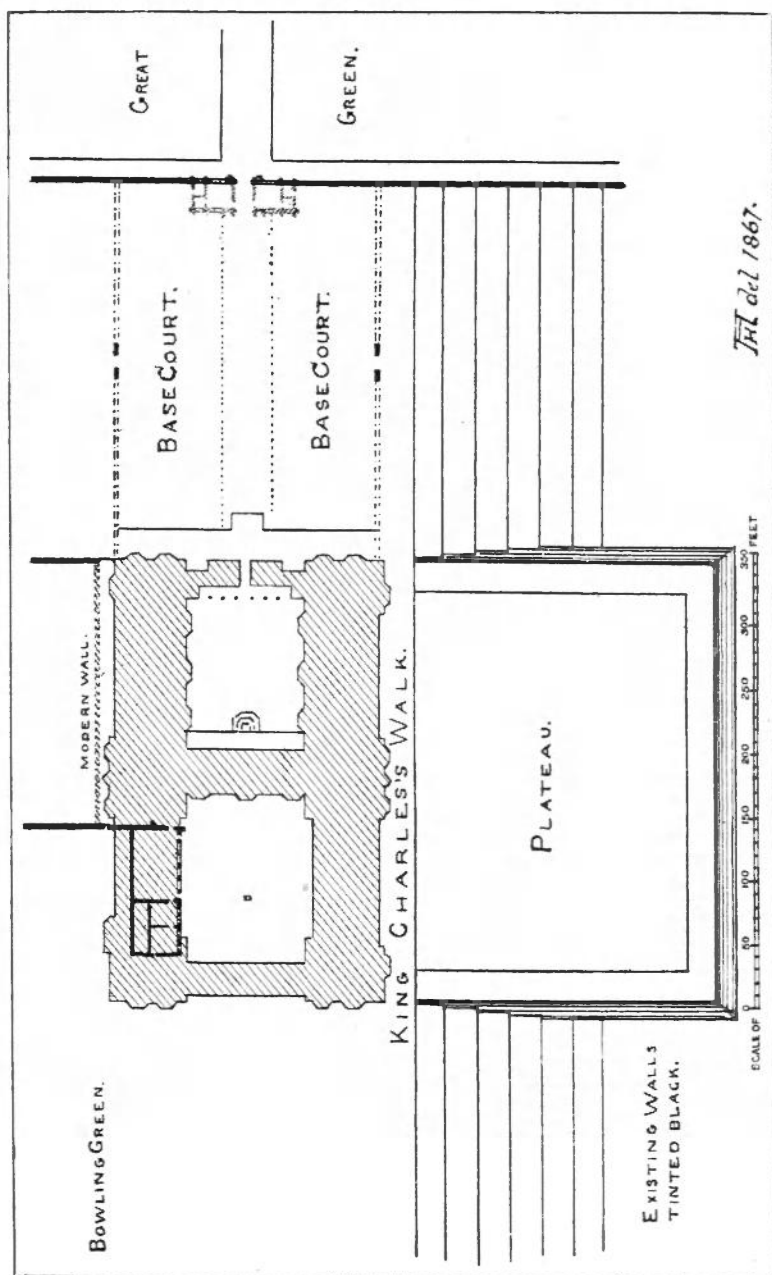
The mouth of the well was found to be filled to the depth of about 4 feet with sticky brown earth containing practically no remains, but below this the earth became black in colour and highly charged with vegetable matter, quantities of straw, matted grass, and what had apparently been thatch being turned out from about 5 feet downwards. Many sticks and pieces of wood occurred in very good preservation, the bark in many cases being still perfect. Slightly lower, from about 5 feet 6 inches, bones became numerous, a series of skulls of oxen, goats, etc., being brought to light, with the interesting cat's skull referred to below, as well as a number of greensand boulders, one very large specimen being extracted with some difficulty from a depth of 7 feet. These finds point to the well having been disused and, as was not infrequently the case, converted into a rubbish pit; while the fact that fragments of coarse black Roman pottery were found some 5 feet from the mouth, and no remains of post-Roman date were found within it, is conclusive evidence that the well was disused and filled up before the end of the Roman occupation; amongst the rubbish cast into the well appear to have been quite a number of old shoes, many fragments of leather being recovered, some of which showed the characteristic sewing of the period, though no nail-studded soles occurred. Near the bottom, at about 10 feet from the mouth, were found extensive remains of a rope composed of three strands of material resembling grass in appearance, which, when submitted to the director of Kew Gardens, was pronounced to be composed of strips of two kinds of bark, one being

tamarisk but the other unidentifiable. This find was additionally interesting as no cordage appears to have been as yet found at Silchester or elsewhere on Roman sites in England. Near the rope was found part of a flat oval piece of wood and some broad thin fragments of wood, which appear to have been respectively the bottom and staves of a bucket, while a small bronze object, the only piece of metal which the well yielded, with the exception of a little iron knife, has the appearance of being one of the ears of the bucket, the handle and hoops of which were probably of withes or bark.

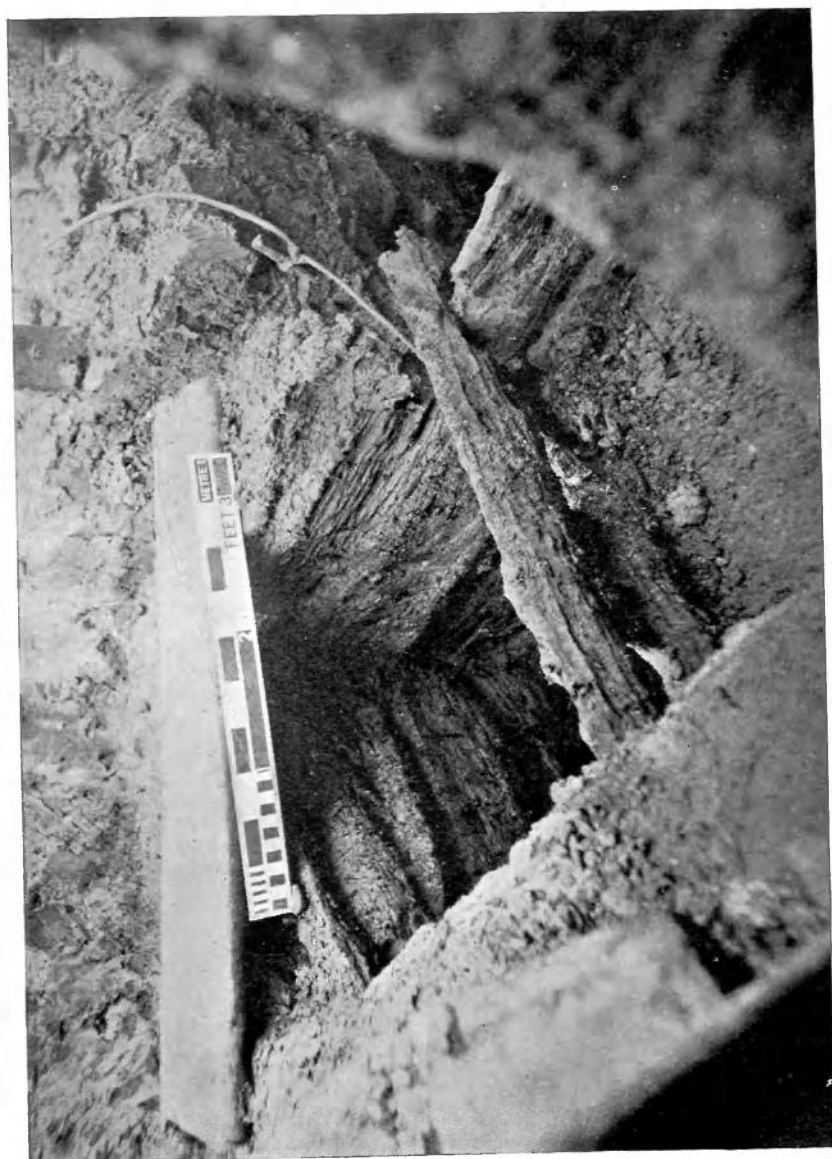
The timbers forming the sides of the well, though very much decayed at the top, were in perfect condition lower down; they were formed of logs split longitudinally and laid with the flat side inwards, the outer side being left rounded (Plate III); the flat inner face of each timber measured on an average 10 inches, there being thirteen courses in the total depth of 10 feet 8 inches. Although the timbering came to an end at this depth the undisturbed soil was not reached until a further 1 foot 6 inches or 2 feet; this undisturbed soil proved to be sand, the clay bed in this part being only 11 to 12 feet thick. The section of the soil south of the well shows that, after the well was built, the clay was filled up round it just up to its mouth, and a large cup-shaped hollow, of which the well formed the lowest point, left, perhaps to assist in collecting the surface water. This hollow, or pond, remained open long enough for a considerable layer of black earth to accumulate in it, and was then filled up to the level of the surrounding ground with clay, and it was probably at this time or not long after that the well itself was filled up.

The pieces of wood and many samples of earth from the well were preserved and a list of the varieties of plants identified is given at the end of this paper.

On continuing the north and south trench (No. II) a little further, about 15 feet south of the well the black earth was found to dip rapidly eastwards, and after unearthing a quantity of fragments of cream-coloured pottery at a depth of 7 feet 9 inches from the surface two holes, each about 2 inches in diameter and 14 or 15 inches apart, were observed leading downwards in



HOLDENBY HOUSE. GENERAL PLAN.



ROMAN WELL FROM THE SOUTH-WEST.

a slanting direction. The sides of these pipe-like holes were lined with a hardish brown incrustation. Upon digging down it was found that they had contained wooden shafts, 2 inches square, which still remained in their lower end. These shafts proved to be the sides of a rough ladder, of which one rung, held in place by wooden pegs, still remained *in situ*, while traces of other rungs and a number of the pegs were also found. At a depth of 16 feet 6 inches a number of interesting remains were brought to light. A wooden shovel with a rounded handle 3 feet 6 inches long and a flat blade 14 inches long by 7 inches broad; the bottom and staves of a wooden bucket, oval (15 inches by 11 inches), the edges of the bottom being bevelled and the staves grooved to receive the bevelled edge; and considerable traces of some woven material, possibly sacking. Slightly lower were found two turned beechwood bowls, 8 inches in diameter, with a maximum depth of 1½ inches; also remains of wattling, which had possibly formed part of a basket, and some pointed stakes, as well as a second wooden shovel, shorter than the first, but resembling it in having a flat blade, of which the bottom edge was in this case bevelled on the under side. The pottery found in this pit, of which the bottom was 19 feet below the present surface, was undoubtedly mediaeval, and probably of the thirteenth century. It seems probable that the pit was dug in order to obtain the sand, of which there is a very fine vein below the clay. This sand seems to have been partly dug out under the clay forming a bell pit, wider at the bottom than above, and it would seem that the sides must have suddenly fallen in, covering up the objects found. From two shovels and two bowls being found it would seem that two workmen were engaged upon the pit at the time that it collapsed.

From the south side of this mediaeval shaft a trench (No. X) was driven in continuation of the first trench, down to the southern boundary of the enclosed area. For a distance of 50 feet from the north end, which was started a few feet south of shaft No. VII, the yellow virgin clay was reached at a depth of from 2 feet 6 inches to 3 feet, and presented a very even surface throughout the

whole of this length. Immediately on the top of this clay small beach pebbles were found in places and the remains in the soil above were comparatively scanty, consisting of the common mediaeval type of pottery near the surface mixed in places with black and grey Roman ware; 40 feet from the south end the dumped clay, mentioned in last year's report, was encountered and presented similar features to that seen in No. X trench of last season's excavations. Dealing with the strata in chronological order we first have the original clay of the island, then a vein of black earth, from 12 inches to 15 inches in thickness, containing Roman remains, next a layer of large waterworn beach boulders about 8 inches in thickness; about all this is a deposit of mottled clay 4 feet 8 inches in thickness at the southern end and tapering to nothing at its northern escarpment. Here a peculiar feature was noticed, which was also present in that season's trench above referred to, namely, an embankment of black earth with a ditch on the inner side, the bank containing a quantity of boulders. This appears to run right along the edge of the dumped clay, but there were insufficient data to determine whether it was thrown up prior to or at the time the dump was made, though the latter seems more probable. This is a feature, however, which may be explained by future excavations, and its elucidation may be important in unravelling the plan of the site in Roman times.

Another trench (No. VI) was carried from near the well right across the enclosed area to the west gate, but this also proved very disappointing and barren of results. Some 20 feet from its north-east end it crossed a patch of gravel or small beach stones lying just above the natural clay, and further west patches of mortar were found, but no trace of any buildings or foundations. A bed of mortar and a quantity of fragments of Roman tiles were also the only objects, beyond coins and pottery, brought to light by the short trench (No. III) to the west of the first trench. As funds did not permit of further extensive trenching a number of holes were dug (marked in the plan VIII, IX, XI, XII, XIII, XIV and XV) in the unexplored portion of the area, but no foundations were found. At IX a small patch of mortar was uncovered, and at XII, a very

much bigger bed. All these mortar beds, and also the patch of beach stones already mentioned, were clearly the remains of material used in building the great wall, and although of no interest in themselves, are of much value as circumstantial evidence of there having been no buildings in this part of the area. The presence of these undisturbed patches of mortar, etc., shows conclusively that the absence of any trace of permanent buildings in this part of the site is not due to their complete removal, but to their never having been erected. It may therefore be claimed with justice that although the results of this season's work were disappointing they were none the less valuable as throwing light upon the actual condition of the fortress in Roman times. It may now be regarded as settled almost beyond dispute that the north-west quarter of the camp was either unoccupied or occupied solely by temporary erections such as the wattle-and-daub huts of which traces were found last season. It still remains for future excavations to show whether any permanent buildings were erected further east.

Another way in which these mortar beds add to our knowledge is that in every case in which they were dug through, no remains of any description were found underneath them, and they were nearly always found to lie directly upon the undisturbed clay, so that there had evidently been no occupation sufficient to produce a marked stratum of deposits prior to the building of the great wall. With regard to the erection of the wall the evidence of the coins found bears out the similar evidence of the first season's coins, which ranged between A.D. 254 and 375. The coins found this season were :

Carausius [287-293]	1	Maximianus [307-313]	1
Allectus [293-296].	2	Crispus [317-326]	1
Constantius Chlorus [292-305]	1	Constantine II. [337-340]	4
Constantine [306-337]	2	Constans [337-350]	4
Const ? [4th c.]	3	Magnentius [350-353]	1
Urbs Roma	4	Valens [367-378]	3 ?
Constantinopolis	2	Gratian [375-383]	2
		Uncertain	11

No further examples of tiles stamped with the title of the Emperor Honorius were found, of which one specimen occurred in the previous season, but a fragment of red tile or brick was turned up which bore the letters BR

within a rectangular cartouche and clearly belonged to the CL(assarii) BR(itannici), or British Marines (Plate IV, Fig. 1). The stamp in question resembles some of those found at Lympne and now in the British Museum, and is quite unlike the specimen previously found at Pevensey. No other inscribed examples were discovered, and the other fragments of tile and brick presented no particular features of interest; they are almost invariably roofing tiles or bonding bricks, to the exclusion of hypocaust tiles and flue pieces, and this is again evidence of the absence of permanent buildings of any importance.

The pottery, as might be expected, was on the whole very similar to that obtained during the first season's work. As before, it was extremely fragmentary, and for the most part of late date; "Samian" was present in only small quantities, and it is unfortunate that the only two pieces which had borne potter's marks were so broken that the letters were completely destroyed. Of imitation "Samian" red wares considerable quantities were found; many pieces of red painted ware with simple but effective decoration in white occurred, as well as a great variety of stamped or impressed patterns. With these latter may be grouped some fragments with the chequered decoration characteristic of the fourth century potteries of Marne.

"Castor" ware this year was absent, with the possible exception of a very few pieces which may have come from either the English potteries or those of the Netherlands, but several fragments of the metallic New Forest ware were brought to light. Of unknown derivation is a very fine ware of cream body, coloured brown and ornamented with bands of simple impressed circles; two examples of this ware, one a small shallow bowl and the other a larger bellied vase, were amongst the most interesting finds. Mention must also be made of two human masks which had formed the ornamentation of vases. The smaller, very similar to one found previously, is of poor execution, but the other and larger (measuring $2\frac{1}{2}$ inches square), though somewhat barbaric, possesses considerable modelling vigour (Plate IV, Fig. 2).

The mass of the earthenware was, naturally, of the common black or grey types; an immense variety of rims and bases, representing innumerable vessels, was found,



FIG. 1.—FRAGMENT OF BRICK WITH [CL] BR STAMP.



FIG. 2.—POTTERY MASK

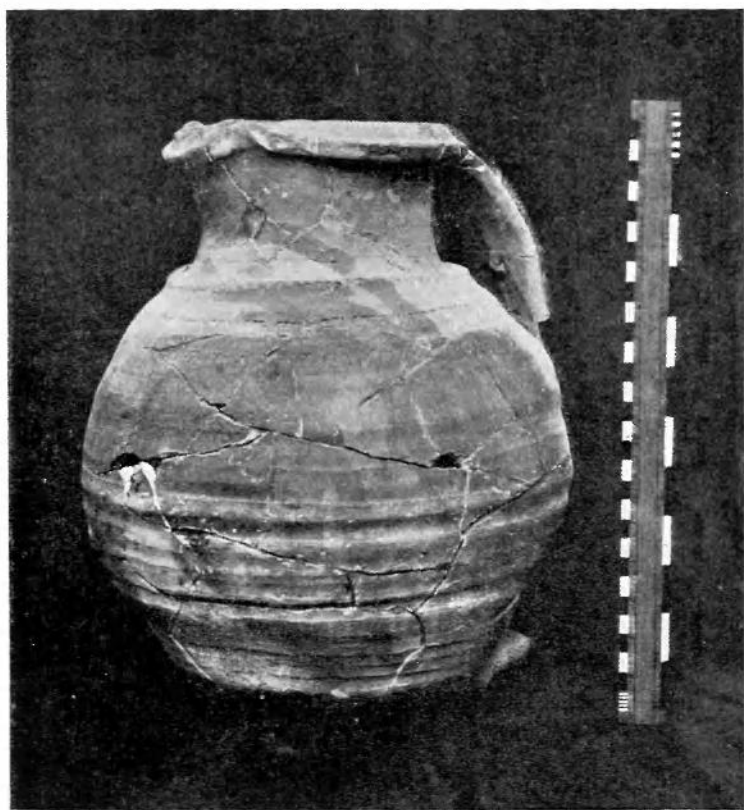


FIG. 3.—JAR FROM THE PIT, OR DEEP SHAFT.

but all extremely fragmentary. The decoration in these examples, where any exists, is usually of the simplest nature; broad bands of darker or lighter colour, and patterns of intersecting straight or wavy lines, shallowly incised and giving the appearance of pencil marks, are the commonest forms, though in one or two cases crescents and circles are introduced. A wavy "combing" is also found, particularly on some fragments of what have clearly been vessels of great size, judging from the slight curvature and the thickness of the pieces. Others of these large vessels were ornamented with rows of plain incised circles about half an inch in diameter. Two fragments of a *mortarium* of grey ware were found, the only instances of the kind, though *mortaria* of red, cream coloured, and painted earthenware are abundant.

Glass was present in small quantities, but displayed no features of interest. A *fibula* of a very plain type, and the end of a *ligula*, were almost the only objects of bronze. Of iron, nails were plentiful, a small knife was found in the well, and a little trident (measuring $3\frac{1}{2}$ inches across, $2\frac{1}{2}$ inches length of prongs) of uncertain use and date, also occurred. Two pointed bone objects, either instruments for punching holes or possibly for writing, a straight bone knife handle, and several cut and half worked pieces of stag's horn and bones, may complete the list of the Roman remains.

Of mediaeval relics, there were again found many spear, arrow and bolt heads of the twelfth or thirteenth century, but more importance attaches to the pottery. First place must be assigned to two vases of graceful design and excellent execution which were found in the deep shaft referred to above, and have been carefully restored by the patient skill of Mr. Frank Maitland. In the same shaft were found portions of a third similar vessel with vertical bands of "pinched ribbon" ornamentation. These three were of cream coloured ware, but a fourth of which only the lower part was recovered, had been slate grey, with the same bands of "pinched ribbon." All these seem to belong to the thirteenth century. Considerable fragments of a very large vessel, apparently of Norman date, were skilfully pieced together by Mr. Ray;

it is of coarse blue-black earthenware, the inner surface covered with finger impressions, and it is remarkable that in one or two places the hollows made by the fingers were actually holes right through the sides of the vessel, which could not therefore have held liquids, but must presumably have been used for storing grain or some similar purpose (Plate IV, Fig. 3). Examples of "thumb-pressed" bases belonging to jugs of the fourteenth century and of various glazes of the same or later date were present, but do not call for special notice. It only remains therefore to give a list of the organic remains found.

Mr. E. T. Newton, F.R.S., who most kindly examined the bones from the lower, Roman, strata, reports as follows :

"The bones found at Pevensey during the excavations of 1907 represent the usual domestic animals with a few wild forms, very similar to those found in 1906, as will be seen from the accompanying list, and for the most part therefore need no comment."

"The bones of oxen are the most numerous, and some of them are undoubtedly those of the long-faced ox (*Bos taurus* var. *longifrons*). Sheep, horse, and wild boar are well represented in nearly every excavation made. One tusk of a wild boar may be mentioned on account of its large size, measuring as it does $1\frac{1}{8}$ inch across the enamel surface, and must have belonged to a very fine animal. Some evidence of at least two breeds of dogs have been found, one large and the other smaller."

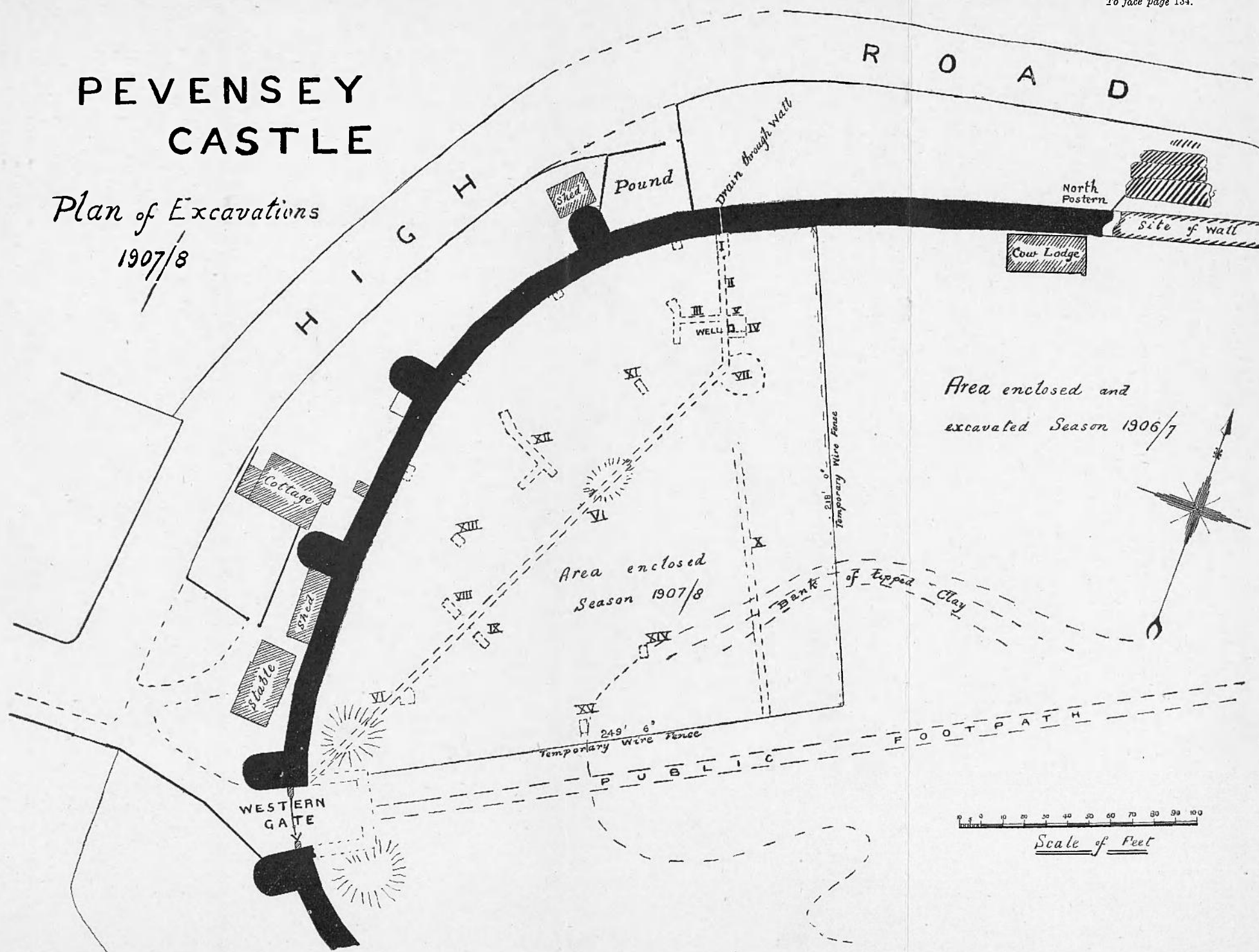
"Last year the remains of a cat were recorded from these Pevensey excavations, but unfortunately the exact place and depth were not known. This year, happily, remains of cats have been exhumed at two spots, and in both places at some depth from the surface ; so that there is no reason for doubting their Roman age. One femur was found in trench 6, in the fourth layer from the surface, and a skull with several limb bones in the timbered well at a depth of 5 feet 6 inches from the mouth."

"These remains of cats are of much interest, confirming, as they do, the discoveries of last year at Pevensey, adding not a little to the evidence, obtained a few years ago at Silchester, that the Romans possessed domestic cats. These Pevensey feline bones, like those from Silchester, are rather small, but otherwise cannot at present be distinguished from those of our modern domestic cat. It is hoped that more material may be obtained, and that a careful study of them may throw a clearer light on the true relationship of these Roman cats."

Some samples of soil from the Roman well were submitted to Mr. Clement Reid, F.R.S., for examination, and one seed of henbane, which has not previously been found on any Romano-British site, was identified by him. The other plants represented were :

PEVENSEY CASTLE

Plan of Excavations
1907/8



Area enclosed and
excavated Season 1906/7

Area enclosed
Season 1907/8

Bank of Tipped Clay

249' 6"

Temporary Wire Fence

218' 0" - - - - -
Boundary Wire Fence

WESTERN
GATE

249' 6"
ary Wire Fence

P U B L I C F O O T P A T H

0 10 20 30 40 50 60 70 80 90 100

Scale of Feet

Flax (*Linum usitatissimum*).
 Buttercup (*Ranunculus repens*).
 Wild Radish (*Raphanus raphanistrum*).
 Fool's Parsley (*Aethusa cynapium*).
 Henbane (*Hyoscyamus niger*).
 Swine's Cress (*Senebiera coronopus*).
 Hemlock (*Conium maculatum*).
 Knotgrass (*Polygonum aviculare*).
 Black Bindweed (*Polygonum convolvulus*).
 Persicaria (*Polygonum persicaria*).
 Fiddle Dock (*Rumex crispus*).
 Sheep's sorrel (*Rumex acetosella*).
 Stinging nettle (*Urtica ureus*, and *U. dioica*).
 Dead-nettle (*Lamium purpureum*).
 Lesser Stichwort (*Stellaria graminea*).
 White Campion (*Lychnis alba*).
 Orache (*Atriplex patula*, and *A. hastata*).
 Seablite (*Sueda maritima*).
 Sowthistle (*Sonchus asper*, and *S. oleraceus*).
 Blackberry (*Rubus fruticosus*).
 Vetch (*Vicia*).
 Sedge (*Carex*).
 Bracken (*Pteris aquilina*).

In addition to these plants Mr. A. H. Lyell, F.S.A., has identified among the pieces of wood from the well submitted to him :

Oak (*Quercus robur*).
 Hazel (*Corylus avellana*).
 Willow (*Salix alba*).
 Maple ? (*Acer campestre*).
 Hawthorn (*Crataegus oxyacantha*).
 Beech (*Fagus sylvestris*).

The presence of beech is satisfactory as confirming the evidence of last season when a piece of beech-charcoal was found. The interest of this find lies in the fact that it has sometimes been doubted whether the beech grew in Britain at the time of the Roman occupation.