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# Proceedings of the Cambridge Antiquarian Society

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(incorporating the Cambs and Hunts Archaeological Society)

Volume XCVI  
for 2007



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**Volume XCVI  
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Editor Sarah Bendall

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## The East Fields of Cambridge

Mary Hesse

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*Of the three large medieval fields of Cambridge borough (West and East Fields, and Chesterton Field), only the West Field has been comprehensively mapped, using early copies of a fourteenth-century terrier. Using other archive terriers, this study completes as far as possible the mapping of the fourteenth-century East Field. Although this Field is now almost entirely built upon, striking correspondences emerge between the patterns of the medieval furlongs and the modern streets. The reconstruction of the fourteenth-century field pattern shows strip-cultivation extending as far as the waterlogged fenland at its eastern boundary. There is, however, evidence to suggest that arable cultivation in the late eleventh century occupied only about half the fourteenth-century area, with a wide arc of common, pasture and moorland within the eastern and southern boundaries. The possible pre-conquest origins of the open-field system are also discussed.*

### Cambridge town fields

Much has been written on the history of the City and urban surroundings of Cambridge, particularly within the medieval borough between the river and the King's Ditch. Much less, however, has been said about the whole area of the Cambridge parishes up to their boundaries with the surrounding villages: Girton, Madingley, Coton, Grantchester, Trumpington, Hinton, Fen Ditton and Chesterton. The total area within these boundaries (as measured at enclosure) is about 2700 acres, of which the medieval town accounts for only about 80 acres, or 3% of the whole. Almost all the rest was the agricultural hinterland which supported the economics of the town, but, when reading many of the classic histories of Cambridge borough, it might seem that no such land existed. Even Domesday Book dismisses it with a couple of remarks: the burgesses lent their ploughs to the Sheriff (Picot) three times a year, and the Sheriff had taken away some common pasture and destroyed many houses.<sup>1</sup>

In the usual Domesday entries for rural villis in Cambridgeshire, the amounts of arable land are measured in numbers of ploughlands. These, however, are

not entered for Cambridge itself, and it is rare to find them entered for boroughs and county towns elsewhere. Because of the importance of trade, defence and sanctuary in time of war, boroughs often had special tenurial and taxation relationships with the King, and these were concerned with the burgesses' messuages in the towns rather than with their arable holdings. Even where hidages are assigned to boroughs in Domesday Book, these are unhelpful in determining amounts of arable. In the entries for the villis of Cambridgeshire, for example, there is often a rough correspondence between numbers of hides and ploughlands, with between one and two ploughlands per hide (Hart, 1974), and the Cambridgeshire ploughland is generally taken to be about 60 field acres.<sup>2</sup> Cambridge borough itself is a Hundred, assigned 100 hides, but this assessment is clearly a value for taxation rather than land-area purposes: as a measure of arable it would imply a quite unrealistic area of between 6000 and 12,000 acres.

The earliest comprehensive evidence for the Cambridge fields is to be found in the archives of the Cambridge colleges. From the time of their foundation until the nineteenth century the colleges owned most of the tithes, and therefore kept a wealth of records of landholding from the later middle ages. These documents began to come to public light in the late nineteenth century, and interest developed in the twentieth century with the beginnings of the study of landscape history. The chief pioneers were Frederick Maitland, the Downing College historian and professor of law, who published *Township and Borough* in 1898; H. P. Stokes, an early follower of Maitland, who mapped part of the East Fields in 1915; and Hall and Ravensdale, with *The West Fields of Cambridge* 80 years later in 1976. *West Fields* contains the reproduction of a plan of the Fields drawn in 1789 and based on a terrier of about 1360 in Corpus Christi College, together with detailed maps of furlong boundaries and names.

These pioneers, however, left the mapping of Cambridge East Field unfinished. To fit Cambridge into currently burgeoning research on the development of early field systems, the first step must therefore

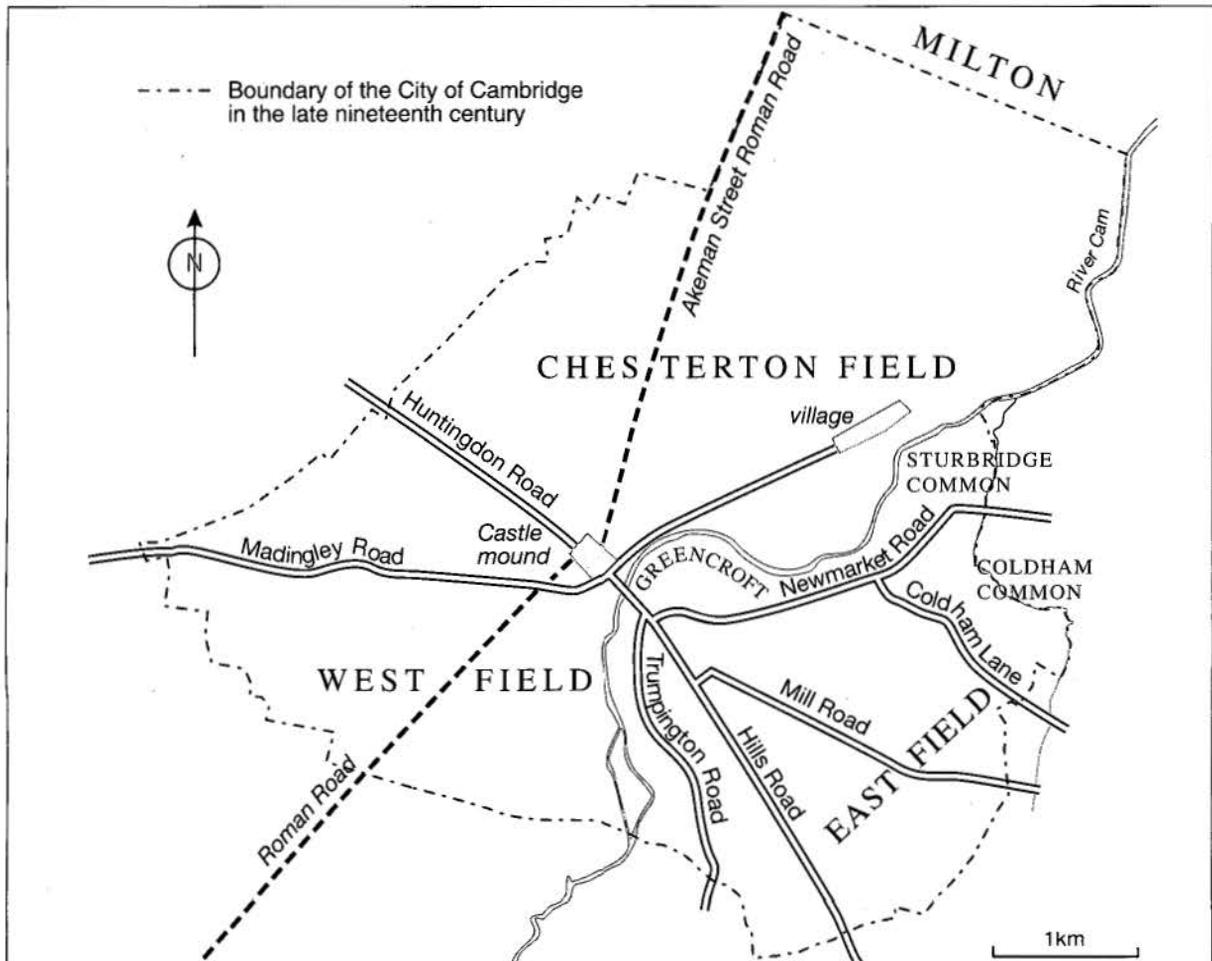


Figure 1. The three open fields of Cambridge (from Maitland 1898, p. 54, and Bryan & Wise, 2005, p. 22).

be to complete the mapping of the medieval system as described in extant terriers of the East Field. The earliest of these is in Corpus Christi College, and is similar in style and date to that of the West Field. In other colleges there are copies of various later dates. These appear to be re-workings of the original, brought up-to-date and sometimes with comments relevant to the specific interests of particular colleges. It is not always easy to disentangle the later additions from the fourteenth-century original, but there is enough consistency among the sources to support the construction of most of the remaining parts of the fourteenth-century map. The reconstructions to be described below are largely based on two such copies: one from the Jesus College archive, transcribed by Dr Caryl, Master of the College in the late eighteenth century, and the other from Cambridge University Library 'by Alderman Wm Brightone, 1575', transcribed in 1645. The copy in Jesus College has detailed acreages assigned to strip holdings, which provide essential information for the construction of a map. Most of the other copies depend on selions (actual strips) for an indication of size. But since selions vary in area between about one rod and one acre, they are virtually useless for mapping.

Before describing the results of the reconstruction, something must be said about the medieval field system in the context of the township and its earlier history. Maitland drew what he called a 'rough sketch' of the West and East Fields of Cambridge on either side of the River Cam. This can be supplemented (Fig. 1) by including the parish of Chesterton to the north of the river and the Huntingdon Road (a Roman road). The resulting boundary of Cambridge with Chesterton has been compared with that of a Roman 'territorium' (land controlled directly from the fort), such as the one postulated by Stephen Bassett (1989, p. 25) around Great Chesterford in north Essex, where neighbouring parish boundaries form a rough ellipse around the fort.<sup>3</sup> The parish of Chesterton has an anomalous-looking rectangular extension in the north-east, but if this is disregarded, the resulting boundary forms a rough circle measuring about three miles across. This appears to be centred on the Norman castle (the site of the Roman fort), with known Roman roads radiating from it. The rectangular extension into the neighbouring parish of Milton in the north was apparently already part of Chesterton's field system by 1300.<sup>4</sup> It might have been acquired while Chesterton was a royal demesne of the late Anglo-Saxon and early

Norman kings, before it was granted to Barnwell Priory by King John in 1200 (Clark 1907, p. 76).

There may well have been such a territorium, but even disregarding the north-eastern extension of Chesterton, the medieval boundary is unlikely to follow exactly its Roman predecessor. This is because there are significant zig-zags in the line of the parish boundaries between the West Field and Coton and Girton, and between Chesterton and Impington, suggesting that these were drawn across the furlongs of earlier open fields continuing beyond Cambridge. We shall also see below, from the details of the medieval fields, that even the smoothly curved parts of the Cambridge boundary are unlikely to be ancient.

Maitland's sketch shows the West and East Fields, each subdivided into three main smaller fields as the basis of three-year rotations (Maitland 1898, pp. 107–8). The divisions in the East Field are Bradmore, Middle and Ford fields, and at the periphery there are also Swinecroft and Sturbridge fields, which were linked to Ford field in the rotation, and Clayangles,

which was linked to Bradmore. The East Field is also called Barnwell Field, after the Priory that was founded in 1092 and located from the early 1100s between the river and the Newmarket Road. The Priory had substantial landholdings throughout the East Field until the Dissolution. There are three commons: Greencroft, Coldham and Sturbridge. In 1915, Stokes constructed an open-field map of Swinecroft, Ford and Middle fields in his *Outside the Barnwell Gate*, to which we shall return later. Meanwhile, Bradmore, Clayangles and Sturbridge fields have not previously been mapped and remain a challenge.

#### Bradmore, Clayangles and Sturbridge fields

The earliest printed maps of the whole of the East Field with any detailed internal boundaries are the enclosure award map of 1806 (Fig. 2), Baker's map of 1830, and the tithe map of 1856. The enclosure and tithe maps are not initially very helpful. The

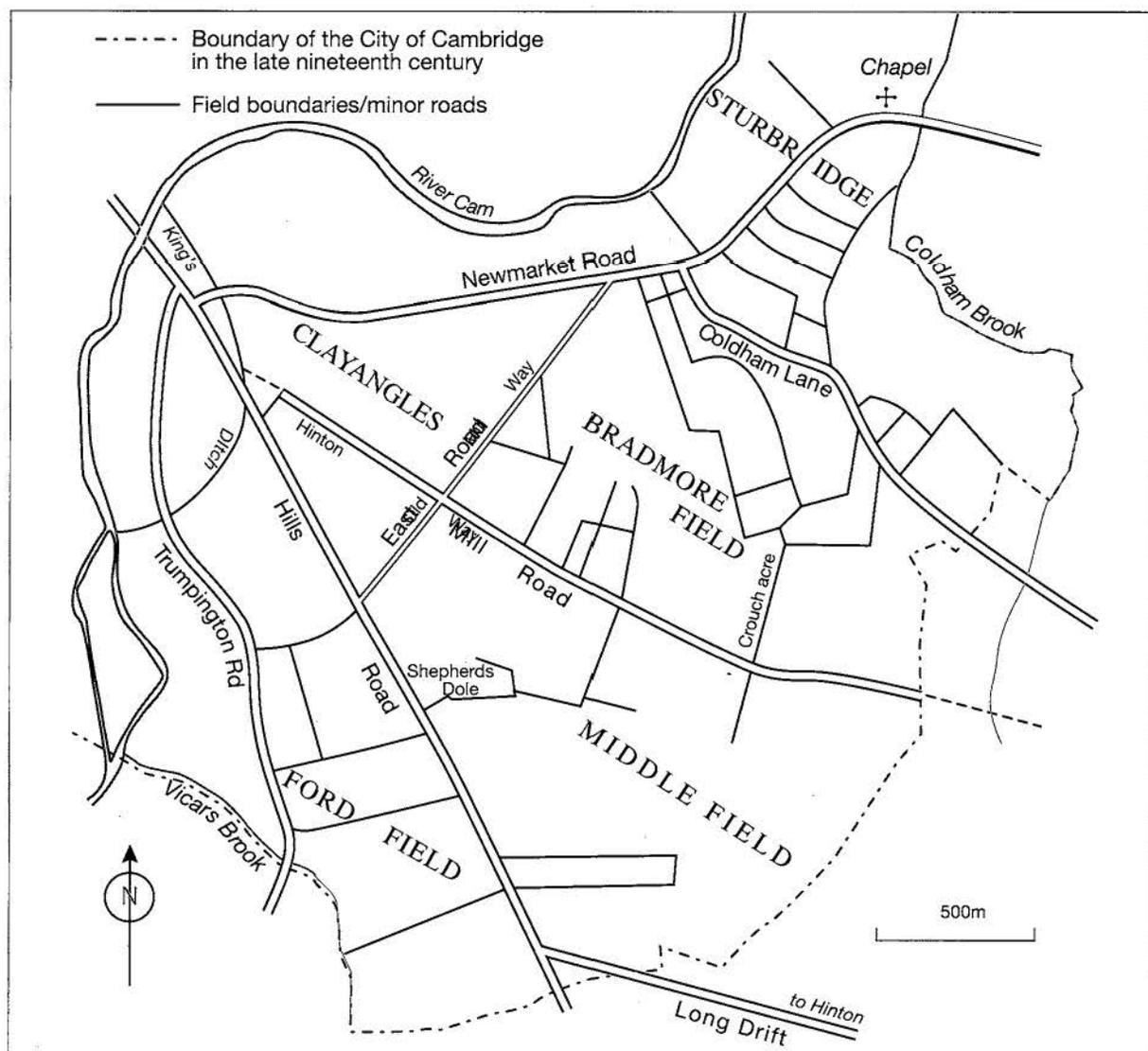


Figure 2. Outline of the East Field from the enclosure map, 1806.

enclosure map leaves most of the East Field empty of furlong boundaries, because of the large allotments to individual holders. The tithe map is more complete, showing boundaries of some strips as well as furlongs; but these tend to indicate the complexities of tithing (some of it clearly post-medieval), rather than the overall shape of ownership and land use. This is the first map showing the newly-built main railway line, indicating major destruction of the medieval pattern as the line crosses from north-east to south-west.

We are very fortunate, however, to have Baker's map of 1830, drawn before the advent of the railway. This is the first relatively complete map of the boundaries of the East Field, including arable fields as well as the growing suburbs of the town. Part of this map, with Bradmore field, is reproduced in Fig. 3. Note how even in 1830 the suburbs have hardly spread beyond East Road. From this map and the early terriers, it has proved possible to reconstruct the furlongs of Bradmore and Clayangles fields almost completely in their fourteenth-century form (Figs 4–5; detailed mapping of the strips has not been attempted). In these figures, furlong numbers are those in the terriers, and the complete set of field names in the terriers is given in Tables 1–2. It turns out that Baker's field boundaries fit the fourteenth-century descriptions almost down to the last acre,<sup>5</sup> leaving only a few problematic cases. In addition to this it is found that, between the Newmarket and East Roads (Old Mill Way), modern streets and property boundaries

coincide precisely with most of the medieval furlong boundaries in the terriers. Sturbridge field is more difficult to map, because in Baker's time it had largely become occupied by brick yards and gas works, in place of the clay pits that were described in the terriers along with the medieval arable (Fig. 6). Parts of Sturbridge field have long been, and largely remain, a commercial landscape. However, the principal road of the great medieval Sturbridge fairground, called Garlic Row, survives, and there is a plan of the Fair, surveyed in 1725,<sup>6</sup> which assists in locating the arable furlongs to which the land reverted between Fairs. The medieval Leper Chapel appears in Furlong 4, which has the alternative name 'Timber Furlong'. This name, together with the 'Holt' shown on Baker's map in the angle between the river and Coldham Brook, suggests a medieval source of timber in this area.

It could be objected that the method of reconstruction of medieval fields from Baker's map involves uncritical copying of his mostly straight boundaries, and therefore ignores the fact that the strip furlongs would have had 'aratural curve' shapes. This might indeed have resulted in small errors in the reconstruction, but it should be noted that, on the large scale, the enclosure map (pre-Baker) and the tithe map (post-Baker) both show in fragmentary form what can only be skeletons of strip furlongs. In any case, the main reason for accepting Baker as the best indicator of earlier furlongs is the remarkable coincidence, particularly in Clayangles and Bradmore fields, of

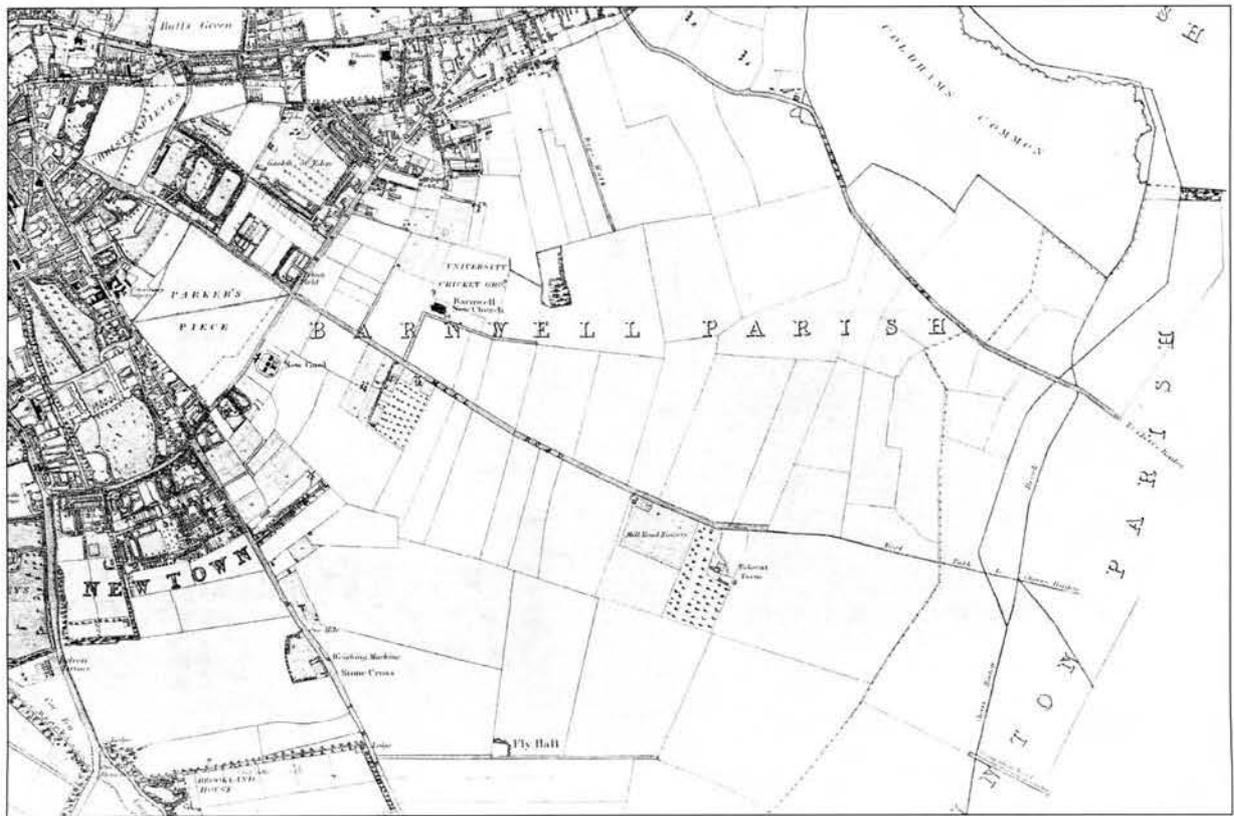


Figure 3. Portion of Baker's map, 1830, showing Bradmore field.

the abutments and acreage measures shown on his map with what is derived from the terriers. These coincidences are too great to be accidental, and leave no doubt that the reconstruction is a generally accurate pattern of the medieval furlongs. Some of the striking instances are described below. It is perhaps ironic that a medieval reconstruction turns out to be easier for those parts of the East Field where the nineteenth-century development of town suburbs was comparatively early. It seems that the furlong boundaries in Bradmore and Clayangles fields were retained more-or-less intact through the period of enclosure, until the laying out of the new street pattern in the later nineteenth century. The correspondence between furlong boundaries and streets is vividly illustrated by a section of the modern Cambridge street map shown in Fig. 7. In most of Middle and Ford fields, on the other hand, urban development was later, and even before enclosure the medieval pattern seems to have been largely destroyed by the formation of large rectangular fields.<sup>7</sup>

There are particular points of interest about Bradmore field. First, its name, which means 'Broad

Moor'. Apart from naming the whole field, there is a specific site within it also called 'Bradmore' in the terriers (Figs 4, 7 and distinguished hereafter from the field by the use of inverted commas). This site is located near the centre of the field, now bordered by the backs of house properties in Gwydir and Sturton Streets on the west (this is the medieval West Balk), and by the East Balk on the east. The ghost of this Balk lies straight across the railway sidings north of Mill Road (formerly Hinton Way). To north and south, Bradmore field is now bounded by Sleaford and Hooper Streets. The West and East Balks are prominent features of the medieval terriers, going north to south almost continuously from Newmarket Road to Hinton Way, and their sites are mostly retained in the modern street pattern.

The small area called 'Bradmore' is a rectangular plot of about 17 acres. Its curious feature is not only that it shares its name with the whole field, but also that it is not described in any of the terriers (up to the eighteenth century) as being an arable furlong or being held in strips, or indeed having any property- or tithe-owners. It is described only as bordering

Table 1. Field names from copies of terriers in Jesus College (eighteenth-century) and University Library (1645).

STURBRIDGE (ESTNHALE) (Furlongs 1-6, Figure 6)				CLAYANGLES (Furlongs 7-13, Figure 5)			
Furlong No.	Name (if any) and acreage	In Furlong	See Figures	Furlong No.	Name (if any) and acreage	In Furlong	See Figures
1	9.3.0	Roswen Dole		7	Caldwell	Barton Croft	
		Tibs Row			33.1.8	Caldwell	
		Walnot Dole				Chipax Close	
2	11.0.0 <i>No field names</i>					Green's Brewhouse	
3	Coal Pit	Coal Pit				Maids Causeway	5
	26.1.20	Cote Dole				Green Croft	5
		Hop acre				New England House	
		Mayor's house				Pitts Lane, Path	
4	Timber Dole	Chapel Close	6			The Plough	
	25.2.31	Chapel Hill				Walls Lane	5
		Joyners acre		8	19.0.29	Barnes Brew- Malt-house	
		Skinners house				Chantry of the Lady of Cambridge	
5	Middle Dole	Garlick Row	6			Drunken four acre	
	8.2.25					Friars Pryorhouse	5
6	Fen/ Nether-Shot 29.0.8	Ammers croft				Great Close	
		Balk Dole		9	17.0.0	Bakers houses	
		Cheese Row	6			Gore acre	
		Dovehouse Yard				St:Austins Close	
		Duddery Leys	6			West Dole	
		Golden acre		10	10.0.0	Maggots Croft	4
		Leyston acre		11	Overthwart	Black Swan Close	4
		Old Coldham acre			Dole 11.0.0		
		Pitance croft		12	4.2.20	Maids Causeway	5
		The Vine		13	18.3.0 <i>No field names</i>		

surrounding furlongs, and indeed is treated as if it were common land (like Coldham Common). Its location among the other fourteenth-century furlongs (Fig. 4) is also strange. It lies in a position that looks like the meeting of two furlong boundaries: one in the north which sweeps from west to east in a long curve between Old Mill Way and Coldham Lane, and the other which maintains a linear course parallel to Hinton Way. Moreover, in the descriptions found in the copies of the terrier, both Furlongs 23 and 24 (numbered in the Jesus College terrier) are divided into separate halves by 'Bradmore' itself. One can imagine a furlong boundary across 'Bradmore' from west to east,

which would unite the two halves of each furlong. It is also noticeable that the eastern parts of Furlongs 23 and 24 respectively include South Bradmore Dole and East Bradmore Dole. The term 'Dole' in this context, as we shall see below, suggests land taken in from waste or pasture by a single owner.

There is another significant feature of 'Bradmore', which remains on Baker's map (Fig. 3). Above the 'E' in 'BARNWELL' is a rectangular plot, partly hatched with Baker's symbols for rough scrubland (as on Chesterton Fen). But 'Bradmore' is not fen. So far as there are any changes of level in this flat landscape, 'Bradmore' touches the 15 metre contour in the south,

*Table 2. Field names from copies of terriers in Jesus College (eighteenth century) and University Library (1645).*

BRADMORE FIELD (Furlongs 14–34, Figure 4)							
Furlong No.	Name (if any) and acreage	In Furlong	See Figures	Furlong No.	Name (if any) and acreage	In Furlong	See Figures
14	50.0.38	Anglesey House		19		Nocket [Naked] acre	
		Barnards/Richards Croft	4			Frog acre	
		Bell backgate		20		Intercommon	4
		Birdbolt Close	4			Mortimers Dole	4
		Black Swan Close		21	11.3.20 <i>No field names</i>		
		Coldham clay pits		22	4.1.20	Crouch acre	2,4
		Coldham Lane	1,2,4,7			Horsepath	4
		Dovehouse Close		23	22.3.20	'Bradmore' [common]	4
		East Bradmore Balk	4			Mortimers Dole	4
		John Smith's Croft	4			Smock Alley	4
		Old Mill Dole	4			South Bradmore Dole	8
		Overthwart Dole	4	24	29.0.15	Bradmore Drain	4
		Sheep house				East Bradmore Dole	
		Six Selions Croft				Smock Alley Way	4
		Steeple Dole Furlong	4	25	Overmilk 8.1.20	Ruttifers path	4
		Three Cups Close		26	7.2.20 <i>No field names</i>		
		West Bradmore Balk	4	27	Nethermilk	Coldham Wall	
15	67.3.6	Crouch acre	2,4		24.3.31	Hogmore, way to	4
		Finne's Croft	4			Pheasants Croft	4
		Gutter acre		28	Milk Croft 5.0.0		4
		Huntingdon Dole	4	29	4.3.20	Bad Husband's headland	
		Long headland	4	30	Seven acre	Coldham Green corner	
		Maniants Balk	4		8.1.20	Seven acre Dole	
		Ruttifer's path	4	31	5.1.20	Black acre	
16	6.2.0 <i>No field names</i>			32	Little Ives 2.2.0	Round Close	4
17	Roser/Cheker 6.3.0		4	33	Mickle Ives 8.3.0	Dirty Four-acre Close	4
18	Roser 7.1.0	Horsepath	4	34	Pesthouse/Cheney 16.3.20	Giles acre	4
19	25.1.20	Gaysley's headland	4				
		Kings acre					
		Long furlong					

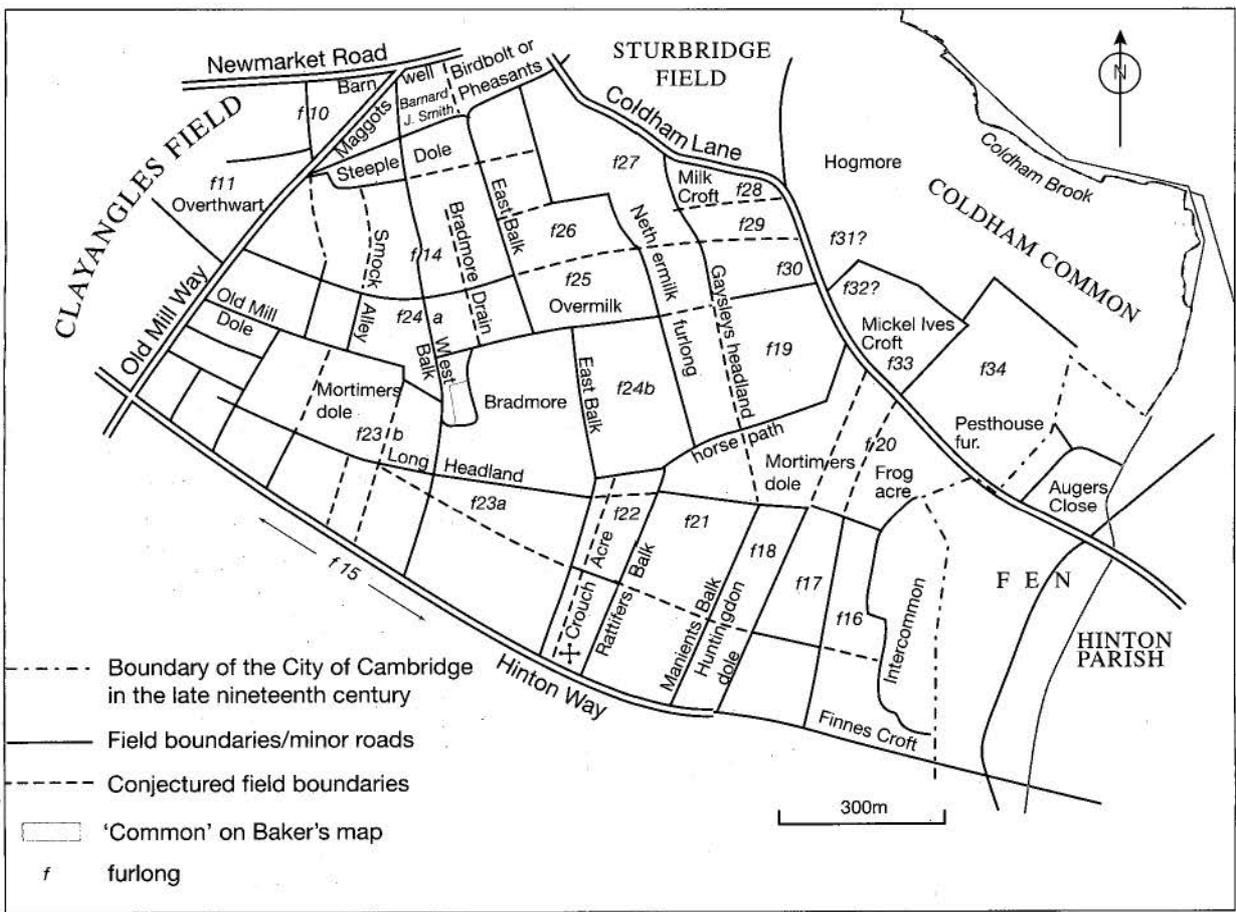


Figure 4. Bradmore field, drawn mainly from Jesus College terrier transcribed by Dr Caryl.

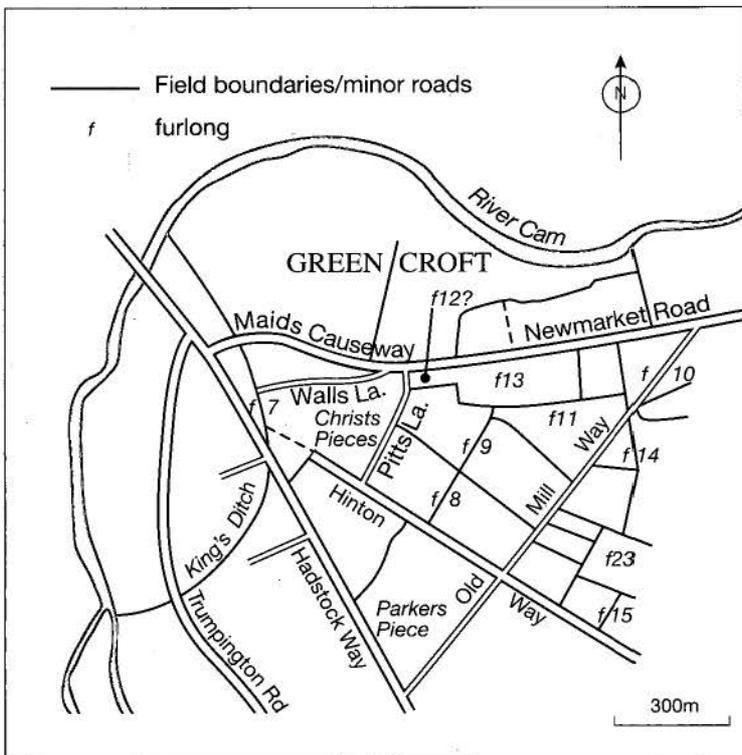


Figure 5. Clayangles field, drawn from Dr Caryl's transcription.

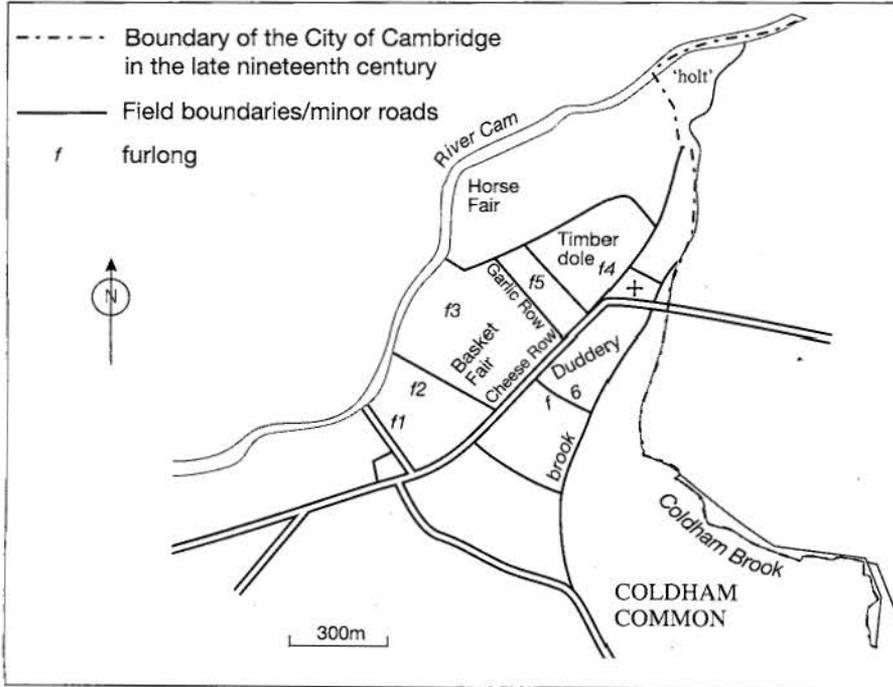


Figure 6. Sturbridge field, drawn from Dr Caryl's transcription.

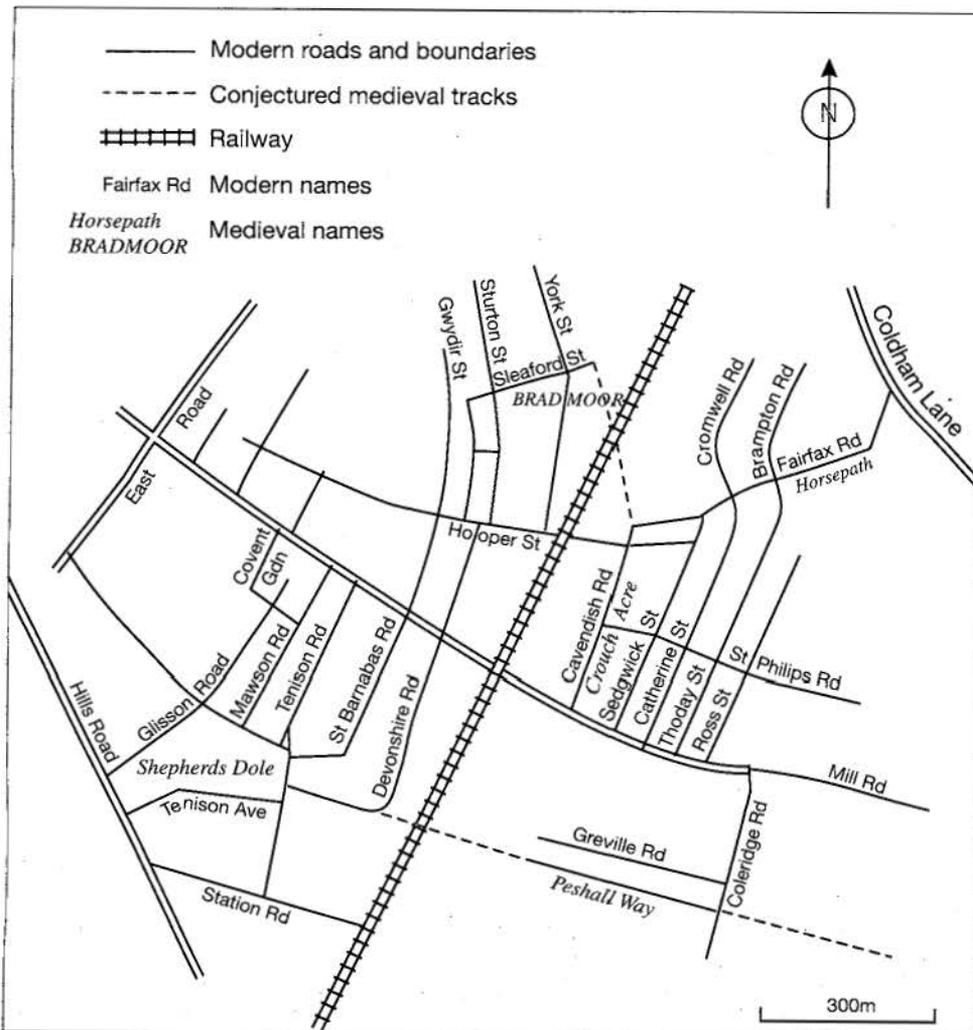


Figure 7. Portion of Bradmoor field (Hesse, drawn from a selection of modern street maps).

and drops gently away to 13 metres in the north. The balk to its west is generally described as 'below Bradmore', and the East Balk as 'above Bradmore', all rather relative Cambridge adjectives. Even so, 'Bradmore' required a drain in the fourteenth century, going from just east of West Balk down to the Cam.

Perhaps 'Bradmore' holds a memory of the time when the whole of the Bradmore field was first used for arable up to the balks, leaving common and pasture as far as the borders of the Coldham Common fen to the east. On the other hand, the possibility that Furlongs 23 and 24 were once arable furlongs across 'Bradmore' suggests that it must have reverted to common or pasture after the initial period of assarting. We shall see below that there are other examples of such exploitation and reversion in the East Field.

The field names to the east of Bradmore field provide evidence that the furlongs there might have been cultivated comparatively late. The copies of the fourteenth-century terriers describe arable land as far east as an area of drainage along the Hinton parish boundary, including an intercommon in the south-east. In the north-east, the fourteenth-century furlong names also suggest a relatively recent memory of pasture rather than arable fields. There are 'Over-' and 'Nether-milk' furlongs (ff. 25, 27) and 'Milk Croft' (f. 28). 'Birdbolt' (f. 14) and 'Pheasants' (f. 27) hark back to bird-shooting over the fen. Part of Coldham Common is called Hogmore (f. 27), and Horsepath leads from 'Bradmore' to Coldham Lane. Further evidence will be cited below from Domesday Book to suggest that the East Balk might have formed a boundary of cultivation until the late eleventh century.

The Horsepath provides another example of the accuracy with which the modern street plan often follows the furlong boundaries. The path is first mentioned in the terriers as lying between the south abutment of Furlong 19 and the north abutment of Mortimer's Dole (f. 20), and is apparently the track leading from Long Headland in the west to the Fen in the east. There is an intriguing junction at Furlong 22, where it seems to make two sharp corners. Furlong 22 (including Crouch acre) is recognisable in Baker's map (Fig. 3), and in Figs 4 and 7. It has an irregular shape compared with its surroundings, and this is identifiable, both in Baker's map and in the modern street plan, between Cavendish Road and Sedgwick Sreet. In the terriers this furlong's selions run north and south. Four selions on the east side are described as being on both sides of the Horsepath, and a piece of headland at the north end is north of the Horsepath. The next selion to the west is Crouch Acre. All of this is consistent with the Horsepath making a zig-zag at the north-east of Furlong 22 and passing across the furlong. Crouch ('Cross') Acre is itself of importance, since it meets Hinton Way where a medieval cross stood (Stokes 1915, p. 54). This is just east of the East Balk, again supporting the idea that the balk might have been an early limit of cultivation.

There is a noticeable change of orientation between Baker's map and the modern street plan at the north-

eastern point of Furlong 22. The terriers, followed by Baker's map, require the strips north of the continuation of Horsepath to be oriented at right-angles to it, following the change of direction of Horsepath itself. However, street maps now show how later building respected the line of the railway, destroying the medieval pattern that was still present in 1830. Near the north-eastern point of Furlong 22 there is now a roundabout and a confusion of streets round Fairfax Road (almost on the site of Horsepath), which marks the change.

There are other significant furlong names to notice. Pesthouse Furlong (f. 34) is first named in seventeenth-century terriers, but it occurs as an arable field in the fourteenth century, located at the corner of Coldham Common, and then called Cheney Dole.<sup>8</sup> It seems to have become part of the Common by the seventeenth century, when Parliamentary permission was required to allow it to be used as a pesthouse in the epidemic of the 1660s.<sup>9</sup> The area must have been withdrawn from cultivation due to waterlogging sometime between the late fourteenth and seventeenth centuries.<sup>10</sup> In 1794, Vancouver wrote one of his characteristic comments about this area:

There is a moor of considerable extent lying between the highlands (sic.) of Cherry Hinton and Barnwell on the north-east ... which at this time is greatly annoyed by the stream which passes through the west end of Cherry Hinton ... the constant height of the water in this brook [reduces it] to the state of an absolute morass, though capable of being highly improved.

Looking at the overall plan of the furlongs in Bradmore field, it is interesting to see how Old Mill Way (East Road) intrudes across a great sweep of long boundaries in the north of Bradmore field and into Clayangles field. These cross the road with the furlong called Overthwart (f. 11) and a furlong to its north (f. 10), which was later divided between the Black Swan and Maggots Closes. It is not known when Old Mill Way was established, but it probably existed as a track at least as early as the building of Barnwell Priory, when it would have acted as a short cut to the roads to the south and east out of Cambridge. The field system, however, clearly shows that Clayangles and Bradmore were originally one field.

### Middle and Ford fields

We now turn to the remainder of the East Field (Fig. 8). Swinecroft and Ford field lie between the River in the west and Hadstock Way (Hills Road) in the east, and extend from the King's Ditch to the Trumpington parish boundary. Maitland gave an excellent account of Swinecroft field where he actually lived, on the Downing College campus. He described how a Way-balk of the St Radegund garden was still marked by old thorn trees 'soon to be destroyed' (Maitland 1898, pp. 112–13). He also transcribed from the terriers the first three furlongs of Ford field lying west of

the Trumpington Road. These extend from the walls of Peterhouse and south to the bridge where Vicars Brook crosses the road and where Hobson's Conduit originally left the Brook to bring water to the town.

Unfortunately Maitland stopped there, but the rest of Ford and Middle fields were taken up by Stokes, using the terriers Maitland had unearthed (though Stokes' references leave something to be desired). I have tried to reproduce his map by the techniques used for Bradmore field, but with only limited success. One problem is that Stokes' relative acreages on his map do not always match those in the terriers, and he does not seem to have used even the sparse information available from the enclosure and tithe maps, or even Baker's map, as a possible basis for the medieval pattern. I have tried to take account of this extra information in a partial reconstruction of Stokes' map in Fig. 8. The problem is intrinsically more difficult than that of Bradmore field because, as mentioned above, the early furlong patterns in these fields were replaced before or after enclosure by large undivided arable fields. Again, the lands tithing to Jesus College were more widespread in the southern fields than in Bradmore, and they appear on the tithe map as vast acreages of undivided land.

A notable feature of Middle field is the long straight track called Peshall Way, going west to east from Shepherd's Dole to the parish boundary and into Hinton parish. It is parallel with Hinton Way, and the rectangular furlongs on its north-eastern side, as drawn by Stokes, seem to fit the terriers fairly accurately. In particular, the irregular shape of Shepherds

Dole at the north end of Peshall seems to be at least as old as the terriers, where it appears as Furlong 46. It retains its shape in the enclosure and Baker's maps and in the modern street pattern around Tenison Avenue and Glisson Road (see Fig. 7).

On the south-western side of Peshall Way, however, there are problems with Stokes' map, and here it is possible to use some of the boundary orientations in nineteenth-century and modern road maps to suggest minor modifications. There is a pattern of field boundaries in the south-western corner of Middle field in the tithe map which is not reproduced in Stokes' map, and which seems to fit the terrier descriptions better than his reconstruction (Fig. 8). The result of incorporating these changes is to emphasise a discontinuity of orientation across the south end of Hadstock Way, as might be expected along the course of a known Roman road.

The south end of Ford field is more problematic, but it is interesting to see on Stokes' reconstruction an indefinitely shaped Potmore Common, placed amid the furlong strips rather like the 'Bradmore' further north. This is approximately where Brooklands Farm was, about 300 yards south of Brooklands Avenue, in the midst of more recent government offices. Potmore Common lies, like 'Bradmore', on a gentle slope just below the 15 metre contour, and drains down to Vicars Brook at Trumpington Road. *Potmore* may mean just 'hole' or 'pot' (Ekwall 1960, p. 372) or, perhaps more probably, it may be a corruption of *Podmore*, meaning 'frog moor' (Gelling 1984, p. 55). A close called Little Potmore further north (in the present Botanic

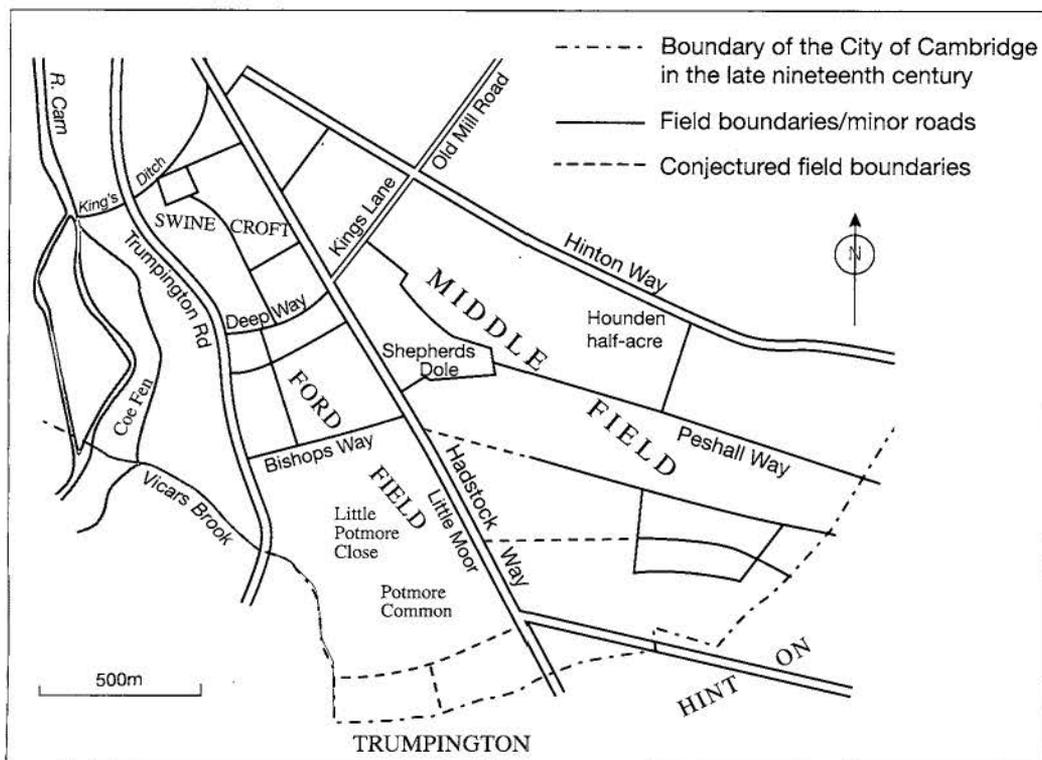


Figure 8. Middle and Ford fields, from Stokes' map and Dr Caryl's transcription.

Garden), together with a piece of scrubland marked on Baker's map and 'Little More furlong' in the south-east, all suggest that Potmore Common was once a larger area, before arable cultivation of the centre and south of Ford field was carried out. Further evidence for this will be discussed below.

### The boundary perambulation

We can now try to come to some conclusions about the origins and general pattern of the early East Field system (Fig. 9). First, consider the parish boundaries. We start the perambulation, as Maitland did, at the railway bridge on Newmarket Road (that is, south of the confluence of Coldham Brook with the Cam and near the Leper Chapel). Follow Coldham Brook, with Fen Ditton and then Hinton parishes on the east side, and Sturbridge and then Coldham Common on the west. The boundary leaves Coldham Brook towards the south of the Common, near where subsidiary drains meet the Brook. Ditches here are mentioned in the fourteenth-century terrier, and appear to surround the furlongs called Cheney Dole and Mickel Ives Croft, which were then arable.

The boundary then goes west and irregularly south round some old copyholds, including 'Augers Close', in Hinton parish, crossing Coldham Lane on the way. 'Augers' is probably an Old English derivation meaning 'old enclosure' (Hesse 1997), which was corrupted to 'Angers' by the time of the enclosure of Hinton (1810). The presence of copyhold at this site perhaps suggests an early Hinton farm that was assarted from fen and common pasture. It is notable that a multitude of drainage channels on the enclosure map are all on the Hinton side of the parish boundary. This is also very clear further north, where the Cambridge boundary lies along the old irregular course of Coldham Brook, while a straight ditch accompanies it on the Ditton and Hinton sides. All this suggests that drainage activities by these villages occurred earlier at these sites than in Cambridge, where the earliest evidence we have for drainage is implied in the ditches described in the copies of the fourteenth-century terrier.

Going south across Coldham Lane, the boundary has a fen intercommon on its Cambridge side, which was present in the fourteenth century. On the enclosure map, this is accompanied by drains and by 'land immediately affected by drainage' on its Hinton side. Then it crosses Hinton Way (Mill Road), near where the Way crosses Hinton Ford (later White Bridge) and becomes Cambridge footpath No. 2 at enclosure. At this point Mill Road becomes a footpath towards Hinton and remains so to this day.

We are now on the boundary between Middle field and Hinton Moor, alias Bridge Field, in Hinton parish. All the way from Coldham Lane, the 1806 enclosure boundary has been sweeping round to the south-east in smooth arcs or straight segments. Peshall Way crosses it, going towards Hinton, where it is called 'Private Road No. 2' on the Hinton enclosure map.

Apart from Peshall Way, however, there appears to be no continuity of furlong boundaries crossing into Hinton parish. The smoothly curved parish boundary is probably a demarcation across intercommoned fen and moor, which remained open before cultivation reached the edge of the parishes. On the Middle field side, the early Cambridge terriers list Fen Furlongs, with Hinton Moor and Fendon Field on the other side. Approaching Long Drift or Drove (Cherry Hinton Road) near its junction with Hadstock Way, the boundary becomes irregular again around some old closes on the Hinton side, and doles on the Barnwell side, one of which is called 'Beyond the Fen', and another 'Mere Dole'. The boundary continues as Mere Way from Long Drift and across Hadstock Way. The name 'mere' suggests an old boundary here, and the closes on Hadstock Way suggest that early advantage was taken of a comparatively steep rise (for this terrain) out of Hinton's Fendon Field.

The boundary continues west, dividing Ford field from Trumpington Field to the south. It has two straight stretches, with large rectangular enclosure fields oriented in parallel on both sides. In the terriers, the Ford field furlongs at this point are Hay Croft, Pit Dole and Little More furlongs, suggesting again that this part of the boundary was a late demarcation across the low-lying moorland, and perhaps parish intercommon. It is said in the *VCH* (1982, p. 248) to have remained uncultivated until the nineteenth century. 'Moor' occurs again as the boundary turns along Vicars Brook, going north to Trumpington Ford on Trumpington Road. Here a strip of common lies between the natural and artificial waterways that originate in springs in Shelford, and carry Vicars Brook to the Cam and Hobson's Conduit to the town. To the west of the boundary is Shelford Moor in Trumpington parish (possibly so-called because a road through Trumpington village leads towards Shelford by a left fork, which was also called Moor Way). The Cambridge-Trumpington boundary follows Vicars Brook to meet the Cam, and thereafter follows the river through the town to Maitland's starting point at the Newmarket Road railway bridge.

It must be concluded from the perambulation that most of the boundary of the East Field was determined by natural features. The only features that cross the limits of the Field are the roads and tracks: Coldham Lane, Hinton Way, Peshall Way, Hadstock Way, Long Drift, and Trumpington Road. There is no sign of other furlong boundaries continuing into adjoining parishes, so it appears that the earliest limits of the East Field were water, fen and moor.

### The 'Doles' and Mortimer's estate

It is noticeable that several furlongs called 'Doles' are described in the terriers of both the East and West Fields. A very general meaning of 'dole' referring to land in Old English is 'A part allotted or apportioned to one, or belonging to one by report' (*OED* 1989, vol. 4 p. 934), and originally a share more generally, but

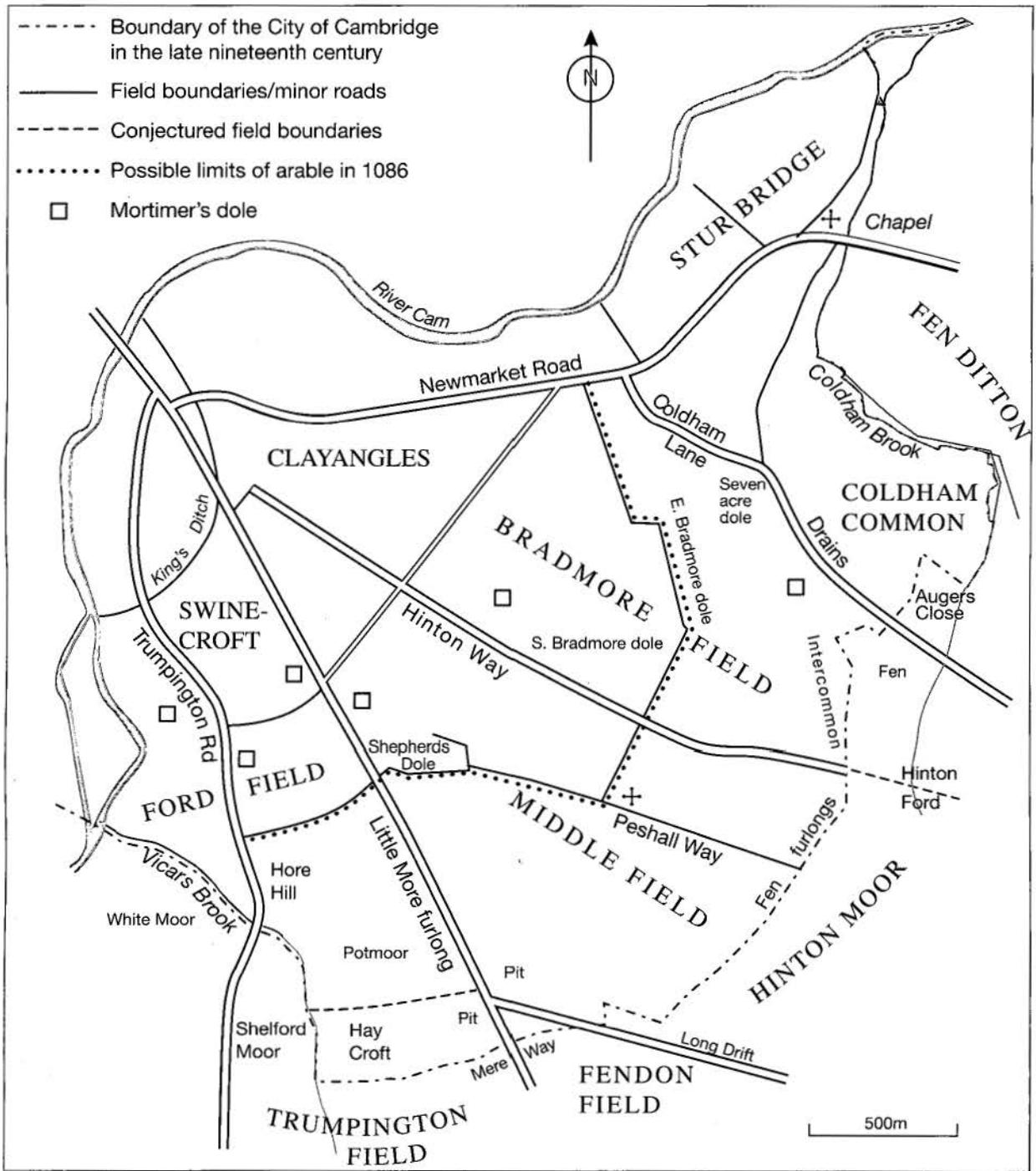


Figure 9. Perambulation of the East Field.

'dole' in the terriers is often more specific, referring to rectangular-shaped blocks of a few acres in area, usually without strip divisions.

In the terriers of the West Field, ten lands are explicitly called 'doles', and Hall & Ravensdale (1976, p. 19) note that: 'they are all, topographically or agriculturally, marginal land. That is to say, they either lie on the far side of the fields ... or they lie in wet places liable to water-logging ... or in other unpromising places, such as Nakedole in Br(a)mbilfurlong and

Peperdole [meaning 'pebble'] where gravel was dug.' There are several other large blocks in the tenancy of 'Mortimer', which are not explicitly called 'doles' in the terriers of the West Field, but appear to be similar in size, site and soil. The locations and types of doles described in the above quotation can be classified as follows:

- (1) at the far edges of Fields, where late assarting might be expected;
- (2) on land liable to waterlogging;

- (3) on unpromising soil;
- (4) containing clay or gravel pits, or other non-arable products of the land.

These types can also be recognised in the terriers of the East Field, where some of the 'doles' are prominently displayed in the text. Thirty-four of them are undivided blocks of four acres or more in area, the largest being Mortimer's Dole of 14 acres (f. 20). Several are scattered along the eastern and south-eastern parish boundaries with Hinton and Trumpington, where there is land liable to flooding from Coldham Brook, and intercommon or 'Fen' and 'Moor' on both sides of the boundary. Where Hadstock Way crosses the boundary, there are gravel pits, which are also found at Hore Hill near where Trumpington Road crosses Vicars Brook. All of these 'doles' can be classified under types (1), (2), or (4). Another example of (4) is Lime Kiln Dole nearer to the town, and possibly Timber Dole near the Chapel at Sturbridge, given the evidence of woodland nearby. At the edge of Coldham Common are Seven Acre and Mortimer's Doles (the latter an irregularly-shaped block of 14 acres), both near Nocket (Naked) Acre, which suggests unpromising soil as in type (3).

There are also doles scattered among the furlongs nearer to the town that do not obviously fit types (1) to (4). The fourteenth-century names of many of these indicate properties of either relatively prosperous thirteenth-century families, or religious institutions. They include Mortimer's, Cayley's, Huntingdon (the Prior), Nuns (of St Radegund), Prior's (of Barnwell), Michael's House, and St Mary the Great. The last two form the present open space of Parkers Piece, and were previously the property of religious foundations in the town. These doles are comparable with Carmedole in the West Field, a block of land of 11 acres that lies immediately behind the Mortimer manor house in Newnham village. This dole probably acquired its name during a lease to the Carmelite Order between 1252 and 1292, which then reverted to the Mortimer family. It seems to have been part of the manorial demesne of Newnham (Hall & Ravensdale pp. 67, 155).

The early Mortimer estate was probably the only one in Cambridge town and fields that came near to being a 'manor' of the type familiar in Domesday Book. As a borough, Cambridge does not appear in 1086 as having any 'lord of the land' other than the King (Maitland 1898, p. 73). By the fourteenth century, the Mortimer Doles and their other lands were scattered over both the West and East Fields, with six in the East Fields ranging in size between four and 14 acres (Fig. 9).<sup>11</sup> These may loosely be called 'demesne lands', connected with the apparent Mortimer manor in Newnham. Other substantial estates in the East Field, consisting of doles together with smaller scattered properties, also functioned as demesne lands. The principal example is the demesne of the Prior and Canons of Barnwell, who held about 460 acres of arable (about a third of the whole field) according to the fourteenth-century terriers, and at least 750 acres

in total according to their own account in the late thirteenth-century *Liber de Barnwelle* (Clark 1907, p. 28).

Evidence for the earlier history of such estates comes from charters of the immediate post-Conquest period, before the establishment of the first religious halls for the reception of students. This evidence has been summarised by Maitland in terms of exchanges of large plots of land between apparently prosperous individuals and families, including many burgesses of Cambridge. During this process, Maitland found a tendency for previously large blocks of land to be split into components of a few strips each (1898, p. 163). Some of the blocks survived intact, and explain the doles and other large holdings that feature in the terriers. In most cases their histories before the twelfth century are obscure, but in the unique case of the Mortimer estate, there is evidence to suggest its possible ancestry from before the Conquest.

The first connection of the Mortimer family with land in Cambridge was a grant of one carucate (ploughland) in about 1200, by King John, together with another carucate that went to the Hospital of St John (predecessor of St John's College).<sup>12</sup> There is evidence to suggest that these lands had earlier been held by the aristocratic family of Earl Waltheof, who was Earl of many counties (Cambridge, Huntingdon, Bedford and Northumbria), and a leading companion of Edward the Confessor. He was executed in a rebellion against the Conqueror in 1076. The properties can be traced almost continuously through Waltheof's descendants, to Earl David of Scotland (also Earl of Huntingdon and Cambridge), and until King John's gift to the Mortimer family. In the early sixteenth century, they passed from descendants of this family to Gonville Hall, and then, by some sleight of hand, became the property of the Town of Cambridge from the seventeenth to the nineteenth centuries (Maitland 1898, p. 179).

The early descent of these lands makes an intriguing story. As Maitland suggested, it indicates another possible close connection between the late Anglo-Saxon kings and the land of Cambridge, in addition to their royal demesne of Chesterton. The suggestion is supported by the Domesday tenures of the villis round Cambridge's south-western borders: Trumpington, Grantchester (then including Coton), Barton, and Comberton. In 1066 all of these were in the hands of King Edward or Earl Waltheof, or their servants or commended freemen, and many of the freemen owed cartage or escort duties to the Sheriff, the King's immediate deputy in Cambridgeshire. It seems that the late Saxon kings might have retained a close interest in a unitary estate extending from the Coldham-Hinton fen in the east, to the Cambridge Fields and its neighbouring parishes to the west. Particularly in the periods of Danish warfare, this would have provided support for the strategically important area of the Cam valley and its tributaries to the south. Discussion of this question would require a closer look at the lands to the west of the Cam, which is beyond the scope of this paper.<sup>13</sup> But some further

evidence about the pre-Conquest history of the East Field can be found from Maitland's discussion of the twelfth-century charters (1898, p. 163), and even from Domesday Book itself.

### Origins and development of the field system

In the brief account of the arable fields of Cambridge given in Domesday Book, we learn only that they were present before 1066, and that they were held, at least partly, by burgesses. But we cannot at once conclude that they were then organised as a classic open-field system, that is, with tenure mostly divided in furlong strips and an annual rotation of crops and fallow between two or three large fields, as was certainly the case by the late fourteenth century. So the questions remain: first, when did such an open-field system develop, and second, did it happen all at once in what Hall & Ravensdale (p. 54) call a 'great plough-up', or perhaps in phases over a prolonged period, depending on the needs of the inhabitants and the availability and location of good soils?

In attempting to answer the first question, Maitland started with evidence from the thirteenth and fourteenth centuries, and then, as he puts it, stripped off the college ownership at that time to reveal, first, the lands of the previous religious houses, and then those of the early Cambridge burgesses who can be glimpsed with their holdings back to twelfth-century charters and to the time of the Domesday Book. As noted above, he found that, going back to the first burghal charters, the earlier land grants were the largest, suggesting that larger family acreages were beginning to be broken up at this time. This conclusion tends to contradict the usually accepted answer to the second question about the development of open fields, namely that the initial 'fair' apportionment of a tenant's strips involved scattering them widely across the fields, and that only in the later Middle Ages were they engrossed into bundles, or even into individual enclosures.

The dilemma is as follows: either a 'classic' open-field system was in place before the time of the Conquest, but the burgesses had already engrossed large areas of strips, which they subsequently sold off in smaller bundles; or their land had belonged to a pre-open field era, and their post-Conquest grants, with their tendency to partition, were themselves part of the process of establishing the sub-divided open fields from an earlier regime of block holdings. The possibility that this regime might even go back to 'Celtic' or 'Roman' fields is tentatively mentioned by Hall & Ravensdale (p. 52), but Maitland clearly favoured the first alternative. This was partly because his study of the twelfth-century documents did not reveal any clues about new rules for organising a drastically new system, as would be expected if the great transition had taken place during that period of increasing legal documentation. Again, although the fourteenth-century terriers reveal the continued presence of the doles and other large blocks of land held

in severalty, these are still surrounded by, and often entangled with, sets of small strips of the open field. The whole picture in the fourteenth century looks much more like blocks of strips engrossed from open fields by individual owners, than open-field strips intruded among pre-existing blocks. This is well illustrated in the detailed furlong maps in Hall & Ravensdale (pp. 20, 40, 71, 77). It is possible, of course, that piecemeal transitions from engrossment of strips to subsequent break-up of single-owner blocks of land occurred more than once in the centuries between the establishment of open fields and Parliamentary Enclosure. It certainly seems that both before and after the Conquest there was much traffic between holdings, the details of which are probably forever inaccessible.

Hall & Ravensdale do not directly address the question of the time of origin of the open fields, but with regard to the question of development they take a clearly evolutionary view. Looking at their reconstruction of the West Field plan of 1789, they identify furlongs of two different types. There are groups of small fields with straight boundaries, some arranged irregularly and some in a grid pattern. These are concentrated around three areas of known early settlement: at the foot of Castle Hill near the old settlement of the Roman town; around The Howes at the Cambridge end of St Neots Way; and in Newnham Crofts and its surrounding fields. Settlement in these areas would have exploited gravel or chalk soil (Fig. 10), which provided easier farming conditions than the pervasive clay wetlands in the centre of the West Field. On the clay, by contrast, there are large long fields with curvilinear boundaries which have the typical appearance of classic open fields. The main east-to-west boundaries are usually headlands situated approximately one furlong apart, and the seventeenth-century map shows strips with reversed S-bends (Hall & Ravensdale pp. 20, 40). It is likely that development of these open fields would have taken place later over the central clays than around the three centres of settlement.

In the East Fields, it is noticeable that the furlongs in the four fields that border the town are smaller and more rectangular than those further out. So far this looks similar to the pattern of the West Field, where settlements seem to have surrounded themselves with small manageable closes. However, the similarities come to an end when it is noticed that the soil conditions in the West and East Fields are quite different (Fig. 10). In the west, the three areas of settlement outside the town are situated on rare patches of gravel near the river and along the Huntingdon Road, while the larger part of the West Field is on waterlogged clay. To the east of the river, on the other hand, patches of clay are small, and the bulk of the surface geology consists of gravel, rising to a low chalk ridge on the west side of Coldham Brook. As we have seen, however, in spite of the chalk, the presence in the flat landscape of the brook (and many chalk springs) causes heavy waterlogging if left undrained. We should expect, therefore, that the earliest arable

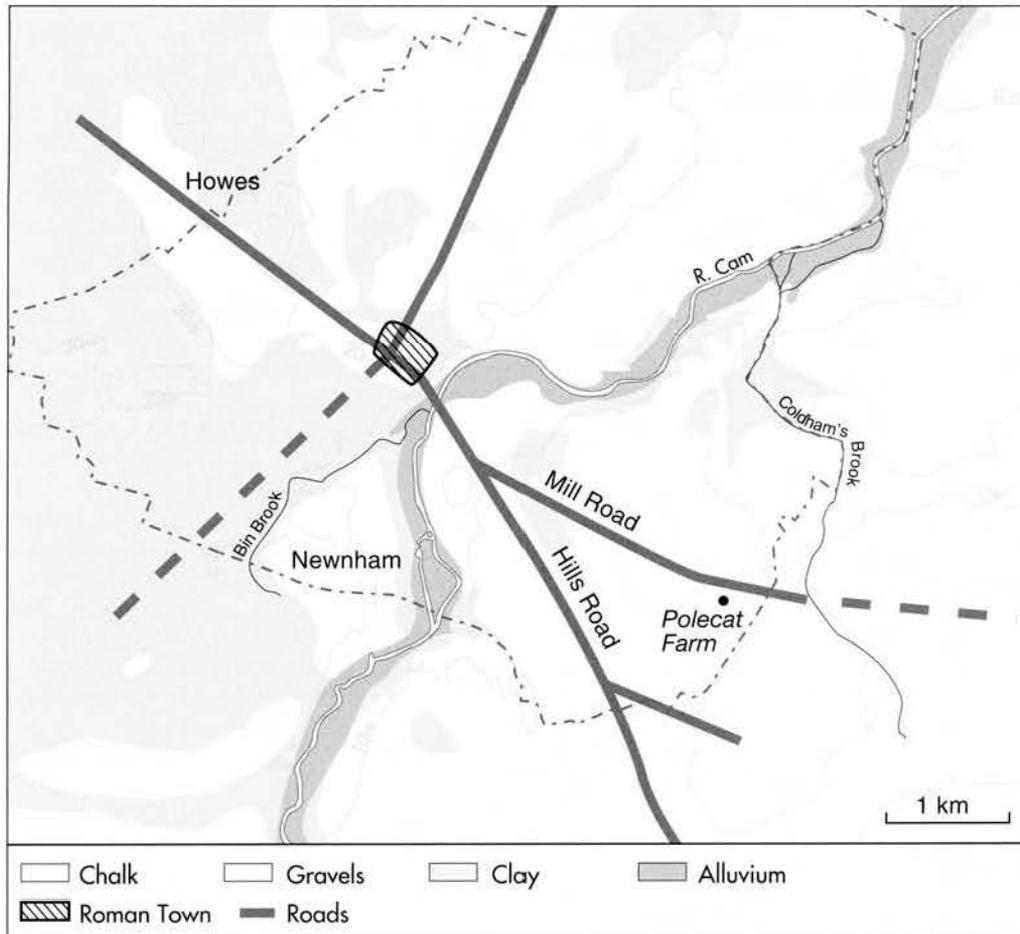


Figure 10. The Geology of the West and East Fields (from drawing of Sarah Wroot, Taylor, 1999, p. 24).

will be on the comparatively dry gravel, quite apart from its proximity to the town. It should be noted, for example, that on Baker's map, the only farmstead beyond the town along Hinton Way is Polecat Farm, and that this was already 'Polecat close and furlong' in the fourteenth-century terrier. It lies, not surprisingly, on the only patch of gravelly soil surrounded by chalk at the east end of Hinton Way.

Together with the geology, other clues about the timing of the development of the open fields are provided by Domesday Book. Interpretations of Domesday are always controversial, and this is no exception, but it is worth pursuing here because its consequences would provide independent evidence for the conclusions just drawn. The argument depends on an observation about numbers of ploughlands as given in the Domesday entries for wide areas of Cambridgeshire and its East Anglian neighbours.<sup>14</sup> First, assume that, in general, the known nineteenth-century parish boundaries are a near approximation to the boundaries in 1066. This has been confirmed in many cases of parish boundaries in pre-Conquest charters. Then, if numbers of Domesday ploughlands (or their surrogates) are taken to represent the acreage of the arable fields in 1066, it turns out that the proportion of arable to total parish area ranges

closely around a mean of about 33%, with occasional anomalous deviations which can be explained by the nature of the terrain: heavy woodland, extensive fen, etc.

Carrying out this calculation for 12 Domesday parishes around Cambridge, and assuming as is usual for Cambridgeshire that a ploughland is equivalent to 60 field acres, we obtain a proportion of arable to parish area ranging from 48% to 29%, with a mean of 36%. Cambridge itself, of course, cannot be included in this calculation because Domesday Book does not record its number of ploughlands. But it is interesting to transfer this average percentage from its neighbours to the Cambridge East Field. Assume that the late Saxon arable stretched from the town limits outward along and between the roads from Newmarket Road to Trumpington Road and the river. The acreages of Midsummer and Coldham Commons should be subtracted from the available arable, since we assume that they were not cultivated before 1066. Probably the whole of Sturbridge field should also be subtracted, for three reasons: first, its situation between waterlogged commons and river make it unlikely to have been among the early arable fields; secondly, there is no evidence of substantial settlement near it until Barnwell Priory was built at its edge in the early 1100s;

and thirdly, it was included in the rotation cycle with Ford field, the most distant of the three larger fields, suggesting an afterthought when the rotation cycles had already been established.

On the basis of these assumptions it may be suggested that the 36% arable, out of the whole of the East Field, should be apportioned as follows (see Fig. 9). Include the whole of Clayangles and Swinecroft fields in the probable total of Domesday arable. They are adjacent to the town, and therefore probably among the first areas to be incorporated in the common fields. Then take the furlongs from the town outwards, and add up their acreages to give totals which form equal proportions of the three largest fields, so that these total acreages, together with those of Clayangles and Swinecroft fields, make up the 36% of arable to the total parish area, which includes the commons and Sturbridge field. This results in the following furlongs as potential Domesday arable:

- (i) Clayangles and Swinecroft;
- (ii) Bradmore field up to the East Balk, but omitting 'Bradmore';
- (iii) Middle field as far south as Peshall Way, and east as far as Hounden Half-acre;
- (iv) Ford field as far south as Bishops Way (Bateman Street), together with most of Coe Fen to the west of Trumpington Road.

In this method of calculation the choice of furlongs to constitute equal proportions of the three largest fields makes some use of what are clearly ancient boundaries. These boundaries do, however, turn out to have quite significant features which are independent of the 36% calculation. In Bradmore field, the 'ploughland area' reaches East Balk, which goes across the whole field in straight pieces from north to south. It is also roughly coincident with the boundary between gravel and chalk from Newmarket Road to Hinton Way, which certainly looks appropriate for the limits of cultivation at an early date. It is notable that the names of furlongs indicating pasture (Milk Croft, etc.) all lie outside it. Moreover, the Balk ends with Crouch acre, named in the fourteenth-century terrier, which doubtless refers to the later named Hinton Cross on Hinton Way. This cross may indicate a significant boundary, perhaps of early extensive intercommon to the east between Cambridge and Hinton. Again, in Middle field, it may not be a coincidence that it seems natural to apportion the early arable to the east of the old track of Peshall Way, and that the 36% proportion in that field brings us again to the cross on Hinton Way, almost opposite East Balk. To the south and west of this point, it cuts across the gravel which extends as far south as Trumpington village. In Ford field, the same calculation of proportion brings us just north of Little Potmore Close, south of which we have already found field names consistent with early moorland. On the other side of Trumpington Road, Coe Fen might seem to be an unlikely site for early arable, but strips there are clearly described in the fourteenth-century terrier.

## Conclusion

This project has attempted to reconstruct as much as possible of a map of the medieval East Field of Cambridge, on the basis of early terriers and the work of Maitland, Stokes, and Hall & Ravensdale. The results have been used to trace out the early township boundaries in detail, and to discuss the possible consequences for the origins and development of the open-field system.

Several significant conclusions have emerged. First, it turned out that Clayangles and Bradmore fields were the easiest to reconstruct, because the street pattern, laid out mainly in the nineteenth century, has retained most of the boundaries described in terriers going back to the fourteenth century. The various later uses of the other largest fields (Sturbridge, Middle and Ford), made reconstruction more difficult, because the medieval pattern has been largely destroyed by post-enclosure arable fields, modern housing developments and various industrial activities. Secondly, a 'perambulation' of the medieval township boundary shows that most of it was determined by the river and other natural watercourses, together with areas of often waterlogged fen, and inter-parish moorland and common. The boundaries across fen and moor that can be deduced from the fourteenth-century terrier are relatively straight or gently curved, and were probably drawn across watercourses and intercommons at some earlier time to define the neighbouring parish territories.

Thirdly, tentative conclusions emerge about two of the long-standing problems in the history of field systems, namely, when were the Cambridge open fields established, and were they set up as single unified systems, or did they evolve over time in response to such factors as growing populations, soil conditions, or even just a human desire to 'tame the wilderness'? With respect to the date of origin, little new evidence is provided by the reconstruction of the medieval maps, but on the other hand nothing has emerged that would contradict the conclusion of Maitland and others that the open fields were pre-Conquest in origin. A new argument from an interpretation of 'ploughlands' in Domesday Book has been used, however, to suggest how arable cultivation in the East Field might have extended to a periphery at about a mile from the town before 1086, and subsequently to the parish boundaries as these existed in the fourteenth century. These boundaries survived until the early twentieth century, when the Borough of Cambridge incorporated much of the land of its neighbouring parishes into its rapidly growing suburbs.

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## Manuscripts

- Cambridge University Library, 'Lands within the bounds of the town of Cambridge, by Alderman Wm. Brightone', 1575, MS Add.7512/1/11
- The following manuscripts have been consulted, with acknowledgements to the Masters, Fellows and Scholars of the respective colleges:
- Corpus Christi College, copy of fourteenth-century terrier of East Fields, CCCC 17.5, and sundry Maps and Plans CCCC 09/17/
- Jesus College, terrier of Barnwell Fields, EST4.4. (late fourteenth-century, transcribed with notes by Dr Caryl, Master of the College 1758–80)
- Peterhouse, 'Little St. Mary's', and 'Cambridge Fields', probably late sixteenth century
- St John's College, 'Lands ... in Barnwell', 1550; Plan of Black Swan Inn, MRS 3; Grant of land by Convent of St Radegund to Hospital of St John, XXXII 6, 1299

## Maps

- Enclosure maps and awards in Cambridge Record Office:
- Barnwell*, 1807, Q/RD c16
- Hinton*, 1806, 152/P7, Q/RDc13 & 26
- Trumpington*, 1804, Q/RDz 6
- Tithe map in Cambridge University Library:
- The Parish of St. Andrew the Less, otherwise Barnwell*, 1856, Maps bb 53(1).01.21
- Baker's Map of the University and Town of Cambridge* 1830. Cambridge: Cambridge Record Society, 1999
- Plan of Sturbridge Fair*, 1725, drawn by G J Smith, 1906. In Cambridge Collection

## Endnotes

- 1 *Domesday Book* 189a
- 2 If Cambridgeshire ploughlands were nominally 120 acres, as appear in other counties, some Hundreds would have had an implausibly high percentage of ploughland acreage within their borders, e.g. Whittlesford Hundred, see Maitland (1897), p. 445.
- 3 See the references and argument in Haslam (1984, p. 23f), which suggests an Anglo-Saxon royal estate dating from before the eighth century, and comprising both Cambridge and Chesterton.
- 4 There have been many changes in this northern boundary during the past century, but measures from thirteenth-century documents given in VCH 1989, pp. 177, 183 show that the medieval boundary of Milton's South Field was about half a mile south of Butt Lane, and in the position shown on Fig. 1.
- 5 The acreages used in the mapping are from the eighteenth-century terrier in Jesus College, and are assumed to be statute values. Most of the land areas in the earlier terriers are given in selions rather than acres.
- 6 Taylor (1999), Plate 22; and *Plan of Sturbridge Fair Cambridge*, surveyed 1725.
- 7 The contrast is apparent in Spalding's map of Cambridge, 1898 (Baggs & Bryan 2002, map 10). The same difficulty arises in the reconstruction of the medieval West Fields. In spite of the existence of a plan drawn from a fourteenth-century terrier in 1789 (foldout in Hall & Ravensdale (1976)), there is very little coincidence between the pre-enclosure boundaries of this plan and those of Baker's map. For the contrast between urban developments in the West and East Fields respectively, see Bryan & Wise (2005) and Guillebaud (2005, 2006).

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- 8 In all the terrier copies there appear to be internal contradictions regarding the location of the furlongs next to Cheney Dole (Little and Mickle Ives Crofts). But there is no doubt about the location of the Pesthouse, and therefore of Cheney Dole, on Coldham Common. Another early example of encroachment of arable on the town's ancient commons occurred on the land between the two ditches at the edge of Greencroft, built in the reigns of Kings John and Henry III respectively. See Faber (2006).
- 9 Grey (1953).
- 10 Vancouver (1794), Vol.I, p. 50).
- 11 Maitland (1898 p. 179) lists seven doles, but the most likely interpretation of the terriers seems to show that they have described separately a seven-acre dole, which should have been included in the irregular 14-acre dole in Furlong 20 next to Coldham Lane.
- 12 For the probable descent of these lands, see Maitland (1898), pp. 179ff, and Hall & Ravensdale (1976), pp. 64ff.
- 13 For a relevant study of the medieval field systems of this area see Oosthuizen (2006).
- 14 As found from Domesday calculations for the counties of Cambridge, Huntingdon, and Suffolk, and for several hundreds in the counties of Bedford, Essex, Hertford and Norfolk. For Suffolk, see Hesse (2000). In Norfolk and Suffolk the surrogates of ploughlands seem to be land areas measured in linear furlongs.