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LINDSEY ARCHAEOLOGICAL SERVICES

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**Bracebridge, Lincoln  
Water Mains Replacement Scheme**

NGR: SK 9640 6820 (centre)  
Site Code: LBWM 02  
LCNCC Museum Accn No.: 2002.98

**Archaeological Monitoring**

Conservation  
Services  
  
21 OCT 2002  
  
Highways & Planning  
Directorate

**Report prepared for  
PDM Associates (on behalf of Anglian Water Services Ltd)**

**by G. Tann**

Conservation  
Services  
  
21 OCT 2002  
  
Highways & Planning  
Directorate

**LAS Report No. 616**

**October 2002**

Event W13474

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L18182

negative

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# **Bracebridge, Lincoln Water Mains Replacement Scheme Archaeological Monitoring**

*NGR: SK 9640 6820 (centre)*

*Site Code: LBWM 02*

*LCNCC Museum Accn No.: 2002.98*

## **Summary**

*Trenches excavated during directional drilling of a replacement water main in Newark Road, Rookery Lane and Doddington Road Lincoln did not encounter identifiable archaeological remains. There was no confirmation of the alignment of the Roman road (the Fosse Way) which is believed to lie below Newark Road. No evidence of early bridges or causeways were seen either side of the River Witham.*

*Monitoring in Rookery Lane identified gravel and sand deposits which were interpreted as evidence of palaeochannels associated with or pre-dating the River Witham.*

## **Introduction**

Lindsey Archaeological Services (LAS) was commissioned by PDM Associates (on behalf of Anglian Water Services Ltd) in January 2002 to conduct a watching brief during directional drilling and open-cut trenching for a replacement water main at Bracebridge, Lincoln (Fig. 1). Archaeological monitoring had been requested by Lincolnshire County Council Conservation Section in case the works disturbed archaeological remains associated with the known Roman road called the Fosse Way leading from Lincoln to Leicester on the line of the present A46 (Margary 1973, 219-21; Margary road ref. 5f).

28 intermittent monitoring visits were made by Geoff Tann and Naomi Field between 18th February and 2nd July 2002.

## **Archaeological Background**

The works for the new main affected areas close to several important archaeological sites. These included the Roman Fosse Way, the bridging point across the River Witham, Roman pottery kilns to the west of Rookery Lane and the medieval settlement of Bracebridge.

The Roman Fosse Way, now the A46, was one of the major military and trade arteries in Roman Britain, in this region linking centres at Lincoln and Leicester. The road has been in active use for centuries, and repairs and resurfacing must have occurred before the tarmacadam surfaces were laid.

## **The Watching Brief**

The new main was directionally drilled or laid in open-cut trench where necessary. Machine-excavated trenches were inspected, and assigned numbers by LAS for recording purposes where observations were noted. The approximate positions of these observations are marked on Figs. 2 and 3.

### **Newark Road**

1. The most easterly point of the scheme monitored was by Bracebridge Hall. Here the trench exposed the backfill of earlier trenches.
2. Outside No. 210 Newark Road, the 0.22m thick tarmac road surface covered 0.38m of gravel, interpreted as a post-medieval road surface (Pl. 1). This overlay dark grey silt. To the west, in the centre of the Brant Road junction, the gravel layer was thinner and mixed with asphalt, which suggested a later date. The observed trenches were at the southern edge of the modern road, and this might explain why more substantial surfaces were absent. The silt is thought to represent marshland beside the river, or flood alluvium.
3. Evidence of more substantial road construction at the approach to the bridge over the River Witham was recorded near the western slip road from Brant Road (Pl. 2). Here the modern road was on a 0.22m thick layer of limestone blocks and stone rubble. Beneath it was 0.18m of red ash and other signs of burnt material, and 0.3m of clinker (Pls. 3 and 4). The silt layer was found 1m below the modern surface. There was no visible dating material within the clinker layer; one interpretation is that it represents factory furnace waste from the late nineteenth or early-mid twentieth century. Although Roman pottery kilns are known from the west side of the river, the burnt material contained no trace of ceramic wasters.
4. To the west of the bridge, opposite the Plough public house, the road foundation was on dark brown and grey silts (Pl. 5).
5. East of the Waggon and Horses public house, the underlying silts were lighter and sandier than closer to the bridge (Pl. 6). The colour indicates that these probably incorporated less waterlogged organic material, and so may have been drier soils away from the river.
6. Close to the Rookery Lane junction, at the southern side of the modern road, the 0.3m thick road surface covered 0.25m of limestone rubble. Beneath this the deposits were a brown/dark brown loam, which may have been a drier version of the silts recorded closer to the river (Pl. 7). This material, at least 0.5m thick, may have been the ground surface with soil sequence prior to construction of the road.
7. A short length of the mainlaying scheme in Brant Road was monitored. Outside No. 3 Brant Road, the trench cut through earlier trench backfill. At 1.1m deep, at the base of the trench, blue/grey clay was exposed. It was impossible to tell whether this clay was also redeposited.
8. Further to the SW, the trench at 13 Brant Road revealed dark brown silty clay below recent material, with no sign of the blue/grey clay seen at 7.



9. In Newark Road, 10m west of the Brant Road junction, the tarmac road surface covered a 0.15m thick layer of clinker, with pale brown and yellow sand below. The clinker had apparently been spread to form a consolidation layer above the natural sand; the direct stratigraphic relationship between the clinker and tarmac supported the interpretation that the clinker was not an ancient layer. The absence of any intervening or underlying layer of metalling probably means that this side of the road was widened in the twentieth century.

10. Opposite 447 Newark Road, the clinker layer had been spread on a light brown sandy clay deposit, at least 0.45m thick (Pl. 8). This may have been natural river alluvium.

11. Slightly thicker tarmac to the west of 449 Newark Road covered 0.3m of clinker. Beneath this was 0.35m of sandy gravel, with grey silt extending below the base of the trench.

12. Opposite 453 Newark Road, the bedding for the modern road covered yellow sand.

13. South of 471 Newark Road, dense gravel and sand was present 0.5m below the modern surface, extending below the base of the trench (Pl. 9).

14. At 406 Newark Road the 0.27m thick tarmac covered a 0.18m thick bedding layer of limestone rubble. Below this was gravel; the upper 0.2m was clean but lower deposits were discoloured and mixed (Pl. 10).

#### ***Doddington Road***

15. Outside The Gables, at the junction of Newark Road with Doddington Road, the remains of a brick structure was seen below the modern road to the east of the existing central island (Pl. 11). A single piece of stone rubble was seen incorporated into the brickwork. The structure was interpreted as a minor bridge or culvert carrying Pike Drain below Doddington Road.

16. In front of 2 Doddington Road, the 0.1m thick tarmac surface covered a 0.26m thick layer of limestone rubble, laid on its edge for greater wear (Pl. 12). Beneath this was 0.25m of ash and clinker. The rubble and clinker layers seem to have been restricted to the vicinity of the Pike Drain bridge; rubble was only seen south of 6 Doddington Road. Below the clinker was 0.08m of discoloured loamy sand, merging to pale yellow sand.

17. At 10 Doddington Road the modern road lay above 0.3m of sandy gravel, with discoloured sand below. The gravel extended to slightly south of 6 Doddington Road, where it was 0.5m thick. This thicker layer, coinciding with the change to stone rubble, may indicate that this was levelling the slope over the bridge; the gravel layer in Doddington Road is probably not a naturally laid deposit.

18. The furthest observation in Doddington Road was close to No. 24. Here the gravel layer was 0.25m thick.

### ***Rookery Lane***

When works for the scheme started at the southern end of Rookery Lane, a 0.9m thick layer of gravel was seen in the trench face in front of a pathway to the south of No. 10. As this material was separated from the modern road only where limestone rubble filled an existing sewer trench, it was initially interpreted as metalling for a former road. Trenches at the junction of Rookery Lane and Newark Road had produced no trace of the anticipated Roman road, and this seemed likely to be the actual location. As works progressed, a trench was excavated to Newark Road, and the southern extent of the gravel was established 20m north of the junction. This also revealed the complexity of the sequence of layers, and prompted reconsideration of the feature.

19. At the junction with Newark Road, the 0.4m thick tarmac layer covered 0.2m of ash and asphalt, thought to be an early surface of Rookery Lane. Beneath this was 0.4m of dark brown sandy loam, as seen on the opposite side of Newark Road, but it extended only 4m into Rookery Lane. In places the tarmac overlay limestone rubble, which may have been a road bedding layer or fill of a sewer trench; the contractors' trench was too narrow for this to be determined.

20. At its northern limit, the sandy loam was replaced by a narrow peak of white sand, rising from below the loam almost to the base of the ash layer.

21. To the north of this sand, the ash layer rose slightly over a ridge of brown sand, 17m wide, with black silt below it (Pl. 13).

22. The northern slope of the brown sand ridge was overlain by gravel lenses, which extended from the base of the ash layer to the black silt at the trench base (Pl. 14).

23. The upper surface of the gravel fell slightly near 10 Rookery Lane, but in this area it was disturbed by a backfilled sewer trench containing limestone rubble. The upper gravel was discoloured.

24. 50m north of the junction with Newark Road, the upper surface of the gravel dipped for about 2m. Here the limestone rubble overlay brick rubble; this may have been sewer trench backfill but this was unclear (Pl. 15).

25. 55m from Newark Road, the black silt at the trench base rose, revealing an underlying orange sandy clay. The silt layer was about 0.2m thick, and the gravel layer above it contained more loam. At the top of the gravel deposit was a 0.1m thick band with virtually no loam content.



26. At 14-16 Rookery Lane, about 67m from Newark Road, the silt band thinned and ended about 0.6m from the modern road surface. The overlying gravelly loam also thinned and ceased about 3m to the north. The gravel band continued, directly covering the orange sandy clay which extended below the trench base (Pl. 16). It appeared that the gravel band had been spread as an earlier lane surface, prior to construction of the modern road. The orange sandy clay was interpreted as a natural deposit at the northern edge of a broad feature extending southwards beyond Newark Road.

27. The bedding for the modern road lay on a band of gravelly loam at 20 Rookery Lane. This layer merged gradually with yellow clay near the trench base.

28. A post-medieval feature, possibly a backfilled roadside ditch, was observed at the junction of Rookery Lane with St. Peter's Avenue. The tarmac surface overlay limestone rubble, with an underlying 0.2m thick band of dark brown soil and brick rubble. This had been cut into, or laid over, orange sand.

29. To the north of St. Peter's Avenue, the underlying sand became markedly denser, incorporating some gravel.

### **Conclusion**

No archaeological features of significance were identified in any of the trenches inspected. The small trenches offered a glimpse of the below-ground deposits, but this was inadequate to allow any confident interpretation of those deposits.

The failure to identify a well-constructed major Roman road in the vicinity of a river crossing was a considerable surprise. The alignment of the Fosse Way has been asserted to have been much the same as the modern Newark Road; in the eighteenth century the antiquarian William Stukeley recorded that the flagstones of the Roman pavement survived between Ermine Street (which diverged at Cross O' Cliff Hill) and Bracebridge (cited by Codrington 1905, 248). Margary's description of the road is that a straight section of the road, from Thorpe on the Hill to the Lincoln suburbs, is ended "at the approach to the crossing of the river Witham at Bracebridge, where the road bends east to the crossing and then northward to the city, joining with Ermine Street on the way, as the present roads do" (Margary 1973, 221).

The observations from this watching brief are more comparable to a relict watercourse, probably flowing west-east, and possibly a natural forerunner of the Pike Drain. It would appear to have been a tributary of the Witham, but to have had a very broad channel, extending broader than the 360m from Newark Road to Boultham Park. This immense width is not a single uniform channel, but a series of ridges and depressions, and a glacial or post-glacial date is possible.

This leaves the problem as to where the Roman Fosse Way lies, and where it crossed the River Witham. It is possible that it lies below Newark Road, but was not observed in any of the trenches. On any alignment north of the southern edge of Newark Road, it should have been visible in trenches in Rookery Lane or Doddington Road.

### **Acknowledgements**

LAS is grateful to Anglian Water Services for their co-operation. The site contractors on this project were AHLCo Ltd, assisted by a directional drilling company. The Lincoln City Archaeologist Mick Jones, and John Herridge, visited the trench in Rookery Lane. Further help was given by Sarah Grundy (Lincolnshire County Council Sites and Monuments Record), Maggi Darling and Barbara Precious. Mark Williams and Mick McDaid prepared illustrations and Jane Frost produced the report.

Geoff Tann  
Lindsey Archaeological Services  
8th October 2002

### **References**

Darling, M.J. 1977 *A Group of Late Roman Pottery from Lincoln*. Lincoln Archaeological Trust Monograph Series 16.1.

Margary, I.D. 1973 *Roman Roads in Britain*.

### **Archive Summary**

Anglian Water Services plans

Annotated plans and field notes

Photographs: colour prints, LAS film nos. 02/17/33-36; 02/19/00-7; 14-18, 21-24; 02/21/13-17; 02/22/00-6, 22-24; 02/25/17-19; 02/36/16-23; 00/37/19-22; 00/43/0-8; 02/45/20-31; 02/52/6-8  
(including those used in this report).

Correspondence



**THE FIGURES**



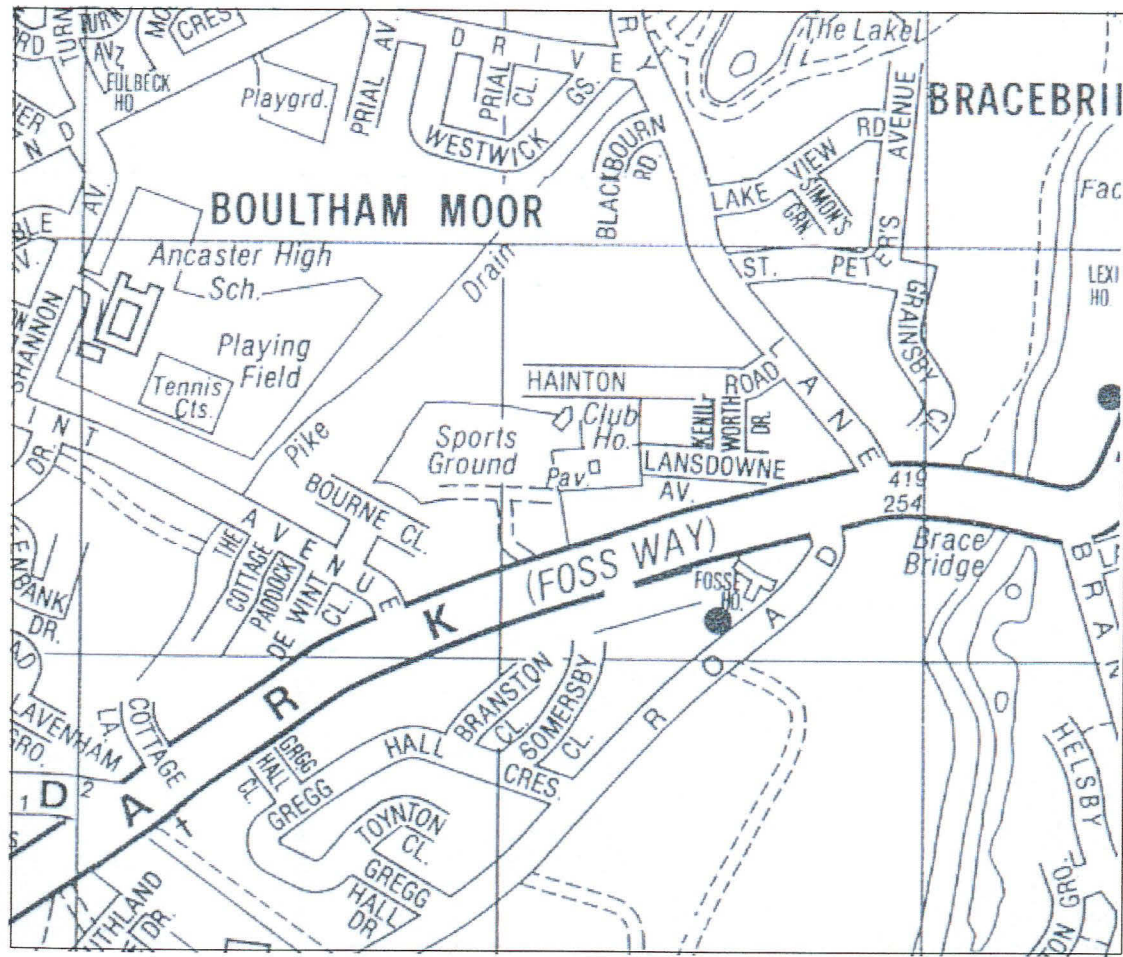
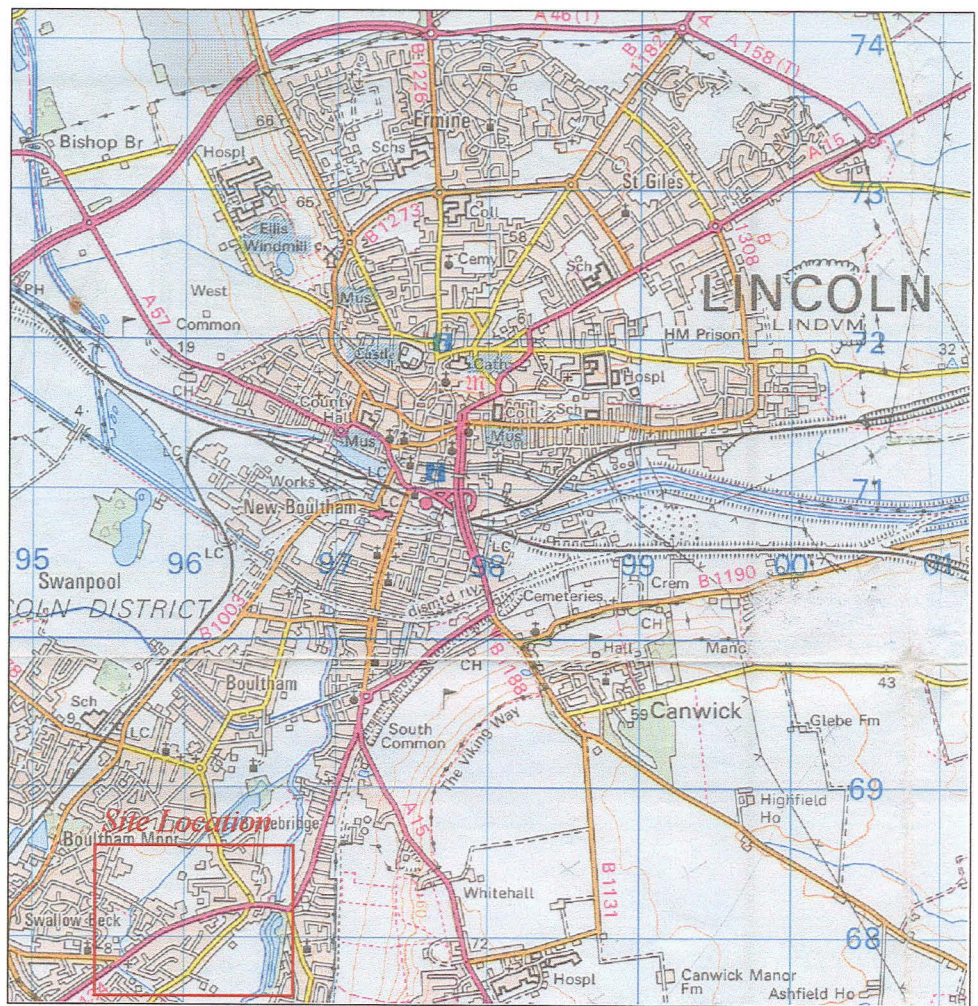


Fig. 1 Location of Bracebridge (C based on the 1980 Ordnance Survey 1:50 000 Landranger map Sheet 121; © Crown Copyright, reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 100002165)







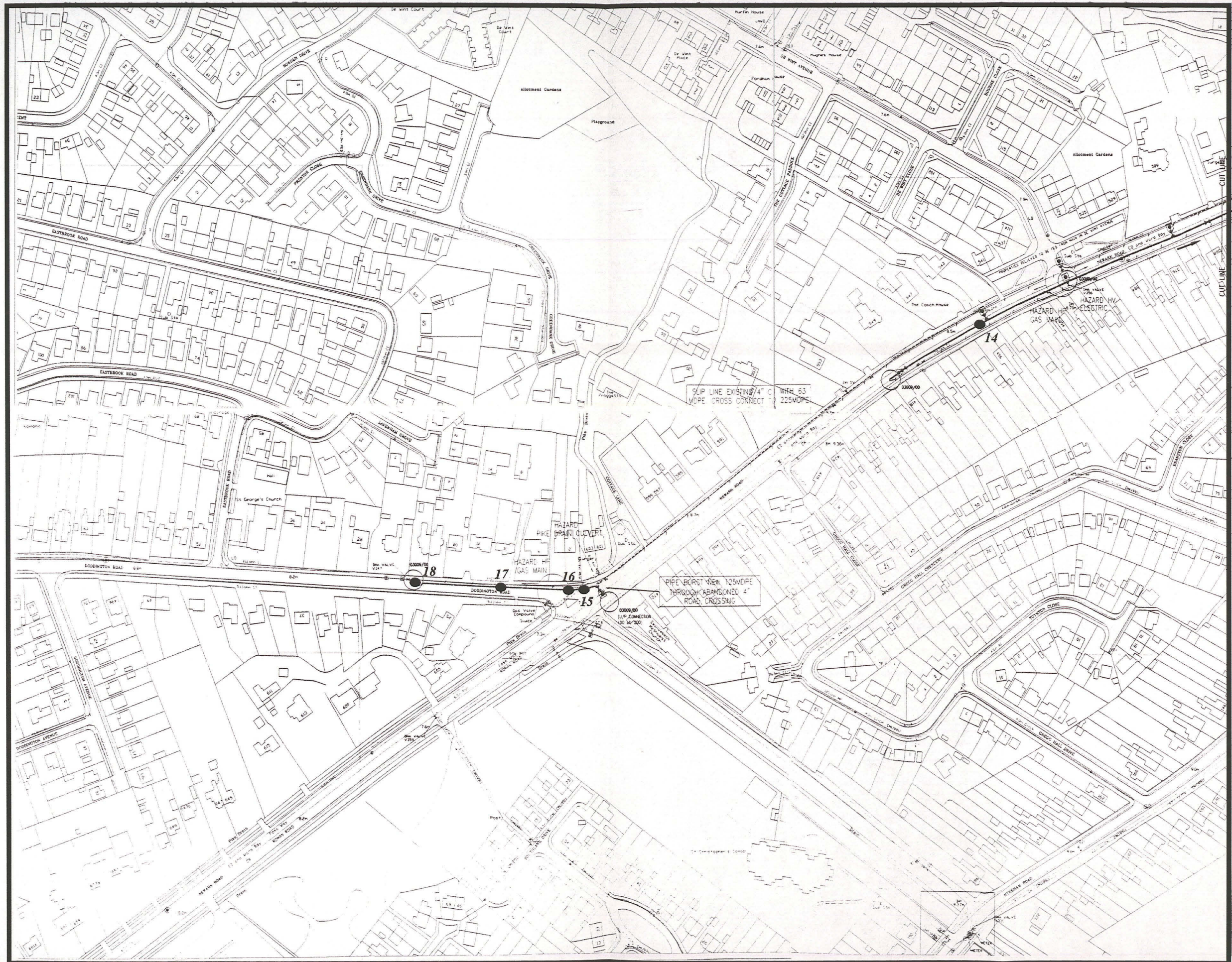


Fig. 3 Position of the observations (based on a reduced scale copy of PDM Associates dwg. Number WAT-03009/02A.  
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**THE PLATES**





Pl. 1 The tarmac road surface overlies a gravel band near 210 Newark Road (2), probably a post-medieval road surface.

Pl. 2 At the approach to the eastern side of the river bridge (3), the foundation bedding for the modern road was thicker, with limestone rubble over clinker, ash and brick rubble (looking east).







**Pl. 3** Ash, burnt material and clinker were visible in the trench face east of the river bridge (3).

**Pl. 4** Burnt material at (3), between the clinker and the underlying dark silt.







Pl. 5 Dark silts below the road bedding west of the river (4), looking NW.

Pl. 6 Near the Waggon and Horses (5), the modern road lies on a thin layer of gravel, with brown loam below.







PI. 7 At the junction with Rookery Lane, the trench at the southern edge of the road revealed silt loam, with no trace of Roman road metalling.

PI. 8 Near 447 Newark Road (10) a thick brown sandy clay deposit was seen.







PI. 9 Dense gravel was seen in the trench west of 471 Newark Road (13).

PI. 10 Mixed gravel was recorded in the trench face near 406 Newark Road (14).







Pl. 11 Close to the junction of Doddington Road with Newark Road (15), a brick structure was seen. This is probably a bridge across the Pike Drain.

Pl. 12 South of 6 Doddington Road (16), the rubble bedding for the road lay on loamy sand.







Pl. 13 Open-cut trenching in Rookery Lane (looking north). Deposits close to the junction with Newark Road (21) were dark silts, with overlying brown loam.

Pl. 14 To the north of (21), the dark silts dipped below layers of gravel (22). The gravel was initially thought to be Roman road metalling, but has been reinterpreted as naturally deposited material within an ancient stream channel. (Looking north).







Pl. 15 Brick rubble over a thin band of gravel at (24), 50m north of the junction with Newark Road.

Pl. 16 The thin gravel band was traced northwards to 16 Rookery Lane (26), where it overlay clay. This suggests that the uppermost gravel may have been a post-medieval road surface.

