

A ROMAN LAND SETTLEMENT NEAR ROCHESTER

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WITH AN INTRODUCTION BY

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THE attempt of Mr. Nightingale to reconstruct from the evidence of modern field-divisions a Roman centuriat grid in the grain-growing areas north of Rochester, the ancient Romano-British Durobrivæ, may not carry conviction to all (there are purists who demand either literary evidence or the discovery of a typical boundary stone); nevertheless, I think that he can fairly claim that his discoveries conform more clearly to Roman traditional methods of land surveying and division than other attempts elsewhere in the country. It is necessary, therefore, to justify this claim by explaining in brief what these traditional methods are and what can be said of their possible application to Britain in general and to the Rochester neighbourhood of Britain in particular.

Centuriation is a method of laying out regular rectangular areas for cereal cultivation (it was not used for the delimitation of pasture or woodland)—a method employed by a guild of technicians (*agrimensores*) according to strict professional doctrines, large portions of which are preserved to us in the *Corpus Agrimensorum*.<sup>1</sup> The instrument of survey was the *groma*, a kind of cross-staff, with which the surveyor began by establishing two lines (*limites*) intersecting at right angles; these lines, the framework of the grid to be constructed, are the *decumanus maximus*, which should run from east to west, and the *kardo maximus*, from north to south. This was the strict doctrine, based on old religious concepts, but it could be modified, notably in the direction that the *decumanus maximus* might occupy the largest extension of the land to be surveyed, or that one or other—or both—of these lines might be laid down with reference to the line of an important road. The point of intersection was normally, but not invariably, taken in the centre of the town to which the land belonged.

With the aid of stations for the *groma* along the two lines, the surveyor constructs a rectangular grid of secondary *limites* to be, like the original lines, fixed on the ground by permanent metalling. In the early days, these rectangular areas might be of a variety of different sizes and shapes, but from the time of the Gracchi (133-121 B.C.) they

<sup>1</sup> There is an extensive literature on the theory and practice of Roman surveyors, mainly in German and Italian which I have utilized for my general remarks. A valuable summary in English mentioning air-surveys in southern Europe is given by Bradford, *Antiquity*, XXI (1947), pp. 197-204.

tended to become standardized. Indeed, the doctrines of the professional writers, reinforced by observations on the ground and from the air, teach us that during the imperial period of Roman history there is only one type of centurial lay-out that we can seriously expect to meet. This is the grid of units, each a square of 20 by 20 *actus*, the *actus* comprising 120 Roman feet. The unit thus formed will consist of a square of 2,400 by 2,400 Roman feet (776 by 776 yards, 710 by 710 metres). Since the standard measure of Roman land, the *iugerum*, is a double square, 2 by 1 *actus*, we see that our unit will comprise 200 *iugera*, in fact 100 of those plots of 2 *iugera* each which made up the traditional land-holding of the primitive Roman. Hence the unit of this size, which forms, as we have said, the rule, is appropriately styled the *centuria*, whence the term "centuriation".

Each of these *centuriæ* has an individuality which should express itself by stones at each corner measuring the "latitude" and "longitude" (if one may so express it) from the original station, and there may well be land divisions inside the *centuria*, known to the professionals as *limites intercisivi*, which may have boundary stones, but which will lack the schematism of the formal survey.

We have next to enquire to what types of land in the Roman empire these methods of survey and lay-out were applied. According to the professional writers, they were intended exclusively for Roman colonial allotments, and thus we might expect to find traces of such *centuriæ* surviving in the neighbourhood of our British colonies, but none of the attempts have been very successful.<sup>1</sup> We are told that land in the provinces was normally simply measured along the frontiers of the city territories with its internal division left as the responsibility of the local magistrates, which is why, no doubt, traces of "centuriation" are so difficult to find in this country and in Gaul; while imperial estates could be divided up into a system of rectangular plots reminiscent of but fundamentally differing from "centuriation", a method which Mr. Margary has, perhaps, discovered in south Sussex.<sup>2</sup> But the professionals make the important observation that in all these types of land where "centuriation", according to the strict rules of the profession, should not occur, it occasionally does (a fact which somewhat annoyed the professional conscience of one of them!), and research on the ground in Africa has shown that imperial estates, private estates, as

<sup>1</sup> Richmond is—rightly—critical of attempts at Colchester and Lincoln (*Arch. Journ.*, CIII, pp. 61, 66). Sharpe's attempt to find centuriation in Middlesex is quite fantastic (*Antiquities of Middlesex*).

<sup>2</sup> *Roman Ways in the Weald*, pp. 204-7. I do not feel convinced that Margary really found a grid, but if he did, it has nothing to do with a "colony" (for where is it?), but an "*assignatio per scamna et strigas*" which the professionals associated with public land in the provinces. It would be possible to make a case for public lands in this district.

well as land in the territories of cities which were not Roman colonies were treated to this operation of gridding in *centuriæ* of 200 *iugera*, just as if they were colonial land. No doubt the snobbish desire of pretending that one's land was really as Roman as a Roman colony played its part.<sup>1</sup> In short, though "centuriation" is not likely to have been common in Britain outside the colonies and its appearance outside them would be professionally irregular, there is no reason why we should not find it here and there.

In the light of this, let us examine Mr. Nightingale's discoveries. We cannot be sure where the original station for the *groma* was, but it does not look as though we are to look in the town of Rochester; in fact Mr. Nightingale makes a good cause for supposing it to be at the intersection of the straight lines of the Watling Street and the Maidstone Roman roads, which, if produced, would meet at Frindsbury. The grid itself is orientated to the cardinal points in true professional style; indeed while it is orientated on the roads as well, the course of them seems to have been readjusted to fit the grid, rather than the grid laid down to fit them, as occurred, for example, with the grid outside Anxur-Terracina, laid down to fit the Appian Way.<sup>2</sup> We would seem then to have the interesting result that the grid is probably contemporary with the present course of Watling Street, which would presumably assign it to an early phase of the Roman occupation. The unit is the *centuria* of 200 *iugera* which is as it should be, and Mr. Nightingale seems to have traces of the *limites intercisivi*. Finally his discovery invites us to consider the status of Durobrivæ itself. The evidence suggests that for a long time it was merely a village in the territory of the Cantii with their capital at Canterbury (Durovernum).<sup>3</sup>

On the other hand there are its massive (and seemingly early) Roman walls and the fact that already in A.D. 604 Augustine chose it as the seat of a bishopric.<sup>4</sup> Bede indeed calls it by its Roman name, which persisted for some centuries in documents.<sup>5</sup> The rule in the west that episcopal sees must correspond with politically independent units of local government was very precise. One would expect, therefore, that Augustine's choice was dictated by the fact that Durobrivæ had been in the past an independent unit, that the area of the Cantii had

<sup>1</sup> Hadrian once expressed surprise at the eagerness of ordinary towns to pretend that they were real Roman colonies (*Gellius*, XVI, p. 13).

<sup>2</sup> See the illustration in the *Corpus Agrimensorum* reproduced in Grenier's *Manuel d'Archeologie*, II, p. 15.

<sup>3</sup> Durovernum alone has the tribal name of the Cantiaci attached in the Ravenna list, where Rochester appears as an ordinary place name, and Rochester is not mentioned in Ptolemy's list of towns of the Cantii at all. (See Haverfield and MacDonald, *Roman Occupation of Britain*, p. 190.)

<sup>4</sup> See *V.C.H. Kent*, III, pp. 81-3, on the Roman name and town walls.

<sup>5</sup> Bede, *Hist. Eccl.*, II, p. 3. Cf. *English Hist. Review*, LII, p. 198.



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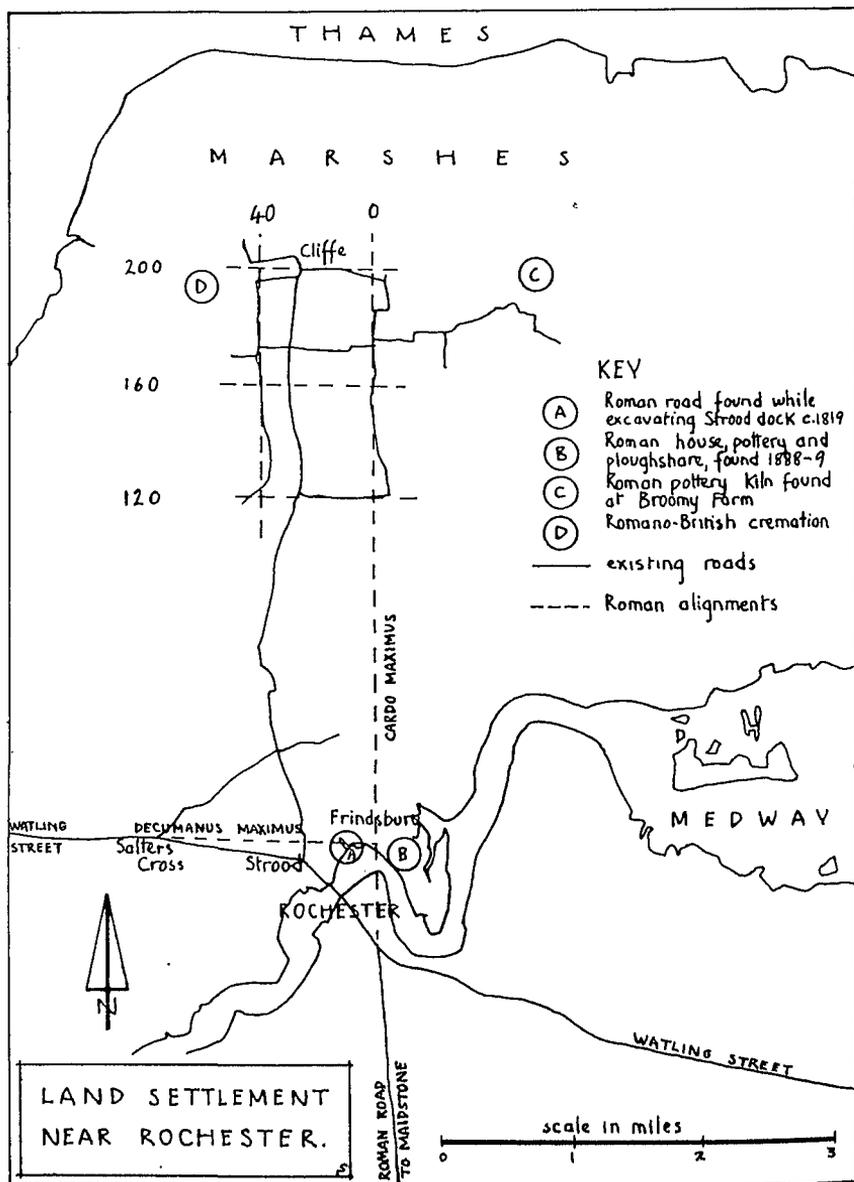


FIG. 1.

area had been planned rather than developed from natural causes. This plan takes the form of a chess board grid of which the orientation of the *cardo* is almost exactly north-south (2 degrees east of north) and correspondingly the *decumanus* east-west (2 degrees south of east). Taking the road which runs north from Cooling Street past Gattons and Berry Court as the *Cardo Maximus* or principal axis, it will be found that at a distance of 40 *actus* west another *cardo* coincides with West Street. Within these two *limites* the road past Perryhill, James' House and Woodview House is at a distance of 10 *actus* west from the *Cardo Maximus*, whilst the Station Road is at a distance of 30 *actus* further west. Now take the road which lies east and west a little to the north of Mortimers Wood as the *Decumanus Primus*,<sup>1</sup> then Reed Street near Cliffe Church coincides with a *decumanus* at a distance of 80 *actus*. Within these latter *limites* Salt Lane is at a distance of 50 *actus*, the road lying a little to the north of it 53 *actus* and the road leading to Cooling Castle 55 *actus* north from the *Decumanus Primus*.

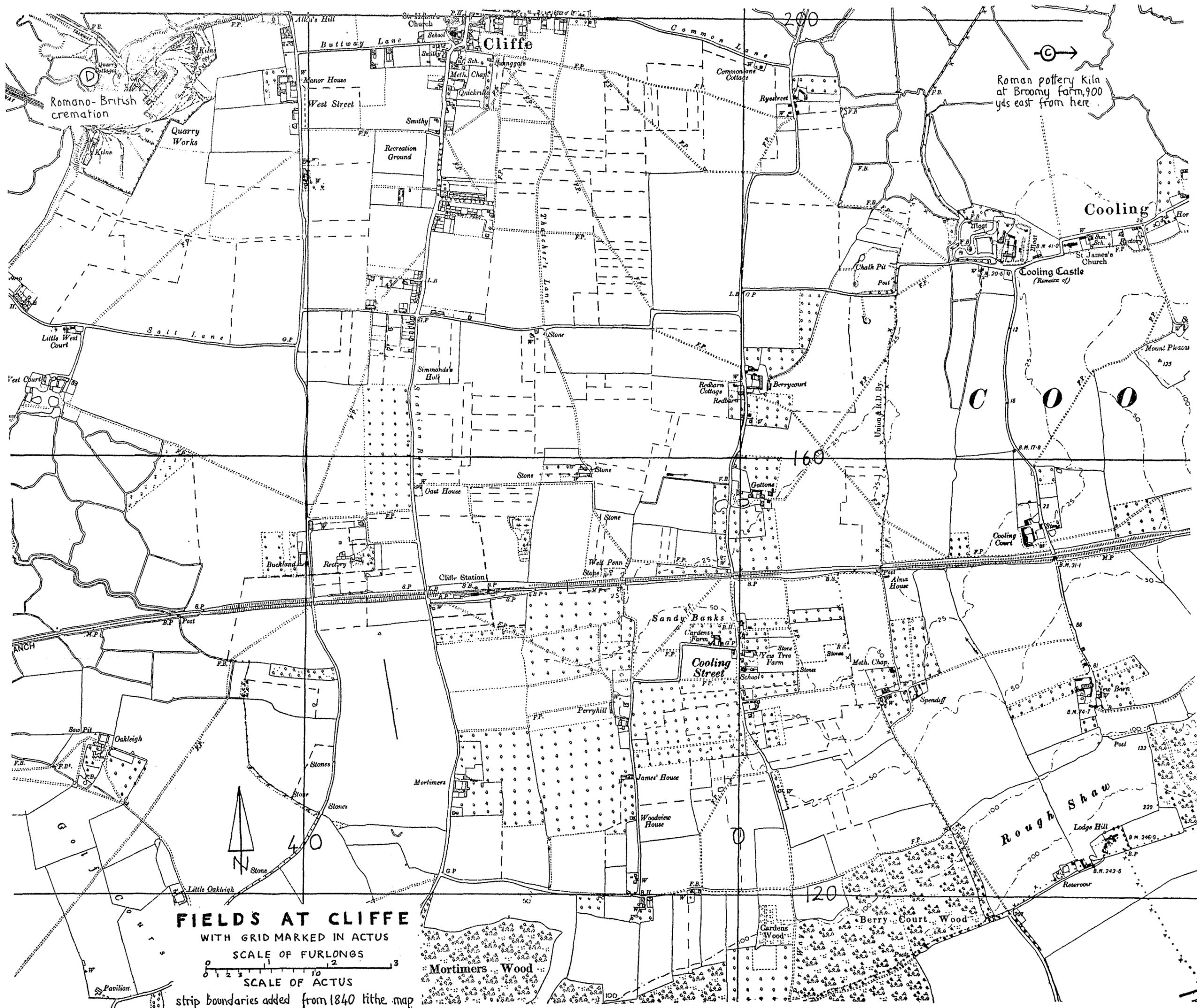
If the *Cardo Maximus* is extended in a southerly direction it passes through Frindsbury to the north bank of the Medway at a place which is opposite Gashouse Point on the southern bank. Extend this line across the river over Gashouse Point, and it will pass through the junction of Eastgate, Star Hill and High Street, Rochester and then coincide with the Star Hill—Delce Road alignment of the Roman Rochester-Maidstone-Hastings Way.<sup>2</sup> At the present stage of investigation it is impossible to say whether there was ever a through road and bridge across the Medway on this alignment or whether it was only the result of planning on the part of the *agrimensores*. It may be significant that a warped extension of the road which coincides with the *Cardo Maximus* in Cliffe is called "Port Way" where it passes through Berry Court Wood (*v. plan*: fig. 2).

The present accepted course of Watling Street from Gravesend to Rochester turns to the south at Salter's Cross in order to make for Rochester Bridge. If, however, this turn is ignored and the original alignment extended it will pass over Strood Dock (close to Roman Foundations marked on the O.S. 6 in. map as found in 1828)<sup>3</sup> and finally will meet the *Cardo Maximus* Cliffe-Delce Road alignment at a position near the north bank of the Medway opposite Gashouse Point. Within 400 yds. of this junction foundations of a Roman house were

<sup>1</sup> If the *Decumanus Maximus* was Watling Street, as I shall suggest later, then this *limes* which I take as the *Decumanus Primus* was 120 *actus* north from it.

<sup>2</sup> For alignments and large scale plan of this road refer to "Roman Roads in West Kent", I. D. Margary (*Arch. Cant.*, LIX, p. 30).

<sup>3</sup> This was a piece of paved way running east and west across the site of Strood Dock, actually found during excavations c. 1819. It has been thought if Roman to have connected the house at Frindsbury with the London Road. Such a road would have followed the course that I have outlined. Refer to *V.C.H., Kent*, III, p. 116.



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discovered in 1888-9. At the base of a pit, underlying various Roman articles such as a bronze statuette was found a plough-share.<sup>1</sup> (*v.* plate).

This extension of Watling Street may have been the *Decumanus Maximus* of the land settlement at Cliffe. The *umbilicus* or junction of this *limes* with the *Cardo Maximus* may also have been the centre of a Roman town at Frindsbury or at the least of an establishment which controlled the farming operations at Cliffe. This would be consistent with the ideals of the *agrimensores*, who made the *umbilicus* the centre of the new colony; and in the case of an existing town, they based their land survey on it, approximating to their ideal as closely as possible.<sup>2</sup> At this stage it can only be noted how striking is the contrast between the number of Roman remains that have been found on the Strood-Frindsbury bank of the Medway<sup>3</sup> and the singular lack of finds within the Medieval and supposedly Roman walls of Rochester.<sup>4</sup>

At Cliffe itself, the four main *limites*, which I have outlined, contain an area of 8 square *centuriae*. The *centuria* is here of the conventional type measuring 20 *actus* by 20 *actus* and containing 200 *iugera*, although the *limites* bounding each *centuria* are now only visible in certain places. Evidence supplied by field boundaries on the modern O.S. 6 in. map<sup>5</sup> shows very little, because most of the central area consists of one large unfenced field. To-day the field is in the hands of a few proprietors, but in 1840 it was divided up amongst 30 or more farmers, who held strips scattered in a typical "open field" arrangement. On the plan (fig. 2.) I have marked in most of these strip boundaries which are shown in the 1840 Tithe Apportionment map.<sup>6</sup> If reference is made to the scale of *actus*, it will be seen how many of the field measurements are in multiples of *actus* and how many of the strips measure 5 *actus* in length exactly, rather than the English furlong, which might be expected in a soil that is light and one which presents no special burden to the draught animals. There is in fact one plot which measures 1 *actus* by 2 *actus* and is, therefore, a conventional *iugerum*. It belonged to Richard Lewis in 1840, and was surrounded by other men's lands lying in the Common Field of Cliffe, but of course it would be difficult to prove the antiquity of this plot and I only mention it in passing.

<sup>1</sup> Most of the finds are now in Rochester Museum. See *Arch. Cant.*, XVII, pp. 189-192; XVIII, pp. 189-95; *Proc. Soc. Ant.*, XII, p. 162.

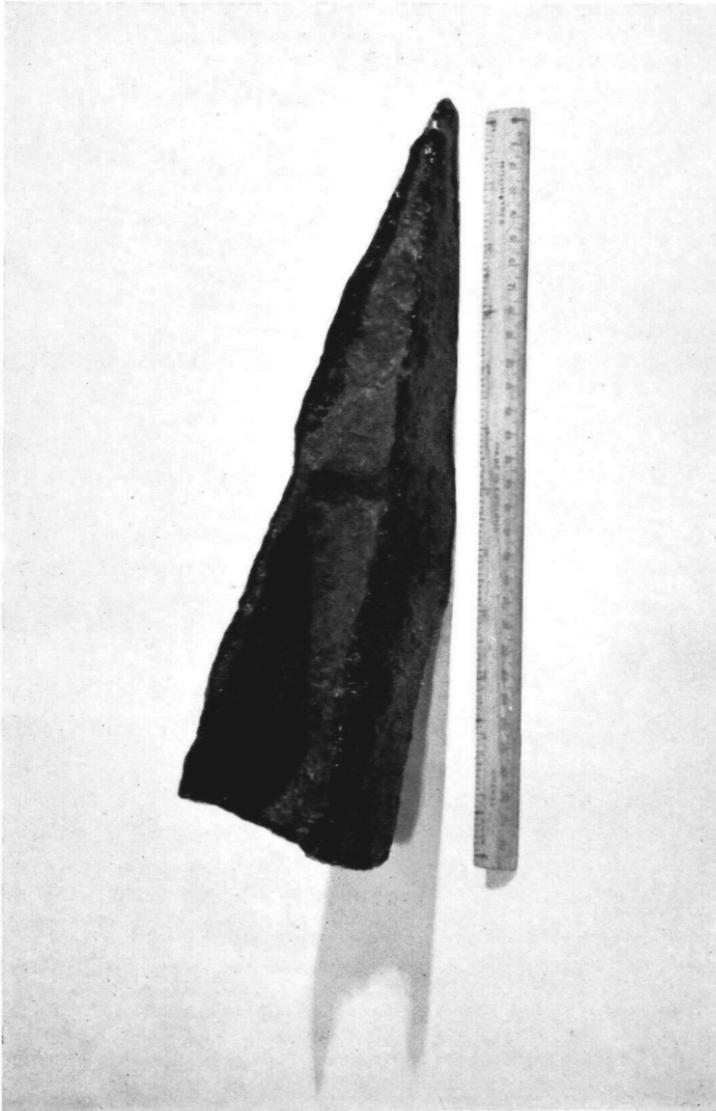
<sup>2</sup> *Archæologia*, XLII, p. 134.

<sup>3</sup> *Arch. Cant.*, XXI, p. lii; XXIV, p. lv; XXIX, p. 217; *Journal Brit. Arch. Assoc.*, IX, p. 359; *Coll. Antiqua*, I, Plate xiii; *Arch.*, XXII, p. 436.

<sup>4</sup> For a general description of Roman Rochester see *V.C.H., Kent*, III, pp. 80-8. Note p. 81, "the details of the R-B settlement itself are scantily known."

<sup>5</sup> Kent Sheets XI NE and NW.

<sup>6</sup> This may be seen at the Office of the Tithe Redemption Commission, 33 Finsbury Square, E.C.2, at the Diocesan Registry, Rochester or in the Vestry at Cliffe Church. The strip boundaries on fig. 2 are approximate.



*Rochester Museum*

Roman Ploughshare from Frindsbury

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If Cliffe was a land settlement for the citizens of Rochester rather than a *villa* farm in the hands of one proprietor, it is possible that such citizens may have farmed in similar shaped strips. The Roman ploughshare found at the Frindsbury house mentioned above was described by A. A. Arnold in 1889 as differing little from the shape of those at use in his time<sup>1</sup> and there is a possibility that a similar system of husbandry may have existed in Roman times, to that found at Cliffe in the nineteenth century. Mr. F. G. Payne has recently suggested that the Saxons made no improvement on the type of plough that they found in Britain;<sup>2</sup> nor is there much evidence to show that they invented the strip system. Mr. C. E. Stevens states that it was well known in the Mediterranean in Classical times, although the *centuriæ* as such were usually inclosed.<sup>3</sup>

The arrangement of many of the strips and of the roads themselves does not conform to the centuriated grid entirely. There are many instances of "warpings", but this is to be expected after long agricultural occupation and only helps to prove that the layout is not of recent origin. Even in Italy and the Mediterranean Provinces where the *centuriæ* were probably planned more exactly, there is good evidence of "warping" in this way.<sup>4</sup> It has been suggested by some<sup>5</sup> that the Open Field Downlands of East Kent were land settlements of a very recent date. In order to show that this is not so at Cliffe (nor do I think it true of East Kent) it is necessary to mention some details concerning the agrarian history of the parish.

In 1811 the parish contained Open arable fields, common meadow called Redham Mead and common pasture called Rye Street Common, the three components of a typical Open Field village.<sup>6</sup> There is a lack of detailed medieval material, but a charter dated 4th October, 39 Henry VI<sup>7</sup> shows that these three were in existence at that period. Cliffe is mentioned in Domesday Book<sup>8</sup> and at that time had land for six ploughs and 36 acres of meadow. Common meadow is mentioned

<sup>1</sup> *Arch. Cant.*, XVIII, p. 189, *et seq.* The ploughshare may be seen in Rochester Museum, it is 12 inches long and weighs about 9 lb. 10 oz.

<sup>2</sup> *Archæological Journal*, CIV, pp. 82-111.

<sup>3</sup> *Cambridge Economic History*, I, pp. 104-5.

<sup>4</sup> See the photograph of *centuriæ* at Zara, Dalmatia facing p. 201 in *Antiquity*, XXI.

<sup>5</sup> H. L. Gray, *English Field Systems*, p. 276. W. E. Tate in *Arch. Cant.*, LVI, p. 56.

<sup>6</sup> For the management of these commons see the bye-laws made at a Court Leet on 31st October, 1811. A copy is preserved in the Vestry at Cliffe Church. The arable fields have lost today their "strips" by consolidation and exchange; the meadow and common were inclosed by an Award dated 12 September, 1853. A copy is kept at County Hall, Maidstone, No. 722.

<sup>7</sup> Dean and Chapter Library, Canterbury, *Chartæ Antiquæ*, C. 296a.

<sup>8</sup> *V.C.H., Kent*, III, p. 216. The Archbishop and Friory of Christ Church, Canterbury held the Manor.

even earlier in a charter of King Eggeberht of Kent to Diora, Bishop of Rochester made in 778.<sup>1</sup> Quite apart from this long tradition, the soil is of such an excellent and fertile nature that it could hardly have been neglected in medieval times.

No Roman objects have been found within the centuriated area itself, but at Broomy Farm, Cooling, 1 mile to the east of Rye Street, pottery kilns, a cemetery and other remains have been excavated.<sup>2</sup> Less than half a mile to the west of West Street by Quarry Cottage a R-B cremation of a child was discovered;<sup>3</sup> this has been assigned to the late first—early second century. Further to the West by the Thames wall, opposite East Tilbury Church, a cemetery was unearthed in 1909, containing several skeletons and a large number of pots, dating from late first to the third century.<sup>4</sup> A coin supposed by the inhabitants of Cliffe to be Roman was found just North of Reed Street, but this has been lost, and its provenance will remain a mystery. If, however, this land settlement was based on Frindsbury (less than an hour's walk away) we should not expect to find Roman buildings in Cliffe.

Amongst those who have drawn attention to centuriation and land settlement in Britain Haverfield noticed evidence for it at Colchester,<sup>5</sup> Gordon Ward has examined the Lincoln and Brancaster areas and also the regular arrangement of the roads leading north from Watling Street, near Gillingham, Kent.<sup>6</sup> Recently, I. D. Margary has reconstructed the system of centuriation at Ripe in Sussex, which may have been a land settlement from the station at Pevensey. The Ripe grid differs from the one described at Cliffe in that the *centuriæ* are not square, but rectangular of two types, which contain 240 and 210 *iugera* respectively.<sup>7</sup> Large populations in the Roman towns had to be fed and it seems an important question as to whether the rural populations existing in Britain when the Romans came, could support these towns by themselves and without a specially planned agricultural economy. A closer study of the areas surrounding Roman towns may produce further evidence useful in this connection.

#### SUMMARY

1. There exists at Cliffe an area which is unexpected in layout.
2. This layout is rectangular, contains a chess board grid, and lies

<sup>1</sup> *Cart. Saxonicum*, ed. Birch, No. 227. The meadow is called Hreodham, which is surely the Redham of the fifteenth and nineteenth century material.

<sup>2</sup> *Arch. Cant.*, XLII, p. xlviii and XLV, p. xliii. This discovery made in 1927 by Mr. Fred Muggeridge, who farms the land, has never been fully recorded. Mr. Muggeridge has most of the pottery at Broomy Farm.

<sup>3</sup> *ex informa*. Gordon Ward, M.D., F.S.A., of Sevenoaks.

<sup>4</sup> *Arch. Cant.*, XXIX, p. lxxvi.

<sup>5</sup> *Eng. Hist. Review*, XXXIII, p. 289.

<sup>6</sup> *Norfolk and Norwich Arch. Soc.*, XXV, p. 373.

<sup>7</sup> *Sussex Arch. Collections*, LXXXI, pp. 31-41.

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less than 3 miles from Rochester (as the crow flies) in a north-south orientation.

3. The eastern limit of the grid is an extension of the Hastings-Maidstone-Rochester Road, either by alignment only, or perhaps even as an actual road which crossed the Medway.

4. The southern limit of the grid is parallel to an extended section of Watling Street.

5. The grid appears to be based on a point close to the Frindsbury House. The ploughshare points to a connection between this building and land settlement.

6. The Cliffe area is surrounded by Roman remains and has a long tradition of agrarian occupation from Saxon times onwards.

7. The grid lines are spaced in multiples of *actus* and contain a total of 1,600 *iugera* within their limits. Many field measurements conform to the Roman and not to the English standards.

8. It is possible that citizens on land settlements of this type may have farmed on a strip system.

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