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the economy and chronology of a fort on Hadrian's
wall*

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ABSTRACT

MARK EDWARD CURTEIS : "THE COINAGE OF HOUSESTEADS: A NUMISMATIC STUDY OF THE ECONOMY AND CHRONOLOGY OF A FORT ON HADRIAN'S WALL".

Commencing with a synopsis of previous research into the fort and a general history of the fort, vicus and constituent structures this thesis then examines the general problems associated with the study of coins. Histograms are produced from coin counts so that the general history of the fort and vicus can be re-examined. The following sections examine the economy and chronology of the fort and vicus at great depth. Starting with the problem of the garrison of the fort during the Antonine Wall period in which a new statistical method is developed for determining garrison size and type. This statistical method using counts of total coin value is then utilised on the problem of Severan pay levels and associated problems such as the probable presence of supplementary troops at Housesteads at this time. This leads into a discussion of what the soldiers did with their pay and the purpose of the vicus. A section on the late third century looks into the hypotheses of a possible abandonment of the fort under Carausius or a possible garrison reduction during this period time perhaps connected with the building of the 'chalet' barracks, the annona militaris and the proposed end of the vicus. The study ends with research into the fourth century in which the giving of military donatives is examined in relation to the garrison type on duty at Housesteads in the fourth century, the problems associated with Count Theodosius and Magnus Maximus and the possible date for the end of the fort. A catalogue of all traceable coins from Housesteads is included.

THE COINAGE OF HOUSESTADS: A NUMISMATIC STUDY OF THE
ECONOMY AND CHRONOLOGY OF A FORT ON HADRIAN'S WALL.

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DECLARATION

No material contained in this thesis has previously been submitted for a degree in this or in any other university.

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INTRODUCTION

Of the areas of the Roman military history of Britain which have been intensively studied, Hadrian's Wall in particular is pre eminent. A mixture of historical narrative and archaeological remains have been used to form a basic uniform history of the Wall. Unfortunately in arriving at such a history it has often been the case that archaeological information has been sought to fit the historical narrative not, as it sometimes would appear, producing similar evidence from an independent view point. As a result a model was constructed in which the chronology of Hadrian's Wall was divided into four main periods (Antonine, Severan, ^{Constantinian} Constantinian and Theodosian) and certain historical events formed points in these periods around which archaeological evidence was attached. It should be noted that Theodosian is a non-dynastic term and refers to Count Theodosius not to the emperor of that name and as such should perhaps be more correctly termed Valentinianic. During the Antonine period it is thought that some sites on Hadrian's Wall were abandoned or held by legionaries during the occupation of the Antonine Wall, at the start of the Severan period the Wall was thought to have been destroyed by northern tribes following which the forts were rebuilt and campaigns were mounted north of the frontier. The Constantian period was similarly thought to have seen destruction of the forts and also severe garrison reductions, complete destruction of the Wall was envisaged in the Valentinianic period due to the Barbarian Conspiracy of 367-9 which was seen to have resulted in the abandonment of vici and the movement of the vicanii into forts.



Coins provide as near to a random statistical base as we are likely to get as a representation of military activity, as more soldiers should lead to more coin losses as would a pay increase, fewer soldiers should lead to fewer coin losses and so on. Various statistical models are developed in the following chapters to try to provide evidence for or against the above ideas of chronology. Several other matters are considered as these are relevant to our interpretation of the coins such as the operation of the annona militaris and the giving of donatives.

We are fortunate that Housesteads, being a well explored fort, has a large coin list as the larger the data base the more accurate the results are likely to be. A small list can provide the odd coin that disrupts the general pattern. To provide as great a accuracy as possible it was essential to locate all coins traceable to Housesteads. Every possible location of the coins was searched, including the Black Gate Museum, Chesters Museum, Housesteads Museum, the Ancient Monuments Laboratory, South Shields Museum and Art Gallery, the Shipley Art Gallery, The Laing Art Gallery, the Museum of Antiquities in Newcastle and the departments of archaeology in Durham and Newcastle. The directors of excavations at Housesteads and authors of coin reports on the excavated coins were also contacted. These people include Mr Charles Daniels, Professor John Wilkes, Dr. D.J Smith, Dr. J.P.C Kent, Professor E. Birley, Professor A. Birley, Mr R. Birley and the Bosanquet family. Once located all the coins were carefully recatalogued. Every bibliographic reference to Housesteads from the very earliest recorded visit by an antiquarian to the latest published report was examined and any coins described in them recorded and checked against the surviving

coins. As a result the most accurate and complete catalogue was produced containing every coin from the earliest reference to the latest (as yet unpublished) excavated finds.

PREVIOUS RESEARCH AT HOUSESTEADS

Housesteads has had a very long history of exploration stretching back over 250 years. Camden and Cotton only ventured as far east along the Wall as Carvoran in 1599 (Camden 1600, 718) this was because of danger from the Armstrongs of Housesteads, a notorious band of moss troopers. An account of Housesteads did however appear in the 1722 edition of Britannia following a visit by Robert Smith (Camden 1722, 1053). In the meantime the site had been visited by Bainbrigg in 1601 (Birley E. 1961, 179) and Chris Hunter described his visit to Housesteads in 1702 when he reports that a square, vaulted, building had been uncovered about 50 yards west of the fort (Hunter 1702). Presumably Hunter was here referring to the Mithraeum.

Gordon's visit in 1724 with Sir John Clerk saw the first reported 'excavation' of the site. They "caused the place to be dug where we were sitting amidst the ruinous streets of this famous Oppidum" (Gordon 1727, 76-77). This was shortly followed by a visit from Stukeley, with Roger Gale in 1725, who simply describes what he saw (Stukeley 1776, 60). Horsely, too, made a similar tour (Horsely 1732, 219-25) and gives a good description with accompanying engravings of the site. Brand was the last antiquarian of the old school to record a visit but gives few details (Brand 1789, 610).

The new era of scientific enquiry begins with John Hodgson, who besides analysing the remains in and around Housesteads, excavated the

western half of the south gate and also the steps on the north side of the principia (Hodgson 1922). Hodgson conducted several other seasons of excavation none of which he published. However Bosanquet examined Hodgson's note-books and has summarised his work (Bosanquet 1904). The location of the blocks within the fort can be seen in fig. 1.

1830. Block VIII, the south granary, was excavated along with the east side of the south gate.

1831. The excavation of the south gate continued and the hypocaust at the east end of block XV was excavated .

1833. The east gate, a tower to the north of it, and the west gate were examined.

The next attempt at excavation appears to have been the grand excavation programme initiated by Clayton in 1849/50.

1850. The west gate was partly excavated (Bruce 1851, 216).

1852. The south gate was cleared of rubbish and excavation was commenced on the north gate (Bruce 1853, 185-87).

1854. The south-west corner of the fort was cleared (Bruce 1867, 193).

1855. The west wall and the buildings against it were cleared from the south-west angle to the west gate (Clayton 1855).

1856. The Knag Burn gateway was excavated (Clayton 1856).

1857. Hadrian's Wall was cleared between the Knag Burn gateway and the fort. The interior of the north wall of the fort was cleared along with the whole of the north gate (Bruce 1857, 234).

1858. The barrack near the south gateway (block XII) was cleared of debris along with the praetorium (Bruce 1867, 188).

There is no record of any excavation for the next twenty-five years, Clayton's attention moving elsewhere along the Wall. But the discovery by a shepherd of an inscription dedicated to Mars Thincsus and the Alaisiagae (RIB 1593) brought his interest back to the site and further excavations were undertaken in 1884 to explore the remains of buildings below Chapel Hill (Bruce 1885, 152). Clayton discovered some of the buildings later explored by Robin Birley in 1960.

The next excavations at Housesteads were those undertaken by the Newcastle Society of Antiquaries in 1898 under the direction of Robert Carr Bosanquet (Bosanquet 1904). The principia was completely excavated along with the latrines and the great cistern by the south-east angle of the fort. Barrack blocks I, II, III, IV were partly excavated. Other buildings that were examined include the hospital (block IX), block XI, the commandant's house (block XII), block XV, block IV, and the late building to the north of blocks I and VIII. The walls and gates were re-examined along with the granaries (block VIII). Outside the fort the

well near the Knag Burn was excavated and the temple of Mithras was re-excavated.

In 1909 Gerald Simpson, while restoring the angle-towers, completely excavated the north-west angle-tower. The lime kiln to the west of the fort was also excavated (Simpson G. 1976). In 1911 Simpson re-excavated the buildings in the south-west angle of the fort as well as the angle-tower, cistern, latrine and sewer (Simpson F. 1976, 133-38). Simpson carried out further excavations in 1930 when he examined the north gateway of the fort (Birley E. 1961, 182).

Another series of large scale excavations was commenced by Eric Birley and John Charlton for the Durham University Excavation Committee in 1931, when the line of the Vallum was traced westwards from the Knag Burn by a series of trenches. In the vicus buildings I, II, IV and the east wall of vicus building III were uncovered. See fig. 2 for the relative positions of these buildings. Exploratory trenches were also made in the building projecting from the east guard chamber of the south gate and a long, oblong, building inside the south gate (Birley E. and Charlton 1932).

In 1932 the fort's ditches were located to the north of the east and west gates. Work on the vicus continued and buildings III and VIII were excavated while V-VII were given a cursory examination. The Vallum was studied where it was overlain by a terrace. Trial trenches were dug on Chapel Hill, near the Knag Burn, in the bath-house and the latrine sewer outlet (Birley E. and Charlton 1933)

The following year Eric Birley excavated the Vallum crossing and made a cursory examination of vicus buildings IX-XXI (Birley E. and Charlton 1934). The buildings thus excavated in 1933 were further examined in 1934 and more buildings (XXII-XXVII) located (Birley E. and Keeney 1935).

In 1936 the Knag Burn gateway was excavated and although the south and west gates of the fort were not re-excavated the conclusions previously reached were reappraised (Birley E. 1937).

Excavation was interrupted by the war but restarted in the autumn of 1945 when the broad foundation of Hadrian's Wall was revealed underlying the fort near its north wall. The position of turret 36b was located in its true position (Simpson G. 1976). The significance of this turret is described below (p. 16).

In 1955 Dr. D. J. Smith did sufficient digging in the principia to allow a fuller plan to be made of its frontage (Birley E. 1961, 182).

Excavations continued in 1959 when John Wilkes excavated the central third of barrack XIV (Wilkes 1960). This work continued in 1960 during which the rest of the barrack was uncovered (Wilkes 1961). As part of this series of excavation Robin Birley excavated the area of the supposed temple of Mars Thincsus (Birley R. 1961) and part of a civil settlement of early date was also discovered. Work at this site continued in 1961 (Birley R. 1962) while inside the fort the large storage building, block XV, was excavated (Wilkes and Leach 1962).

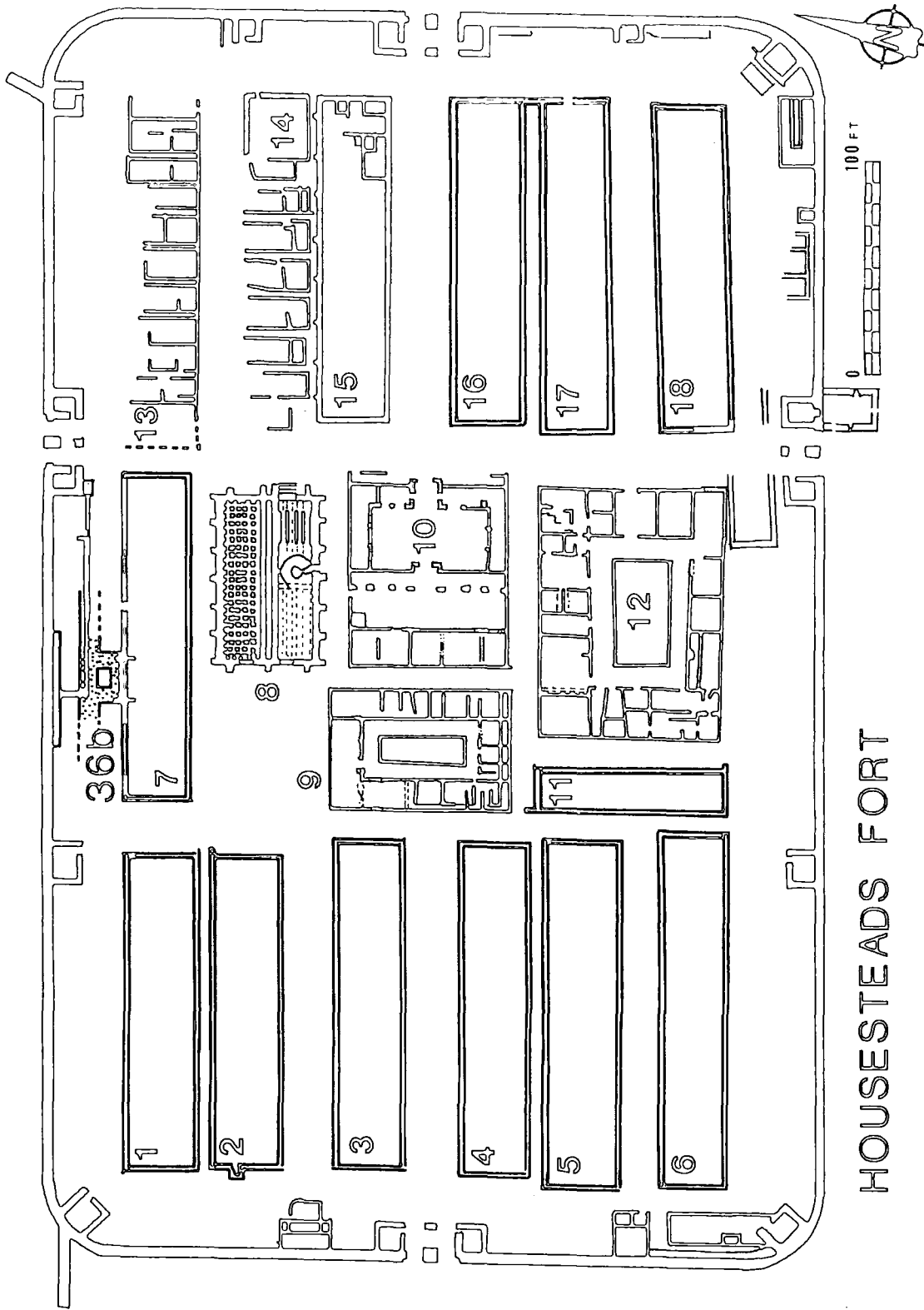
It would appear from the coins found in the latrines in 1963 that work occurred in this area in that year although this is not reported.

Professor Wilkes began an excavation of the commandant's house in 1967 and work was later continued by Dorothy Charlesworth up to 1969 (Charlesworth 1975). In 1968 Wilkes also examined the inside and outside of the north-west angle tower (Simpson F. 1976,137).

In 1970 Charlesworth re-excavated the northern terminal of the fort's west ditch (Charlesworth 1971). The hospital was excavated by Charlesworth between 1969 and 1973 (Charlesworth 1976).

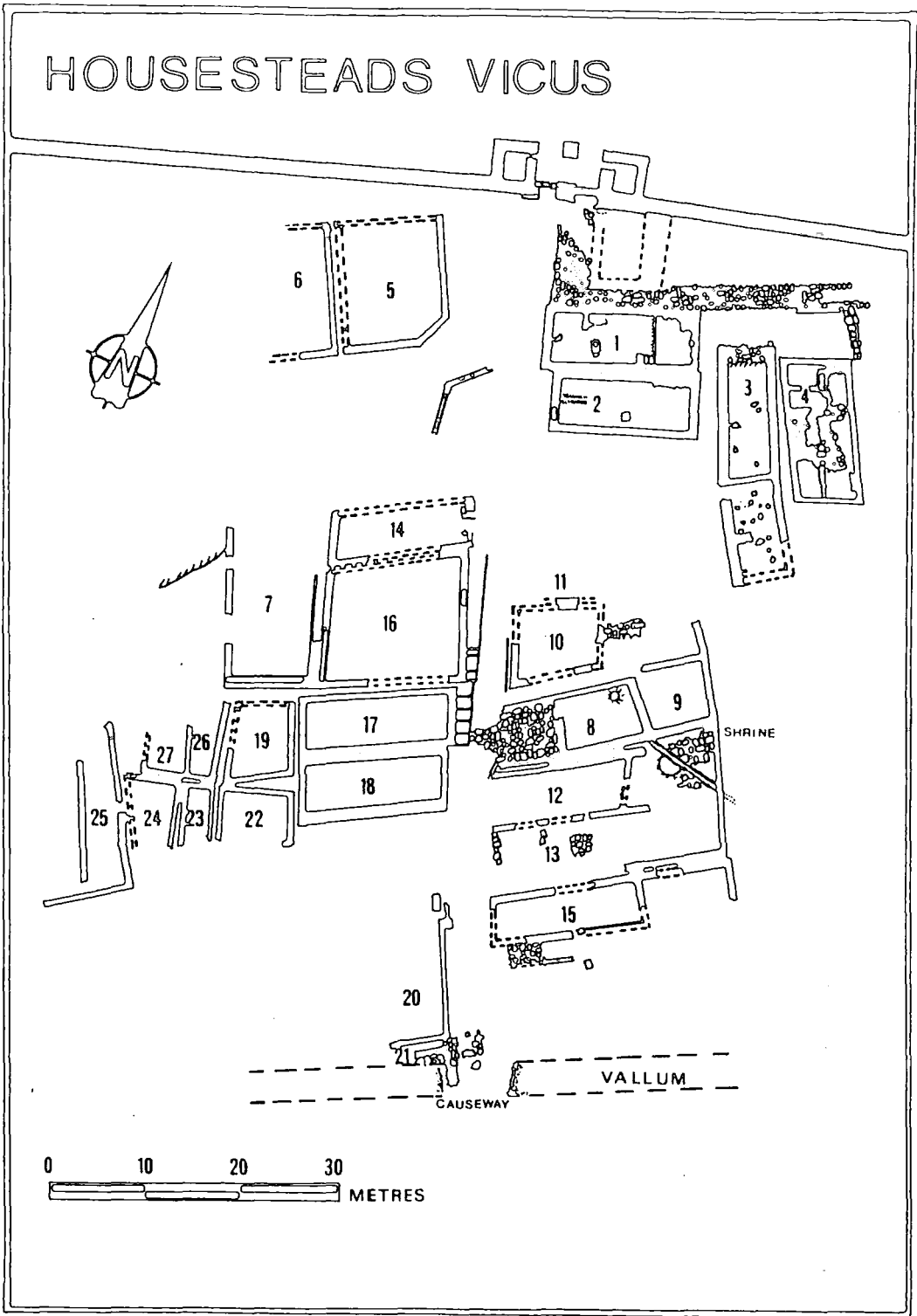
Work was begun on barrack XIII by Gillam and Daniels in 1974 (Wilson 1975) and the work was continued in 1975, 1976 (Frere 1977) and 1977 (Goodburn 1978). In 1979 Gillam and Daniels directed an excavation behind the rampart of the fort between the north-east angle-tower and the north gate (Grew 1980). The following year the wall from the north-east angle to the east gate was excavated (Grew 1981). In 1981 the east rampart back area, the bath-house in block XV, and the road between barracks XIII and XIV were excavated. Barrack XIV was stripped of turf and the centurion's quarters uncovered for display (Rankov 1982).

The last published mention of excavation is an account of the excavation of the last unexcavated length of the exterior face of the north wall (Frere 1985).



HOUSESTEADS FORT

HOUSESTEADS VICUS



A HISTORY OF HOUSESTEADS

The structural history of Housesteads fort starts with the construction of turret 36b (fig. 1) around A.D 124. The turret was located by Simpson and Richmond (Simpson G. 1976) and was built on the broad Wall foundation. The structure was probably built by detachments of the legio II Augusta, because it conforms to their building style and falls into their allocated building sector (Breeze and Dobson 1987, 74). The discovery of this turret is important because it shows that the decision to put the forts along the Wall was secondary to the original design which consisted solely of curtain wall, milecastles, and turrets. The fort, in its initial form, was commenced A.D 124/25 and the turret was demolished. Housesteads is unusual in having its long axis parallel with the Wall rather than at right angles to the Wall as at the other forts. The reason for this is the topography of the area, the hill is too steep for the the fort to be orientated in the normal way.

Shortly after the construction of the fort had started there came the decision to narrow the Wall. It may be that this decision came in 126. Coins of 126 minted in Alexandria record an unspecified Victory which could be British. The narrowing of the Wall could be the result of a desire to hasten the completion of the Wall in the threat of danger (P.J.Casey pers. comm.).

The fort or its curtain wall, at least, was already standing because the narrow Wall followed a slightly different line to the broad Wall on the east and the north-east angle-tower was moved to the west to meet the

new Wall. The fort's ditches were only constructed north of the east and west gates, the eastern ditch running out before reaching the Wall. The west ditch, however, cuts through the broad Wall foundation and must therefore, be later. The ditch approaches the narrow Wall but stops short of the Wall itself. Accordingly it would seem that either the ditch was primary and the Wall building party could see it or the Wall foundation, at least, had already been built and the ditch party worked up to it (Charlesworth 1971). The gap between the Wall and the ditch on the east side of the fort, however, suggests the ditch preceded the narrow Wall. Breeze and Dobson (1987, 74-6) would suggest that the fort was built by II Augusta or VI Victrix.

The Vallum passes about 100 metres to the south of the fort and thus does not have to divert around it as is the case at Haltonchesters and Birdoswald. Excavations in 1931 (Birley E. and Charlton 1932) showed that the Vallum was interrupted to leave a causeway of uncut rock across it for a road leading to the fort from the south-east. Unlike Benwell this causeway never seems to have had a gate, which is perhaps due to the distance of the fort from the Vallum. The provision of a causeway (fig. 2) for a road leading to the fort indicates that the fort precedes the construction of the Vallum. After the creation of the causeway, but before the construction of the road across it, the Vallum had been largely eradicated along with most of the original causeway by the construction of a series of terraces to the south of the fort. The road cannot be earlier than the third quarter of the third century since it sealed a coin of Claudius II (Vicus Cat. No. 193). This road cuts through one of the terraces (Birley E. and Keeney 1935), thus dating the

construction of the terraces to before the end of the third century. In his unpublished undergraduate dissertation A.Hartley (1984) observes, from Eden's plan of the site, that the vicus overlies the terraces, suggesting a late second century date. Furthermore he carried out a magnetic susceptibility survey of the area (for details see p. 114) and concluded that the terraces were not constructed for agricultural purposes but as house platforms for unlocated wooden buildings.

The east gate of the fort had its south portal blocked after having been repaired following the events of 181 or in the Severan period, the blocking therefore presumably belongs to the third or fourth centuries. The south portal now became a guard chamber and the old guard chamber became a coal store (Daniels 1978, 145). South of the east gate an interval tower seems to be a late addition.

F.G.Simpson (1976, 151) found evidence of an extensive collapse of the south wall of the fort. Both angle-towers on the south wall had to be strengthened and the outer face of the wall was rebuilt, almost from its foundations, from the south gate as far round as the east gate. The wall at the south-east angle was widened, causing the rebuilding of the sewer outfall of the latrine. The excavator dated this work to the third or early fourth century, but Daniels suggested that the work could be attributed to repairs after general neglect in the late third century (Daniels 1978, 147). The entrance to the south-east angle-tower was moved and a large cistern (fig. 1), used for flushing the nearby latrines, was constructed in front of the original entrance.

The south gate (Birley E, 1937, 180-83) had its eastern portal blocked before vicus buildings I and VIII had been built in front of the doorway (see fig. 2). The portal had received considerable wear before being blocked perhaps dating the blocking to the late second or early third century as the coins from buildings I and VIII suggest a third century occupation (Vicus Cat. Nos. 8, 11, 28, 36, 52, 67, 78, 83, 102, 106, 112, 117, 118, 121, 139, 142, 143, 146, 148, 149, 151, 153, 154, 155, 157, 160, 169, 170, 171, 175, 178, 179, 180, 181, 182, 183, 187, 190, 194, 195, 196, 200, 201, 202, 206, 208, 209, 210, 211, 212, 213, 216, 217, 218, 221, 222, 227, 229, 230, 231, 232, 234, 239, 240, 241, 242, 243, 253, 255, 258, 259, 261, 269). The interval tower between the south-west angle and the west gate had been reconstructed from a low level (Daniels 1978, 145-48).

The west gate (Birley E. 1937, 178-80) had its south portal repaired and later blocked. The north portal was blocked with rough masonry suggesting that this was at a late date in the fort's history. The guard chambers were later converted into heated rooms as at Birdoswald (Daniels 1978, 149). The west rampart, like the south rampart, has several late buildings attached to it.

The north gate had its eastern portal blocked before the door pivots had been inserted, which implies a Hadrianic blocking. The west portal received considerable wear and was rebuilt (Daniels 1978, 145). Excavations in the praetentura immediately south of the north wall revealed rampart buildings constructed not later than the early third century on the evidence of associated pottery. These buildings were used

for industrial activities and the absence of south walls suggests they were open ended, unless they had wooden gable ends. There were four such buildings, divided by three short cross walls (Daniels 1980, 359). They were demolished by the fourth century and their site covered by a new rampart bank. The rampart was constantly widened and refaced, causing the fort wall to bulge and possibly even collapse. Indeed excavations in 1984 (Frere 1985, 270-71) showed that the north curtain was rebuilt twice. The first occasion being no later than the early third century, the second time the wall was rebuilt it completely collapsed outwards sealing fourth century pottery. The rampart fill yielded a coin of Constantius II (the information as to which catalogue record this coin refers to is not yet available from the excavators). Finally access to the interval tower was blocked and the intervallum road encroached upon. The second century oven by the angle-tower was shut off by another wall and remained in use after the other rampart buildings had been demolished. On the east wall north of the gate, another rampart building containing ovens, was later replaced by an interval tower (Grew 1981, 323 and Welsby 1982, 30). The rampart building located by F.G.Simpson (1976, 133) to the west of the east interval tower on the south wall has recently had its pottery re-examined by J.Gillam. He concluded that the pottery from its first floor was precisely the kind of group he would expect to be sealed by a Severan structure (Daniels 1980, 87). This would make the building about the same date as those behind the north rampart, both being constructed long before the chalets, possibly reflecting a shortage of space in the third century when the military cohort of Tungrians was augmented by a numerus and a cuneus (RIB 1576 and 1594). The presence of these extra units may be reflected in the

coinage of the site (p. 95). The rampart building on the south wall seems to have continued well into the fourth century. Other structures attached to the west and north walls cannot at present be dated.

Several blocks within the fort have been investigated and the history of each, as far as it is known, is described below. For the position of each of these buildings within the fort and a rough plan refer to the plan of the fort (fig. 1).

The principia was excavated by Bosanquet (1904) in 1898. The present surviving building was built in the Severan period, traces of its Hadrianic predecessor have been located below. Its main entrance leads into a colonnaded courtyard beyond which was another smaller court with the usual rear range of four rooms and central sacellum. After an unknown period of time the spaces between the columns in the outer courtyard were walled up and the porticos turned into rooms. This sort of development has been dated to the second century at Carrawburgh (Welsby 1982,77). In the inner court the ends of the porticos had been walled off. Dickie (Bosanquet 1904) suggested that this end of the building was completed slightly later than the front due to its inferior workmanship. At some period the division between rooms 8 and 9 was demolished and the doorway to 8 blocked, the monumental plinth in front of the blocking only being slightly worn. The entrance into room 9 was narrowed and another wall was built 1.22 metres from, and parallel to, the back wall of 8 and 9. Daniels (1978, 143) suggested that it may have cut off space for a latrine for the paymaster who was now living in his office. Bosanquet suggested that it may have supported a staircase to an

upper storey, which was thought to exist over room 12 due to the presence of hypocaust flue boxtiles in the fill of this room. The doorway into room 11 was contracted and then blocked, both happening early on as the threshold was only slightly worn. Rooms 11 and 12 were now only accessible from the sacellum, perhaps to form a strong room. The rough rubble wall between 11 and 12 was pierced by two doorways which the excavator presumed to be of different periods. Room 12 with its heating may have been the record room. Later it seems to have become an armoury and over 800 iron arrowheads were found arranged in bundles directly under the fallen roof. The smith who made the arrows may have had a temporary forge in the inner court which would explain the ash, coal, and scoriae found there by Hodgson (Bosanquet 1904). A fire on the outer courtyard contained pottery dated 330-400.

Two granaries were constructed north of the principia, they were raised and buttressed. The south buttresses of the north granary were founded upon a dismantled portico, suggesting the original was single, undivided, with a central portico. The reconstruction could be Severan (Daniels 1978, 143-44). Fourth century pottery was found in them in 1931 (Birley E. and Charlton 1932, 223-24), suggesting to the excavators that it was indicative of the shortage of living space after the abandonment of the vicus in circa 369. For the argument against this see p. 117,178.

Nearby is block XV, Leach and Wilkes (1962, 83-91) suggest that it was originally a Hadrianic L-shape barrack. However Daniels (Rankov 1982, 342) suggests that, as it had no projecting centurion's quarters, it was a workshop or stores building, although two rooms were found comparable

to the contubernia of barrack XIV. In phase 2, assigned to Marcus Aurelius, it was reduced in width to allow for a verandah on its south side. This building was not a barrack since there no trace of contubernia. Phase 3 is dated to the third century and a coin of Tetricus (270-73) (Fort Cat. No. 189), was associated with a drain belonging to this phase. Also in this phase the buildings width was increased to about the phase 1 dimensions. Phase 4 was of massive construction and was assigned a post-Tetrician date from coins trodden into its floor (Fort Cat. Nos. 264-278, 282, 284, 288, 290, 292, 294, 296, 304, 306-314, 319). It had unattached buttresses along its north side. There were two entrances one of which was 11 feet wide presumably to allow carts into this barn-like building, perhaps functioning as a storehouse in connection with the operation of the annona militaris. Late in the fourth century the eastern end was demolished and a small bath-house inserted. A new cross wall in the southern half of the building suggests that part of it continued as before.

Block IV appears to have been a workshop and a lot of slag was found inside. The small amount of debris in the fill suggested to Bosanquet (1904, 241) that like the other early buildings it had a wooden superstructure which was destroyed, but in this case, not rebuilt.

Barrack XIV was excavated in 1959 and 1960 (Wilkes 1960, 61-71 and 1961, 279-90) and again in 1981 (Rankov 1982, 342). The Hadrianic barrack was of the normal L-shape with the centurion's quarters (partitioned into two) at the east end, the rest of the building being divided into ten contubernia fronted by a cobbled verandah and bounded by a gutter.

In phase 2 Wilkes suggested a similar plan but with an extension in the length of the contubernia by 1 foot. However the 1981 excavations showed that Wilkes north walls belonged to phase 3 (Welsby 1982, 26) and the plan was therefore the same as that of Hadrian. This reconstruction has been assigned to Severus. In phase 3, attributable to the late third or early fourth century from pottery and seven radiate copies (Fort Cat. Nos. 257-263) found below its floor, the L-shape barrack was demolished. Gillam and Daniels (1976) considered that the phase 2 building had fallen into disrepair due to abandonment of the fort, such evidence was not sought in the excavation of XIV but was sought when XIII was examined; however, no such evidence was found. In place of the L-shape barrack a series of separate units was constructed with eavesdrips between (fig. 3). The new walls included reused blocks, many reddened by fire, and columns from the verandahs of the earlier barracks. The centurion's quarters were rebuilt without projection or subdivision. Next to this was a smaller room, possibly a kitchen. The next 100 feet of the barrack was taken up with six units, each being made longer than the older contubernia by extending them onto the verandah. The north walls of the units, except for the centurion's block, could not be located and Wilkes suggested that they had wooden gables, however analogy with block XIII may suggest that block XIV did have a stone front wall but this was not located by the excavators. A workshop was attached to the west end of unit 8. In phase 4, dubiously ascribed by its excavator to Count Theodosius (although it is certainly mid to late fourth century), the units were subdivided towards their southern ends, perhaps connected with the supposed end of the vicus and the requirement of extra living space in the fort at this time (see p. 177). Chalet 2

was reduced in length. At some time during the fourth century the centurion's quarters were levelled and the tops of the demolished walls show considerable wear. J.Crow has noted that the road surface contemporary with this sealed a coin of Constantius II (Welsby 1982, 121) (Fort Cat. No. 339). Units 3, 4, and 5 now had wider alleyways between them, perhaps giving access to a doorway half way down the east side of each chalet.

Barrack XIII (Wilson 1976, 309; Frere 1977, 372-73; Goodburn 1978, 420-21) follows a similar structural history to barrack XIV. In its L-shape Hadrianic form there was an unpartitioned centurion's quarters at the end, followed by ten contubernia; the first of which projected to match the centurion's block. In other respects it parallels barrack XIV. In the early fourth century it was reconstructed as basically a large western block and six detached chalets. The western-most sections lay across part of the via principalis, closing the approach to the blocked east portal of the north gate. The eastern-most chalet had a porch attached to it and at one point in its life a large oven had occupied most of its southern area. To the west lay five detached chalets; a sixth is separated from the end block by a party wall only, but nevertheless appears to have been a self contained entity. The rest of the end block may have consisted of a two roomed house with a wide porch, again party walls were employed (Daniels 1980). All the units shared a common south wall, belonging to the older barrack which had not completely collapsed or been totally demolished. In period 4 the length of some of the chalets was reduced by the rebuilding of their north walls. The chalets without party walls were never of uniform length.

The hospital (fig. 4) was excavated between 1969 and 1973 by Dorothy Charlesworth (1976). Like the commandant's house the outer walls were built first and the partition walls were then added. It was a courtyard building. The north range had at least part of its outer wall rebuilt in the fourth century when the presence of hearths suggest a metal working function. The east range originally of nine rooms, had this number reduced, probably by Severus. Part of the wall of room 2 leading onto the courtyard was rebuilt in the fourth century (a coin of Magnentius, 350-53, was found on it) (Fort Cat. No. 457). The west range, in which there was a scattering of hobnails, had a coin of 330-35 (Fort Cat. No. 377) below some late flagging. The rooms of the south range saw several phases of flooring and the low wall of the verandah around the courtyard was buried in places under late flagging.

The commandant's house (praetorium) was also excavated by Charlesworth (1975). The original building was L-shaped but shortly afterwards the east and south ranges were added producing a normal courtyard house. The history of the building is not known in any great detail, with most alterations being a matter of domestic convenience rather than due to a major historical event. A fragmentary building inscription, found in the later oven of room 2, records work undertaken in the years 205-08 under the governorship of L. Alfenus Senecio (Charlesworth 1975). This is a different inscription to RIB 1612 (p. 27) and shows evidence of a major reconstruction in the Severan period. It cannot be associated with any destruction of the building, if it is indeed connected with the praetorium. The presence of burnt stones in some walls shows that they have been rebuilt from near floor level. A major rebuilding of the west

range occurred about this time. In its final phase the building was subdivided; the evidence for this is best seen in rooms 6 and 7 which were made into one unit with its only doorway in the west (outside) wall of 7. Room 10 also appears to have been completely separate. Room 5 had a hypocaust inserted, with pillars of small column parts like those from the barrack verandahs, suggesting the early fourth century for its construction. The pillars were replaced several times and coins dating down to 366-78 (Fort Cat. Nos. 464, 476) were found in its fill. Room 18 had a coin of Valens (Fort Cat. No. 468) in its south-west wall, indicating that this building continued to a late date.

It may be noticed that a lot of building work has been ascribed to around the time of the reigns of Septimius Severus and Constantius I. This is backed up by epigraphic sources. Along with the inscription dated 205-08 from the praetorium, described above, three fragments of another Severan inscription slab have been uncovered (RIB 1612) including a fragment from the principia. The slab is dated 198-209 as it includes Caracalla as joint Augustus and not Geta. For the early fourth century reconstructions a small fragment of a slab is dedicated to Diocletian and Maximian (RIB 1613).

Outside the fort several areas have been explored. The temple of Mithras was partly excavated by Hodgson and completed by Bosanquet (1904, 255-63). It was probably constructed early in the third century. One of the many altars found in the temple bears the names of Gallus and Volusianus, the emperors holding the consulship in 252, suggesting a refurbishment of the temple at this time. Presumably the temple went out

of use with the introduction of christianity under Constantine. Several other altars found in this temple are described below (p. 112).

South of the Vallum, also under Chapel Hill, a settlement was excavated in 1960 and 1961 (Birley R. 1961 and 1962). This settlement seems to have been constructed shortly after the fort; site II, for instance, contains Hadrianic pottery. Site III was originally a timber structure of which two post-holes and a rubbish pit remain (the pit contained a gold ligula). Later around A.D 150 stone buildings were constructed with more substantial walls than the later vicus north of the Vallum. Site II now became a workshop. At the close of the second century these stone buildings were abandoned, perhaps due to the troubles in 181 or 197, when the settlement moved to outside the fort's south gate. The site was not completely abandoned for a circular temple, probably that of Mars Thincsus, was constructed above the workshop and this continued in use for, at least, part of the third century. The well adjacent to the temple contained coins down to Constantine I (316-17) (vicus Cat. Nos. 75, 85, 97, 130, 164, 189, 192, 249) and fourth century pottery suggesting it continued in use longer than the surrounding buildings. The extent of this settlement is not known.

The vicus by the south gate of the fort was much more extensive. It was excavated between 1931 and 1934 (Birley E. and Charlton 1932, 1933 and 1934; and Birley E. and Keeney 1935). The buildings are neatly concentrated around the roads spreading from the south gate and many have the open fronts associated with shops and taverns. For a plan of the vicus and the buildings contained therein refer to fig. 2. Daniels

notes the similarity in plan between these buildings and the chalets (Daniels 1980, 189) but the similarity between the chalets and the contubernia may be more significant. Other buildings in the vicus had an industrial function such as IV which was involved in metal working and a coin mould for casting counterfeit denarii of Julia Domna (Vicus Cat. No. 276) was found outside its east wall (another coin mould was found in the well under Chapel Hill (Vicus Cat. No. 275)). The settlement appears to have been self governing as an inscription (RIB 1616) shows work was carried out by Julius S(...) in accordance with the decree of the inhabitants of the vicus. It was noticed that there were two successive plans for the vicus since the fronts of II and IX (the western end of which was eventually incorporated into VIII) are on one alignment and sites I and VIII, and the rest of the buildings on the east side of the road are on another. This later group was thought to be coeval with the existing road and are dated along with VIII to the late third century (from coins of Tetricus and Claudius II (Vicus Cat. Nos. 187, 222) found below its original floor). The south roadway between XVIII and XII is also of one build with the paved floor of VIII. As described above this road was dated independently to the late third or early fourth century as it cuts through a terrace and seals a coin of Claudius II (Vicus Cat. No. 193) where it crosses the causeway. This late expansion of the vicus now seems unlikely (see pp. 47, 177). The earlier group is dated along with II, which had a coin Septimius Severus (197) (Vicus Cat. No. 100) in the mortar of its east wall, and coins of Hadrian (Vicus Cat. Nos. 26, 33) sealed below the floor, thus dating it to the early third century. They must also post-date the blocking (Severan ?) of the east portal of the south gate, the access to which

the early vicus buildings obscure. Birley suggested that VII, being of large well dressed blocks, may have an official nature connected with the beneficarius consularis (RIB 1599) who was possibly there to supervise trade between barbaricum and the province funneled through the milecastles adjacent to Housesteads. The vicus buildings appear to have had long lives and show several phases of rebuilding. Birley concluded that none of these buildings were occupied after what he thought were troubled times during the barbarian conspiracy of 367. J. Gillam has reconsidered the ceramic evidence from the vicus and suggested that it inferred much less fourth century activity than previously considered (Welsby 1982, 123).

The garrison of the fort in the second century would have been a cohors milliaria peditata, possibly the cohors I Tungrorum who were definitely there in the third century as the large number of inscriptions they have left behind indicates (RIB 1579, 1584, 1585, 1591, 1598, and 1618). they are known to be milliary from RIB 1580 and 1586. They were still the garrison force when the Notitia Dignitatum was written in 395. During the occupation of the Antonine Wall, when the garrison may have moved out, perhaps to Castlecary, the fort was possibly garrisoned by legionary detachments (see p. 74). An inscription to Cocidius from the Mithraeum was set up by soldiers from legio II Augusta who were on garrison duty (RIB 1583). An altar set up by a soldier from the same legion, dedicated to Jupiter, was found south of Housesteads milecastle (RIB 1582). Another altar, from near the Mithraeum, was dedicated to Cocidius by a soldier from the legio VI Victrix pia fidelis who are also commemorated on an altar from Chapel Hill (RIB 1609). In the third

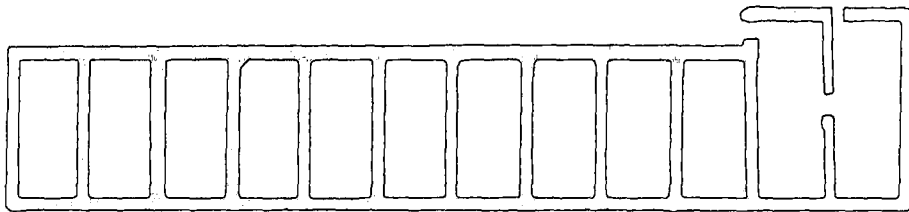
century the garrison was supplemented by the numerus Hnaudifridi and the cuneus Frisiorum who were Germanic tribesmen from Tuihanti (? Twenthe in Holland). The cuneus was styled Severus Alexander's own (RIB 1593 and 1594) of Ver(covicium). Alexander ruled 222-235. It will be suggested (p. 95) that these troops lived outside the fort on the terraces, however it is more likely that they lived inside the fort, perhaps in the rampart buildings.

Several alternative viewpoints concerning the garrison of Housesteads have been put forward, Charlesworth (1975, 28) believes that the cohors I Tungrorum had left Housesteads by the early third century, being first replaced by vexillations of the second and sixth legions, and later by the numerus and the cuneus. J. Mann thought that the cohors I Tungrorum was withdrawn, along with other Wall garrisons, by Gallienus for his German campaigns, never to return, their place being taken by the German units. Daniels and Welsby suggested that the garrison had been removed by Allectus to fight against Constantius. They further believed that marauders caused the viciani to move into the fort (Welsby 1982, 141). It should be noted that there is little evidence for any of the above hypotheses.

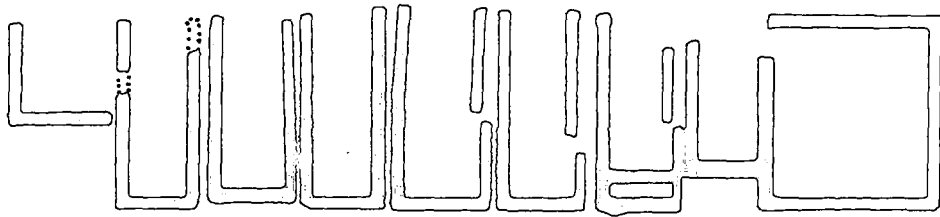
Taking each chalet barrack unit to house a family, as suggested by Wilkes (1960) on the basis of the trinkets found in barrack XIV, Welsby (1982, 141) suggests that in the early fourth century Housesteads may have only housed 150 men. This, he suggests, corresponds with the Duncan-Jones (1978, 547) interpretation of the Beatty papyrus which appears to show that at the time of Diocletian an auxiliary cohort consisted of

around 160 men. The numismatic evidence for or against this and other theories of garrison reduction in the late third century plus other theories mentioned in this chapter will be discussed in the following sections of this thesis.

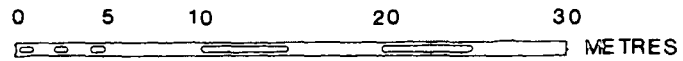
HOUSESTEADS FORT
BARRACK - BLOCK XIV



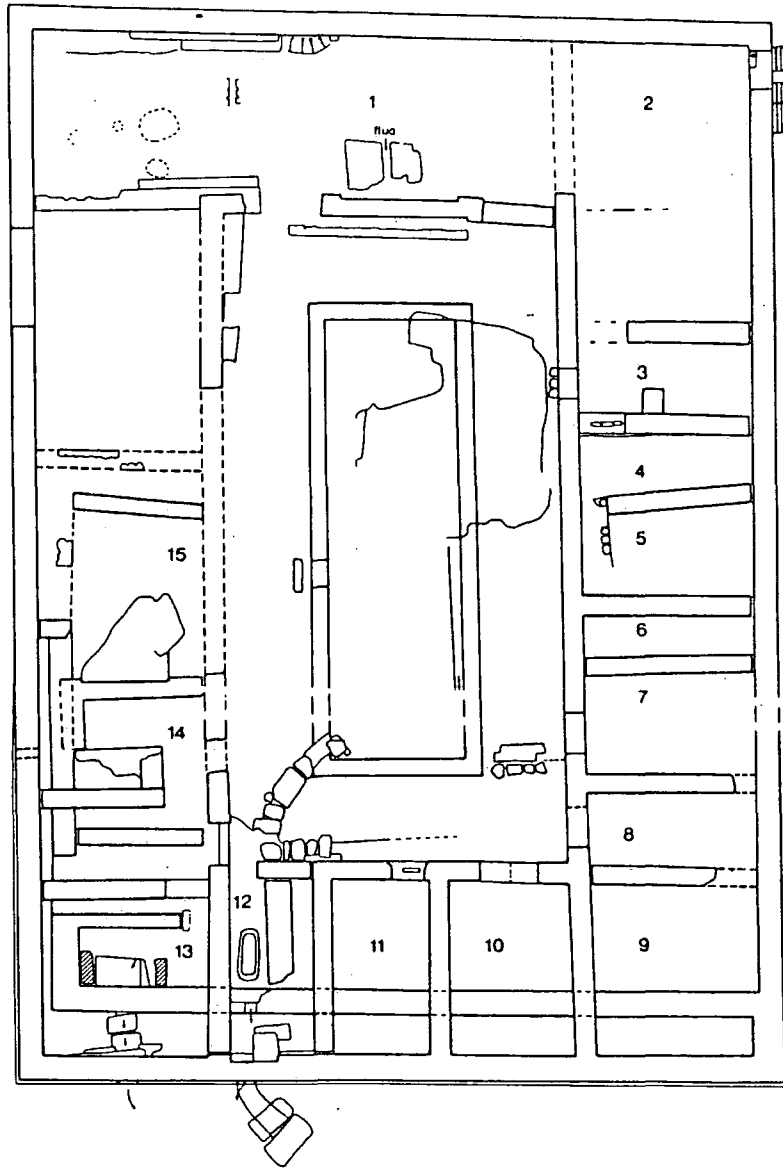
SECOND CENTURY



EARLY FOURTH CENTURY



HOUSESTEADS HOSPITAL



0 1 2 3 4 5 6 7 8 9 10 Metres

INTRODUCTION TO THE STUDY OF COINS

Before entering into an analysis of the coins it is important to highlight some general factors which affect the methods of their interpretation. The investigation of numerous urban, rural and military sites in Britain has brought to light many thousands of coins. A study of these has shown that they fall into a well marked pattern (Casey 1974) and a careful analysis of the coins shows that the pattern reflects factors other than the status or fate of an individual site. As a result coins must not be seen in the context of the site alone until the wider framework of the economic and political situation in which they were produced has been taken into full account.

There are five self-evident factors which effect coin loss that Casey (1986) has outlined:

1) Coin losses are proportional to the volume of coinage originally issued. This is particularly important for the Roman Empire because the State produced coin when and in what amount it was needed. The result is that we have periods with low coin production and periods of high coin production. An archaeologist's recovered assemblage will be biased towards periods of high coin production and he must therefore consider this bias in his interpretation.

2) Coin losses are proportional to the intrinsic value of the coins issued. In a coin population of mixed denominations it is the lowest value coins which people can best afford to lose and on which they will

expend the least effort in recovering. If the lower denominations also happen to be small in size the effect on coin losses will be increased. Witness the fate of the now demonitized half-pence piece. A complicating factor is that high value coins of one period may be the low value coins of another period. For example in the first century the sestertius was of fairly high value, but by the third century most base metal coin losses were sestertii.

3) Coin losses are proportional to political factors prevailing during the lifetime of the coins. Coins are affected by the operation of political factors because coins themselves are an expression of collective political will on the part of the issuing state. There are many cases of coin deposits being the direct result of political decisions. Policies of demonitisation for economic reasons, or the condemnation of the coinage of rival political factions. For instance, if an emperor fell from grace, everything about him was damned, the damnatio memoriae, including his coins which were illegal to keep or use. Emperors who were treated in this way include Carausius and Magnentius and therefore coinage of these emperors is more common than it would otherwise be, because hoards were not collected and coins discarded.

4) Coin losses are proportional to economic factors prevailing during the lifetime of coins. A common example of this is inflation resulting in a large number of coins in circulation and deflation causing there to be fewer coins in circulation.

5) Coin losses are frequently proportional to the physical size of the individual coins in the population. ^{Which} simply means that a small coin is more easily lost than a large one. However as noted above a higher value coin would be more assiduously looked for than a lower value coin.

All the above categories interact to produce the assemblage recovered from the site, generally reflecting what a man could best afford to lose and what was available to him to lose at a particular moment because coins, unlike pot sherds, represent wealth not rubbish.

In this study we are not concerned with precise contextual detail only what part of the fort or vicus the coin came from rather than vertical stratigraphy. What is important however is the number and value of coins dropped in a given time period. There is an unquantifiable problem in this however, the longevity of coins. ^{Many} Coins can stay in circulation for long periods of time. For example on Hadrian's Wall there was a great deal of Trajanic coinage circulating in the 120s. If we compare the Trajanic coinage to Hadrianic coinage at Housesteads the following picture is produced:

Number of coins of Trajan (98-117) = 27 or an average 1.4 per year.

Number of coins of Hadrian (117-38) = 35 or an average 1.7 per year.

Thus there are almost the same number of coins per year of Trajan as there are of Hadrian even though the fort was not founded until 125.

The situation is even worse on the Antonine Wall where the coins are overwhelmingly Trajanic:

Number of coins of Trajan (98-117) = 34 or an average 1.8 per year.

Number of coins of Pius (138-61) = 21 or an average 0.9 per year.

(Figures from Robertson 1983).

Further^{more} coins of the Republic have been found at Housesteads deposited over 150 years after they were struck. Although wear may show that coins have had an active circulatory life it is a very rough measure of the length of that life as some coins may have a harder circulation life than others, some coins may be immobilised in hoards for long periods before being reintroduced into circulation. Other measures, such as the attempt by Postumus (258-68), to continue a policy of Trajan Decius, to revive the old imperial system of the sestertius and its fractions, may have brought old coins back into circulation. In this case by introducing a double sestertius of similar module to the original sestertius and often overstruck onto it. This had the affect of reactivating the old sestertii, its value being doubled.

Apart from coin loss several other factors eventually lead to the production of our recovered assemblage. The first is the depositional environment. Primarily this involves the environment at the time of loss, i.e. a well cleaned, well paved area is going to yield ^{fewer} less coins than a crowded market place with poor flooring. For instance at Housesteads the basement of vicus building I has yielded forty coins

compared with twelve from the normal floor in the rest of the building. Once buried post-depositional factors begin to operate namely physical and chemical erosion. At Housesteads there is a high degree of chemical erosion owing to the strongly acidic soil overlying the Whin Sill, while a desert would see mostly physical erosion.

Having survived all of this, further bias is encountered in the recovery of the coins due to the efficiency of excavation and the scale of excavation. On a well excavated site like Housesteads these biases are minimal compared to small, poorly dug excavations, because the site having been excavated on a large scale by several excavators reduces the bias of recovery. Similarly this produces a large coin list which will be more representative of the original population than a small list although it is still generally of the smaller denominations. We must assume that the factors affecting coin loss, described above, acted uniformly in antiquity.

The number of coins diminishes as the above biases are run through. Only a very few coins of the original population are lost, fewer enter the archaeological record and survive over the centuries and even fewer are eventually recovered. At Housesteads not a single gold coin has been recovered compared with 820 coins of other metals. In fact the large number of coins found at Housesteads amounts to merely 0.000009 of the original population (for the calculation of this figure see p. 63). When dealing with such small proportions it is important to identify each coin with complete accuracy. Unfortunately this task is made more difficult as many coins are very worn and corroded.

Furthermore archaeologists tend not to speak of 'unstratified coins' and dismiss them from their reports because they think they are of little interest. Therefore due to the small proportion of the sample compared with the original population it was deemed necessary for this study to locate *all* coins traceable to Housesteads (not an inconsiderable task) and recataloguing all of them to reduce bias as far as possible. This involved searching archives for references to coins, and local and national museums, archaeological departments and units for the coins themselves.

HISTOGRAMS AND CHRONOLOGY

In the preceding section I explained that, foremost, the coins show provincial coin trends rather than relate to a particular site. This can be seen very clearly in the two histograms (figs. 5 and 6) which provide a very close resemblance to the provincial picture. This picture must be explained to enable the site to be interpreted.

In constructing histograms it is important that the presentation is uniform so that comparisons can be made with other sites, since a sites coin list cannot be seen in isolation. The following equation was established by Ravetz (1965) for her work in the fourth century and the formula was developed back into earlier periods by Casey (e.g. 1974, 1976).

$$\frac{\text{Coins per reign} \times 1,000}{\text{Length of reign}} = \text{Total for site}$$

This formula ensures that we are comparing like with like. Long reigns tend to produce a larger number of coins than short reigns, (monetary and political factors being equal), therefore to enable the two to be compared, and the underlying trends established, the coins are seen as a product of individual regnal years. Since sites produce different quantities of coin, due to their different size or sampling strategies, the population is expressed as a notional thousand coins. This allows sites with different coin populations to be compared and it also provides a good statistical base. The presentation of coin figures is

complicated by periods in which there are a number of simultaneous rulers and others in which the ruler is not so important as the module and metallic content of the coin. The later point is especially important in the third and fourth centuries when coin issues tend to reflect rapid changes in the physical composition of the currency, this being more important than the identity of the issuer. The coin issue periods used in this study are as follows:

PERIOD	DATE RANGE	PRINCIPAL RULERS
1 Claudian	43-54	Claudius
2 Neronian	54-68	Nero
3 Flavian I	68-81	Vespasian, Titus
4 Flavian II	81-96	Domitian
5 Trajanic	96-117	Nerva, Trajan
6 Hadrianic	117-38	Hadrian
7 Antonine I	138-61	Antoninus Pius
8 Antonine II	161-80	Marcus Aurelius
9 Antonine III	180-92	Commodus
10 Severan I	193-217	Septimius Severus, Caracalla
11 Severan II	217-22	Elagabalus
12-17 Mid C3rd	222-58	S. Alexander, Philip, Decius, Valerian
18 Gallic Empire	258-73	Postumus, Victorinus, Tetricus
19 Aurelianic	273-86	Aurelian, Tacitus, Probus, Carinus
20 Carausian	287-96	Carausius, Allectus
21 Diocletianic	296-318	Diocletian, Maximian, Constantine I
22 Constantinian I	318-30	Constantine I, Licinius
23 Constantinian II	330-48	Constantine I & II, Constantius II
24 Constantinian III	348-64	Constantius II, Magnentius, Julian
25 Valentinianic	364-78	Valentinian I, Valens, Gratian
26 Theodosian I	378-88	Gratian, Theodosius I, Mag. Maximus
27 Theodosian II	388-402	Theodosius I, Honorius, Arcadius

Reference to the two histograms (figs. 5 and 6) makes it very clear that there were periods when coins were abundant and others when there were few or no coins present. These fluctuations tend to result from internal changes in the coinage itself or to political factors rather than from several garrison changes or periods of abandonment and

reoccupation of the fort. The results of the equation are shown in a histogram, rather than a distribution curve, in which the density of coinage is expressed over a time scale divided into the periods described above. Each period will be discussed below and the inherent provincial pattern described and removed to show changes relating to the site itself.

Even though the fort was not constructed until the Hadrianic period 6, it can be seen that there was a considerable amount of residual coinage circulating. This includes a large number of denarii which could have circulated well into the third century, when their intrinsic value was greater than their face value, for example when Trajan Decius (249-51) was overstriking denarii as antoniniani. The fact the comparatively silver rich denarii were running at a premium in the third century is shown by the production of cast copies particularly from the Antonine and Severan periods (copies are unshaded on the histograms). The presence of copies of these coins at Housesteads is not surprising since two coin moulds have been found in the vicus, one of a denarius of Antoninus Pius, the other is a mould for a denarius of Julia Domna. Similarly sestertii would be running at a premium when Postumus (258-68) tried to reinforce the old imperial system of the sestertius and its fractions together with a double sestertius frequently overstruck onto old sestertii.

Despite the fact that the coins in the first five periods are residual they still fall into the provincial coin pattern. No Claudian coinage exists due to the very low emission rate from circa 44, after which

little Claudian coinage reached Britain except in the form of copies. Again period 2 is only represented by two coins from the vicus since Nero issued no orichalcum or copper coins between 54 and 63/64. Copies were made of Claudian aes from circa 44 to 64 to meet the demand for coinage. These copies seem to have ceased circulating when the supply of coinage was resumed in 64 and therefore none have been recorded at Housesteads. The peak of Flavian coins (period 3) is a result of the renewed vigour in the conquest of Britain and a large amount of silver coinage arrived in the province, this probably included older coinage, perhaps the denarii of M. Antonius. For the next four periods the amount of coinage continued to increase due to gradual inflation. The sestertius and dupondius were now replacing the aes in popularity. It will be noticed that the construction of the fort in period 6 does not make any major fluctuation and indeed its effect is hardly noticeable. The upward trend levels in periods 7 to 10, this is a result of the aes coinage giving way to silver (fig. 7) and the consequent effects on the volume of site finds, since a single denarius was worth four sestertii or sixteen asses. The silver coinage gradually became debased so the older, intrinsically higher value coins, ^{were} are removed from circulation either by the state or by private individuals. Period 10 reverses the trend slightly by Severus' and later Caracalla's increase in army pay. Against this trend is a high number of denarii of Severus Alexander (222-35) in period 11, perhaps indicating an unrecorded military event in Britain at this time. A military event is perhaps indicated by the amount of rebuilding in northern forts at this time. Between 219 and 225 inscriptions were set up at High Rochester, Chesters, Netherby, South Shields, Cawfields, Great Chesters (where a granary was restored)

and Birdoswald (Frere 1967, 180). The middle of the third century (periods 13 to 17) produces few site finds due to the re-establishment of the antoninianus (a two denarius piece) first introduced by Caracalla in 215. The cessation of the production of the denarius in 244 meant that the main denomination in circulation was the high value antoninianus, ensuring few site finds. Furthermore the antoninianus was, from the outset, a debased currency produced by a hard pressed government and this became debased even faster than the denarius. Indeed Trajan Decius was over striking denarii as antoniniani. The withdrawal of these coins accelerated as the intrinsic value of the coin declined. Consequently it would be wrong to conclude that Housesteads was abandoned at this time.

A comparison of the periods between period 8 and period 17 in the two histograms shows that, although following the general provincial trends, the vicus contains a great many more coins than expected and the fort, considerably less. This is exactly what we would expect to see since military stations in the ancient world were places where the state, through payments to troops, could inject fresh coinage into the economy and, as such, were a powerful magnet to civilian settlement. Where such settlements existed, the pay of the soldiers may be expected to drain from the camp into the extra-mural settlement through commercial transactions or because the dependents of the soldiers lived in the settlement and were maintained by the regular pay of the soldiers. Therefore it could be argued that the vicus was founded as early as Marcus Aurelius (period 8) but since the coins seem to have

received some wear Birley's belief that the vicus started in the early Severan period seems to be upheld by the numismatic evidence.

The peak in period 18 does not show a renewed vigour but a complete collapse of the Roman monetary system under the Gallic and central empires. The antoninianus fell in both module and silver content, eventually falling (below 1%) New mints were established to produce the large quantities required of the antoninianus now of little intrinsic value. It is not known why the soldiers could afford to lose this amount of coinage when there is no evidence of a pay rise. The possible solutions are:

- 1) The army actually received a pay rise.
- 2) The coinage became of so little real value during this period that it became virtually obsolete.
- 3) The coinage was drastically devalued in official as well as in intrinsic terms during period 18, or under Aurelian in his reform of 273 which included the introduction of a new five denarii radiate coin.
- 4) The army were being paid stipendium and donativum in debased antoniniani and not gold.
- 5) Two or more of the above.

In period 19, following the re-unification of the Empire, Aurelian reformed the billon coinage issuing the coins with value mark of XXI which may have been valued at five denarii. These coins are very scarce as site finds in Britain. It further appears that they were rare at the time as there was large scale copying of the contemporary coinage of the Gallic Empire to remedy the situation. Some of these copies are very rough and small, but all show the radiate crown. The copies seem to have circulated until Carausius seized power in 286, despite the fact that copies of coins later than Probus' issues are not found. The copies occur in the fort in the large quantities to be expected. However there are fewer than to be expected in the vicus in real terms, especially considering that the vicus had previously proved a strong drain on the fort's coinage, giving it higher coinage figures than the fort in each period. This evidence would suggest that period 19 saw a sharp decline in the vicus (see below).

During the period of Carausius and Allectus the fort does seem to show a decline, as a small peak was expected during this period when compared to southern sites, a parallel picture to Housesteads is provided by Wallsend and Vindolanda (a histogram for the coinage of Vindolanda is published in Casey 1986). The decline of the fort and other Wall forts during the Carausian episode is discussed fully in a later section.

Period 21, however, shows no sign of depression from the regional pattern and indeed would appear to suggest more than normal activity. Southern sites during this period usually show a trough as it includes coins of the Diocletianic reform with the introduction of the 10 gram

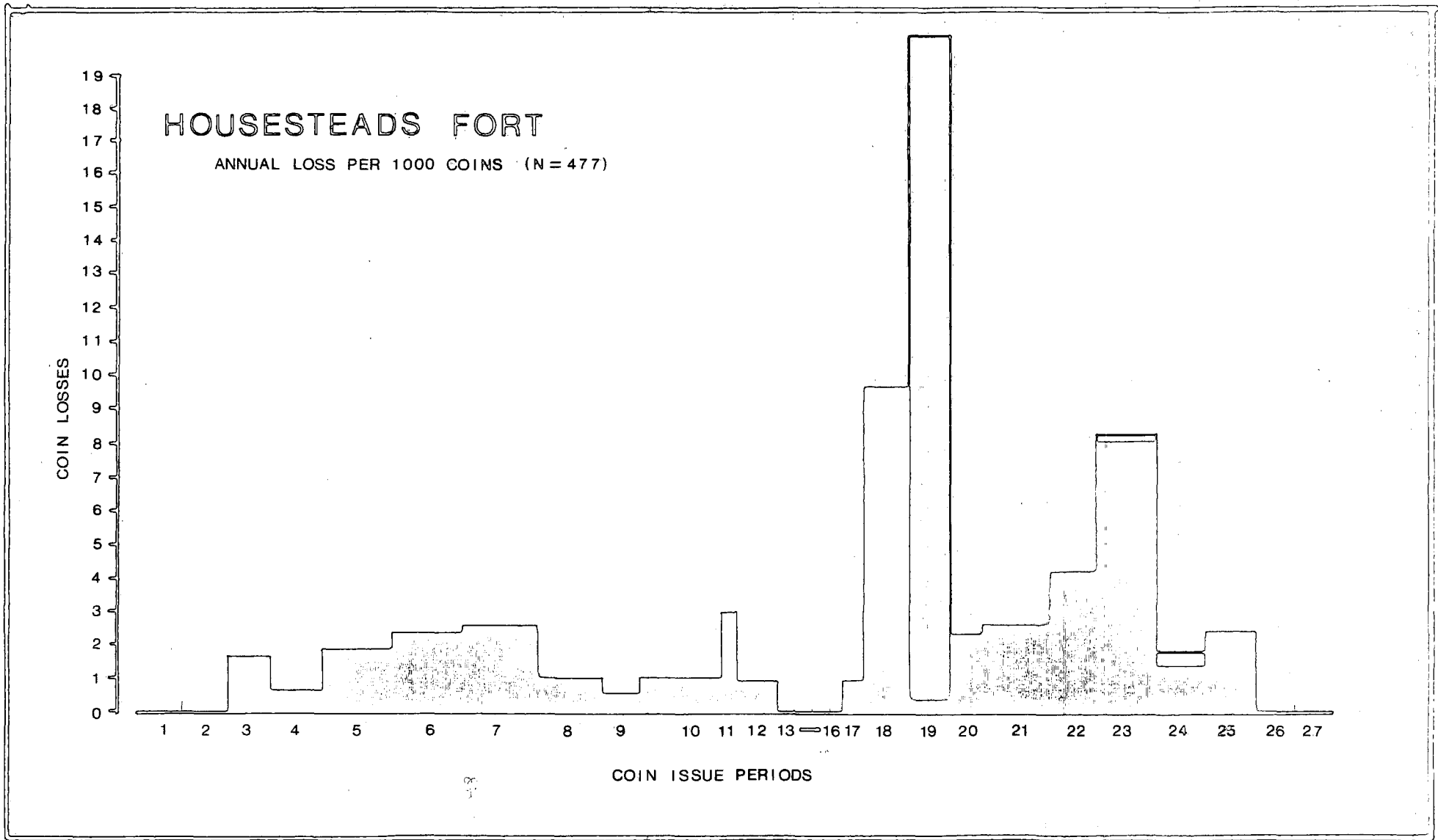
billon 'follis'. This coin having a high value (priced at 10 denarii before 301 and 20 denarii after 301), and also being of large module, was not frequently lost, yet the fort has yielded ten of these large module coins (Fort Cat. Nos. 332-341) with the legend GENIO POPVLI ROMANI. How could the proportionally high numbers of these coins be explained, especially in a period when the annona militaris is expected to have started operating? There are several explanations that can be made to explain this seeing the fort in isolation. However a comparison with Vindolanda (Casey 1986, 102) shows that the same thing happened there. This high number of Diocletianic coins therefore may represent increased military activity on the northern frontier either in terms of expenditure or garrison numbers, perhaps both. This would be expected if the fort had been abandoned during the Carausian episode. The increase in coinage may also be due to rebuilding and repair work in the forts at this time (see p. 124). This is particularly clear at Housesteads with the dedication slab to Diocletian and Maximian and the construction of the chalet barracks. The fact that the rampart backing mound seems to have been replaced at this time, and the repair of the curtain wall, may also be seen as part of this refurbishment. Alternatively it may indicate trouble with the people north of the frontier, but this would seem unlikely (pp. 118-19). Perhaps the large amount of coinage in the fort in the fourth century, when we could expect less due to the operation of the annona militaris, may be used to indicate that the vicani were now living inside the fort. Such a theory has been put forward by Gillam and Daniels (Daniels 1980, 189) who were struck by the preponderance of brooches and other trinkets in barrack XIII which suggested to them that this was some kind of married

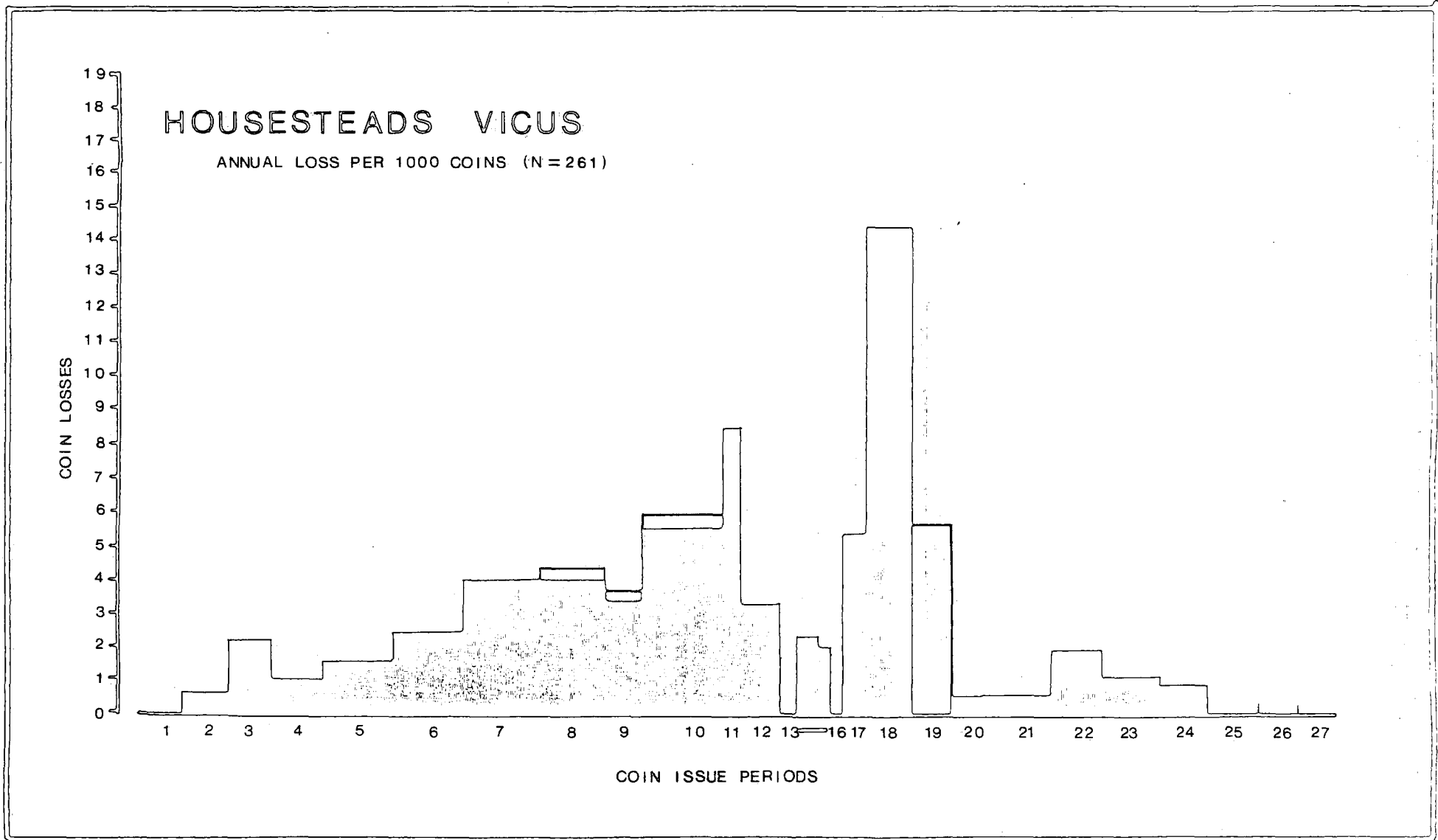
quarters. Wilkes (1966,130) also made a similar suggestion. Daniels (1980, 190) further believes that the fort may have been abandoned during the episode of Carausius and Allectus and the vicani moved into the fort. Such a model could fit the picture except that the vicani received their coinage from the soldiers; if the soldiers had been withdrawn, then fresh coinage would drop, and period 20 would be consequently reduced. There is much debate on the evidence of families in forts. If each chalet unit had contained a family at Housesteads the fourth century garrison would have been a mere 15% of the second century garrison. Evidence for and against these hypotheses will be discussed in a later section (pp. 117-46 below).

The fort follows the provincial trends for the next few periods. The large billon coin of Diocletian declined rapidly in size and silver content, and as a consequence the volume of coin losses increases. The coin reached its final weight of 1.5 grams in the last years of Constantine's reign and this was maintained by his sons hence the peak in period in period 23. In 348 Constans and Constantius II initiated a reform producing a high value coin comparable in module to the 'folles' of Diocletian. This new coin bore the optimistic legend FEL(IX) TEMP(orum) REPARATIO. The intrinsic value of the Fel Temp Reparatio coinage therefore produces few site finds. The revolt of Magnentius (350-53) produced a coin of similar module. However when the Magnentian revolt was suppressed, and the usurper had suffered damnatio memoriae, his coinage was discarded, as is shown by the unworn specimens of the coinage of Magnentius found at Housesteads and other sites. As a result from 353 there was little coinage in circulation, the matter being made

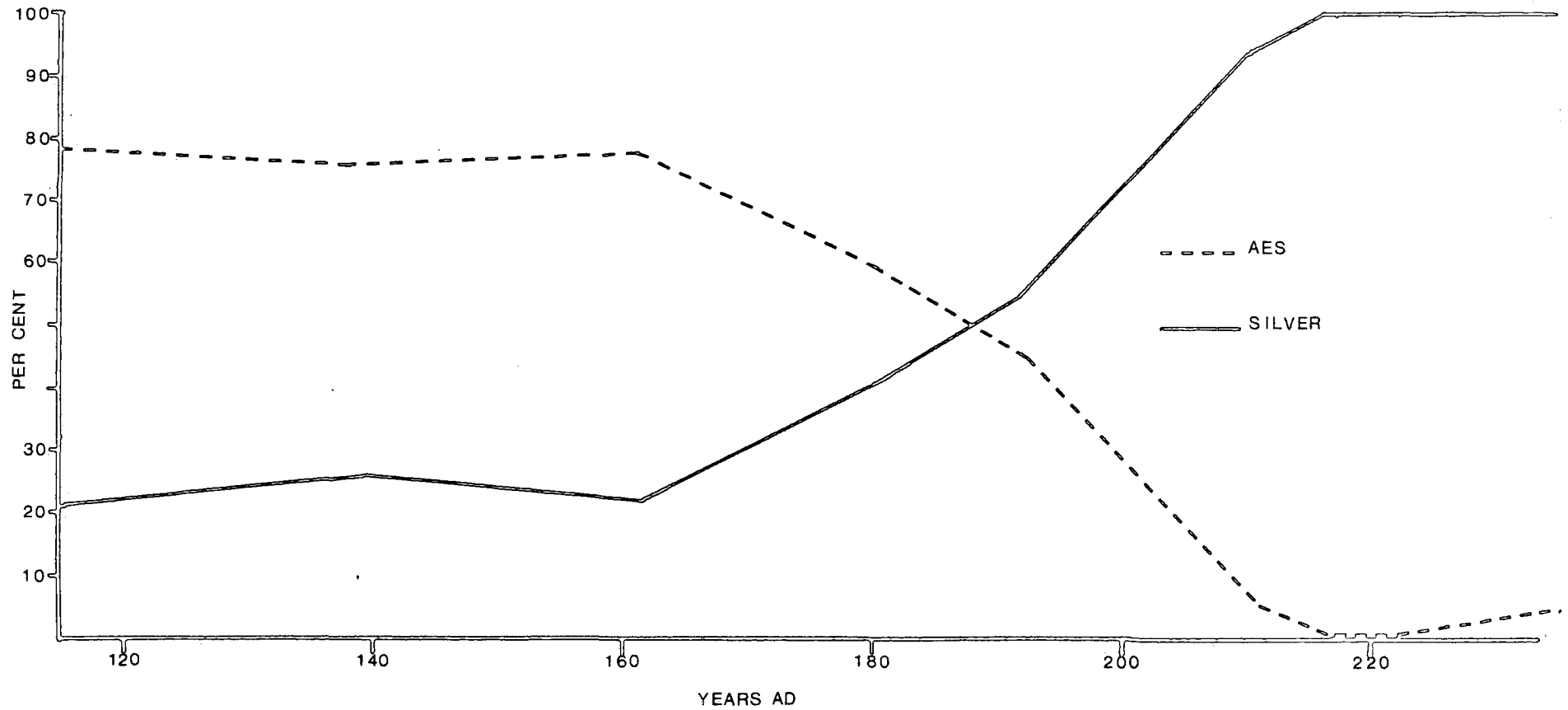
worse by Constantius' unwillingness to supply Julian, his Caesar in the West, with quantities of coinage as he feared Julian may use the money to usurp the armies of the Western Empire. The dearth in coinage was made good by the copying of the Fel Temp Reparatio coins allowed to circulate after 354. These copies rapidly declined in module and faithfulness to their prototypes. In period 25 Valentinian produced a large number of quality silver coins which are rarely discovered on sites. The need was no longer felt for billon coins and the series was abandoned. The peak of this period being reached by the production of large numbers of low value bronze coinage. Period 26 is not represented at Housesteads. This period coincides with the revolt of Magnus Maximus. I do not believe that the fort was abandoned in this period (discussed on p. 180) since Maximus would have severed contacts with Rome and hence with coinage supply. The lack of copies at this time in Britain shows that sufficient Valentinianic coinage was still circulating. Period 27 is also unrepresented and although it is recorded in towns is notoriously rare on military sites. Indeed coin supplies to Britain were affected by the closure of the Gallic mints in 395. The last bulk coinage, with the legend VRBS ROMA FELIX, reached Britain in 402. The excavations carried out last century may have removed any coins of this period, since being small and mostly in the topsoil, they would have been stripped away along with the topsoil of much of the forts interior and discarded on spoil heaps. Consequently although it may be argued that occupation of the fort ceased in period 27 but it is more likely that it continued for some time afterwards as will be dicussed later (pp. 190-95).

The suggested decline of the vicus from circa 273 runs contrary to the conclusions derived by E. Birley from his several seasons of excavation (see pp. 117, 178 below). Birley saw a large development in the size of the vicus in the early fourth century and he thought that occupation continued down to 367. The evidence from the vicus in comparison to the regional coinage picture described above however is of very little occupation in the fourth century. Indeed it could be very plausibly argued that the vicus in fact ended at the close of the century circa 270-86 because of the low numbers of radiate copies. The low coin counts after these dates could be produced by soldiers dropping coins while entering or leaving the fort. Although it is possible to argue that the vicus dwindled into the fourth century, declining yet further in the 330s, as the large peak expected in period 23 is absent, and perhaps terminating all together circa 364 because the common, low value, Valentinianic bronze is not present. I believe that the first of these two hypotheses is more likely to be correct and agrees with recent work by J.P. Gillam who, in reappraising pottery from the vicus would suggest that the vicus at Housesteads shows considerably less fourth century activity than previously expected (see p. 117).





HOUSESTEADS PROPORTION OF AES TO SILVER COINAGE



THE GARRISON DURING THE ANTONINE WALL PERIOD

It has been thought for some time that the Hadrian's Wall forts were garrisoned by legionary vexillations during the occupation of the Antonine Wall. Indeed there is epigraphic evidence at Housesteads that can be used to support this.

Of the sixteen forts on Hadrian's Wall only one has been found to contain a Hadrianic inscription recording an auxiliary cohort (although it should be noted that an auxiliary cavalry unit, ala II Augusta ob virtutem appellata, is recorded on an Hadrianic inscription from Chesters). This inscription is from Carvoran recording the presence of the cohort I Hamiorum sagittariorum (RIB 1778). The Hadrianic inscriptions from Benwell (RIB 1340) and Haltonchesters (RIB 1427) record builders rather than garrisons. The inscription from Great Chesters (RIB 1736) does not record any unit. There are three inscriptions that may record Hadrianic garrisons. Cohors I Aquitanorum is recorded on an inscription from Carrawburgh (RIB 1550) which was either set up under Sextus Julius Severus (attested in 133) or Cn. Julius Verus (attested in 158). Gillam and Mann strongly suggest the earlier date (Gillam and Mann 1970). The cohort VI Merviorum is recorded at Great Chesters on an inscription which, since it appears not to be early or mid-Antonine, may therefore be Hadrianic (RIB 1731). The cohort IV Gallorum may have been the Hadrianic garrison at Castlesteads where it is attested on two undated altars (RIB 1979 and 1980). This unit is attested at Risingham under Marcus Aurelius and at Vindolanda in the third century where it is also listed in the notitia.

Of these four units, three are attested on the Antonine Wall. Cohors I Hamiorum appears on two undated altars found near Bar Hill (RIB 2166 and 2167). Cohors VI Nerviorum appears on two inscriptions (RIB 2144 and 2145) from Rough Castle and one of them is dated to Antoninus Pius, while cohors IV Gallorum appears on an undated inscription from Castlehill (RIB 2195). Further the cohors I Tungrorum, if not at Housesteads under Hadrian, may have been at Birdoswald, near which a tile stamped with the name of the unit has been found. The same unit is attested on an inscription dated to Pius from Castlecary .

Thus while there is no single instance of a unit definitely being on Hadrian's Wall under Hadrian and on the Antonine Wall under Pius, there appears to be a general trend, with four possible cases of transfer. Now we should look at the other side of the coin to see what evidence there is for legionary detachments in Hadrian's Wall forts during the occupation of the Antonine Wall.

At Benwell an altar was set up to Jupiter Dolichenus by a centurion of the legio II Augusta, for the welfare of Antoninus Pius (RIB 1330). The same legion erected a stone at Haltonchesters with zoomorphic peltae stylistically similar to examples on the distance slabs from the Antonine Wall. At Chesters parts of two early Antonine inscriptions have been found (RIB 1460 and 1461), each set up by a legion. Meanwhile at Housesteads two altars (RIB 1577 and 1609) have been found on Chapel Hill attesting the presence of legio VI Victrix pia fidelis they are undated and could presumably represent the builders of the Wall or fort. Dobson and Breeze (1987, 74) believe that the second legion was

? involved in the construction of turret 36b (which underlies the fort), it is not certain which legion was involved in the building of which fort this portion of the Wall. But as the VI had the next building sector to the east and appear to have been well ahead in their building schedule, it is plausible to suggest that the IV were in fact involved in the building of the fort. Two altars have been found outside the fort dedicated by legio II Augusta (RIB 1582 and 1583). One of these was found re-used in the Mithraeum which would thus give it a terminus ante quem (see p. 27) of the second century. These inscriptions could be said to have been set up by the Wall builders however the soldiers describe themselves as being on garrison duty, agentes in praesidio. Thus at Housesteads and other the forts described we have good evidence for legions on garrison duty on Hadrian's Wall and when these are dated the date shows them to be Antonine. A further example may be provided by an altar set by L. Maximus Gaetulicus, a centurion of the twentieth legion (RIB 1725) at Great Chesters who also dedicated an altar to Apollo which was found in a pit containing Antonine material at Newstead (RIB 2120). It is probably that in the eleven other forts on Hadrian's Wall the same arrangements existed to these five. At no fort on Hadrian's Wall is there a record of a unit or detachment, in the early Antonine period, other than the legionary detachments discussed. As the cohorts and alae moved out the legionary vexillations moved in.

Hartley (1972) has studied the distribution of individual potters' name stamp dies on Central and Eastern Gaulish samian ware. Only stamps found on plain samian are used since the large dies used on decorated wares were used over long periods. The dies from the Antonine Wall are

compared with those from Hadrian's Wall and the hinterland forts. The Wroxeter Gutter Group and Pudding Pan Rock find are used as test-groups. Hartley looked at Walters form 79/80 which began about 140 but did not become common 160-200, and form 27 which was common throughout the Flavian and Trajanic periods but then becoming less common before it went out of production in about 160, and noticed that die stamps on form 79/80 are completely confined to Hadrian's Wall while die stamps on form 27 are proportionately more common on the Antonine Wall. From this Hartley concluded that either both Walls were not held together (from form 79/80) or if they were Hadrian's Wall was held by a smaller garrison force than previously (from form 27). Indeed it would be appear pointless to keep the two Walls at full strength concurrently, Frere (1974, 180) notes that there would be a shortfall of some 9,000 men if this was attempted.

Therefore epigraphic and ceramic evidence together suggest that legionary detachments occupied Hadrian's Wall during the Antonine Wall period and that these detachments were small. How instructive are the coins on this point?

Reference to the annual coin loss histogram for the fort (fig. 5) shows that the average number of coins lost per year is very similar in the Hadrianic and Antonine I period, which broadly corresponds to the Antonine Wall period, and is therefore not very instructive. However this method does not take into consideration the total value of coinage dropped in a given period. For example if we find four sestertii in period A and four sestertii in period B at site one, and four sestertii

in period A and one denarius in period B at site two, both period A and period B being of a similar length of time, we can start to draw conclusions from the number of coins present, that site one was four times as intensively occupied as site two in period B and so on. Yet the actual money dropped is identical in amount at both sites. A new numerical method is here developed to take advantage of these findings. As with the histograms the length of the study range is important to the calculation but on the other hand in this method the pay and the garrison are important. The methodology is set out below.

Before doing any statistical exercises to find out the garrison type at Housesteads during the occupation of the Antonine Wall it is necessary to calculate the fraction of the coinage found on the site to the possible original population. The first calculation, or base fraction, must be calculated for a set period of time when the number of soldiers in the garrison is known and does not fluctuate significantly and also the proposed pay for the type of soldier on garrison duty (e.g. auxiliary, legionary, ala, cohors equitata, etc.). The pay scale used in this thesis is that calculated by Watson and is described more fully in the next two sections (pp. 61, 78-82). From this information the possible original population is calculated, in denarii, for a given number of years. The number of coins found on the site, also in terms of denarii, is divided by the original population to give the base fraction. The base fraction can be defined as the fraction of the extant coinage representative of a unit size and type. The base fraction can be moved in to a different date range, where if we count up the coins (in terms of denarii) and divide them by the base

fraction then the possible original population is produced for the period used.

This method is subject to the same numismatic limitations as the histograms. These general limitations are discussed in an earlier section (pp. 35-40). If the base fraction is calculated in the first or second centuries it is only really valid in the first, second, and early third centuries after which rapid inflation makes comparison with considerably earlier time periods difficult and in such a case a new base fraction would have to be calculated nearer to the date of the period of study. A major problem with the method is the residuality of coins (pp. 37-8), although it is hoped that when the study period is close to the period in which the base fraction was calculated, that the residual coin pool would be similar in composition in both cases and so would, in effect, be self canceling.

To calculate the base fraction at Housesteads the years 117-38 and 161-92 are used, since during these periods the garrison at the fort appears to have been a cohort milliaria of about 960 men. The Hadrianic coinage used in the calculation has a range that extends back before the establishment of the fort because the Hadrianic coinage is very difficult to date internally. If the base fraction is calculated using the recovered coinage separately for Hadrian and Marcus Aurelius then similar fractions are produced in both cases indicating that in terms of coin count values the gap between the start of Hadrian's reign and the foundation of the fort is not significant. The coinage of Antoninus

Pius is not included since it is the period under test and is also a period in which the garrison of the fort is uncertain.

Furthermore, the pay of auxiliaries has been best calculated, and is most certain, during these years (i.e. between the pay rises of Domitian and Severus). The basic pay of the ordinary auxiliary soldier being one hundred denarii (Watson 1959). Higher rates are not included in the calculation because these rates are not known nor the number of soldiers on each pay scale. Furthermore it would seem from two papyri, Geneva Papyri 1 and 4, that about one third of a soldiers pay was removed for various stoppages such as food and equipment (Webster 1969, 258 and Watson 1956).

As a result the figure for pay used for the Housesteads calculations is 70 denarii per year, as this was the maximum the soldiers had available to lose. When considering the Housesteads coins it should be noted that the coins from milecastles 37 and 39 are included in the calculations along with those from the fort and vicus because these milecastles, being closer to Housesteads than any other Wall fort, were likely to have been manned by the Housesteads garrison.

The study uses coins dated 141-61 in calculating the Antonine Wall period garrison as this coincides with the Antonine Wall period and fits neatly into a regnal period. If the Wall was fully reoccupied in circa 157-58 and then evacuated to the same garrison numbers as before, as suggested by Hartley (1972) it should not be significant to the calculation since the period is so short. Indeed it is not at all

certain if there were two periods of occupation of the Antonine Wall and at Bearsden there was no possibility of a second period of building (Breeze 1974). The few coins which can only be dated within overall 138-61 bracket are also included as most of their date range is in the period under study and hence are most likely to have been lost in the period 141-61.

The method and calculations are repeated for Vindolanda, Wallsend, Segontium, Carrawburgh and Littlechester to test the validity of the method. The Carrawburgh coin list, because it principally comprises of the Coventina's Well coins will provide interesting comparative results.

Copies are not included and hoards are treated as one coin. For the references to the coin lists used see p.250.

CALCULATIONS

a) Housesteads

1). The base fraction using the years 117-38 and 161-92.

Fort: 11 denarii, 14 sestertii, 3 dupondii, 5 asses.

Vicus: 10 denarii, 23 sestertii, 3 dupondii, 4 asses.

Milecastles: 2 denarii, 1 dupondius, 1 as.

Total = 33.75 denarii.

Potential coin population = No. of men × pay × No. of years.

$$= 960 \times 70 \times 54$$

$$= 3,628,800 \text{ denarii .}$$

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{33.75}{3,628,800} = 9.3005952 \times 10^{-6}$$

ii). The garrison during the years 141-61.

Fort: 5 denarii, 11 sestertii, 5 dupondii, 5 asses.

vicus: 5 denarii, 12 sestertii, 4 dupondii, 2 asses.

Milecastles: 1 as.

$$\text{Total} = 17.375 \text{ denarii .}$$

Expected original population = $\frac{\text{Recovered sample}}{\text{Base fraction}}$

$$= \frac{17.375}{9.3005952 \times 10^{-6}}$$

$$= 1,868,160 \text{ denarii .}$$

Residual pay per man per year = 200 denarii for legionaries.

$$= 70 \text{ denarii for auxiliaries.}$$

The number of years (141-61) = 21

Therefore the approximate number of soldiers in the garrison at this time is:

$$\frac{1,868,160}{(200 \times 21)} \approx 445 \text{ legionaries.}$$

$$\frac{1,868,160}{(70 \times 21)} \approx 1271 \text{ auxiliaries.}$$

Before commenting on this result the calculations must be repeated for the other sites.

b) Vindolanda

i). The base fraction using years 161-92.

These years are used at Vindolanda because during this period the garrison type and size is known. The garrison is thought to be a cohors quingenaria, possibly the cohors II Nerviorum civium Romanorum, i.e. an auxiliary cohort 480 strong.

Fort: 3 denarii, 1 sestertius.

vicus: 11 denarii, 31 sestertii, 1 dupondius, 2 asses.

Total = 21.25 denarii.

Potential coin population = 480 × 70 × 32

= 1,075,200 denarii.

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{21.25}{1,075,200} = 1.9763765 \times 10^{-5}$$

ii). The garrison during the years 141-61.

Fort: 2 denarii, 1 sestertius, 1 dupondius, 3 asses.

Vicus: 18 denarii, 29 sestertii, 5 dupondii, 6 asses.

Total = 28.8125 denarii.

$$\text{Expected original population} = \frac{28.8125}{1.9763765 \times 10^{-5}}$$

$$= 1,422,806 \text{ denarii .}$$

Therefore the approximate number of soldiers in garrison at this time is:

$$\frac{1,422,806}{(200 \times 21)} \approx 339 \text{ legionaries.}$$

$$\frac{1,422,806}{(70 \times 21)} \approx 968 \text{ auxiliaries.}$$

c) Wallsend

i). The base fraction using the years 117-38 and 161-80.

The garrison at Wallsend during these two periods appears to have been a cohors quingenaria equitata.

Fort: 2 denarii, 12 sestertii, 4 dupondii, 6 asses, 1 quadrans.

$$\text{Total} = 5.90625 \text{ denarii .}$$

First we have to calculate the average annual pay per soldier because this was a mixed unit of infantry and mounted auxiliaries. It is believed that such a unit may have contained 360 infantry and 128 cavalry (P.J. Casey pers. comm.). The pay of an auxiliary cavalryman was 150 denarii giving a residual figure, after stoppages, of 100 denarii.

$$\text{Potential coin population} = (360 \times 70 \times 42) + (128 \times 100 \times 42)$$

$$= 1,596,000 \text{ denarii .}$$

(This gives us an average annual residual pay figure of 78 denarii per man).

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{5,90625}{1,596,000} = 3.7006579 \times 10^{-6}$$

ii). The garrison during the years 141-61.

Fort: 1 denarius, 6 sestertii, 7 dupondii, 9 asses.

Total = 3.9375 denarii.

$$\text{Expected original population} = \frac{3,9375}{3.7006579 \times 10^{-6}}$$

$$= 1,064,000 \text{ denarii .}$$

Therefore the approximate number of soldiers in garrison at this time is:

$$\frac{1,064,000}{(200 \times 21)} \approx 253 \text{ legionaries.}$$

$$\frac{1,064,000}{(78 \times 21)} \approx 650 \text{ cohors equitata .}$$

$$\frac{1,064,000}{(70 \times 21)} \approx 723 \text{ auxiliaries.}$$

d) Segontium.

i). The base fraction using the years 77-96.

These years are used because Segontium, founded circa 77, has an uncertain garrison history. During its early history it may have contained a military cohort due to its large size (5.5 acres). However in the later first or early second century a palisade was built across the praetentura considerably reducing the area of the fort. The barracks in the fort were demolished leaving only the centurion's quarters before the barracks were rebuilt. Even though there is no evidence for legionaries in the fort Segontium is used to provide another fort with which to test the validity of the method. All Flavian coinage is included

Fort: 2 denarii, 6 sestertii, 4 dupondii, 23 asses.

Total = 5.4375 denarii.

Potential coin population = $960 \times 70 \times 20$
 = 1,344,000 denarii.

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{5.4375}{1,344,000} = 4.0457589 \times 10^{-6}$$

ii). The garrison during the years 141-61.

Fort: 1 denarii, 3 sestertii, 1 dupondius, 2 asses.

Total = 2 denarii.

Expected original population = $\frac{2}{4.0457589 \times 10^{-6}}$
 = 494,345 denarii.

Therefore the approximate number of soldiers in garrison at this time is:

$$\frac{494,345}{(200 \times 21)} = 118 \text{ legionaries.}$$

$$\frac{494,345}{(70 \times 21)} = 336 \text{ auxiliaries.}$$

e) Carrawburgh.

i). The base fraction using the years 117-38 and 161-92.

It should be noted that the Carrawburgh coins are predominantly coins from the Coventina's Well deposit. This is a votive deposit and may attract coins from a larger area than just the nearby fort. In the Well's coin list several of the coins are listed as undifferentiated dupondii/asses. For this study this class is divided into separate denominations on the ratio of the numbers of dupondii to asses in the part of the list belonging to that particular emperor. The garrison of the fort is thought to have been a cohors quingenaria equitata

3 denarii, 1,412 sestertii, 350 dupondii, 503 asses.

Total = 431.1875 denarii.

Potential coin population = 488 × 78 × 42

= 1,598,688 denarii.

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{431,1875}{1,598,688} = 2.6971335 \times 10^{-4}$$

ii). The garrison during the years 141-61.

5 denarii, 648 sestertii, 472 dupondii, 563 asses.

Total = 243.6875 denarii.

$$\text{Expected original population} = \frac{243.6875}{2.6971335 \times 10^{-4}}$$

$$= 903,506 \text{ denarii .}$$

Therefore the approximate number of soldiers in garrison at this time is:

$$\frac{903,506}{(200 \times 21)} \approx 215 \text{ legionaries.}$$

$$\frac{903,506}{(78 \times 21)} \approx 552 \text{ cohors equitata .}$$

$$\frac{903,506}{(70 \times 21)} \approx 615 \text{ auxiliaries.}$$

f) Littlechester.

As at Segontium there is no evidence for auxiliaries at this fort it, is being tested just to make a comparison with Housesteads and to test the methodology.

i). The base fraction using the years 117-38.

Fort and vicus: 1 denarius, 5 sestertii, 3 dupondii, 2 asses.

Total = 2.75 denarii.

Potential coin population = 480 × 70 × 21

= 705,600 denarii.

Therefore the recovered assemblage provides us with a base fraction of:

$$\frac{2.75}{705,600} = 3.8973923 \times 10^{-6}$$

ii). The garrison during the years 141-61.

Fort and vicus: 2 denarii, 10 sestertii, 3 dupondii, 4 asses.

Total = 5.125 denarii.

Expected original population = $\frac{5.125}{3.8973923 \times 10^{-6}}$

= 1,314,982 denarii.

Therefore the approximate number of soldiers in garrison at this time is:

$$\frac{1,314,982}{(200 \times 21)} = 313 \text{ legionaries.}$$

1,314,982 = 895 auxiliaries.
(70 x 21)

Table of results

Site	Legionaries	Cohors equitata	Auxiliaries
Housesteads	445		1271
Vindolanda	339		968
Wallsend	253	650	723
Segontium	118		336
Carrowburgh	215	552	615
Littlechester	313		895

These approximate garrison figures produced by the new method described above have to be examined, taking archaeological evidence and the original base fraction into consideration. The latter is important because if the base fraction is calculated for a wrong garrison number then the results will be consequently distorted. These two factors having been looked into then the results appear to produce relatively accurate results as will be seen below.

Firstly we shall examine the two sites not per lineam valli to show how these figures should be interpreted. At Littlechester the base fraction was calculated using the Hadrianic period for which a garrison of 480 men was suggested. There is no evidence for legionaries at Littlechester at any time and what appears to be happening is a doubling up of the garrison. However this is completely untrue. The very high Antonine figure is produced by using a base fraction when the fort at Littlechester was at a low garrison level or abandoned during

the Hadrianic period. If we recalculate the Antonine garrison using a period when the fort appears to be fully garrisoned (on numismatic grounds), between 81 and 117, the following result appears:

Fort and vicus (81-117): 8 denarii, 8 sestertii, 4 dupondii, 14 asses.

Total = 11.375 denarii.

Potential coin population = $480 \times 70 \times 36$

= 1,209,600 denarii.

This provides us with a base fraction of:

$$\frac{11.375}{1,209,600} = 9.4039352 \times 10^{-6}$$

The number of coins found 141-61 is:

Fort and vicus: 2 denarii, 10 sestertii, 3 dupondii, 4 asses.

Total = 5.125 denarii.

Expected original population = $\frac{5.125}{9.4039352 \times 10^{-6}}$

= 544,985 denarii.

This implies 371 auxiliaries ($544,985 \div (70 \times 21)$). Thus the fort would appear to have been garrisoned at a very low level, if at all, under Hadrian, returning to a fuller occupation level under Antoninus

Pius comparable to Trajanic levels. Littlechester therefore demonstrates that with this method it is preferable, in order to facilitate interpretation, to produce the base factor from a period in which the site was fully occupied i.e. the garrison size and type is known. The remaining sites have all had their base fractions calculated from a period of supposed full occupation.

As at Littlechester there are no inscriptions indicating a legionary garrison during the Antonine Wall period at Segontium. Our calculations show a reduction in garrison from a milliary cohort in the Trajanic period to only 336 in the Antonine period. This fits in very well with what we know of the structural history of the site with the construction of the pallisade across the interior of the fort and the demolition of the two barracks excavated in the south east corner of the praetentura (P.J. Casey pers. comm.). The two barracks were demolished leaving only the centurion's blocks which were themselves later demolished and a large building constructed on the site (120+). The troops from Segontium may have been withdrawn to help form part of the Hadrian's Wall or Antonine Wall garrisons. If the Hadrianic coinage is included in the production of the base figure then the resulting garrison figure for the Antonine Wall period at Segontium is 441 auxiliaries which suggests considerable garrison reduction under Hadrian followed by further reductions under Antoninus Pius. Besides going onto one of the two Walls the Segontium garrison may have been used to govern small fortlets. For example Pen Llystyn was a Trajanic fort holding a milliary cohort or a cohors quingenaria but in the second century (100-30) a fortlet was constructed in the north corner

of the fort (Hogg 1969). Therefore we have a fortlet close to, and connected to Segontium by a road, being garrisoned at a time when the Segontium garrison diminished. Another example of garrison reduction perhaps similar to the situation at Pen Llystyn can be seen at Castel Collen (Nash-Williams and Jarrett 1969, 74-75) where the Trajanic fort, probably housing a cohorta milliaria, was reduced in size by the abandonment of the retentura, perhaps reducing the garrison to a cohorta quingenaria. This reduction in this case was said to be Severan although the evidence for this is not clear.

Having seen that the method works on these two sites we can turn to sites per lineam valli. Housesteads is the easiest to explain. Firstly there is evidence for legionaries on garrison duty and evidence from the other Wall forts suggests that we can consider legionaries in the fort during the Antonine Wall period. Thus the calculations appear to show that a legionary cohort was stationed at Housesteads at this time. Because there are a large number of coins traceable to Housesteads we have a good enough data base to test the fit of our results to our model which can be stated as either a full auxiliary force of 960 men or a reduced garrison of a legionary cohort. Our produced figures are compared with these. A perfect fit is equal to one.

For legionaries $\frac{445}{480} = 0.93$ For auxiliaries $\frac{1271}{960} = 1.32$

Therefore on archaeological and statistical grounds it would seem likely that the Housesteads garrison was a legionary cohort during the Antonine Wall period.

At both Wallsend and Carrawburgh the base fractions have been calculated using a cohors quingenaria equitata because that type of troop is thought to form the garrison at both forts during the years used for the production of the base fraction. At both forts there is no indication of what the Antonine garrison may have been. We can discount auxiliaries because the unit sizes calculated are simply too large for the forts in question. As with Housesteads it may be possible to solve this problem by finding which result, legionary or part-mounted auxiliary, has the closest fit to the expected results. The model for the Antonine garrison we can test these results against is either a full garrison of a legionary cohort, a cohors quingenaria equitata, or half a legionary cohort.

a) Carrawburgh.

For legionaries $\frac{215}{480} = 0.45$ $\frac{215}{240} = 0.90$ For cohors equitata $\frac{552}{488} = 1.13$

b) Wallsend.

For legionaries $\frac{253}{480} = 0.53$ $\frac{253}{240} = 1.05$ For cohors equitata $\frac{650}{488} = 1.33$

The results from Carrawburgh and Wallsend clearly show that the garrison was not a legionary cohort but it is not quite so clear whether half a legionary cohort or a cohors equitata formed the

Antonine garrisons of the forts. However on closer examination the fit is closer to the model at both sites for half a cohort of legionaries than for part-mounted auxiliaries (+0.05 at Wallsend and -0.10 at Carrawburgh, compared to a fit of +0.33 at Wallsend and +0.13 at Carrawburgh for cohortes equitatae. Indeed cavalry or mixed units were required at a number of the Antonine Wall forts including Mumrills, Bearsden, Castlehill and possibly Castlecary (Breeze and Dobson 1987, 107). The actual garrisons at most of the Antonine Wall forts is uncertain.

Vindolanda is thought to have been an auxiliary fort during this period yet the calculated result appears to show 968 auxiliaries. Twice the expected number. It could be suggested that a cohort of legionaries was stationed in the fort at this time but there is no evidence to back up such an explanation. Bidwell has shown that cohort IV Gallorum equitata, recorded on an inscription dated 213 (RIB 1705), was the last garrison of stone fort 1 and formed the garrison of stone fort 2 (built circa 223-25) but that the unit did not arrive until after about 170. He suggested that cohort II Nerviorum formed the Antonine garrison at least after period 1B, circa 163 (Bidwell 1985, 85). However the inscription recording II Nerviorum is undated and is discounted in RIB 1683 as evidence for a garrison at Vindolanda as it is not certain if the altar came from the fort or from a shrine (to Cocidius) outside the fort. There is however the proof of a cohort equitata slightly later in stone fort 1. It would be better therefore to suggest a cohort equitata formed the Antonine Wall period garrison at Vindolanda, which may or which may not be the cohort IV Gallorum. Indeed if Hadrian's Wall was

having its cavalry element removed it would make good military sense to have a new mobile garrison behind the frontier.

The new calculation method for determining garrison sizes has produced some interesting results and has shown what we set out to do, to find the Antonine Wall period garrison of Housesteads. In fact the Antonine period is ideal to use with this method due to little inflation between it and the periods in which the base fractions were calculated. Our findings would appear to suggest that during the Antonine Wall period Housesteads was held by a legionary cohort. As a by-product of using other forts as a comparison and check for the method it would seem that Wallsend and Carrawburgh were both held by half a legionary cohort, Vindolanda was held by a cohort equitata, Littlechester was reoccupied after being abandoned or occupied by few soldiers under Hadrian, and Segontium saw garrison reductions under Hadrian and Antoninus Pius.

ARMY PAY UNDER SEVERUS AND CARACALLA: AND THE PROBLEM OF MILITARY COIN DEPOSITS

It has been known for a long time that army pay was raised by Septimius Severus and later by Caracalla according to the information given to us by Dio (LXXVIII,36.3) and Herodian (III,8.4). The rise implemented by Severus is thought to have occurred in 197 after he had defeated his last rival, Clodius Albinus, rather than during the war of succession. It is not known whether Caracalla implemented his pay rise in 212 on his accession or later in 215. The later date coincides with the introduction of the so-called 'antoninianus', a coin worth two denarii but only containing the silver of one and a half, thus saving the treasury a considerable amount of money in terms of silver bullion. The saving produced would have enabled the army to receive a pay rise. A rise under Commodus (177-92) has been postulated because some legions received the name 'Commodiana' but there is no supporting evidence for this hypothesis (Brunt 1950).

Over the years there has been much debate on auxiliary pay and the way in which it differed from that of the legionary. Several theories have been put forward, all taking different view points. These theories are based on three papyri, Geneva papyri 1 and 4 (e.g Johnson 1936), and Berlin papyrus 6866 (e.g Brunt 1950) and the suggestion by Suetonius (Dom.7.3) that Domitian raised army pay by implementing an extra pay day each year, making four pay days in all. This is contrary to the suggestion of Dio (LXVII,3.5) who indicates that Domitian increased pay

by raising the amount paid on each of the three existing pay days, not introducing a fourth instalment.

Recent attempts to construct basic auxiliary pay are outlined below. The first view was that subscribed to by Johnson (1936, 670-73). He examined the two Geneva papyri. Papyrus 1 being the account of the wages paid to Q. Iulius Proculus and C. Valerius Germanus, and is dated to A.D. 81. Papyrus 4 is the account of [Quadratus(s...)] and dates to A.D. 84. From a study of these two papyri it was inferred that Geneva papyrus 1 refers to an auxiliary's pay even though the name involves the tria nomina of a Roman citizen. Roman citizenship was not made universal until 212 by Caracalla to increase revenue and although there is evidence for citizens serving in auxiliary units it would appear that this was the exception rather than the rule. Thus it is now almost generally accepted that this papyrus refers to legionary pay. Furthermore it was assumed that each account refers to a stipendium paid three times a year and not the four inferred by Suetonius. Thus the annual totals Johnson derives from the two papyri suggests that the wage increase given by Domitian was 300 denarii for legionaries (from Geneva papyrus 4) and 253 denarii for auxiliaries (from Geneva papyrus 1). It should be noted that 253 is an odd number and it is generally believed that pay was usually divisible by twenty-five so that it could be paid out in notional aurei. These rates of pay give a ratio of 5:6 between auxiliary and legionary pay. We can then take this further to suggest that when Johnson calculates that legionary pay was 450 denarii following the rise given by Severus, a basic auxiliary pay of 375 denarii is implied. Following the pay rise given by Caracalla a basic

auxiliary pay of 560 denarii is implied when legionary pay has been calculated to be 675 denarii.

Brunt produces a different ratio between legionary and auxiliary pay. His reconstruction of auxiliary pay involves Berlin papyrus 6866 (Brunt 1950) which appears to be an auxiliary pay account. From this he takes the figure of 84 denarii 15¾ obols to represent an original stipendium of 100 denarii, less an exchange rate. The operation of an exchange rate in changing drachmae into denarii had previously been noticed in the two Geneva papyri. Brunt, like Johnson, takes Dio's three stipendia and thus produces a figure for annual basic pay of 300 denarii. However the Berlin papyrus is usually dated to 192 and thus Brunt's figure gives parity with legionary pay at this time. Because of this Brunt redates the Berlin papyrus to 197 when, after Severus' pay rise, the legionaries received annual pay, he suggests, of 500 denarii, and so providing a ratio of 3:5 between auxiliary and legionary pay. This implies a basic auxiliary pay scale of 180 denarii after the pay rise given by Domitian, 300 denarii after the pay rise given by Severus and 450 denarii after the pay rise given by Caracalla.

The most recent attempt to reconstruct auxiliary pay has been undertaken by M. Spiedel (1973). He, like Johnson, believes that Geneva papyrus 1 refers to auxiliary pay which, as already indicated, is unlikely. Taking Berlin papyrus 6866 to date to 192 and the amount of stipendium it refers to, 84 denarii 15¾ obols, to be a quarter of the soldier's annual pay, following Suetonius' indication of four stipendia a year. From this he concludes a ratio between auxiliary and legionary

pay of 5:6. This implies auxiliary pay of of 250 denarii after the pay rise of Domitian, 375 denarii after the pay rise of Severus, and about 560 denarii after the pay rise of Caracalla. He further suggests that Geneva papyrus 1 and the Berlin papyrus may refer to equites cohortis which would provide a ratio between auxiliaries and legionaries of 2:3 giving annual pay under Domitian of 200 denarii, raised to 300 denarii under Severus and about 450 denarii following Caracalla's pay rise.

It is Watson who has calculated the most universally accepted view on auxiliary pay and it is his view which is endorsed in this thesis. He examined all the pre-existing accounts of auxiliary pay namely Domaszewski, Johnson, Forni, Passerini and Brunt; and reinterpreted the Berlin papyrus and the two Geneva papyri. Watson noticed that the normal figure of depositum is 100 denarii and viaticum of 75 denarii. In a few instances the depositum is a higher sum but the viaticum is invariably the same and he wondered why the stipendium was affected by the exchange rate but not the depositum or viaticum. He concludes that the 84 denarii 15¼ obols of the Berlin papyrus (here dated 192) represents an annual pay of 100 denarii minus 15 denarii 12¼ obols perhaps deducted for the upkeep of equipment. Watson suggests that the viaticum of 75 denarii represents a bonus on enlistment earmarked as a compulsory saving. The depositum of 100 denarii perhaps representing half a donative that was given on the accession of Severus or Pescennius Niger. Watson's Theory therefore gives a ratio of 1:3 between auxiliary and legionary pay. Namely 100 denarii after the Domitianic rise, 150 denarii after the rise given by Severus and 225 after the rise given by Caracalla (Watson 1959).

Taking this further Watson constructed a table for pay according to rank and the type of auxiliary unit. Since we know from Hadrian's allocutio to the auxiliary troops at Lambasesis, recorded by Tacitus, that alares were better paid than cohortales. We also know that that it was a promotion for a legionary to be appointed a duplicarius alae, the rank below this presumably receiving the same wage as a legionary. The equites of a cohort would have received more than the pedites but less than the alares, probably receiving the same pay as the sesquiplicarii pedites. The table Watson constructed is shown below expanded to include legionaries and the pay rises of Severus and Caracalla. It should be noted that the figures added to Watson's table are not always divisible by twenty-five and therefore if Watson's figures are correct not all our figures are strictly accurate. The numbers refer to the annual wage of a soldier in denarii.

Period and rates of pay	Legionaries	Auxiliary Cavalry	Part Mounted Auxiliaries	Auxiliary Infantry
Claudius-Domitian				
Duplicarii	450	-	-	-
Sesquiplicarii	338	-	-	-
Basic	225	-	-	-
Domitian-Severus				
Duplicarii	600	400	300	200
Sesquiplicarii	450	300	225	150
Basic	300	200	150	100
Severus-Caracalla				
Duplicarii	900	600	400	300
Sesquiplicarii	675	450	300	225
Basic	450	300	200	150
Caracalla				
Duplicarii	1350	800	600	450
Sesquiplicarii	1013	600	450	338
Basic	675	400	300	225

Because the Housesteads coin assemblage ultimately derives from the pay of the garrison force in the fort it is thought that, besides reflecting the size and type of garrison, it must also reflect rises in army pay. More pay implies more coin, or total value of coin, in circulation and hence greater coin loss in terms of number or total value. As it is Watson's calculations that have received most general acceptance it is these that are used and tested here. The methodology is the same as that developed in the preceding section. The same base fractions are used. The calculations used in producing the base fractions did not take account of differing pay scales for different ranks because the number of soldiers in each of the scales is unknown. However if we assume that the pay of all the ranks is proportionately increased by the same amount after each pay rise such a problem is of no consequence.

In calculating the expected original populations two sets of ranges are used: 196-211, 212-35 and 196-214, 215-35. This is because although the pay rise of Septimius Severus is fairly well established as 197, that of Caracalla may be either in 212 or 215, as already described, and it is hoped that a comparison of the two sets of date ranges may shed light onto which of these dates is more appropriate.

From the table of coins found at Housesteads during these years it will be noticed that the date range of the coins does not always fit into the range being examined. Therefore to provide as little bias as possible only the portion of each coin that fits in to the range is included. This produces less bias than if the coin is not recorded because most of its date range is outside the dates of the range under study. For

example if we have a notional denarius of date range 193-99 it partly fits into the earlier of the test ranges which are 196-211 or 196-214. It will be noticed that the coin could either be a maximum of three years outside the range under test, or a maximum of three years into the test range i.e it has a 50:50 chance of being in the test range consequently a score of 0.5 would be recorded. The same thing happens for coins that overlap the earlier and later test ranges, although with these the proportion of each coin allocated to each range depends on which set of ranges is being used. Vindolanda, Wallsend and Segontium are used to provide a control against which the Housesteads results can be compared. Copies are not included because counterfeit denarii are likely to have circulated considerably later than the coins they represent, possibly in the middle of the third century when such coins were running at a premium and furthermore are unlikely to have formed part of a soldiers pay.

The Calculations

a) Housesteads

Year	No. of denarii	Proportion in each range			
		196-211	212-35	196-214	215-35
193-211	3.5	2.92	-	2.92	-
194-98	1	0.5	-	0.5	-
196-211	30	30	-	30	-
198-217	1	0.68	0.32	0.9	0.1
209-12	2	1.33	0.67	2	-
211-17	2	0.33	1.67	1.33	0.67
212-15	1	-	1	1	-
215-35	37.25	-	37.25	-	37.25
TOTALS	76.75	35.76	40.91	38.65	38.02

In the above table the proportion of the number of coins in denarii recovered from Housesteads in each date range under test has been counted and and totalled. From these totals we can calculate the probable original population in denarii using the base fraction for the potential coin population calculated in the previous section. Because we know the number of years in each test range and the probable number of troops in garrison, the possible amount of denarii paid to each man each year, minus approximately one third for stoppages on clothes, food etc., can be calculated (see p. 61 for explanation). The calculation can be expressed by the following formula which is simply a reorganisation of the formula used in the previous section when calculating garrison numbers.

$$\text{Annual pay per man} = \frac{\text{No. of recovered denarii}}{\text{Base fraction}} \div \text{No. of years} \div \text{No. of men}$$

$$\begin{aligned} \underline{196-211} &= \frac{35.76}{9.3005952 \times 10^{-6}} \div 15 \div 960 \\ &= 267 \text{ denarii.} \end{aligned}$$

$$\begin{aligned} \underline{212-35} &= \frac{40.91}{9.3005952 \times 10^{-6}} \div 23 \div 960 \\ &= 199 \text{ denarii.} \end{aligned}$$

$$\begin{aligned} \underline{196-214} &= \frac{38.65}{9.3005952 \times 10^{-6}} \div 18 \div 960 \\ &= 240 \text{ denarii.} \end{aligned}$$

$$\begin{aligned} \underline{215-35} &= \frac{38.02}{9.3005952 \times 10^{-6}} \div 20 \div 960 \end{aligned}$$

= 213 denarii.

b) Vindolanda

Year	No. of denarii	Proportion in each range			
		196-211	212-35	196-214	215-35
193-210	2	1.65	-	1.65	-
193-211	12	10	-	10	-
194-211	1	0.88	-	0.88	-
195-96	2	1	-	1	-
196-211	37.25	37.25	-	37.25	-
202-17	1	0.6	0.4	0.87	0.13
212	1	-	1	1	-
211-17	1	0.17	0.83	0.67	0.33
211-18	1	0.14	0.86	0.57	0.43
215-35	51.31	-	51.31	-	51.31
TOTALS	109.56	51.69	54.40	53.89	52.20

The calculation is exactly the same as for Housesteads but the garrison force at Vindolanda is only 488 (360 infantry and 128 cavalry) strong, being almost certainly formed by the cohors IV Gallorum equitata.

Annual pay per man = $\frac{\text{No. of recovered denarii}}{\text{Base fraction}} \div \text{No. of years} \div \text{No. of men}$

196-211

$$= \frac{51.69}{1.9763765 \times 10^{-5}} \div 15 \div 488$$

$$= 357 \text{ denarii .}$$

212-35

$$= \frac{54.40}{1.9763765 \times 10^{-5}} \div 23 \div 488$$

$$= 245 \text{ denarii .}$$

196-214

$$= \frac{53.89}{1.9763765 \times 10^{-5}} \div 18 \div 488$$

= 315 denarii.

215-35

$$= \frac{52.20}{1.9763765 \times 10^{-5}} \div 20 \div 488$$

= 271 denarii.

c) Wallsend

Year	No. of denarii	Proportion in each range			
		196-211	212-35	196-214	215-35
194-97	1	0.5	-	0.5	-
196-211	7	7	-	7	-
212-35	6	-	6	-	6
TOTALS	14	7.5	6	7.5	6

Like Vindolanda, Wallsend contained a similar mixed unit of auxiliary infantry and cavalry, in this case probably cohors IV Lingonum equitata attested on three late, but undated, inscriptions from the fort (RIB 1299-1301).

Annual pay per man = $\frac{\text{No. of recovered denarii}}{\text{Base fraction}} \div \text{No. of years} \div \text{No. of men}$

196-211

$$= \frac{7.5}{3.7006579 \times 10^{-6}} \div 15 \div 488$$

= 277 denarii.

212-35

$$= \frac{6}{3.7006579 \times 10^{-6}} \div 23 \div 488$$

= 145 denarii.

196-214

$$= \frac{7.5}{3.7006579 \times 10^{-6}} \div 18 \div 488$$

$$= 231 \text{ denarii.}$$

215-35

$$= \frac{6}{3.7006579 \times 10^{-6}} \div 20 \div 488$$

$$= 166 \text{ denarii.}$$

d) Segontium

Year	No. of denarii	Proportion in each range			
		196-211	212-35	196-214	215-35
196-211	8	8	-	8	-
212-35	7.25	-	7.25	-	7.25
TOTALS	15.25	8	7.25	8	7.25

The garrison during the Severan period at Segontium was the cohort of Sunici, assumed to be nominally 500 strong, who are recorded on an inscription dated 198-209 recording the reconstruction of the aqueducts.

Annual pay per man = $\frac{\text{No. of recovered denarii}}{\text{Base fraction}} \div \text{No. of years} \div \text{No. of men}$

196-211

$$= \frac{8}{4.0457589 \times 10^{-6}} \div 15 \div 480$$

$$= 275 \text{ denarii.}$$

212-35

$$= \frac{7.25}{4.0457589 \times 10^{-6}} \div 23 \div 480$$

$$= 162 \text{ denarii.}$$

196-214

$$= \frac{8}{4.0457589 \times 10^{-6}} \div 18 \div 480$$

= 229 denarii.

215-35

$$= \frac{7.25}{4.0457589 \times 10^{-6}} \div 20 \div 480$$

= 187 denarii.

All the above results are tabulated below.

Site	Date Range			
	196-211	212-35	196-214	215-35
Housesteads	267	199	240	213
Vindolanda	357	245	310	271
Wallsend	277	145	231	166
Segontium	275	162	229	187

A first look at the above table and the table of Watson's results seems to show large differences between the two perhaps indicating that the methodology used in the calculation is wrong since the number of denarii is larger than expected in the earlier of both sets of dates and pay seems to decrease in 212 or 215 rather than increase. However a closer examination of the figures shows that this is not the case. The fact that all the figures closely parallel the behaviour of the Housesteads figures shows that the general difference between our results and the expected picture is due to a change in the use and availability of the coinage. Firstly the abundance of coinage of Severus at sites fully occupied during this period suggests that prices were high in the province at this time and so coin would be worth intrinsically less, the

period also saw the change from ~~aes~~ to silver coinage (fig. 7) and so any coin losses would be in higher value denominations. Military matters are, however, more important. As noted above the soldiers had been given a large pay rise at the beginning of the period. Furthermore more money may be expected to be circulating in the province (at this time because of Severus' northern military campaigns. Indeed Dio (LXXVII. 11, 2) comments on the amount of money drawn into Britain under Severus for his campaigns: 'He (Severus) took along with him an immense amount of money'. The wide reaching effects of the Severan campaigns can be seen fossilised in the archaeological record in the form of building inscriptions. In the north the hinterland forts seem to have received attention under the governor Virius Lupus in 197 and 198 who is recorded on inscriptions from Brough under Stainmore, Ilkley and Bowes. Bainbridge has produced an inscription, dated 205, recording barrack-building under C. Valerius Pudens. Attention turned to the Wall in 205-07 under the governorship of L. Alfenus Senecio. He restored the granaries at Birdoswald and other buildings at Chesters and Housesteads. At Benwell his name is recorded on an altar dedicated to Victory and at Risingham he restored a gate and the fort walls (RIB 1234). Senecio is further credited at Bainbridge, Bowes and Greta Bridge (Frere 1974, 197-8). As a result the rebuilding programme in these years appears to have been very comprehensive. According to Herodian (III.14,1) Senecio wrote to Severus reporting that the military situation was still serious and asked either for reinforcements or an imperial expedition led by Severus himself. Senecio got both, and Severus arrived with legionary vexillations, his wife and two sons. Preparations were made for an invasion of Scotland, no doubt involving considerable capital

investment, at Corbridge a granary appears to have been built, while at South Shields twenty new granaries were constructed and other buildings were modified to produce a grand total of twenty-four no doubt to supply the campaign by sea. According to Dio and Herodian the campaign was first directed against the Caledonians, probably in 208-09, and the erand against the Maeatae in 210. The campaign would appear to have wound up shortly after the death of Severus in 211. Thus we have Dio's reference to quantities of money brought into the province, a military campaign, a pay rise and high prices contributing to our higher than expected figures. Furthermore Brunt (1950) would suggest that on Severus' victory he gave a large donative to the army, no doubt to pacify the soldiers, if this can be inferred from a passage in the Historia Augusta (S.H.A. Sev.12,2 quoted in Brunt 1950) which reads 'he gave the troops more money than any other emperor'. Brunt believes that this refers to a donative and not to the pay rise.

An alternative explanation involves the actual use of the coins. We have noticed from an examination of our results that the Severan figures are consistently high while the results for the later date ranges are consistently low. Our alternative explanation is that such a picture could be produced by the emperors of the later ranges paying their troops in Severan coinage i.e. our calculated picture is complicated by the residuality of coins. We can test this hypothesis by a calculation using the Housesteads results:

Average pay 196-235 =

196-211 @ Severan pay scale + 212-35 @ Caracalla pay scale
No. of years 196-235

Using Watson's pay figures (one-third removed to provide parity with calculated figures (see below)):

$$\frac{(100 \times 15) + (150 \times 23)}{38} = 130 \text{ denarii}$$

Using our calculated pay figures for Housesteads:

$$\frac{(267 \times 15) + (199 \times 23)}{38} = 225 \text{ denarii}$$

From this it would appear that although residuality is undoubtedly a problem it cannot be proved by the above calculation. The calculation does, however, show that there is a considerably higher total value of coin on the site at this time than would be expected.

Reasons for the high Severan figure having been set out above we can now examine the calculated figures in greater detail. Our results are compared with the expected results below. Because our calculations involved using pay figures with one third deducted for various stoppages we would similarly expect our results to be one third less than the expected figures for pay. To allow for this one third is deducted from the expected results (the figure for annual pay) to make the two comparable. For example if we find 10 denarii in 20 years with a garrison of 480 auxiliaries each being paid 100 denarii giving a residual amount of 70 denarii then a base fraction of 1.48809×10^{-5} is produced. If the period we want to use this on to find out what the pay figure was, was also 20 years long, the garrison still consisted of 480 men and our coin count was also 10 denarii then our equation is reversed i.e $\text{pay} = 10 \text{ denarii} \div (1.48809 \times 10^{-5}) \div (480 \times 20) = 70 \text{ denarii}$.

Thus our results are also one third less. During this period the Housesteads garrison was formed by the cohors I Tungrorum (p. 30) and Segontium by the cohors Suniciorum (Boon 1974). Both of these units were of auxiliary infantry for which the expected residual pay figures (from the table on p. 82 minus one third) are 100 denarii after the pay rise given by Severus and 150 denarii after the pay rise given by Caracalla. Wallsend and Vindolanda were both garrisoned by auxiliary units of mixed infantry and cavalry. Vindolanda by the cohors IV Gallorum equitata (RIB 1687 and 1706) and Wallsend by the cohors IV Lingonum equitata (RIB 1299-1301). Their residual pay is more difficult to calculate after Severus it was 115 denarii $([(130 \times 128) + (360 \times 100)] \div 488)$, where 128 is the number of cavalry in a unit of this type and 360 the number of infantry giving a total of 488 men) and 163 denarii after Caracalla $([(200 \times 128) + (360 \times 150)] \div 488)$. The figures for basic pay are used in the comparison because these soldiers would have formed the majority of the garrison and the number of soldier on other pay scales is not known. Because all calculations have been made using the figures for basic pay the variation according to pay scale is not important as long as the number of soldiers on each scale does not alter dramatically between the base fraction and the test period. A perfect fit, i.e the calculated results are the same as the expected results, is represented by a ratio equal to one.

Site	196-211	212-35	196-214	215-35
Housesteads	$\frac{267}{100} = 2.7$	$\frac{199}{150} = 1.3$	$\frac{240}{100} = 2.4$	$\frac{213}{150} = 1.4$
Vindolanda	$\frac{357}{115} = 3.1$	$\frac{245}{163} = 1.5$	$\frac{310}{115} = 2.7$	$\frac{271}{163} = 1.6$
Wallsend	$\frac{277}{115} = 2.4$	$\frac{145}{163} = 0.9$	$\frac{231}{115} = 2.0$	$\frac{166}{163} = 1.0$
Segontium	$\frac{275}{100} = 2.8$	$\frac{162}{150} = 1.1$	$\frac{229}{100} = 2.3$	$\frac{187}{150} = 1.2$

This table proves most interesting. The first point to be brought out is that in the earlier of the two test ranges, 196-211 and 196-214, not only do all the forts show the much higher figures as described above, but that these figures are all similarly between two and a half and three times higher. This indicates that it was the same factors that were increasing the amount of coinage at Housesteads and the other sites studied which must surely reflect Severus' high military expenditure. Away from the Wall Segontium, after garrison reductions in the previous century, is now back to full garrison strength and appears to remain like this throughout the earlier test ranges and in the later pair when the calculated results are very close to our expected results. Perhaps the garrison was brought back to full strength by the arrival of the cohors Suniciorum.

The best picture of the later two ranges is provided by the years 212-35 (why these years are considered to be preferable to 215-35 will be described below). Now the results clearly define the four forts into two classes, those in which the calculated results almost match the expected results, and those in which the calculated results are considerably

larger than the expected results. The forts in the first class are Segontium and Wallsend. Segontium presumably continuing as under Severus with the cohors Suniciorum, similarly Wallsend after the military activity of the Severan period returned to normal operations with a garrison force of cohors IV Lingonum equitata.

Housesteads and Vindolanda form an interesting picture especially if other Wall forts had returned to normal routines. What the is the explanation for the high figures at these two forts? Although at variance ^{with} to Wallsend and Segontium they produce similar results. The problem is easily explained by the presence of vexillations from other units raising the garrison numbers above that normally expected. There is evidence of such extra forces at both forts. At Housesteads two irregular units are recorded (or one unit with two names) the numerus Hnaudifridi (RIB 1576) and the cuneus Erisiorum (RIB 1594). The cuneus was called the cuneus Erisiorum of Vercovicium styled Severus Alexander's in RIB 1594 (cuneus Erisiorum Ver(covicianorum) Se(ve)r(iani) Alexandriani), which suggests that they were supplementing the cohors I Tungrorum in the reign of Severus Alexander (222-35). Thus their presence would clearly appear to fall into the later of the two pairs of each study range. We then have to find accomodation for these extra troops. Inside the fort the rampart back buildings seem to have been constructed at this time. The pottery from the building west of the interval tower on the south wall of the fort is, J.P Gillam suggests, just the kind of group he would suggest to be sealed by a Severan building (p. 20). The buildings at the back of the north rampart were similarly dated by Charles Daniels (Daniels 1980). These buildings could

provide considerable extra accommodation. There is also the possibility that the terraces outside the fort, if not part of the vicus, could have had buildings constructed on them to provide accommodation for extra soldiers. It has been thought that the terraces were used for agriculture, but A.Hartley (see p. 114) has shown from a magnetic susceptibility survey of the area that the readings from the terraces were too high for agriculture and suggests that hearths and structures provided the high readings. He notes the remains of retaining walls have been noticed on the terraces and postulates that the terraces were constructed as house platforms for wooden buildings.

At Vindolanda there are two inscriptions to indicate that the garrison of cohort IV Gallorum equitata was supplemented by vexillations. RIB 1687 is associated with the praetorium of Stone Fort 2 and is thus dated circa 223-25. The text of the inscription is: 'I(ovi) O(ptimo) M(aximo) et Genio Ve[...] Caecil[...] I OP CELER [...]'. Davies thought (Bidwell 1985, 85) that the 'Ve[...]' might be the beginning of the word 'vexillatio' followed by the badly preserved traces of an 'X'. The remainder of the line may have given the composition of the vexillation or the clause 'q(uorum) or c(uius) c(uram) a(git)'. In the last line Davies was inclined to interpret the uprights following the stop after CELER as the centurial sign and p(rae) p(ositus). The last two strokes in the line he thought could be an 'H' preceded by two rounded letters perhaps forming coh. Therefore Davies reading would suggest that the IV Gallorum shared garrison duties with a vexillation under the charge of a legionary centurion fulfilling the duties of a praepositus. The other inscription is RIB 1706, a gate inscription dated circa 223-25, which

Richmond believed had the name of a legionary detachment preceding the first line 'coh(ors IIII) Gallor(um)'. Three further inscriptions appear to record legionary praepositi, these are RIB 1684, 1710 and 2062. Thus there appears to be epigraphic evidence for vexillations at Vindolanda at least during the reign of Severus Alexander. As far as accomodation is concerned a completely new stone fort was constructed under Alexander. While Stone Fort 1 had several circular buildings constructed by the north rampart, circa 205-07, again suggesting the requirement of extra accommodation. There is then both archaeological and epigraphic evidence for vexillations at both Housesteads and Vindolanda in the period circa 212-35 to back the evidence provided by our calculations.

The final question we posed was did Caracalla introduce his pay rise in 212 when he became sole emperor or in 215 when he introduced the antoninianus? It is postulated on the grounds of our calculations that this was in 212. The reasoning behind this is that when we examine the table comparing the calculated results to the expected results the fit is closer in the earlier of the two later ranges i.e 212-35 rather than 215-35. Indeed it is hardly surprising to expect Caracalla to placate the soldiers on becoming sole emperor. Indeed there are a number of inscriptions set up in northern England in 213 declaring loyalty to Caracalla in a rather uniform manner suggesting widespread insubordination in the preceding year, 212. The introduction of the antoninianus can then be seen not as a cause of the pay rise, providing the state with extra cash to enable it to afford a rise, but as a result the pay rise producing a deficit in the state treasuries which had to be made up.

In this section the new calculating method has shown that although there is more than the expected value of coinage at Housesteads under Severus it is no higher than should be expected on a military site at this time due to the high military expenditure of Septimius Severus. However in the following period, after a pay rise in 212, the value of the Housesteads coins is higher than expected due the presence of the numerus Hnaudifridi and the cuneus Frisiorum.

WHERE HAS ALL THE MONEY GONE?

From a reading of the preceding three sections it will be realised that the recovered sample of coinage is very small indeed when compared with the original population paid to the soldiers. We have shown that an auxiliary trooper in the second century was paid one hundred denarii a year. From this one-third was deducted for stoppages, which included weapons, food, clothes and the camp saturnalia leaving about seventy denarii in the purse of each soldier. We calculated, using the reigns of Hadrian and Marcus Aurelius, that in fifty-two years the pay of the Housesteads garrison, after stoppages, should have amounted to at least 3,494,400 denarii. Of this only 33,505 denarii have been recovered. This is 9.3005952×10^{-6} of the potential population. Considering the extent of the excavation at Housesteads this is a very small quantity indeed compared with the original population. In the rest of this section we will be discussing what the soldiers may have done with their money.

It would appear that auxiliary soldiers spent most of their pay. The only document to give a specific figure for auxiliary pay is Berlin papyrus 6866 but unlike Geneva papyrus 1, which is a legionary pay sheet, gives few details of expenditure. The Berlin papyrus would appear to suggest that in 192/3 of the 100 denarii paid to an auxiliary soldier 15 denarii 12¼ obols was perhaps applied to the upkeep of arms and equipment, a small amount was levied for regimental purposes (about 5 denarii, while the rest, 79 denarii 15¼ obols, was taken in cash by the men concerned. This is a very large proportion of their total pay and could be explained by the fact that the document refers to soldiers, not

stationed at a camp, but dispersed in various detachments throughout Lower Egypt. Their expenses would therefore be relatively high but it is likely that accomodation would be provided and food would have to be paid for in any case, and so such extra expenses would not be alot larger than normal expenditure (Watson 1959). The auxiliaries, therefore, would be receiving a wage on which a reasonable life was possible but saving was not. The auxiliary soldier did, however, have some savings recorded on Berlin papyrus 6866. These were compulsory savings and appear to be made up of 75 denarii given to soldiers as a bonus on enlistment (viaticum) and 100 denarii (depositum) probably representing the compulsory saving of half a donative, perhaps in this case given on the accession of Severus or Pescennius Niger (Watson 1959). Thus the auxiliary soldier was much worse off than a legionary who, it should be noted, also received donatives and a bonus on enlistment. From an analysis of Geneva papyri 1 and 4 (dated 81 and 84 respectively) it would appear that a legionary received 75 denarii each pay day, 62 of which were retained to cover various debts and the balance was credited to his balance, he then had 13 denarii spending money after each pay day, i.e. an annual pocket money of 52 denarii after the Domitianic pay rise. The legionary soldier was therefore, unlike the poorer auxiliary, able to make considerable savings (Watson 1969, 107). This is summarised by Watson's calculations (Watson 1956, 1959) which show that auxiliary soldiers were consistently paid one third of that paid to a legionary during the period of the principate (p. 82)

We can compare an auxiliary soldier's pay to some known commodity prices to get a picture of his spending power. If an auxiliary soldier had been required to buy corn on his pay (this commodity was in fact supplied to him) he could only just afford a small amount as the second century price for this in Rome appears to have been around four sestertii per modius (two gallons). If his residual pay was 70 denarii then he could spend all his pay just purchasing a third of a gallon of corn a day. Above subsistence level, the conventional price for an iugera (240 x 120 feet) of unimproved land in Italy was 1,000 sestertii (250 denarii) while the average burial cost of an auxiliary soldier in Italy could be as much as 2,000 sestertii (500 denarii), as for example in the case of C. Surenus Seneca miles cohortis VII civium Romanum (Duncan-Jones 1974, 144-45 and 170). The annual wage of the auxiliary soldier appears very small against such prices, but few would necessarily devote their income to their burial to judge from the evidence of interment yielded by archaeology in Britain..

Besides the compulsory deductions the soldier at Housesteads would also purchase other necessary items and luxury goods. It is certain that soldiers did make purchases from the variety of goods found in forts and the mercantile settlements often associated with them. Written sources also show that soldiers spent some of their money. In the preamble to his edict on maximum prices Diocletian states that 'sometimes in a single retail sale a soldier is stripped of his donative and pay'. While Iulius Appolinarius in a letter written to his father (in 107) asks for linen and states that merchants come to the fort everyday (Breeze 1984).



The close relationship between fort and vicus in the frontier area is also testament to the spending power of the soldiers.

Pottery would have been supplied in quantity to the soldiers of the garrison as is shown by the volume of sherds recovered from forts. This item has also been more intensively studied than other supplied item. Soldiers on the move do not appear to have carried pottery preferring instead the more robust metal mess tins depicted on Trajan's column. This is also shown by the lack of pottery from marching camps. It was only when a garrison fort was established that attention was turned to the supply of pottery.

It is not easy to determine the relationship between the scale of goods supplied to the army and those which the soldier acquired by and for himself. Presumably the soldier took what the army gave him, especially when the cost was automatically deducted from his salary. The request of one soldier to his father for clothing and equipment to avoid having to pay for new ones implies that all deductions were not necessarily automatic (Breeze 1984), and at other times soldiers would have supplemented their army issue with privately purchased goods.

The variety of pottery on the northern frontier shows clearly that the army drew its supplies of pottery from many sources. This indicates that although a unit may have sometimes purchased directly from a pottery they more usually purchased from merchants,

The army and state relied heavily upon independent merchants and did everything to enable them to operate freely. Although the army did not usually supply pottery to the troops it had nevertheless to ensure that it was available. Good profits for negotiatores were probably the best incentive for the creation of plentiful supplies (Greene 1979).

Pottery studies clearly show that the supply of this item, at least, to garrisons was not centralised and which pottery supplied which fort would appear to depend on the cost and the quality of the product. A good example of this is black-burnished ware which, although manufactured in Dorset, dominated the northern pottery market in the second century. During the occupation of the Antonine Wall black-burnished ware radiates out from the Firth of Forth. Suggesting that merchants sailed up the Forth, by-passing the Tyne, and then sold their wares by private marketing rather than bulk purchasing on the part of the army (Breeze 1977). Yet, however popular black-burnished ware was, it ceased to be delivered to the north of England in the third quarter of the fourth century as a direct result of competition from Huntcliff and Crambeck wares in particular. Because although technologically retrograde these wares were cheaper to produce and also cheaper to distribute to the north (Gillam 1974).

When the merchandise was brought to the fort by traders not everyone was able to afford the prices of the quality objects. This is shown by studies of samian, a quality table ware which had to be shipped from the Rhineland. At Bearsden Breeze (1977) analysed the distribution of 1,860 sherds of coarse pottery which did not reveal any discernable pattern,

being spread randomly about the fort. However the distribution of the 40 sherds of samian showed that it was mainly only officers who used samian. The sherds came predominantly from the centurion's quarters and the commanding officer's house. The fact that samian sherds also turn up in turrets, unlikely to have housed officers, indicates that it was not only officers who were supplied with samian but that only officers could usually afford the prices charged by merchants. That samian and sometimes also less fine wares belonged to individuals in the fort is depicted by names of the owners often scratched onto the pottery.

From this look at the pottery it would seem that although units may have bought pottery, it was normally individual soldiers who made most of the pottery purchases but only officers could afford the best table ware. Perhaps essential cooking equipment was provided by the unit, bulk buying from merchants, and the cost deducted from the soldiers pay, and the soldier bought extra pottery himself. Whatever the method the end result is the same; less money in the soldiers purse at the end of the day.

The study of pottery further shows that the purchasing power of the standing army on the Wall was enormous and could exert a strong magnetic influence on merchants and entrepreneurs keen to tap this source of wealth. These people were also prepared to travel considerable distances. In Gaul epigraphic evidence suggests a strong link between entrepreneurial activity and the military presence. A number of traders in the Rhineland, who traded with Britain, can be firmly associated with military supply lines as their inscriptions from the Domburg, Cologne,

and Mainz show (Middleton 1979). A British example may be provided by Antonianus who dedicated an altar (RIB 2059) at Bowness on Solway, again firmly in the military zone, prior to setting out on a (commercial?) venture. Much small-scale activity was undoubtedly conducted on an orderly basis between regular suppliers and markets, but the risks and capital investment involved in long distance trade brought speculators into the field, whose motives may have been short term, the rapid movement of saleable cargoes to profitable markets on an irregular basis. Good profits would presumably lead to repetitions of successful enterprises and the large standing Wall army would tend to formalise such activities.

Such a situation is fossilised by the distribution of the various types of pottery described. But pottery was not the only product made available to the soldier. There was a variety of other mass produced and prestigious items for them to buy. The government promoted such trade as part of its struggle to get the precious metal coinage paid to the soldiers back to the central treasuries.

The variety of goods, besides pottery, sold to soldiers is well represented at Housesteads and the other Wall forts. High expenditure is represented by the finds of jewellery. Housesteads has produced a variety of this type of object. Two gold rings have been found. One contains a blue stone intaglio of a man holding a spear (Bruce 1867, 200). Unfortunately this item is now lost. The other gold ring holds a garnet intaglio depicting a theatrical mask. It was found in the latrine drain of the commandant's house (Charlesworth 1969). Presumably this

item belonged to the commander, since being of equestrian status he was entitled to wear a gold ring. The other gold objects are a gold pendant earring consisting of two acanthus leaves and two S-shaped spirals hanging from a hook, this too is now lost (Bruce 1867, 200), and a gold ligula from the well under Chapel Hill (Birley R. 1962). A jasper intaglio of Silvanus and a blue glass intaglio of Victory, a jet ring with an oval bezel and an incomplete silver brooch formed from three trumpets have been found (Charlesworth 1961) along with several bronze rings and a gilt bronze disc brooch with a glass boss (Birley E. and Charlton 1934).

Along with these valuable objects should be seen the quantity of mass produced objects from the site which include numerous types of fibulae and other copper alloy brooches, spoons, spatulas, studs, seal boxes, and other attachments, as well as iron rings, keys, shears, knives and chapes, glass beads and vessels, and jet spindle whorls. All of which must have been purchased by individual soldiers.

The kind of wealth that soldiers may expend on display is depicted by the impressive finds from Great Chesters. Here the west guard chamber of the south gate yielded a rich hoard of fibulae (Gibson 1903). These finds included a silver fibula, 12.7 cm in length, a gold plated fibula 10.2 cm in length, an enamelled brooch shaped as a hare, a silver collar with pendant, having a diameter of 11.7 cm and a width of 3.4 cm, two silver rings, and a bronze ring with a Gnostic gem. Other prestigious

objects from Great Chesters include a bronze figure of Mercury and a gold earring.

The Backworth hoard, now housed in the British Museum, contains four gold rings, a silver ring, two gold chains, a gold bracelet of hollow gold beads, and two identical silver trumpet brooches (Charlesworth 1961).

Although both Backworth and Great Chesters objects are principally composed of hoard items they do indicate the kind of expensive jewellery that soldiers had available to them to purchase alongside the copper alloy and other mass produced objects.

When considering all the above objects that have been found indicating the sort of objects the Housesteads garrison had available to it to buy we must not forget the objects that are, except in special conditions, invisible in the archaeological record. Such artefacts include various items of clothing, extra items of food, and beverages such as wine and beer whose presence can only be inferred. The discovery of the Vindolanda writing tablets has provided some interesting documentary evidence of some of these illusive items and indicates the demand for them from soldiers on the northern frontier. They illustrate the range of foodstuffs in use in forts of the region: Celtic beer, vintage wine, sour wine, fish-sauce, spices and a variety of meat including roe-deer and venison. One private letter refers to a gift of fifty oysters sent to a soldier in the fort. While another private letter records the despatch of various items of clothing: socks, sandals and underpants to

a soldier in the fort (Bowman 1983). Both these letters indicate some of the commodities a soldier might be prepared to buy to supplement his official issue of food and clothing. Prices for such objects are not certain but Cato (*de Agric.* 59) boasting what little money he spent claims that his suit (toga, tunic and shoes) never cost over 100 denarii a year. While Duncan-Jones (1974) suggests (after Columella) that wine may have had a wholesale price of around 15 sestertii per amphora.

It is often assumed that merchants who sell all these items visited the forts frequently and set up stalls in the fort's accompanying vicus or held permanent shops or taverns in the vicus. So was this the function of the vicus? If the vici on the northern frontier were full of shops, taverns and brothels it is a most evocative and obvious indication of the soldiers purchasing ability. This is especially the case at Housesteads as the fort was in the centre of the northern standing army and is near the Knag Burn gateway through the Wall, it also had a large garrison of 960 regularly paid men.

It has long been recognised that merchants and natives were encouraged to trade with soldiers. Greene (1979) has suggested that an interned rectangular structure at Usk represents an area where merchandise could be procured from what might be termed licensed merchants of civilian status at an early stage after the invasion of an area. Early vici in newly conquered areas also seem to have received official recognition and protection. For example the first vicus at Vindolanda was protected by a rampart while the vicus at Melandra, near Glossop, had a rampart with an interned clavicula entrance (Jones G. 1984). Outside many forts

are the enigmatic structures known as 'mansiones'. Jones believes that since these are outside forts they are unlikely to have been bases for the imperial post and instead suggests that they are small versions of the fora found in towns. For example he compares the mansiones at Old Carlisle and Buckton to the Caesarean market place at Corinth and the forum at Sabratha (Jones G. 1984).

It is possible that such structures represent a formalized attempt at encouraging trade. A further example of this is the widening of the road from the fort at Newton Kyme through the vicus to about 40 feet where we would expect shops to be vieing for the best positions. Jones would suggest that this was an official measure reserving an open space for the setting up of market stalls. Other forts where this can be observed are Caerhun and Frenchfield (Jones G. 1984). A possible market place could exist at Housesteads between blocks I, II, III, V, XIV and XI (fig. 2).

At Housesteads there is evidence of traders in the vicus. Vicus building IV contained a large furnace and the two coin moulds (one of which was found outside this building), attest to metal working. The long open ended buildings fronting the street are generally interpreted as shops or taverns. Buildings III, VIII, XIII, and XIV are well preserved examples of this type of building. Other examples have been located at Malton, Binchester and at Vindolanda where XXIII even preserved its counter and is likely to have been a butcher's shop. Greta Bridge also contained a building with evidence for a counter. Other evidence for commercial activity here includes a part used lead ingot

and a possible weaving sword (Casey 1982). There seems to have been a shop for mortaria and samian at Castleford, while at Lancaster there was a shop apparently selling only mortaria. As indicated above soldiers appear to have had to purchase much of their own pottery with the possible exception of cooking pots and it would seem from this evidence that merchants set up specialised pottery shops in vici to cater for this demand. At Malton there is the so-called kiln building in which three separate kilns were discovered along with a possible corn drying kiln (Mitchelson 1963). While across the river at Norton an inscription found in 1814 records that a goldsmith had a shop there (Wenham 1974, 39). At Vindolanda metalworking is attested by an inscription found in 1914. It reads ' for the Divine house and the Powers of the Emperors, the villagers of Vindolanda set up this sacred offering to Vulcan...' (Birley R. 1979, 79).

Other inscriptions may point to the direct presence of traders in the area of Hadrian's Wall. The altar dedicated by Antonianus prior to setting out on a (commercial?) venture has already been described (p. 105). The tomb stone of Barathes, the Palmyrene, set up at Corbridge, describes himself as a vexillarius and was probably a seller of flags rather than a standard-bearer (RIB 1171). His Catuvellaunian wife, Regina, was buried at South Shields. Some men with eastern names may be traders such as Salamanes of Auchendavy on the Antonine Wall (RIB 2182) and M. Antigonus Papias of Carlisle (RIB 955).

It is interesting to note the non-appearance of the Income Multiplier Effect (I.M.E) at Housesteads. The I.M.E is where a source of wealth

creates a series of economic subsystems. Each subsystem becomes more complex and attracts other subsystems to the site and each draws on each other for custom and trade, eventually producing an economic unit independent of the fort that had caused its conception. Carlisle may be such an example of where the settlement had become independent of the fort perhaps even becoming the civitas of the Carvetii. Another northern example is Corbridge. Given the close spacing of communities along the Wall it is probable that the manufacture and supply of goods became more centralised with centres perhaps at Corbridge and Carlisle both of which flourished in the fourth century. Housesteads vici never seems to have been very prosperous compared to its more wealthy cousins to the south where the I.M.E operated and towns developed. For example nothing has been found to indicate the residence of wealthy merchants such as the town house at Malton with its fine mosaics and heating system. Indeed it is possible that the more wealthy merchants did not have premises in many of the Wall vici the soldiers either having to go to the centralised trading centres for some items or these merchants visiting the forts on an occasional basis before returning to the mercantile centres taking the soldiers' money with them.

We must not forget that religion in the ancient world was expensive and would be another drain on the soldiers' purses. Temples had to be built and kept in good repair, statues and altars commissioned as well as the payment of priests and costs of festivals and liturgical equipment met. At Housesteads religion is well represented. Two extra-mural temples have been identified. The first to be discovered was the Mithraeum (p. 27), a rectangular temple about 60 feet long with raised benches

flanking a central aisle and a recessed sanctuary at the west end. In the sanctuary a large sculpture was found showing Mithras' spectacular birth from a rock surrounded by the signs of the zodiac. This sculpture was flanked by two altars. Behind one of these altars was found the headless statue of a torch bearer and in front of them was a fragmentary slab showing the mystical slaying of the bull. In the nave were found three statuettes all around three feet in height. Two of these figures represent the torch bearers Cautes and Cautopates. An altar to Cocidius was also found in the temple (Bosanquet 1904). The other temple is that ascribed by its excavator (Birley 1962) to Mars Thincsus. It is circular and 13 feet in diameter. Down the slope from this temple an inscribed left door jamb (RIB 1593) dedicated to Mars Thincsus, a sculptured lintel, and an altar (RIB 1594) were found. To add to the above altars over 50 other altars have been found at Housesteads not including other sculptured fragments. Although the unit may have paid for some of the sculptures and temples for the more important cults, such as Jupiter Optimus Maximus, it was individuals who would have paid for the temples described above and for most of the altars, as is indicated by personal names appearing on altars, rather than just the name of the unit e.g. the altar found dedicated to Mithras from the Mithraeum which was dedicated by the centurion Publicius Proculinus (RIB 1600). Duncan-Jones (1974) has produced a list of prices for such religious objects from documentary evidence found in Africa. He suggests that marble statues cost between 2,000 and 8,000 sestertii, the construction of temples cost, on average, between 10,000 and 100,000 sestertii, while statue bases alone cost between 400 and 500 sestertii. As such we can clearly

see that the amount of sculpture surrounding Housesteads represents considerable expenditure on behalf of the individual soldiers.

The vici would have contained a number of slaves in their population, either engaged in trade or belonging to soldiers. The purchase and upkeep of slaves would be another drain on the soldiers purse. However the evidence of slaves in vici is scant. There is a tombstone from Halton Chesters which alludes to a burial club for slaves (RIB 1436) and there is the well known memorial to Victor the Moor at South Shields that tells us that he was a freedman of a soldier serving on the Wall named Numerianus who was an ordinary trooper of the ala I Asturum which was probably stationed at Benwell (RIB 1064).

Besides the functions of service and industry it has often been thought that the vici were engaged in agriculture. There is very little proof of for this, since there is no epigraphical evidence and archaeological evidence is scarce. None of the buildings found in military vici have evidence for particular agricultural use. Some agricultural implements have been found in vici and in forts. These implements include ox-goats, hoes, spades, turf-cutters, reaping-hooks, pruning-hooks, sickles, billhooks, scythes, mowers, anvils, forks and rakes. The function of these as a testimony to agriculture is ambiguous because all these objects can form part of standard military equipment used primarily for the collection of fodder and the construction of earthworks. Coulters do provide evidence for agriculture but only two have been found in military contexts. One comes from Hod Hill, definitely from inside the fort, the other comes from Chester but its exact find spot is unknown

(Sommer 1984, 36). Aerial photographs have revealed field systems surrounding some forts e.g. Carriden and Brancaster. At Housesteads the terraces around the fort have been thought to have been agricultural. However in his unpublished dissertation A. Hartley (1984) has observed from his magnetic susceptibility survey of the area that the terraces show very high magnetic readings compared with the surrounding area indicating that the terraces are more likely to have been used for occupation than agriculture. Since refuse and hearths increase the magnetic properties of the soil and hence its magnetic susceptibility. Stubble burning alone is not likely to have produced such high readings as the ash would quickly wash or blow away. Furthermore it would seem strange to construct small terraces for agriculture when better land was available further down the valley side. The Piercebridge plough group has been taken as evidence of agriculture, but as Casey (1982, 129) has described, the piece presumably represents the cutting of the pomerium, a religious rite which accompanied the founding of a city. On these grounds it seems unlikely that the vicani at Housesteads were engaged in agriculture to any great extent.

What of the soldiers' families? The fact that there were women in vici is well attested and no doubt many of them would be married, become married, or enter into a common-law relationship with soldiers from the garrison. It became legal for soldiers to become married from Severan times onwards. The jet betrothal medallion from Vindolanda does show that such relationships occurred. Vindolanda has also yielded a number of ladies' leather shoes and a bronze earring pendant. Finds from Housesteads' vici include hair pins, beads, unguent vessels and a gold

ligula. Nothing recorded in the excavation reports would indicate a large feminine population, most trinkets being useable by both sexes. The fact that no infant burials have been found in Housesteads vicus is in contrast to other civilian settlements, for example the Malton vicus yielded twenty-infants as excavated between 1949 and 1952 (Mitchelson 1963). Inscriptions of women and children not belonging to the commander of the garrison may represent inhabitants of a vicus, rather than belonging to an officer's family. However, the relation of most of them is only implied; it is usually not specified on the stones to whom they were related. We must not forget that many of these women may have been prostitutes. Casey (1982, 128) has pointed out that there is evidence to suggest that many vici in the north were demolished while their forts were still garrisoned. This may suggest that many vicani were perhaps more interested in trade than being attached to the local garrison by family ties. The key site in this is Vindolanda where the first vicus was completely demolished in the late second century (Bidwell 1985). The civilian settlement at Ribchester seems to have been eliminated in the early third century and here again the fort continued. Watercrook also follows this pattern and possibly Old Penrith even if this was later reoccupied (Potter 1979). Other possible sites are Manchester, Lancaster and Brough under Stainmore (Casey 1982).

From this evidence it would appear that the soldiers at Housesteads would have spent a large proportion of their pay on luxury and more necessary items. Many of these objects were made available to them in the vicus, which appears to have been specifically orientated towards service to the nearby garrison, from travelling merchants trading in the

vicus, or from nearby mercantile centres. What little the poor auxiliary soldier did not spend he presumably saved. This would be taken away with the soldier when he retired. It has often been thought that veterans moved into the vici when they retired joining their families that lived there. But, as has been observed from the distribution of diplomata and inscriptions, a very high proportion of veterans did not settle in the civilian settlements next to their old garrisons. Most military diplomata have been found at non-military sites and are most frequently found in the lowlands. For example diplomata in Britain have been found in Colchester (dated 154/9), Wroxeter (135), Chesters (145/6), Middlewich (105), Sydenham, Stannington, Walcot, Cirencester and Malpas (Roxan 1978, 1981). Only one has come from a definite military context and that from within the fort at Vindolanda where the soldier recorded in the diploma was on garrison duty. As a result it would appear that veterans did not really prefer to settle in vici, although the name of Ribchester in the Ravenna Cosmography as *Bresnetenaci Veteranorum* may argue against this.

THE LATER THIRD CENTURY.

The vicus and the garrison must have been in some way connected either by family ties or by commerce, perhaps both. A change in the vicus could be a reflection of a change in the garrison. The presence of danger could have the effect of forcing the vicani to abandon the vicus or the military removing the vicus from around the fort walls, enabling the approach of enemy forces to be seen. The vicani may either have moved into the fort or to another place. In the later third century there is also evidence and several reasons for a possible decrease in garrison and by what amount. All these factors will be discussed in the rest of this section.

As already described in an earlier section (p. 47) the histogram plotted from coins found in the vicus appears to show the rapid decrease of the vicus between 273 and 286. This is shown by the small number of radiate copies compared with the regional picture which is reflected in the histogram of the fort. This agrees with Gillam's re-examination of the vicus pottery which now suggests much less fourth century activity than had previously been thought. The small amount of coinage found in the vicus after this date may show that the vicus continued in a very diminished form or that the coinage recorded was dropped by the soldiers themselves. Radiate copies are conventionally dated 273-86 to fill the gap produced by the reform of coinage by Aurelian (270-75) which involved the introduction of what we may call the 'aurelianus' in order to distinguish it from the antoninianus. It was a high value coin and

appears to have been valued at five denarii as compared to the antoninianus valued at two denarii. The aurelianus may not have reached the province in quantity and the coins that did were not lost due to their high value. The fact that some radiate copies are present shows that the decline of the vicus was shortly after 273 but before 286 when the copied coinage seems to have ceased to be used possibly due to the influx of Carausian coinage.

The first suggestion for the abandonment of the vicus is danger from tribes north of the frontier which resulted in the vicani giving up their houses. There is a panegyric addressed to Constantius Chlorus in 297 (Pan Lat. Vet. VIII (v) 11, 4) mentioning raids by the Hiberni and the Picti, indicating that the Picti were thought of as a threat to the province. Bewcastle could be the only fort where there may be evidence for destruction after 273. Here the evidence comes from the aedes of the principia, which had been destroyed by fire, and the debris had fallen into the strong room below. The rubbish therein contained the remains of a statue of Jupiter, the base of which and an iron thunder bolt remain. Ferules possibly from flag poles and silver votive plaques dedicated to Cocidius were also found. The coins in the deposit go down to radiate copies of the Tetrici (270-73) thus suggesting destruction 273-86. The excavators envisaged an attack in circa 296 coinciding with Constantius' invasion of Britain (Richmond, Hodgson, and St. Joseph 1938). Allectus' removal of troops from the north to aid him against Constantius in the south was believed to offer an advantage to the people north of the frontier. This they quickly siezed upon and ravaged southwards plundering everything in their path, even reaching York and Chester,

which is deduced from evidence of the refurbishment of their defences. Yet it seems strange that plunderers would leave silver plaques unless they were particularly careless, and as such the Bewcastle deposit should be seen as the burying of religious objects by a garrison before it was withdrawn to prevent them being defiled, rather than destruction by hostile forces. Neither is there any evidence for the destruction of Chester or York at this time; the rebuilt wall at York has been found to seal a coin of Dalmatius.

Since so much repair work has been dated to Constantius Chlorus, much of it probably correctly so, and the nature of the excavated evidence, there seems to be an indication of partial abandonment of the Wall forts at the very least if not a full scale one. If the province had been ravaged to the extent indicated by the repairs it would seem unlikely that Constantius would have returned to Rome as quickly as he did after the defeat of Allectus and then not return until 306. A major attack on the province does not therefore seem to have much supporting evidence.

It is plausible to suggest that major rebuilding took place after a period of abandonment or neglect. The nature of the repair work around Hadrian's Wall is outlined below. Some of the work will be seen to date a little before 296 or a little after 306, but because of the lack of coinage dropped on sites during this period and to the nature of the pottery it is difficult to date work precisely to the late third or early fourth century. The date seems to depend on whether the excavator is either associating work with Constantius Chlorus or trying to avoid the association.

Two forts which have been thought to have been completely abandoned around this time are Haltonchesters and Rudchester. Gillam (1961) suggested that Haltonchesters was abandoned some time after 273 after which the buildings collapsed and were covered by 400 mm of soil before the fort was reoccupied in circa 369. A coin of Allectus was, however, found below the floor of a rampart building indicating at least some occupation after 293-96. At Rudchester a barrack block was excavated which the excavator thought paralleled the sequence at Haltonchesters, thereby showing abandonment in the late third century followed by later reoccupation. Here an unstratified, slightly worn, coin of Maximianus has been found. At these two sites therefore, a garrison reduction rather than complete abandonment would seem to best fit the evidence.

Collingwood recorded ninety-nine coins from Castlesteads (Collingwood 1922, 220-21). Only one of these coins is from the Gallic Empire while there are two of Carausius. Welsby (1982, 37) suggests that coins of Claudius II, found in large numbers on British sites, may only have reached Britain when it was reunited with the empire in 273. Therefore Castlesteads may have been abandoned circa 270-86.

At Greatchesters a hoard of one hundred coins was found earlier this century (Gibson 1930, 51). It was located at the base of a hypocaust in a way that suggested that it had fallen there. This indicated to the excavator that the building was disused at the time. The latest coin in the hoard is of Claudius II. The hypocaust fill contained human bones which Gibson thought may have belonged to people who perished in the

destruction of the building. This hypothesis would seem less likely than an abandonment or decline of the fort through garrison reductions.

In 1929 RIB 1912 was found at Birdoswald. This inscription was found in a Valentinianic barrack floor and is dedicated to Diocletian and Maximinus; it must therefore be dated 297-305. It records the rebuilding of three buildings. Part of the inscription reads: '- restored the commanding officer's house, which had been covered with earth and had fallen into ruin; and the Headquarters Building, and a bath building-'. It was suggested that the inscription showed the commanding officer unwilling to admit the thoroughness of the enemy's action, but more likely shows the previous abandonment of the three buildings. However no evidence was found at Birdoswald indicating abandonment to the excavators (Richmond and Birley 1930, 172). Birdoswald also seems to have had its north guard chamber by its east gate completely rebuilt and the south and east rampart bank cut back to form a shelf at this time and a roomed building was constructed replacing a barrack block. If the fort was completely or partially abandoned it was probably after 273 as an inscription (RIB 1885) has been found dedicated to Jupiter Optimus Maximus by the first cohort of Dacians who are styled Tetrician. The Tetrician dynasty lasted 270-73.

At South Shields the following hypothesis was put forward (Dore and Gillam 1979, 69-70). Sometime before the end of the third century the garrison of the fort departed. There was no military occupation or rebuilding under Constantius Chlorus. During the absence of the military the population of the vicus moved inside the fort, where they were

responsible for the building of tile kilns against a granary. This hypothesis was put forward since it is unusual for the army to have a kiln inside a fort and also because the excavators could not see any military rebuilding inside the fort. The civilians then continued to live inside the fort up to and throughout the last military occupation of the fort. Pottery from the vicus seems to have ceased in the late third century (Dore and Gillam 1979, 57). The coins (Casey 1979B) do not appear to show any significant break in the occupation of the site. Excavations 1985-86 however have shown that there was the construction of a large courtyard building within the fort sometime in the three decades following 270. In the latest interim report (1985-86) an abandonment of the fort is not implied.

It is uncertain whether Carrawburgh was abandoned since the bath house seems to have been rebuilt shortly after 276, evidence being unworn coins of Claudius Gothicus and Tacitus found in the wall foundations (Daniels 1978, 127). However the presence of these coins could date the rebuilding to any time after 276. The shrine of Coventina's Well contains a large number of coins and comparisons of period coin counts with other sites (p. 127) shows a reduction of activity in the Carausian period or slightly before. The shrine is of wider importance than just belonging to the fort and thus reflects garrison decline of the fort and of the region generally.

The fact that chalet barracks were constructed at Greatchesters and Wallsend indicates a similar structural history to Housesteads at this time. This may be taken further to suggest that they also had a

similar history in terms of garrison in the late third century when compared to Housesteads.

Not far from Housesteads is Vindolanda. Archaeologically there is no evidence for the abandonment of Vindolanda in the period under discussion. Like Housesteads there are very few coins of Carausius and Allectus (Casey 1985) which appear to have been issued in large numbers, this may suggest abandonment or decrease in garrison. The large number of radiate copies would suggest that this event was in the 280s. This may be slightly later than the abandonment of the vicus or perhaps contemporary with it. A hoard of one hundred and eleven coins was found in the last occupation layer of a vicus structure and therefore must have been deposited when the building had gone out of use. The hoard consists of radiate copies, including copies of Postumus and Victorinus but not of Tetricus, 270-73 (Bidwell 1985, 90). Furthermore very few radiates and their copies were found on the vicus generally and late third century coins onwards are very scarce. The significance of these conclusions and their similarity with Housesteads will be discussed below.

From our discussion of the above forts it may be inferred there was an abandonment or partial abandonment, at least, of several forts on Hadrian's Wall and its surrounding area. This may not be the case in the north west of England where it has been suggested a similar system to the Saxon Shore forts was constructed. At Watercrook Potter has suggested reoccupation of the fort in this period. The ditches were recut and contained a coin of Gallienus as a terminus post quem and the

reused guard chamber has four coins 268-73 sealed in charcoal (Potter 1979, 180). However the evidence for this reoccupation seems to have been largely based on the large proportion of radiate copies which are common on all sites, and the coarse pottery in fact seems to show a decline. The vicus at Watercrock may have ceased in the early third century. Jarrett in reviewing Potter suggests abandonment at Watercrock 220-70 and Ravenglass in the late third century (Jarrett 1980). Lancaster seems to have been under restoration 262-66 (RIB 605) so is unlikely to have been abandoned.

The archaeological evidence at Housesteads seems to indicate a possible abandonment around 286. Considerable rebuilding in the fort is ascribed to Constantius Chlorus and this is backed by a fragmentary inscription (RIB 1613) which seems to be a dedication to Diocletian and Maximian. The inscription presumably reads D(ominu)s [Nostris Diocletiano et] Ma[ximiano....]. The rebuilding takes various forms. The principia saw several changes that have been conventionally dated to the early fourth century. The southern rooms 8 and 9 were joined together by the removal of a partition wall. The doorway into 11 was reduced and then blocked. Rooms 11 and 12 could then only be entered from the aedes. The wall between rooms 11 and 12 was of rough construction and pierced by two doors that Bosanquet suggests were of different date (Bosanquet 1904, 208-28). The praetorium had a hypocaust installed in its north range probably early in the fourth century. The pilae being formed by small columns which, as already suggested, may have come from period I and II barracks (Charlesworth 1975). F.G.Simpson noted that there was a serious and extensive wall collapse about this time. This resulted in the outer

side of the fort wall being rebuilt almost from its foundations from the south gate to just before the east gate. The angle towers on the south wall were also strengthened (Simpson F. 1976, 151). The large number of coping stones reused in the construction of the chalets suggested to Daniels that some of the towers on the fort defences were delapidated due to general neglect in the later third century. The south portal of the west gate was thought to be blocked under Constantius. The north wall seems to have been rebuilt 'no earlier than the late third century' and it later collapsed sealing fourth century pottery (Frere 1985, 270-71). The rampart backing mound seems to have been replaced and covered the demolished rampart buildings. While the hospital had the outer wall of its north range reconstructed and included several hearths which suggests a metal working function; this rebuilding may be early fourth century or perhaps later. The most well known reconstruction of this period at Housesteads is the construction of the so-called chalet barracks and the L-shaped barracks XIII and XIV were rebuilt as a series of individual units separated by eavesdrips (p. 25, fig. 3).

There is then, evidence for extensive rebuilding in Housesteads fort, a building programme which seems to be reflected in several other forts along the Wall. This does suggest a possible abandonment or garrison reduction but is it at the same time as the decline of the vicus or later as has been suggested at Vindolanda? Reference to the coin histograms of the fort and the vicus (figs. 5 and 6) in period 19 appears to show that a decline of the fort was shortly after that of the vicus. In fact the number of radiate copies from Housesteads fort is comparable to a fully occupied site. However examination and analysis of

hoards shows clearly that although radiate copies may not have circulated in large numbers until after 273 the radiates of the Gallic Empire circulated in large numbers throughout the period even when the copies were circulating. This means that both types of coin were circulating until 286 when the influx of Carausian coinage seems to render this coinage worthless and hoards were abandoned. Since coins of the Gallic Empire and a few copies have been found at Vindolanda this may indicate the likelihood that the vicus at Vindolanda could have ended as late as 286, although probably slightly earlier, not in the early 270s as indicated by Casey (1985) i.e. the vicus ended in the same date range as at Housesteads. Further, it is postulated below (p. 134), that the vici on the northern frontier were closely attached to their accompanying forts and the abandonment of the fort would imply the necessary end of the vicus. The fact that the percentage deviations (see below) of Housesteads and Vindolanda almost exactly parallel each other provides strong evidence that the two sites had very similar histories. The quantity of the radiate copies which are not believed to have circulated in large numbers until after 273 would suggest decline between circa 280-96. This date range encompasses the Carausian episode and the years leading up to it. At Housesteads and other Wall forts there is thus archaeological evidence suggesting decline of buildings within the forts in the late third century which required rebuilding under Constantius Chlorus. We also have archaeological and numismatic evidence for a corresponding decline in the accompanying vici.

This postulated abandonment of the fort roughly corresponding to the Carausian episode (286-96) should be reflected in the coinage of the

site. Of the Carausian period twelve coins have been found at Housesteads. At Vindolanda where a reduction in garrison or total abandonment has been suggested (Casey 1985) only five coins of Carausius and Allectus have been recorded. The sites where reduction is postulated are compared with civil sites that were fully occupied throughout this period. All northern sites with good coin lists are also included with the exception of Piercebridge since the fort here was established only in the mid-third century, thus making comparison with the other sample sites impossible. The results are shown in the following table. For the source of the coin lists see p.280.

Site	222-86	286-96	Percentage of total	
			222-86	286-96
Carrawburgh	398	18	95	5
High Rochester	45	3	94	6
Housesteads	311	12	96	4
Malton	456	72	86	14
Maryport	28	1	97	3
Segontium	247	41	86	14
South Shields	345	46	88	12
Vindolanda	219	5	98	2
Wallsend	36	1	97	3
Caerwent	637	116	85	15
Corbridge	2754	167	94	6
Leicester	144	24	84	16
Silchester	2977	459	87	13

Some very interesting conclusions can be drawn from the above table. Housesteads, Carrawburgh, High Rochester, Maryport, Wallsend and Vindolanda all show a sharp decline in comparison with the civil sites. Corbridge does not fit in with the expected picture of a civil site. The probable reason for this is that since there now seems to be less

troops on the Wall at this time there would be less coinage flowing flowing into the nearby mercantile centres. South Shields which could be expected to act like a Wall fort seems to represent a fully occupied site. This is probably due to the fact that South Shields functioned as a port and therefore saw a high level of trading, much of the coinage being brought in by shippage from outside the northern frontier. Segontium too seems to be stable in the late third century, this agrees with Casey (pers. comm.) who from the evidence of Welsh hoards of this period could not see removal of garrison forces in Wales during the Carausian episode.

But Carausius did not ignore the north completely. A Carausian milestone has been found near the line of the Wall, as has a Carausian medallion. Indeed Carausian coins tend to indicate Carausian occupation since both Carausius and Allectus would have suffered damnatio memoriae when the province was recovered. Their coinage would have been demonetised with strict penalties being enforced if anyone was caught in possession of the usurpers' coins. This is indicated by the abandonment of Carausian hoards. Carausian hoards are common over most of the province. However no hoards of Carausian coins have been found near the Wall. The most northerly hoard was found in Darlington in the bed of the river Tees (Shiel 1977, 206).

If the presence of Carausian coins implies Carausian activity then Wall sites such as Housesteads, Wallsend and Vindolanda were still occupied but their garrisons were considerably reduced. It is possible to postulate the approximate percentage of garrison reduction but no exact

figures can be given because of the low coin counts. The mean percentage of Carausian coins to the totals for Silchester, Leicester and Caerwent is 13.8%. This compares to 3.7% for Housesteads and 2.2% for Vindolanda (in more exact figures than in the above table). This infers a 73% garrison reduction at Housesteads and a 84% garrison reduction at Vindolanda. It must be stressed that these percentages for garrison reduction are approximate. They do however illustrate the scale of troop removal from Wall fort garrisons in the late third century.

Eric Birley has suggested that the lack of hoards in the north at this time shows that 'the military zone was the safest place to be living in'. The implication being that this was due to a strong military presence, but it seems more likely that the northern frontier was considered sufficiently safe and stable to drain troops away and deploy them elsewhere where they were more urgently needed. Where and how these reductions took place is not clear but several of the Wall forts at least and other forts nearby seem to have been so treated. The emphasis in the north seems to have changed to mobile forces rather than the fixed limitanei. For example if Piercebridge, which was constructed in the mid-third century, is identified as the Morbium of the Notitia Dignitatum then its garrison may have been, at least later, the equites Catafractorum, which was a unit of heavily armoured cavalry. The units of the Wall's hinterland listed in the Notitia are the 'new style' numeri as opposed to the 'old style' alae and cohorts stationed on the Wall itself. The new or reoccupied hinterland forts thought to contain numeri are frequently situated on roads to provide ease in mobility. Piercebridge shares some of the features present in the near cotemporary

forts on the Saxon Shore, Reculver and Brancaster. It has no angle towers and the guard chambers of the west gate are accommodated in a thickening of the fort wall. Forts containing the 'old style' forces did not receive the new style architecture. Only three sites in the north have been seen to be updated with the new military architecture used on the Saxon Shore and on the continent. The sites are York, Chester and Brough-on-Humber. This seems to emphasise the shift in defence from the north to the coast, especially the Saxon Shore. While the new forts had high walls and no rampart mound, Housesteads seems to have had its rampart mound replaced in the late third century. *? by what*

From the foregoing it would appear that Wall garrisons were depleted and troops were moved to where they were more needed. Where may the Wall garrisons have gone? Outside Britain there was trouble in Gaul due to the dereliction of the Gallic provinces by successive claims to imperial power during the period of the Gallic Empire. This was followed by the barbarian invasion across the German limes in 276 and the Bagaudae had begun a type of brigandage which terrorized estates and towns throughout the province (Johnson 1976, 23). In Britain, as has been already noted, there was the invasion of Constantius Chlorus in 296. This invasion took three years to prepare and Allectus can have had no illusions about the attitude of Constantius and would have put out a considerable defence to repel such an invasion. The newly completed Saxon Shore forts would, no doubt, have formed part of this defence. Shiel (1977, 13) has noted from his study of the Incerti Panegyricus Constantio Caesari Dictus that the alleged ease of Asclepiodotus' victory may indicate that the force of Allectus was not particularly large and there is no evidence for the

dissatisfaction of the troops which, it would be thought, the panegyric would have cashed in on. Thus either Allectus' force was small, his troops went over to Constantius, or Allectus had positioned his force in the wrong place. The panegyric records that Asclepiodotus had landed in thick fog. Even if it was the case that Allectus had a small army the newly completed Saxon Shore forts, nine of which had been constructed at this time, had to be garrisoned.

Brancaster and Reculver seem to have been constructed in the early third century. Burgh Castle is transitional between the above two forts and those built later in style and presumably also in date. Its rounded corners and incomplete internal towers at the angle of the walls are early features as is the possible rampart backing mound. The fort does have the external towers which although secondary are built in exactly the same way as the curtain wall and are clearly a very early modification to the plan. Bradwell, Walton Castle, Dover, Richborough, Lympne and Portchester are thought to have been constructed 276-85 (Johnson 1976, 109). Portchester was dated by its excavator to the reign of Carausius. Briefly summarized the evidence for this dating consists of a { of one coin of Saloninus (259) and two of Gallienus (258-68) in contexts immediately predating construction levels, together with a coin of Tetricus I (270-73) and one of Carausius in primary layers against the fort wall (Cunliffe 1975, 421). Cunliffe would see the last two coins in a construction layer, but the clay in which they were found around the scaffolding post-holes may suggest that the deposit is immediately post construction suggesting a pre Carausian date for the building of the fort. Casey (pers. comm.) has reinterpreted the coins

from the main series of Saxon Shore forts and suggests construction under Carinus (283-85). If this is true it fits in ² neatly with our scheme and we can see the construction of the Saxon Shore forts to be virtually contemporary with the depletion of Hadrian's Wall fort garrisons and also the end of the vici at Housesteads and Vindolanda.

There is some evidence to suggest that although the Notitia Dignitatum records new style units in many of the Saxon Shore forts their original garrisons in some cases may have come from the northern frontier. The cohors I Baetasiorum was stationed at Bar Hill and later at Old Kilpatrick during the occupation of the Antonine Wall. In the later second century it was stationed at Maryport. The Notitia Dignitatum (Occ. XXVIII, 18) and several roofing tiles attest that the unit later formed the garrison at Reculver. The cohors I Aquitanorum equitata is attested at Carrawburgh in the reign of Hadrian (RIB 1550) and then recorded at Brough-on-Noe also in the reign of Hadrian² this inscription can be dated 130-33 (RIB 283). Tile stamps of this unit have been found at Brancaster suggesting that the unit was at least involved in the construction of the fort even if it did not form part of the garrison. The Notitia (Occ. XXVIII, 17) lists the equites Dalmatae Branodunenses as the later garrison of Brancaster. The numerus Exploratorum is stated as being stationed at Portchester by the Notitia (Occ. XXVIII, 21). The unit may be the same as the numerus Exploratorum Bremensium stationed at High Rochester under Gordian (RIB 1262) or perhaps the same as the numerus Exploratorum Habitancensium stationed at Risingham in 213 (RIB 1235). Therefore it must be considered a possibility that even if part

of the cohors I Tungrorum remained at Housesteads a large portion of it may have been withdrawn to form part of a garrison elsewhere.

There is also epigraphic evidence for parts of garrisons being moved to serve elsewhere. R.W Davies' (unpublished) study of peacetime routine in the Roman army has described parts of the Dura rosters that show that soldiers from the Dura garrison were often on garrison duty elsewhere sometimes for long periods. Although these reductions are often smaller than those proposed at Housesteads and Vindolanda they show that such a practice was common and widespread, even under more settled conditions. In 208 the whole Dura garrison is attested at Appadana when it entertained the Persian envoy Goces as he was passing through the province. In 219 12% of the garrison was stationed away from the fort. In 222 forty-nine soldiers were at Appadana perhaps left from 208 and in 235 the roster shows that Dura men were still stationed at Appadana. In 219 the roster also shows eleven men stationed at Magdala, seven at Birtha, seven at Castellum Arabium and six at Chafer Avira. Therefore these rosters show that a complete garrison can be removed to form a garrison elsewhere for a period. Or they show parts of the garrison being removed to various other forts, and these are the soldiers that they kept on their books.

Duncan-Jones (1978) has produced figures suggesting reduced garrisons under Diocletian from his interpretation of the Beatty papyri from Panopolis. He lists the suggested number of shares (i.e. men) in several units. The only cohort in the papyri, the cohors I Chemavorum, produces garrison totals of 163.75 and 164.25. If this unit was a cohors

quingenaria then a reduction of 67% is implied. Duncan-Jones also calls upon the Notitia to show that small garrisons existed; a cohorta centenaria is recorded in Palestine, while a cohorta quinquagenaria Arabum is recorded in Mesopotamia. The nominal strengths of these units would be one hundred men and fifty men respectively in each case. Although the examples given here are extreme they do show the general principle that the state did allow small units to exist.

It has been noted earlier in this section and elsewhere (p. 47) that the decline of the vici at Housesteads and Vindolanda is roughly contemporary with the decline of the fort garrisons. Since no danger is implied in the north at this time it would suggest that the vicani were in some way dependent on the garrison. The removal of which caused the end of the vicus in both cases. This leads us into a discussion on why this may be the case. In an earlier section, discussing what the soldiers may have done with their money, it was shown that as well as perhaps containing women or families attached to serving soldiers the main purpose of the vicus was to provide services to the acting garrison, providing them with taverns, and other necessary and more luxurious items. Yet unlike the productive lowland civil zone the under developed highland military zone received what was in effect a continuing subsidy in the form of continuous payment of the troops. The resulting economy was thus completely artificial, accompanied by an artificial increase in the population, living in the vici (Mann 1979).

It has already been noted that there is no evidence at Housesteads and Vindolanda for the operation of the Income Multiplier Effect (pp. 110-

11). Housesteads vicus never seems to have been very prosperous compared to its more wealthy cousins to the south where the I.M.E operated and prosperous towns developed independent of a supporting garrison.

Thus the vicus at Housesteads can be seen as primarily a trading settlement. The fact that it may have had legal recognition, if we can assume this from the inscription found in the settlement south of the Vallum which reads '...Julius...by the decree of the villagers' (RIB 1616), and by the presence of a beneficarius to the prefect of the camp, a certain Hurmius who was in fact a soldier in the cohors I Tungrorum (RIB 1619). This does not suggest that it was anything other than dependent on the soldiers and their pay in particular.

The collapse of the currency and the rapid inflation during the period of the Gallic Empire when, if we can infer from the numbers found, many of the two denarii pieces were required for everyday transactions, must have put a strain on the traders in the vicus. The partial or complete withdrawal of the garrison under Carausius would then be a very good reason for the final decline of the vicus. The return of the garrison under Constantius may have seen the return of the traders, and a rejuvenation of the vicus may be expected. However a new system of payment was now operating with the soldiers being partially paid in kind (the annona militaris) thus the soldiers had less spending money, and hence less attractive to merchants who were happier to stay in the more centralised market centres. Thus the numismatic evidence for the end of the vicus ties in well with the existing data.

It has been thought that the vicani moved into the forts and lived in the chalet barracks which were constructed in the late third century. This case has been especially argued for Housesteads. Wilkes thought that barrack XIV chalets contained articles belonging to women. He envisaged a family occupying each contubernium. Such a state of affairs is thought by the present author to be unlikely and the argument against it is set out below although it will be seen that women were present in some forts such as on the Saxon Shore and at Malton.

It is possible that the families of soldiers moved away with them when the garrison was reduced never to return. Reculver has yielded five infant burials from the area of the fort but these could belong to a pre fort phase when civilian occupation is known on the site (Philp 1967). At Portchester twenty-seven infants were located and most had died soon after birth indicating infanticide (Hooper 1975). These burials occurred mainly between 325 and 345 but were present from circa 300 onwards. The babies were disposed of with little ceremony in convenient places. Other evidence suggesting the presence of women at Portchester is weaving and spinning equipment, finger rings, bracelets of bronze and shale, toilet equipment, beads and a number of women's leather shoes. Another fort thought to have contained women is Malton. Here the fort was found to contain over thirty infant burials (Mitchelson 1963). There is however evidence from the drawings of sections that some of these burials at least may belong to the later third century when the fort is believed to have been unoccupied by the military. Although Corder (1930, 70) suggests that ten infant burials may be associated with a chalet-like block and notes that from the time of Constantius Chlorus onwards

occupation within the fort was in part civil. The only infant burials from the Wall region have been found at Chesters were the skeletons of two babies were found in an interval tower on the south wall (Birley E. 1959, 17). The date of these is not known however.

Daniels has suggested that when troops moved out of many forts in the north in the late third century, as has now been showed numismatically to have occurred, the vicani who were left may have moved into these forts. He envisages the soldiers returning under Constantius Chlorus being faced with a *fait accompli*. The evidence that he uses is the 'preponderance of brooches and other trinkets in Housesteads XIII' and notes the similarity in plan between the strip-houses of the vicus and the Housesteads' chalets (Daniels 1980, 189). The similarity in plan between the chalets and contubernia is, however, probably more significant. Excavation of barrack XIV yielded only a jet spindle whorl and a few beads to suggest the presence of women in the chalets. Indeed Wilkes' in discussing the evidence for women in barrack XIV states that 'there is the possibility (that women were present), not, it is true, supported by any evidence' (Wilkes 1966, 130). If women were present in the fort for any length of time the absence of infant burials and the low number of feminine artefacts does seem puzzling. It should also be noted that the forts where women definitely were present are the new style forts such as on the Saxon Shore, not the old style auxiliary forts.

Indeed if each chalet unit housed a family group then the garrison size would have to be very considerably reduced. Daniels has suggested that rampart buildings may also have functioned as 'chalets' but recent excavations behind the north wall of the fort (e.g. Grew 1980) have shown that the rampart mound was replaced in the early fourth century, covering the rampart buildings and leaving only a small open area. Similarly the rampart building to the west of the interval tower on the south wall has been shown by Gillam to be Severan (Daniels 1980, 87). Thus the evidence as it stands would suggest that rampart buildings were not constructed to provide extra accommodation at this time but date earlier to the Severan period when, as previously described (p. 95), extra accommodation may have been required for the numerus Hnaudifridi and the cuneus Frisiorum. Ten barrack blocks appear to be available for accommodation at this time. The leaving of eavesdrips between each chalet suggests a net reduction in floor space of about 10% which would be nugatory in terms of coin loss representation. On the other hand the change from ten contubernia in barracks XIII and XIV to six chalets represents a reduction in the garrison of 40% if the chalets each housed the eight men of a regular contubernium. If each chalet housed a family the garrison reduction would be approximately 94%. This would produce a garrison of only about sixty men (not including officers) which seem rather too low and hardly worth continuing the occupation of a fort designed to hold a military cohort.

A 40% or a 94% reduction in the garrison should be reflected in the coin losses. As before Housesteads is compared with other forts and towns to enable the fullest picture to be obtained. In the following

table copies are included since they circulated as part of the currency and are often difficult to distinguish from the genuine coins.

Site	222-96	297-402	Percentage total	
			222-96	297-402
Carrowburgh	417	858	33	67
Housesteads	323	160	67	33
Malton	528	742	42	58
Maryport	29	47	38	62
Segontium	308	654	32	68
South Shields	391	402	49	51
Vindolanda	224	100	69	31
Caerwent	753	922	45	55
Corbridge	2921	2968	50	50
Leicester	172	304	36	64
Silchester	3436	5563	38	62

Before the above table can be interpreted the annona militaris must be taken into consideration. The annona appears to imply the payment of soldiers for part of the year in cash and the rest of the year in food. It is believed to have been introduced by Diocletian in 297 and its operation can clearly be seen on graphs showing the deviation of coins from military sites with coins from civil sites, showing up as a general negative deviation during the fourth century. Two theories can be put forward for how many months a year the soldiers pay can be related to. The first theory has been proposed by Casey (1974, 51) who believes soldiers were paid for three months a year. This viewpoint is based on a rescript of Valentinian I (Codex Theodosianus 7.4.14) which reads: 'river patrol troops shall receive subsistence allowances in kind for nine months of the year, and for the other three months they shall receive the corresponding prices'. If we take this to represent riparienses being brought into line with other limitanei then coin

counts from forts with frontier garrisons should be increased four fold to make the count comparable to civil sites. The second theory is based on the Beatty papyri (e.g. Duncan-Jones 1978) which indicates that army pay was for four months a year. Thus the coin counts in this case should be increased three fold to make them comparable with a civil site. If we increase the fort fourth century coin counts by three or four times these percentages are produced:

Site	Four times		Three times	
	222-96	297-402	222-96	297-402
Carrawburgh	11	89	14	86
Housesteads	34	66	40	60
Maryport	13	87	17	83
Segontium	11	89	14	86
South Shields	20	80	24	76
Vindolanda	36	64	43	57

Before turning to Housesteads and Vindolanda, which show similar results, the other forts must be examined and interpreted. Segontium shows much more intense military activity in the fourth century compared to the third century infact nearly twice as much. This corresponds with the reconstruction of the fort in the fourth century to form part of the coastal system. Maryport and South Shields appear to show much more fourth century occupation than expected. An explanation of this is that at these sites there were well established civil settlements which may counteract the effects of the annona militaris and indeed the original unaltered results indicate no change between the third and fourth century occupation levels. Furthermore being coastal sites the garrisons of these forts may have been upgraded

to a higher class limitanei as is indicated by the name of the garrison of South Shields given by the Notitia as numerus barcariorum Tigrisiensium. Such a style of name (being called numerus) appears to often to have been used for higher grade frontier troops in the fourth century. Carrawburgh is the hardest site to interpret. The recalculated results seem to show an increase in coins at this site in the fourth century when it would be expected to behave in the same way as Housesteads and Vindolanda. We could suggest that this fort did behave like its neighbours but that as most of the Carrawburgh coins come from the votive deposit of Coventina's Well they are unquantifiable for our purposes or that this special deposit is unaffected by the operation of the annona.

The recalculated results for Housesteads and Vindolanda however have proved most interesting and instructive and answer several of the questions raised in this section, if of course our methodology is correct. The first point of interest is that after the garrisons in the period roughly corresponding to the Carausian episode the garrison would appear to have returned to full strength under Constantius, or at least to their third century strengths which on other grounds, numismatic and archaeological, seems to reflect full garrisons. Full garrisons on the Wall from the time of Constantius Chlorus can be backed by archaeological evidence. There is the evidence of the general and large scale rebuilding programme on the Wall at this time backed by epigraphic evidence from Housesteads and Birdoswald. The Birdoswald inscription depicting the reconstruction of major fort buildings that had collapsed and been covered with earth should be seen clearly to

reflect abandonment in the period 280-96, a period long enough for untended wooden superstructures to decay, or perhaps the demolishing of the buildings by the army prior to withdrawal. The troops returning under Constantius making the fort a working, functional unit again.

Finds of artefacts and coins tend to show considerable activity in the north during the reign of Diocletian. A gold donative brooch celebrating Diocletian's decennalia has been found just north of the Wall (P.J Casey pers. comm.). Sewingshields, a milecastle near to Housesteads, has produced nine Diocletianic coins dating to the years 294-303 from a coin list of only twenty-two coins. These coins are normally rare as site finds as they are a product of Diocletian's monetary reform in 294 or 296. Weighing about ten grams and containing about 3% silver they were of high intrinsic value as well as of high monetary value, the coin was valued at ten denarii before 301, and twenty denarii after this date. The intrinsic value of these coins rapidly declined and so the coins quickly disappeared from circulation. Other milecastles with poor coin lists have also produced Diocletianic issues, milecastle 12, milecastle 40 (3 coins), milecastle 45 (5 coins), and milecastle 79 (Casey 1984). Housesteads and Vindolanda have also produced numbers of these coins producing eleven and six respectively. Thus there is evidence for considerable Diocletianic activity along the Wall.

For these reasons the hypotheses put forward by Daniels, Wilkes and Welsby advocating either a 90% or a 40% garrison reduction must be rejected. Their views were based upon interpretations of the chalet

barracks and who lived in them. The 40% reduction hypothesis arose from the fact that barrack XIV (fig. 3) only had six contubernia compared with the original ten. Barrack XIII, interpreted by Daniels to also consist of six contubernia with two suites at each end, could also be seen as an officers block and perhaps nine or ten contubernia, thereby implying no garrison reduction. Similarly it is not known how many soldiers occupied each chalet unit, perhaps extra men could be squeezed into each. The 90% reduction hypothesis of Daniels and Welsby suggesting each chalet housed a family can also be rejected on grounds other than the above stated numismatic evidence. The fact that the vicus ceased at Housesteads and Vindolanda when the garrisons declined, or slightly before, and that vici elsewhere have been seen to end when the garrison was in full occupation, coupled with the fact that the vici did not start up again when the garrison returned, and the lack of evidence for women inside Housesteads chalets would suggest that a major function of the vici was service to the garrison as described above. The more centralised settlements of Corbridge and Carlisle would be more lucrative and therefore attractive to these people in the fourth century and such centres must have drawn their populations from somewhere.

A possible argument against the full occupation of the fort at this time is provided by the latrines. Only one latrine block has been located in the fort, in the south-east corner, positioned here for drainage reasons. All the coins from the fort were plotted onto a plan, included in this thesis in the form of two histograms (figs. 8 and 9) (the results of this exercise were generally inconclusive, groupings

tending to show what parts of the fort had been excavated well. Large counts tended to come from the barracks which may thus have had clay floors or board floors which facilitated coin loss). Although not much was gained from this exercise, it was noticed that of the seven coins from the latrine and its sewer three were fourth century (Fort Cat. Nos. 382, 418; Vicus Cat. No. 256). Showing that the latrines continued during this period. It would seem a long way to walk from block I in the north-west corner to the latrine in the south-east corner for a desperate trooper. However it should be noted that the same latrine is the only one known even when the fort was fully occupied. Hence this argument would not appear to be valid. So although Duncan-Jones' argument for small garrisons may be true for the eastern empire this does not seem to be the case for the northern frontier of Britain.

If the garrison was at full strength during the fourth century at Housesteads and Vindolanda some light may be thrown on whether the affect of the annona militaris was to suppress the coin population by four times as suggested by Casey or three times as suggested by the Beatty papyri when compared to a civil site. For this we must return to the previous calculations. Taking the mean percentage totals of the third and fourth century coin counts from the definite civil sites (Caerwent, Corbridge, Leicester and Silchester) we have a figure of 42% for years 222-96 and 58% for years 297-402. The corrected results for Housesteads and Vindolanda were:

Site	Four times		Three times	
	222-96	297-402	222-96	297-402
Housesteads	34	66	40	60
Vindolanda	36	64	43	57

An interpretation of this table would appear to show that the annona militaris reduced the fourth century coinage of forts of the Housesteads/Vindolanda limitanei type by a factor of three as suggested by readings of the Beatty papyri since the increase of the military coin counts by three produces the closest parity to the civil site mean.

Furthermore if the Wall garrisons had been withdrawn to form part of the garrison of some of the Saxon Shore forts in the late third century the return of these garrisons to the Wall under Constantius may suggest abandonment of the Saxon Shore forts at this time. The relevant coin counts are included in the following table:

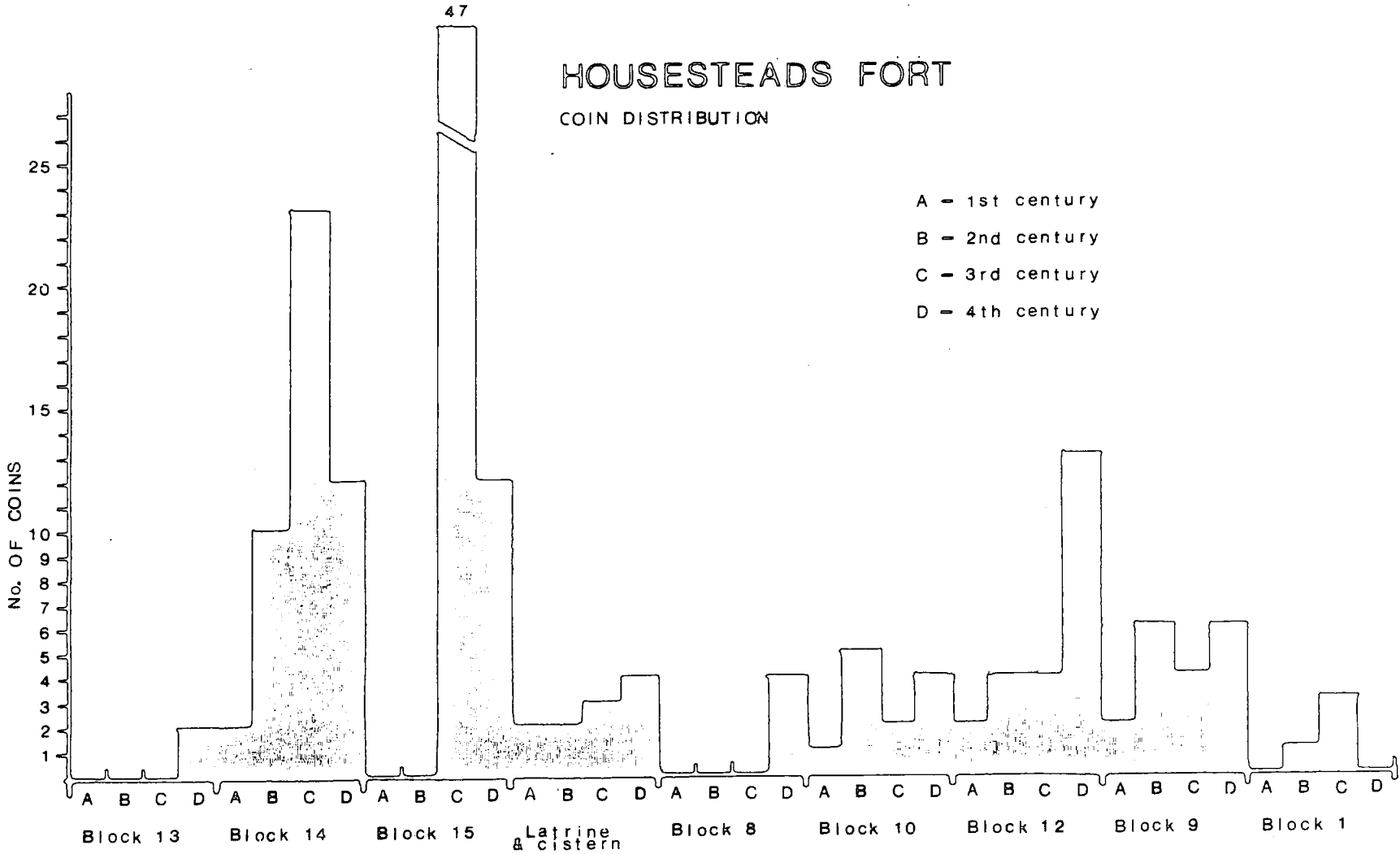
Site	296-317	318-402	Percentage total	
			296-317	318-402
Housesteads	24	136	15	85
Vindolanda	9	90	9	91
Portchester	75	383	16	84
Caerwent	21	901	2	98
Leicester	16	288	5	95
Silchester	134	5429	2	98

From the above table it would seem that Portchester, a typical Saxon Shore fort, was not abandoned during the period following 296 or, at least, for a length of time large enough to show up in the coin

assemblage from the site. This does not prove that the Housesteads and other northern fort garrisons were not placed in Saxon Shore forts during the late third century. As these troops may not have returned north until a relief garrison was available to replace them in the Saxon Shore forts, thereby providing continuity in population. It is interesting to note the high coin counts at Housesteads and Vindolanda in the period 296-317 in comparison to the civil sites. This is another reflection of the high military expenditure in the north and also, as it would appear, the south, during this period. A period of much military activity with the invasion and the recovery of the province in 296 by Constantius Chlorus and the reoccupation and rebuilding of Housesteads and other Wall forts, followed by his later northern operations in 306.

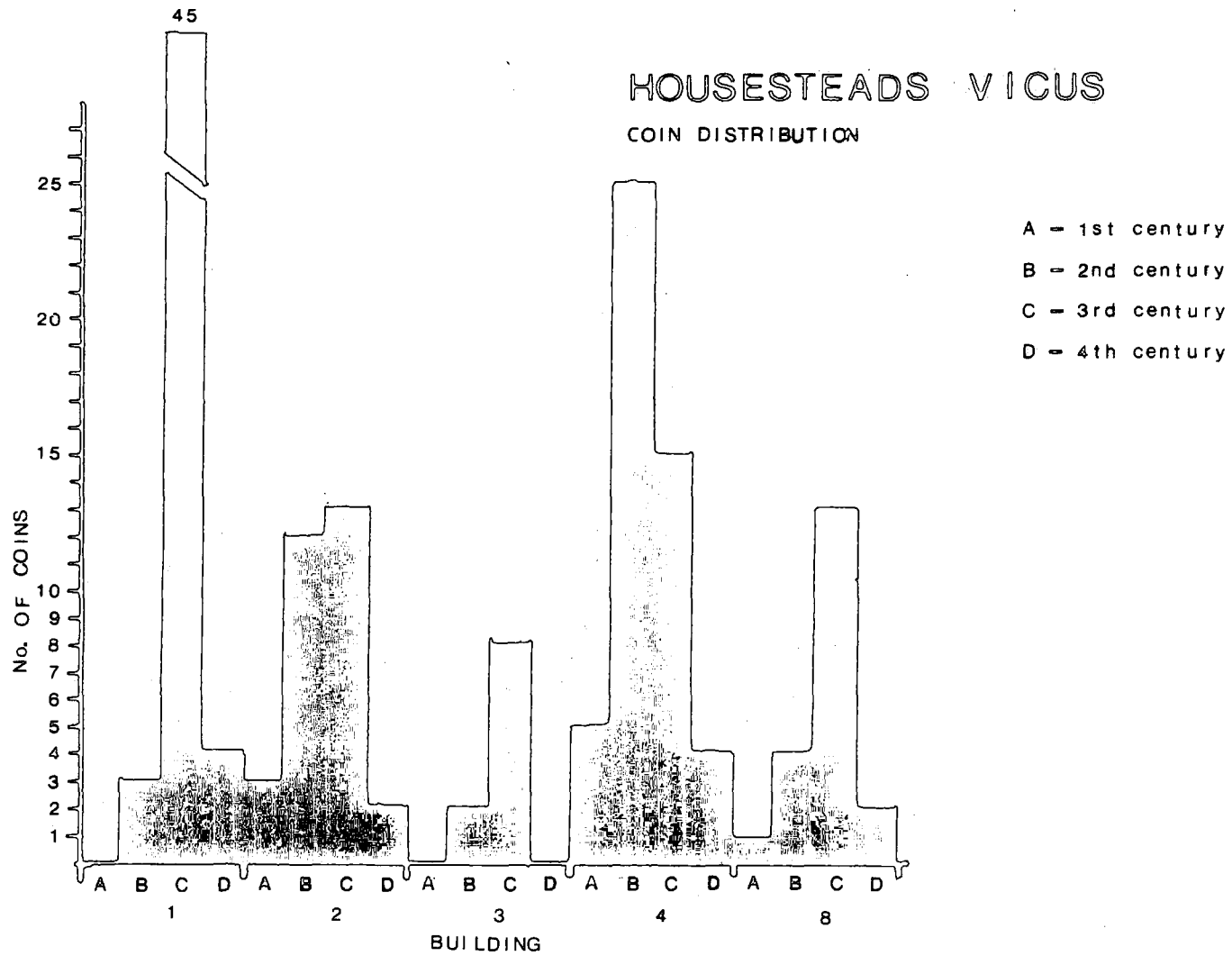
HOUSESTEADS FORT

COIN DISTRIBUTION



HOUSESTEADS VICUS

COIN DISTRIBUTION



THE FOURTH CENTURY

As noted in the preceding section the soldier in the fourth century was chiefly paid in kind, the annona militaris. But in the first half of the fourth century, at least, he received a regular wage. The Beatty papyri from Panopolis has revealed that in Diocletian's reign, in the years 299 and 300, soldiers received an annual stipendium, paid in three instalments as it had been earlier in the principate. Legionaries appear to have received 1,800 denarii a year while auxiliaries may have been paid 1,200 denarii plus the annona, a food allowance, of 600 denarii a year (Duncan-Jones 1978). Pay was supplemented by donatives given on the birthdays and accession days of members of the imperial college (type A), and also on their holding of the consulship (type B). Duncan-Jones would suggest that type A donatives usually produced 2,500 denarii and type B 1,200 denarii, but notes that the Beatty papyri only lists donatives for legionaries and equivalent troops, the only cohort listed in the papyri, cohors XI Chamavorum, is not credited with receiving any donative, neither is the ala I Hiberorum, while the ala II Herc. dromedariorum did receive a type A donative. As a result it does not appear certain if auxiliary troops received donatives. This will be discussed below.

Duncan-Jones would suggest that therefore Diocletian may be exaggerating in the preamble to his edict of prices when he declared that the exorbitant avarice of traders may exhaust all the soldiers' stipendium et donativum in a single purchase. Yet pay, even including donatives, was poor and its real value must have sunk rapidly as the

denarius depreciated further and further in value. These annual payments still continued in Julian's day. In 360 he complained to Constantius II that his troops had received no yearly pay (annuum stipendium) since his accession as caesar, and Ammianus confirms that Constantius had withheld their stipendium and donativum (Ammianus XX,8.3-10). In other passages Ammianus uses the terms stipendium and donativum synonymously to denote gold payments made on the accession of an emperor and his quinquennial celebrations (Ammianus XX,11.5; XXVI,8.6; XXVIII,6.12,17,19), and there is no recorded annual payment later than Julian's reign (Jones 1973, 623) and indeed under Valentinian there was no coin small enough to pay the sum out on an annual basis. This was a result of the gradual, but fast, degeneration of the 'denarius' during the fourth century. In 294/6 Diocletian replaced the XXI billion radiate introduced by Aurelian, and thought to be valued at five denarii, by a large laureate coin weighing about 10 grams and having a silver content of around 3%. Two smaller copper denominations were also issued. The large laureate coin appears to have been valued at ten denarii, but after 301 its value was doubled, i.e. it was now worth twenty denarii. The coin rapidly diminished in size and weight. In 308/9 it would appear that the value of this coin was increased to twenty-five denarii as coins dated to this year bear the value mark CI/HS. The traditional abbreviation of the sestertius being HS, i.e. giving the coin a value of one hundred sestertii (Hendy 1985). In 318 it was superseded by an even baser coin weighing 3 grams with the reverse type VICTORIAE LAETAE PRINC PERP. This coin would appear to have been valued at 12½ denarii by comparison with value marks on the parallel eastern issues of Licinius and as such represents the halving of the coins previous value. Between 318 and 348 this coin

continued to fall in weight from about 3 grams to circa 1.7 grams. To supplement this coinage two standards of high quality silver were produced, the siliqua at one ninety-sixth of a pound, and the miliarensis at one seventy-second of a pound of silver. Most higher economic activity would have been through the medium of these silver coins which continued to be issued in various modules at periods throughout the fourth century. The other precious metal coin was the gold solidus. It was introduced by Constantine in circa 310 and accepted throughout the Empire following the defeat of Licinius in 324. Weighing one seventy-second of a pound of gold (4.45 grams) the solidus became the high denomination of the Roman world and its integrity was protected down to the eleventh century. In 348 the billon coinage was again reformed with the return to a large denomination weighing 5.2 grams and containing about 3.5% silver. Two smaller denominations were also produced; the larger, weighing 4.5 grams, containing about 1.5% silver and a small copper denomination weighing circa 2.6 grams. All of these coins bear the optimistic legend FEL(IX) TEMP(orum) REPARATIO. The value of these coins is not certain.

This coinage like its predecessors rapidly fell in weight and size. The smaller denominations were abandoned and the larger coin was reduced to only 2.2 grams by 361 when Julian tried to return to the Diocletianic standard. He introduced a coin weighing 8.3 grams and containing about 3% silver with a reverse of a blatantly pagan Apis bull. This high value coin only just outlasted Julian's death in 363. What did survive was a bronze fraction weighing 2.4 grams which was produced in large quantities under the Valentinianic dynasty (364-78). The idea of adding

silver to the lower denominations was now completely abandoned. In circa 380 a double and half denomination of this coin were issued, both in copper. In the western empire the two larger denominations did not outlast 388 from which date only the small 1.5 gram issue continued. Indeed the Theodosian Code shows us that it became illegal to use the higher denominations:

'We command only the centenionalis coin (centenionalis nummus) to be handled in public use, the making of the larger coin (maior pecunia) having been discontinued.' This law was given 12 April at Milan in 395 (Codex Theodosianus 9.23.2).

Against this background we can see that whatever happened to the annual stipendium (et donativum) the accession and quinquennial donatives were the most important part of a soldiers payment. The value of the accession donative was five solidi and one pound of silver which is the equivalent of nine solidi in all. This figure is first recorded as the sum paid on the accession of Julian in 360 and would appear to be a standard payment as would as does the quinquennial donative of five solidi (Jones 1973, 624). As donatives were paid on the accession and subsequent quinquennial celebrations of all members of the imperial college they normally occurred more than once in every five years, although many emperors harmonised their quinquennia. Donatives of unknown amount also seem to have been paid when an emperor received a consulship. Thus soldiers would have received this as the most important part of their pay and as it was in precious metal in a system with unstable base denominations its value, especially black market, must

have been heightened. The regular donative and the stipendium being of negligible importance, if they existed, in the late fourth century. They are last recorded being paid under Julian. Food and uniforms were also issued to soldiers as part of their payment in kind.

However important these donatives were in the later fourth century some doubt has been cast on whether or not they were paid to all types of limitanei (P.J Casey pers. comm.) and indeed very little late Roman silver or gold has been found on Wall sites, none at all from the large Housesteads coin list. The years in which the accession and quinquennial donatives were paid have been calculated by Kent (1981) by studying coins commemorating donatives and comparing them to classical sources. It is not sufficient to simply keep adding on five years to an emperor's accession date since it was normal for imperial colleagues to harmonise their vota. For instance Diocletian and Maximian celebrated joint decennalia and vicennalia and Constantine followed this trend celebrating his quindecennalia in 321. His sons also continued the trend (Eusebius, Panegyric 3.1-2; in Kent 1981, 50). Quinquennial celebrations are usually consistent with this reckoning although care must be taken when single numbers are present on coins since these generally denote vota suscepta which refer to the next five or ten year celebration. For example VOT XV MVLT XX on coins denotes the quindecennalia of Constantine I, while Constantine II simultaneously celebrated his quinquennalia VOT V MVLT X, which means 'have done the last five years well and will do the next five better'. There are however exceptions to this rule.

The fact that donatives of unknown amount may have been paid for consulships is shown by the fact that consulships often fall on vota years, especially under Constantius II, perhaps indicating the emperor trying save money by having both celebrations in the same year. Kent has used this to fix the decennalia of Constans and the vicennalia of Constantius II in 342, since the donative coins have triumphal inscriptions; there was a victory over the Franks in 342. Both emperors also held consulships in this year. Constantius celebrated his delayed tricennalia at Arles in October 353. Magnentius released vota coins in 351-2 with the forms V-X or X (suscepta). It is not clear if they are numbered from his accession or are just a grossly premature quinquennalia.

Constantius' thirty-fifth anniversary is well documented and took place in Rome, April and May 357. Julian did not synchronise his donatives with Constantius II releasing a two-fold suscepta (i.e. looking forward ten years) in 355-7 and celebrated his quinquennalia at the normal date in 360 in Vienna. It would seem that that he had to pay another quinquennial donative to the army of Constantius II in 362 since they had not received one since 357 (Kent 1981, 53-4). All these dates are summarised in the table below, as received by a trooper in a British fort, and the quantity of bullion produced calculated. It must be noted that in 358 Julian's troops complained that they had not received a donative since Julian's arrival in Gaul. The dates of the later donativa are taken from Casey and Brickstock (forthcoming) and the consulships from Clinton (1850).

Date	Event	Pay
314-5	Constantine I <u>decennalia</u> . Consuls	5 <u>solidi</u>
317	Accession of Constantine II	5 <u>solidi</u> & 1 lb silver
319	Constantine I consul	?
320	Constantine I & Constantine II consuls	?
321	Constantine I <u>quindecennalia</u> , Constantine II <u>quinquennalia</u> . Consul	5 <u>solidi</u>
324	Accession of Constantius II. Consul	5 <u>solidi</u> & 1 lb silver
325,6	Constantine I <u>vicennalia</u> , Constantine II <u>decennalia</u> , Constantius II <u>quinquennalia</u> . Consuls	5 <u>solidi</u>
327	Constantius II consul	?
329	Constantine I & Constantine II consuls	?
330	Constantine I <u>quinvicennalia</u> , Constantine II <u>quindecennalia</u> , Constantius II <u>decennalia</u>	5 <u>solidi</u>
333	Accession of Constans	5 <u>solidi</u> & 1 lb silver
335	Constantine I <u>tricennalia</u> , Constantine II <u>vicennalia</u> , Constantius II <u>quindecennalia</u> , Constans <u>quinquennalia</u> . Consuls	5 <u>solidi</u>
339	Constantius II & Constans consuls	?
342	Constantius II <u>vicennalia</u> , Constans <u>decennalia</u> . Consuls	5 <u>solidi</u>
346	Constantius II <u>quinvicennalia</u> , Constans <u>quindecennalia</u> . Consuls	5 <u>solidi</u>
350	Accession of Magnentius	5 <u>solidi</u> & 1 lb silver
351-2	?Magnentius <u>quinquennalia</u>	? 5 <u>solidi</u>
353	Constantius II <u>tricennalia</u> . Consul	5 <u>solidi</u>
354	Constantius II & Gallus consuls	?
355	Accession of Julian	5 <u>solidi</u> & 1 lb silver
356	Constantius II and Julian consuls	?
357	[Constantius II <u>quintricennalia</u>]. Consuls	?
360	Julian <u>quinquennalia</u> . Consuls	5 <u>solidi</u>
362	Julian <u>decennalia</u>	5 <u>solidi</u>
363	Accession of Jovian. Consul	5 <u>solidi</u> & 1 lb silver
364	Accession of Valentinian and Valens. Consul	5 <u>solidi</u> & 1 lb silver
365	Valentinian I and Valens consuls	?
366	Gratian consul	?
367	Accession of Gratian	5 <u>solidi</u> & 1 lb silver
368	Valentinian & Valens <u>quinquennalia</u> . Consuls	5 <u>solidi</u>
369	Valentinian consul	?
370	Valentinian & Valens consuls	?
371	Gratian consul	?
372	Gratian <u>quinquennalia</u>	5 <u>solidi</u>
373	Valentinian & Valens <u>decennalia</u> . Consuls	5 <u>solidi</u>
374	Gratian consul	?
375	Accession of Valentinian II	5 <u>solidi</u> & 1 lb silver
376	Valens & Valentinian II consuls	?
377	Gratian <u>decennalia</u> . Consul	5 <u>solidi</u>
378	Valens <u>quindecennalia</u> . Consuls	5 <u>solidi</u>

If these bullion payments were made throughout the fourth century (discussed below) our hypothetical soldier would receive at least 161 solidi in the sixty-four years following 314. This is equivalent to 716 grams of gold. In the second century a trooper would have received pay of one hundred denarii a year, equivalent to four aurei, which implies 256 aurei in sixty-four years or 1,869 grams of gold.

However we are missing an important consideration in the above calculation in that for a major part of the period under study the auxiliary soldiers were still receiving stipendium of 1,200 denarii and annona of 600 denarii on top of the donatives. Hence it can be noticed that in the early period of the study the main billon denomination was a 20 denarii piece, raised to 25 denarii in 308-9 and halved to 12½ denarii in 318, with the introduction of the VICTORIAE LAETAE PRINC PERP type, it was still possible to pay the troops stipendium on an annual basis. The small coins appear to have remained at this value down to 341 with the GLORIA EXERCITVS two standard (330-35) and one standard (335-41) issues and possibly also down to 348. However by the time of Valentinian the silver had been removed from the copper coinage giving the coin only its copper value.

The solidus was probably tariffed at 28.8 million denarii in circa 360 (Jones 1953, 308). As Casey and Brickstock (forthcoming) have shown the relationship between copper and gold was 1:1,800. It follows that if the solidus weighs 4.45 grams and the Valentinianic copper coin 2.7 grams then there are $(4.45 \times 1,800) \div 2.7 = 2,967$ ($\approx 3,000$) copper coins to one solidus. Further one copper coin can then be valued at 28.8 million

denarii divided by 3,000 which gives a value of 9,600 denarii. This may imply a value of a round 10,000 denarii allowing for the customary overvaluation by the state. Hence the coins became known as nummi rather than as large multiples of the defunct denarius. From the foregoing it would appear that between circa 341 and circa 364 an enormous devaluation of the coinage took place, the value of the small denomination dropping from 12½ denarii to 10,000 denarii. A soldier's stipendium and regular donative came to considerably less than this and so there was now no coin small enough to pay a soldier on an annual basis. Thus this type of payment was of negligible importance, if any, when compared to the accession, quinquennial and consular donatives paid out in precious metals.

If we compare the Valentinianic donativa with the second century pay of the auxiliary soldier we find that in the fourteen years between 364 and 378 a soldier would receive fifty-two solidi which amounts to 231 grams of gold. Over a fourteen year period in the second century an auxiliary soldier would receive 409 grams of gold (15 × 4 aurei which in the second century contained approximately 7.3 grams of gold). This on first appearances would appear to show that the late fourth century soldier was only paid half the amount of his second century parallel. When we consider the annona we find that in the fifth and sixth centuries it was commuted for four or five solidi. The soldiers allowance for vestis is uncertain, but as he received one solidus for his chlamys, and was allowed three garments in all, chlamys, pallium, and sticharium, three solidi may be implied. Jones has suggested a further three solidi for arms (Jones 1953, 306) although it would seem

unlikely that these had to be renewed frequently. As a result a Valentinianic soldier would received a donative of an average 3½ solidi per year (52 ÷ 14) plus the equivalent of ten or eleven solidi for food, clothing and equipment which produces about 62 grams of gold for each soldier each year. This is double the pay of his second century counterpart.

If soldiers were paid bullion donatives of five solidi and a pound of silver for quinquennalia between 314 and 341 then they would have received fifty-two solidi, 231 grams of gold, compared with a second century soldier who would have been paid 788 grams of gold over the same period. However during this period it was still possible to pay a soldier his stipendium et donativum in denarii communes (donativum to be distinguished from from accession and quinquennial donatives paid in gold and silver). This is opposed to the monetary system operating under Valentinian when inflation had increased the value of base denominations to such an extent that all payments, if they were to mean anything in real terms, had to be paid in bullion. Therefore it is proposed that donatives before 341 were made in billon coinage. This is demonstrated by the fact that vota were recorded on billon coins during this period as well as silver. Indeed if we make an examination of fourth century coins from forts it will be noticed that they do not appear until after 341. At Richborough the first silver coin is of Constantius II and is dated to 342 (VOT/XX/MVLT/XXX). The only silver coin from Vindolanda and the first silver coin from Portchester are both of Julian and dated 355/60 (VOTIS/V/MVLTIS/X). The Wallsend siliqua of Constantius II is dated 353 (VOTIS/XXX/MVLTIS/XXXX) while the earliest fourth century

to wear
a letter

350/60
or later

silver from Piercebridge are the two miliarensia, which formed part of a lost hoard, these are dated 340-50 and 352-55. These dates appear to be significant to our argument that the giving of the donatives of five solidi and a pound of silver for an accession and five solidi for quinquennial celebrations did not start until after 341 due to the great inflation in the middle of the century.

If we are right to suggest that donatives were paid in denarii communes in the first part of the fourth century, a period when the billon coinage was still of low enough value to allow the payment of annual stipendium, we can calculate auxiliary pay over the period 314-42. Duncan-Jones (1978) has calculated the necessary figures. He suggests 1,200 denarii for stipendium and 600 denarii for annona both paid on an annual basis with a further amount of 2,500 denarii for accessions and perhaps quinquennalia and 1,200 denarii for the holding of the consulship. From this we can calculate the approximate amount received by an auxiliary between 314 and 341. The results are included in the following table (P.T.O).

Date	Event	Pay (denarii)
314-5	Constantine I <u>decennalia</u> , Consul	2,500
317	Accession of Constantine II	2,500
319	Constantine I consul	1,200
320	Constantine I & Constantine II consuls	1,200
321	Constantine <u>quindecennalia</u> , Constantine II <u>quinquennalia</u> , Consul	2,500
324	Accession of Constantius II, Consul	2,500
325,6	Constantine I <u>vicennalia</u> , Constantine II <u>decennalia</u> , Constantius II <u>quinquennalia</u> , Consul	2,500
327	Constantius II consul	1,200
329	Constantine I & Constantine II consuls	1,200
330	Constantine I <u>quinvicennalia</u> , Constantine II <u>quindecennalia</u> , Constantius II <u>decennalia</u>	2,500
333	Accession of Constans	2,500
335	Constantine I <u>tricennalia</u> , Constantine II <u>vicennalia</u> , Constantius II <u>quindecennalia</u> , Constans <u>quinquennalia</u> , Consuls	2,500
339	Constantius II & Constans consuls	1,200

The cumulative results of the above table show that the donatives paid between 314 and 341 amount to 26,000 denarii per man. To this must be added the annual stipendium and annona:

$$27 \text{ years} \times (1,200 + 600) + 26,000 = 77,600 \text{ denarii}$$

If we wish to compare this to the type of donative given later in later in the century it is necessary to convert the number of denarii into the corresponding number of solidi. This is where a problem in this method becomes apparent because the period saw fast and increasing inflation with a corresponding rapid increase in the value of gold in terms of denarii. Unfortunately the price of gold at many of the dates in the list is not known. If it had existed in 301 the solidus at 4.45 grams would have been worth 1,000 denarii. In circa 309 it would have been worth 1,389 denarii. The value of the solidus in 324 would have been 4,350 denarii. In the middle of the century a papyrus gives the price of the solidus at about 5,760,000 denarii (576 myriads). Another papyrus

dated to the late fourth century equates the value of the solidus to 37,500,000 or 45,000,000 denarii (Jones 1953, 308). If these values are plotted on a graph the early points show gradual inflation up to the middle of the century with extremely rapid inflation after this date. This again underlines the need for payment in bullion in the second half of the fourth century rather than payment in denarii communes as in the first half of the century.

We have calculated that if paid in notional denarii a soldier would have been paid 77,600 denarii between 314 and 341. To convert this into solidi it would be best to take the 324 value as this falls into the middle of the range. This implies that between 314 and 341 an auxiliary soldier may have been paid the equivalent to 18 solidi (77,600 ÷ 4,350). Which implies 0.7 solidi per year or 3 grams of gold. This compares with 3.7 solidi per year or 16.5 grams of gold under Valentinian.

Payment of an average 3 grams of gold per year between 314 and 341, when calculated using payment in denarii, compares with an average 8.6 grams per year calculated using the later known bullion donatives. Thus payment in denarii communes in the first half of the fourth century would appear to fit the inflationary model better. It would also show why silver donative coins are absent from military sites in the first half of the fourth century. Diocletian may then not be exaggerating in the preamble to his edict of prices when he declared that all a soldiers stipendium and donativum could be exhausted in a single purchase.

The evidence then of silver coinage not appearing in forts until after 341, the massive inflation in the middle of the century, and the ability to pay wages in denarii communes before 341 all seems to indicate that the payment in bullion of five solidi and 1 lb silver for accessions and five solidi for quinquennial donatives would not have begun until after 341 and from this time become a fixed amount. The bullion would have varied in value according to inflation, keeping its real value steady, and keeping the soldiers happy. Further, that the payment of stipendium may have stopped under Valentinian but it is recorded as being present under Julian. The copper nummus being valued at 10,000 denarii under Valentinian made such a payment in base metal virtually worthless. Ammianus tends to use the terms stipendium and donativum (probably bullion type) indifferently as though they meant the same thing by his time. An examination of the lists of donatives drawn up above clearly shows that they were at first paid at irregular intervals but by the time of Valentinian there was some sort of donative being paid out each year. Thus taking the place of the now defunct, or if still paid, worthless, stipendium.

Accepting that soldiers pay in the late fourth century was in the form of bullion donatives we find that under Valentinian a soldier received about fifty-two solidi or 231 grams of gold in a fourteen year period (364-78). If we are correct in thinking Housesteads was fully occupied during this period with a garrison of about 960 men then the unit should have received a total of 222 kg of gold in fifteen years giving an average of 15 kg (or the equivalent in silver or in both metals) each year. For this example we assume that the Housesteads garrison received

all the described types of donative and at this point it is not important if we are correct or not in this assumption. Whether or not Housesteads and other Wall garrisons received these donatives will be discussed below.

The payment of the equivalent of 15 kg in gold annually is a large amount but when we consider this is just to one unit, a small part of the whole Roman army, the complete donative must have been a very large amount of bullion.

So where did all the gold and silver to pay for this come from? The answer is the largitiones (later sacrae) and comes who had replaced the summae rationes and rationalis by 342. These were concerned with the finance of the earlier empire and control of state land other than that directly administered. The largitiones and its associated offices has been studied by Dr. J.P.C Kent (1961) and most of the information below derives from this study.

The single source of revenue to the largitiones was collatio lustralis. This was collected in cash and at five yearly intervals. There is no evidence that it was particularly heavy, but because it originated from the hated urban capitatio, workmen were called upon to pay, solvent or not, and texts refer to the hardships that this produced. During the fourth century the collection of the collatio was the responsibility of the curia of each city. There is little doubt that this quinquennial tax was designed to meet the quinquennial donative. Indeed the name

largitiones is derived from the technical use of the word in late Latin to mean 'military donative'. However the fact that the office is first heard of in 342 adds weight to our argument that bullion donatives started in 341.

Other main sources of revenue for the largitiones were the titulus auri comparaticii, which was a land tax with the function of financing the purchase of gold, and the bina et terra, also a land tax of mysterious function. While the gleba senatoria was a supertax on the estates of the hierarchy. There were also 'voluntary' payments. The oblatio senatoria was paid by the Roman senate on a grand scale at quinquennial celebrations and to a lesser extent with the new year vota. The aurum coronarium was paid by the curial classes who gave gold crowns and other gold objects, such as statues of Victory, on occasions of public rejoicing like imperial accessions, triumphs and so on. Although these taxes were designed to be levied from the landed rich, the city councils usually levied them on the community at large. Other sources of revenue for the largitiones were customs duties, fines and quarries, ^{whom} who paid 10% of their products to the state. By 379 the revenue from the emphyteutic and patrimonial land had passed to the res privata. Down to 364/5 the largitionales tituli were collected by largitionales civitatis, who were responsible for the collection of taxes from each city and then passed the money onto two palatini who were despatched to the province to collect the taxes. Provincial governors, after 365, were forbidden to accept coin without melting it down and subjecting it to tests for weight and purity. Any deficiency was required to be made up

by a charge called obryza. Thus tested for weight and fineness at every stage the bullion finally arrived at the comitatus in refined bar form. From the year 368 coins were marked OB(ryzum) for gold and P(u)S(ulatum) for silver as an expression of imperial fineness. The mint producing these coins followed the emperor around from province to province and therefore enables us to tell where the emperor was at the time of minting.

Another facet of the collection of taxes to pay donatives is directly reflected in the coin finds of Housesteads and other forts, and civil sites. This is because the army and other officials were paid in gold while the ordinary man had to pay his taxes in gold. To bridge the gap between the two parties were the collectarii, or money changers, who bought gold solidi for the government. A report by Symmachus, the Prefect of the City, speaks of the collectarii of Rome: 'vendendis solidis, quos plerumque publicus usus exposcit, collectariorum corpus obnoxium est, quibus arca vinaria statutum pretium subministrat' (quoted in Jones 1953). The guild of money changers was then under the obligation of selling solidi to the government and being paid in return in denarii at a fixed tariff from the arca vinaria, which was presumably the account into which the money made from government sales of wine in Rome was paid. The small change thus received was of no use to the treasury, which accordingly supplied it to the collectarii to purchase solidi on the government account. Another function of these or similar bodies was to sell solidi to the people to enable them to pay their taxes. For this transaction it would seem that the citizen handed over a certain weight of copper coin for a solidus. The solidus was necessarily

weighed before purchase since as the government collected taxes in weighed bullion the collectors were at pains to have solidi of the correct weight otherwise they would have to make up the deficit themselves (P.J Casey pers. comm.).

As a result of the tax system there was the army being paid in gold and silver and there were civil sites in which large quantities of low value copper coinage was supplied to enable the state to purchase back the gold. This produces the effect of their being plentiful Valentinianic copper coins on civil sites but very few on military sites where they are comparatively archaeologically invisible, precious metal coins were of more importance and for the first time in Roman Britain, fresh supplies of coinage were going straight to civil sites not emanating from the army as was previously the case. In the following table coins of the House of Valentinian from a series of sites are expressed as a percentage of the total number of coins 300-50 at each site plus the Valentinianic coin counts (for source of coin lists see p.280).

Site	300-50	364-78	% total
Housesteads	130	16	11
Piercebridge	178	131	42
Vindolanda	75	5	6
Wallsend	30	3	9
Caerwent	788	41	5
Corbridge	2554	792	46
Leicester	174	87	33
Silchester	3063	1557	34

The table clearly shows that there are generally proportionately many more Valentinianic coins on civil sites than forts when compared to the

first half of the fourth century. There are two sites that do not fit the proposed picture, Piercebridge and Caerwent. At Piercebridge Casey and Brickstock (forthcoming) have shown from their study of the coins that the fort was unoccupied between 330-48 when the coinage of the GLORIA EXERCITVS, CONSTANTINOPOLIS, and URBS ROMA type, abundant on most sites, is much lower than expected and probably represents the sort of volume that was likely to have been residual in the currency pool when the fort was reoccupied. It is not clear why the number of Valentinianic coins at Caerwent was so low. Caerwent was definitely occupied late in the Roman period. Its walls have external projecting towers and in the floor of one of these was a hoard dated to the 350's. Caerwent has also produced a Christian martyr, Julius of Caerwent (Johnson 1980, 96 and 169). The most plausible explanation for the lack of Valentinianic coins at Caerwent is bad recovery of these coins which are small and come from the upper layers of the site's stratigraphy.

However good this explanation may be others could say that the low incidence of Valentinianic coins on the northern frontier would have to be seen in connection with the events 367-69. In 1963 Richmond summarised the then held view of these events. 'In A.D 367 the Saxons, Picts and Scots made a synchronized assault on the province, killing the Count of the Saxon Shore...and immobilizing the Duke of the Britains...The Wall and the forts of the north again fell... (due to) the treachery of the frontier scouts, who were bought over by promises of a share in the loot' (Richmond 1963, 62). Any reconsideration of the northern frontier must proceed from Ammianus Marcellinus' account of the events '....Britain was bought into a state of extreme need by a

conspiracy of the savages that Nectaridus, the comes maritimi tractus had been killed and the dux Fullofaudes had been 'ambushed' (circumventum) by the enemy and taken prisoner....At that time the Picts, divided into two tribes called Dicalydones and Verturiones, as well as Attacotti, a warlike race of men, and the Scotti were ranging widely and causing great devastation, while the Gallic regions, wherever anyone could break in by land or sea, were harrassed by the Franks and their neighbours the Saxons....' (Ammianus XXVII,8.1).

Ammianus clearly states that Nectaridus, the comes maritimi tractus was killed and Fullofaudes the dux was hostilibus insidiis circumventum. The later was a general, who may have been the Dux Britanniarum, who was in some way suprised by the enemy. The death of the Count of the Saxon Shore, or more correctly the comes maritimi tractus, demonstrates that there was an attack on the area of his command. If this command is the same as that of the Count of the Saxon Shore it probably extended from the Wash around the south coast, possibly even including Wales. Further Ammianus focuses his narrative of the attack on London. 'When the Batavii, Heruli, Jovii and ^{? Victorii}Victorii, who followed him (Count Theodosius), had arrived, troops confident in their strength, he began his march and came to the old town of Lundinium, which later times called Augusta. There he divided his troops into many parts and attacked the predatory bands of the enemy, which were ranging about and were laden with heavy burdens; quickly routing those who were driving along prisoners and cattle, he wrested from them the booty which the wretched tribute paying people had lost. And when all this had been restored to them, except for a small part which was allotted to the weary soldiers,

he entered the city, which had previously been plunged into the greatest difficulties, but had been restored more quickly than rescue could have been expected, rejoicing and as if celebrating an ovation' (Ammianus XXVII,8.7-8).

Therefore Ammianus would seem to be indicating that the Saxon Shore was overwhelmed, its commander was killed and London was threatened before the intervention of an expeditionary force. The Wall destruction school would call upon the areani or arcani to back their argument. The areani appear to have been scouts, whether Roman soldiers or natives is not clear, whose duty was to 'hasten hither and thither over long distances, to give information to our generals of the clashes of rebellion amongst neighbouring people' (Ammianus XXVIII,3.8-9). Gradual corruption and the sale of intelligence is given as the reason for their dismissal. It appears that their betrayal was gradual being brought on by the 'promise of great booty at various times' (Ammianus XXVIII,3.8) and only came to a head when they gave no warning of the attack 367. This does not prove that the Wall itself was attacked. If we turn to the fate of Fullofaudes, the dux, that the enemy surprised him is clear but the term circumventum does not necessarily mean that he was ambushed. The word could be used to mean that Fullofaudes was prevented from intervening. It is even possible to suggest that the enemy sailed around him and attacked from his rear. Indeed the five signal stations on the Yorkshire headlands between Goldsborough and Filey appear to have been constructed in Valentinianic times from an examination of their annual coin loss histograms, as drawn by P.J Casey (1980, 52), and may be the response of an attack from the sea/^w which could well be the case especially if

Fullofaudes was based in York. Indeed an attack on the massive fortifications of Hadrian's Wall would hardly be consonant with the strategy of the conspiracy. Since a seaborne attack is implicit in the participation of the Scotti from Ireland and in an attack, by Picts, on the Saxon Shore; it is not certain if Ammianus is using the term Gallic Shore in a poetic sense to mean the shore nearest Gaul or the coast of Gaul. However whether this attack was in the south of England or on the Yorkshire Coast is not important to this thesis. What is important is that the literary sources do not ^{implicate} ~~implicate~~ the involvement of Hadrian's Wall, and hence Housesteads, in the invasion.

An inscription from Ambleside shows that the fort was attacked in the fourth century, perhaps at this time, and a retired centurion and pay clerk were killed by the enemy who had broken into the fort (Welsby 1982). Indeed there is some evidence to suggest that the defences of the north-west of England were strengthened about this time. Lancaster appears to have had a defensive arrangement that closely parallels the architecture of the Saxon Shore forts. The construction of the fort is not very closely dated but a terminus post quem is provided by a coin of 326 from beneath the ^Yery wall. This wall was of massive foundations and had at least one external tower (Potter 1979, 365). Thus it may be closer to the date of Pevensey where a coin of Constans has been found in one of the constructional beam-holes underneath the wall (Johnson 1980, 93). It should be noted that the Pevensey coin could have been planted by Charles Dawson who is known to have planted fake tiles on the site. The construction of the fort at Lancaster does however emphasise the need for fortifications in the north-west in the fourth century. The

noth-west also saw the construction of the fort at Caer Gybi in the late fourth century. Maryport, Ambleside and Low Burrow Bridge were certainly garrisoned in 367, and Burrow Walls was constructed earlier in the century. Potter (1979, 41) suggests that Ravenglass was reconstructed under Theodosius following a possible destruction phase from the evidence of burnt daub which contained a Magnentian coin. All this evidence together with the Yorkshire signal stations would suggest that the danger was from the sea and not across the northern frontier. This has previously been suggested by Dobson and Breeze (1976, 221): 'In A.D 367 they (the Picts) may have ignored Hadrian's Wall and simply sailed round it....this may have been how Fullofaudes was caught in a trap. It would also account for the lack of evidence for the destruction of Hadrian's Wall at this time - in fact the Wall was probably the safest place in the province'. Indeed the outposts north of the Wall had been abandoned earlier, for example High Rochester was abandoned at the end of the third century as is shown by the coin list which ends with coins of Carausius (Casey and Savage 1980) and never reoccupied. This would suggest little danger in the area to the north of the Wall.

That there was some trouble in 367 cannot be doubted, but little can be done to ascertain its extent. Archaeology, in many cases, suggests that the trouble was not serious but the archaeological evidence may have serious limitations in determining the presence of raiders in the area. Whatever did happen there was certainly a vigorous reaction by the Roman government. By the end of 368 Theodosius had cleared the province of the enemy and put down a usurper. His total force of four auxilia palatina perhaps did not number more than 2,000 men (Tomlin 1974). Ammianus, our

main source for these events, was writing under Theodosius I, the son of Count Theodosius. Therefore he is not likely to have minimised the achievements of the father of his emperor. The crisis required the sending of a force of identical size under Lupercinus consisting of the Heruli and Batavii and two other units described as Moesian (Ammianus XX,1). Ammianus dismisses this in a couple of lines because Lupercinus was of minimal importance to Ammianus' emperor. P.J Casey has suggested that the main reason for dispatching Lupercinus to Britain in 360 was to remove him from Gaul at a critical stage in Julian's rise to power. Indeed seen in relation to the steps Constantius II took to prevent Julian obtaining enough money to usurp this proposal seems more than possible.

Not only is Theodosius said to have cleared the diocese of invaders, he is also credited with - 'making many necessary improvements, restoring the cities and defences....and protecting the frontiers by sentinels and outposts' (Ammianus XXVIII,3.1). It is in rebuilding that Housesteads and other Hadrian's Wall forts may fit into the Theodosian picture. There is a little evidence to suggest that Theodosius campaigned beyond the Wall. Claudian records that he 'pitched his camp amid the snows of Caledonia' (pan.VII,26 quoted in Welsby 1982, 26) and it may be due to this that the Wall forts were repaired. Casey (1979) has however cast doubts on Theodosian rebuilding in the north and suggests that as the events of 367 seem to have been largely in the south-east, then it should be Magnus Maximus who should be credited with the rebuilding since he is known to have campaigned against two tribes involved in the barbarian conspiracy. 'Incursantes Pictis et Scottos Maximus Tyrannus

strenue superavit' (Chronica Gallica a CCCLII, Gratian iii quoted by Casey 1979).

Casey cites the hoard of forty-eight solidi from Corbridge comprising thirteen issues of Magnus Maximus and the AVGOB solidus from South Shields as evidence of northern military activity. The hoard would appear to have been deposited circa 384. It contains unworn coins a great many of which are of Gratian. Maximus would later have withdrawn these in order to have minted his own. The South Shields' coin Casey has associated with Magnus Maximus' presence in Britain. As after 366/7 the comitatus (imperial residence) was normally the only source of gold. The AVGOB on the coin means pure tested gold coins (OBryzium) from London (AVGusta), which was thus also an imperial residence at the time of minting. Casey suggests that it was either minted to pay for the campaign or issued as a donative to the victorious soldiers on the completion of hostilities. Whatever the actions against the Picts and Scots the Wall garrisons do not seem to have been involved in the events that led to the collapse of Roman rule in 410 (Mann 1979).

Unfortunately the repair work cannot be closely dated, but it does seem to be repair work because the buildings needed refurbishing not because of any destruction by hostile forces. The building work on the Wall is outlined in the following paragraphs.

Haltonchesters, Rudchester and possibly Old Penrith were reoccupied after having been abandoned in the third century. At Haltonchesters several new buildings were built. They consisted of two constructional

methods, the normal ashlar construction, while the other buildings made use of stone sleeper beams for supporting wooden uprights which were attached to the sleeper beams by iron clamps (Gillam 1961). Sleeper beams are normally of wood. Both of these building types overlay a thick layer of earth which had collected on the site since its abandonment. One of the buildings sealed a sherd of Crambeck pottery datable to after 369 (Jarrett 1959). The third century praetorium was overlain by these sleeper beams. Several of the beams show recut holes indicating at least two phases. Although several beams and ashlar walls were located no recognisable plan could be made from them. A rebuilt angle tower contained a coin of Constans (342-48) in its mortar (Daniels 1978, 181). A similar stone sleeper has been found at Rudchester also overlying a layer of earth suggesting a similar site history.

At Bowness on Solway, although there is no structural evidence for reoccupation in the late third and early fourth centuries, in the late fourth century a timber building was constructed in the north-east quadrant of the site. The building was rectangular and about 5 metres wide. It was constructed in timber with stone packed post-holes set in a shallow trench. The extent of this building could not be elucidated due to the confusion of post-holes. Another possible late building of which only three post-holes remain existed near by. This building was surrounded by a scatter of charcoal and slag. The fact that little late fourth century pottery was found led the excavator to believe that either the fort had a small garrison or the nucleus of the late fourth century occupation was elsewhere (Potter 1979, 330-32).

Bidwell places period 6 as dating to circa 370 at Vindolanda. To this period he places the rebuilding and flagging of the barracks. The defences were strengthened by the placing of a rubble mound behind the wall, which appears to have buckled, to support it. Bidwell suggests that this is reminiscent of the post-Roman refortification of Iron Age hillforts in the fifth century (Bidwell 1985). It should be noted that a similar method seems to have been used on the Housesteads' defences. A building overlying the clay rampart backing on the east wall contained a coin of Constans (342-48) in the core of its wall (Breeze and Dobson 1976, 222). The principia contained abundant pottery attributable to the period after the 'Picts' War'. A coin of Valentinian II (388-92) is associated with the latest period of occupation of this building (Bidwell 1985, 47).

Major building work has been associated with Theodosius at Birdoswald. The building north of the via principalis was modified into a long narrow building similar to the second century building it overlies. To the north of it was a small detached room with a raised floor and a ventilator hole in the wall which was later blocked by a buttress and replaced by another ventilator that punched through the wall. Reused in the floor was an inscription dedicated to Maximian and Diocletian (RIB 1912). A quern was set into the paved floor and burnt daub suggested to the excavators that this was a cookhouse (Richmond and Birley 1930). A building associated with Huntcliff ware overlies a Constantinian building on the via quintana. It had heavy flagged floors and walls laid on flags. The building was not alligned to the axes of the fort

suggesting it had to be squeezed into the available space (Richmond 1931).

In the north guard chamber of the porta principalis in its final phase a floor of lime was put down upon which lay a heap of coal. At the south gate the east wall of the west guard chamber was reconstructed, following complete destruction, in large irregular masonry, said to be of a late fourth century style (Daniels 1978, 201). The defences between the porta decumana and quintana dextra were completely rebuilt with the new wall being constructed on the rubble of the old and a new rampart bank was put behind it. The excavators thought that it represented enemy action in 367 with the hostile forces demolishing the wall. 'It is an eloquent picture of the ruin effected in 367 as we are likely to get' (Simpson and Richmond 1933, 261). Such a hypothesis would seem unlikely and raiders would be more interested in plunder than systematically going along Hadrian's Wall demolishing fort walls. The wall had presumably collapsed through age. A coin of Valentinian was found in 1929 well stratified below one of the buildings immediately north of the via principalis (Frere 1974, 394).

Here we can turn to Housesteads which has several points in common with Birdoswald. The northern defences east of the north gate may have consisted only of a rampart mound by the end of the Roman period. The fort wall having collapsed outwards sealing fourth century pottery. This may explain why the rampart mound was on several occasions extended towards the south, eventually it even encroached on the intervallum road and blocked the entrance to the interval tower (Grew 1980). The use of a

rampart mound to support the wall could be very late if compared to Vindolanda.

Another parallel to Birdoswald is provided by the south guard chamber of the east gate which was also used as a coal store in the fourth century. It was possibly under Theodosius that the west gate was finally blocked and filled solid with a mass of rubbish (Birley E. 1959, 16). The guard chambers at Housesteads had previously been converted into heated rooms.

There is evidence for metalworking in the principia in the late fourth century. In the basilica principiorum Hodgson found a deposit of coal, ash and scoriae. While in room 12 800 iron arrowheads were found in a way that suggested the arrows were tied in bundles. Bosanquet (1904) suggested that the smith who made the arrows had a temporary forge in the principia. Also in the basilica was a fire containing broken pottery including Gillam type 229-32 dated 330-400 (Welsby 1982, 119). Some of the other alterations in the principia, described earlier (pp. 21-2), may also be late fourth century such as the walling up of the gaps between the columns and the putting in of hearths into various rooms.

A bath-house was inserted into the east end of block XV at some date after the construction of Wilkes' period III building. Excavations in 1981 dated this to the late third or early fourth century. The period III building had gone out of use, at least its eastern end, since the bath-house stoke hole broke through a period III wall and the bath-house

appears to have been constructed out of reused blocks from the earlier building. Thus the bath-house could easily have been built in the later part of the fourth century.

The chalet blocks XIII and XIV received repairs. Block XIV was re-roofed and stone cross walls were built across each chalet and some units were given new floors. Chalet 2 was reduced in length. It has been thought (Wilkes 1961) that the chalets were subdivided in 367 to make space for the vicani who deserted the vicus due to the troubles. Other vici, especially Vindolanda, were also thought to end at this time. But as has been shown in the last section the vicus at Housesteads, and also at Vindolanda, ended in the late third century. The centurions block was demolished during the fourth century and the top of the demolished walls received considerable wear. A road surface contemporary with this sealed a coin of Constantius II (Fort Cat. No. 339). The chalets in block XIII were reduced in length when the north walls were rebuilt. Further a platform was set up against block VII. At Wallsend the chalets seem to have had a complicated structural history not yet elucidated but Daniels (1976) excavated a crude stone building in the north-west praetentura thought to have been built after 367. While the western chalet at Great Chesters had two periods of flagging.

The hospital saw some rebuilding which may be late fourth century. The west range, on which was a scattering of hobnails, had a coin dated 332 (Fort Cat. No. 377) sealed below some flagging. The low wall of the verandah was also buried below some flagging. The praetorium was subdivided in its final phase and some rooms, especially rooms 6 and 7,

seem to have formed separate units. Valentinianic coins (364-78) were found in the hypocaust fill in room 5 (Fort Cat. Nos. 464, 476). Room 18 had a coin of Valens (Fort Cat. No. 468) in its south-east wall suggesting a rebuilding in this period or shortly afterwards. Various alterations took place in the praetorium at Chesters in the fourth century where alterations were made to the heating system in the south-west corner of the building (Harper 1961). The late fourth century pottery deposited in the granaries at Housesteads could have been put there anytime after 367.

Therefore it would seem that at most, if not all of the forts on Hadrian's Wall, were occupied under Theodosius. Although close dating of the rebuilding is very rough a good piece of dating evidence is the coin of Valens from the wall of the praetorium at Housesteads. However even a good terminus post quem does not solve the problem of whether there was a rebuilding programme under Theodosius in 369 or Magnus Maximus, thirteen years later in 382, as Casey has suggested. The quantity of Magnus Maximus coins in the north of Britain would indicate increased activity in the area especially as his coinage is generally rare.

The Corbridge hoard and the South Shields AVGOB coin have already been described. A further hoard of solidi has been found at Cakeham while hoards of silver coin have been found at Springhead and Cleeve Prior. All of these would suggest that Maximus' action in 382 was in the north and while he was doing this he may or may not have reconstructed the Wall forts and constructed the Yorkshire signal stations. Malton can be seen as an integral part in the defence of the rich settlement in the

Vale of York, a defence of which the Yorkshire signal stations must also have formed an important part. The fact that the last coin from Brough on Humber is of Magnus Maximus may be significant, suggesting that the move of the numerus Supervenientium Petueriensium from Brough to Malton was under his reign. Therefore it is possible that Maximus was responsible for building in the north especially as he is recorded in taking action against the Picts. Ammianus gives no specific mention of Theodosius campaigning against the Picts.

The abrupt decline in coinage following the Valentinianic period at Housesteads and other Wall forts could be used to argue that Maximus stripped the garrisons of troops and took the army of Britain to Gaul to support him in his claim for the throne after his usurption in 383 and thus deprived Britain of troops who would in the normal course of events have been issued with new coinage. The comparison of the coinage in the period 378-88 to the Valentinianic period would however argue against this.

Site	364-78	378-88
Housesteads	16	0
Piercebridge	131	4
Portchester	78	5
Vindolanda	5	0
Wallsend	3	0
Caerwent	41	3
Corbridge	792	22
Leicester	87	4
Silchester	1557	31

Thus since the ratios of forts and towns, with very low coin counts 378-88 at all sites, the Wall forts coin lists are simply not large enough for these rare coins to be represented. This inconclusive evidence could show that Magnus Maximus either completely stripped the island of troops, he removed very few, possibly only field units, or none at all.

It is interesting to note that all Wall forts were treated similarly to Portchester and Piercebridge. Although they are all types of limitanei, forts like Portchester and Piercebridge appear to have contained a higher class of limitanei. The development of two types of limitanei can be traced back to the abdication of Diocletian in 305 when the developments had begun to take place.

New units were added to the frontier armies which were neither legionaries nor auxiliary units. They were not called by the titles legio, ala or cohors in fact they were given no specific title at all or referred to indifferently as numeri, or as equites or milites. They appear to have been ranked with legionaries in status. Under Diocletian troops of this type had been raised from the existing legions, for example the lancearii and equites promoti, but later the new class of troops were to become independent creations.

The lower grade of limitanei, the alae and cohortes, were commanded by officers who received their codicils of appointment from the Quaestor of the Sacred Palace. These are the units which in the eastern half of the Notitia Dignitatum are referred to as 'listed in the Laterculum Minus'

and should perhaps be referred to as 'units of the Laterculum Minus (Mann 1977). It would appear from late Roman sources that these lower class units of limitanei were known as castellani (Prof. J.C Mann pers. comm.). The Hadrian's Wall garrisons were formed by this type of unit for instance the cohors I Tungrorum stationed at Housesteads, the cohors III Lingonum equitata stationed at Wallsend, and the ala II Asturum stationed at Chesters.

The higher grade limitanei at first do not seem to have had any distinctive classification from the legions. It is not until 325 that they are first attested as being referred to as ripenses or riparienses. The name is appropriate for soldiers stationed on river banks, and may originally have been specifically applied to these, more especially perhaps to the auxilia or auxiliares, and cunei equitatum listed in the Danube ducates of the Notitia Dignitatum. But it seems to have been accepted as a convenient term for the upper grade of units stationed on the frontiers. Before long units entitled numerus and equites seem to have become typical of ripenses. British examples of these troops are the numerus Turnacensium stationed at Lympne, the numerus Vigilum, stationed at Chester-le-Street, the equites Catafractarii perhaps stationed at Piercebridge, and the equites Stablesiani Gariannonenses stationed at Burgh Castle. Just as the castellani were listed in the eastern Notitia under the Laterculum Minus the ripenses are listed under the Laterculum Maius, and just as the castellani were under the Quaestor of the Sacred Palace the ripenses were under the more important Primicerius of the Notaries again accentuating their superiority (Mann 1976).

The purpose of the ripenses was to supplement the legions, or later the comitatenses, as mobile support for the alae and cohortes. The latter had remained in the same place for so long that they had become virtually immobile, able to perform little more than mere frontier police duties. The new units were clearly intended to supply the mobility which the older units had lost. This function seems particularly well illustrated in the entry for the Duke of the Britains in the Notitia Dignitatum (Occ. XL), where in second place in the list, the section per lineam valli, gives the units of the Laterculum Minus. The leading section of the list, headed by the legion at York, includes numeri and equites stationed in support positions on the roads leading up to the frontier line, representing the mobile reserve. The important point to note is that under Diocletian the mobile reserve was still under the control of the frontier commanders (Mann 1977).

Most of the names of ripenses known in Britain come from the Notitia and it has been thought that they only arrived in Britain under Theodosius as part of his refortification programme. But the regiment of the equites Crispiani stationed at Danum (probably Doncaster) suggests that some at least were here by the time of Constantine, since the name of this unit was derived from that of the Caesar Crispus (317-26), indicating that it was here by 326 (Holder 1982, 98).

Mr. P.J Casey has suggested (pers. comm.) that the castellani, being inferior troops to the ripenses, may not have received donatives and indeed there is some evidence to suggest that this may be correct. Firstly Duncan-Jones' interpretation of the Beatty papyri from Panopolis

(Duncan-Jones 1978) suggests that accessions and consulship donatives were given to legionaries and equivalent troops. There is no mention of the giving of donatives to cohorts in the documents, although it may be significant that the ala II Herc. dromedariorum was given accession donatives suggesting that some old style troops, at least, were given ~~ac~~ accession donatives at this time (298-300). This date however predates the main shift to the new style troops. The papyri only include the lanciarri and equites promoti which were early 'prototypes' of the later established new type units and these were paid both accession and consulship donatives. When the new style troops had become independent creations the attitude towards the payment of the old style troops may have changed. Or the attitude may have changed when the switch was made from paying donatives in terms of denarii to paying them in bullion which, as shown above, took place after 341.

Further if we state that it was only the comitatenses that received the various types of donatives then it is likely that the ripenses also received these since although of a lower grade to the comitatenses they were not vastly inferior because ripenses could if need be, and often were, converted into regiments of the field army as pseudocomitatenses, and were sometimes even upgraded into comitatenses. A study of the army lists in the Notitia shows that such transfers were being made in west down to the reign of Honorius (Jones 1973, 651). British examples may be the equites Stablesiani which was listed under the command of the comes Britanniarum in the Notitia Dignitatum (Occ. VII,20) and it has been suggested that this was the same unit as the equites Stablesiani Gariannonenses (stationed at Burgh Castle) promoted to field army status

by Stilicho in 400/2 (Holder 1982, 128). The Seguntienses formed part of the field army at Illyricum (Not. Dig. Occ. VII,49). The name suggests that the unit used to be the garrison of Segontium (Caernarvon), perhaps being removed from there and upgraded to field army status by Stilicho (Holder 1982, 129). Under Constantine III (407-11) three units from the Saxon Shore were elevated to the field army in Gaul with the status legiones pseudocomitatenses. These units were the numerus Exploratorum (from Portchester), the numerus Abulcorum (from Pevensey) and the detachment of the II Augusta (from Richborough). There is no evidence of castellani being raised to comitatenses or pseudocomitatenses.

The comitatenses were permanent mobile field armies. They may have developed from the long struggle of Constantine for ^{power} between 306 and 324, when Constantine found it necessary to maintain a large force permanently with him, to defend himself against his rivals or to attack them. They are first referred to as comitatenses in 325. A law of that year (Codex Theodosianus VII.20,4) shows that they had much the same status and privileges as the ripenses ^{off} which they are basically an offshoot (Mann 1977) and would presumably have received the same donatives. During the fourth century smaller field armies developed in the western provinces, no doubt due to their scattered nature and long stretches of seaboard. The small army of the comes Britanniae was probably established under Honorius, when Stilicho reorganized the defences of Britain shortly after 395 as indicated by Claudian (decons. Stilichonis II,250-5, in Mann 1977). The Notitia backs this by including the equites Honoriani Seniores (Occ. VIII,202), a regiment raised by Honorius (hence its name) in 395-98 and sent to Britain by Stilicho.

This evidence would appear to suggest that the ripenses were of a much higher grade than the castellani, coming near the comitatenses in status, and that the comitatenses would have received all normal types of donatives. In the early fifth century Synesius strongly objected to the transfer of the Unnigardi, a unit apparently of foederates whom he highly esteemed, to the limitanei. Not only would they descend 'to less honourable rank', their efficiency would be impaired if they were 'deprived of their imperial donatives, if they got no remounts, no military equipment, no expenditure adequate for fighting troops' (Jones 1973, 653). Since the ripenses were near to comitatenses in status we could infer that Synesius is here referring to castellani and suggests that they received no imperial donatives.

As donatives were paid in bullion after 341 a comparison of silver coins from forts garrisoned by limitanei to the total number of coins (including silver) 348-95 may throw some light on whether both types of limitanei received similar volumes. 348 is chosen as the starting point of this comparison to make sure we are measuring a period when bullion donatives were issued, the date of 341 produced earlier in this section is the earliest date for the establishment of this tradition. The forts used to represent castellani are Housesteads, Vindolanda and Wallsend, while Richborough, Piercebridge and Portchester are examples of forts garrisoned by ripenses.

Site	348-95	Silver
Housesteads	27	0
Vindolanda	25	2
Wallsend	27	1
Piercebridge	773	7
Portchester	128	2
Richborough	6865	26

From this table nothing certain can be established because the ratios are so low that the proposed theory cannot be proved or disproved. This is because silver is almost archaeologically invisible as people do not usually discard valuable coins and if dropped such coins are most carefully searched for. Thus a breakdown of the Piercebridge silver coins gives three siliquae of Julian all the other silver coins are from hoards or once formed parts of hoards (e.g the miliarensia) even the three coins of Julian may have originated from a hoard. Therefore what we are examining by looking at the silver is often the discovery of hoards not the statistically random collection of coin losses.

How can we try to show whether or not ripenses were more highly paid than castellani? We have previously shown that bullion donatives probably started in the middle of the fourth century. A comparison of all coin counts 300-48 and 348-402 should show if castellani received bullion donatives since it can be assumed that higher pay would produce higher numbers of the lower denominations as the two are closely linked. More money producing higher expenditure or perhaps exchanging precious metal coin for lower base denomination on the black market for profit. The coins 348-402 are expressed as a percentage total of all fourth century coins.

Site	300-48	348-402	% total
Housesteads	116	27	19
Vindolanda	71	25	26
Wallsend	30	27	47
Piercebridge	178	773	81
Portchester	330	128	29
Richborough	3857	6865	64

These results can easily be interpreted to show that castellani were receiving less pay in the second half of the fourth century than the first half when compared with the ripenses. However they were not receiving substantially less and therefore may have been receiving the same bullion donatives for accessions, quinquennial celebrations and consulships as the ripenses but in lesser amounts, or that they missed out on certain donatives. This later explanation would seem most plausible especially with reference to the Beatty papyrus which shows an ala receiving an accession donative but not a consular donative (p. 149). Explanations have to be given for the Piercebridge and Portchester results which for archaeological reasons are biased. Piercebridge appears to have been abandoned c330-48 on numismatic evidence which would suppress the 300-48 coin count but the coin count 348-402 is sufficiently large to allow for a large increase in the 300-48 coin count if the site was to be occupied c330-48. The Portchester 348-402 coin count is much lower than the hypothesis would have expected. This fits with the theory that Portchester may have been abandoned by the military when the fort at Bitterne (Claesentum) was constructed late in the fourth century (Frere 1974, 398). The Housesteads count in the later fourth century may be lower than the other forts of similar class because these late coins would lie in the upper levels of the site much

of which was stripped off last century in search of walls and relics further down the sequence. In this test we must assume that the forts used in the tests all had stable garrison types during the fourth century and the Wall forts did end sufficiently early as to suppress the late fourth century coin counts. However if all of this is taken into consideration we can conclude, from numismatic evidence, that castellani did receive bullion donatives but to a lesser extent than the ripenses perhaps missing out on consular donatives.

The last assumption that was made above was that Housesteads continued to be occupied down to 402 or at least down to 395 when the last bulk coinage arrived under Theodosius, and that garrison size was fairly stable throughout the fourth century. The latest building work on the Wall has been ascribed to Count Theodosius by its excavators, although it could just as feasibly be ascribed to Magnus Maximus. No building work has been ascribed later than this with the possible exception of the rampart backing mounds at Housesteads and Vindolanda, although most well excavated forts have yielded unusual buildings normally called 'late'. At Housesteads for instance there are two buildings inside the north and south gates. The northern one overlies part of a barrack and the intervallum road and has an apse at one end. Such building could well post-date the Theodosian/Maximus rebuilding. Unfortunately most late fourth century pottery cannot be more closely dated than 370-400 and is therefore of little use. A quantity of this late pottery, in this case Huntcliff ware, was found in the topsoil overlying Housesteads barrack XIV (Wilkes 1960).

It used to be thought that Magnus Maximus was also responsible for the abandonment of Hadrian's Wall in his bid for the purple, taking the garrisons away to Gaul. There is absolutely no evidence that Hadrian's Wall was abandoned at this time. If Maximus was to take a force with him he is likely to have taken field units or if necessary regiments of the ripenses upgraded as pseudocomitatenses. It would seem unlikely that Maximus would trust his claim to low grade limitanei like castellani.

The numismatic evidence shows that there was activity in the Wall forts for several years following Maximus' defeat. Although coins later than 388 were known from the Wall area it was not realised until Kent's study of late coins from the Wall that the Wall forts could have been held after this (Kent 1951). The fact that the coin series does not stop abruptly and uniformly on Wall sites shows that it is dangerous to assume that official occupation ceased shortly after the date of minting of the latest coin found on the site. For example the latest coins identified from Housesteads are of Gratian and Valens (364-78) as are the latest coins from Wallsend and Castlesteads. While the coin list from Carvoran ends with Constans and Rudchester has no fourth century coins at all. This does not mean that all these forts were abandoned before 388 since other forts have yielded later coins. Coins of Valentinian II (375-92) have been recorded in the Clayton collection at Chesters, as is a coin of Arcadius from the Walltown area (Kent 1951). A coin of Theodosius (388-402) has been recorded from Vindolanda (Casey 1985) as has a coin of Valentinian II (SALVS REIPUBLICAE). A further coin of this type was found at Birdoswald in 1929 (Richmond and Birley 1930).² Coventina's Well has yielded a siliqua of Valentinian II (389-92)

² I saw it in a coin cabinet with others of the 1929 finds in the guest-room in the long-abandoned gate-house of Hadfield College, Durham. DA

and a coin of Honorius (post 393) (Allason-Jones and McKay 1985, 54). Another coin of Valentinian II comes from Castlesteads (Collingwood 1922). Other Hadrian's Wall sites which have yielded late coins are Carlisle and South Shields where coins of Valentinian II, Theodosius, Arcadius and Honorius have been found (Casey 1979). Care should be taken with the last two sites as to late occupation of Hadrian's Wall because Carlisle continued as a town and was still occupied in 685 when it was visited by St. Cuthbert. South Shields on the other hand was a port.

One last coin which needs to be described is the VRBS ROMA FELIX coin of Arcadius from Heddon-on-the-Wall (Stevens 1926). This was a coin issued circa 403. It formed part of a 'collection' of coins found at Heddon in 1820, although it is sometimes seen as part of a hoard this is unlikely. Coins of Maximian, Constantine I, Constans, Constantius II, and Valens formed the rest of the 'collection'. Bruce was the first to published the 'collection' thirty-six years after it was discovered (Bruce 1856, 125). He described the 'collection' as having been 'found on or near Heddon-on-the-Wall'. Thus it is best to say that Heddon may have been occupied at least at the end of the fourth century and if it was not there was activity in its environs at a very late date.

As a result of the numismatic evidence it would seem that Roman activity continued in many of the Wall forts.

There is no evidence for the violent destruction of military installations on the Wall like that seen in the signal stations on the Yorkshire coast. At Huntcliff there were found the skeletal remains of

* I saw this coin in the old Black Gate museum, Newcastle. It had a black patina unlike anything from the Wall etc

fourteen humans. The skulls were detached from the rest of the skeletons (Hornsby and Stanton 1912). At Goldsborough a skeleton of a man was found lying across a fire. His skull had received severe cuts. Nearby was a man lying face down on top of a large dog who had his paws on his shoulders. The well yielded further human bones and a skull fragment was found in the tower. The excavators dated the end of the occupation, on numismatic grounds, to soon after 395 (Hornsby and Laverick 1932). The only archaeological evidence for the end of a Wall fort comes from Birdoswald (Richmond and Birley 1930). The excavators thought that the building north of the via principalis had been looted and then burnt down soon after 375. However the evidence of burning for 'violent destruction' is dubious and this deposit probably represents accidental destruction.

In the lack of any archaeological evidence does the historical record throw any light on the demise of the Wall garrisons? Frere suggests that north of the Wall the kingdoms of the Votadini and Strathclyde remained friendly to Rome and that Maximus probably created a third friendly dynasty in south-west Scotland. The dark age dynasty of Galloway counted Maximus as the founder of its line (Frere 1974, 405-06). However this may be, problems continued, and in the 390s Stilicho, effectively the commander of the armies of western Europe, reorganised the defences of Britain. It is not certain if he visited the province. The panegyric delivered to him in 399 records that Stilicho defended the diocese when it was under attack from the Picts, Saxons and Scots (Claudian: de consulatu Stilichonis ii, 250-55, in Welsby 1982, 129). The Saxons and Scots were noted as sea raiders and therefore of little consequence to

the Wall. Elsewhere Claudian records that under Honorius the Saxon had been tamed and the Pict crushed, and indeed they do not appear to have been a threat again until the middle of the fifth century. This may indicate that Stilicho conducted a punitive campaign but nothing else about Stilicho's actions can be implied.

Furthermore Claudian records that 'the legion that kept the fierce Scots in check, whose men had scanned the strange devices tattooed on the faces of dying Picts' (de bello Gothico, 416-18) was withdrawn. The legion referred could be the VI Victrix at York but could refer to field units or a levy of troops. Again, as with the assumed withdrawals under Magnus Maximus, the castellani are unlikely to have been affected.

In 406 there was a series of three usurpers. The first, Marcus, may have seized power due to a sense of isolation brought about by barbarian attacks on the Gallic provinces. Further it may be a reaction to a possible cessation of payment to the army in 402 since the new issue of coinage in c403 with the legend VRBS ROMA FELIX did not reach Britain ^{c. 403} (note the specimen from Heddon). Marcus was deposed and replaced by Gratian who was similarly disposed of after four months and replaced ^{of Solan specimen examined} by Constantine III. Constantine crossed to Gaul, but it is not certain how many troops he took with him. The castellani were probably again unaffected, but the field army may have left never to return.

From the foregoing it should be apparent that although coins do not show that Housesteads continued to a late date, coins from other forts show that some certainly did. Furthermore there does not appear to be

any strong historical reason why the garrison of the fort should be withdrawn neither is there any archaeological evidence for the destruction of the fort (or other Wall forts) by hostile forces. Indeed environmental studies seem to show that there was no change to the environment of the Wall region (e.g Pennington 1970) from the late fourth century through the fifth indicating that the environment and hence land use continued as before. It is generally believed that forts received basic supplies of foodstuffs from a local catchment area or territorium. Such a territorium (or prata) is recorded at Chester-le-Street (RIB 1049). While the territorium at Xanten is well recorded and is thought to cover over 20,000 acres. Manning (1973) quoting Polybius suggests that a soldier was rationed 2lb (0.9kg) of grain per day, which implies the Housesteads garrison would require something like 315,000kg of grain per year. The Wall as a whole with a possible garrison of 9,090 officers and men (Breeze and Dobson 1987, 54) would require over 3,000 tonnes of grain or its equivalent in food value. Thus grain alone, not including the meat also known to have been consumed on the northern frontier from the Vindolanda tablets, would be a considerable drain on the resources of the area. That the supply of ordinary foodstuffs to the garrisons was with local produce in the fourth century is ratified legally by the Theodosian Code (7.4.15): 'Just as We, by Our beneficial foresight, have commanded to be done throughout all frontiers, you shall order supplies of subsistence allowances to be brought to the camps by the provincials nearest to the border'. Such a situation is not surprising when we consider that grain was a relatively cheap commodity in the ancient world while transport was expensive, the more so the cheaper the goods. Therefore the fact that the agricultural regime

continued unchanged for some time after the start of the fifth century would seem to suggest that garrisons, or a new population of similar size, continued to be supplied as before.

In conclusion it would seem that the view of Dobson and Breeze and others that the garrisons simply dwindled away after supply of fresh coinage ceased ('there is little evidence for Saxons-and none for Picts and Scots-on Hadrian's Wall and we may accept that the soldiers of the Wall returned to the soil from which they had sprung' (Breeze and Dobson 1976, 232)) no longer seems tenable. We should perhaps see Housesteads and other Wall forts continuing well into the fifth century being paid in freshly minted coinage down to c402 after which only the odd new coin continued to circulate. It is interesting to note that in this thesis it has been shown what great detail can be thrown onto the history of a site from the study of its coinage. However when the site becomes beyond the reach of numismatic research we can shed little light except to comment that the fort continued to be inhabited in some form or other probably for some time to come.

INTRODUCTION TO THE CATALOGUE

Various abbreviations are used in the following catalogue which are explained below:

Mints. [followed, where appropriate, by officina letter, e.g. P,I,a

denoting Primo, 1st or alpha.]

AL	Alexandria	HE	Heraclea
AM	Amiens	LG	Lyons
AN	Antioch	LN	London
AQ	Aquileia	ME	Milan
AR	Arles	NK	Nicomedia
KA	Carthage	OS	Ostia
CL	Cologne	RM	Rome
CO	Colchester	SR	Sirmium
CN	Constantinople	SS	Siscia
CY	Cyzicus	TA	Tarraco
EM	Emesa	TC	Ticinum
GA	Gallic mint	TE	Thessalonica
		TR	Trier

Denominations. [denom:]

ANT	Antoninianus	MIL	Miliarensia
AS	As	SEST	Sestertius
AUR	Aureus	SEM	Semis
AUREL	Aurelianus	SILIQ	Siliqua
DEN	Denarius	SOL	Solidus
DUP	Dupondius	QUAD	Quadrans
FOLL	'Follis'	QUIN	Quinarius

Catalogue. [cat:] (Numbers refer to RIC unless stated otherwise).

RIC	The Roman Imperial Coinage, volumes 1-9, ed. H. Mattingly, E.A. Sydenham, C.H.V. Sutherland, R.A.G. Carson, J.P.C. Kent. (1926-81)
BMC	Coins of the Roman Empire in the British Museum, by H. Mattingly, volumes 1-6, 1965-68.
C	Description Historique des Monnaies Frappees sous l'Empire Romain, by H. Cohen (2nd edition), Paris, 1880-92.
CK	Late Roman Bronze Coinage, Part II, by R.A.G. Carson and

J.P.C. Kent, 1960.

CR Roman Republican Coinage, by M. Crawford, 1974.

CUNETIO The Cunetio Treasure, Roman Coinage of the Third Century A.D.,
by E. Besly and R. Bland, 1983.

E Die Munzprägung der Gallischen Kaiser in Köln, Trier und
Mailand, by G. Elmer, 1941.

HK Late Roman Bronze Coinage, Part I, by P.V. Hill and
J.P.C. Kent.

A copy or counterfeit of a particular ruler/issuer is denoted by single quotation marks, e.g. 'CLAUDIUS II', and by the use of the lower case 'c' in the catalogue reference, e.g. c.of 261 = a copy of RIC 261. The use of the word 'of' indicates that a precise catalogue reference has been obtained; 'as' is used, for both official issues and copies, to denote an incomplete catalogue coin.

Where recorded, the condition [wear:] of both the obverse and reverse is denoted by the following abbreviations:

UW	Unworn	EW	Extremely worn
SW	Slightly worn	C	Corroded
W	Worn	NSU	Not struck up
VW	Very worn		

Where recorded, the flan diameter [diam:] is given in millimetres [mm] and the weight [wt:] in grams [g].

HOUSESTEADS FORT: COIN LIST by ISSUER and PERIOD.

No. 1	Ruler REPUBLICAN	denom: DEN	Obv -
	date: BC-	cat: -	Rev -
	diam: -	wt: -	wear: EW/EW
No. 2	M.ANTONIUS	denom: DEN	Obv ANT [AVG] III VIR [RPC]
	date: BC32-31	cat: CR 544/39	Rev LEG XXIII
	diam: -	wt: -	wear: -
No. 3	M.ANTONIUS	denom: DEN	Obv -
	date: BC32-31	cat: CR 544	Rev -
	diam: -	wt: -	wear: -
No. 4	AUGUSTUS	denom: DEN	Obv AVG[VSTVS] DIVI F]
	date: BC15-13	cat: 167a	Rev IMP X
	diam: -	wt: -	wear: VU/VH
No. 5	VESPASIAN	denom: DEN	Obv ...VESP...
	date: 69-79	cat: -	Rev -
	diam: -	wt: -	wear: VW/VH
No. 6	VESPASIAN	denom: AS	Obv -
	date: 69-79	cat: -	Rev -
	diam: -	wt: -	wear: VW/EN
No. 7	VESPASIAN	denom: DUP	Obv -
	date: 69-79	cat: -	Rev -
	diam: -	wt: -	wear: VW/C
No. 8	VESPASIAN	denom: DEN	Obv -
	date: 69-79	cat: -	Rev -
	diam: -	wt: -	wear: C/C
No. 9	VESPASIAN	denom: DUP	Obv [IMP CAES]AR [VESPASIAN AVG COS III]
	date: 71	cat: 475	Rev [PAX AVG] SC
	diam: -	wt: -	wear: VW/VH
No. 10	VESPASIAN	denom: DUP	Obv IMP CAES[VESPASIAN AVG COS IIIII]
	date: 71	cat: 475	Rev [PAX AVG] SC
	diam: -	wt: -	wear: VW/H
No. 11	TITUS, CAES	denom: AS	Obv [T CAES IMP] AVG F TRP COS [VI CENSOR]
	date: 77-78	cat: (VESP) as 788	Rev -
	diam: -	wt: -	wear: W/C
No. 12	TITUS	denom: DEN	Obv [IMP TITVS CAES[VESPASIAN AVG P]
	date: 79	cat: as 5	Rev [TRP VIIII IMP XIIII] COS VII
	diam: -	wt: -	wear: VW/VH

No.	Site	Context	Feature	Sfno	Area
1	H20	063	08	8383	-
2	HS1864	-	-	-	-
3	HSE60	-	-	-	Barrack XIV
4	HS1898	-	-	H	-
5	H20	074	06	8502	-
6	H20	010	05	5909	-
7	HSE67-	-	-	-	Commandants Ho: near SE corner U/S
8	H13	023	02	3217	-
9	HS1898	-	-	6	-
10	HS1898	-	-	U	-
11	HSE71	-	-	014	Hospital: S range U/S
12	H13	031	10	3049	-

No.	Ruler				
13	TITUS			denom: DEN	Obv -
	date: 79-81	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/C	
14	TITUS			denom: DUP	Obv -
	date: 79-81	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: VW/EW	
15	DOMITIAN			denom: SEST	Obv -
	date: 81-92	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
16	DOMITIAN			denom: AS	Obv -
	date: 81-96	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
17	DOMITIAN			denom: AS	Obv [IMP CAESAR DOMIT AVG GER COS XII CENS PER PP]
	date: 86	mint: - -		cat: 340	Rev [VIIRTITVTI AVGVSTI SC]
	diam: -	wt: -		wear: VW/VW	
18	DOMITIAN			denom: AS	Obv [IMP CAES DOMIT AVGV GERH COS XV CENS PER PP]
	date: 90-91	mint: - -		cat: 395	Rev [MONETA AVGVSTI SC]
	diam: -	wt: -		wear: W/VW	
19	FLAVIAN			denom: SEST	Obv -
	date: 69-96	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
20	FLAVIAN			denom: SEST	Obv -
	date: 69-96	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
21	FLAVIAN			denom: DUP	Obv -
	date: 69-96	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
22	TRAJAN			denom: DEN	Obv [IMP CAES] NERVA [TRAJAN AVG GERH]
	date: 100-02	mint: - -		cat: as 11	Rev [PONT MAX TRPOT COS...]
	diam: -	wt: -		wear: VW/VW	
23	TRAJAN			denom: SEST	Obv [IMP CAES NERVA]E TRAJANO AVG GER DAC PH TRP COS V [PP]
	date: 103-11	mint: - -		cat: 492	Rev SPQR OPTIMO PRINCIPI SC
	diam: -	wt: -		wear: SW/SW	
24	TRAJAN			denom: SEST	Obv [IMP CAES NERVAE TRAJANO] AVG GER DAC PH TRP COS V PP]
	date: 103-11	mint: - -		cat: as 519	Rev [SPQR OPTIMO PRINCIPI SC]
	diam: -	wt: -		wear: W/VW	

No.	Site	Context	Feature	Sfno	Area
13	H15	004	01	9265	-
14	HS1898	-	-	N	-
15	HSE70	-	-	001	Hospital:E range
16	H13	100	01	3429	-
17	HSE68	-	-	015	Commandants Ho:Rm 9 latrine drain
18	HS1898	-	-	Q	-
19	HS1898	-	-	020	-
20	HS1898	-	-	K	-
21	HS1898	-	-	I	-
22	HSE	-	-	-	-
23	HS1898	-	-	A	-
24	HS1898	-	-	119	-

No.	Ruler						
25	TRAJAN			denom: SEST		Obv [IMP CAES] AVG GER DAC...	
	date: 103-12	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
26	TRAJAN			denom: SEST		Obv [IMP CAES NERVAE TRAIANO AVG GER DAC] PH TRP COS V.PP]	
	date: 103-17	mint: - -		cat: as 492		Rev [SPQR OPTIMO PRINCIPI SC]	
	diam: -	wt: -		wear: VM/EW			
27	TRAJAN			denom: SEST		Obv [IMP [CAES NERVAE] TRAIANO AVG GER DAC...]	
	date: 103-17	mint: - -		cat: as 606		Rev -	
	diam: -	wt: -		wear: VM/FU			
28	TRAJAN			denom: DEN		Obv [IMP [TRAIANO AVG GER DAC] PH [TRP]	
	date: 114-17	mint: - -		cat: as 308		Rev COS [VI PP SPQR] FORT RED	
	diam: -	wt: -		wear: SW/SH			
29	TRAJAN			denom: SEST		Obv [IMP CAES NERVAE TRAIANO OPTIMO AVG GER DAC] [PARTHICOPHTRPCOSVIPP]	
	date: 114-17	mint: - -		cat: 667		Rev [REX PARTHIS DATVS SC]	
	diam: -	wt: -		wear: SW/C			
30	TRAJAN			denom: DEN		Obv [IMP CAES NERVAE TRAIANO OPTIMO AVG GER DAC]	
	date: 114-17	mint: - -		cat: 332		Rev PH TRP COS VI PP SPQR	
	diam: -	wt: -		wear: SW/H			
31	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
32	TRAJAN			denom: DEN		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
33	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
34	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: VM/VW			
35	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
36	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			

No.	Site	Context	Feature	Sfno	Area
25	HSE59	-	-	-	Barrack XIV: pI below stone hearth
26	HS1898	-	-	R	-
27	H13	TS	10	454	-
28	HSE	-	-	-	-
29	HS1898	-	-	069	N central near boulder
30	HS1898	-	-	A1	-
31	H13	011	09	1603	-
32	HSE60	-	-	-	Barrack XIV
33	HS1898	-	-	091	-
34	HSE71	-	-	-	Hospital: S wall
35	HS1898	-	-	F	-
36	HSE11	-	-	-	Latrine pit

No.	Ruler						
37	TRAJAN			denom: DUP		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: VW/EW			
38	TRAJAN			denom: AS		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
39	TRAJAN			denom: SEST		Obv -	
	date: 98-117	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
40	TRAJAN			denom: SEST		Obv [IMP NERVA CAES TRAIAN AVG GERM PM]	
	date: 98-99	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: VW/C			
41	HADRIAN			denom: SEST		Obv -	
	date: 117-19	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: EW/EH			
42	HADRIAN			denom: SEST		Obv -	
	date: 117-38	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
43	HADRIAN			denom: SEST		Obv -	
	date: -	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
44	HADRIAN			denom: AS		Obv -	
	date: 117-38	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
45	HADRIAN			denom: SEST		Obv [IMP CAESAR TRAIANVS HADRIANVS AVG]	
	date: 118	mint: - -		cat: 551b		Rev [PONT MAX TRPOT COS III] FORT RED SC	
	diam: -	wt: -		wear: SW/W			
46	HADRIAN			denom: SEST		Obv [IMP CAESAR] TRAIANVS HADRIANVS AVG]	
	date: 118	mint: - -		cat: 551a		Rev PONT MAX TRPOT COS II FORT RED SC	
	diam: -	wt: -		wear: -			
47	HADRIAN			denom: AS		Obv IMP CAESAR] TRAIANVS HADRIANVS AVG]	
	date: 119	mint: - -		cat: 577		Rev [PONT MAX TRPOT COS III SC BRITANNICA]	
	diam: -	wt: -		wear: SW/SW			
48	HADRIAN			denom: DEN		Obv [IMP CAESAR TRAIANVS HADRIANVS AVG]	
	date: 119-22	mint: - -		cat: 98		Rev [PM TRP COS III]	
	diam: -	wt: -		wear: W/W			

No.	Site	Context	Feature	Sfno	Area
37	HS1898	-	-	L	-
38	HSE59	-	-	-	Barrack XIV:pI below pII wall
39	HS1898	-	-	T	-
40	HS1898	-	-	X	-
41	HSE59	-	-	-	Barrack XIV:pI below pII wall
42	HSE	-	-	-	-
43	HSE11	-	-	-	Latrine pit
44	HS1898	-	-	061	-
45	HS1898	-	-	AE	-
46	HSE59	-	-	-	Barrack XIV:pI below pII wall
47	H21	006	02	8536	-
48	H21	036	04	8654	-

No.	Ruler						
49	HADRIAN			denom: DUF		Obv [HADRIANVS AVGVSTVS]	
	date: 125-28	mint: - -		cat: 654		Rev [COS III SC]	
	diam: -	wt: -		wear: VW/VH			
50	HADRIAN			denom: AS		Obv HADRIANVS AVGVSTVS	
	date: 132-34	mint: - -		cat: 716		Rev COS III PP SC	
	diam: -	wt: -		wear: W/VH			
51	HADRIAN			denom: AS		Obv [HADRIANVS] AVG [COS III PP]	
	date: 134-38	mint: - -		cat: 831d		Rev SC	
	diam: -	wt: -		wear: W/W			
52	HADRIAN			denom: DEN		Obv HADRIANVS AVG COS III PP	
	date: 134-38	mint: - -		cat: 268		Rev SALVS AVG	
	diam: -	wt: -		wear: SW/H			
53	HADRIAN			denom: DEN		Obv HADRIANVS AVG COS III PP]	
	date: 134-38	mint: - -		cat: 274		Rev [SPES P R]	
	diam: -	wt: -		wear: W/H			
54	HADRIAN			denom: DUF		Obv [HADRIANVS AVG COS III PP]	
	date: 134-38	mint: - -		cat: 830		Rev SC	
	diam: -	wt: -		wear: VH/VW			
55	HADRIAN			denom: DEN		Obv [HADRIANVS AVG COS III PP	
	date: 134-38	mint: - -		cat: 267		Rev [SALVS] AVG	
	diam: -	wt: -		wear: W/H			
56	HADRIAN			denom: SEST		Obv [HADRIANVS [AVG COS III PP]	
	date: 134-38	mint: - -		cat: as 741		Rev [ADVENTVS AVG SC]	
	diam: -	wt: -		wear: VH/VW			
57	HADRIAN			denom: SEST		Obv [HADRIANVS AVG COS III PP]	
	date: 134-38	mint: - -		cat: 759		Rev [FORTVNA AVG SC]	
	diam: -	wt: -		wear: VW/VW			
58	HADRIAN			denom: SEST		Obv -	
	date: 134-38	mint: - -		cat: as 790		Rev Spes adv. 1	
	diam: -	wt: -		wear: EH/EW			
59	HADRIAN			denom: SEST		Obv [HADRIANVS AVGVSTVS PP]	
	date: 134-8	mint: - -		cat: 970		Rev [HILARITAS P R] COS III] SC	
	diam: -	wt: -		wear: W/H			
60	AELIUS			denom: DEN		Obv L AELIVS CAESAR	
	date: 136-38	mint: - -		cat: (HADRIAN)436		Rev TRIB POT COS II/CONCORD	
	diam: -	wt: -		wear: UW/SW			

No.	Site	Context	Feature	Sfno	Area
49	H13	242	01	9555	-
50	HSE	-	-	-	Principia:U/S
51	HS1898	-	-	AF	-
52	HSE69-	-	-	-	Hospital:Rm 3 under cobble floor
53	HS1898	-	-	-	-
54	H13	014	11	3127	-
55	H20	034	08	7737	-
56	HS1898	-	-	117	NW III:on paved floor
57	HSE69-	-	-	004	Hospital:Rm 7 below offset coarse
58	H13	003	04	486	-
59	HSE	-	-	-	U/S
60	H20	015	10	020	-

No. Ruler					
61 SABINA			denom: DEN		Obv [[SABINA AVGVSTA HADRIANI AVG [PP]]
date: 117-38	mint: - -		cat: 399		Rev CONCORDIA AVG
diam: -	wt: -		wear: SW/SW		
62 SABINA			denom: DEN		Obv [SABINA AVGVSTA HADRIANI AVG PP]
date: 117-38	mint: - -		cat: (HADR)398		Rev [CONCORDIA AVG]
diam: -	wt: -		wear: U/W		
63 ANTONINUS PIUS			denom: DUP		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
64 ANTONINUS PIUS			denom: SEST		Obv -
date: 138-61	mint: - -		cat: as 626		Rev Spes
diam: -	wt: -		wear: VW/VW		
65 ANTONINUS PIUS			denom: AS		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: VH/C		
66 ANTONINUS PIUS			denom: DEN		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: VW/VW		
67 ANTONINUS PIUS			denom: DUP		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
68 ANTONINUS PIUS			denom: SEST		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
69 ANTONINUS PIUS			denom: AS		Obv -
date: 138-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: -		
70 ANTONINUS PIUS			denom: DUP		Obv -
date: 138-61	mint: - -		cat: -		Rev Libertas stg. 1
diam: -	wt: -		wear: W/W		
71 ANTONINUS PIUS			denom: SEST		Obv [ANTONINVS AVG [PIVS PP]]
date: 139-44	mint: - -		cat: 546/646		Rev TR[PL]OT COS II(II) SC
diam: -	wt: -		wear: W/VW		
72 ANTONINUS PIUS			denom: SEST		Obv [ANTONINVS [AVG PIVS PP...]]
date: 139-61	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: EW/C		

No.	Site	Context	Feature	Sfno	Area
61	H13	008	02	2945	-
62	H14	004	06	9501	-
63	HSE68	-	-	014	Commandants Ho:Rm 8
64	HSE	-	-	-	Principia:U/S
65	H20	010	04	5361	-
66	HSE	-	-	-	-
67	HSE68	-	-	-	Commandants Ho:Rm 9 latrine drain
68	HS1898	-	-	070	Praetorium:rm 12
69	HSE61	-	-	-	Block XV
70	HSE68	-	-	016	Commandants Ho:Rm 9 latrine drain
71	HSE69-	-	-	005	Hospital:Rm 5 below bench level
72	H13	TS	08	225	-

No. Ruler					
73 ANTONINUS PIUS		denom: SEST		Obv ANTONINVS AVG PIVS PP TRP COS III	
date: 140-44	mint: - -	cat: 622		Rev [ROMAE AETERNAE SC]	
diam: -	wt: -	wear: W/VW			
74 ANTONINUS PIUS		denom: SEST		Obv ANTONINVS AVG PIVS PP TRP COS III	
date: 140-44	mint: - -	cat: 637		Rev SALVS [AVG] SC	
diam: -	wt: -	wear: SW/SW			
75 ANTONINUS PIUS		denom: DEN		Obv ANTONINVS AVG PIVS PP TRP XII	
date: 148-49	mint: - -	cat: 175		Rev COS IIII	
diam: -	wt: -	wear: UW/UW			
76 ANTONINUS PIUS		denom: AS		Obv [ANTONINVS AVG PIVS PP TRP XVIIII]	
date: 154-55	mint: - -	cat: 934		Rev [BRITANNIA COS IIII SC]	
diam: -	wt: -	wear: VW/VW			
77 ANTONINUS PIUS		denom: SEST		Obv ANTONINVS AVG [PIVS PP] TRP XXIII	
date: 158-59	mint: - -	cat: 1004		Rev TEMPLVM DIV AVG REST [COS IIII] SC	
diam: -	wt: -	wear: W/W			
78 'ANTONINUS PIUS'		denom: DUP		Obv ANTONINVS AVG [PIVS PP TRP COS....]	
date: 138+	mint: - -	cat: c.as 803		Rev LIBER[ALIT]AS [AVG...] SC	
diam: -	wt: -	wear: W/SW			
79 FAUSTINA I,POSTH		denom: DEN		Obv DIVA FAVSTINA	
date: 140-61	mint: - -	cat: (A.PIUS) 373		Rev AVGVSTA	
diam: -	wt: -	wear: SW/SW			
80 FAUSTINA I,POSTH		denom: AS		Obv [DIVA FAVSTINA]	
date: 140-61	mint: - -	cat: (A.PIUS) as 1155		Rev [AETERNITAS] SC	
diam: -	wt: -	wear: W/W			
81 FAUSTINA I,POSTH		denom: DUP		Obv [DIVA] [FAVSTINA]	
date: 141-61	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: C/C			
82 FAUSTINA I,POSTH		denom: SEST		Obv -	
date: 141-61	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: -			
83 FAUSTINA I,POSTH		denom: SEST		Obv [DIVA] AVGVSTA [FAVSTINA]	
date: 141-61	mint: - -	cat: (A.PIUS) 1108		Rev [AETERNITAS] SC	
diam: -	wt: -	wear: C/C			
84 FAUSTINA I,POSTH		denom: DEN		Obv DIVA FAVSTINA	
date: 141-61	mint: - -	cat: (A.PIUS) 361		Rev AVGVSTA	
diam: -	wt: -	wear: SW/SW			

No.	Site	Context	Feature	Sfno	Area
73	HS1898	-	-	-	-
74	HSE	-	-	-	-
75	HSE67-	-	-	020	Commandants Ho:courtyard on flags
76	HSE64	-	-	-	-
77	HS1898	-	-	B	-
78	HSE71	-	-	006	Hospital:S range topsoil W end
79	H13	080	01	3201	-
80	H20	008	08	8318	-
81	HSE68	-	-	013	Commandants Ho:Rm 9 latrine drain
82	HSE60	-	-	-	Barrack XIV
83	HSE	-	-	-	-
84	HSE67-	-	-	017	Commandants Ho:Rm 9 latrine drain

No. Ruler					
85 FAUSTINA II (ANT.PIUS)	date: 145-61	mint: - -	diam: -	denom: SEST	Obv [FAVSTINAE] AVG PII [AVG FIL]
				cat: (A.PIUS)378c	Rev [LAETITIAE PVBLICAE SC]
				wear: VW/VW	
86 FAUSTINA II (ANT.PIUS)	date: 147-61	mint: - -	diam: -	denom: DEN	Obv FAVSTINA AVG PII AVG FIL
				cat: (A.PIUS)502	Rev CONCORDIA
				wear: -	
87 M.AURELIUS,CAES	date: 140-44	mint: - -	diam: -	denom: AS	Obv [AIVRELIVS CAESAR AVG PII F COS]
				cat: (A.PIUS)1238	Rev [IVVENTAS SC]
				wear: U/W	
88 M.AURELIUS,CAES	date: 153-54	mint: - -	diam: -	denom: SEST	Obv [AVRELIVS CAESAR [AVG PII FIL]
				cat: (A.PIUS)1314	Rev [TRPOT VIII] COS II SC
				wear: W/W	
89 M.AURELIUS	date: 161-80	mint: - -	diam: -	denom: DUP	Obv -
				cat: -	Rev -
				wear: EW/EW	
90 M.AURELIUS	date: 161-80	mint: - -	diam: -	denom: SEST	Obv -
				cat: -	Rev -
				wear: VH/C	
91 M.AURELIUS	date: 161-80	mint: - -	diam: -	denom: SEST	Obv -
				cat: -	Rev -
				wear: VH/VW	
92 FAUSTINA II	date: 161-75	mint: - -	diam: -	denom: AS	Obv -
				cat: -	Rev -
				wear: C/C	
93 FAUSTINA II (M.AURELIUS)	date: 161-75	mint: - -	diam: -	denom: DEN	Obv [FAVSTINJA AVGVSTA
				cat: (M.AUR)729	Rev VENVS
				wear: W/W	
94 FAUSTINA II (M.AURELIUS)	date: 161-75	mint: - -	diam: -	denom: SEST	Obv [FAVSTINA AVGVSTA]
				cat: (M.AUR)1667	Rev [SALVTI AVGVSTAE SC]
				wear: EW/EH	
95 FAUSTINA II (M.AURELIUS)	date: 161-75	mint: - -	diam: -	denom: SEST	Obv FAVSTINA AVGVSTA]
				cat: (M.AUR)1638	Rev [FECVNDITAS SC]
				wear: C/C	
96 FAUSTINA II,POSTH	date: 175-80	mint: - -	diam: -	denom: DEN	Obv DIVA FAVSTINA PIA
				cat: (M.AUR)745	Rev CONSECRATIO
				wear: -	

No.	Site	Context	Feature	Sfno	Area
85	HS1898	-	-	AB	-
86	HSE60	-	-	-	Barrack XIV
87	HS1898	-	-	AC	-
88	H13	003	04	487	-
89	H13	TS/1	10	1044	-
90	HSE32	-	-	045	Sewer SE angle of fort
91	H13	059	01	2723	-
92	HS1898	-	-	064	Outside SE tower
93	H13	014	11	3457	-
94	HS1898	-	-	P	-
95	HS1898	-	-	D	-
96	HSE11	-	-	-	Latrine pit

No. Ruler					
97	FAUSTINA II, POSTH	date: 175-80	mint: - -	denom: DEN	Obv DIVA [FAVISTINA PIA Rev [CONSECRATIO]
		diam: -	wt: -	cat: (H.AUR)746	
				near: C/C	
98	CONMODUS	date: 181	mint: - -	denom: SEST	Obv M CONMODVS ANTONINVS AVG Rev PROV DEOR TRP VI IMP IIII COS III PP SC
		diam: -	wt: -	cat: 312	
				wear: UW/US	
99	CONMODUS	date: 187-88	mint: - -	denom: DEN	Obv M CONM ANT P FEL AVG [BRIT] Rev PH TRP XIII IMP VIIII COS V PP
		diam: -	wt: -	cat: 164	
				wear: SU/SW	
100	SEPTIMIUS SEVERUS	date: 194-98	mint: - -	denom: DEN	Obv [L SEPT] SEV PER[IT AVG IMP...] Rev Victory
		diam: -	wt: -	cat: as 29A	
				wear: W/W	
101	SEPTIMIUS SEVERUS	date: 195-96	mint: - -	denom: DEN	Obv [L SEPT] SEV PERT AVG [IMP VII Rev [PH TRP] III [COS II PP]
		diam: -	wt: -	cat: 67	
				wear: C/C	
102	SEPTIMIUS SEVERUS	date: 197-98	mint: - -	denom: DEN	Obv [L SEPT] SEV PERT AVG IMP X Rev PACI AETERNAE
		diam: -	wt: -	cat: 118	
				wear: W/W	
103	SEPTIMIUS SEVERUS	date: 197-98	mint: - -	denom: DEN	Obv [L SEPT] SEV PERT AVG IMP...] Rev [LIBER[O PATRI]
		diam: -	wt: -	cat: 99/112a	
				wear: SW/W	
104	SEPTIMIUS SEVERUS	date: 198-200	mint: - -	denom: DEN	Obv L SEPT SEV AVG IMP XI PART MAX Rev ANNONAE AVGG
		diam: -	wt: -	cat: 123	
				wear: SW/W	
105	SEPTIMIUS SEVERUS	date: 207	mint: - -	denom: DEN	Obv SEVERVS PIVS AVG Rev PH TRP XV COS III PP
		diam: -	wt: -	cat: 211	
				wear: SW/SW	
106	SEPTIMIUS SEVERUS	date: 210	mint: - -	denom: DEN	Obv SEVERVS PIVS AVG Rev PH TRP XVIII COS III PP
		diam: -	wt: -	cat: 233	
				wear: -	
107	JULIA DOMNA	date: 196-211	mint: - -	denom: DEN	Obv [VLIA AVGVSTA Rev [VENVS] FELIX
		diam: -	wt: -	cat: 580	
				wear: W/W	
108	JULIA DOMNA	date: 196-211	mint: - -	denom: DEN	Obv [VLIA AVGVSTA Rev [S]AECVLI [FELICITAS]
		diam: -	wt: -	cat: (S.SEV)577	
				wear: VW/VN	

No.	Site	Context	Feature	Sfno	Area
97	HSE	-	-	-	-
98	HS1853	-	-	-	In front of S gate
99	H20	030	05	6238	-
100	H13	016	07	2224	-
101	H20	-	04	6263	-
102	HS1898	-	-	AD	-
103	H20	028	05	6044	-
104	HSE	-	-	-	-
105	H20	009	10	003	-
106	HSE60	-	-	-	Barrack XIV
107	H20	015	15	006	-
108	HS1898	-	-	053	-

No. Ruler					
109 CARACALLA		denom: DEN		Obv [M AVR ANTONINVS] CAES	
date: 196	mint: - -	cat: 2		Rev SECVRLITAS PERPETVA]	
diam: -	wt: -	wear: W/W			
110 CARACALLA		denom: DEN		Obv [ANTONINVS PIVS [AVG...]	
date: 211-17	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: W/W			
111 'CARACALLA'		denom: DEN		Obv ANTONINVS PIVS AVG	
date: 205+	mint: -	cat: c.of 81		Rev PONTIF TRP VIII COS II	
diam: -	wt: -	wear: W/W			
112 ELAGABALUS		denom: DEN		Obv [...AN]TONINVS...]	
date: 218-22	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: C/C			
113 ELAGABALUS		denom: DEN		Obv [IMP AN]TONINVS AVG	
date: 218-22	mint: - -	cat: 141		Rev [S]ALVS AV[GVSTI]	
diam: -	wt: -	wear: SH/SH			
114 ELAGABALUS		denom: DEN		Obv IMP ANTONINVS PIVS AVG	
date: 219	mint: - -	cat: 17		Rev PH TRP II COS II PP	
diam: -	wt: -	wear: SH/SH			
115 ELAGABALUS		denom: DEN		Obv IMP ANTONINVS PIVS AVG	
date: 221-22	mint: - -	cat: 46b/53b		Rev [PH TRP...] COS III [PP]	
diam: -	wt: -	wear: W/W			
116 JULIA SOAENIAS		denom: DEN		Obv IVLIA SOAENIAS [AVG]	
date: 218-22	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: SH/C			
117 JULIA MAESA		denom: DEN		Obv IVLIA MAESA AVG	
date: 218-22	mint: - -	cat: (ELAG)268		Rev PVDICITIA	
diam: -	wt: -	wear: SH/SH			
118 JULIA MAESA		denom: DEN		Obv IVLIA MAESA AVG	
date: 218-22	mint: - -	cat: (ELAG)268		Rev PVDICITIA	
diam: -	wt: -	wear: SH/SH			
119 SEVERUS ALEXANDER		denom: DEN		Obv IMP C M AVR SEV ALEXAND AVG	
date: 222	mint: - -	cat: 7		Rev PH TRP COS PP	
diam: -	wt: -	wear: SH/SH			
120 SEVERUS ALEXANDER		denom: DEN		Obv [IMP C M AVR SEV ALEXAND AVG	
date: 222-28	mint: - -	cat: 16B		Rev PAX AVG	
diam: -	wt: -	wear: -			

No.	Site	Context	Feature	Sfno	Area
109	H20	TS	07	5209	-
110	HS1898	-	-	049	SE III
111	H13	005	06	1041	-
112	H13	022	01	1872	-
113	H13	880	03	9556	-
114	HSE	-	-	-	-
115	H20	001	09	7485	-
116	H20	018	06	6118	-
117	HSE	-	-	-	-
118	HSE69-	-	-	007	Hospital:Rm 12 in drain
119	HSE68	-	-	025	Commandants Ho:Rm 8 latrine fill
120	HSE59	-	-	-	Barrack XIV:pII below pIII bench

No. Ruler					
121 SEVERUS ALEXANDER	date: 222-28	mint: - -	denom: DEN	cat: as 40	Obv IMP C M AVR SEV ALEXAND AVG
	diam: -	wt: -		wear: SW/SW	Rev [P] TRP I.. COS PP
122 SEVERUS ALEXANDER	date: 222-28	mint: - -	denom: DEN	cat: 156	Obv [IMP C M AVR SEV] ALEXAND AVG
	diam: -	wt: -		wear: W/W	Rev [LIBERTAS AVG]
123 SEVERUS ALEXANDER	date: 222-28	mint: - -	denom: DEN	cat: 165	Obv IMP C M AVR [SEV ALEXAND AVG]
	diam: -	wt: -		wear: W/W	Rev PAX AETERNA AVG
124 SEVERUS ALEXANDER	date: 222-31	mint: - -	denom: SEST	cat: 548	Obv [IMP CAES M AVR SEV ALEXANDER AVG]
	diam: -	wt: -		wear: VW/VW	Rev ANTONA AVGVSTI SC
125 JULIA MAEAEA	date: 222-35	mint: - -	denom: DEN	cat: (S.ALEX)358	Obv IVLIA MAEAEA AVG
	diam: -	wt: -		wear: W/W	Rev VENVS VIC[TRIX]
126 VALERIAN I	date: 258	mint: - -	denom: ANT	cat: 10	Obv IMP C [VALERIANVS P AVG]
	diam: -	wt: -		wear: VW/VH	Rev [ORJENS ALVGG]
127 SALONINUS	date: 256-59	mint: - -	denom: ANT	cat: 9	Obv SALON VALERIANVS CAES
	diam: -	wt: -		wear: -	Rev PIETAS AVG
128 GALLIENUS	date: 258-68	mint: - -	denom: ANT	cat: -	Obv -
	diam: -	wt: -		wear: C/C	Rev -
129 GALLIENUS	date: 258-68	mint: - -	denom: ANT	cat: 514	Obv [GALL]IENVS AVG
	diam: -	wt: -		wear: W/W	Rev SECVRIT AVG
130 GALLIENUS	date: 258-68	mint: - -	denom: ANT	cat: 157	Obv GALLIENVS AVG
	diam: -	wt: -		wear: SW/SW	Rev [ABVNDJANTIA AVG]
131 GALLIENUS	date: 258-68	mint: - -	denom: ANT	cat: 280	Obv [GALLIENVS AVG]
	diam: -	wt: -		wear: W/W	Rev [SECVRIT PE[RPET]
132 GALLIENUS	date: 258-68	mint: - -	denom: ANT	cat: 178/9	Obv [...GALLIENVS AVG]
	diam: -	wt: -		wear: SW/C	Rev [DIANAE] CO[INS] AVG

No.	Site	Context	Feature	Sfno	Area
121	H14	001	03	9281	-
122	H21	053	04	9523	-
123	H13	005	06	1091	-
124	HS1898	-	-	7	-
125	HS1898	-	-	019	Block XV
126	H21	047	03	8671	-
127	HSE61	-	-	-	Block XV
128	HSE	031	01	9299	-
129	HS1898	-	-	044	NE above drain N of cistern
130	HSE	024	01	9098	-
131	HS1898	-	-	043	Filling in
132	HS1898	-	-	060	-

No. Ruler					
133 GALLIENUS		denom: ANT		Obv [IMP GALLIENVS AVG]	
date: 258-68	mint: - -	cat: 178		Rev [DIANA CONS AVG]	
diam: -	wt: -	wear: W/W			
134 GALLIENUS		denom: ANT		Obv [...GALLIENVS AVG]	
date: 258-68	mint: - -	cat: as 176		Rev [DIANA CONS AVG]	
diam: -	wt: -	wear: W/C			
135 GALLIENUS		denom: ANT		Obv [GALLIENVS AVG]	
date: 258-68	mint: - XI	cat: 181		Rev [DIANA CONS AVG]	
diam: -	wt: -	wear: SW/SW			
136 GALLIENUS		denom: ANT		Obv [IMP GALLIENVS AVG]	
date: 258-68	mint: - -	cat: 198		Rev GENIVS AVG	
diam: -	wt: -	wear: SW/SW			
137 SALONINA		denom: ANT		Obv SALONINA AVG	
date: 258-68	mint: - -	cat: 12		Rev [IVND [REGINA]	
diam: -	wt: -	wear: W/W			
138 CLAUDIUS II		denom: ANT		Obv IMP CLAVDIVS AVG	
date: 268-70	mint: - -	cat: 105		Rev [VICTORIA AVG]	
diam: -	wt: -	wear: W/W			
139 CLAUDIUS II		denom: ANT		Obv [IMP..CLAVDIVS [AVG]	
date: 268-70	mint: - -	cat: as 90		Rev -	
diam: -	wt: -	wear: SW/SW			
140 CLAUDIUS II		denom: ANT		Obv -	
date: 268-70	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: EW/C			
141 CLAUDIUS II		denom: ANT		Obv -	
date: 268-70	mint: - -	cat: -		Rev -	
diam: -	wt: -	wear: SW/C			
142 CLAUDIUS II		denom: ANT		Obv [IMP C CLAVDIVS AVG]	
date: 268-70	mint: - -	cat: 66		Rev [MARS VILTOR]	
diam: -	wt: -	wear: W/W			
143 CLAUDIUS II		denom: ANT		Obv [IMP.. CLAVDIVS AVG]	
date: 268-70	mint: - -	cat: as 104		Rev VICTORIA AVG	
diam: -	wt: -	wear: -			
144 CLAUDIUS II		denom: ANT		Obv IMP CLAVDIVS AVG	
date: 268-70	mint: - -	cat: 80		Rev [PAX AVG]	
diam: -	wt: -	wear: SW/SW			

No.	Site	Context	Feature	Sfno	Area
133	HSE	024	01	8901	-
134	HS1898	-	-	073	-
135	HSE69-	-	-	-	Hospital:E range U/S
136	H20	TS	03	5046	-
137	H21	001	03	8538	-
138	HS1898	-	-	029	Filling in
139	HS1898	-	-	081	-
140	H13	TS	01	035	-
141	H20	010	04	6113	-
142	H21	047	03	8655	-
143	HSE60	-	-	-	Barrack XIV:beneath pIII floor
144	HSE	-	-	-	-

No. Ruler					
145	CLAUDIUS II			denom: ANT	Obv [IMP CLAVDIVS AVG]
	date: 268-70	mint: - -		cat: 195	Rev [VIRTVS AVG]
	diam: -	wt: -		wear: VW/VW	
146	CLAUDIUS II			denom: ANT	Obv [IMP C CLAVDIVS] AVG
	date: 268-70	mint: - -		cat: 14	Rev [AEQUITAS] AVG
	diam: -	wt: -		wear: VW/W	
147	CLAUDIUS II			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/U	
148	CLAUDIUS II			denom: ANT	Obv [IMP C CLAVDIVS AVG]
	date: 268-70	mint: - -		cat: as 104	Rev [VICTORIA AVG]
	diam: -	wt: -		wear: W/VW	
149	CLAUDIUS II			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/C	
150	'CLAUDIUS II'			denom: ANT	Obv [...CLAVDIVS...]
	date: 273+	mint: - -		cat: -	Rev -
	diam: 13.0 mm	wt: 2.7 g		wear: SW/SW	
151	'CLAUDIUS II'			denom: ANT	Obv -
	date: 273+	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	
152	CLAUDIUS II,POSTH			denom: ANT	Obv DIVO CLAVDIO
	date: 270+	mint: - -		cat: 259	Rev CONSECRATIO
	diam: -	wt: -		wear: -	
153	CLAUDIUS II,POSTH			denom: ANT	Obv [DIVO CLAVDIO]
	date: 270+	mint: - -		cat: 261	Rev [CONSECRATIO]
	diam: -	wt: -		wear: W/W	
154	CLAUDIUS II,POSTH			denom: ANT	Obv [DIVO CLAVDIO]
	date: 270+	mint: - -		cat: 266	Rev [CONSECRATIO]
	diam: -	wt: -		wear: W/W	
155	CLAUDIUS II,POSTH			denom: ANT	Obv DIVO CLAVDIO
	date: 270+	mint: - -		cat: 261	Rev [CONSECRATIO]
	diam: -	wt: -		wear: SW/SW	
156	CLAUDIUS II,POSTH			denom: ANT	Obv [DIVO CLAVDIO]
	date: 270+	mint: - -		cat: 261	Rev [CONSECRATIO]
	diam: -	wt: -		wear: W/W	

No.	Site	Context	Feature	Sfno	Area
145	H13	014	11	3461	-
146	H21	004	04	8557	-
147	H5E	029	01	9246	-
148	H13	TS	11	2698	-
149	H21	004	04	8558	-
150	H21	009	04	8632	-
151	H5E59	-	-	-	Barrack XIV:pIII in clay below flag
152	H5E60	-	-	-	Barrack XIV
153	H51898	-	-	0	-
154	H13	TS	11	2699	-
155	H13	001	07	1235	-
156	H13	001	07	1424	-

No.	Ruler								
157	CLAUDIUS II,POSTH		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 270+	mint: - -	cat: 261			Rev	[CONSECRATIO]		
	diam: -	wt: -	wear: EW/VW						
158	CLAUDIUS II,POSTH		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 270+	mint: - -	cat: 261			Rev	[CONSECRATIO]		
	diam: -	wt: -	wear: VW/W						
159	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: 12.0 mm	wt: 0.5 g	wear: W/W						
160	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: -	wt: -	wear: W/W						
161	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: -	wt: -	wear: SW/W						
162	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: 14.0 mm	wt: 0.9 g	wear: W/SW						
163	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: 14.0 mm	wt: 1.3 g	wear: EW/W						
164	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: 7.0 mm	wt: 0.4 g	wear: W/W						
165	'CLAUDIUS II,POSTH'		denom: ANT			Obv	[DIVO CLAVDIO]		
	date: 273+	mint: - -	cat: c.of 261			Rev	[CONSECRATIO]		
	diam: 13.0 mm	wt: 1.1 g	wear: W/W						
166	POSTUMUS		denom: ANT			Obv	[IMP C POSTV]MVS [P F AVG]		
	date: 258-68	mint: - -	cat: -			Rev	-		
	diam: -	wt: -	wear: W/W						
167	POSTUMUS		denom: ANT			Obv	[IMP C POSTV]MVS [P F AVG]		
	date: 260	mint: - -	cat: E 189			Rev	[FIDJES N[ILITVM]		
	diam: -	wt: -	wear: W/W						
168	'POSTUMUS'		denom: ANT			Obv	[IMP C POSTV]MVS P F AVG]		
	date: 273+	mint: - -	cat: c.of E 563			Rev	[DVO] STIATORI		
	diam: 18.0 mm	wt: 2.6 g	wear: W/W						

No.	Site	Context	Feature	Sfno	Area
157	H21	053	04	9525	-
158	H5E	029	01	9256	-
159	H13	003	09	1601	-
160	H13	003	09	416	-
161	H13	TS	11	2927	-
162	H13	014	11	3455	-
163	H21	053	04	9526	-
164	H21	001	03	9600	-
165	H13	004	11	3202	-
166	H5E	012	01	9239	-
167	H20	001	08	6961	-
168	H20	017	08	7163	-

No. Ruler					
169 VICTORINUS			denom: ANT		Obv [IMP C VICTORINVS [P F AVG]
date: 258-68	mint: - -		cat: as E 697		Rev [SIALVS AVG]
diam: -	wt: -		wear: W/W		
170 VICTORINUS			denom: ANT		Obv [IMP C PIAV VICTORINVS P F AVG]
date: 268-70	mint: - -		cat: as E 651		Rev [PAX AVG]
diam: -	wt: -		wear: H/C		
171 VICTORINUS			denom: ANT		Obv -
date: 268-70	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: SM/W		
172 VICTORINUS			denom: ANT		Obv IMP [C VICTORINVS P F AVG]
date: 268-70	mint: - -		cat: as E 697		Rev [SALVS AVG]
diam: -	wt: -		wear: W/VW		
173 VICTORINUS			denom: ANT		Obv [IMP C] VICTORINVS AVG]
date: 270	mint: - -		cat: E as 699		Rev [VIRTIVS AVG]
diam: -	wt: -		wear: W/W		
174 'VICTORINUS'			denom: ANT		Obv [IMP C VICTORINVS [P F AVG]
date: 273+	mint: - -		cat: c.of E 741/2		Rev [PIETAS AVG]
diam: 17.0 mm	wt: -		wear: SW/SW		
175 'VICTORINUS'			denom: ANT		Obv IMP VICTORINVS [P F AVG]
date: 273+	mint: - -		cat: c.as E 699		Rev [VIRTVS AVG]
diam: 15.0 mm	wt: 1.2 g		wear: W/W		
176 GALLIC EMPIRE			denom: ANT		Obv -
date: 258-73	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
177 GALLIC EMPIRE			denom: ANT		Obv -
date: 258-73	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
178 GALLIC EMPIRE			denom: ANT		Obv -
date: 258-73	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
179 GALLIC EMPIRE			denom: ANT		Obv -
date: 258-73	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		
180 GALLIC EMPIRE			denom: ANT		Obv -
date: 258-73	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/EH		

No.	Site	Context	Feature	Sfno	Area
169	H21	053	04	9524	-
170	H20	TS	02	4217	-
171	H13	001	11	2696	-
172	H20	003	09	7309	-
173	H5E	033	01	9522	-
174	HS1898	-	-	034	Filling in
175	H13	014	11	3459	-
176	H13	001	07	1468	-
177	H13	001	06	020	-
178	H13	002	08	243	-
179	H20	010	04	4046	-
180	H5E	026	01	9199	-

No.	Ruler						
181	GALLIC EMPIRE			denom: ANT		Obv -	
	date: 250-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: EW/C			
182	GALLIC EMPIRE			denom: ANT		Obv -	
	date: 250-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: EW/EW			
183	GALLIC EMPIRE			denom: ANT		Obv -	
	date: 250-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: EW/EW			
184	GALLIC EMPIRE			denom: ANT		Obv -	
	date: 250-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
185	GALLIC EMPIRE			denom: ANT		Obv -	
	date: 260-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
186	TETRICUS I			denom: ANT		Obv -	
	date: 270-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
187	TETRICUS I			denom: ANT		Obv -	
	date: 270-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: VW/VW			
188	TETRICUS I			denom: ANT		Obv -	
	date: 270-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/C			
189	TETRICUS I			denom: ANT		Obv -	
	date: 270-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
190	TETRICUS I			denom: ANT		Obv [IMP C TERICVS P F] AVG	
	date: 270-73	mint: - -		cat: 109		Rev [PIETAS AVG]	
	diam: -	wt: -		wear: SW/W			
191	TETRICUS I			denom: ANT		Obv [IMP C TETRICVS P F] AVG	
	date: 270-73	mint: - -		cat: 110		Rev [PIETAS AVG]	
	diam: -	wt: -		wear: SW/SW			
192	TETRICUS I			denom: ANT		Obv [IMP C..] ESV [TETRICVS AVG]	
	date: 270-73	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: VW/VW			

No.	Site	Context	Feature	Sfno	Area
181	HSE	012	01	9240	-
182	HSE	024	01	8904	-
183	HSE	-	01	9097	-
184	H21	018	03	8672	-
185	HS1898	-	-	084	-
186	HS1898	-	-	062	NW III S wall
187	HS1898	-	-	078	-
188	HS1898	-	-	062	NW III S wall
189	HSE61	-	-	-	Block XV:pIII drain (S)
190	HSE63	-	-	023	Latrines
191	HS1898	-	-	115	-
192	HS1898	-	-	055	-

No.	Ruler				
193	TETRICUS I		denom: ANT		Obv -
	date: 270-73	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
194	TETRICUS I		denom: ANT		Obv -
	date: 270-73	mint: - -	cat: as E 761/4		Rev [SPES PVBLICA]
	diam: -	wt: -	wear: SM/SW		
195	TETRICUS I		denom: ANT		Obv [IMP] TETRICVS [P F AVG]
	date: 270-73	mint: - -	cat: 86		Rev [LAETITIA] AVG
	diam: -	wt: -	wear: W/W		
196	TETRICUS I		denom: ANT		Obv -
	date: 270-73	mint: - -	cat: E 782/4		Rev [FIDES MILITVM]
	diam: -	wt: -	wear: W/W		
197	TETRICUS I		denom: ANT		Obv [IMP] TETRICVS P F AVG
	date: 270-73	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: W/W		
198	TETRICUS I		denom: ANT		Obv [IMP C] TETRICVS PF AVG
	date: 270-73	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: W/C		
199	TETRICUS I		denom: ANT		Obv IMP [C] TETRICVS P F AVG
	date: 273	mint: - -	cat: E 790		Rev HILARITAS AVGG
	diam: -	wt: -	wear: W/W		
200	TETRICUS I		denom: ANT		Obv IMP TETRICVS P F AVG
	date: 273	mint: - -	cat: E 789		Rev HILARITAS AVGG
	diam: -	wt: -	wear: SM/SW		
201	TETRICUS I		denom: ANT		Obv [IMP C] TETRICVS [P F AVG]
	date: 273	mint: - -	cat: E 771/5		Rev [PAX AVG]
	diam: -	wt: -	wear: W/W		
202	'TETRICUS I'		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 17.0 mm	wt: 1.7 g	wear: W/C		
203	TETRICUS I		denom: ANT		Obv [IMP C] TETRICVS [P F AVG]
	date: 274	mint: - -	cat: E 795		Rev [NOBILITAS AVGG]
	diam: -	wt: -	wear: W/W		
204	'TETRICUS I'		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 9.0 mm	wt: -	wear: SM/SW		

No.	Site	Context	Feature	Sfno	Area
193	H13	014	11	3511	-
194	H13	006	01	3123	-
195	HS1898	-	-	071	-
196	HS1898	-	-	108	-
197	H5E	024	01	8902	-
198	H5E69-	-	-	009	Hospital:U/S SE corner
199	H13	014	11	3451	-
200	H13	014	11	3142	-
201	HS1898	-	-	025	-
202	H21	-	03	8537	-
203	H13	014	11	3452	-
204	HS1898	-	-	088	-

No.	Ruler	denom:	Obv -
205	'TETRICUS I' date: 273+ mint: - - diam: 9.0 mm wt: -	ANT cat: - wear: SW/SW	Rev -
206	'TETRICUS I' date: 273+ mint: - - diam: 7.0 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
207	'TETRICUS I' date: 273+ mint: - - diam: 13.0 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
208	'TETRICUS I' date: 273+ mint: - - diam: 12.0 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
209	'TETRICUS I' date: 273+ mint: - - diam: 10.0 mm wt: -	ANT cat: c.of E 771/5 wear: SW/SW	Obv - Rev [PAX AVG]
210	'TETRICUS I' date: 273+ mint: - - diam: 17.0 mm wt: -	ANT cat: - wear: W/C	Obv - Rev -
211	'TETRICUS I' date: 273+ mint: - - diam: 12.0 mm wt: -	ANT cat: c.of E 794 wear: W/W	Obv [IMP C TETRICVS P F AVG] Rev [MARS VICTOR]
212	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 1.3 g	ANT cat: as E 787 wear: C/W	Obv - Rev [LAETITIA AVGG]
213	'TETRICUS I' date: 273+ mint: - - diam: 10.0 mm wt: -	ANT cat: - wear: SW/SW	Obv - Rev -
214	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 0.9 g	ANT cat: c.as E 764/7 wear: SW/SW	Obv - Rev [SPES PVBLICA]
215	'TETRICUS I' date: 273+ mint: - - diam: 15.0 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
216	'TETRICUS I' date: 273+ mint: - - diam: 17.0 mm wt: -	ANT cat: E 764/7 wear: W/W	Obv [IMP C TETRICVS P F AVG] Rev [SPES PVBLICA]

No.	Site	Context	Feature	Sfno	Area
205	HS1898	-	-	085	-
206	HSE67-	-	-	008	Commandants Ho:Rm 5 hypocaust fill
207	HS1898	-	-	086	-
208	HSE67	-	-	009	Hospital:topsoil
209	HSE67	-	-	003	Commandants Ho
210	HS1898	-	-	095	-
211	HS1898	-	-	079	-
212	H13	014	11	3148	-
213	HS1898	-	-	075	-
214	H13	014	11	3456	-
215	HS1898	-	-	048	-
216	HS1898	-	-	059	-

No.	Ruler	denom:	Obv -
217	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 1.3 g	ANY cat: - wear: C/C	Rev -
218	'TETRICUS I' date: 273+ mint: - - diam: 15.0 mm wt: 1.0 g	ANT cat: - wear: W/W	Obv - Rev -
219	'TETRICUS I' date: 273+ mint: - - diam: 17.0 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
220	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 1.6 g	ANT cat: - wear: W/C	Obv - Rev -
221	'TETRICUS I' date: 273+ mint: - - diam: 13.0 mm wt: 0.6 g	ANT cat: - wear: C/C	Obv - Rev -
222	'TETRICUS I' date: 273+ mint: - - diam: 16.0 mm wt: 0.8 g	ANT cat: c.as E 765 wear: SW/SW	Obv - Rev [VICTORIA AVG]
223	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 0.9 g	ANT cat: c.as E 766 wear: W/W	Obv - Rev -
224	'TETRICUS I' date: 273+ mint: - - diam: 16.0 mm wt: 1.3 g	ANT cat: - wear: VW/VW	Obv - Rev -
225	'TETRICUS I' date: 273+ mint: - - diam: 17.0 mm wt: 1.9 g	ANT cat: c.of E 779/BB wear: W/W	Obv IMP [..TETRICVS] P F AVG Rev [SALVS] AVGG
226	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: -	ANT cat: - wear: SW/SW	Obv ...PEDTDDE... Rev ...CIOC...
227	'TETRICUS I' date: 273+ mint: - - diam: 14.0 mm wt: 1.0 g	ANT cat: - wear: W/W	Obv - Rev -
228	'TETRICUS I' date: 273+ mint: - - diam: 15.0 mm wt: 0.9 g	ANT cat: c.of E 780 wear: W/VW	Obv [IMP C TETRICVS P F AVG] Rev VIIRT[VS AVGG]

No.	Site	Context	Feature	Sfno	Area
217	HSE31	-	-	135	Building inside S gate
218	HSE31	-	-	153	E end of building N of S gate
219	HS1898	-	-	068	-
220	HSE	029	01	9249	-
221	HSE	-	-	9253	-
222	HSE	024	01	8900	-
223	HSE	016	01	9518	-
224	H21	018	03	8673	-
225	H21	000	03	8542	-
226	H14	007	04	9396	Part of hoard (1)
227	HSE	016	01	9516	-
228	HSE	029	01	9251	-

No. Ruler						
229 'TETRICUS I'	date: 273+	mint: - -	diam: 14.0 mm	wt: 2.2 g	denom: ANT cat: c.as E 770 wear: SW/W	Obv - Rev [HILJARITAS AVGG]
230 TETRICUS II	date: 270	mint: - -	diam: -	wt: -	denom: ANT cat: E 769/91 wear: EW/EW	Obv - Rev [SPES...]
231 TETRICUS II	date: 270	mint: - -	diam: -	wt: -	denom: ANT cat: as E 781 wear: W/W	Obv - Rev [PRINC IVVENT]
232 TETRICUS II	date: 270-73	mint: - -	diam: -	wt: -	denom: ANT cat: - wear: -	Obv ...[TETRICVS...] Rev -
233 TETRICUS II	date: 272	mint: - -	diam: -	wt: -	denom: ANT cat: E 791/6 wear: W/W	Obv [C PIV ESV TETRICVS CAES] Rev [SPES AVGG]
234 TETRICUS II	date: 273	mint: - -	diam: -	wt: -	denom: ANT cat: E 769/91 wear: W/W	Obv [C] PIV E[SV TETRICVS CAES] Rev [SPES...]
235 'TETRICUS II'	date: 273+	mint: - -	diam: 11.0 mm	wt: -	denom: ANT cat: E 769/91 wear: W/W	Obv [C PIV ESV] TETRICVS CAES] Rev [SPES....]
236 'TETRICUS II'	date: 273+	mint: - -	diam: 15.0 mm	wt: 0.4 g	denom: ANT cat: c.of E 769/91 wear: UW/SW	Obv - Rev [SPES...]
237 'TETRICUS II'	date: 273+	mint: - -	diam: 10.0 mm	wt: -	denom: ANT cat: - wear: W/W	Obv - Rev -
238 'TETRICUS II'	date: 273+	mint: - -	diam: 13.0 mm	wt: 0.9 g	denom: ANT cat: c.as E 769/91 wear: SW/W	Obv - Rev [SPES...]
239 'TETRICUS II'	date: 273+	mint: - -	diam: 9.0 mm	wt: 0.8 g	denom: ANT cat: - wear: W/W	Obv - Rev -
240 'TETRICUS II'	date: 273+	mint: - -	diam: 14.0 mm	wt: 1.0 g	denom: ANT cat: c.of 232 wear: SW/SW	Obv [C PIV ESV] TETRICVS CAES] Rev [HILARITAS] AVGG

No.	Site	Context	Feature	Sfno	Area
229	H21	054	04	9527	-
230	H13	T5	09	277	-
231	H5E	033	01	9530	-
232	H5E59	-	-	-	Barrack XIV:central 3rd
233	HS1898	-	-	030	-
234	H13	001	07	1476	-
235	HS1898	-	-	032	Filling in
236	H13	014	11	3453	-
237	HS1898	-	-	080	-
238	H13	046	01	2686	-
239	H13	014	11	3454	-
240	H5E	024	01	8905	-

No.	Ruler	denom:	Obv -
241	'TETRICUS II' date: 273+ mint: - - diam: 15.0 mm wt: 0.4 g	ANT cat: - wear: C/W	Rev -
242	'TETRICUS II' date: 273+ mint: - - diam: - wt: -	ANT cat: c.of E 769/91 wear: W/W	Obv - Rev [SPES...]
243	'TETRICUS II' date: 273+ mint: - - diam: 15.0 mm wt: 1.3 g	ANT cat: c.as E 769/91 wear: W/W	Obv - Rev [SPES...]
244	'TETRICUS II' date: 273+ mint: - - diam: 15.0 mm wt: -	ANT cat: - wear: W/W	Obv [...TETRICVS...] Rev -
245	'TETRICUS II' date: 273+ mint: - - diam: 13.0 mm wt: 1.5 g	ANT cat: - wear: VW/VW	Obv - Rev -
246	'TETRICUS II' date: 273+ mint: - - diam: 12.0 mm wt: 0.8 g	ANT cat: c.of E 769/91 wear: W/W	Obv - Rev [SPES...]
247	'TETRICUS II' date: 273+ mint: - - diam: 12.0 mm wt: 0.8 g	ANT cat: c.of E 769/91 wear: SW/SW	Obv [C PIV ESV TETRICVS CAES] Rev [SPES...]
248	'TETRICUS II' date: 273+ mint: - - diam: 13.0 mm wt: 0.8 g	ANT cat: - wear: VW/VW	Obv - Rev -
249	'TETRICUS II' date: 273+ mint: - - diam: 15.0 mm wt: 1.3 g	ANT cat: c.of E 769/91 wear: W/W	Obv - Rev [SPES...]
250	'TETRICUS II' date: 273+ mint: - - diam: 11.0 mm wt: 0.7 g	ANT cat: - wear: W/W	Obv - Rev Trophy
251	'TETRICUS II' date: 273+ mint: - - diam: 0.8 mm wt: -	ANT cat: - wear: W/W	Obv - Rev -
252	'TETRICUS II' date: 273+ mint: - - diam: 14.0 mm wt: 0.6 g	ANT cat: - wear: W/W	Obv - Rev -

No.	Site	Context	Feature	Sfno	Area
241	H13	001	07	1478	-
242	H13	006	01	1757	-
243	H20	TS	02	4219	-
244	HS1898	-	-	111	-
245	HSE	016	01	9519	-
246	HSE	027	01	9200	-
247	H14	007	04	9396	Part of hoard (1)
248	H15	006	01	9060	-
249	H21	041	03	8670	-
250	H21	047	03	8598	-
251	H14	007	04	9396	Part of hoard (1)
252	H21	018	03	8597	-

No.	Ruler				
253	'TETRICUS II'	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: 15.0 mm	wt: 2.2 g	wear: W/W		
254	'TETRICUS II'	denom: ANT		Obv [C PIV ESV TETRICVS CAES]	
	date: 273+	mint: - -	cat: c.of E 769/91	Rev [SPES...]	
	diam: -	wt: -	wear: W/W		
255	'TETRICUS II'	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: 13.0 mm	wt: 1.0 g	wear: W/W		
256	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: 12.0 mm	wt: 1.1 g	wear: W/W		
257	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
258	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
259	RADIATE COPY	denom: ANT		Obv ...H...	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
260	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev ...E..C..	
	diam: -	wt: -	wear: -		
261	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
262	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
263	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		
264	RADIATE COPY	denom: ANT		Obv -	
	date: 273+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: -		

No.	Site	Context	Feature	Sfno	Area
253	HSE	033	01	9521	-
254	HSE	031	01	9298	-
255	HSE	030	01	9259	-
256	H13	001	00	1045	-
257	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
258	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
259	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
260	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
261	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
262	HSE59	-	-	-	Barrack XIV:central 3rd
263	HSE59	-	-	-	Barrack XIV:pIII in clay below flag
264	HSE61	-	-	-	Block XV

No.	Ruler					
265	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
266	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
267	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
268	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
269	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
270	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
271	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
272	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
273	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
274	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
275	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
276	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		

No.	Site	Context	Feature	Sfno	Area
265	HSE61	-	-	-	Block XV
266	HSE61	-	-	-	Block XV
267	HSE61	-	-	-	Block XV
268	HSE61	-	-	-	Block XV
269	HSE61	-	-	-	Block XV
270	HSE61	-	-	-	Block XV
271	HSE61	-	-	-	Block XV
272	HSE61	-	-	-	Block XV
273	HSE61	-	-	-	Block XV
274	HSE61	-	-	-	Block XV
275	HSE61	-	-	-	Block XV
276	HSE61	-	-	-	Block XV

No.	Ruler						
277	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
278	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
279	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 9.0 mm	wt: -		wear: C/C			
280	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 13.0 mm	wt: 0.5 g		wear: VH/VW			
281	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 11.0 mm	wt: 0.5 g		wear: C/C			
282	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
283	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 8.0 mm	wt: 0.2 g		wear: W/H			
284	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
285	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 14.0 mm	wt: 1.5 g		wear: C/C			
286	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
287	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 12.0 mm	wt: 1.0 g		wear: C/C			
288	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			

No.	Site	Context	Feature	Sfno	Area
277	HSE61	-	-	-	Block XV
278	HSE61	-	-	-	Block XV
279	HS1898	-	-	110	-
280	H14	007	04	9396	Part of hoard (1)
281	H20	001	09	7214	-
282	HSE61	-	-	-	Block XV
283	H13	014	11	3460	-
284	HSE61	-	-	-	Block XV
285	H20	036	08	7775	-
286	HSE31	-	-	150	Building inside S gate
287	H13	006	04	055	-
288	HSE61	-	-	-	Block XV

No.	Ruler						
289	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 13.0 mm	wt: 0.8 g		wear: C/C			
290	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
291	RADIATE COPY			denom: ANT		Obv (H) ATELE...	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
292	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
293	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 7.0 mm	wt: 0.5 g		wear: C/C			
294	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
295	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 10.0 mm	wt: 0.3 g		wear: W/H			
296	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: -			
297	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 12.0 mm	wt: 0.3 g		wear: C/H			
298	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: C/H			
299	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 7.0 mm	wt: 0.1 g		wear: C/C			
300	RADIATE COPY			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 6.0 mm	wt: -		wear: C/C			

No.	Site	Context	Feature	Sfno	Area
289	H13	TS	01	024	-
290	HSE61	-	-	-	Block XV
291	HS1864	-	-	-	-
292	HSE61	-	-	-	Block XV
293	HSE	026	01	9198	-
294	HSE61	-	-	-	Block XV
295	HSE	024	01	8903	-
296	HSE61	-	-	-	Block XV
297	HSE	024	01	8899	-
298	HS1898	-	-	093	-
299	H15	001	01	9262	-
300	HS1898	-	-	H	-

No.	Ruler								
301	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	C/C				
302	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: 9.0 mm	wt: -		wear:	C/C				
303	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: 6.0 mm	wt: 0.3 g		wear:	W/U				
304	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
305	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: 7.0 mm	wt: 0.2 g		wear:	C/C				
306	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
307	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
308	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
309	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
310	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
311	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				
312	RADIATE COPY			denom:	ANT			Obv -	
	date: 273+	mint: - -		cat:	-			Rev -	
	diam: -	wt: -		wear:	-				

No.	Site	Context	Feature	Sfno	Area
301	H21	001	03	8583	-
302	HS1898	-	-	H	-
303	H21	018	03	8674	-
304	HSE61	-	-	-	Block XV
305	H21	009	01	8605	-
306	HSE61	-	-	-	Block XV
307	HSE61	-	-	-	Block XV
308	HSE61	-	-	-	Block XV
309	HSE61	-	-	-	Block XV
310	HSE61	-	-	-	Block XV
311	HSE61	-	-	-	Block XV
312	HSE61	-	-	-	Block XV

No.	Ruler					
313	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
314	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
315	RADIATE COPY			denom: ANTT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: 18.0 mm	wt: 1.0 g		wear: EH/EN		
316	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: 11.0 mm	wt: -		wear: W/C		
317	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: 8.0 mm	wt: 0.3 g		wear: W/W		
318	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: 10.0 mm	wt: 0.4 g		wear: C/C		
319	RADIATE COPY			denom: ANT		Obv -
	date: 273+	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: -		
320	PROBUS			denom: AUREL		Obv PROBVS P F AVG
	date: 276-82	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: W/C		
321	CARAUSIUS			denom: AUREL		Obv -
	date: 286-93	mint: - -		cat: as 118		Rev P[AX] A[VG]
	diam: -	wt: -		wear: W/W		
322	CARAUSIUS			denom: AUREL		Obv [IMP C CARAVSIVS AVG
	date: 286-93	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: SW/C		
323	CARAUSIUS			denom: AUREL		Obv [...CARAVSIVS...]
	date: 287-93	mint: - -		cat: -		Rev -
	diam: -	wt: -		wear: W/W		
324	CARAUSIUS			denom: AUREL		Obv [IMP C] CARAVSIVS P F AVG
	date: 287-93	mint: CO -		cat: 255		Rev LAETIT AVG
	diam: -	wt: -		wear: W/W		

No.	Site	Context	Feature	Sfno	Area
313	HSE61	-	-	-	Block XV
314	HSE61	-	-	-	Block XV
315	H13	TS	00	702	-
316	HS1898	-	-	082	-
317	H20	001	08	8525	-
318	H13	001	00	1170	-
319	HSE61	-	-	-	Block XV
320	HSE67-	-	-	009	Commandants Ho:Rm 5 hypocaust fill
321	HSE	-	-	-	-
322	HS1898	-	-	051	-
323	H13	014	11	3479	-
324	H13	001	06	986	-

No.	Ruler						
325	CARAVSIUS			denom: AUREL		Obv -	
	date: 287-93	mint: CO -		cat: as 411		Rev [SPIES....	
	diam: -	wt: -		wear: W/H			
326	ALLECTVS			denom: AUREL		Obv [IHP C [ALLECTVS...]	
	date: 286-93	mint: - -		cat: -		Rev -	
	diam: -	wt: -		wear: W/W			
327	ALLECTVS			denom: AUREL		Obv IHP C ALLECTVS P F (I) AVG]	
	date: 286-93	mint: - -		cat: 90		Rev PAX AV[G]	
	diam: -	wt: -		wear: W/H			
328	ALLECTVS			denom: AUREL		Obv [IHP C] ALLECTVS P F AVG	
	date: 293-96	mint: - -		cat: as 55		Rev -	
	diam: -	wt: -		wear: C/C			
329	ALLECTVS			denom: AUREL		Obv [IMP C ALLECTVS P F AVG]	
	date: 293-96	mint: LN -		cat: 42		Rev SALVS AVG	
	diam: -	wt: -		wear: -			
330	ALLECTVS			denom: QVIN		Obv IHP C ALLECTVS P F AVG	
	date: 293-96	mint: LN -		cat: -		Rev VIRTVS AVG	
	diam: -	wt: -		wear: -			
331	ALLECTVS			denom: AUREL		Obv IMP C ALLECTVS P F AVG	
	date: 293-96	mint: LN P		cat: 33		Rev PAX AVG	
	diam: -	wt: -		wear: W/H			
332	DIOCLETIAN			denom: -		Obv -	
	date: 294-305	mint: - -		cat: -		Rev [GENIO POPVLI ROMANI]	
	diam: -	wt: -		wear: C/H			
333	DIOCLETIAN			denom: -		Obv IMP DIOCLETIANVS P F AVG	
	date: 295-97	mint: TR C		cat: VI TR as 170a		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: W/W			
334	DIOCLETIAN			denom: -		Obv IHP C DIOCLETIANVS P F AVG	
	date: 300-05	mint: LN -		cat: VI LN 6a		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: SW/SW			
335	DIOCLETIAN			denom: -		Obv IHP C DIOCLETIANVS AVG	
	date: 301-03	mint: LG P		cat: VI LG as 83		Rev GENIO POP-VLI ROMANI	
	diam: -	wt: -		wear: W/W			
336	MAXIMIANVS			denom: -		Obv IHP MAXIMIANVS P F AVG	
	date: 294	mint: TR -		cat: VI TR 141b		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: W/W			

No.	Site	Context	Feature	Sfno	Area
325	H13	TS	09	184	-
326	HS1898	-	-	074	-
327	HS1898	-	-	024	Block I:1
328	H13	TS	00	582	-
329	HSE60	-	-	-	Barrack XIV
330	HSE60	-	-	-	Barrack XIV
331	HSE72	-	-	-	Hospital:W wall (disturbed)
332	H13	001	07	1236	-
333	HS1898	-	-	021	Principia;Ro 11
334	HSE	-	-	-	-
335	HSE	-	-	-	-
336	HSE	-	-	-	-

No.	Ruler						
337	MAXIMIANUS			denom: -		Obv IMP C MAXIMIANVS P F AVG	
	date: 300-05	mint: - -		cat: VI LN 6b		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: SW/W			
338	CONSTANTIUS I			denom: -		Obv FL VAL CONSTANTIVS NOB C	
	date: 295-99	mint: TR P		cat: VI TR as 195/328		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: -			
339	CONSTANTIUS I			denom: -		Obv [FL VAL] CONSTANTIVS NOB C	
	date: 300	mint: LN -		cat: VI LN 14a		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: SW/SW			
340	GALERIUS			denom: -		Obv MAXIMIANVS NOB [C...]	
	date: 300	mint: LN		cat: VI LN 15/31		Rev GENIO POPV-LI ROMANI	
	diam: -	wt: -		wear: -			
341	GALERIUS			denom: -		Obv MAXIMIANVS NOB CAES	
	date: 300-05	mint: LN -		cat: VI LN as 15		Rev GENIO POPV-CLII ROMANI	
	diam: -	wt: -		wear: W/W			
342	GALERIUS			denom: -		Obv MAXIMIANVS NOBIL C	
	date: 302-03	mint: TR I		cat: VI TR 558b		Rev HONETA S AVGG ET CAESS NN	
	diam: -	wt: -		wear: UW/UW			
343	LICINIUS I			denom: -		Obv [IMP] LICINIVS P F AVG	
	date: 313-14	mint: LN P		cat: VII LN 19		Rev [SOLI INVIC]-TO COMITI	
	diam: -	wt: -		wear: SW/SW			
344	LICINIUS I			denom: -		Obv IMP LICINIVS P F AVG	
	date: 313-15	mint: TR P		cat: VII TR 58		Rev GENIO-POP ROM	
	diam: -	wt: -		wear: SW/W			
345	CONSTANTINE I			denom: -		Obv [IMP] CONSTAN[TINVS P..AVG]	
	date: 310	mint: LN P		cat: VI LN as 121a		Rev SOLI INVICTO COMITI]	
	diam: -	wt: -		wear: SW/SW			
346	CONSTANTINE I			denom: -		Obv [IMP] CONSTANTINVS P F AVG	
	date: 310	mint: LN P		cat: VI LN 121a		Rev SOLI INVIC-TO COMITI	
	diam: -	wt: -		wear: SW/SW			
347	CONSTANTINE I			denom: -		Obv -	
	date: 310-18	mint: - -		cat: -		Rev [S]OLI [INVICTO COMITI]	
	diam: -	wt: -		wear: C/C			
348	CONSTANTINE I			denom: -		Obv IMP CONSTANTINVS AVG	
	date: 313-14	mint: LN P		cat: VII LN 10		Rev SOLI INVIC-TO COMITI	
	diam: -	wt: -		wear: SW/SW			

No.	Site	Context	Feature	Sfno	Area
337	HSE69-	-	-	009	Hospital:S wall of entrance lobby
338	HSE60	-	-	-	Barrack XIV
339	HSE	016	01	9520	-
340	HSE60	-	-	-	Barrack XIV
341	HSE	-	-	-	-
342	H13	TSN	09	1612	-
343	HSE	029	01	9258	-
344	HS1898	-	-	-	Blocks XIV-XV
345	HS1898	-	-	AJ	-
346	HSE	016	01	9517	-
347	HS1898	-	-	104	-
348	HSE68	-	-	001	Commandants Ho:Rm 5 hypocaust fill

No.	Ruler						
349	CONSTANTINE I	date: 313-15	mint: TR P	denom: -	cat: VII TR 53	Obv CONSTANTINVS P F AVG	Rev [HARTI CONJ-SERVATORI
		diam: -	wt: -		wear: W/W		
350	CONSTANTINE I	date: 314-15	mint: LG P	denom: -	cat: VII LG 15	Obv IMP CONSTANTINVS P F AVG	Rev SOLI INVIC-TO COHITI
		diam: -	wt: -		wear: W/SW		
351	CONSTANTINE I	date: 316-17	mint: LN P	denom: -	cat: VII LN 90	Obv [CONSTANTINVS P F AVG	Rev SOLI INVIC-TO COHITI
		diam: -	wt: -		wear: W/W		
352	CONSTANTINE I	date: 316-17	mint: LN -	denom: -	cat: VII LN 74	Obv [CONSTANTINVS P AVG	Rev [SOLI INVICTO] COHITI
		diam: -	wt: -		wear: SW/SW		
353	CONSTANTINE I	date: 318	mint: LN P	denom: -	cat: VII LN 134-47	Obv -	Rev SOLI INVIC-TO COHITI
		diam: -	wt: -		wear: -		
354	CONSTANTINE I	date: 319	mint: LN P	denom: -	cat: VII LN 154	Obv IMP CONSTAN-TINVS MAX AVG	Rev VICTORIAE LAETAE PRINC PERP VOT/PR
		diam: -	wt: -		wear: SW/SW		
355	CONSTANTINE I	date: 319	mint: TR	denom: -	cat: VII TR 213	Obv IMP CONSTANTINVS MAX AVG	Rev [VICTORIAE LAETAE PRINC PERP VOT/PR
		diam: -	wt: -		wear: W/W		
356	CONSTANTINE I	date: 319	mint: TR -	denom: -	cat: VII TR 215	Obv [IMP CONSTANTINVS AVG	Rev [VICTORIAE LAETAE PRINC PERP] VOT/PR
		diam: -	wt: -		wear: W/W		
357	CONSTANTINE I	date: 319	mint: TR S	denom: -	cat: VII TR 213	Obv IMP [CONSTIAN-TINVS MAX AVG]	Rev [VICTORIAE LAETAE PRINC PERP VOT/PR
		diam: -	wt: -		wear: W/W		
358	CONSTANTINE I	date: 320-21	mint: TC S	denom: -	cat: VII TC 140	Obv CONSTAN-TINVS AVG	Rev D N CONSTANTINI MAX AVG
		diam: -	wt: -		wear: SW/SW		
359	CONSTANTINE I	date: 321-23	mint: LG -	denom: -	cat: VII LG as 128	Obv [CONSTANTINVS P AVG]	Rev [BEATA [TRANQVILL]ITAS VOT/TIS/XX
		diam: -	wt: -		wear: C/W		
360	CONSTANTINE I	date: 323	mint: LG P	denom: -	cat: VII LY 200	Obv CONSTANT-[INVS AVG]	Rev BEATA TRAN[QUILLITAS] VOT/IS/XX
		diam: -	wt: -		wear: W/W		

No.	Site	Context	Feature	Sfno	Area
349	HS1898	-	-	J	-
350	HSE	-	-	-	-
351	HS1898	-	-	-	-
352	HSE	-	-	-	-
353	HSE60	-	-	-	Barrack XIV
354	HSE67-	-	-	027	Commandants Ho
355	HSE73	-	-	014	Hospital:W range topsoil
356	HS1898	-	-	S	-
357	H21	001	03	8539	-
358	HSE	029	01	9244	-
359	H21	019	03	8566	-
360	HSE72	-	-	-	Hospital:W wall (disturbed)

No.	Ruler				
361	CONSTANTINE II, CAES	denom: -		Obv CONSTANTII-NVS IVN N C	
	date: 323-34	mint: LN P	cat: VII LN 287	Rev BEAT TRAN-NOLITAS VOT/IS/XX	
	diam: -	wt: -	wear: SW/SW		
362	CONSTANTINE I	denom: -		Obv [CONSTANTINVS AG	
	date: 323-24	mint: LN P	cat: VII LN 290	Rev [SARHATIA] DEVICTA	
	diam: -	wt: -	wear: W/H		
363	CONSTANTINE I	denom: -		Obv [CONSTANTINVS AVG]	
	date: 323-24	mint: TR P	cat: VII TR 429	Rev [SARHATIA] DEVICTA	
	diam: -	wt: -	wear: W/H		
364	CONSTANTINE I	denom: -		Obv [CONSTANTINVS AVG	
	date: 323-24	mint: TR P	cat: VII TR 435	Rev [SARHATIA] DEVICTA	
	diam: -	wt: -	wear: SW/SW		
365	CONSTANTINE I	denom: -		Obv [VRBS ROMA	
	date: 330-31	mint: TR P	cat: VII TR 529	Rev Wolf and twins	
	diam: -	wt: -	wear: W/H		
366	CONSTANTINE I	denom: -		Obv [VRBS] ROMA	
	date: 332	mint: LG P	cat: VII LY 257	Rev Wolf and twins	
	diam: -	wt: -	wear: SW/SW		
367	CONSTANTINE I	denom: -		Obv VRBS-ROMA	
	date: 330-31	mint: LG P	cat: VII LG 247	Rev Wolf and twins	
	diam: -	wt: -	wear: -		
368	CONSTANTINE I	denom: -		Obv VRBS-ROMA	
	date: 330-31	mint: LG P	cat: VII LG 242	Rev Wolf and twins	
	diam: -	wt: -	wear: SW/SW		
369	CONSTANTINE I	denom: -		Obv [VRBS] ROMA	
	date: 330-31	mint: TR P	cat: VII TR 529	Rev Wolf and twins	
	diam: -	wt: -	wear: W/H		
370	CONSTANTINE I	denom: -		Obv VRBS-ROMA	
	date: 330-31	mint: TR P	cat: VII TR 529	Rev Wolf and twins	
	diam: -	wt: -	wear: SW/SW		
371	CONSTANTINE I	denom: -		Obv [VRBS]-ROMA	
	date: 332-33	mint: TR S	cat: VII TR 542	Rev Wolf and twins	
	diam: -	wt: -	wear: W/H		
372	CONSTANTINE I	denom: -		Obv CONSTAN-[TINOPOLIS]	
	date: 330-31	mint: TR -	cat: VII TR as 523	Rev Victory on prow	
	diam: -	wt: -	wear: W/H		

No.	Site	Context	Feature	Sfno	Area
361	HSE87	-	-	-	Granaries:surface
362	HSE	012	01	9096	-
363	H13	001	11	2689	-
364	HSE	033	01	9531	-
365	H20	011	04	5389	-
366	HSE67-	-	-	002	Commandants Ho:Rm 5 hypocaust fill
367	HSE61	-	-	-	Block XV
368	HSE	-	-	9557	On spoil tip
369	H21	001	03	8585	-
370	HS1898	-	-	45	Filling in
371	HS1898	-	-	45b	-
372	H13	014	11	3216	-

No.	Ruler				
373	CONSTANTINE I			denom: -	Obv CONSTANTINOPOLIS
	date: 330-31	mint: TR P		cat: VII TR 523	Rev Victory on prow
	diam: -	wt: -		wear: VW/VH	
374	CONSTANTINE I			denom: -	Obv [CONSTAN]-TINOPOLIS
	date: 330-35	mint: - -		cat: -	Rev Victory on prow
	diam: -	wt: -		wear: VW/VW	
375	CONSTANTINE I			denom: -	Obv [CONSTANTINOPOLIS]
	date: 330-35	mint: - -		cat: -	Rev Victory on prow
	diam: -	wt: -		wear: VW/VW	
376	CONSTANTINE I			denom: -	Obv [COINSTAN]-TINOPOLIS
	date: 330-35	mint: - -		cat: -	Rev Victory on prow
	diam: -	wt: -		wear: SW/SW	
377	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 332	mint: LG P		cat: VII LY 256	Rev Victory on prow
	diam: -	wt: -		wear: SW/SW	
378	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 332-33	mint: TR S		cat: VII TR 543	Rev Victory on prow
	diam: -	wt: -		wear: -	
379	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 332-33	mint: TR S		cat: VII TR 543	Rev Victory on prow
	diam: -	wt: -		wear: -	
380	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 332-33	mint: TR S		cat: VII TR 543	Rev Victory on prow
	diam: -	wt: -		wear: SW/SW	
381	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 333-34	mint: LG P		cat: VII LG 266	Rev Victory on prow
	diam: -	wt: -		wear: SW/SW	
382	CONSTANTINE I			denom: -	Obv CONSTAN-TINOPOLIS
	date: 333-34	mint: TR P		cat: VII TR 554	Rev Victory on prow
	diam: -	wt: -		wear: W/W	
383	CONSTANTINE I			denom: -	Obv [CONSTAN-TI]NVS AVG
	date: 330	mint: AR P		cat: VII AR 341	Rev GLOR-IA EXERC-ITVS 2std
	diam: -	wt: -		wear: SW/SW	
384	CONSTANTINE I			denom: -	Obv CONSTANTINVS HAX AVGJ
	date: 330	mint: AR P		cat: VII AR 341	Rev GLORJ-IA EXERC-ITVS 2std
	diam: -	wt: -		wear: SW/SW	

No.	Site	Context	Feature	Sfno	Area
373	HSE	029	01	9248	-
374	HSE	-	-	-	U/S
375	HS1898	-	-	077	-
376	HS1898	-	-	056	-
377	HSE72	-	-	014	Hospital:Rm 13 under latest floor
378	HSE60	-	-	-	Barrack XIV
379	HSE61	-	-	-	Block XV
380	H21	019	03	8573	-
381	HS1898	-	-	022	-
382	HSE63	-	-	029	Latrines
383	HS1898	-	-	118	SW III
384	HSE	029	01	9247	-

No.	Ruler				
385	CONSTANTINE I	denom: -		Obv CONSTANTINVS MAX AVG	
	date: 330-31	mint: TR -	cat: VII TR 518/25	Rev GLOR-CIA EXERCITVS 2std	
	diam: -	wt: -	wear: VU/VU		
386	CONSTANTINE I	denom: -		Obv [CONSTANTINVS MAX AVG	
	date: 330-35	mint: - -	cat: VII as TR 518	Rev [GLORIA EXERCITVS] 2std	
	diam: -	wt: -	wear: UU/UU		
387	CONSTANTINE I	denom: -		Obv [..CONSTANTINVS MAX AVG]	
	date: 330-35	mint: TR P	cat: VII TR as 537	Rev GLO[RIA EXERCITVS] 2std	
	diam: -	wt: -	wear: SU/U		
388	CONSTANTINE I	denom: -		Obv [CONSTANTINVS] MAX AVG	
	date: 330-35	mint: TR -	cat: VII TR as 537	Rev GLOR[CIA EXERCITVS] 2std	
	diam: -	wt: -	wear: W/W		
389	CONSTANTINE I	denom: -		Obv [CONSTANTINVS MAX AVG]	
	date: 332-33	mint: TR P	cat: VII TR 537	Rev GLOR-CIA EXERCITVS 2std	
	diam: -	wt: -	wear: SW/SW		
390	CONSTANTINE I/II	denom: -		Obv CONSTAN-TINVS....	
	date: 320-35	mint: - -	cat: -	Rev [VICTORIAE LAETAE PRINC PERP VOT/PR]	
	diam: -	wt: -	wear: SW/-		
391	'CONSTANTINE I'	denom: -		Obv [CONSTANTINOPOLIS]	
	date: 330-35	mint: - -	cat: c.as VII TR 523	Rev Victory on prow	
	diam: 13.0 mm	wt: 0.7 g	wear: C/W		
392	CRISPUS	denom: -		Obv D N CRISPO-NOB CAES	
	date: 319-20	mint: LG -	cat: VII LG 74	Rev VICTORIAE LAETAE PRINC PERP VOT/PR	
	diam: -	wt: -	wear: SW/SW		
393	CRISPUS	denom: -		Obv [FL IVL CRIPV-[VS NOB CAES]	
	date: 320	mint: LN P	cat: VII LN 175/6	Rev [VICTORIAE LAETAE PRINC PERP VOT/PR]	
	diam: -	wt: -	wear: W/W		
394	CRISPUS	denom: -		Obv IVL CRIS-PVS NOB C	
	date: 323-24	mint: LN P	cat: VII LN 291	Rev CAESARVM NOSTRORVM VOT/X	
	diam: -	wt: -	wear: -		
395	CRISPUS	denom: -		Obv F L IVL CRISPVS NOB CAES	
	date: 324-25	mint: LN P	cat: VII LN 295	Rev PROVIDEN-TIAE CAESS	
	diam: -	wt: -	wear: UU/UU		
396	CRISPUS	denom: -		Obv CRISPUS NOB CAES	
	date: 325-26	mint: HE A	cat: VII HE 75	Rev PROVIDEN-TIAE CAESS	
	diam: -	wt: -	wear: -		

No.	Site	Context	Feature	Sfno	Area
385	H20	001	09	7310	-
386	HSE	029	01	9241	-
387	HS1898	-	-	120	-
388	HSE	031	01	9297	-
389	HS1898	-	-	027	-
390	HS1898	-	-	023	-
391	H15	002	01	9266	-
392	H20	U/S	10	002	-
393	HS1898	-	-	096	-
394	HSE61	-	-	-	Block XV
395	HSE67-	-	-	024	Commandants Ho:N of S hypocaust
396	HSE60	-	-	-	Barrack XIV

No. Ruler					
397	CONSTANTINE II, CAES	denom: -		Obv FL VIAL CONSTANTINVS NOB C	
	date: 307 mint: - -	cat: VI LN 88b		Rev GENIO-POP ROM	
	diam: - wt: -	wear: SW/SU			
398	CONSTANTINE II, CAES	denom: -		Obv [CONSTANTINVS IVN N C	
	date: 321-24 mint: LN P	cat: VII LN as 286		Rev BEATA TRAN-QUILLITAS VOT/IS/XX	
	diam: - wt: -	wear: SW/SW			
399	CONSTANTINE II, CAES	denom: -		Obv [CONSTANTINVS IVN NOB C]	
	date: 323-24 mint: TR P	cat: VII TR 433		Rev [CAESARVN NOSITIKORIVHI VOT/X	
	diam: - wt: -	wear: W/W			
400	CONSTANTINE II, CAES	denom: -		Obv CONSTANTINVS IVN NOB C	
	date: 327-28 mint: TR P	cat: VII TR 505		Rev PROVIDEN-TIAE CAESS	
	diam: - wt: -	wear: SW/SW			
401	CONSTANTINE II, CAES	denom: -		Obv CONSTANTINVS IVN NOB C	
	date: 330-31 mint: TR S	cat: -		Rev GLOR-IA EXERC-ITVS 2std	
	diam: - wt: -	wear: -			
402	CONSTANTINE II, CAES	denom: -		Obv -	
	date: 330-35 mint: - -	cat: -		Rev [GLORIA EXERCITVS] 2std	
	diam: - wt: -	wear: -			
403	CONSTANTINE II, CAES	denom: -		Obv -	
	date: 330-35 mint: - -	cat: -		Rev [GLORIA EXERCITVS] 2std	
	diam: - wt: -	wear: VW/VH			
404	CONSTANTINE II, CAES	denom: -		Obv [CONSTANTINVS IVN NOB C	
	date: 330-35 mint: TR -	cat: VII TR as 539		Rev GLOR-IA EXERC-ITVS 2std	
	diam: - wt: -	wear: W/W			
405	CONSTANTINE II, CAES	denom: -		Obv CONSTANTINVS IVN NOB C	
	date: 332-3 mint: AR P	cat: VII AR 359/65		Rev GLOR-IA EXERC-ITVS 2std	
	diam: - wt: -	wear: SW/SW			
406	CONSTANTINE II, CAES	denom: -		Obv CONSTANTINVS IVN NOB C	
	date: 334-35 mint: AQ S	cat: VII AQ 119		Rev GLOR-IA EXERC-ITVS 2std	
	diam: - wt: -	wear: W/W			
407	CONSTANTINE II, CAES	denom: -		Obv CONSITANTINVS IVN N...C]	
	date: 335-36 mint: RM P	cat: VII RM 364/5		Rev [GLORIA EXERCITVS] 2std	
	diam: - wt: -	wear: SW/W			
408	CONSTANTINE II, CAES	denom: -		Obv [CONSTANTINVS IVN] NOB C	
	date: 335-37 mint: - -	cat: VII as LG 271		Rev [GLOR-IA EXERCITVS] 1std	
	diam: - wt: -	wear: UM/UW			

No.	Site	Context	Feature	Sfno	Area
397	HS1898	-	-	123	-
398	HS1898	-	-	AG	-
399	HS1898	-	-	072	-
400	HSE72	-	-	013	Hospital:outside W wall
401	HSE61	-	-	-	Block XV
402	HSE61	-	-	-	Block XV
403	H21	002	04	8633	-
404	HS1898	-	-	037	SE II
405	HSE67-	-	-	007	Commandants Ho:Rm 5 hypocaust fill
406	H21	018	03	8669	-
407	HS1898	-	-	040	Drain under central road
408	H13	001	00	1164	-

No. Rule:					
409	CONSTANTINE II, CAES		denom: -		Obv [C]ON[STANTINVS] IVN N C]
	date: 337	mint: AR P	cat: VII AR 412		Rev [GLORIA EXERC]-ITVS 1std
	diam: -	wt: -	wear: VV/VV		
410	CONSTANTIUS II, CAES		denom: -		Obv FL IVL [CONSTANTIUS NOB] C
	date: 330-35	mint: - -	cat: -		Rev [GLORIA EXERCITVS] 2std
	diam: -	wt: -	wear: W/W		
411	CONSTANTIUS II, CAES		denom: -		Obv [FL IVL CONSTANTIIVS NOB] C]
	date: 330-35	mint: TR P	cat: VII TR as 528		Rev [GLORIA EXERC]-ITVS 2std
	diam: -	wt: -	wear: W/SW		
412	CONSTANTIUS II, CAES		denom: -		Obv [FL IVL C]ON[STANTIIVS] [NOB] C]
	date: 335-37	mint: TR S	cat: VII TR 592		Rev [GLORIA] [EXERC]-ITVS 1std
	diam: -	wt: -	wear: SW/SW		
413	CONSTANTIUS II, CAES		denom: -		Obv FL IVL CONSTANTIVS NOB C
	date: 330-31	mint: TR P	cat: VII TR 528		Rev GLOR-IA EXERC-ITVS 2std
	diam: -	wt: -	wear: SW/SW		
414	CONSTANS, CAES		denom: -		Obv FL IVL CONSTANS N[OB] C]
	date: 336	mint: - -	cat: VII as LG 278		Rev GLOR-IA EXERC-ITVS 1std
	diam: -	wt: -	wear: W/W		
415	HELENA		denom: -		Obv [FL HELENA AVG[VSTA]
	date: 324-26	mint: TR P	cat: VII TR as 12		Rev [SECVRITAS REIPVBLICAE]
	diam: -	wt: -	wear: SW/SW		
416	HELENA		denom: -		Obv [FL HELENA] AVG[VSTA]
	date: 324-28	mint: TR -	cat: VII TR as 458		Rev [SECVRITAS REIPVBLICAE]
	diam: -	wt: -	wear: W/SW		
417	THEODORA		denom: -		Obv FL MAX THEO-DORAE AV[G]
	date: 337-40	mint: TR P	cat: VIII TR 79		Rev PIETAS ROMANA
	diam: -	wt: -	wear: SW/SW		
418	CONSTANTINE II		denom: -		Obv [CONSTANTI]-VS P F AVG
	date: 333-34	mint: LG S	cat: VIII LG 22		Rev [GLORIA EXERC]-ITVS 1std
	diam: -	wt: -	wear: SW/SW		
419	CONSTANTINE II		denom: -		Obv [FL C]L CONST[ANTINVS] AV[G]
	date: 337-40	mint: - -	cat: VIII as TR 39		Rev [GLORIA EXERCITVS] 1std
	diam: -	wt: -	wear: UW/UW		
420	CONSTANTINE II		denom: -		Obv [IMP CONSTA-NTIN]VS AV[G]
	date: 337-40	mint: AR P	cat: VIII AR 1/11		Rev [GLOR-]IA EXERC-ITVS 1std
	diam: -	wt: -	wear: VV/VV		

No.	Site	Context	Feature	Sfno	Area
409	HSE	029	01	9243	-
410	HS1898	-	-	059	-
411	HS1898	-	-	083	-
412	HSE68	-	-	004	Commandants Ho:Rm S hypocaust fill
413	HSE	-	-	-	-
414	HSE	029	01	9245	-
415	HS1898	-	-	114	-
416	HSE31	-	-	196	S granary
417	HS1898	-	-	052	-
418	HSE63	-	-	028	Latrines
419	HSE	-	01	9213	-
420	HS1898	-	-	057	-

No.	Ruler				
421	CONSTANS	date: 337-40	mint: - -	denom: -	Obv [D N FL CONSTANS AVG]
		diam: -	wt: -	cat: VIII as RH 10/16	Rev [SECVRITAS REI P]
				wear: SW/SW	
422	CONSTANS	date: 337-40	mint: RN T	denom: -	Obv D N FL CONSTANS AVG
		diam: -	wt: -	cat: VIII RN 26	Rev GLOR-IA EXERC-ITVS 1std
				wear: SW/SW	
423	CONSTANS	date: 340	mint: LG P	denom: -	Obv [CONSTANS] P F AVG
		diam: -	wt: -	cat: VIII LG 30	Rev [GLORIA EXERC]ITVS 1std
				wear: W/W	
424	CONSTANS	date: 347-48	mint: LG P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII LG 57	Rev VICTOR[IAE DD] AVGGQ NN]
				wear: SW/SW	
425	CONSTANS	date: 347-48	mint: RP P	denom: -	Obv CONSTAN-S [P F AVG]
		diam: -	wt: -	cat: VIII TR 199	Rev VICTORIAE DD AVGGQ NN]
				wear: SW/SW	
426	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv [CO]NSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR 206	Rev VICTORIAE DD AVGGQ NN]
				wear: W/W	
427	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN]S P F AVG
		diam: -	wt: -	cat: VIII TR 199	Rev VICTOR]IAE DD AVGGQ NN
				wear: SW/SW	
428	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR 195	Rev VICTORIAE DD AVGGQ NN
				wear: SW/SW	
429	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR 206	Rev VICTORIAE DD AVGGQ NN
				wear: W/W	
430	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR 185	Rev [VICTORIAE] DD AVGGQ NN
				wear: SW/SW	
431	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR as 182	Rev VICTORIAE DCD AVGGQ NN]
				wear: UW/UW	
432	CONSTANS	date: 347-48	mint: TR P	denom: -	Obv CONSTAN-S P F AVG
		diam: -	wt: -	cat: VIII TR 206	Rev VICTORIAE DD AVGGQ NN
				wear: SW/SW	

No.	Site	Context	Feature	Sfno	Area
421	HS1898	-	-	106	-
422	HSE	-	-	-	-
423	HSE67-	-	-	026	Commandants Ho:rubble over W wall
424	HS1898	-	-	056	-
425	HS1898	-	-	036	-
426	HSE67-	-	-	018	Commandants Ho:Rm 11 (top room)
427	HSE67-	-	-	010	Commandants Ho:Rm 5 hypocaust fill
428	HSE67-	-	-	028	Commandants Ho:in consolidation
429	HSE67-	-	-	018	Commandants Ho:W range
430	HS1898	-	-	122	-
431	HS1898	-	-	039	-
432	HS1898	-	-	033	Filling in

No.	Ruler					
433	CONSTANS	date: 348	mint: - -	denom: -	cat: VIII as TR 221	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: W/W	
434	CONSTANS	date: 348-50	mint: - -	denom: -	cat: VIII as TR 243	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: EW/EW	
435	CONSTANS	date: 348-50	mint: TR P	denom: -	cat: VIII TR as 243	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: W/H	
436	CONSTANTIUS II	date: 330-35	mint: - -	denom: -	cat: VII as TR 528	Obv FL [IVL CONS[ANTIVS] NOB C] Rev [GLD]R-IA EXE[RCITVS] 2std
		diam: -	wt: -		wear: SW/SW	
437	CONSTANTIUS II	date: 337-40	mint: TR P	denom: -	cat: VIII TR 108	Obv CONSTANTI-[VS P F AVG] Rev GLORI-[A EX]ER-[CITVS] 1std
		diam: -	wt: -		wear: SW/SW	
438	CONSTANTIUS II	date: 347-48	mint: - -	denom: -	cat: -	Obv CONST[ANTI-VS P] F AVG Rev VICTORIAE DD AV[G]G NN
		diam: -	wt: -		wear: SW/SW	
439	CONSTANTIUS II	date: 347-48	mint: TR P	denom: -	cat: VIII TR 193	Obv [C]ONSTAN-[TIVS P F AVG] Rev VICTOR[IAE DD AVGG] NN
		diam: -	wt: -		wear: W/W	
440	CONSTANTIUS II	date: 348-50	mint: - -	denom: -	cat: VIII as SS 197	Obv D N CONSTAN-[TIVS P F AVG] Rev [FEL TEMP] REPARATIO
		diam: -	wt: -		wear: SW/SW	
441	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	cat: c.as VII TR 359	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: C/C	
442	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	cat: -	Obv - Rev [FEL TEMP REPARATIO]
		diam: 12.0 mm	wt: -		wear: SW/SW	
443	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	cat: -	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: C/SW	
444	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	cat: c.as VII TR 359	Obv - Rev [FEL TEMP REPARATIO]
		diam: -	wt: -		wear: W/W	

No.	Site	Context	Feature	Sfno	Area
433	H13	TS	03	047	-
434	H13	TS	08	283a	-
435	H13	TS	08	283b	-
436	HS1898	-	-	050	Filling in
437	HS1898	-	-	042	-
438	HS1898	-	-	047	Filling in
439	H21	001	03	8586	-
440	H13	013	09	2679	-
441	HSE	-	-	-	-
442	HS1898	-	-	113	-
443	HS1898	-	-	087	-
444	H13	TS	05	3618	-

No.	Ruler					
445	CONSTANTIUS II/CONSTANS	denom:	-	Obv -		
	date: 340-45	mint:	TR P	Rev	[VICTORIAE DD AVGGIO NN]	
	diam: -	wt: -				
		cat:	VIII TR 193/5			
		wear:	-			
446	CONSTANS/CONSTANTIUS II	denom:	-	Obv -		
	date: 347-48	mint:	TR P	Rev	[VICTORIAE DD AVGGIO NN]	
	diam: -	wt: -				
		cat:	VIII TR 182/3			
		wear:	W/W			
447	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 319	mint:	- -	Rev	[VICTORIAE LAETAE PRINC PERP VOT/PR]	
	diam: -	wt: -				
		cat:	VII as TR 213			
		wear:	VW/VH			
448	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 325-26	mint:	LN P	Rev	[VIRTVS EXERCIT]	
	diam: -	wt: -				
		cat:	VII LN 183-90			
		wear:	-			
449	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 330-41	mint:	-	Rev -		
	diam: -	wt: -				
		cat:	-			
		wear:	C/C			
450	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 347-48	mint:	- -	Rev	[VICTORIAE DD AVGGIO NN]	
	diam: -	wt: -				
		cat:	-			
		wear:	W/W			
451	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: C4	mint:	- -	Rev -		
	diam: -	wt: -				
		cat:	-			
		wear:	C/C			
452	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 330-35	mint:	- -	Rev	[GLORIA EXERCITVS] 2std	
	diam: -	wt: -				
		cat:	-			
		wear:	SW/W			
453	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 330-35	mint:	- -	Rev	[GLORIA EXERCITVS] 2std	
	diam: -	wt: -				
		cat:	-			
		wear:	C/W			
454	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 330-35	mint:	- -	Rev	[GLORIA EXERCITVS] 2std	
	diam: -	wt: -				
		cat:	-			
		wear:	C/W			
455	HOUSE OF CONSTANTINE	denom:	-	Obv -		
	date: 335-41	mint:	- -	Rev	[GLORIA EXERCITVS] 1std	
	diam: -	wt: -				
		cat:	-			
		wear:	W/SW			
456	MAGNENTIUS	denom:	-	Obv	D N MAGNEN-[T]IIVS P F AVG	
	date: 350-51	mint:	AR 5	Rev	GLORIA ROMANORVM	
	diam: -	wt: -				
		cat:	VIII AR 151			
		wear:	UH/SW			

No.	Site	Context	Feature	Sfno	Area
445	HSE60	-	-	-	Barrack XIV
446	HSE68	-	-	003	Commandants Ho:Rm 5 hypocaust fill
447	HS1898	-	-	103	-
448	HSE60	-	-	-	Barrack XIV
449	H13	005	06	1043	-
450	HSE	012	01	9238	-
451	HS1898	-	-	026	-
452	HS1898	-	-	M	-
453	HS1898	-	-	050	-
454	HSE	029	01	9248	-
455	HS1898	-	-	101	-
456	H13	001	00	1047	-

No. Ruler					
457	MAGNENTIUS			denom: -	Obv D N [MAGNEN-TIVS P F AVG]
	date: 351-53	mint: TR P		cat: CK 66	Rev [SALVS D D N N] AVGV ET] CAES
	diam: -	wt: -		wear: SW/SW	
458	MAGNENTIUS			denom: -	Obv D N MAGNEN-TIVS P F AVG
	date: 352	mint: - -		cat: VIII as TR 312/5	Rev VICTORIAE DD NN AVGV ET CAES
	diam: -	wt: -		wear: ..	
459	'MAGNENTIUS'			denom: -	Obv [D N MAGNEN]TIVS AVGV
	date: 350+	mint: - -		cat: c.as VIII AN 1	Rev [G]LORIA [R]O[M]ANORVM
	diam: 16.0 mm	wt: 3.0 g		wear: SW/SW	
460	DECENTIUS			denom: -	Obv [D N DECEN]TIVS [NOB] CAES]
	date: 352-53	mint: TR S		cat: VIII TR 312	Rev [VICTORIAE DD NN AVGV ET CAES]
	diam: -	wt: -		wear: W/W	
461	DECENTIUS			denom: -	Obv [D N DECEN]TIVS [NOB] CAES]
	date: 353	mint: - -		cat: VIII as AN 34	Rev [SALVS DD NN AVGV ET CAES]
	diam: -	wt: -		wear: SW/SW	
462	VALENTINIAN I			denom: -	Obv D N VALENTINIANVS] P F AVGV
	date: 364-78	mint: - -		cat: -	Rev [SECV]RITAS REIPVBLICAE]
	diam: -	wt: -		wear: W/W	
463	VALENTINIAN I			denom: -	Obv [D N VALENTINI-ANVS P] F AVGV
	date: 364-78	mint: LG II		cat: IX LG as 10a	Rev [GLORIA RO]M[ANORVM]
	diam: -	wt: -		wear: W/W	
464	VALENTINIAN I			denom: -	Obv D N VALENTINI-ANVS P F AVGV
	date: 367-75	mint: AD P		cat: CK 1017	Rev GLORIA RO-MANORVM
	diam: -	wt: -		wear: UW/UW	
465	VALENTINIAN I			denom: -	Obv [D N VALENTINI-ANVS P] F AVGV
	date: 367-75	mint: AR II		cat: IX AR 17a	Rev [SECV]RITAS-REI[PVBLIC]AE
	diam: -	wt: -		wear: SW/SW	
466	VALENTINIAN I			denom: -	Obv D N VALENTINI-ANVS P F AVGV
	date: 367-75	mint: SS B		cat: IX SS 14a	Rev GLORIA RO-MANORVM
	diam: -	wt: -		wear: W/W	
467	VALENS			denom: -	Obv D N [VALENS P] F AVGV
	date: 364-78	mint: - -		cat: -	Rev [GLORIA RO]M[ANORVM]
	diam: -	wt: -		wear: W/W	
468	VALENS			denom: -	Obv D N VALEN-[S P F AVGV]
	date: 364-78	mint: LG II		cat: CK as 273-363	Rev [SECV]RITAS] REIPVBLICAE
	diam: -	wt: -		wear: SW/SW	

No.	Site	Context	Feature	Sfno	Area
457	HSE69-	-	-	015	Hospital:Rm 2 in W wall
458	HSE60	-	-	-	Barrack XIV
459	HSE	012	01	9257	-
460	HS1898	-	-	076	Block IX:S of in drain
461	HS1898	-	-	-	-
462	HSE67	-	-	001	Commandants Ho
463	HS1898	-	-	054	-
464	HSE67-	-	-	005	Commandants Ho:Rm 5 hypocaust fill
465	HS1898	-	-	041	-
466	HS1898	-	-	031	-
467	HSE59	-	-	-	Barrack XIV:central 3rd
468	HSE67-	-	-	019	Commandants Ho:Rm 18 SW corner

No. Ruler					
469 VALENS			denom: -		Obv [D N VALEN-S] P [F AVG]
date: 367-75	mint: LG I		cat: CK 340		Rev [SECVRITAS] REIPVBLICAE
diam: -	wt: -		wear: SU/SU		
470 GRATIAN			denom: -		Obv [D N GRATIANVS AVGG AVG]
date: 367-75	mint: AR III		cat: CK as 503		Rev GLORIA NOVI SAECVLI
diam: -	wt: -		wear: -		
471 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 364-67	mint: AR II		cat: CK as 487		Rev SECVRITAS REIPVBLICAE
diam: -	wt: -		wear: W/W		
472 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 364-75	mint: AR III		cat: IX AR 7/16		Rev [GLORIA ROMANORVM]
diam: -	wt: -		wear: H/W		
473 HOUSE OF VALENTINIAN			denom: -		Obv [D N VALEN...S] P F AVG
date: 364-78	mint: - -		cat: -		Rev SECVRITAS REIPVBLICAE]
diam: -	wt: -		wear: W/W		
474 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 364-78	mint: - -		cat: -		Rev [GLORIA ROMANORVM]
diam: -	wt: -		wear: W/W		
475 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 364-78	mint: - -		cat: -		Rev [GLORIA ROMANORVM]
diam: -	wt: -		wear: C/W		
476 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 364-78	mint: TR -		cat: CK 99etc		Rev [GLORIA ROMANORVM]
diam: -	wt: -		wear: C/W		
477 HOUSE OF VALENTINIAN			denom: -		Obv -
date: 367-75	mint: - -		cat: -		Rev [GLORIA ROMANORVM]
diam: -	wt: -		wear: C/W		
478 ILLEGIBLE			denom: ANT		Obv -
date: C3	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: -		
479 ILLEGIBLE			denom: AS		Obv -
date: C1	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: -		
480 ILLEGIBLE			denom: DUP		Obv -
date: C1/2	mint: - -		cat: -		Rev -
diam: -	wt: -		wear: C/C		

No.	Site	Context	Feature	Sfno	Area
469	HSE67-	-	-	021	Commandants Ho:courtyard rubble E
470	HSE60	-	-	-	Barrack XIV
471	HSE74	-	-	093	W,F,D
472	HS1898	-	-	046	-
473	HSE67	-	-	-	Commandants Ho
474	HS1898	-	-	067	Principia:by southern base
475	HS1898	-	-	112	-
476	HSE67-	-	-	006	Commandants Ho:Rm 5 hypocaust fill
477	HS1898	-	-	121	-
478	HSE59	-	-	-	Barrack XIV:central 3rd
479	HSE60	-	-	-	Barrack XIV
480	HS1898	-	-	Y	-

No.	Ruler				
481	ILLEGIBLE			denom: ASDUP	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	
482	ILLEGIBLE			denom: ASDUP	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	
483	ILLEGIBLE			denom: DUP	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
484	ILLEGIBLE			denom: DUP	Obv ..
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
485	ILLEGIBLE			denom: SEST	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
486	ILLEGIBLE			denom: SEST	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
487	ILLEGIBLE			denom: DUP	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
488	ILLEGIBLE			denom: DUP	Obv -
	date: C1/2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
489	ILLEGIBLE			denom: SEST	Obv -
	date: C2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
490	ILLEGIBLE			denom: DEN	Obv -
	date: C1-3	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: EN/EW	
491	ILLEGIBLE			denom: SEST	Obv -
	date: C2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
492	ILLEGIBLE			denom: SEST	Obv -
	date: C2	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: EN/EW	

No.	Site	Context	Feature	Sfno	Area
481	HSE59	-	-	-	Barrack XIV:pl below pII wall
482	HSE59	-	-	-	Barrack XIV:pl below pII wall
483	HS1898	-	-	090	-
484	HSE71	-	-	-	Hospital:outside W wall U/S
485	HS1898	-	-	089	-
486	HS1898	-	-	094	-
487	HS1898	-	-	C	-
488	H13	052	05	2953	-
489	HS1898	-	-	E	-
490	HSE	027	01	9201	-
491	H13	TS	08	154	-
492	H13	TS	07	586	-

No.	Ruler					
493	ILLEGIBLE	date: C3	mint: - -	denom: ANT	cat: -	Obv - Rev [SIALVS....
		diam: -	wt: -	wear: - /		
494	ILLEGIBLE	date: C3	mint: - -	denom: ANT	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
495	ILLEGIBLE	date: C3	mint: - -	denom: ANT	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
496	ILLEGIBLE	date: C3	mint: - -	denom: ANT	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
497	ILLEGIBLE	date: C3	mint: - -	denom: ANT	cat: -	Obv - Rev -
		diam: -	wt: -	wear: C/C		
498	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
499	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
500	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
501	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
502	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
503	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		
504	ILLEGIBLE	date: C3/4	mint: - -	denom: -	cat: -	Obv - Rev -
		diam: -	wt: -	wear: -		

No.	Site	Context	Feature	Sfno	Area
493	HSE59	-	-	-	Barrack XIV:central 3rd
494	HSE60	-	-	-	Barrack XIV
495	HSE59	-	-	-	Barrack XIV:central 3rd
496	HSE59	-	-	-	Barrack XIV:central 3rd
497	H20	002	01	5885	-
498	HSE61	-	-	-	Block XV:trodden into pIII floor
499	HSE60	-	-	-	Barrack XIV
500	HSE61	-	-	-	Block XV
501	HSE60	-	-	-	Barrack XIV
502	HSE61	-	-	-	Block XV
503	HSE61	-	-	-	Block XV
504	HSE60	-	-	-	Barrack XIV

No.	Ruler				
505	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
506	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
507	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
508	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
509	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
510	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
511	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
512	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
513	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
514	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
515	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
516	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		

No.	Site	Context	Feature	Sfno	Area
505	HSE61	-	-	-	Block XV:trodden into pIII floor
506	HSE60	-	-	-	Barrack XIV
507	HSE60	-	-	-	Barrack XIV
508	HSE60	-	-	-	Barrack XIV
509	HSE60	-	-	-	Barrack XIV
510	HSE60	-	-	-	Barrack XIV
511	HSE61	-	-	-	Block XV:trodden into pIII floor
512	HS1898	-	-	063	SE:great tank
513	HS1898	-	-	105	-
514	HS1898	-	-	066	SE II:on pavement
515	HSE60	-	-	-	Barrack XIV
516	H13	014	11	3366	-

No.	Ruler				
517	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
518	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
519	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
520	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
521	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
522	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
523	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
524	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
525	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
526	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		
527	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
528	ILLEGIBLE		denom: -		Obv -
	date: C3/4	mint: -	cat: -		Rev -
	diam: -	wt: -	wear: -		

No.	Site	Context	Feature	Sfno	Area
517	HSE61	-	-	-	Block XV
518	HS1898	-	-	098	-
519	HSE61	-	-	-	Block XV
520	HS1898	-	-	109	-
521	HSE60	-	-	-	Barrack XIV
522	HS1898	-	-	099	-
523	HSE61	-	-	-	Block XV:trodden into pIII floor
524	HSE61	-	-	-	Block XV:trodden into pIII floor
525	HSE61	-	-	-	Block XV
526	HSE61	-	-	-	Block XV:trodden into pIII floor
527	HS1898	-	-	092	-
528	HSE61	-	-	-	Block XV:trodden into pIII floor

No.	Ruler				
529	ILLEGIBLE	date: C3/4	mint: - -	denom: -	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
530	ILLEGIBLE	date: C3/4	mint: - -	denom: -	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
531	ILLEGIBLE	date: C3/4	mint: - -	denom: -	Obv -
		diam: 7.0 mm	wt: 0.2 g	cat: -	Rev -
				wear: C/C	
532	ILLEGIBLE	date: C4early	mint: - -	denom: -	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
533	CHARLES II	date: 1660-85	mint: - -	denom: BODLE	Obv -
		diam: -	wt: -	cat: -	Rev Thistle
				wear: EW/EW	

No.	Site	Context	Feature	Sfno	Area
529	HS1898	-	-	100	-
530	HS1898	-	-	102	-
531	H21	018	03	8607	-
532	H20	020	03	6045	-
533	HS1898	-	-	AH	-

HOUSESTEADS VICUS: COIN LIST by ISSUER and PERIOD.

No.	Ruler	date:	mint:	wt:	denom:	cat:	wear:	Obv	Rev
1	M.ANTONIUS	BC32-31	-	-	DEN	CR 544	-	H ANT AVG III VIR RPC	LEG...
2	M.ANTONIUS	BC32-31	-	-	DEN	CR 544/8 etc	-	-	...III VIR RPC
3	NERO	54-68	-	-	SEST	-	C/C	-	-
4	NERO	66-68	-	-	AS	-	EW/EW	IMP NERO CAESAR AVG P MAX TRIP PP	-
5	VITELLIUS	69	-	-	DEN	90	SW/SW	LA VITELLIVS GERM IMP AVG TRP	CONCORDIA P R
6	VESPASIAN	69-71	-	-	DEN	10	VW/VW	IMP CAESAR VESPASIANVS AVG	COS ITER TRPOT
7	VESPASIAN	69-79	-	-	DEN	-	VW/VW	-	-
8	VESPASIAN	69-79	-	-	DEN	as 94	VW/VW	-	-
9	VESPASIAN	70-72	-	-	DEN	30	-	IMP CAES VESP AVG PM	AVGV TRIPOT
10	VESPASIAN	75	-	-	DEN	90	W/W	IMP CAESAR VESPASIANVS	IPON MAXI TRP COS VI
11	DOMITIAN	95-96	-	-	DEN	192	-	IMP CAES DOMIT AVG GERM PM TRP XV	IMP XXII COS XVII CENS P P P
12	FLAVIAN	69-96	-	-	AS	-	C/C	-	-

No.	Site	Context	Feature	Sfno	Area
1	VIC31	-	-	001	Vicus II:zero:NE
2	VIC60	-	-	-	VCH:U/S
3	VIC31	-	-	003	Vicus II:U/S:NE
4	VIC31	-	-	002	Vicus II:U/S:SE
5	VIC32	-	-	40	Vallum trench F
6	VIC32	-	-	43	Sewer trench 6 on top
7	VIC34	-	-	-	Vicus XIV:S wall inside
8	VIC32	-	-	17	Vicus VIII:S of cross wall
9	VIC31	-	-	004	Vicus III-IV.Part of hoard (2)
10	VIC32	-	-	044	Sewer trench (6)
11	VIC32	-	-	018	Vicus VIII:outside N wall
12	VIC31	-	-	-	U/S

No.	Ruler				
13	FLAVIAN	date: 69-96	mint: - -	denom: AS	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
14	FLAVIAN	date: 69-96	mint: - -	denom: DUP	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
15	FLAVIAN	date: 69-96	mint: - -	denom: AS	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: -	
16	TRAJAN	date: 100	mint: - -	denom: DEN	Obv IMP CAES NERVA TRAIAN AVG GERH
		diam: -	wt: -	cat: 38	Rev PH TRP COS III P P
				wear: UW/UW	
17	TRAJAN	date: 103-11	mint: - -	denom: DEN	Obv [IMP TRAIANO AVG GER [DAC PH TRP]
		diam: -	wt: -	cat: 142	Rev COS V PP SPQR OPTIMO PRINC
				wear: W/W	
18	TRAJAN	date: 103-11	mint: - -	denom: SEST	Obv [IMP CAES NERVAE TRAIANO AVG GER DAC PH TRP COS V PP]
		diam: -	wt: -	cat: as 478	Rev [SPQR OPTIMO PRINCIPI SC]
				wear: C/C	
19	TRAJAN	date: 103-12	mint: - -	denom: DEN	Obv IMP NERVA TRAIANVS AVG GER DACICVS
		diam: -	wt: -	cat: 81	Rev PH TRP COS V PP
				wear: W/SW	
20	TRAJAN	date: 103-17	mint: - -	denom: SEST	Obv [IMP CAES NERVAE] TRAIANO AVG GER DAC PH TRP
		diam: -	wt: -	cat: as 461	Rev -
				wear: VW/EW	
21	TRAJAN	date: 114-17	mint: - -	denom: SEST	Obv IHPCAESNERTRAIANOOPTIHDAVGGERDACPARTHICOPMTRPCOSVIPP
		diam: -	wt: -	cat: 663	Rev PROVIDENTIA AVGVSTI SPQR SC
				wear: UW/UW	
22	TRAJAN	date: 97-117	mint: - -	denom: AS	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
23	TRAJAN	date: 97-117	mint: - -	denom: SEST	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
24	HADRIAN	date: 117-38	mint: - -	denom: SEST	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: VW/VW	

No.	Site	Context	Feature	Sfno	Area
13	VIC31	-	-	006	Vallum trench E
14	VIC31	-	-	005	Vicus IV(stone)
15	VIC31	-	-	007	Vicus IV:U/S:E
16	VIC32	-	-	041	Vallum trench F
17	VIC31	-	-	008	Vicus IV(stone):1:E
18	VIC98	-	-	-	Temple of Mithras
19	VIC31	-	-	009	Vicus IV:U/S:E
20	VIC31	-	-	010	Vicus IV(stone):1:(sealed)centre
21	VIC33	-	-	-	E of vallum causeway below terrace
22	VIC31	-	-	017	Vicus IV(stone):1:W
23	VIC33	-	-	-	Vicus XXI:below floor
24	VIC32	-	-	-	1932 tip

No.	Ruler				
25	HADRIAN		denom: AS	Obv -	
	date: 117-38	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: W/W		
26	HADRIAN		denom: SEST	Obv -	
	date: 117-38	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/C		
27	HADRIAN		denom: SEST	Obv -	
	date: 117-38	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/EW		
28	HADRIAN		denom: SEST	Obv -	
	date: 117-38	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/EW		
29	HADRIAN		denom: DUP	Obv IMP CAESAR TRAIANVS HADRIANVS AVG PM TRP COS III	
	date: 119-21	mint: - -	cat: 597c	Rev AETERNITAS AVGVSTI SC	
	diam: -	wt: -	wear: SW/SW		
30	HADRIAN		denom: DUP	Obv IMP CAESAR TRAIANVS HADRIANVS [PM TRP COS III]	
	date: 119-21	mint: - -	cat: 601b	Rev [PIETIAS AVGVSTI SC	
	diam: -	wt: -	wear: W/W		
31	HADRIAN		denom: DUP	Obv IMP CAESAR TRAIANVS HADRIANVS AVG PM TRP COS III	
	date: 119-21	mint: - -	cat: as 599	Rev -	
	diam: -	wt: -	wear: VW/EW		
32	HADRIAN		denom: AS	Obv [HADRIANVS AVGVSTVS]	
	date: 125-28	mint: - -	cat: as 673	Rev [COS III SC]	
	diam: -	wt: -	wear: C/C		
33	HADRIAN		denom: SEST	Obv [HADRIANVS] AVGVSTVS	
	date: 125-32	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: VW/EW		
34	HADRIAN		denom: DEN	Obv HADRIANVS AVG COS III PP	
	date: 134-38	mint: - -	cat: 266	Rev ROMVLD CONDITORI	
	diam: -	wt: -	wear: SW/SW		
35	HADRIAN		denom: DEN	Obv HADRIANVS AVG COS III PP	
	date: 134-38	mint: - -	cat: 268d	Rev SALVS AVG	
	diam: -	wt: -	wear: SW/SW		
36	HADRIAN		denom: SEST	Obv HADRIANVS AVG COS III P P	
	date: 134-38	mint: - -	cat: as 760	Rev [FORTVNA AVG]	
	diam: -	wt: -	wear: VW/VW		

No.	Site	Context	Feature	Sfnd	Area
25	VIC33	-	-	-	On road by vallum causeway
26	VIC31	-	-	014	Vicus II:zero:NE
27	VIC31	-	-	013	Vicus IV(stone):2:centre
28	VIC32	-	-	019	Vicus VIII:inside S wall
29	VIC31	-	-	015	Vallum trench E
30	VIC31	-	-	-	U/S
31	VIC31	-	-	016	Vicus II:b:NE
32	VIC32	-	-	021	W of alley S of Vicus VIII
33	VIC31	-	-	012	Vicus II:zero:E
34	VIC31	-	-	011	Vallum trench E
35	VIC32	-	-	52	Lynne's drain
36	VIC32	-	-	020	Vicus VIII:black layer below clay

No.	Ruler				
37	ANTONINUS PIUS	denom: SEST		Obv	IHP T AEL CAES HADRI ANTONINVS AVG PIVS
	date: 138	mint: - -	cat: 519c	Rev	PONT MAX TRPOT COS SC
	diam: -	wt: -	wear: EW/EW		
38	ANTONINUS PIUS	denom: SEST		Obv -	
	date: 138-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
39	ANTONINUS PIUS	denom: DEN		Obv -	
	date: 138-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
40	ANTONINUS PIUS	denom: SEST		Obv -	
	date: 138-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
41	ANTONINUS PIUS	denom: SEST		Obv -	
	date: 138-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/EW		
42	ANTONINUS PIUS	denom: DUP		Obv -	
	date: 138-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
43	ANTONINUS PIUS	denom: SEST		Obv	ANTONINVS AVG PIVS PP TRP COS III
	date: 140-44	mint: - -	cat: 600	Rev	[CONCORDIA EXERCITVVM] SC
	diam: -	wt: -	wear: VW/VW		
44	ANTONINUS PIUS	denom: SEST		Obv	ANTONINVS AVG [PIVS PP TRJP COS IIII
	date: 140-44	mint: - -	cat: 636	Rev	SALVS AVG SC
	diam: -	wt: -	wear: VW/VW		
45	ANTONINUS PIUS	denom: SEST		Obv	[ANTONINVS AVG PIVS P P TRP COS IIII
	date: 145-61	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/C		
46	ANTONINUS PIUS	denom: SEST		Obv	ANTONINVS AVG PIVS PP TRP COS IIII
	date: 145-61	mint: - -	cat: 756	Rev	[ANINONA [AVG SC]
	diam: -	wt: -	wear: EW/C		
47	ANTONINUS PIUS	denom: DUP		Obv	[ANTONINVS] AVG PIVS....
	date: 145-61	mint: - -	cat: as 808	Rev	SC
	diam: -	wt: -	wear: VW/W		
48	ANTONINUS PIUS	denom: SEST		Obv	[IHP CAES T AEL HADR ANTONINVS AVG PIVS P P]
	date: 150-52	mint: - -	cat: 871/91	Rev	[TRPOT XIIII(or XV) COS IIIII] ANNONA AVG [SC]
	diam: -	wt: -	wear: C/SW		

No.	Site	Context	Feature	Sfno	Area
37	VIC31	-	-	019	Vicus II:U/S:5
38	VIC32	-	-	-	1932 tip
39	VIC32	-	-	022	Inside build. N of Vicus VIII
40	VIC31	-	-	024	Vicus II:b:SE
41	VIC31	-	-	025	Vicus II:c:centre
42	VIC31	-	-	027	Vicus IV(stone):1:(sealed) centre
43	VIC31	-	-	023	Vicus IV(wood):sealed:E
44	VIC31	-	-	021	Vicus IV:zero:SW
45	VIC32	-	-	-	-
46	VIC31	-	-	022	Vicus IV:U/S:E
47	VIC31	-	-	026	Vicus IV(stone):1:SW
48	VIC32	-	-	042	Vallum trench F

No.	Ruler				
49	ANTONINUS PIUS	denom: DEN	Obv IMP CAES T AEL HADR ANTONINVS AVG FIVS PP		
	date: 151-52	mint: - -	cat: 216a	Rev TR POT XV COS IIII PAX	
	diam: -	wt: -	wear: VW/VW		
50	ANTONINUS PIUS	denom: SEST	Obv ANTONINVS AVG PIVS PP TRP XVII		
	date: 153-54	mint: - -	cat: 917	Rev LIBERTAS COS IIII SC	
	diam: -	wt: -	wear: -		
51	ANTONINUS PIUS	denom: AS	Obv ANTONINVS AVG PIVS PP TRP XVIII		
	date: 154-55	mint: - -	cat: 934	Rev BRITANNIA COS IIII SC	
	diam: -	wt: -	wear: VW/VW		
52	ANTONINUS PIUS	denom: AS	Obv ANTONINVS AVG PIVS PP TRP XVIII		
	date: 154-557	mint: - -	cat: 934	Rev BRITANNIA COS IIII SC	
	diam: -	wt: -	wear: VH/VH		
53	ANTONINUS PIUS,POSTH	denom: DEN	Obv DIVVS ANTONINVS		
	date: 161-80	mint: - -	cat: 441	Rev DIVO PIO	
	diam: -	wt: -	wear: W/W		
54	FAUSTINA I (ANT.PIUS)	denom: SEST	Obv [DIVA AVGVSTA FAVSTINA		
	date: 141-61	mint: - -	cat: (A.PIUS)1108	Rev [AETERNITAS] SC	
	diam: -	wt: -	wear: W/W		
55	FAUSTINA I (ANT.PIUS)	denom: DEN	Obv DIVA FAVSTINA		
	date: 141-61	mint: - -	cat: (A.PIUS)363	Rev AVGVSTA	
	diam: -	wt: -	wear: W/W		
56	FAUSTINA I (ANT.PIUS)	denom: SEST	Obv DIVA FAVSTINA		
	date: 141-61	mint: - -	cat: as (A.PIUS)1102	Rev [AETERNITAS SC]	
	diam: -	wt: -	wear: VH/EW		
57	FAUSTINA I,POSTH	denom: SEST	Obv DIVA AVGVSTA FAVSTINA		
	date: 141-61	mint: - -	cat: (A.PIUS)1146a	Rev PIETAS AVG SC	
	diam: -	wt: -	wear: -		
58	FAUSTINA II (ANT.PIUS)	denom: DUP	Obv FAVSTINA AVG PII AVG FIL		
	date: 145-46	mint: - -	cat: (A.PIUS)1395	Rev FELICITAS SC	
	diam: -	wt: -	wear: VW/VW		
59	FAUSTINA II (ANT.PIUS)	denom: DEN	Obv FAVSTINA AVG PII AVG FIL		
	date: 145-61	mint: - -	cat: (A.PIUS)502a	Rev CONCORDIA	
	diam: -	wt: -	wear: SW/SW		
60	H.AURELIUS,CAES	denom: DUP	Obv AVRELIUS CAESAR AVG PII F		
	date: 158-59	mint: - -	cat: (A.PIUS)1351	Rev TRPOT XIII COS II SC	
	diam: -	wt: -	wear: W/SW		

No.	Site	Context	Feature	Sfno	Area
49	VIC31	-	-	019	Vicus IV:zero:SW
50	VIC31	-	-	020	-
51	VIC31	-	-	028	Vicus IV(wood):in revetting wall
52	VIC32	-	-	23	Vicus VIII:burnt layer centre
53	VIC31	-	-	032	Vicus IV(stone):1:(sealed) centre
54	VIC31	-	-	030	Vicus IV:zero:SW
55	VIC31	-	-	029	Vicus II:a:NE
56	VIC32	-	-	016	Vicus VI:trial trench
57	VIC31	-	-	031	Vicus IV(stone):1:SW
58	VIC32	-	-	-	Tip W of Vicus VIII
59	VIC31	-	-	040	Vicus IV(wood):on revetting wall
60	VIC31	-	-	037	Vicus IV(stone):1:SW

No.	Ruler				
61	M.AURELIUS		denom: DEN		Obv IMP M AVREL ANTONINVS AVG
	date: 161	mint: - -	cat: 3		Rev CONCORD AVG TRP XV COS III
	diam: -	wt: -	wear: VW/VW		
62	M.AURELIUS		denom: SEST		Obv -
	date: 161-80	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: EW/EW		
63	M.AURELIUS		denom: SEST		Obv -
	date: 161-80	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
64	M.AURELIUS		denom: DEN		Obv -
	date: 161-80	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: VW/VW		
65	M.AURELIUS		denom: AS		Obv -
	date: 161-80	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: EW/EW		
66	M.AURELIUS		denom: SEST		Obv IMP CAES M AVREL ANTONINVS AVG
	date: 161-80	mint: - -	cat: as 797		Rev [CONCORD AVGVSTOR TRP XV COS III] SC
	diam: -	wt: -	wear: EW/C		
67	M.AURELIUS		denom: SEST		Obv M ANTONINVS AVG.....
	date: 163-80	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: VW/VW		
68	M.AURELIUS		denom: SEST		Obv M ANTONINVS ARM PARTH MAX
	date: 168	mint: - -	cat: 959		Rev TRPOT XXII IMP V COS III SC
	diam: -	wt: -	wear: W/W		
69	M.AURELIUS		denom: SEST		Obv M ANTONINVS AVG [GERM TRP XXIX]
	date: 174-75	mint: - -	cat: as 1147		Rev [LIBERALITAS AVG VI] IMP VII [COS III] SC
	diam: -	wt: -	wear: VW/VW		
70	M.AURELIUS		denom: SEST		Obv M ANTONINVS AVG GERM SARMATICVS
	date: 175-76	mint: - -	cat: 1169		Rev TRP XXX IMP VIII COS III SC
	diam: -	wt: -	wear: SW/SW		
71	M.AURELIUS		denom: SEST		Obv -
	date: 170-73	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: W/W		
72	'M.AURELIUS'		denom: DEN		Obv -
	date: 163-64+	mint: - -	cat: c.as 92		Rev PM TRP XVIII IMP II COS III
	diam: -	wt: -	wear: C/SW		

No.	Site	Context	Feature	Sfno	Area
61	VIC31	-	-	033	Vicus IV(stone):1:SW
62	VIC33	-	-	-	1931 tip
63	VIC33	-	-	-	1931 tip
64	VIC32	-	-	18	Vicus III:centre
65	VIC31	-	-	039	Vicus IV(stone):1:SW
66	VIC31	-	-	034	Vicus IV(stone):1:SW
67	VIC32	-	-	24	Vicus VIII:SE corner
68	VIC31	-	-	035	Vicus IV(wood):c:(sealed)
69	VIC31	-	-	036	Vicus IV(stone):1
70	VIC33	-	-	-	Vallum 6
71	VIC32	-	-	45	N wall of build. S of Vicus VIII
72	VIC34	-	-	-	Vicus XIX:W wall outside

No.	Ruler				
73	LUCIUS VERUS			denom: DEN	Obv IMP L AVREL VERVS AVG
	date: 161	mint: - -		cat: 463	Rev PROV DEOR TRP COS II
	diam: -	wt: -		wear: -	
74	LUCIUS VERUS			denom: DEN	Obv L VERVS AVG ARH PARTH MAX
	date: 167-68	mint: - -		cat: (H.AUR)578	Rev TRP VIII IMP IIII COS III
	diam: -	wt: -		wear: -	
75	FAUSTINA II (H.AURELIUS)			denom: AS	Obv [FAVSTIINA AVGVSTA]
	date: 161-75	mint: - -		cat: (H.AUR) as 1639	Rev [FECVNDITAS] SC
	diam: -	wt: -		wear: -	
76	FAUSTINA II (H.AURELIUS)			denom: SEST	Obv -
	date: 161-80	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: EW/C	
77	FAUSTINA II (H.AURELIUS)			denom: SEST	Obv DIVA FAVSTINA PIA
	date: 175-80	mint: - -		cat: (H.AUR)1692	Rev AETERNITAS SC
	diam: -	wt: -		wear: W/W	
78	FAUSTINA II (H.AURELIUS)			denom: SEST	Obv DIVA FAVSTINA PIA]
	date: 175-80	mint: - -		cat: (H.AUR)1699	Rev [AETERNITAS] SC]
	diam: -	wt: -		wear: VW/VW	
79	FAUSTINA II (H.AURELIUS)			denom: SEST	Obv DIVA [FAVSTINA]
	date: 175-80	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: EW/C	
80	FAUSTINA II (H.AURELIUS)			denom: DEN	Obv DIVA FAVSTINA PIA
	date: 176-80	mint: - -		cat: (H.AUR)741	Rev CONSECRATIO
	diam: -	wt: -		wear: -	
81	COMMODUS			denom: SEST	Obv -
	date: 176-92	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
82	COMMODUS			denom: SEST	Obv L AVREL COMMODVS AVG [TRP IIIII]
	date: 179	mint: - -		cat: (H. AUR)1599	Rev [IMP II COS II PP] SC
	diam: -	wt: -		wear: -	
83	COMMODUS			denom: SEST	Obv [L AVRREL COMMODVS AVG TRP V]
	date: 179-80	mint: - -		cat: as 293	Rev -
	diam: -	wt: -		wear: EW/EW	
84	COMMODUS			denom: SEST	Obv [M COMMODVS ANTONINVS AVG]
	date: 181	mint: - -		cat: 309	Rev LIB AVG IIII SC
	diam: -	wt: -		wear: EW/EW	

No.	Site	Context	Feature	Sfno	Area
73	VIC31	-	-	045	Vicus II:c:SE
74	VIC31	-	-	046	Vicus IV(stone):U/S
75	VIC60	-	-	-	VCH 1:in well
76	VIC31	-	-	041	Vicus II:a:W
77	VIC31	-	-	044	Vicus IV(stone):2:U/S
78	VIC31	-	-	042	Vicus I:2:N
79	VIC31	-	-	043	Vicus II:b:NE
80	VIC32	-	-	-	E of Vicus IV
81	VIC31	-	-	-	U/S
82	VIC32	-	-	2	Vicus III:centre of W wall
83	VIC32	-	-	25	Vicus VIII:outside N wall
84	VIC31	-	-	052	Vicus I:N side top floor

No.	Ruler			denom:	DEN	Obv	M COHN ANT P FEL AVG BRIT]
85	COMMODUS			cat:	146	Rev	[AI]VCT PIET PH TRP XII IMP VIII COS V P P
	date:	186/87	mint: - -	wt:	-		
	diam:	-					
86	COMMODUS			denom:	DEN	Obv	M COHN ANT P FEL AVG BRIT
	date:	188-89	mint: - -	cat:	173	Rev	IOV IUVEN PH TRP XIII COS V PP
	diam:	-	wt: -				
87	COMMODUS			denom:	DEN	Obv	M COHN ANT [P FEL AVG] BRIT PP
	date:	189-92	mint: - -	cat:	as 91	Rev	PH TRP....
	diam:	-	wt: -	wear:	VU/EW		
88	COMMODUS			denom:	SEST	Obv	M COMMOD ANT P FELIX AVG BRIT PP
	date:	190	mint: - -	cat:	as 565	Rev	SAECVLI (or THER) FELIC PH TRP XV IMP VIII COS VI SC
	diam:	-	wt: -	wear:	C/C		
89	COMMODUS			denom:	DEN	Obv	M COMM ANT P FEL AVG BRIT PP
	date:	190-91	mint: - -	cat:	222a	Rev	MN AVG PH TRP [XVI COS VI]
	diam:	-	wt: -	wear:	SM/H		
90	COMMODUS			denom:	DEN	Obv	[L AEL AVREL COMM AVG P FEL]
	date:	191-92	mint: - -	cat:	251	Rev	HERCVL ROMAN AVGV
	diam:	-	wt: -	wear:	-		
91	'COMMODUS'			denom:	DEN	Obv	...ANTON AVG BRIT
	date:	184+	mint: - -	cat:	-	Rev	-
	diam:	-	wt: -	wear:	M/C		
92	CLODIUS ALBINUS			denom:	AS	Obv	IMP CAEIS D CLOJ SEP ALB AVG
	date:	193-95	mint: - -	cat:	64	Rev	FORTVN[AE REDVCI COS] II
	diam:	-	wt: -	wear:	-		
93	CLODIUS ALBINUS			denom:	SEST	Obv	...SEP...
	date:	193-97	mint: - -	cat:	-	Rev	-
	diam:	-	wt: -	wear:	-		
94	SEPTIMIUS SEVERUS			denom:	SEST	Obv	-
	date:	193-211	mint: - -	cat:	-	Rev	-
	diam:	-	wt: -	wear:	-		
95	SEPTIMIUS SEVERUS			denom:	DEN	Obv	...SEVERVS...
	date:	193-211	mint: - -	cat:	-	Rev	-
	diam:	-	wt: -	wear:	EW/C		
96	SEPTIMIUS SEVERUS			denom:	DEN	Obv	-
	date:	193-211	mint: - -	cat:	-	Rev	-
	diam:	-	wt: -	wear:	C/C		

No.	Site	Context	Feature	Sfno	Area
85	VIC60	-	-	-	VCH 1:in well
86	VIC31	-	-	047	Vicus IV(stone):1:SW
87	VIC31	-	-	050	Vicus IV(stone):1:centre
88	VIC31	-	-	053	Vicus II:b:E
89	VIC31	-	-	048	Vicus IV(stone):1:(sealed) centre
90	VIC31	-	-	049	Vicus IV(wood):c:(sealed)
91	VIC31	-	-	051	Vicus II:below flag W end
92	VIC60	-	-	-	VCH:U/S
93	VIC60	-	-	-	VCH:U/S
94	VIC60	-	-	-	VCH:U/S
95	VIC31	-	-	068	Vicus IV:SW corner
96	VIC31	-	-	070	Vicus IV:sealed by furnace

No.	Ruler				
97	SEPTIMIUS SEVERUS	denom: SEST	Obv -		
	date: 193-211	mint: - -	cat: as 667	Rev [....] SC	
	diam: -	wt: -	wear: -		
98	SEPTIMIUS SEVERUS	denom: DEN	Obv IHP CAE L SEP SEV PERT AVG		
	date: 193-94	mint: - -	cat: 344	Rev AEQVITAS II	
	diam: -	wt: -	wear: W/H		
99	SEPTIMIUS SEVERUS	denom: DEN	Obv [L SEPT] SEV PERT AVG IMP IIIII		
	date: 194-95	mint: - -	cat: 40	Rev [APOLLINI] AVGVSTO	
	diam: -	wt: -	wear: W/H		
100	SEPTIMIUS SEVERUS	denom: DEN	Obv L SEPT SEV PERT AVG IMP VIII		
	date: 196-97	mint: - -	cat: 491a	Rev PROVIDENTIA AVG	
	diam: -	wt: -	wear: -		
101	SEPTIMIUS SEVERUS	denom: DEN	Obv [L SEPT SEV PERT] AVG IMP VIII		
	date: 196-97	mint: - -	cat: 79	Rev [HERICVLI] DEFENS	
	diam: -	wt: -	wear: SW/SW		
102	SEPTIMIUS SEVERUS	denom: DEN	Obv [L SEPT SEV PERT] AVG IMP VIII		
	date: 196-97	mint: - -	cat: 85	Rev [PH TRP IIIII] COS II PP	
	diam: -	wt: -	wear: SW/W		
103	SEPTIMIUS SEVERUS	denom: DEN	Obv [L SEPT] SEV PERT [AVG IMP...]		
	date: 196-97	mint: - -	cat: as 79	Rev HERCVLII DEFENS]	
	diam: -	wt: -	wear: W/H		
104	SEPTIMIUS SEVERUS	denom: DEN	Obv [L SEPT SEV PERT] AVG IMP VIIII		
	date: 197	mint: - -	cat: 101	Rev [PH TRP V] COS II P P	
	diam: -	wt: -	wear: SW/SW		
105	SEPTIMIUS SEVERUS	denom: DEN	Obv L SEPT SEV AVG IMP XI PART MAX		
	date: 198-202	mint: - -	cat: 504	Rev COS III PP	
	diam: -	wt: -	wear: SW/SW		
106	SEPTIMIUS SEVERUS	denom: DEN	Obv SEVERUS PIUS AVG		
	date: 201	mint: - -	cat: 176	Rev PART MAX	
	diam: -	wt: -	wear: -		
107	SEPTIMIUS SEVERUS	denom: DEN	Obv SEVERVS PIVS AVG		
	date: 201	mint: - -	cat: 176	Rev PART MAX PM TRP VIIII	
	diam: -	wt: -	wear: W/W		
108	SEPTIMIUS SEVERUS	denom: DEN	Obv SEVERVS PIVS AVG		
	date: 208	mint: - -	cat: 220	Rev PM TRP XVI COS III PP	
	diam: -	wt: -	wear: -		

No.	Site	Context	Feature	Sfno	Area
97	VIC60	-	-	-	VCH 1:in well
98	VIC31	-	-	065	Vicus IV
99	VIC33	-	-	-	Vallum 6
100	VIC31	-	-	064	Vicus II:in base of E wall
101	VIC31	-	-	062	Vicus IV(stone):1:SW
102	VIC31	-	-	060	Vicus I:top floor NW corner
103	VIC31	-	-	061	Vicus II:burnt layer near top
104	VIC32	-	-	-	1931-32 tip
105	VIC31	-	-	059	Vicus IV(stone):1a:W
106	VIC31	-	-	063	Vicus I:(basement):c:S
107	VIC31	-	-	066	Vicus II:b:NE angle
108	VIC31	-	-	058	Vicus III-IV.Part of hoard (2)

No.	Ruler				
109	'SEPTIMIUS SEVERUS'	denom: DEN		Obv SEVERVS [PIVS AVG]	
	date: 193+	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
110	'SEPTIMIUS SEVERUS'	denom: DEN		Obv -	
	date: 193+	mint: - -	cat: c.as 220	Rev -	
	diam: 14.0 mm	wt: 0.7 g	wear: VW/VH		
111	JULIA DOMNA	denom: DEN		Obv -	
	date: 193-211	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: EW/EW		
112	JULIA DOMNA	denom: DEN		Obv IVLIA AVGVSTA	
	date: 196-211	mint: - -	cat: (S.SEV)551	Rev FELICITAS	
	diam: -	wt: -	wear: -		
113	JULIA DOMNA	denom: DEN		Obv IVLIA AVGVSTA	
	date: 196-211	mint: - -	cat: (S.SEV)559	Rev IVND	
	diam: -	wt: -	wear: -		
114	JULIA DOMNA	denom: DEN		Obv IVLIA AVGVSTA	
	date: 196-211	mint: - -	cat: (S.SEV)561	Rev LAETITIA	
	diam: -	wt: -	wear: W/W		
115	JULIA DOMNA	denom: DEN		Obv IVLIA AVGVSTA	
	date: 196-211	mint: - -	cat: (S.SEV)564	Rev MATER DEVM	
	diam: -	wt: -	wear: -		
116	JULIA DOMNA	denom: DEN		Obv IVLIA AVGVSTA	
	date: 196-211	mint: - -	cat: (S.SEV)577	Rev SAECULI FELICITAS	
	diam: -	wt: -	wear: -		
117	JULIA DOMNA	denom: DEN		Obv IVLIA [AVGVSTA]	
	date: 196-211	mint: - -	cat: (S.SEV)587	Rev [VESTAE] SANCTAE	
	diam: -	wt: -	wear: SW/SW		
118	JULIA DOMNA	denom: DEN		Obv IVLIA PIA FELIX AVG	
	date: 211-17	mint: - -	cat: (S.SEV)373A	Rev DIANA LVCIFERA	
	diam: -	wt: -	wear: -		
119	CARACALLA	denom: DEN		Obv M AVR ANTONINVS CAES	
	date: 196	mint: - -	cat: 2	Rev SECVRITAS PERPETVA	
	diam: -	wt: -	wear: -		
120	CARACALLA	denom: DEN		Obv M AVR ANTONINVS CAES	
	date: 196	mint: - -	cat: 5	Rev [SP]EI PERPETVAE]	
	diam: -	wt: -	wear: SW/SW		

No.	Site	Context	Feature	Sfno	Area
109	VIC31	-	-	067	Vicus IV(stone):1:SW
110	VIC31	-	-	069	Vicus IV(wood):c:sealed by furnace
111	VIC32	-	-	27	Vicus VIII:centre under flags
112	VIC31	-	-	072	Vicus I:basement c,in hearth
113	VIC31	-	-	073	Vicus IV(stone):NW top
114	VIC31	-	-	074	East of Vicus I
115	VIC31	-	-	075	Vicus IV(stone):1:SW corner
116	VIC31	-	-	076	Vicus II:SE top
117	VIC31	-	-	077	Vicus I:NE corner
118	VIC31	-	-	071	Vicus I:basement on step
119	VIC31	-	-	080	Vicus IV(stone):1:SW
120	VIC31	-	-	079	Vicus IV:E side under flags

No.	Ruler	date:	mint:	wt:	denom:	cat:	wear:	Obv	Rev
121	CARACALLA	198-217	-	-	DEN	324	SW/SW	ANTONINVS PIVS AVG GERH	SALVS [ANTONINI AVG]
122	CARACALLA	201-06	-	-	DEN	144b	-	ANTONINVS PIVS AVG	VICT PART MAX
123	CARACALLA	207	-	-	DEN	92	-	ANTONINVS PIVS AVG	PONTIF TRP X COS II
124	CARACALLA	209-12	-	-	DEN	205	W/SW	ANTONINVS PIVS AVG	VOTA SALVT DEC COS III
125	CARACALLA	212	-	-	DEN	as 192	W/W	[ANTONINVS PIVS] AVG BRIT	[PH TRP XIV COS III PP
126	CARACALLA	215	-	-	ANT	264a	-	ANTONINVS PIVS AVG GERH	PH TRP XVIII COS IIII PP
127	CARACALLA	215	-	-	DEN	311b	W/W	[ANTONINVS PIVS] AVG GERM	[VIENVS VIICT[R]IX
128	GETA	198-200	-	-	DEN	2	SW/SW	L SEPTIMIUS GETA CAES	FELICITAS TEMPOR
129	GETA	198-200	-	-	DEN	3	VE/VW	P SEPT GETA CAES PONT	[SEVERI PII AVG FIL]
130	GETA	200-02	-	-	DEN	18	-	P SEPT GETA CAES PONT	PRINC IVVENTVTIS
131	GETA	203-08	-	-	DEN	34	VW/W	P SEPTIMIUS GETA CAES	PONTIF COS
132	GETA	209-12	-	-	DEN	-	-	...PIUS...	-

No.	Site	Context	Feature	Sfno	Area
121	VIC32	-	-	26	Vicus VIII:E above flagging
122	VIC31	-	-	081	Vicus IV:W wall outside
123	VIC31	-	-	082	Vicus IV(stone):1:SW
124	VIC32	-	-	29	Vicus VIII:SE corner top
125	VIC31	-	-	083	W of Vicus I
126	VIC31	-	-	078	Vicus III-IV.Part of hoard (2)
127	VIC32	-	-	003	Vicus III:S annexe
128	VIC31	-	-	084	Vicus II:SE on floor
129	VIC32	-	-	4	Vicus III:NE corner of annexe
130	VIC60	-	-	-	VCH 1:in well
131	VIC31	-	-	085	E of Vicus I
132	VIC32	-	-	-	1931-32 tip

No.	Ruler	date:	mint:	diam:	wt:	denom:	cat:	wear:	Obv	Rev
133	'GETA'	200-02+	- -	-	-	DEN	c. of 20a	SM/SU	P SEPT GETA CAES PONT	SECVRIT IMPERII
134	HACRINUS	217-18	- -	-	-	DEN	-	EU/C	-	-
135	ELAGABALUS	218	- -	-	-	DEN	1	-	IMP CAES H AVR ANTONINVS AVG	PH TRP COS PP
136	ELAGABALUS	218	- -	-	-	DEN	3	-	IMP CAES H AVR ANTONINVS AVG	PH TRP COS PP
137	ELAGABALUS	218-22	- -	-	-	DEN	-	EU/VN	-	-
138	ELAGABALUS	218-22	- -	-	-	ANT	137	-	IMP CAES ANTONINVS AVG	SALVS ANTONINI AVG
139	ELAGABALUS	218-22	- -	-	-	DEN	139	-	IMP CAES H AVR ANTONINVS AVG	SALVS ANTONINI AVG
140	ELAGABALUS	218-22	- -	-	-	DEN	88	-	IMP ANTONINVS PIVS AVG	INVICTVS SACERDOS AVG
141	ELAGABALUS	220	- -	-	-	DEN	-	-	-	-
142	ELAGABALUS	221	- -	-	-	DEN	46	-	IMP ANTONINVS PIVS AVG	PH TRP III COS III PP
143	JULIA SOAENIAS	218-22	- -	-	-	DEN	-	W/W	-	-
144	JULIA SOAENIAS	218-22	- -	-	-	DEN	(ELAG)241	UW/UW	IVLIA SOAEMIAS AVG	VENVS CAELESTIS

No.	Site	Context	Feature	Sfno	Area
133	VIC32	-	-	005	Vicus III:annexe
134	VIC31	-	-	086	Vicus IV-III
135	VIC31	-	-	087	Vicus III-IV.Part of hoard (2)
136	VIC31	-	-	087	Vicus III-IV.Part of hoard (2)
137	VIC31	-	-	091	Vicus II:a:SE on flagged floor
138	VIC31	-	-	088	Vicus III-IV:hoard with 56-9
139	VIC31	-	-	089	Vicus I:basement on step landing
140	VIC31	-	-	090	Vicus II:b:E
141	VIC33	-	-	-	Shrine E end V.XII.Part hoard (3)
142	VIC32	-	-	28	Vicus VIII:NE corner
143	VIC31	-	-	092	Vicus I:N top floor
144	VIC33	-	-	-	Shrine E end V.XII.Part hoard (3)

No.	Ruler				
145	JULIA HAESA	date: 218-22	mint: - -	denom: DEN	Obv IVLIA HAESA AVG
		diam: -	wt: -	cat: (ELAB)271	Rev SAECVLI FELICITAS
				wear: UU/UW	
146	SEVERUS ALEXANDER	date: 222-28	mint: - -	denom: DEN	Obv IMP C H AVR SEV ALEXAND AVG
		diam: -	wt: -	cat: 127	Rev AEQUITAS AVG
				wear: -	
147	SEVERUS ALEXANDER	date: 227-35	mint: - -	denom: ANT	Obv IMP SEV ALEXANDER AVG
		diam: -	wt: -	cat: -	RevAVG
				wear: W/W	
148	SEVERUS ALEXANDER	date: 224	mint: - -	denom: DEN	Obv IMP C H AVR SEV ALEXAND
		diam: -	wt: -	cat: 35	Rev PH TRP III COS PP
				wear: -	
149	SEVERUS ALEXANDER	date: 227	mint: - -	denom: DEN	Obv IMP C M AVR SEV ALEXAND AVGG
		diam: -	wt: -	cat: 64	Rev PH TRP VI COS II PP
				wear: -	
150	SEVERUS ALEXANDER	date: 228-31	mint: - -	denom: DEN	Obv IMP SEV ALEXAND AVG
		diam: -	wt: -	cat: 187	Rev ANNONA AVG
				wear: SW/SW	
151	SEVERUS ALEXANDER	date: 228-31	mint: - -	denom: DEN	Obv IMP SEV ALEXAND AVG
		diam: -	wt: -	cat: 196	Rev FORTUNAE REDVCI
				wear: -	
152	SEVERUS ALEXANDER	date: 229	mint: - -	denom: DEN	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: UU/UW	
153	SEVERUS ALEXANDER	date: 230	mint: - -	denom: DEN	Obv IMP SEV ALEXAND AVG
		diam: -	wt: -	cat: 101	Rev PH TRP VIIII COS III PP
				wear: -	
154	SEVERUS ALEXANDER	date: 231-35	mint: - -	denom: DEN	Obv IMP ALEXANDER PIVS AVG
		diam: -	wt: -	cat: 250	Rev PROVIDENTIA AVG
				wear: -	
155	SEVERUS ALEXANDER	date: 233-35	mint: - -	denom: DEN	Obv IMP SEV ALEXAND AVG
		diam: -	wt: -	cat: 169	Rev PERPETVITATI AVG
				wear: SW/SW	
156	JULIA MANAEA	date: 222-35	mint: - -	denom: DEN	Obv IVLIA MANAEA AVG
		diam: -	wt: -	cat: (S.ALEX)335	Rev FELICITAS PVBLICA
				wear: W/VW	

No.	Site	Context	Feature	Sfno	Area
145	VIC33	-	-	-	Shrine E end V.XII.Part hoard (3)
146	VIC31	-	-	096	Vicus I:basement a
147	VIC32	-	-	030	Trench N of Vicus VIII
148	VIC31	-	-	095	Vicus I:basement b
149	VIC31	-	-	100	Vicus I:2:NM
150	VIC33	-	-	-	Vallum G
151	VIC31	-	-	094	Vicus I:basement a
152	VIC33	-	-	-	Shrine E end V.XII.Part hoard (3)
153	VIC31	-	-	097	Vicus I:basement b
154	VIC31	-	-	093	Vicus I:basement b
155	VIC31	-	-	099	Vicus I:basement b:sealed by oven
156	VIC31	-	-	101	Vicus IV(stone):S end

No.	Ruler		denom:	DEN	Obv	IVLIA HAMAEEA
157	JULIA HAMAEEA		cat:	(S.ALEX)343	Rev	IVNO CONSERVATRIX
	date: 222-35	mint: - -	wear:	SW/SW		
	diam: -	wt: -				
158	JULIA HAMAEEA		denom:	DEN	Obv	IVLIA HAMAEEA AVG
	date: 222-35	mint: - -	cat:	(S.ALEX)360	Rev	VESTA
	diam: -	wt: -	wear:	U/VW		
159	JULIA HAMAEEA		denom:	DEN	Obv	IVLIA HAMAEEA AVG
	date: 222-35	mint: - -	cat:	(S.ALEX)360	Rev	VESTA
	diam: -	wt: -	wear:	UH/UH		
160	MAXIMINUS I		denom:	DEN	Obv	IMP MAXIMINVS PIVS AVG
	date: 236	mint: - -	cat:	3	Rev	PH TRP II COS PP
	diam: -	wt: -	wear:	-		
161	PHILIP I		denom:	ANT	Obv	-
	date: 244-49	mint: - -	cat:	-	Rev	-
	diam: -	wt: -	wear:	-		
162	PHILIP I		denom:	ANT	Obv	[IMP M IV]L PHILIPPVS [AVG]
	date: 245	mint: - -	cat:	2b	Rev	[PH] TRP II C[OS PP]
	diam: -	wt: -	wear:	SW/SW		
163	OTACILIA SEVERA		denom:	ANT	Obv	M OTACIL SEVERA AVG
	date: 244-49	mint: - -	cat:	(PHILIP I)138	Rev	AEQVITAS AVGG
	diam: -	wt: -	wear:	N/VW		
164	TRAJAN DECIUS		denom:	ANT	Obv	IMP TRAIANVS DECIVS AVG
	date: 249	mint: - -	cat:	1b	Rev	ADVENTVS AVG
	diam: -	wt: -	wear:	-		
165	VALERIAN I		denom:	ANT	Obv	[IMP VALERIANVS AVG]
	date: 253-59	mint: - -	cat:	107	Rev	[OR]IENS[AVGG]
	diam: -	wt: -	wear:	VW/VW		
166	VALERIAN I		denom:	ANT	Obv	IMP VALERIANVS P F AVG]
	date: 253-59	mint: - -	cat:	246	Rev	PIETAS A[VG6]
	diam: -	wt: -	wear:	VW/VW		
167	VALERIAN I		denom:	ANT	Obv	-
	date: 253-60	mint: - -	cat:	-	Rev	-
	diam: -	wt: -	wear:	-		
168	VALERIAN I		denom:	ANT	Obv	-
	date: 253-60	mint: - -	cat:	-	Rev	-
	diam: -	wt: -	wear:	-		

No.	Site	Context	Feature	Sfno	Area
157	VIC31	-	-	102	Vicus I:basement b:sealed by oven
158	VIC31	-	-	103	Vicus II:on ruined S wall c
159	VIC33	-	-	-	Shrine E end V.XII.Part hoard (3)
160	VIC31	-	-	104	Vicus I:b:basement (sealed)
161	VIC32	-	-	046	Fort sewer
162	VIC31	-	-	-	U/S
163	VIC31	-	-	-	Tip
164	VIC60	-	-	-	VCH 1:in well
165	VIC33	-	-	-	1931 tip
166	VIC32	-	-	6	Vicus III:NW corner
167	VIC31	-	-	109	Vicus II:b:E
168	VIC31	-	-	109	Vicus II:b:E

No.	Ruler				
169	VALERIAN I	date: 258-59	mint: - -	denom: ANT	Obv VALERIANVS P F AVG
		diam: -	wt: -	cat: 12	Rev ORIENS AVGG
				wear: -	
170	VALERIAN I	date: 258-59	mint: - -	denom: ANT	Obv VALERIANVS] P F AVG
		diam: -	wt: -	cat: 12	Rev ORIENS AVGG
				wear: W/VW	
171	VALERIAN II	date: 253-55	mint: - -	denom: ANT	Obv VALERIANVS CAES
		diam: -	wt: -	cat: 3	Rev IOVI CRESCENTI
				wear: -	
172	GALLIENUS	date: 253-68	mint: - -	denom: ANT	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: -	
173	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv -
		diam: -	wt: -	cat: -	Rev -
				wear: C/C	
174	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv [..GALLIENVS P F AVG
		diam: -	wt: -	cat: -	Rev -
				wear: VW/C	
175	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv GALLIENVS AVG
		diam: -	wt: -	cat: 157	Rev ABVNDANTIA AVG
				wear: -	
176	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv GALLIENVS AVG
		diam: -	wt: -	cat: 157	Rev ABVNDANTIA AVG
				wear: -	
177	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv GALLIENVS AVG
		diam: -	wt: -	cat: 160	Rev AETERNITAS AVGG
				wear: VW/VW	
178	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv GALLIENVS AVG
		diam: -	wt: -	cat: 161	Rev ANNONA AVG
				wear: -	
179	GALLIENUS	date: 258-68	mint: - XI	denom: ANT	Obv IMP GALLIENVS AVG
		diam: -	wt: -	cat: 213	Rev IOVI PROPVGAT
				wear: -	
180	GALLIENUS	date: 258-68	mint: - -	denom: ANT	Obv GALLIENVS AVG
		diam: -	wt: -	cat: 280	Rev SECVRIT PERPET
				wear: -	

No.	Site	Context	Feature	Sfno	Area
169	VIC31	-	-	107	Vicus I:SE corner
170	VIC31	-	-	108	Vicus I:outside E wall
171	VIC31	-	-	110	Vicus I:b:basement
172	VIC31	-	-	117	Vicus II:U/S:NE
173	VIC32	-	-	031	SW of Vicus VIII below flags
174	VIC33	-	-	-	Vallum B
175	VIC31	-	-	116	Vicus I:1:N
176	VIC31	-	-	111	Vicus I:b:basement
177	VIC31	-	-	-	U/S
178	VIC31	-	-	115	Vicus I:U/S:SE
179	VIC31	-	-	113	Vicus I:b:basement
180	VIC31	-	-	114	Vicus I:b:basement

No.	Ruler				
181	GALLIENUS			denom: ANT	Obv IMP GALLIENVS AVG
	date: 258-68	mint: - -		cat: 287	Rev VBERITAS AVG
	diam: -	wt: -		wear: -	
182	GALLIENUS			denom: ANT	Obv IMP GALLIENVS AVG
	date: 258-68	mint: - -		cat: 287	Rev VBERTAS AVG
	diam: -	wt: -		wear: -	
183	SALONINA			denom: ANT	Obv SALONINA AVG
	date: 258-69	mint: - VI		cat: 3	Rev VENVS VICTRIX
	diam: -	wt: -		wear: VH/VH	
184	CLAUDIUS II			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/C	
185	CLAUDIUS II			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: C/C	
186	CLAUDIUS II			denom: ANT	Obv IMP C CLAVDIVS AVG
	date: 268-70	mint: - -		cat: -	RevAVG
	diam: -	wt: -		wear: SW/SW	
187	CLAUDIUS II			denom: ANT	Obv IMP CLAVDIVS AVG
	date: 268-70	mint: - P		cat: 144	Rev DIANA LVCI F
	diam: -	wt: -		wear: SW/SW	
188	CLAUDIUS II			denom: ANT	Obv IMP C CLAVDIVS P F AVG
	date: 268-70	mint: - -		cat: 167	Rev SALVS AVG
	diam: -	wt: -		wear: -	
189	CLAUDIUS II			denom: ANT	Obv I[IMP] CL[AVD]IVS [P F] AVG
	date: 268-70	mint: - -		cat: 171	Rev VICTORIA AVG
	diam: -	wt: -		wear: -	
190	CLAUDIUS II			denom: ANT	Obv IMP CLAVDIVS AVG
	date: 268-70	mint: - -		cat: 49	Rev GENIVS EXERCI
	diam: -	wt: -		wear: -	
191	CLAUDIUS II			denom: ANT	Obv IMP CLAVDIVS AVG
	date: 268-70	mint: - -		cat: 56	Rev LAETITIA AVG
	diam: -	wt: -		wear: -	
192	CLAUDIUS II			denom: ANT	Obv IMP C CLAVDIVS AVG
	date: 268-70	mint: - H		cat: 66	Rev MARS VLTOR
	diam: -	wt: -		wear: -	

No.	Site	Context	Feature	Sfno	Area
181	VIC31	-	-	112	Vicus I:a:basement
182	VIC32	-	-	032	Vicus VIII:SE (inside)
183	VIC32	-	-	33	Vicus VIII:NE corner
184	VIC31	-	-	-	U/S
185	VIC31	-	-	-	Vicus IV:outside W wall
186	VIC32	-	-	11	W of Vicus III
187	VIC32	-	-	38	Vicus VIII:below clay filling
188	VIC31	-	-	142	Vicus II:U/S:SE
189	VIC60	-	-	-	VCH 1:in well
190	VIC31	-	-	138	Vicus I:basement:b
191	VIC31	-	-	139	N of Vicus I
192	VIC60	-	-	-	VCH 1:in well

No.	Ruler						
193	CLAUDIUS II			denom: ANT		Obv IMP CLAVDIVS AVG	
	date: 268-70	mint: - -		cat: 87		Rev PROVID AVG	
	diam: -	wt: -		wear: -			
194	CLAUDIUS II			denom: ANT		Obv [IMP CLAVDIVS AVG]	
	date: 268-70	mint: - -		cat: 88		Rev PROVID AVG	
	diam: -	wt: -		wear: -			
195	CLAUDIUS II			denom: ANT		Obv IMP [C] CLAVDIVS AVG	
	date: 268-70	mint: - -		cat: 91/2		Rev PROVIDENTIA AVG	
	diam: -	wt: -		wear: -			
196	CLAUDIUS II			denom: ANT		Obv [IMP C] CLAVDIVS AVG]	
	date: 268-70	mint: - -		cat: as 109		Rev [VIRTVIS AVG	
	diam: -	wt: -		wear: W/W			
197	CLAUDIUS II,POSTH			denom: ANT		Obv DIVO CLAVDIO	
	date: 270	mint: - -		cat: 261		Rev CONSECRATIO	
	diam: -	wt: -		wear: -			
198	'CLAUDIUS II'			denom: ANT		Obv -	
	date: 273+	mint: - -		cat: -		Rev -	
	diam: 17.0 mm	wt: 2.6 g		wear: W/W			
199	'CLAUDIUS II,POSTH'			denom: ANT		Obv [DIVO CLAVDIO]	
	date: 273+	mint: - -		cat: 261		Rev [CONSECRATIO]	
	diam: 13.0 mm	wt: 0.8 g		wear: VW/VW			
200	POSTUMUS			denom: ANT		Obv IMP C POSTVMVS P F AVG	
	date: 258-68	mint: - -		cat: 78		Rev PAX AVG	
	diam: -	wt: -		wear: -			
201	POSTUMUS			denom: ANT		Obv [IMP C POSTVMVS P F AVG	
	date: 258-68	mint: - -		cat: 83		Rev [SA]ECVLI FELI[CITAS]	
	diam: -	wt: -		wear: SW/SW			
202	POSTUMUS			denom: ANT		Obv IMP C POSTVMVS P F AVG	
	date: 260	mint: - -		cat: E 123		Rev SALVS PROVINCIARVM	
	diam: -	wt: -		wear: UW/UW			
203	POSTUMUS			denom: ANT		Obv IMP C POSTVMVS P F AVG	
	date: 260	mint: - -		cat: E 129		Rev PM TRP COS II PP	
	diam: -	wt: -		wear: W/SW			
204	POSTUMUS			denom: ANT		Obv IMP C POSTVMVS P F AVG	
	date: 262	mint: - -		cat: E 336		Rev MONETA AVG	
	diam: -	wt: -		wear: -			

No.	Site	Context	Feature	Sfno	Area
193	VIC32	-	-	-	Over causeway below road
194	VIC31	-	-	140	Vicus I:2:NW
195	VIC31	-	-	141	Vicus I:basement:b
196	VIC32	-	-	010	Vicus VIII:centre of W wall nr. top
197	VIC31	-	-	143	Vicus II:U/S:SE
198	VIC33	-	-	-	1932 tip
199	VIC31	-	-	-	N of Vicus I and road
200	VIC32	-	-	032	Vicus VIII:SE corner
201	VIC32	-	-	007	Vicus VIII:in passage nr. top
202	VIC32	-	-	34	Vicus VIII:NW corner on flagging
203	VIC31	-	-	-	Tip
204	VIC31	-	-	118	Vicus IV(stone):U/S

No.	Ruler				
205	VICTORINUS			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	
206	VICTORINUS			denom: ANT	Obv -
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	
207	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS...AVG
	date: 268-70	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/EH	
208	VICTORINUS			denom: ANT	Obv IMP VICTORINVS P F AVG
	date: 268-70	mint: - -		cat: as C 2526/7	Rev ORIENS AVG
	diam: -	wt: -		wear: -	
209	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS P F AVG
	date: 269	mint: - -		cat: E 682	Rev PAX AVG
	diam: -	wt: -		wear: -	
210	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS P F AVG
	date: 269	mint: - -		cat: E 684	Rev FIDES HILITVM
	diam: -	wt: -		wear: -	
211	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS P F AVG
	date: 269	mint: - -		cat: E 732/3	Rev SALVS AVG
	diam: -	wt: -		wear: -	
212	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS P F AVG
	date: 269	mint: - -		cat: E 741	Rev PIETAS AVG
	diam: -	wt: -		wear: -	
213	VICTORINUS			denom: ANT	Obv IMP C VICTORINVS P F AVG
	date: 269	mint: - -		cat: E 744	Rev VICTORIA AVG
	diam: -	wt: -		wear: -	
214	'VICTORINUS'			denom: ANT	Obv IIVIC.....
	date: 273+	mint: - -		cat: -	Rev ...OTV...VICT
	diam: -	wt: -		wear: VW/VH	
215	TETRICUS I			denom: ANT	Obv -
	date: 270-73	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: W/W	
216	TETRICUS I			denom: ANT	Obv -
	date: 270-73	mint: - -		cat: -	Rev -
	diam: -	wt: -		wear: -	

No.	Site	Context	Feature	Sfno	Area
205	VIC32	-	-	-	On road by vallum causeway
206	VIC31	-	-	125	Vicus I:a:basement
207	VIC32	-	-	95	Vicus III:fill
208	VIC31	-	-	120	Vicus I:b:basement
209	VIC31	-	-	121	Vicus I:b:basement
210	VIC31	-	-	119	Vicus I:b:basement
211	VIC31	-	-	123	Vicus I:2:N
212	VIC31	-	-	122	Vicus I:b:basement (sealed)
213	VIC31	-	-	124	Vicus I:b:basement (sealed)
214	VIC32	-	-	009	Vicus III:N end top
215	VIC32	-	-	36	N wall of build. S of Vicus VIII
216	VIC31	-	-	130	Vicus I:a:basement

No.	Ruler			denom:	ANT	Obv	IHP C [TETRICVS P AVG]
217	TETRICUS I	date: 270-73	mint: - -	cat: 109		Rev	PIETAS AVG
		diam: -	wt: -	wear: -			
218	TETRICUS I	date: 270-73	mint: - -	cat: 82		Obv	IHP C [TETRICVS P F AVG]
		diam: -	wt: -	wear: -		Rev	INVICTVS
219	TETRICUS I	date: 270-73	mint: - -	cat: E as 746		Obv	IHP C TETRICVS P F AVG
		diam: -	wt: -	wear: VW/EW		Rev	SPES [PVBLICA]
220	TETRICUS I	date: 270-73	mint: - -	cat: c.as 100		Obv	-
		diam: -	wt: -	wear: EW/C		Rev	-
221	TETRICUS I	date: 272	mint: - -	cat: E 787		Obv	IHP [TETRICVS P F AVG]
		diam: -	wt: -	wear: -		Rev	[LAETITIA AVGG]
222	TETRICUS I	date: 273	mint: - -	cat: as E 772		Obv	-
		diam: -	wt: -	wear: EW/EW		Rev	SALVS AVG
223	'TETRICUS I'	date: 273+	mint: - -	cat: -		Obv	-
		diam: 14.5 mm	wt: 1.3 g	wear: VW/VW		Rev	-
224	'TETRICUS I'	date: 273+	mint: - -	cat: -		Obv	-
		diam: -	wt: -	wear: -		Rev	-
225	'TETRICUS I'	date: 273+	mint: - -	cat: c.as 100		Obv	...PICVS PVVIC
		diam: 15.0 mm	wt: 1.7 g	wear: W/W		Rev	
226	'TETRICUS I'	date: 273+	mint: - -	cat: c.of E 776		Obv	[IHP C TETRICVS P F] AVG
		diam: 16.0 mm	wt: 2.0 g	wear: W/W		Rev	[SALVS AVG]
227	'TETRICUS I'	date: 273+	mint: - -	cat: c.of E 788		Obv	[IHP TETRICVS P F AVG]
		diam: 16.0 mm	wt: 2.1 g	wear: W/W		Rev	[SALVS AVGG]
228	'TETRICUS I'	date: 273+	mint: - -	cat: c.as E 789		Obv	NTE...
		diam: -	wt: -	wear: SH/SW		Rev	[HILARITAS AVGG]

No.	Site	Context	Feature	Sfno	Area
217	VIC31	-	-	128	Vicus I:U/S:SE
218	VIC31	-	-	126	Vicus I:b:basement (sealed)
219	VIC33	-	-	-	1931 tip
220	VIC31	-	-	151	Vicus II:S wall outside
221	VIC31	-	-	127	Vicus I:b:NE
222	VIC32	-	-	37	Vicus VIII:below floor
223	VIC31	-	-	-	U/S
224	VIC31	-	-	157	Vicus II:E
225	VIC31	-	-	158	Spoil tip
226	VIC33	-	-	-	1931 tip
227	VIC31	-	-	129	Vicus I:basement b (sealed)
228	VIC98	-	-	-	Temple of Mithras

No.	Ruler				
229	TETRICUS II		denom: ANT		Obv [C PIV ESV TETRICVS CAES]
	date: 270-72	mint: - -	cat: E 769		Rev SPES PVBLICA
	diam: -	wt: -	wear: -		
230	TETRICUS II		denom: ANT		Obv -
	date: 270-73	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
231	TETRICUS II		denom: ANT		Obv C PIV ESV TETRICVS CAES
	date: 270-73	mint: - -	cat: 238		Rev LAETITIA AVG
	diam: -	wt: -	wear: -		
232	TETRICUS II		denom: ANT		Obv C PIV ES TETRICVS CAES
	date: 270-73	mint: - -	cat: 264		Rev SALVS AVG
	diam: -	wt: -	wear: -		
233	TETRICUS II		denom: ANT		Obv [C PIV] ESV TETRICVS CAES]
	date: 272-73	mint: - -	cat: E 769		Rev SPES [PVBLICA]
	diam: -	wt: -	wear: W/W		
234	TETRICUS II		denom: ANT		Obv C PIV ESV TETRICVS CAES
	date: 273	mint: - -	cat: E 778		Rev PIETAS AVGVSTOR
	diam: -	wt: -	wear: -		
235	TETRICUS II		denom: ANT		Obv [C PIV ES]V TETRICVS [CAES]
	date: 273	mint: - -	cat: E 778		Rev [PIETAS AVGVSTOR]
	diam: -	wt: -	wear: W/W		
236	'TETRICUS II'		denom: ANT		Obv -
	date: 273+	mint: - -	cat: as E 769		Rev [SPES....]
	diam: 16.0 mm	wt: 1.6 g	wear: W/W		
237	'TETRICUS II'		denom: ANT		Obv [C P E TETRICVS CAES]
	date: 273+	mint: - -	cat: c.of E 773		Rev [PIETAS AVGVSTOR]
	diam: 14.0 mm	wt: 0.6 g	wear: W/W		
238	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 12.5 mm	wt: 0.6 g	wear: EH/EW		
239	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
240	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 17.0 mm	wt: 1.4 g	wear: W/W		

No.	Site	Context	Feature	Sfno	Area
229	VIC31	-	-	136	Vicus I:a:basement
230	VIC31	-	-	-	Vicus I:b:basement
231	VIC31	-	-	132	Vicus I:b:basement
232	VIC31	-	-	133	Vicus I:c:basement
233	VIC32	-	-	012	Vicus III:S annexe
234	VIC31	-	-	133	Vicus I:b:basement
235	VIC32	-	-	013	Trench W of Vicus III
236	VIC31	-	-	-	U/S
237	VIC31	-	-	131	N of Vicus I
238	VIC32	-	-	048	Close to fort SE corner
239	VIC31	-	-	-	Vicus I:2:NW
240	VIC31	-	-	159	Vicus I:N wall outside on flagging

No.	Ruler				
241	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 7.0 mm	wt: 0.6 g	wear: VW/VW		
242	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: C/C		
243	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
244	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: -		
245	RADIATE COPY		denom: ANT		Obv -
	date: 273+	mint: - -	cat: -		Rev -
	diam: 0.9 mm	wt: 0.4 g	wear: C/EW		
246	CARAUSIUS		denom: AUREL		Obv -
	date: 287-93	mint: - -	cat: -		Rev -
	diam: -	wt: -	wear: EW/VH		
247	LICINIUS I		denom: -		Obv [...LICINIIVS AVG
	date: 308-24	mint: - -	cat: -		Rev -
	diam: 18.5 mm	wt: -	wear: C/C		
248	CONSTANTINE I		denom: -		Obv IMP CONSTANTINVS....
	date: 313-18	mint: - -	cat: VII LN as 5		Rev [SOLI INVIC]-TO COMITI
	diam: -	wt: -	wear: W/H		
249	CONSTANTINE I		denom: -		Obv [CONSTANTINVS P AVG]
	date: 316-17	mint: - -	cat: VII as LN 92		Rev [SOLI INVIC]-TO COMITI
	diam: -	wt: -	wear: -		
250	CONSTANTINE I		denom: -		Obv IMP CONSTANTINVS MAX AVG
	date: 318-19	mint: - -	cat: VII as TR 209		Rev VICTORIAE LAETAE PRINC PERP VOT/PR
	diam: -	wt: -	wear: W/W		
251	HOUSE OF CONSTANTINE		denom: -		Obv -
	date: 318-19	mint: - -	cat: VII as TR 209		Rev [VICTORIAE LAETAE PRINC PERP VOT/PR]
	diam: -	wt: -	wear: EW/EH		
252	CONSTANTINE I		denom: -		Obv IMP CONSTANT-[INVS....]
	date: 319-20	mint: - -	cat: VII LN as 154		Rev VICTORIA LAETAE] PRINC PERP
	diam: -	wt: -	wear: EW/EW		

No.	Site	Context	Feature	Sfno	Area
241	VIC31	-	-	155	Vicus I:basement b
242	VIC31	-	-	156	Vicus I:basement:b
243	VIC31	-	-	149	Vicus I:basement:b(sealed)
244	VIC31	-	-	151	Vicus II:outside S wall
245	VIC34	-	-	-	Vicus XII:S wall outside
246	VIC32	-	-	014	Vicus III:S of cross wall
247	VIC32	-	-	-	Trench S of Vicus II
248	VIC31	-	-	145	W of Vicus I:road trench top
249	VIC60	-	-	-	VCH I:in well
250	VIC32	-	-	50	W of E gate
251	VIC32	-	-	51	N of E gate
252	VIC32	-	-	15	Vicus III:S of cross wall

No.	Ruler		denom:	-	Obv	IHP CONSTANTINVS AVE
253	CONSTANTINE I	date: 319-20	mint: LN P	cat: VII LN 158	Rev	VICTORIAE LAETAE PRINC PERP VOT/PR
		diam: -	wt: -	wear: SH/SU		
254	CONSTANTINE I	date: 322-23	mint: LG S	cat: VII LY 156	Obv	CONSTANTINVS AVG
		diam: -	wt: -	wear: SW/SW	Rev	BEATA TRANQUILLITAS VOT/IS/XX
255	CONSTANTINE I	date: 330-35	mint: - -	cat: -	Obv	[URBS-ROHA]
		diam: -	wt: -	wear: H/W	Rev	Wolf and twins
256	CONSTANTINE I	date: 330-35	mint: - -	cat: -	Obv	-
		diam: -	wt: -	wear: -	Rev	[GLORIA EXERCITVS] 2std
257	CONSTANTINE I	date: 330-35	mint: LG P	cat: VII LG as 241	Obv	[CONSTANTINOPOLIS]
		diam: -	wt: -	wear: W/W	Rev	Victory on prow
258	CONSTANTINE II, CAES	date: 333-34	mint: LG P	cat: VII LY 238	Obv	CONSTANTINVS IVN NOB C
		diam: -	wt: -	wear: SH/SW	Rev	GLOR-IA EXER-CITVS 2std
259	HOUSE OF CONSTANTINE	date: 330-35	mint: - -	cat: -	Obv	-
		diam: -	wt: -	wear: VW/VW	Rev	[GLORIA EXERCITVS] 2std
260	CONSTANTIUS II/CONSTANS	date: 348-50	mint: - -	cat: VIII as TR 359	Obv	-
		diam: -	wt: -	wear: C/C	Rev	[FEL TEMP REPARATIO]
261	'CONSTANTIUS II'	date: 353+	mint: - -	cat: VIII c.as TR 359	Obv	-
		diam: -	wt: -	wear: C/C	Rev	[FEL TEMP REPARATIO]
262	ILLEGIBLE	date: C1	mint: - -	cat: -	Obv	-
		diam: -	wt: -	wear: C/C	Rev	-
263	ILLEGIBLE	date: C1-3	mint: - -	cat: DEN	Obv	-
		diam: -	wt: -	wear: -	Rev	-
264	ILLEGIBLE	date: C1/2	mint: - -	cat: -	Obv	-
		diam: -	wt: -	wear: C/C	Rev	-

No.	Site	Context	Feature	Sfno	Area
253	VIC31	-	-	144	Vicus I:basement:c:NW
254	VIC32	-	-	49	E ditch top of fill
255	VIC31	-	-	147	Vicus I:outside NE corner
256	VIC32	-	-	047	Fort sewer
257	VIC31	-	-	148	Vicus I:basement a:NE over hearth
258	VIC32	-	-	39	Vicus VIII:W end top soil
259	VIC31	-	-	146	Vicus I:NW corner
260	VIC31	-	-	-	U/S
261	VIC31	-	-	-	Vicus I:basement:a
262	VIC31	-	-	055	Vicus IV:E side under flags
263	VIC31	-	-	106	Vicus IV(stone):l:centre (sealed)
264	VIC31	-	-	056	Masons Arms tip heap

No.	Ruler			denom:	AS	Obv -
265	ILLEGIBLE			cat:	-	Rev -
	date: C1/2	mint: - -		wear:	-	
	diam: -	wt: -				
266	ILLEGIBLE			denom:	SEST	Obv -
	date: C2	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
267	ILLEGIBLE			denom:	AS	Obv -
	date: C2	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	-	
268	ILLEGIBLE			denom:	AS	Obv -
	date: C2	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
269	ILLEGIBLE			denom:	DEN	Obv -
	date: C2	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
270	ILLEGIBLE			denom:	AS	Obv -
	date: C2	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
271	ILLEGIBLE			denom:	DEN	Obv -
	date: C2/3	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
272	ILLEGIBLE			denom:	ANT	Obv -
	date: C3	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
273	ILLEGIBLE			denom:	-	Obv -
	date: C3/4	mint: - -		cat:	-	Rev -
	diam: -	wt: -		wear:	C/C	
274	CHARLES II			denom:	BODLE	Obv CAR D B SCOT ANS FRA ET HIB R C R
	date: 1660-85	mint: - -		cat:	-	Rev NEMO HE IHPVNE LACESSET
	diam: -	wt: -		wear:	W/W	
275	COIN HOULD:ANT.PIUS			denom:	DEN	Obv ANTONINVS PIVS AVG
	date: -	mint: - -		cat:	-	Rev CONCORDIA AVGG
	diam: -	wt: -		wear:	-	
276	COIN HOULD: JULIA DOMNA			denom:	DEN	Obv IVLIA AVGVSTA
	date: 194-211	mint: - -		cat:	rev.(S.SEV)694	Rev VICT AVGG COS II P P
	diam: -	wt: -		wear:	100	

No.	Site	Context	Feature	Sfno	Area
265	VIC60	-	-	-	VCH:U/S
266	VIC31	-	-	054	Vicus II:in "drain" W end
267	VIC31	-	-	038	Vicus IV(stone):1:SW
268	VIC31	-	-	057	Vicus IV:alongside W wall
269	VIC32	-	-	-	Vicus VIII:E end
270	VIC34	-	-	-	Vicus XV:middle trench
271	VIC31	-	-	105	Vicus IV
272	VIC33	-	-	-	1931 tip
273	VIC32	-	-	-	Vicus III:outside N wall
274	VIC31	-	-	164	Vicus II:N top
275	VIC60	-	-	-	VCH 1:in well
276	VIC32	-	-	-	Vicus III-IV

MILECASTLES 37/39 & KNABBURN: COIN LIST by ISSUER and PERIOD.

No.	Ruler	date:	mint:	cat:	denom:	Obv	Rev
1	N. SCAUR, P. HUPSAEUS	BC58	- -	CR 422/1	DEN	IMP SCIAVR [EX SC] AED CVR	Rev [P] HUPSAEVS AED CVR C HUPSAE COS PREIVER CAPTVH
		diam: -	wt: -		wear: VW/EW		
2	N. ANTONIUS	BC32-31	- -	CR 544/24	DEN	IMP ANT AVG III VIR R P C	Rev LEG X
		diam: -	wt: -		wear: VW/VW		
3	N. ANTONIUS	BC32-31	- -	CR 544/24	DEN	IMP ANT AVG III VIR R P C	Rev LEG X
		diam: -	wt: -		wear: VW/VW		
4	GALBA	68-69	- -	186	DEN	IMP SER GALBA CAESAR AVG	Rev DIVA AVGVSTA
		diam: -	wt: -		wear: W/W		
5	VESPASIAN	69-71	- -	7	DEN	IMP CAESAR VESPASIANVS [AVG]	Rev COS ITER [TRPOT]
		diam: -	wt: -		wear: VW/VW		
6	VESPASIAN	69-79	- -	-	AS	[...VESPASIAN...]	Rev -
		diam: -	wt: -		wear: W/EW		
7	VESPASIAN	69-79	- -	-	AS	Obv -	Rev -
		diam: -	wt: -		wear: C/C		
8	VESPASIAN	74	- -	84	DEN	IMP CAESAR VESP AVG	Rev [PONTIF] MAXIM
		diam: -	wt: -		wear: SW/SW		
9	DOMITIAN, CAES	79-81	- -	(VESP) as 699	DUP	Obv -	Rev Spes walking 1.
		diam: -	wt: -		wear: VW/VW		
10	DOMITIAN, CAES	79-81	- -	(VESP) as 699	DUP	Obv -	Rev Spes walking 1
		diam: -	wt: -		wear: VW/VW		
11	DOMITIAN	81-96	- -	-	SEST	Obv -	Rev -
		diam: -	wt: -		wear: VW/EW		
12	TRAJAN	98-117	- -	-	AS	Obv -	Rev -
		diam: -	wt: -		wear: C/C		

No.	Site	Context	Feature	Sfno	Area
1	CN86	-	-	0797	Milecastle 39
2	HMC33	-	-	-	Milecastle 37:NW under flagging
3	HMC33	-	-	-	Milecastle 37:NW under flagging
4	CN86	-	-	0820	Milecastle 39
5	CN85	-	-	0203	Milecastle 39
6	CN86	-	-	1216	Milecastle 39
7	CN85	-	-	0216	Milecastle 39
8	CN86	-	-	1000	Milecastle 39
9	HMC33	-	-	-	Milecastle 37
10	HMC33	-	-	-	Milecastle 37
11	CN85	-	-	0345	Milecastle 39
12	CN85	-	-	0457	Milecastle 39

No.	Ruler							
13	TRAJAN			denom: SEST		Obv [IMP CAES NERVAE TRAIANO AVG GER DAC PM TRP COS V PP]		
	date: 103-11	mint: - -		cat: 492		Rev [SPQR OPTIMO PRINCIPIO] SC		
	diam: -	wt: -		wear: SW/SW				
14	TRAJAN			denom: DUP		Obv [IMP CAES] NERVAE TRAIANO AVG [GER DAC PM TRP COS V PP]		
	date: 103-11	mint: - -		cat: 494		Rev SPQR OPTIMO PRINCIPIO] SC		
	diam: -	wt: -		wear: SW/SW				
15	TRAJAN			denom: DUP		Obv IMP CAES NERVAE TRAIANO AVG GER [DAC PM TRP COS] VIPP		
	date: 112-17	mint: - -		cat: 629		Rev FORTVNAE REDVCI SC		
	diam: -	wt: -		wear: SW/SW				
16	TRAJAN			denom: SEST		Obv IMPCAES[NER]TRAIANO OPTIMO AVG GER DAC PART[CHICOPHTRPCOSVIPP		
	date: 114-17	mint: - -		cat: 663		Rev PROVIDENTIA AVGVSTI SPQR] SC		
	diam: -	wt: -		wear: W/VW				
17	HADRIAN			denom: DUP		Obv -		
	date: 117-38	mint: - -		cat: -		Rev -		
	diam: -	wt: -		wear: VW/C				
18	HADRIAN			denom: AS		Obv [IMP CAESAR TRAIAN(VS) HADRIANVS AVG PM TRP COS III		
	date: 119-21	mint: - -		cat: as 600a		Rev[SC]		
	diam: -	wt: -		wear: SW/SW				
19	AELIUS			denom: DEN		Obv L AELIVS CAESAR		
	date: 137	mint: - -		cat: (HADR)434		Rev TRPOT COS II		
	diam: -	wt: -		wear: UW/UW				
20	AELIUS			denom: DEN		Obv L AELIVS CAESAR		
	date: 137	mint: - -		cat: (HADR)434		Rev TRPOT COS II		
	diam: -	wt: -		wear: UW/UW				
21	ANTONINUS PIUS			denom: AS		Obv [ANTONINVS AVG PIVS PP TRP XVIII]		
	date: 154-55	mint: - -		cat: 934		Rev [BRITANNIA COS IIII] SC]		
	diam: -	wt: -		wear: SW/SW				
22	CLAUDIUS II			denom: -		Obv -		
	date: 268-70	mint: - -		cat: -		Rev -		
	diam: -	wt: -		wear: -				
23	'CLAUDIUS II,POSTH'			denom: ANT		Obv [DIVO CLAVDIO]		
	date: 273+	mint: - -		cat: c.of 261		Rev [CONSECRATIO]		
	diam: 9.0 mm	wt: 0.3 g		wear: C/C				
24	CONSTANTIUS I			denom: -		Obv -		
	date: 293-306	mint: - -		cat: -		Rev -		
	diam: -	wt: -		wear: -				

No.	Site	Context	Feature	Sfno	Area
13	CN85	-	-	0477	Milecastle 39
14	CN86	-	-	1105	Milecastle 39
15	HMC33	-	-	-	Milecastle 37:under late wall S bld
16	CN84	-	-	0834	Milecastle 39
17	CN85	-	-	0426	Milecastle 39
18	CN85	-	-	0485	Milecastle 39
19	HMC33	-	-	-	Milecastle 37:NE topsoil
20	HMC33	-	-	-	Milecastle 37:NE topsoil
21	CN85	-	-	0886	Milecastle 39
22	K61856	-	-	-	Knagburn Gateway
23	CN85	-	-	0251	Milecastle 39
24	K61856	-	-	-	Knagburn Gateway

No.	Ruler				
25	CONSTANTINE I	date: 317	mint: LN P	denom: -	Obv IHP CONSTANTINVS AVG
		diam: -	wt: -	cat: VII LN 106	Rev SOLI INVIC-[ITO CONITII]
				wear: SW/SW	
26	CONSTANTINE I	date: 330-35	mint: - -	denom: -	Obv [CONSTANTINOPOLIS]
		diam: -	wt: -	cat: as VII TR 523	Rev Victory on prow
				wear: C/SW	
27	CONSTANTINE II, CAES	date: 321-22	mint: LN P	denom: -	Obv CONSTANTI-NVS IVN N C
		diam: -	wt: -	cat: VII LN 236	Rev BEATA TRAN-QUILLITAS VOT/IS/XX
				wear: SW/SW	
28	CONSTANTIUS II	date: 353	mint: TR P	denom: -	Obv [D N CONSTANTIVS P F AVG
		diam: -	wt: -	cat: VIII TR 334	Rev [SALVS AVG NOSTRI]
				wear: W/SW	
29	CONSTANTIUS II	date: 353-54	mint: - -	denom: -	Obv [D N CONSTANTINIVS P F AVG
		diam: 18.0 mm	wt: -	cat: as VIII AR 215	Rev FEL TEMP REPARATIO
				wear: UW/UW	
30	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv [D N CONSTANTIVS AVG
		diam: 15.0 mm	wt: 1.0 g	cat: c.as VIII TR 359	Rev [FEL TEMP REPARATIO] reversed
				wear: UW/UW	
31	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv [D N CONSTANTIVS P F AVG
		diam: 13.0 mm	wt: 0.9 g	cat: c.as VIII LG 189	Rev [FEL TEMP REPARATIO]
				wear: UW/UW	
32	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv -
		diam: 14.0 mm	wt: 2.3 g	cat: c.of VIII TR 359	Rev [FEL TEMP REPARATIO]
				wear: W/W	
33	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv D N CON-STIV..
		diam: 17.0 mm	wt: 1.7 g	cat: c.as VIII TR 359	Rev [FEL TEMP REPARATIO]
				wear: UW/UW	
34	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv -
		diam: 12.0 mm	wt: 1.0 g	cat: c.of VIII TR 359	Rev [FEL TEMP REPARATIO]
				wear: UW/UW	
35	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv [DN CONSTAN-]TIVIIAVG
		diam: 14.0 mm	wt: 0.8 g	cat: c.of VIII TR 359	Rev [FEL TEMP REPARATIO]
				wear: UW/UW	
36	'CONSTANTIUS II'	date: 354+	mint: - -	denom: -	Obv [D N] CONSTANTIVS P F AVG]
		diam: 14.5 mm	wt: 0.7 g	cat: c.as VIII TR 359	Rev [FEL TEMP REPARATIO]
				wear: UW/UW	

No.	Site	Context	Feature	Sfno	Area
25	CN84	-	-	0807	Milecastle 39
26	CN85	-	-	0021	Milecastle 39
27	CN86	-	-	0590	Milecastle 39
28	CN84	-	-	0819	Milecastle 39:hoard (4)
29	CN84	-	-	0813	Milecastle 39:hoard (4)
30	CN84	-	-	0830	Milecastle 39:hoard (4)
31	CN84	-	-	0829	Milecastle 39:hoard (4)
32	CN84	-	-	0821	Milecastle 39:hoard (4)
33	CN84	-	-	0827	Milecastle 39:hoard (4)
34	CN84	-	-	0820	Milecastle 39:hoard (4)
35	CN84	-	-	0822	Milecastle 39:hoard (4)
36	CN84	-	-	0812	Milecastle 39:hoard (4)

No.	Ruler				
37	'CONSTANTIUS II'	denom: -		Obv [DN] CIOSTHN-[TI]VS PF AV[G]	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 14.5 mm wt: 1.2 g	wear: UW/UW			
38	'CONSTANTIUS II'	denom: -		Obv [D] N CONSTANTIIVS [P] F AV[G]	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 13.0 mm wt: 0.8 g	wear: UW/UW			
39	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 13.0 mm wt: -	wear: UW/UW			
40	'CONSTANTIUS II'	denom: -		Obv [DN] CONSTAN-[TI]VS P[IF] AV[G]	
	date: 354+ mint: - -	cat: c.as VIII TR 350		Rev [FEL] TEMP [RE]PARATIO	
	diam: 16.0 mm wt: 1.0 g	wear: UW/UW			
41	'CONSTANTIUS II'	denom: -		Obv [D] N CONSTANTIIVS P F AV[G]	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 16.0 mm wt: 0.8 g	wear: UW/UW			
42	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 12.0 mm wt: -	wear: W/W			
43	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 11.5 mm wt: 0.4 g	wear: UW/UW			
44	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 10.0 mm wt: 0.5 g	wear: UW/UW			
45	'CONSTANTIUS II'	denom: -		Obv ...CONSTAN...	
	date: 354+ mint: - -	cat: c.as VIII LG 190		Rev FEL [TEMP REPARATIO]	
	diam: 18.5 mm wt: 1.3 g	wear: SW/SW			
46	'CONSTANTIUS II'	denom: -		Obv [DN] CONSTANTIIVS P[IF] AV[G]	
	date: 354+ mint: - -	cat: c.as VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 11.0 mm wt: 0.6 g	wear: UW/UW			
47	'CONSTANTIUS II'	denom: -		Obv [D] N CONSTANTIIVS AV[G]	
	date: 354+ mint: - -	cat: c.as VIII AR 216		Rev [FEL] TEMP REPARATIO	
	diam: 15.0 mm wt: 1.5 g	wear: UW/UW			
48	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+ mint: - -	cat: c.of VIII TR 359		Rev [FEL] TEMP REPARATIO	
	diam: 14.0 mm wt: 1.0 g	wear: UW/UW			

No.	Site	Context	Feature	Sfno	Area
37	CNB4	-	-	0832	Milecastle 39:hoard (4)
38	CNB4	-	-	0811	Milecastle 39:hoard (4)
39	CNB4	-	-	0833	Milecastle 39:hoard (4)
40	CNB4	-	-	0817	Milecastle 39:hoard (4)
41	CNB4	-	-	0810	Milecastle 39:hoard (4)
42	CNB4	-	-	0826	Milecastle 39:hoard (4)
43	CNB4	-	-	0816	Milecastle 39:hoard (4)
44	CNB4	-	-	0809	Milecastle 39:hoard (4)
45	CNB4	-	-	0808	Milecastle 39:hoard (4)
46	CNB4	-	-	0815	Milecastle 39:hoard (4)
47	CNB4	-	-	0814	Milecastle 39:hoard (4)
48	CNB4	-	-	0823	Milecastle 39:hoard (4)

No.	Ruler				
49	'CONSTANTIUS II'	denom: -		Obv -	
	date: 354+	mint: - -	cat: c.of VIII TR 359	Rev FEL TEN [REPARATIO]	
	diam: 13.0 mm	wt: -	wear: SH/SW		
50	'CONSTANTIUS II'	denom: -		Obv D N CONSAN-TIVS P F AVG]	
	date: 354+	mint: - -	cat: c.as VIII LG 189	Rev [FEL TENP REPARATIO]	
	diam: 15.0 mm	wt: 1.0 g	wear: UN/UN		
51	'CONSTANTIUS II'	denom: -		Obv [D N] CONSTAN[N]-TIVS PA	
	date: 354+	mint: TR S	cat: c.as VIII TR 359	Rev [FEL TEN]IO RE-[PARATIO]	
	diam: 14.0 mm	wt: 1.5 g	wear: SH/SW		
52	'CONSTANTIUS II'	denom: -		Obv D N CONSTANTIVS P F AVG]	
	date: 354+	mint: TR P	cat: c.as VIII TR 358	Rev [FEL TENP REPARATIO]	
	diam: 18.5 mm	wt: 2.3 g	wear: SH/SW		
53	HAGENNIUS	denom: -		Obv D N HAGENNIIVS P F AVG]	
	date: 353	mint: AN B	cat: VIII AN 41	Rev SALVS DDNN [AVG ET CAES]	
	diam: -	wt: -	wear: SH/SW		
54	ILLEGIBLE	denom: -		Obv -	
	date: C1/2	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
55	ILLEGIBLE	denom: -		Obv -	
	date: C1/2	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: C/C		
56	MODERN SCOTTISH	denom: BODLE		Obv -	
	date: C18	mint: - -	cat: -	Rev -	
	diam: -	wt: -	wear: VW/VW		

No.	Site	Context	Feature	Sfno	Area
49	CN84	-	-	0824	Milecastle 39:hoard (4)
50	CN84	-	-	0825	Milecastle 39:hoard (4)
51	CN84	-	-	0828	Milecastle 39:hoard (4)
52	CN84	-	-	0831	Milecastle 39:hoard (4)
53	CN84	-	-	0818	Milecastle 39:hoard (4)
54	CN86	-	-	1256	Milecastle 39
55	CN85	-	-	0033	Milecastle 39
56	CN86	-	-	0844	Milecastle 39

THE HOARDS

Although no large hoards have been found at Housesteads three small hoards have been recovered from the fort and the vicus and there is the large hoard from Castle Nick which is also included along with the collection of the coins from the well found under Chapel Hill. All of the coins below are included with full numismatic details in the catalogue but are here set out for easy examination and reference.

Hoard 1

Cat.No.	Ruler	Denom.	Date
226	'Tetricus I'	Ant	273+
247	'Tetricus II'	Ant	273+
251	'Tetricus II'	Ant	273+
280	Radiate copy	Ant	273+

This hoard therefore consists of four radiate copies that had become corroded together. They were excavated by Charles Daniels in the fort in the mid 1970s and contextual detail is not yet available. The collection must have a date of deposition between 273 and 286.

Hoard 2

Cat.No.	Ruler	Denom.	Date
9	Vespasian	Den	70-72
108	Septimius Severus	Den	208
126	Caracalla	Ant	215
135	Elagabalus	Den	218
138	Elagabalus	Ant	218-22

The above coins were found corroded together in the passage between vicus buildings III and IV. Since this hoard is so small it may

represent a purse hoard, yet the silver it contains is the best circulating at the time of collection which should be circa 225 because the rapid debasement of the silver currency caused higher value silver to be successively withdrawn by the private individual or by the state. The fact that this hoard contains two early antoniniani, one of which is very early, which quickly disappeared from circulation, suggests a date close to 222 for the closing of the hoard. The hoard, none of the coins of which could be traced, was discovered in 1931 (Birley E. and Charlton 1932).

Hoard 3

Cat.No.	Ruler	Denom.	Date
141	Elagabalus	Den	220
144	Julia Soaemias	Den	218-22
145	Julia Maesa	Den	218-22
152	Sev. Alexander	Den	229
159	Julia Mamaea	Den	222-35

This deposit of coins was found in the shrine at the eas end of of vicus building XII (fig. 2). The coins were inside the recess, behind the sculpture fronting the shrine, and resting immediately upon the western flag stone. Because all the coins are very close in date it would suggest that it was a foundation offering of the shrine which was constructed during the reign of Severus Alexander. The hoard was discovered in 1933 (Birley E. and Charlton 1934).

Hoard 4

Cat.No.	Ruler	Date
53	Magnentius	355-53
28-29	Constantius II	352-54
30-52	'Constantius II'	354+

This hoard found in 1984 at Castle Nick milecastle is published in R. Brickstock (forthcoming) and so is only summarised here. Full details of the coins can be found in preceding catalogue. The date of the deposition of the hoard is circa 354 or a little later because the size of all the copies is fairly large.

The coins from the well on Chapel Hill.

Cat.No.	Ruler	Denom.	Date
75	Faustina II	As	161-75
85	Commodus	Den	186/7
97	Septimius Severus	Sest	193-211
130	Geta	Den	200-02
164	Trajan Decius	Ant	249
189	Claudius II	Ant	268-70
192	Claudius II	Ant	268-70
249	Constantine I		316-17
275	Julia Domna	Den coin mould	

These coins represent the collection from the well which was enclosed in the shrine in the early civil settlement under Chapel Hill which includes the possible circular temple to Mars Thincsus. The date of the coins spreads throughout the history of the fort although there are no early coins dating from the period when the settlement was occupied before the construction of the temple. The well in its shrine may then be connected with just the temple not the earlier settlement. It is not possible to say if the coins are casual losses or votive offerings. The

well was excavated in 1961 (Birley R. 1961) but the finds from it cannot be located.

WHICH COINS.....WHERE?

The preceding catalogue includes all of the coins I could locate that were traceable to Housesteads and other coins of which only written records could be found, not the coins themselves, despite extensive searching. This section is designed to enable the missing coins to be recognised from the traced, reidentified coins, the sources from which they came, the present whereabouts of the located coins and the places that were searched for the missing coins but without success. Thus anyone else wishing to study the coinage of Housesteads will have less of a task locating the coins and the references in which the missing coins are mentioned.

a) The missing coins listed in the catalogue.

Excavation date: 1853
Catalogue Number: Fort 98
Reference: Bruce 1867, 200

Excavation date: 1864
Catalogue Numbers: Fort 2, 291
Reference: AA2 VI, 1881, 200

Excavation date: 1911
Catalogue Numbers: Fort 43, 96
Reference: Simpson F. 1976, 138

Excavation date: 1931
Catalogue Numbers: Vicus 1, 9, 13, 15, 29, 34, 50, 57, 73, 74, 86, 90, 100, 106, 108, 112, 113, 115, 116, 118, 119, 122, 123, 126, 135, 136, 138, 139, 140, 146, 148, 149, 151, 153, 154, 160, 167, 168, 169, 171, 172, 175, 176, 178, 179, 180, 181, 188, 190, 191, 194, 195, 197, 204, 206, 208, 209, 210, 211, 212, 213, 216, 217, 218, 221, 229, 230, 231, 232, 234, 239, 243, 244, 253, 263, 267

Fort 286

Reference: Hedley P., unpublished coin list (Dept. of Archaeology, Durham)

Excavation date: 1932

Catalogue Numbers: Vicus 11, 16, 80, 82, 142, 161, 182, 202, 256, 276

Reference: Hedley P., unpublished coin list

Excavation date: 1933

Catalogue Numbers: Vicus 21, 23, 25, 63, 141, 144, 145, 152, 159, 193, 193, 205

Reference: Birley E. and Charlton 1934

Excavation date: 1959

Catalogue Numbers: Fort 25, 38, 41, 46, 120, 151, 232, 257, 258, 259, 260, 261, 262, 263, 467, 478, 481, 482, 493, 495, 496

Reference: Wilkes 1960

Excavation date: 1960

Catalogue Numbers: Fort 32, 82, 86, 106, 143, 152, 329, 330, 338, 340, 353, 378, 396, 445, 448, 458, 470, 479, 494, 499, 501, 504, 506, 507, 508, 509, 510, 515, 521

Vicus 2, 75, 85, 92, 93, 94, 97, 130, 164, 189, 192, 249, 265, 275

Reference: Wilkes 1961 and Birley R. 1961

Excavation date: 1961

Catalogue Numbers: Fort 69, 127, 189, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 282, 284, 288, 290, 292, 294, 296, 304, 306, 307, 308, 309, 310, 313, 314, 319, 367, 379, 394, 401, 402, 498, 500, 502, 503, 505, 517, 519, 523, 524, 525, 526, 528

Reference: Wilkes and Leach 1962

b) The present location of the coins

The Museum of Antiquities and the Department of Archaeology in Newcastle contain several odd coins dating from the 1898 excavations (fort catalogue 53, 73, 344, 351, 422, 461) and three coins with the museum accession year of 1955 (fort catalogue 50, 64, 413). Two of these coins came from the principia and may be connected with Dr D.J Smith's excavations there in that year. A surface coin found in february 1987 is now also kept in the department (fort catalogue 361).

Most of the 1898 coins excavated by Bosanquet are now safely stored in Chesters Museum as are the coins from Charlesworth's excavations of the commandant's house and the hospital. It is interesting to note that the list of the published coins from the Charlesworth excavations is incomplete.

The Department of Archaeology in Durham holds all the surviving coins from the excavations of the vicus in 1931, 1932 and 1933. It presently contains all the excavated coins from the digs conducted by Gillam and Daniels between 1974 and 1981.

c) Places searched for coins

I have searched as widely as possible for the coins besides the three places recorded above but without success. It is however important to record these to spare future researchers the effort involved. All literary sources have been checked that have a relevance to Housesteads and these references can be found in the first two sections of this thesis, in this section when discussing missing coins, and in the bibliography.

Clayton's coins were sold off by Hampton's Estate Agents in the 1920s. No details of the coins are given in the auction catalogue and there present whereabouts is unknown.

There are no Roman coins traceable to Housesteads in the Black Gate Museum, Newcastle, all the coins they have are unprovenanced. Graham

Robson of the Society of Antiquaries of Newcastle upon Tyne (pers. comm) suggests that all Roman material had been removed to the (joint) Museum of Antiquities. It is (possible that the 1898 coins described above formed part of this collection.

The Bosanquet collection and the Charlesworth coins were located with the help of Mr W. Hubbard, curator of the Hadrian's Wall museums, who could not locate any more of the coins from Housesteads in the museums under his custody. Housesteads museum itself does not contain any coins.

There are no coins traceable to Housesteads in the South Shields Museum and Art Gallery and all the Roman coins in the Shipley Art Gallery are similarly unprovenanced. The Laing Art Gallery contains the Collingwood-Bruce coin collection but unfortunately none of these coins has a provenance. This gallery also contains Collingwood-Bruces' notebooks. These have been carefully examined by Roger Miket who confirms (pers. comm.) that these documents do not contain references to any coins.

The quantity of coins excavated by John Wilkes and Robin Birley between 1959 and 1959 is large as indicated by the published excavation reports. However these coins have been found untraceable. There are no coins from Housesteads in the Ancient Monuments Laboratory at English Heritage. Further neither Professor J. Wilkes, Dr C.M Daniels, Professor A. Birley, Dr J.P.C Kent, Dr R. Birley, Dr D.J Smith nor Lindsay Allason-Jones know where these coins are or indeed where other Housesteads coins might be. Professor Eric Birley has no Housesteads

coins in his possession and could suggest nowhere to look other than the people and places described above.

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