Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological Society)

Volume XCVII
for 2008
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The Old Plough: a neglected property of Ely Porta Manor

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The Old Plough is mid-way between Ely and Prickwillow, adjacent to the Ouse until it was diverted in 1830 to run direct from Ely to Littleport (Figure 1). It was a public house until it became a private residence in the 1930s. So far as has been ascertained, there are only two modern references to the history of this building. Astbury describes it as a ‘stone cottage’, and his photograph has a caption which reads in part: ‘It is built partly of Barnack stone which never completed its journey to the site of Ely Cathedral’ (Astbury 1958, p. 158 and plate 15). A similar message is conveyed by Jakes (1995, p. 103), in the text accompanying his photograph: the ancient public house was built ‘to cater for the river traffic held up at the shallows on the River Ouse.’ But even a brief visit to the site suggests that the building has a much more interesting history than that solely of a riverside public house which illicitly incorporates stone destined for Ely cathedral.

Location and situation

The Old Plough stands at TL 575 812 on a small “island” of Kimmeridge Clay between the former course of the river to the north and Middle Fen Bank to the south (Figure 2). It seems probable that, from early times, the summit of this “island” stood above the level of the recurrent inundations that would have been the norm in medieval times and later. There is no other patch of land in the immediate vicinity which stands as high. However, the island we see today is much larger than it would have been before the Fens were drained. Since 1652, the surface of peat lands has fallen in some places by as much as 4.6 metres (French and Pryor 1993, p. 11; see also Fowler 1933), so we must imagine the Old Plough as having stood upon a tiny patch of dry ground. Between the building and Middle Fen Bank there is a very pronounced depression, of which more will be said below.

It is generally accepted that the Ouse was diverted in the twelfth century to connect Ely to the river, whereas prior to that it flowed past Stuntney and Quanea to the Old Plough and then turned eastwards to Prickwillow. Before this diversion the Lark joined the former course of the Ouse about 800 yards south of the Old Plough, roughly half way to Quanea (Astbury 1958, pp. 31 and 33; Fowler 1934). The former main channel of the Ouse, past Stuntney and Quanea, came to be known as Roll’s Lode.

The Old Plough as a building

The principal part of the building is rectangular, 41 feet long and 20 feet wide (c. 12.5 m by 6.25 m), with the long axis being approximately east-west. This is a single-storey building in which the roof space has been incorporated as bedrooms, apparently long ago, now lit by velux windows replacing the former dormer windows, each with a flat roof covered by a single sheet of cast lead (compare Figures 3 and 4). The present tiled roof replaces tiles which the owner believes were late sixteenth century or early seventeenth in date; they had been re-laid so that the formerly weathered lower parts were protected by the unweathered areas of the tiles above. At the eastern end there is a modern extension, mainly timber-framed and slightly narrower, also one storey in height but substantially lower than the main building; this extends for 36 feet (c. 11 m). On the north side of the property is a nineteenth-century lean-to extension housing the kitchen, etc; this runs for 22 feet (c. 6.75 m) from the east gable.

There is no known early documentary evidence about the house and there are no timbers that can be confidently accepted as original to the building suitable for dendrochronology dating (Martin Bridge Pers. comm. 2007). Despite considerable work on the house and garden over a period of twenty years by the present owners, no midden has been found, and no scattering of shards and other debris that might illuminate the early settlement of the site. Tim Murray (Pers. comm, 2007) finds it difficult to understand this lack of archaeological evidence. Consequently, the starting point of the enquiry has to be the architectural evidence of the building itself.

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Exterior

The central chimney is a nineteenth century addition to the property. The visible upper part of the eastern chimney was re-built by the present owner in a manner to approximate the original structure; all the lower part is undoubtedly original. As for the west gable, prominent in the photographs, the upper metre or thereabouts was also re-built by the present owner; the overall height was reduced by six courses. Otherwise, the chimney is original, subject only to building scars and recent re-pointing. There is no doubt that the western gable chimney is integral with the structure of the house, and it appears that the same is true of the eastern chimney.

Mac Dowdy considers that the chimneys, especially the western one, are key to the architectural understanding of the building, taking the view that the quality of the bricks and the pattern of their bonding provide a conservative dating to the early sixteenth century (Pers. comm. 2006). This is an assessment with which Paul Spoerry concurs (Pers. comm. 2006). However, Beth Davis (Pers. comm. 2007) draws attention to the tumbling brickwork in the western gable, and that the gable without the chimney is one of the commonest forms found in the Fens from the eighteenth century (Cudworth 1937); she thinks the present house was built in the second half of the seventeenth century. A fact of critical importance that cannot be inferred from either photograph must be noted: the present-day house stands upon a masonry plinth, which faithfully traces the entire footprint of the main rectangular building, including the base of the western chimney. It is obvious that the plinth was constructed by masons who were familiar with their materials and Davis accepts that this plinth may be late medieval, believing that the property was re-built in the second half of the seventeenth century.

In sharp contrast to the plinth, the Barnack stones above are set randomly, paying no attention to proper alignments, and with a small intermixture of Greensand and Chalk clunch plus the occasional brick. Some of the stones are dressed, others are not, and the present owners have found several pieces of fully worked stone buried in the garden. These materials have all the appearance of being second hand, or rejects from mason's yards. These materials, and the way they are laid, are identical to dwellings and walls that abound in Ely, and elsewhere. King's School has inherited several monastic buildings and a perambulation with the Archivist, Lynne Turner (2006), revealed the use of recycled stone in the fifteenth century and even earlier, comparable to 5 Silver Street, Ely, which is thought to have been a merchant's abode (Blakeman and Petty 2001, p. 67).
The key to dating the Old Plough above the stone plinth is the brickwork, which is English bond, in general use from the fifteenth century and then progressively replaced by Flemish bond during the seventeenth (Brunskill and Clifton-Taylor 1977, pp. 27-8; Lloyd 2003, p. 65). English bond has alternating courses of headers and stretchers, whereas Flemish bond alternates headers and stretches in each course. The bond suggests the earlier date in preference to the later one suggested by Davis, but on its own is not conclusive.

The most obvious other features of the Old Plough brickwork are the use of relatively thick mortar and disregard for the perpends, the alignment of the vertical joints between bricks. Over time, as bricks became more precise in their dimensions, it was possible to use thinner mortar and to respect the perpends, so that brickwork became more geometrical. Although there are examples of early brickwork using relatively thin mortar with well-defined perpends (e.g., the Deanery at Hadleigh in Suffolk, 1495), the chronological survey contained in Brunskill and Clifton-Taylor (1977) indicates that the characteristics found in the Old Plough were general until the seventeenth century, when there was a fairly sharp change before mid-century. Ball's Park in Hertfordshire (c. 1640) illustrates the transition, being English bond with relatively thin mortar and well-kept perpends. It appears that, from the Restoration onwards, brickwork was much more regular than hitherto.

The other notable changes were the increasing thickness of bricks and the greater regularity of their...
Figure 3. The Old Plough, November 2005, viewed from the west. Photograph by Michael Young.

Figure 4. The Old Plough, probably 1930s. Astbury 1958, plate 15.
sizes. Lloyd (2003, pp. 89-95) tabulates buildings by the thickness of the bricks used and the date of construction. Bricks under 2 inch were not in use after about 1500, whereas 2 inch bricks were used from the thirteenth century until the late seventeenth. Somewhat larger bricks, ranging in thickness from 2 to 2.25 inch, were in use from the mid-fifteenth century to the mid-seventeenth, and, from about 1550, 2.5 inch bricks began to be used. The general trend was towards thicker bricks.

Cambridge illustrates the changing use of red brick (Royal Commission on Historical Monuments 1995). The Front Court of Queen's College was built in 1448-49, a variable semi-English bond, with an excess of stretches, using 8x1.75-2 inch bricks, relatively thick mortar and with no attention to perpends. Late fifteenth century bricks in Jesus College are 8.75x1.75 inch, and somewhat later, 1511-16, the First Court of St John's was built in English bond and with the perpends disregarded; the bricks are 8.9x2-2.25 inch thick. By 1586, Emmanuel used 9.25x2.25 inch bricks. Chesterton Hall, c. 1630, was built using a rather irregular bond and with imperfect to non-existent perpends. The bricks appear to be somewhat thicker, 2.25 to 2.5 inches, and the mortar is much thinner than in the earlier buildings. Striking changes are then visible in both St Catharine's and St John's. The south west corner of St Catharine's Main Court, abutting Queen's Lane, was built in 1673-74, in English bond, with ill-defined perpends; the bricks, 9x2.5 inch thick, are set in thin mortar. At almost the same time, 1669-73, St John's completed the Dutch gabled range that rises from the river Cam, with bricks that appear to be 9x2.25 inch, in Flemish bond and using mortar that is comparatively thin. Although the perpends are only partially kept, the precision of the brickwork has a distinctly 'modern' appearance, more so than contemporaneous St Catharine's.

Bishop Alcock (1486-1501) built two palaces, one in Ely and another in Little Downham, both in red brick. The former has been much modified, whereas what is known as the barn at the latter, which is probably the original palace, with a magnificent crow-step gable, is mostly original. This is largely 9 inch bricks, with some 8 inch, and all are 2 inch thick. English bond, thick mortar and disregard of perpends are the other characteristics of the Little Downham building. The brickwork is very similar to that of the Old Plough, the bricks there being 8.5-9x2 inch.

This brief review of dated buildings indicates that the brickwork of the Old Plough is late fifteenth century or early sixteenth, possibly built of bricks surplus to the construction of Alcock's two palaces. However, is the presence of tumbling brick in a straight sided gable sufficient reason for thinking that the present building was constructed some 150 years later?

According to Clifton-Taylor (1987, p. 251), the Fenland gable 'won considerable favour' in the eastern counties in the seventeenth century and thereafter, implying somewhat earlier adoption than indicated by Cudworth. However, the two separate elements - straight sides and tumbling brick - had been in use considerably earlier.

Good examples of early straight-sided gables are to be seen in Silver Street, Ely. The stone-built dwelling contains fifteenth or sixteenth century paintings. Another property, in Littleport, no longer exists, being the building which Astbury (1958, p. 158) likens to the Old Plough for the Barnack stone supposedly destined for Ely cathedral. Described by Fowler (1937), Fisher's Cottage dated from the fifteenth or sixteenth century and possessed a straight-sided gable.

Tumbling brick was in use for chimneys and gables well before the second half of the seventeenth century. Cudworth cites a property in Fen Drayton as a good example of early Dutch/European architectural influence, in the form of a crow-stepped gable, a design that became popular in the late fifteenth century (Clifton-Taylor 1987, p. 218). The Fen Drayton example is interesting for the transition from vertical wall to gable, effected by tumbling brick. The use of tumbling brick in 'Sussex chimneys' was common throughout the Sussex-Kent area and in Essex from the sixteenth century (Lloyd 1929, p. 35), and an example from that century, adjacent to Badley Hall, Suffolk, is illustrated in Brunskill and Clifton-Taylor (1977, p. 108). The Prior's House in Ely possesses a Sussex chimney, built on a massive stone base; although the date of the brickwork appears to be uncertain, the quality thereof and its situation suggest that it is an early example of the use of tumbling brick. Two notable sixteenth century houses have been identified that incorporate tumbling brick in straight-sided gables: Sissinghurst Castle in Kent, 1535 (Lloyd 2003, p. 338); and Lovell's Hall at Terrington St Clement, near the Wash, 1543 or earlier (Wight 1972, plate 75 and p. 347).

The form of the gable at the Old Plough appears to be a much less reliable indicator of its date than is the quality of the brickwork. Therefore, it seems probable that the Dowdy/Sperry dating to the early sixteenth century or earlier can be accepted, with the implication that the property represents an early example of what became the common Fenland gable of the eighteenth century. However, whatever the date of the present building, Davis accepts that the masonry plinth may be late mediaeval, which implies that a substantial and important building was on the site from around 1500.

Interior

The interior of the Old Plough has been much altered but the owners have found nothing to show that the entrance was ever situated other than on the south front. There is evidence, probably dating from the nineteenth century, of its use as a pub; for example, a sliding glass panel into 'The Snug'. Beth Davis judges that the door and its frame leading into the lean-to kitchen on the north side of the property are from the period 1660-1720 but it seems unlikely that they are in their original location because they show no sign of weathering. Another similar frame has been relocated by the present owners. Traces of a bread oven were found at the eastern end, and a doorway has been re-opened into the extension at that end of the
building; when this was re-built on the previous foot-

of the main house, with the northern foundation built

walls stand on foundations very similar to the those

of speaking that the thirteenth-century pine roof timbers of the Three Blackbirds,

Krayenbuhl Broad Street, Ely originated as scaffolding (Holton-Krayenbuhl 1984, p. 13). Prior to the construction of the Guildhall in Cambridge some houses dating from

before the end of the sixteenth century, standing on

Pine Hill, also had pine roof timbers, and it is known

that the best scaffolding poles used for the construc-

tion of the chapel for Peterhouse in the seventeenth

century were passed on to the carpenter (Hughes

1937, p. 12). However, the supply of secondhand

timbers was almost certainly declined as the great period of mediaeval church and cathedral

building came to an end, suggesting that the presence

of the pine beams in the Old Plough implies an earlier

rather than a later date for its construction.

Upstairs, the present owners found a small fire-

place at the western end of the building, the flue for

which is constructed of the same bricks as the main

chimney and in a manner consistent with it having

been built at the same time. Access from the ground

door was by means of a simple open tread timber

stair, a feature consistent with an early date for the

property.

Conclusion

The strong balance of probability is that the exist-
ing building was built early in the sixteenth century

or late in the preceding one. If in fact Davis is right

that it was re-built in the second half of the seven-
teenth century, the pre-existing building would have

had the same footprint as the main part of the present-
day structure, and there appears to be no doubt that it

would have been late mediaeval because of the nature

of the stone plinth. Therefore we may be confident

that there was a structure of some importance on the

site round about 1500, whose owner must have been

a person of substance.

A building as significant as the Old Plough, adja-
cent to the Ouse, must have had a landing place, or

hithe. However, there is now no visible sign thereof,
nor is there known any folk memory of such a facili-
ty. However, the photograph reproduced as Figure

4, probably taken in the 1930s, is highly suggestive.
Clearly visible to the right of the motorcar is a retain-
ing wall, which apparently turns at ninety degrees to

run northward beyond the eastern end of the build-
ing. By the time the present owners bought the prop-

erty in 1987 there was no visible sign of the wall, and

no traces have since been encountered. So it is a mat-
ter of speculation that the wall may have been the

remnants of a quay.

Documentary evidence

The earliest public records of the Old Plough that

have been identified are two auction notices in the

Cambridge Chronicle, published on 19 April 1806 and 7

June 1811 respectively. Both notices refer to the avail-

ability from solicitors of further particulars, but there

is no record at either of the relevant Record Offices

(Cambridge and Norwich) that the documents have

survived. The property was offered as a public house

under the sign of the Plow or Plough. It was a cop-
yhold property, occupied by a tenant at will (Mole

Gotobed in 1806), being the property of Ely Porta

Manor in the parish of Holy Trinity (more usually,

Ely Trinity). In 1811, the land tax charges had been

redeemed. The property came with 'the yard, lodges, and

appurtenances; plus some four acres of "excellent

wash land"'.

There is no doubt that the Old Plough was a ma-
norial property of Ely Porta, which was one of the

monastic properties transferred to the Bishop of Ely

shortly after the bishopric was established in 1109.

Presumably, the four acres of washland that went

with the property in 1806 represented part of the

manorial lands. The fact that they were described

as 'washland' implies that they lay to the north of

Middle Fen Bank, where periodic river inundations

would have occurred.

Being a property of the Bishop implies that there

should be ecclesiastical records from early times. So

far as can be ascertained, no scholar has identified the

property from these sources. In fact, there are very

few references to Ely Porta, and certainly nothing to

compare with Coleman's (1984) account of Downham,

another of the Bishop's manors administered by the

Dean and Chapter. The nearest to an early published

reference to the site that has been found is derived

from a 1251 survey of Ely, which records that the

Bishop's wastes merged into the wastes of other town-

ships, including Padnal Fen, wherein he had enclo-
sures for peat digging (VCH 1667, p. 35, including fn 2).
The major turbaries at Turbutey was at the western

dge of Padnal Fen, and evidently it was not the only

one.

Reaney (1943, p. 222) identifies Padnal Fen as the

intermixed lands of the parishes of Ely St Mary and

Ely Trinity, with the earliest record for the name

being 1221. The name survives to the present day on

Ordnance Survey maps, and was cartographically re-

corded by Hayward (1604), Hondius (1632) and Moore

(c. 1658). Hayward's map is at a scale of one inch to the

mile and is particularly interesting (Figure 5). Padnal

(or Padnold) is shown as occupying the triangular

area between Ely, Prickwillow and Littleport, and as

being divided into the northerly 'Littleport Padnold'

and the southerly 'Ely Padnold', the latter presum-
ably being the area controlled by the Bishop. Hayward

records Padnold Lake, as an appendix of the Ouse on

its left (north) bank, almost exactly half way between

Ely cathedral and the Ouse/Lark confluence, plac-

ing it very near to the Old Plough. The Old Plough is

not shown, nor is Quanea, though both Thorney and
The Old Plough: a neglected property of Ely Porta Manor

Figure 5. Padnal Fen and environs, 1604. Re-drawn from Hayward 1604.

Turbutsey do figure. The Lake is clearly not a natural mere, but artificial in origin, with two possible interpretations. It might have originated as a peat digging that had become flooded, as occurred in the Broads. However, an alternative explanation is that the Lake represents the relic of a water channel linking to the north-south channel shown by Hayward, so forming a continuous watercourse passing through the Fen between two points on the Ouse, as portrayed in 1662 by Dugdale (1772, map facing p. 416). Whether there was a continuous channel or not, Hayward shows a Fen for which access had been created, implying active commercial use. Consequently, it seems likely that the Old Plough would have played an important role, whether for a turbary or as the upstream access into Padnal Fen as part of the management of Ely Porta Manor.

Reaney offers two possible origins for Padnal as a name: the first is suggested by the element *pad*, derived from the Old English for a frog or toad, and hence 'frog's nook'; the other possibility is the personal name *Padda* and hence 'Pada's nook'. If the former is the root of Padnal, then Reaney suggests comparison with 'Pathewere' or 'Padewere', a fishery of the monks of Ely dating to 1086. As Darby (1971) makes clear, the Domesday documents are difficult to work with. He points out that the Domesday Book includes Stuntney and its fishery, but no other property or fishery in the vicinity, even though Turbutsey is known to have existed in 974. On the other hand, the *Inquisitio* lists 15 or 16 fisheries belonging to the Abbot, including one identified as 'Pathewere' or 'Padewere', but omits Stuntney, which is surprising given its importance (Hamiltos 1876, p. 190). The *Inquisitio* also includes 'Prikewyleu' and 'Quammingewere' as fisheries; the former is Prickwillow, while the latter might have been a fishery in the vicinity of Quanea (Reaney 1943, pp. 220 and 222). Thirty Domesday fisheries have been mapped in Cambridgeshire (Darby 1971, fig. 84), and we know that the Abbot of Ely had the benefit of 15 or 16, so it is evident that fisheries were widespread in the area at the time of the Norman Conquest; there must have been eel fishing in Padnal Fen.

It is tempting to suppose that the 'nook' or 'knoll' of Padnoll refers to the small island of Kimmeridge Clay on which the Old Plough stands, which may have been the only dry land on the edge of the Bishop's part of Padnal Fen other than the Ely upland to the west. It seems probable that there was a fishery, and it is enticing to suppose that Padnoll Lake could have been either a turbary or the relic of a channel giving access into the heart of Padnal Fen. The little area of dry ground at the Old Plough would have been a good base for commercial operations, the Ouse providing relatively easy communications to both the north and the south. The fact that the river did not flow directly to Ely until the twelfth-century diversion would not necessarily have been a problem, despite the fact that most of the local manors were used to provision the
clergy in Ely, because the Abbot and then the Bishop were both also interested in the cash income which their manors could generate, which could imply non-local disposal and sale for produce originating at the Old Plough and transported along the river.

To determine whether these suppositions have merit would require a careful search through the surviving ecclesiastical documentation, much of which is now held by Cambridge University Library. The well known study of the Sacrist Rolls published by Chapman was based on a very small sample of the available records (Chapman 1907, p. v), and it is known that there were major primary sources which never did survive beyond their immediate use (Evans 1940). For someone with the requisite skills and interest, it seems that there is a substantial piece of work to be done to see whether or not the Old Plough can be identified and how the site was used.

Given the dearth of identified documentary material, it might be thought that very little more could be said about the early history of the Old Plough. In fact, this is not so. The property occupies a peculiarly important position in relation to the Ouse, and to the other manorial properties in the area. Consequently, the basic question may be formulated as follows: what economic function or functions would warrant the construction of an important residence in this particular location in the early sixteenth century or before? This question is a shorthand way in which to describe what archaeologists term 'site catchment analysis' (Murray 2001, p. 570; see also Chisholm 1962). Following this train of thought, it is possible to set out important leads that it would be possible to explore by documentary enquiry or direct archaeological investigation.

What may the history of the Old Plough be?

There are hints that there would have been turf cutting and eel fishing in the vicinity, and no doubt the washland was used for summer grazing. The additional possible functions of the Old Plough in medieval and post-medieval times are listed below:

1. Transhipment of goods on the Ouse to permit vessels to negotiate the shallows or 'Hards' that existed just upstream from the Old Plough.
2. Transhipment of goods over Middle Fen Bank, between the Ouse and Roll's Lode, to service Quanea and Stuntney.
3. Collection of tolls or dues on river traffic.
4. A retreat for the clergy and place for entertainment, analogous to the way in which Turbutsey was used (Chapman 1907, p 3; Meadows and Ramsay 2003, p 65).

Something can be said about the first three of these numbered possibilities.

The need for transhipment on the Ouse at the Old Plough

It is well known that, in the early seventeenth century, there were shallows downstream from Ely, locally termed Hards. Their location can be determined with some precision as being a very short distance on the Ely side of the Old Plough. The twelfth-century cut to divert the Ouse crosses the outcrop of Kimmeridge Clay on which the Old Plough stands, this clay being a resistant rock in the local context. Relatively large vessels coming from King's Lynn fully laden found that the Hards could not be negotiated, at least during times of low flow. Badeslade (1766 p. i) avers that, prior to the draining of the Fens in the seventeenth century, keels could carry 40 ton cargoes 36 miles from King's Lynn and that cargoes of about 13 ton could proceed further upriver; the 36 miles would have brought keels to the Hards near the Old Plough (Chisholm 2007, p. 180).

That transhipment did occur in the immediate vicinity of the Old Plough is strongly suggested by the coal that can be gleaned. It happens that the field immediately north of the property was deep ploughed in the winter of 2005/06, this being the first ploughing for about eight years. On 22 March 2006, the author walked the land. Very little coal was found south of the ditch which marks the northern boundary of the Old Plough curtilage, and only in the northeastern corner of the property and the adjacent field to the east, close to the ditch. On the other hand, coal proved to be plentiful north of the ditch, most especially between points A and C in Figure 6; a frontage to the Old Plough of about 125 metres. The greatest concentration, especially of the larger lumps, was in the vicinity of B. In places, coal be found some 30 m north of the ditch. Coal was also found between C and D, a distance of about 125 m. Outside the limits A-D, coal seemed to be entirely absent.

The recent ploughing clearly revealed that the ditch forming the northern boundary of the Old Plough property represents the southern edge of the former river channel. Between A and C in Figure 6, riverine gravels with some fresh water shells mark a channel some 20–30 metres wide, beyond which to the north is a sharp transition to stoneless alluvium, the remains of the ploughed out natural levee deposited by flood waters. South of the ditch, the land rises gently, being the outcrop of Kimmeridge Clay.

Coal found today may have been moved from its original location by the river itself and/or by cultivation since 1830. The distribution in the bed of the former river implies that it has not originated from a single source, such as a sunken vessel, but has its origins in widespread spillages. The most likely cause of spills is transhipment, from larger boats coming from King's Lynn (or Wisbech) into smaller vessels which could negotiate the Hards just upriver from the Old Plough. Some of this transhipment evidently occurred along the course of the river east of the point at which it was diverted in the twelfth century. No transhipment seems to have occurred between C and E (Figure 6), where the pre-twelfth century river ran along the eastern edge of the Old Plough.

The field evidence recorded above corroborates the following oral history. The present owners say that the elderly lady from whom they purchased the
property recollected, as a child, being sent by her mother with a bucket to collect coal from the field. We do not know how frequently this happened, nor the quantity collected but we may assume that the practice went back to the time when the Ely-Prickwillow channel became redundant in 1830. The March 2006 field walk was devoted primarily to ascertaining the spatial pattern of finds, but nevertheless 0.76 kilogram of coal was collected in about one hour; the largest lump weighed 0.10 kg.

No coal has been found south of the existing dwelling. This may mean that there was no transhipment there. Alternatively, it may be that the existing depression is the pale shadow of a former harbour, in which coal spillages lie buried under more recent infill. The only way to find out would be some systematic excavation. If there had been transhipment over Middle Fen Bank to service Quana and Stuntney, then we would expect some coal to have spilled on the south side of the Bank, but there are no reports of finds having been made.

There is no reasonable doubt that transhipment of coal in the Ouse north of the Old Plough was a common occurrence. Likewise, if there was the need to do this for coal, presumably the same thing was necessary for other goods. Consequently, it is clear that there was at least this economic function for the Old Plough. But was there a staithes, or did all of the transhipment take place from one vessel to another somewhat randomly over the 250 m. stretch of river? And over what period of time did this happen? Coal was being transported to the monastic coal yards in Ely as early 1251 (Owen 1993, p. 11), so it is possible that transhipment at the Old Plough occurred from that date or even earlier. The latest that transhipment would have been necessary seems to be the mid-seventeenth century, for reasons discussed in the section below on the draining of the Fens. We can be reasonably confident that transhipment was necessary in the first half of the seventeenth century but information for earlier times is scanty. One relevant factor would have been the size of the vessels in use and their laden draught, regarding which the available information is somewhat contradictory.

Excavations at Broad Street in Ely have revealed four cuts perpendicular to the river, variously in use from the fourteenth century to the sixteenth; two were probably dug in the late fourteenth century or early in the fifteenth. Ranging in width to somewhat over 13 ft (4m), these cuts would have allowed small barges or boats to berth, vessels that may have carried 15 to 25 tons when fully laden (Cessford et al. 2006; see also Fairweather 2005, p. 181 fn 382). Such craft would have needed about one m. of water, a depth which may normally have been available at the Hards. The two early harbours appear to have been replaced by two others in the sixteenth century with similar dimensions. Unfortunately, we do not know whether the craft using these four anchorages would have been fully laden when crossing the Hards. More confidently, we may say that the dimensions of the cuts preclude the possibility that keels, with a beam of about five metres, could have used them. But these hithes were not the only ones at Ely, so we cannot be sure that larger vessels were not reaching the town. A somewhat different picture is conveyed by a mid-sixteenth century report that Ely had but three barges or lighters, the average capacity of which was only just over seven tons of cargo (Elye et al. 1909, p. 95; see also Summers 1973, p. 39). These boats were trading all the
way to King’s Lynn, and are unlikely to have been seriously impeded by the Hards. It seems reasonable to suppose that vessels became larger over time, and that this increased the frequency with which transhipment became necessary. And we know that early in the seventeenth century the Hards presented a serious problem at times of low flow, so it is probable that this had been the case for some time previously.

The transhipment function identified above places the scene of action to the north of the Old Plough. That being the case, one might expect the building to face in that direction. However, the present owners have found no evidence to suggest that the building ever faced north; in the light of their renovation work, they believe that it has always faced south. Why? Attention has been drawn to the depression which separates the building from Middle Fen Bank, a depression that Michael Young (Pers. comm, 2005) thinks is reminiscent of river harbours elsewhere in the area. To explore matters further, we need to consider Roll’s Lode.

Roll’s Lode

It is generally accepted that, at the time it was decided to re-build the cathedral at Ely after the Norman conquest, the Ouse did not follow its present course from the Old Plough westward to the city. Instead, it turned sharply south from a point immediately east of the Old Plough, to wind its way past Quanea and Stuntney to join the modern course of the river south of Ely, just upstream of the railway bridge, at TL543 782. To bring stone close to the cathedral construction site, the river was diverted, most probably early in the twelfth century, and the straight section of Middle Fen Bank which runs west from the Old Plough marks the new course (Gardiner 1993, p. 35; Hall and Coles 1994, p. 136). The channel of the abandoned river is clearly visible as a roddon on the 1:50,000 geological map, solid and drift, published by the British Geological Survey in 1980, passing close to Quanea and Stuntney. It came to be known as Roll’s Lode, remnants of which are still visible in the landscape (Figures 2 and 6).

We know that Quanea had a hithe in 1416 (VCH 1967, p. 38 fn 60, and p. 49; see also Hall et al. 1996, p. 40). At the minimum, therefore, we know that Roll’s Lode was navigable for some period after the Ouse had been diverted. But does this imply free access to the Ouse, or had Middle Fen Bank been constructed, with the effect that navigation on the Lode depended on transhipment at the Old Plough?

There are no known documentary sources which record the diversion of the Ouse in the twelfth century. Nor are there records about the construction of embankments, which are hard to date unless they contain datable material, as was the case with the wooden culvert through a sea bank near Wisbech (Taylor 1977). Consequently, in considering Roll’s Lode and Middle Fen Bank, it is necessary to rely upon indirect evidence, in the interpretation of which we need to remember an important feature of ecclesiastical administration following the establishment of the Ely bishopric in 1109. The re-building of the cathedral was in the hands of the Bishop, and his lands, including Ely Porta Manor, were administered by the Dean and Chapter, so it may be surmised that the Bishop was responsible for diverting the Ouse to facilitate the carriage of stone. Stuntney and Quanea remained monastic properties, reliant upon Roll’s Lode for water transport.

That Stuntney was an important manorial property in Saxon and Norman times is well attested. It was given to the monks at Ely in about 955, along with its fishery (Benthall 1812, p. 70), and at the time of the Domesday Survey in 1086 the fishery was the third most important in Cambridgeshire, with 24,000 eels (Darby 1936, p. 50 and 1971, p. 306). Eels remained important at Stuntney following the confirmation of Hervey as the first bishop of Ely in 1109 (Evans 1973, p. 5; Miller 1969, p. 282); eels were perhaps the major fenland resource during the mediaeval period (Darby 1974, pp. 22-32). Stuntney was also important for the Causeway, leading to Ely from the uplands east of the Fens, which was built not long after Etheldreda and her brother founded a monastery at Ely in the seventh century (Fairweather 2005, 319-20). In addition, Stuntney’s early church is thought to have had Saxon associations (Hocker 1984–86, p. 11); the existing edifice, which has been much altered, goes back to the late eleventh century or early twelfth, and is thought to have been a resting point for pilgrims (Mullett 1904, p. 114). Although there are no known documentary references to a hithe at Stuntney, nor archaeological evidence for the mediaeval period or later, what is thought to have been a Roman dock was discovered in 1901 (Hall et al. 1996, pp. 35-6).

Apparently less important was the manorial possession of Quanea, first recorded in 1279, and possessed of a hithe which was still in use in 1416. Given the ubiquity of hithes at that time, it is inconceivable that Stuntney was lacking in this facility, and if Quanea’s continued in use after the Ouse had been diverted at the Old Plough, then so must the one at Stuntney.

Consequently, the first inference is that Roll’s Lode remained an open waterway until 1416 or later, which would be consistent with a desire to maintain the economic viability of the manorial possessions, an inference upon which some archaeological finds in the Lode near Quanea throw light. The finds mostly date from the eleventh century, and include a pitcher and a jug which are of special interest in the present context. Lethbridge and Fowler (1933) thought that the pitcher was late Saxon or early Norman, a view confirmed by Hurst (1956, p. 52) and, more recently, by Paul Spoerry (Pers. comm, 2006), who gives 1050–1150 as the probable range of dates. As for the jug, Lethbridge and Fowler were not certain that it was contemporaneous with the pitcher, and Hurst confidently puts the date as late thirteenth-century. Unfortunately, this pot cannot now be located in the Cambridge Museum of Archaeology and Anthropology. Nevertheless, on the basis of the published description and photograph, Spoerry believes that the jug was made no earlier
than 1200 and no later than the fourteenth century. It seems to be clear, therefore, that the pitcher found its place in what is now Roll's Lode either before the Ouse had been diverted in the early twelfth century, or very shortly thereafter. On the other hand, the jug must have been dropped after the diversion had occurred, and no later than about 1400. So far as can be ascertained, the only other archaeological evidence found in or very near the Lode is at Stuntney and is of Roman date, including the hithche mentioned above.

The two Lethbridge and Fowler pots found near Quaniea both rested on silt, which must have been the bed of the channel. This indicates fairly conclusively that the Lode must have remained an open channel with a reasonable flow of water, possibly until 1400 or even later. With open access between the Lode and the Ouse, it is reasonable to infer that navigation was able to continue without undue hindrance.

The pots were found 'embedded in a stratum of freshwater shells about 6 in. thick', which implies a considerable environmental change sometime after the jug came to rest on the channel bed; the implication is a reduced current but nevertheless a continuing free flow of water. Among the freshwater shells were found single valves of Ostrea, or oyster; clearly, fresh oysters had been consumed in the vicinity, which implies continuing access to the Wash and hence the navigability of the Lode. Above the shells were three feet six inches of black peat and then a further two feet six inches of brown peat, making six feet in all. Peat formation implies that the water in the Lode was no longer freely flowing, which carries the further implication that one end at least had been blocked. The inference to be drawn is that the commencement of peat accumulation was triggered by the completion of Middle Fen Bank, all the way from Soham Lode to the Old Plough and across Roll's Lode at both ends, isolating it from the Ouse. The probability that this was the case is increased by the following further information from the excavation.

The lower horizons of the peat contained unopened shells of Mytilus edulis, the common mussel that inhabits coastal and estuarine waters. It is conceivable that they lived in situ during a marine incursion, which brought brackish water far up the Ouse. Such an incursion might have been possible, since the silt of the Lode itself consists of Terrington Beds in at least one place; in origin, these Beds are marine aluvium and/or saltmarsh deposits. However, it would be difficult to explain the simultaneous accumulation of peat and the presence of brackish/saline water, since the vegetation which gives rise to fenland peat is freshwater. Furthermore, Lethbridge and Fowler do not record the peat as having any intermixture of silt, which one would expect to be present if the water were tidal. Finally, a marine incursion would imply that, while the upstream end of the Lode had been blocked, eliminating the free river flow, the downstream end at the Old Plough remained open, allowing the brackish water to penetrate up the Lode.

It seems that a natural origin for the mussel shells must be discounted, which leaves just one possibility, human agency. The fact that the shells were unopened proves that the mussels had not been eaten. Consequently, it seems probable that the mussels had died and were thrown into the Lode as being inedible. The mussels would have been brought from King's Lynn, this port having become the point of access to the Wash, with the implication that the Lode was navigable after the peat began to form, and hence after it had been blocked at the Old Plough. Therefore, the mussels must have been transshipped at the Old Plough.

On this interpretation, it is evident that Roll's Lode remained an open waterway after the Ouse had been diverted in the twelfth century, and continued in this state possibly as late as the 1416 survey which records the Quaniea hithche, and conceivably even later. There was then a period of unknown duration when the free flow of water was much curtailed, creating conditions for the accumulation of freshwater shells. On the evidence so far, Middle Fen Bank cannot have been built across the Lode any earlier than the late thirteenth century. And we know that, once the Bank had been built and the accumulation of peat had begun, the Lode remained navigable for some period of time, on the basis of transshipment at the Old Plough.

The problem of dating the closure of the Lode can be approached in another manner. Whereas Hayward's 1604 map shows just one short isolated section of the Lode, hugging Stuntney island, even this relic is absent from the earlier map of Saxton (1576) and the later cartography of Hondius (1632) and Blaeu (1645). Moore's map, published in c. 1658, is at a larger scale (two inches to the mile) and shows considerable detail regarding the waterways, drains and ditches, which is hardly surprising given his role as the Surveyor for the Fen drainage enterprise, working with Vermyuyden. This map shows the Lode as a continuous feature, mostly as a single line, in a manner suggestive of a drain and not a navigable waterway. Around Stuntney, the Lode is emphasised by the use of double lines instead of a single line, and here it is labelled 'Stock load'. Celia Fiennes travelled through Stuntney to Ely in 1697, recording that, after descending the steep hill, she crossed 'a bridge over water' (Morris and Trevelyan 1949, p. 155). By the late seventeenth century, the Fen drainage project was in crisis on account of the shrinkage of the peat; rendering gravity drainage ineffective (Darby 1956, pp. 104-16). In addition, at the time of her journey there had been exceptionally heavy rains, the land was sodden, and it would not be surprising if the relic Lode had some water in it; her observation cannot be taken as evidence that navigation was possible. The cartographic evidence is consistent in showing the Lode so diminished as to have been useless for navigation by the beginning of the seventeenth century, being little more than a ditch for most of its length. This suggests that the accumulation of peat rendered navigation impossible, even for small boats, by about 1500 at the latest.

If navigation had become impossible by about 1500, Middle Fen Bank must have been built some
considerable time previously but it is largely a matter of guesswork when. It seems likely that it cannot have been constructed across the Lode much later than about 1416, giving us a range of possible dates from the late thirteenth century to the early fifteenth. The possibilities can be narrowed even further by the following consideration. The Black Death (1347–51) caused a severe shortage of labour and had a major impact on the organisation of society. It seems unlikely that Middle Fen Bank would have been engineered after this disaster, which suggests that the first half of the fourteenth century is the most likely time for the Bank to have been built\(^1\). Such a date is consistent with what we know about the responsibilities of the Ely bishops for flood control and the fluctuating fortunes of monastic and church enterprises (Heal 1973; Platt 1995).

With embankments at both ends of the Lode, the hithes at Quanea and Stuntney could only remain in business with the transhipment of goods over the Bank at one end or both ends. The Old Plough is nearer to King’s Lynn than is the southern end of the Lode, from which we may infer that there must have been a period when transhipment was taking place at the Old Plough. With the steady accumulation of peat, navigation along the Lode would have become impossible, probably by about 1500. A transhipment business over the Bank implies water access immediately adjacent, i.e., a harbour or hith, on both sides. This would provide a reason for the Old Plough to face south, towards a harbour adjacent to the north side of Middle Fen Bank.

**Land drainage**

Embarkments across Roll’s Lode implies that there would have to be provision for removing land water draining into the Lode, i.e., a culvert, with a sluice or gate to prevent the river waters flooding the land. In this way, the land water could drain off whenever the river level was lower. Sluices of this kind are known to have been in use in the mid-thirteenth century, and maybe earlier. The thirteenth century one described in Taylor 1977 (see also Hall et al 1996 p. 185) was constructed from three hollowed out tree trunks. At the Old Plough, there is a substantial brick culvert through Middle Fen Bank, on the alignment of the former Roll’s Lode. Figure 6 is based on the 1886 1:2,500 sheet, for which the survey work was done in 1885. The Lode is clearly visible passing between Hawthorn Farm and Bank farm, reappearing on the northern side of Middle Fen Bank, immediately east of the Old Plough before turning eastwards for Prickwillow. These two ditches are still clearly visible but they are not now connected. There is, however, a brick culvert through the Bank between them.

At the time of the author’s first site visit, in November 2005, the upper part of the culvert was visible at either end, to a height of about 0.65 m, being the vaulted roof and the upper part of the walls. About three metres of the culvert through the Bank were still in place, covered by a thin layer of soil, the upper part of the Bank having been removed. The top of the culvert is one or two metres above the present day ground level south of Middle Fen Bank, where silt deposits show through the peat. The culvert has a gentle declivity to the north. It is built of white unfrogged bricks, which are approximately 9×4 inches, and generally slightly less than 2 inches thick; they are laid with lime mortar.

The southern end of the culvert had been truncated over time, with the result that it is impossible to know how the inflow was originally configured, but the northern outflow was substantially intact. Excavation of this end with Gerald Rigby (Figure 8) revealed that the structure comprises walls which are 1.25 m apart, rising 0.75 m from the cill to a barrel vault, which rises a further 0.5 m, measured to the underside. The two parallel side walls extend about 1.2 m beyond the culvert’s mouth to the north, and at the culvert’s entrance there are original rebates in the brickwork. Some fragments of rotten wood were found in the vertical rebates, and plaster in the cill rebate carried the imprint of the grain of timber that had been set there; evidently, the culvert was built with an inset wooden frame. In addition, several pieces of rusted iron were found, including substantial nails and iron strapping, and an object that may have been the base bearing for a door. The floor of the culvert is paved with bricks, as is the floor between the two parallel walls extending toward the former course of the Ouse. These two walls were built upon a timber base, the wood now rotted. At 1.2 m from the culvert’s mouth, the side walls turn through 45° to form a fan, and then again to run parallel with the embankment. No evidence has been found that the floor of the fan was paved.

The design of the culvert’s outfall distinguishes it from the culverts in use in the nineteenth century, associated with windmills to pump water from land lying below river level (Wheeler 1868, facing p. 56; see Darby 1956, facing p. 226). As portrayed by Wheeler, the water issued from the culvert as a cascade down three shallow steps forming a fan between two splayed retaining walls. The splayed outfall was paved to pre-
Figure 7. River embankments, Rolls Lode and Delph Drain in 1811. Re-drawn from Ordnance Survey 1811.

Figure 8. Culvert at The Old Plough, viewed from the west (water flow from right to left). Note the horizontal and vertical rebates in the brickwork. Gerald Rigby at work. March 2006. Photograph by Judith Chisholm.
vent erosion by the rushing water. The culvert at the Old Plough would have been destroyed very quickly if had been handling rapidly moving water, even if the flow were considerably smaller than was possible in the mid-nineteenth century. The design of the Old Plough culvert is consistent with gentle gravity flow, not with the rush of water associated with windmills lifting water over a bank. In any case, culverts associated with windmills did not need a gate such as was incorporated into the Old Plough culvert. 

The inference is that the Old Plough culvert was built to provide gravity drainage from the Lode into the Ouse, and that it was equipped with a wooden door which could close to the wooden frame at the outflow (northern) end. If freely hinged, the door would open when the water in the Lode was higher than the Ouse, and close to prevent river water entering the Lode when the river was running high: the same system as that used at Denver Sluice from 1652 to discharge water from the Ouse. The whole structure was well-designed and evidently built with the intention that it would last.

So when was the existing culvert at the Old Plough built? Moore's map of about 1658 shows Roll's Lode discharging into the Ouse through a culvert, in the same way that Crooked Drain (or Delph Drain) also debouched into the river near Prickwillow. Two other culverts are recorded by Moore in the vicinity, both on the right bank of the Lark between Prickwillow and Isleham and identified as 'A Tunnell'. Given the then state of technology, the implication is that these culverts would all have been built of brick, and that therefore a brick culvert existed at the Old Plough in the mid-seventeenth century, presumably replacing an earlier structure.

Two other lines of evidence combine to suggest a mid-seventeenth century date for its construction. Michael Young believes that the bricks are seventeenth century, a view which Paul Spoerry modifies slightly to suggest sometime between 1600 and the early eighteenth century (Pers. comm., 2006). Within that time frame, the probable date of construction can be narrowed quite precisely in the following manner. The first major attempt to drain the Fens was in the 1630s but, comparatively modest in concept and beset by the troubles of the subsequent Civil War, proved largely ineffectual. It is unlikely that the culvert was built as part of this early drainage scheme. A new start was made in 1649 by Cornelius Vermuyden. Dependent entirely upon gravity drainage (Harris 1957, p. 320), this project initially appeared to be a success but the peat quickly compacted and began to degrade in the presence of oxygen. The peat surface became progressively lower, while rivers flowed along the ribbons of firm silt which they had deposited, eventually standing above the surrounding land. Gravity drains ceased to work, and the whole enterprise was in crisis before the end of the century. 

Salvation lay with windmills to pump water over the embankments; introduced in the late seventeenth century, they were in general use in the first quarter of the succeeding one (Darby 1956, pp. 104–16). The Old Plough culvert would not have been built when the problems of gravity drainage had become evident. Consequently, the most probable time of construction is when the major engineering and embanking works were being undertaken in the 1650s. Within half a century it would have ceased to function.

There is local evidence that the culvert had ceased to function by the middle of the eighteenth century. Excavation of the apex of the culvert's fan, beyond the two parallel walls, revealed a jumble of bricks and mortar, the bricks being identical to those in the existing structure. This collapsed material went a foot or more below the paved surface already mentioned and imbedded therein was found the base of a wine bottle. A tentative, but not authoritative, date for this shard is the third quarter of the eighteenth century (see Appendix), with the implication that the culvert had been out of use for some time previously.

We know that Roll's Lode no longer discharged into the Ouse in 1811, land waters having been diverted to a point further east (Figure 7). There is no known physical evidence that there was ever a windmill at the Old Plough, nor any known reliable documentary information. An anonymous undated eighteenth-century sketch of the river system shows windmills along the Ouse. One is clearly the Overfall Mill and another is located roughly where Crooked Drain debouched, near Prickwillow. In between, two mills are shown, one of which could be at the Old Plough (Cambridge RO, R59.31.40.89). The reliability of this document is questionable and it seems probable that the local drainage was reorganised when windmills came into general use in the early eighteenth century, diverting the water of Roll's Lode further eastward.

**Evidence of harbours at the Old Plough?**

Figure 6 shows that, on the south side of Middle Fen Bank, on the property of Hawthorn Farm, Roll's Lode terminated in 1885 with a short appendix running westward, parallel with the Bank and immediately at its foot; the same feature survived until the 1925 revision, which was published in 1927. There is nothing now visible to reveal the presence of this short watercourse. Was it the remnant of a small berth or harbour for the transhipment of goods over the Bank?

The existing Hawthorn Farm house, built in the 1980s, stands on the site of a former dwelling of unknown age, thatched and with a mud floor. The garden land slopes from the house to the east, towards, and merging with, Roll's Lode, with a sharp bank rising on the other side to Bank Farm. This local topography contrasts with the Lode south of the garden: here the channel is distinctly incised into the landscape, with banks of equal height on either side. How much re-shaping of the landscape has occurred within the curtilage of Hawthorn Farm is unclear, but the form suggests that there may have been a small basin at some time which has been filled in, perhaps in the process of cultivation. A rather similar conclusion applies on the north side of Middle Fen Bank. There is a distinct depression between the Bank and
the Old Plough, which might be the remnants of a long disused basin. This topographical evidence is no more than suggestive but it is consistent with the clear evidence that transhipment over the Bank did take place for a period in mediaeval times.

**River tolls and dues**

In the early mediaeval period, a general feature of England was the ubiquity of tolls and impose of all kinds, including those upon trade and the movement of goods by land or water (e.g., Carus-Wilson, 1958; Gras 1918, Chap. 1; Poole 1951, p. 73; Willard 1926, p. 369). It is clear that traffic on the Ouse and its tributaries was indeed subject to impose. We know that in the mid-fifteenth century the Abbot of Bury St Edmunds had full control over the river Lark for all uses, and imposed tolls on the barge traffic (Gottfried 1982, pp. 80 and 92). More generally, sometime between 1120 and 1131, Henry I issued a Writ, part of which reads as follows:

‘Henry King of the English to Hervey Bishop of Ely and all his barons of Cambridgeshire greeting, I forbid that any boat shall ply at any hythe in Cambridgeshire, save at the hithe of my borough of Cambridge, nor shall barges be laden save in the borough of Cambridge, nor shall any take toll elsewhere, but only there’ (Maitland and Bateson, 1901, p. 3).

As Jones (1920, p. 113) points out, issuing a Writ is one thing but enforcement is another matter. In any case, the Isle of Ely enjoyed privileges akin to those of a palatinate. In 1052, Edward the Confessor gave the Ely Abbey to Wulfric “in all things within borough and without, (with) toll and team and ...” A subsequent Charter from Richard II in 1189 provided that the Isle of Ely “was free and quit of all royal exaction” (VCH 1967, pp. 5 and 7). In the early period after the Norman Conquest, the ecclesiastical authorities had very considerable, if not complete, independence in fiscal matters, this being one feature of the liberties enjoyed by the Isle of Ely.

The manors owned by the bishop of Ely were managed with a high level of integration to supply the entourage and for trade to London, King's Lynn, Wisbech and elsewhere. A fair was established in Ely itself, traffic destined for Cambridge, St Ives and elsewhere could use Roll's Lode and avoid those impose. The logical response would have been to establish a toll point which could control all the river traffic, for which purpose the site of the Old Plough would have been the place to choose, where the Dean and Chapter would have needed an establishment to collect river tolls and to keep a general eye on river traffic. This points to permanent occupation as early as the first decades of the twelfth century, and to the probability that the resident must have been a person of some importance.

**Draining the Fens**

When Vermuyden dug the New Bedford river to divert the Ouse at Earith, and constructed Denver Sluice, the general expectation was that water levels in the Ouse between Earith and Denver would be lowered. In the absence of the tides, this might have created problems for navigation because of shallow water. Given that there were Hards near the Old Plough, and shallows in Ely, it is reasonable to expect that something might have to be done to maintain an adequate draught for vessels: either modify the channel; or construct a lock. There is clear evidence that both solutions were contemplated, though it is uncertain what exactly may have been done.

A hitherto overlooked source is the report given by Vermuyden to the Lords Commissioners of Adjudication of the drainage scheme in March 1632. He was asked to ‘read over’ his design for draining the South Level, the text whereof contains the following passage:

‘And yet, lest whilst I was dreyinge I might not prejudice the navigation from Cambridge to Salter's Loade, and so to Lyn, in regard the tydes were stopt out att Salter's Loade, and the old channel of Ouze, nere to Elie bridge, exceeding large and spatiious, and very shallow; by reason whereof the navigation formerly, in dry tymes, and upon all neape tydes in summer, was obstructed, I caused a water gage to bee sett upon the said river, near Elie, at a place called Rassell Hill, to keep up the water at a gage,
Vermuyden gave this account, so it is virtually certain that he portrayed the then existing arrangements accurately. However, within six years ideas had changed, it then being intended to construct a lock, which would have been little more than the adaptation of the arrangements described by Vermuyden in 1652. Figure 2 records the lock as shown by Jonas Moore about 1658; there is some documentary support for the intention to build this lock (Chisholm 2006, 2007, 2008) but it was never built, which implies that an alternative solution was found, most probably by managing Denver Sluice in a way that was not originally thought to be possible. The full account of this water control regime remains to be written. Sufficient in the present context to note that the need for transhipment to get over the Hards immediately upstream of the Old Plough apparently ceased with the construction of Denver Sluice. By that time, Roll's Lode had for some considerable period been impassible for boats, so this other transhipment business at the Old Plough had already disappeared. Consequently, with the draining of the Fens, the reasons for overseeing river traffic at the Old Plough finally ended.

Conclusion

Use of the Old Plough site had its origins in the manorial organisation of lands around Ely, first as a monastic property and then under the control of the Bishop. It occupies a strategic position for the exploitation of Padnal Fen, with eels and peat both being likely resources used in mediaeval times. River traffic would also have provided reasons for the establishment of an important habitation, there being clear evidence of transhipment on the Ouse and over Middle Fen Bank. In addition, it seems probable that the collection of river tolls would have been important, especially while Roll's Lode remained an open waterway.

However, with the passage of time, the early economic functions ceased, and it may be that draining the Fens in the seventeenth century was the near final blow, with the end of transhipment on the Ouse. The only available business would then have been as an inn, serving the river traffic and also land-based custom. There used to be a significant number of dwellings along Middle Fen Bank, presumably associated with agriculture, and the Bank was an important thoroughfare from Ely to Prickwillow until the modern road link through Queen Adelaide was built in the nineteenth century; indeed, the Bank was still occasionally used in the 1930s (Ken Hopkin, Pers. comm. 2006).

This assessment of the site and the building is consistent with what may be termed the 'folk memory' recorded by Shirley Cornwell, daughter of the lady who sold the property to the present owners in 1987. In some notes prepared for Chris Jakes, dated 11 June 1991, she records that her mother believed the Old Plough was 'built about [the] 13th century' (Cambridgeshire Collection, C.274). There is no reason for supposing that the present building is that old, but the recorded oral testimony points to the site having been used for a very long time indeed.

The present building appears to date from the early sixteenth century or late fifteenth, and manifestly was not constructed as a riverside public house but for much more important purposes. The stone incorporated into the Old Plough was not on its way up the river, intended for the cathedral, but is second-hand material presumably originating in Ely; supplies were available from the fourteenth century. Consequently, the Old Plough should be thought of as an example of the local habit of re-cycling building materials, particularly evident in Ely but common in Cambridge, Littleport and elsewhere.

The Old Plough is also of interest for the brick culvert through Middle Fen Bank, a culvert which was clearly constructed to provide gravity drainage from Roll's Lode into the Ouse. There seems to be little doubt that it was built in the 1650s, as part of the major engineering works for draining the Fens undertaken by Vermuyden, and that it replaced an earlier structure serving the same purpose.

There seem to be two two possibilities for adding to our knowledge of the early use of the site and the date of the present building. The first would be archaeological investigation going beyond the preliminary and essentially negative preliminary findings reported in the Appendix. The second is the possibility that information awaits discovery in Ely ecclesiastical manuscripts, now housed in Cambridge University Library. Is it the case that the Old Plough occupies the site identified as 'Pathewere' or 'Padwere' in the Inquisitio Eliensis? At the time Chapman wrote his highly regarded study of the Sacrist Rolls of Ely, he noted that his study encompassed a "very small portion of the documents which have been for centuries lying in the Muniment Room of Ely Cathedral" (Chapman 1907, vol. 1, p. v. When they are examined by scholars with the requisite skills, the present paper should be helpful in providing leads regarding relevant information for which to look, information that may confirm or confound the analysis that has been set out above and thereby shed important light on the management of resources around Ely in mediaeval and post-mediaeval times.

Appendix

Preliminary site investigations

Dowsing

Mac Dowdy walked the land in February 2006 with his dowsing rods. Though many will be sceptical
about this technique, the results were very suggestive (Figure 9). He found what appeared to be the foundations of substantial extensions to the main house, mostly to the west and to a lesser extent to the east, giving dimensions which he regards as a classic ratio for a mediaeval dwelling. Two rectangular building plans were also identified, as detached structures. He believes that there is evidence of the site being used from the early fourteenth century or even earlier.

Figure 9. Old Plough site details and dowsing record by Mac Dowdy.

Archaeology RheeSearch

The second investigation was by Archaeology RheeSearch, on 15 October 2006, a team equipped to measure soil resistivity and magnetometry responses. Unfortunately, the site does not lend itself to this form of investigation, for two reasons: there are numerous trees and a number of outbuildings within the curtilage; and to the west of the house there is a substantial amount of made ground, being the spoil from the pond which the present owners dug. Four comparatively small areas were surveyed, with results that are no more than suggestive. No evidence was found for a westward extension of the house, but there is the suggestion of foundations consistent with the building which Dowdy thinks stood to the north of the present building. In addition, the geophysical results suggest that there may have been a harbour basin north of Middle Fen Bank and east of the present house, an area of low resistivity flanked on both sides by markedly higher resistivity, with some confirmation from the magnetometry data.

Trial trench

A week after the geophysical survey, the author dug an experimental trench to see whether any evidence exists of foundations on the westward extension of the north wall of the main building. The edge of this trench nearest to the building was nine feet (2.7 metres) away, clear of the land for which the resistivity results indicate the presence of rubble near the house. The trench was four feet long, straddling the line of the possible foundation. To a depth of somewhat over two feet, the soil was manifestly disturbed, incorporating a mixture of materials, including modern artefacts, some shards of relatively modern pottery and some fragments of tile that are similar to the tiles that were on the house in 1987, but nothing from mediaeval times. There was no hint of foundations. From about two feet three inches (0.7 of a metre) below the surface down to three feet (0.9 of a metre), the ground appeared to be undisturbed and no artefacts were found. The investigation was then carried a further two feet to a final depth of five feet (1.5 metre) with the use of an augur at intervals of six inches along the trench. These augur trials showed conclusively that there has been no interference with the subsoil. Therefore, it is clear that there has never been a wall extending the line of the north wall of the present house, with the clear implication that the results from dowsing cannot be accepted as evidence that there was a building west of the existing one.

The culvert

As noted on page 162, a bottle shard was recovered from the discharge end of the brick culvert, tentatively dated to the third quarter of the eighteenth century. The shard comprises almost the entire base of a bottle, about 11.5 cm in diameter, rising to a maximum of 6.5 cm from the base, the side curving slightly outwards. The bottle is cylindrical, with a high conical kick. It is made of green glass, 2–3 mm thick at 50 cm from the base, thickening downwards to a maximum of 4 cm. All the surfaces, including the broken edges, were covered with a fragile iridescent patina, the product of degrading glass, indicating that the object had not been disturbed since deposition in the alkaline environment.

Being cylindrical, the bottle could not be earlier than the eighteenth century (Bacon 1939; Bossche 2001; Charleston 1984; Dumbell 1983; Willmott 2002). According to Bossche, Belgium was the main centre for glass bottle manufacture from the seventeenth century, most of the output being green glass, unlike the black glass commonly used in England. The glass of English bottles was generally 3–6 mm thick, whereas Belgian wares were made with thinner glass, 2–4 mm. Consequently, the bottle is probably Belgian.

Cylindrical Belgian bottles with a high kick were manufactured from 1740 to 1800, and the English equivalent from 1735 to 1780. During the eighteenth century, bottles became taller, the necks shorter; at the same time, the diameter declined towards 9 cm. In combination, the characteristics of the shard suggest that it was in use no later than the third quarter of the eighteenth century, probably nearer 1750 than 1775.

Lead plumb bobs

Close to the bottle shard, in the same jumble of bricks and mortar, three cast lead objects were found (Figure
10. These are unlike mediaeval fish tackle (Lucas 1998; Stean and Foreman 1988), and are not weights for weighing machines. Almost certainly they are plumb bobs that would originally have had a piece of wood passing through the tapered holes piercing the objects from one end to the other. They are in remarkably good condition, probably reflecting the alkaline environment in which they were embedded.

There is no information about any similar finds in the records of the Cambridgeshire Portable Antiquities Scheme, and other enquiries indicate that these unusual objects cannot readily be dated except by association with other datable materials. In this case, they probably reached their resting place about the same time as the glass shard, although they could be considerably older.

Acknowledgements

I am greatly indebted to Melanie and Gerald Rigby, the present owners of the Old Plough. They bought the property in 1987, when it was in a near terminal state of dereliction. With great skill and understanding, they have rescued the property with sympathetic restoration, whereby they have become intimately acquainted with its quirks and foibles. Both of them have been very generous with their time and knowledge. A very considerable debt is also owed to Michael Young for his invaluable help, with suggestions for people to contact, for literature leads, and in reading and commenting on early drafts. He accompanied the author on the first visit to the property in November 2005, and then again with Mac Dowdy in January 2006 and Paul Spoerry in June. The staff at the Cambridge Record Office, the Cambridgeshire Collection and Cambridge University Library have given a great deal of assistance, as also staff in the University’s Faculty of Archaeology and Anthropology. A geophysical survey of the Old Plough site was undertaken by Archaeology Research in October 2006. In addition, the following individuals have contributed in diverse ways: Richard Bamford, Pamela Blakeman, Judith Chisholm, Beth Davis, Nicola Duncan-Finn, Lizzie Gill, David Hall, Elie Hughes, Chris Jakes, Donna Martin, Mike Petty, Lynne Turner and Frances Willmorth. The drawings were done by Ian Agnew; the lead objects and bottle shard were photographed by Jim Youlden, both at the Department of Geography, University of Cambridge.

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Figure 10. Lead artefacts found at the outfall end of the culvert through Middle Fen Bank. Probably plumb bobs.
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