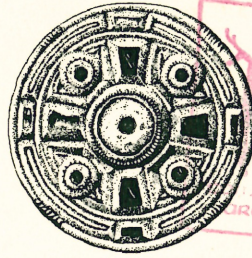


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Archaeological Field Unit

An Eighteenth Century Road at The Dog in a Doublet, Thorney

K Welsh

1994

Cambridgeshire County Council

Report No. 106

Commissioned By The Transportation Department, Cambridgeshire County Council

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at The Dog in a Doublet, Thorney**

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SUMMARY

During June and July 1994, the Archaeological Field Unit of Cambridgeshire County Council undertook an archaeological assessment at the Dog-in-a-Doublet pumping station (TL 2746 9947), between Whittlesey and Thorney in Cambridgeshire. The work was carried out on behalf of the Transportation Department of the County Council, with the kind permission of the North Level Internal Drainage Board.

The pumping station is adjacent to the Thorney to Whittlesey road, just to the north of where it crosses the River Nene. The present bridge was constructed in the 1930s, slightly to the east of its predecessor, and its approaches were re-aligned accordingly.

The assessment revealed the original road, constructed on a causeway to raise it above the surrounding peat as it approached the bridge. A sub-structure of wooden planking and uprights formed the foundation of the causeway, with layers of re-deposited peat, silt and gravel being used to build up the road. Finally, the road was surfaced with limestone cobbles.

Pottery, clay tobacco pipes, and glass bottles, found within the road structure, date its construction to the first part of the eighteenth century. It appears to have remained in use until the present bridge over the Nene was built in 1932.

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1 INTRODUCTION

From 27th June to 5th July 1994, a team from the Archaeological Field Unit (AFU) of Cambridgeshire County Council carried out an archaeological evaluation within the grounds of the Dog-in-a-Doublet pumping station (TL 2746 9947) between Whittlesey and Thorney in the Cambridgeshire Fens (*Figure 1*). The work was carried out at the request of the Transportation Department of the County Council, following advice from Mr A Hurley of the County Archaeology Office, and with the kind permission of the North Level Internal Drainage Board who own the pumping station.

It is proposed to upgrade the present bridge over the River Nene, approximately 80m to the south of the assessment site, which will involve realigning the approaches to the bridge. A series of test-pits and boreholes was excavated for the Transportation Department to provide geological data in advance of the scheme. In one of these, in the grounds of the pumping station, two pieces of worked wood were recorded, probably forming upright posts. They were found at a depth of about 1.5m and appeared to be embedded in peat. As a result of this information it was decided that an archaeological evaluation was appropriate.

2 GEOLOGY AND TOPOGRAPHY

The site lies in the flat lands of the Cambridgeshire peat fens close to the present course of the River Nene. There are several islands of higher ground nearby, for example, at Whittlesey, and Eastrea. Thorney lies on a peninsula of higher ground, connected to that at Eye by a narrow neck of land.

In the recent geological past, the area has seen a sequence of marine transgressions and regressions or, alternatively, oscillations in a general rise in sea level. This resulted in the deposition of alternating bands of marine silts and of freshwater peat. In the vicinity of the assessment site, there is an extensive outcrop of the Nordelph Peat, laid down from about 3000 years ago. Large areas of this have been lost over the past one hundred years due to oxidation of the peat as a result of drainage schemes. The former extent of the Nordelph Peat is now only indicated by remnants around buildings and under artificially alluviated areas such as the Nene washes (Horton 1989).

This has exposed the underlying Barroway Drove Beds which are of marine origin and consist of humic and silty clays. Within these beds, there is a complex of dendritic drainage channels and rivers, many of which show up on aerial photographs or as slightly raised 'roddons' exposed as the peat wastes away. A very large channel runs north-eastwards from a point about 500m to the east of the Dog-in-a-Doublet. To the south, it is lost under the Nordelph Peat.

A section recorded about 500m to the north-west of the site showed that the Nordelph Peat almost joins with the earlier Lower Peat as the intervening Barroway Drove Beds thin to the west. At the site itself, therefore, the Barroway Drove Beds are likely to be thicker. The present excavations show a peat layer at a depth of 1.6m and extending below the base of the engineer's test-pit at a depth of 2.4m.

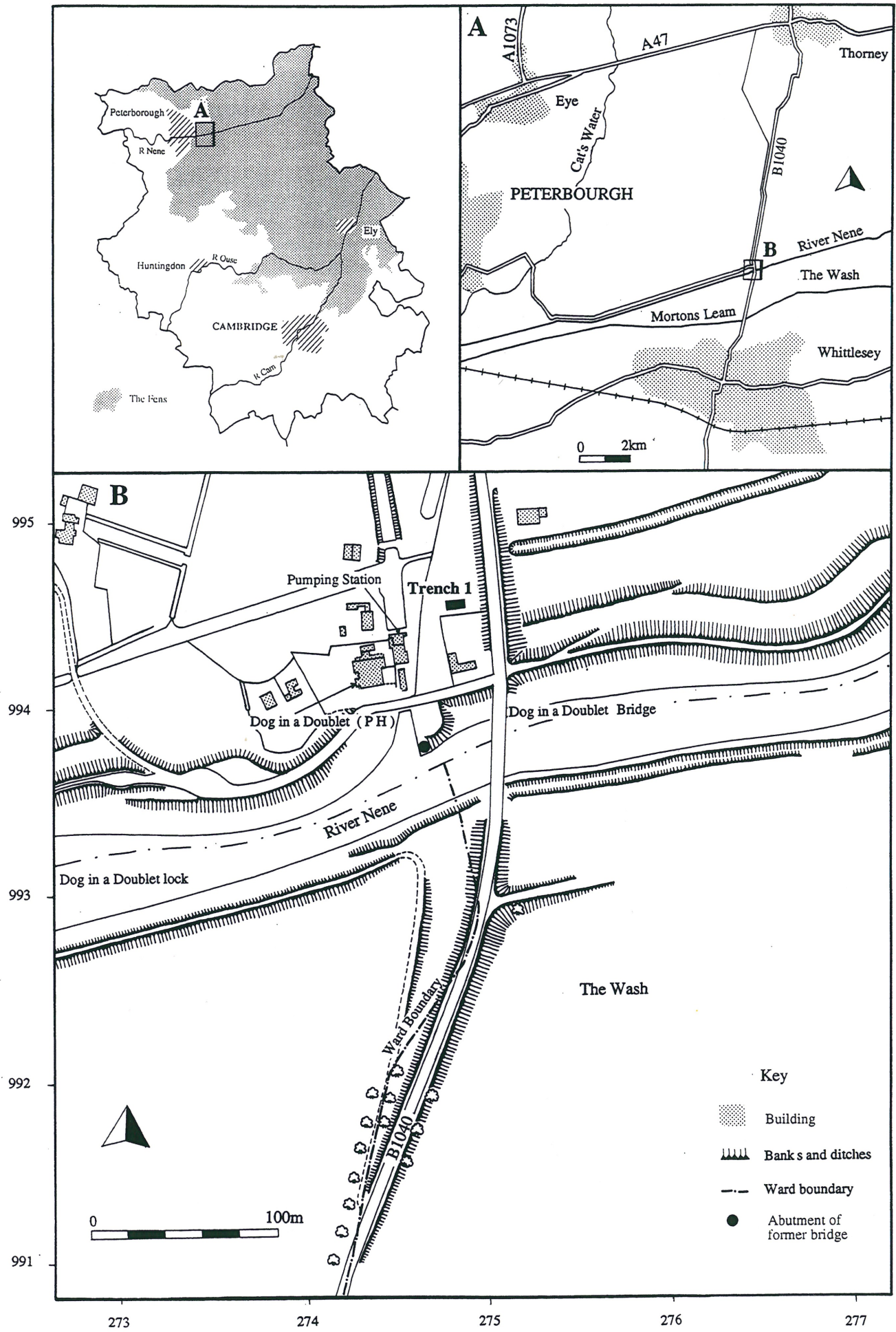


Figure 1 Location Map

3 BACKGROUND

The settlement of the fens is very closely related to the conditions which produced the later geological strata mentioned above. In the earliest period of settlement, the Mesolithic period, the area was well above sea level. Subsequently, oscillations in the rising sea level led to large variations in the amount of dry land available and, therefore, to the positioning of settlements.

No early prehistoric sites have been found in the immediate vicinity of the Dog-in-a-Doublet bridge, although one or two neolithic flint scatters have been found in the parishes of Whittlesey and Thorney (Hall, 1987). Evidence of Bronze Age activity is more extensive with a scattered series of barrows lying between 2 and 3km to the north-west, a group to the south-east (TL 313 981), and a second to the south-west (TL 244 943).

A group of Iron Age occupation areas have been located through field-walking in the west of Thorney parish (centred on TF 250 020) and appear to date from the third century BC and later.

Both parishes contain abundant evidence for settlement during the Roman period, largely on the dry land in the north and the west of Thorney parish, and on the gravel islands at Whittlesey and Eastrea.

In the Saxon period, the area of dry land available in Thorney was limited to the area of the modern village, Thorney Abbey was founded as an anchorite cell and was referred to as *Anclarig* in the Anglo-Saxon Chronicle entry for the year 656. It was destroyed by the Danes in the ninth century and lay barren until a monastery was founded in 972. After the Dissolution, the estate (corresponding to the whole parish) passed to the Earl of Bedford.

In Whittlesey parish, Saxon and medieval settlement was largely confined to the two gravel islands on which Whittlesey and Eastrea now lie. An early Saxon cemetery was discovered at Whittlesey in 1828 and aerial photography has revealed possible sunken featured buildings of Saxon date at Eastrea. During the medieval period, the parish consisted of two manors, Whittlesey St Andrew and Whittlesey St Mary, owned by the Abbots of Ely and Thorney respectively. After the Dissolution, the manors were held jointly, first by the Hatton family and then by the Waldegraves (Hall op cit).

The present course of the Nene, between Peterborough and Guyhirn, was cut in 1728 by the Bedford Level Corporation and was known as Smith's Leam after Humphrey Smith who directed the work (Boyes and Russell, 1977). Whilst it may have been bridged at that time, the first reference to a bridge is made in 1792, when a local landowner mentions the construction of a new bridge (Akeroyd pers comm). The 1st Edition Ordnance Survey map of 1886 shows the bridge and its approach roads displaced to the west of the present bridge - the line of the road to the south of the Nene is preserved by the ward boundary (*Figure 1*).

A new bridge was constructed in the 1920s, the abutment of which can still be seen on the north bank. This lasted a few years only, to be replaced by the present bridge in 1932 (see *Figure 1*).

4 METHODS AND CONSTRAINTS

A single trench, 10m by 4m, was opened using a mechanical excavator with a 1.8m, toothless ditching bucket. It was located to coincide, as closely as possible, with the position of the engineer's test-pit. Originally, it was intended to extend the trench from south to north, parallel to the road. However, this proved impossible due to the presence of a water main.

Due to the depth of the deposits, the sides of the trench were stepped-in in order to provide a safe working environment in the centre of the trench and to allow safe access.

On first opening the trench, the archaeological staff noted a smell similar to diesel oil, concentrated in patches with a blue-grey discoloration were observed. After being left overnight, the smell had largely dispersed, presumably due to evaporation.

A pump was used to remove ground water from the trench - fortunately, dry weather meant that this was only necessary at the start of each day.

The trench was then cleaned by hand, photographed, and planned at a scale of 1:20. A strategy of partial excavation was then adopted and the deposits so revealed were recorded using the standard techniques and *pro formas* of the AFU.

5 RESULTS (*Figures 2 and 3*)

Layer 9, 1.40m below the ground surface (1.03m OD), was natural peat which, when fresh, was a strong brown colour with a marked odour of hydrogen sulphide. It quickly oxidised to dark brown on exposure to the air. Cut by 13.

Feature 13, a linear cut orientated north to south, and extending beyond the limit of excavation to the north, west, and south, was 0.70m deep. It contained the following contexts;

Structure 4 was a clinker-built 'revetment,' orientated north to south, and 0.85m high (see *Plate 1*). It extended beyond the limit of excavation to the north and south. It was composed of four courses of overlapping planks. Each course was constructed from one or more separate elements nailed together.

The lowest course contained four separate timbers:

Context 22 (not illustrated), more than 1.18m long, more than 0.17m deep, and 30mm thick; Context 23, more than 0.73m long, more than 0.25m deep, and 40mm thick; Context 30 (not illustrated), more than 1.18m long, 30mm thick, depth uncertain; Context 31 (not illustrated), more than 0.27m long, 2mm in diameter.

The second course consisted of a single timber, 29, which was more than 1.5m long, 0.25m deep, and roughly 30mm thick.

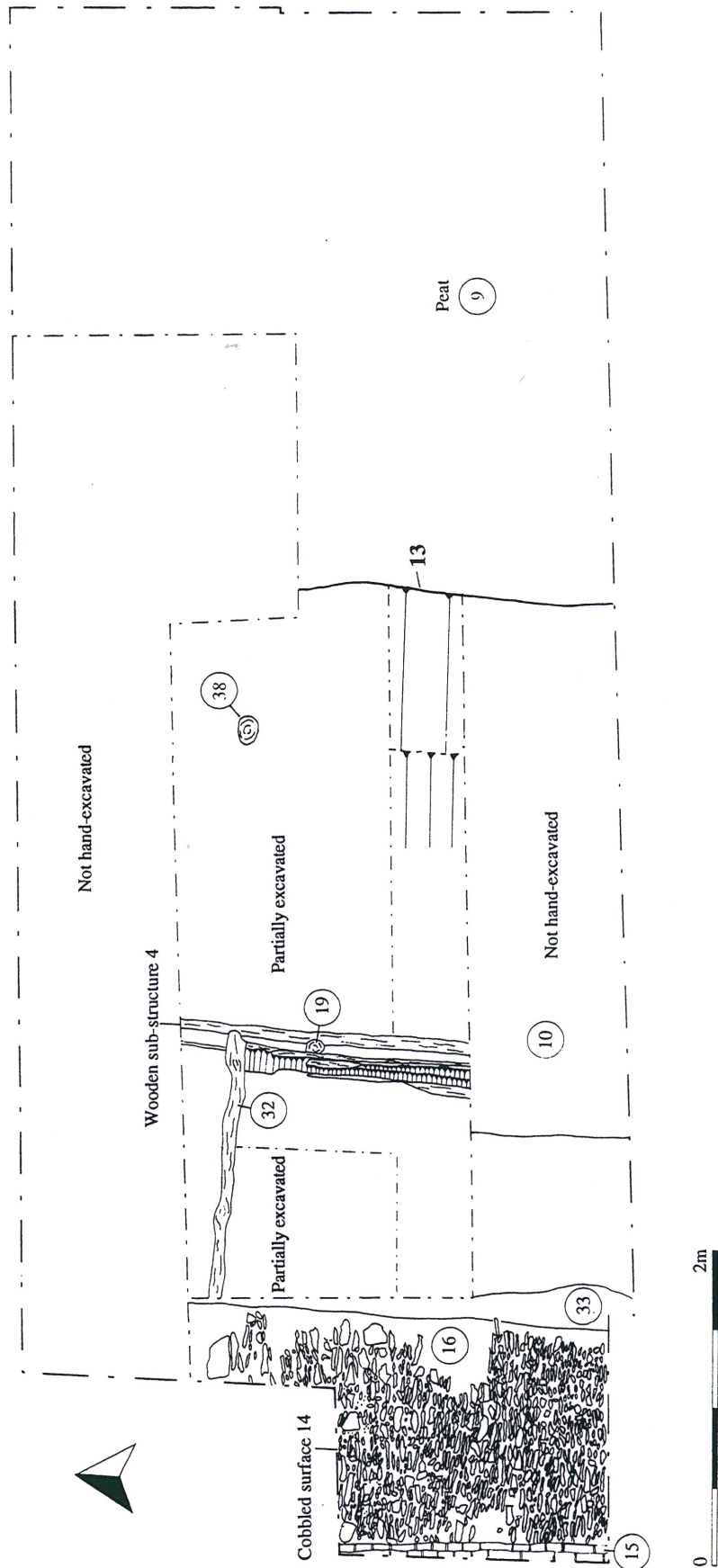


Figure 2 Plan of features

The third course consisted of two timbers:

Context 28, more than 1.5m long, 0.36m deep, and 25mm thick; Context 35, more than 1.5m long, 0.36m deep, and 25mm thick.

The upper course consisted of two timbers:

Context 20, more than 1.5m long, 0.26m deep, and 30mm thick; Context 21, more than 1.5m long, 0.36m deep, and 30mm thick

In turn, the courses were nailed to each other and to an upright wooden post, Context 19, length uncertain, and 0.18m by 0.09m in cross-section.

A horizontal, wooden beam, Context 18, more than 1.8m long, and 0.10m by 0.08m in cross-section was nailed to the back, ie west side, of post 19, level with the top of the upper course of planking.

An unworked branch, Context 32, which lay on top of the planking, but was not attached to it, was orientated east to west.



Plate 1 Clinker-built 'revetment', Structure 4 (seen from the west)

Fill 5, up to 0.15m thick, was a dark brown, silty peat with frequent lenses of clay, and occasional bottle glass, brick fragments, clay tobacco pipe fragments, pot sherds, and animal bone.

Fill 37 was a very dark brown, silty peat. No artefacts were recovered. Below 10.

Fill 26, up to 0.78m thick, was a very dark brown silty, peat with occasional lenses of black silty peat, occasional pottery sherds, animal bone, brick

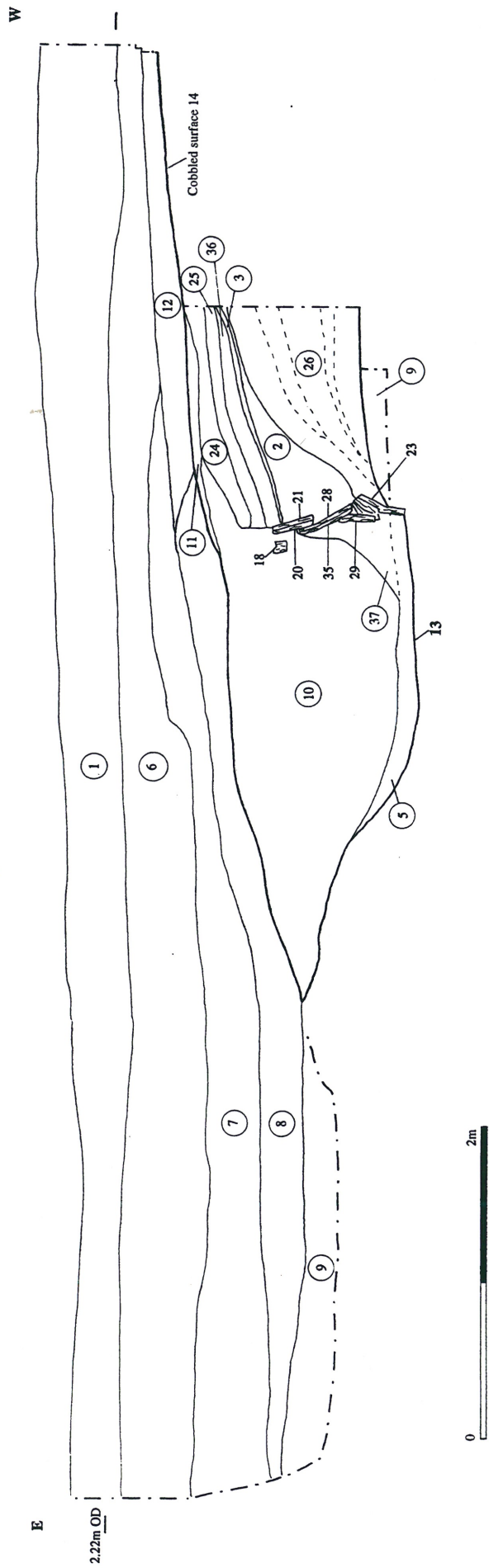


Figure 3 Composite section of the north-facing side of the trench

fragments, and a single iron nail. In the lower 0.30m, it contained frequent sharpened stakes (on average, 40mm in diameter, and up to 0.4m long, many of which were bedded in the natural peat below. Below 2.

Fill 2, up to 0.45m thick, was a olive grey to olive yellow, sticky clay containing a sherd of pottery, occasional brick fragments and clay tobacco pipe fragments. Below 3.

Fill 3, up to 40mm thick, was a grey, slightly clayey, sandy silt. The sand component was extremely fine. It contained occasional mussel shell, pottery fragments, clay tobacco pipe fragments, and an iron object. Below 36.

Fill 36, up to 0.11m thick, was identical to Fill 2. No artefacts were recovered. Below 25.

Fill 25, up to 0.10m thick, was identical to Fill 3. No finds were recovered. Below 24.

Fill/Layer 24, up to 0.16m thick, was a yellowish brown, gravel (on average, 10mm-30mm across) with occasional limestone fragments (50mm-80mm across). No artefacts were recovered. Below 10 and 33.

Fill 10, up to 1.25m thick, was a grey, slightly clayey, sandy silt. Identical to Fills 3 and 25. No artefacts were recovered. Below 11.

Context 38, 0.14 by 0.12 in cross-section, was a wooden stake, inclined towards the west at an angle of about 30° from the vertical.

Fill/Layer 33, 50mm thick, was a very compact gravel (up to 20mm across). Not excavated. Below 17.

Fill/Layer 17, 30mm-40mm thick, was identical to Fill 3. Not excavated. Below 16.

Fill/Layer 16, 30mm-40mm thick, was identical to 33. Not excavated. Below 14.

Layer 14 was a cobbled surface constructed of irregular, flat, limestone fragments (on average, 120mm by 120mm by 50mm), laid on edge and bedded into the layers below. The individual stones were orientated east-west. Below 12.

Overlying the road were the following deposits:

Layer 11, up to 0.07m thick, was a dark yellowish brown, sand. Not excavated. Below Layer 8.

Layer 8, up to 0.28m thick, black organic silt containing occasional pottery sherds, and animal bone. Below Layer 12.

Layer 12, up to 0.18m thick, was a dark brown, silty clay containing frequent brick fragments. Below Wall 15.

Wall 15, orientated north to south, was wall-footing consisting of two courses of modern, machine-made, bricks. Below layer 7.

Layer 7, up to 0.45m thick, was an olive brown, silty sand containing lenses of gravel, brick fragments, ironwork, pottery, and glass. Below Layer 6.

Layer 6, up to 0.55m thick, was a black, sandy silty clay containing, amongst other things, plastic fertiliser bags. Below Layer 1.

Layer 1, up to 0.5m thick, was the modern topsoil.

6 DISCUSSION

The earliest deposit encountered here was the natural peat, Context 9, which is, presumably, part of the Nordelph Peat. It was decided, after discussion with P Murphy of East Anglia University, and in view of the depth of the trench, not to attempt to sample the peat.

Feature 13, cut into the natural peat, appears to be the construction cut for a raised approach road, running south across the fen towards the bridge over the Nene. The method of construction seems to have involved cutting down into the peat to form a trench, 0.7m deep, with a flattish base (the width of which is unknown since only the eastern edge of the road was revealed during the excavations). Within this, a 'revetment' of wooden planking and posts, Structure 4, was constructed (the type of wood used has not yet been identified). It was presumably matched by a second revetment along the western side of the cut resulting in a wooden 'box' running along the length of the construction cut. The silty peat layer, 5, found to the east of Structure 4 in the base of the cut, is very probably a 'trample' layer produced by the original workmen during construction. Fill 37 was then piled up against the east side of the planking.

Sharpened stakes were driven into the peat, and Fill 26, which was almost certainly derived from the peat originally excavated from the cut, was mounded up within the structure. The stakes presumably provided a degree of stability to the redeposited peat. Sticky clay, Fills 2 and 36, was then dumped on top of the mound, sealing the timbers. The surface of the clay was given a gentle slope down to the east, levelling off towards the west, to ensure that the final road surface would be properly drained. At this point, an east to west timber, 17, was placed on the surface of the clay, its end resting on the uppermost timbers of Structure 4. It does not appear to be an original part of the structure and may have been added, as an afterthought, in an attempt to add stability to the road.

A layer of silt, 25, and gravel, 24, was laid on top of the clay, after which a large quantity of very clean silt, 10, was dumped in the cut, 13, to the east of Structure 4. It is almost certain that the deposits so far described represent a single phase of construction since Fill 10 appears to be an integral part of the road, acting as ballast and preventing the planking from buckling under the weight of the road.

Thin, alternating bands of compact gravel, 33 and 16, and silt, 17, were then laid down to produce a stable surface in which the cobbled surface of the road, 14, could be bedded. It was not possible to determine if Layer 14 was the original road surface or a later re-surfacing.

Layer 11, a yellowish brown sand, may be part of the original build, or may represent a repair to the road surface.

Timber 38, an inclined stake, was erected at some point after Fill 10 was dumped and does not appear to be part of the original road structure. It possibly formed part of a roadside fence, although this cannot be proved. The timbers

found within the engineer's test-pit may have formed part of this as they were not associated with any vertical planking.

Layer 8, an organic silt overlying Fill 10, was probably laid down over a relatively long period, in damp conditions prevailing at the roadside. This impression was strengthened by the presence of pottery of the seventeenth, eighteenth, and perhaps nineteenth, centuries within the layer.

Layer 12, which contained nineteenth or twentieth century brick fragments, was dumped directly onto the cobbled surface of the road, presumably after 1933, when the present bridge was built and the road re-aligned to the east. A shallow brick foundation, Wall 15, cut through this layer and resting directly on the road surface, was probably associated with the original pumping station, built in the 1930s. Layers 7 and 6 post-date the demolition of Wall 15, and are probably the result of landscaping and building work carried out in the early 1980s when the new pumping station was constructed.

Dating evidence for the road's construction took the form of pottery sherds, bottle glass and clay tobacco pipes. Large fragments of onion bottles, along with clay tobacco pipe fragments, and pot sherds, were found in Fill 5 at the base of Cut 13. These artefacts must have been introduced by the original construction workers and, whilst some may have been brought in along with building materials, it is likely that the bottles and a complete tobacco pipe-bowl were discarded during construction work. These have been provisionally dated, and indicate that construction work probably took place in the first part of the eighteenth century. It is reasonable to assume, then, that the road was constructed around the same time as the new course of the River Nene was cut, in 1728.

Unfortunately, it has not been possible to find any references to the construction or maintenance of the road in historical records (Akeroyd and Lutt pers comm), although it is certain that it was not a turnpike road. However, it seems unlikely that the parish of Thorney, on its own, would have built such a well-made road. After all, turnpike trusts were set up during the eighteenth century in response to the poor condition of many roads, which had previously been the responsibility of parishes - even into this century, many roads in the fens 'were rutted, boggy tracks, often impassable' (Taylor, 1973). It is possible that the Bedford Level Corporation, who cut the new channel for the Nene, also constructed the bridge and its approach roads. This would account for the high quality of the work, but probably implies that, away from the approaches to the bridge, the road would not have been rebuilt.

The road appears to have remained in use for a long period, although it may have been re-surfaced. Indeed, there was no evidence to suggest that it went out of use, or was significantly altered, before the present bridge was built and the road re-aligned, in 1932.

7 CONCLUSIONS

This evaluation has proved very worthwhile, in that it revealed the techniques used in eighteenth century road construction - detail which would normally have been lost during later, especially twentieth century, alterations. Although only one side of the road and causeway was available for study, this is unlikely to have resulted in a significant loss of information concerning the method of construction. However, it would be useful to know the full width of the road as well as to be able to record any traces of wear on the cobbled surface. To this end, it is recommended that a small scale recording brief is undertaken during the forthcoming building works.

ACKNOWLEDGEMENTS

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APPENDIX A

List of Contexts

<u>Context</u>	<u>Description</u>	<u>Nature</u>	<u>Below</u>	<u>Above</u>
1	Layer	10yr 3/2 very dark greyish brown silty sandy clay	-	6
2	Fill of 13	2.5Y 6/6 olive yellow - 5Y 5/2 olive grey, clay	3	26
3	Fill of 13	10YR 3/1 very dark grey, slightly clayey, sandy silt	36	2
4	Timber structure	Plank and upright 'revetment'	26, 37	13
5	Fill of 13	10YR 2.5/1 black silty peat	37	13
6	Layer	10YR 2/1 black sandy silty clay	1	7
7	Layer	2.5YR 4/3 olive brown, silty sand	6	15
8	Layer	10YR 2/1 black, organic silt	12	11
9	Layer	7.5YR 3/4 brown, peat	13	-
10	Fill of 13	10YR 5/1 grey, slightly clayey sandy silt	11	37
11	Layer	10YR 4/6 dark yellowish brown, sand	8	10
12	Layer	7.5YR 2.5/2 very dark brown, silty clay	15	8
13	Cut	Construction cut for road	4, 5	9
14	Layer/fill	Cobbled surface of road	12	16
15	Wall	Modern wall-footing	7	12
16	Layer/fill	Compact gravel	14	17
17	Layer/fill	10YR 3/1 very dark grey, slightly clayey, sandy silt	16	33
18	Timber	Part of Structure 4		see 4
19	Timber	Part of Structure 4		see 4
20	Timber	Part of Structure 4		see 4
21	Timber	Part of Structure 4		see 4
22	Timber	Part of Structure 4		see 4
23	Timber	Part of Structure 4		see 4
24	Fill of 13	10YR 5/6 yellowish brown, gravel	10, 33	25
25	Fill of 13	10YR 3/1 very dark grey, slightly clayey sandy silt	24	36
26	Fill of 13	10YR 2/1 black, silty peat	2	4
27	Not used			
28	Timber	Part of Structure 4		see 4
29	Timber	Part of Structure 4		see 4
30	Timber	Part of Structure 4		see 4
31	Timber	Part of Structure 4		see 4
32	Timber	Part of Structure 4		see 4
33	Layer/fill	Compact gravel	17	34
34	Not used			
35	Timber	Part of Structure 4		see 4
36	Fill of 13	2.5Y 6/6 olive yellow - 5Y 5/2 olive grey, clay	25	3
37	Fill of 13	10YR 2/1 black, silty peat	10	37
38	Timber	Inclined post	78	710



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