

Ribble to Bamber Bridge, Electricity Cable, Lancashire

Watching Brief



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SUMMARY

Oxford Archaeology North (OA North) conducted a watching brief on six test pits along the proposed route of an electricity cable, running along a disused railway embankment to the south of Avenham Park on the south side of Preston (SD 5378 2849 – SD 5411 2742). The Lancashire Sites and Monuments Record (SMR 6611) suggested that the railway embankment may have been built upon, and the site of an earlier viaduct on the Preston to Blackburn line (Ordnance Survey 1849, Fig 2) which may have been incorporated within it.

The test pits revealed successive layers of construction material, some of which had varying amounts of demolition rubble within them. Only test pit **4** showed a distinct concentration of demolition rubble, including brick and sandstone fragments, but no structural remains of the viaduct were revealed.

The proposed development route for the electricity cable is unlikely to impact upon any surviving archaeological remains of the viaduct within the parameters of excavation to a depth of 1m for the laying of the cable. There is little evidence to suggest that the viaduct survives at all. It is recommended that no further archaeological investigations are necessary for this proposed development.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Peter Farnsworth of United Utilities Ltd for commissioning the project, together with representatives of O'Connor Utilities Ltd for their hard work, and also Peter Isles of the Lancashire SMR for his assistance during the project.

The watching brief was undertaken by Peter Schofield. The drawings were compiled by Adam Parsons. The report was written by Peter Schofield and was edited by Alison Plummer and Carol Allen. The project was managed by Alison Plummer.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 A verbal brief was issued by Peter Iles of the Lancashire SMR, for a watching brief along the proposed route of a 33kv electricity cable running north-north-west to south-south-east from the river Ribble to Bamber Bridge (Fig 1). This was issued in advance of cable laying operations to be carried out by United Utilities Ltd. OA North was commissioned to undertake the project. A considerable section of the proposed route of the cable runs along what is currently a cycle track (Plate 1), but had once been a railway embankment on the Preston to Blackburn line, running from Bamber Bridge towards a viaduct over the river Ribble directly to the south of Preston (SD 5378 2849 – SD 5411 2742). The embankment was predated by a viaduct, built in the 1840s, running south to Walton Factory (Fig 2). There was potential that *in-situ* archaeological evidence of this structure could be found in the course of the proposed development.
- 1.1.2 On May 29th 2003, OA North conducted a watching brief to assess the potential survival of the viaduct beneath the later railway embankment. The watching brief consisted of observing the excavation of six test pits to a depth of 1m (maximum cable depth), along the line of the proposed development (Fig 3). This report presents the results of the watching brief, along with associated impacts on archaeological features and recommendations for further work.

1.2 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

- 1.2.1 The site is located in Walton-le-Dale parish, in a corridor of flat, low lying, fields and recreational areas directly to the south of Avenham Park, on the south side of Preston city centre (Ordnance Survey 1978). The geology of the area is New Red Sandstone of the Lancashire Lowlands, which can contain areas of sand, mossland and pockets of clay (British Geological Survey Sheet 61).
- 1.2.2 The Preston to Blackburn line railway embankment runs north-north-west to south-south-east from the south of the current viaduct (SMR 6611) southwards to Walton Factory (SD 5378 2849 – SD 5411 2742) The railway embankment has a junction mid-way along its length to a dismantled railway heading east. The embankment is bounded to the west by the embankment and viaduct of the North Union railway line, and to the east by the line of the Preston and Walton Plateway, both of which run roughly north to south (Fig 1).

1.3 HISTORICAL BACKGROUND

- 1.3.1 Preston was originally one of Lancashire's four medieval royal boroughs that grew as an administrative centre and market town (Ashmore 1982, 217). The town was transformed with the development of the cotton industry, which started in 1791 when John Horrocks built the first of the Horrocks' Mills in Stanley Street (Ashmore 1969, 299)

- 1.3.2 The nineteenth century saw an era of intensive development during which Preston became a prosperous textile town. By the 1850s large cotton mills such as the Arkwright Mill, Brookhouse Mill and Greenbank Mill, had been built (*ibid*). At this time most of the town centre was built-up, housing was encroaching on Avenham Fields (Ordnance Survey 1849, Fig 2) and the Preston Corporation ordered the landscaping of Avenham Park (Hunt 1992, 164).
- 1.3.3 The development of Preston as a textile town was related to the vast improvement of transport infrastructure in the late eighteenth and early nineteenth centuries. It gave an impetus to the early cotton mills that then in turn provided the money for further investments in first the canals and then the railways (*ibid*, 168).
- 1.3.4 In the 1790s the branch route to the Leeds and Liverpool Canal was constructed. The canal was originally to have been a single section of the Lancaster Canal, however the aqueduct over the river Ribble was not built, and therefore in 1803 the Preston and Walton Plateway and tram bridge was constructed, to the east of the railway embankment currently being investigated and this linked the two arms of the Lancaster Canal (Ashmore 1982, 217).
- 1.3.5 The rapid development of the railways in the 1830s and 1840s confirmed Preston as a nodal point for communications and trade with the rest of Britain. At one time there were up to eight rival rail companies vying for trade and even illicitly using each others tracks (Hunt 1992, 171). The first railway the North Union line connecting Preston to Wigan and the great viaduct to the west of the railway embankment currently being investigated, was completed in 1838 (*ibid*).
- 1.3.6 The railway embankment investigated in this project is located on the Preston to Blackburn line. The line originally consisted of a viaduct that crossed the river Ribble and ran southwards towards Walton Factory (Ordnance Survey 1849 *Figure 2*). At some point the viaduct changes into an embankment to the south of the river (Ordnance Survey 1891) in order to join with another railway line running east to west. The viaduct survives over the river as a four span steel girder bridge, built on brick and sandstone piers (Ashmore 1982, 217) but within the Sites and Monuments Record entry (SMR 6611) it is stated that the original viaduct may survive within the embankment structure.

2. METHODOLOGY

2.1 WATCHING BRIEF

- 2.1.1 The watching brief was maintained during the excavation of six manually excavated test pits, (measuring 1m long by 0.6m wide and up to 1m deep) exposed at even intervals along the length of the proposed development (Fig 3). The depth of the test pits was limited to 1m because this was the maximum depth of the proposed development.
- 2.1.2 A programme of field observations accurately recorded the location, extent, and character of any surviving archaeological features within the six test pits along the line of the proposed development. This work comprised observation during the ground-works, the systematic examination of any stratigraphic archaeological layers exposed, and the recording of any archaeological features identified during the observations.

2.2 ARCHIVE

- 2.2.1 A full archive has been compiled to professional standards, following current English Heritage guidelines (English Heritage 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project, and includes *pro forma* recording sheets, the photographic archive, and accurate digital plans and sections.

3. WATCHING BRIEF RESULTS

3.1 INTRODUCTION

3.1.1 The test pits were located along the route of the embankment at approximately 150-200m intervals. These were manually excavated under the supervision of an archaeologist.

3.2 RESULTS

3.2.1 *Test Pit 01:* (SD 5382 2835) located on east side of embankment plateau.

Depth in m	Description
0 – 0.20	dark brown, gravelly sandy silt, with frequent clinker inclusions
0.21 – 0.30	highly compacted, clean, orange/brown clay
0.31 – 0.40	black, gravelly sandy silt, with frequent clinker inclusions and slag
0.41 – 1.00	brown/black gravelly sandy silt with frequent small-medium brick and slag inclusions

3.2.2 *Test Pit 02:* (SD 5388 2814) located on east side of embankment plateau.

Depth in m	Description
0 – 0.30	black/brown, gravelly sandy silt, with frequent clinker inclusions
0.31 – 0.50	dark brown, gravelly sandy silt, with frequent clinker inclusions and mortar flecking
0.51 – 1.00	orange/brown gravelly silt, with frequent small-medium brick fragments, crushed brick and mortar flecking and occasional coal

3.2.3 *Test Pit 03:* (SD 5392 2798) located on east side of embankment plateau.

Depth in m	Description
0 – 0.40	dark brown, gravelly sandy silt, with frequent clinker inclusions
0.41 – 1.00	moderately compacted clean orange sand

3.2.4 **Test Pit 04:** (SD 5397 2783) located on the east sloping side of embankment below lip of plateau

Depth in m	Description
0 – 0.50	dark brown, gravelly sandy silt, with frequent clinker, slag and coal inclusions
0.51 – 0.75	mixed orange and brown sand, clean but occasional coal flecking
0.76 – 1.00	dark brown, gravelly sandy silt, with frequent clinker, mortar, bricks, and sandstone fragments with slag concretions

3.2.5 **Test Pit 05:** (SD 5402 2762) located on the east sloping side of embankment below lip of plateau

Depth in m	Description
0 – 0.50	black/brown, gravelly sandy silt, with frequent clinker inclusions
0.51 – 0.70	dark brown, gravelly sandy silt, with frequent coal inclusions
0.71 – 1.00	mixed orange and brown sand, clean but occasional coal flecking

3.2.6 **Test Pit 06:** (SD 5407 2747) located on east side of embankment plateau.

Depth in m	Description
0 – 0.50	black/brown, gravelly sandy silt, with frequent clinker inclusions
0.51 – 0.70	dark brown, gravelly sandy silt, with frequent coal inclusions
0.71 – 1.00	mixed orange and brown sand, clean but occasional coal flecking

3.2.7 The test pits revealed successive layers of construction packing that included dark gravelly sandy silt layers, sand layers and a clay layer. Many of the layers had small amounts of demolition rubble, including crushed brick, coal fragments, clinker and slag. Only test pit **04** had substantial demolition rubble between 0.71 and 1.00m deep as a dumping layer but this had no evidence for the viaduct structure visible beneath it.

4. DISCUSSIONS AND RECOMMENDATIONS

4.1 DISCUSSION

- 4.1.1 The results of the test pits show that there was no evidence for any structure of the viaduct within the build of the embankment to a depth of 1m from the top of the plateau. Test Pits **04** and **05** were placed just below the east side of the lip of the plateau but still did not uncover any viaduct structure. It is possible that the viaduct has been completely demolished before the embankment was built. However, the demolition rubble dumping layer in test pit **04** (Plate 2) could suggest that if the viaduct was not completely destroyed, the upper super-structure may have been removed and levelled before the embankment was built.

4.2 IMPACT AND RECOMMENDATIONS

- 4.2.1 The test pits show that within the parameters of a pipeline development running along the embankment up to a depth of 1m, there is unlikely to be any surviving *in-situ* remains of the 1840s viaduct.
- 4.2.2 It is recommended that no further archaeological investigations be conducted on the site of the embankment for this specific proposed development.

5. BIBLIOGRAPHY

5.1 PRIMARY SOURCES

British Geological Survey Sheet 61

Lancashire SMR, 6611, Pers com; Jepson, P; 22-05-2003

Ordnance Survey, 1849, 1st Edition 6":1 mile (1:10,560), Sheet Lancs 61

Ordnance Survey, 1891, 2nd Edition 6":1 mile (1:10,560)

Ordnance Survey, 1893, 2nd Edition 25":1 mile (1:2,500), Sheet 61.14

Ordnance Survey, 1978, 1:25,000, Preston (South), Sheet SD 42/52

5.2 SECONDARY SOURCES

Ashmore, O, 1969 *Industrial Archaeology of Lancashire*, Newton Abbot

Ashmore, O, 1982 *Industrial Archaeology of North West England – And Where To Find It*, Manchester

English Heritage, 1991, *Management of Archaeological Projects*, 2nd Edition, London

Hunt, D, 1992 *A History of Preston*, Preston

ILLUSTRATIONS

ILLUSTRATIONS

Figure 1: Location Map

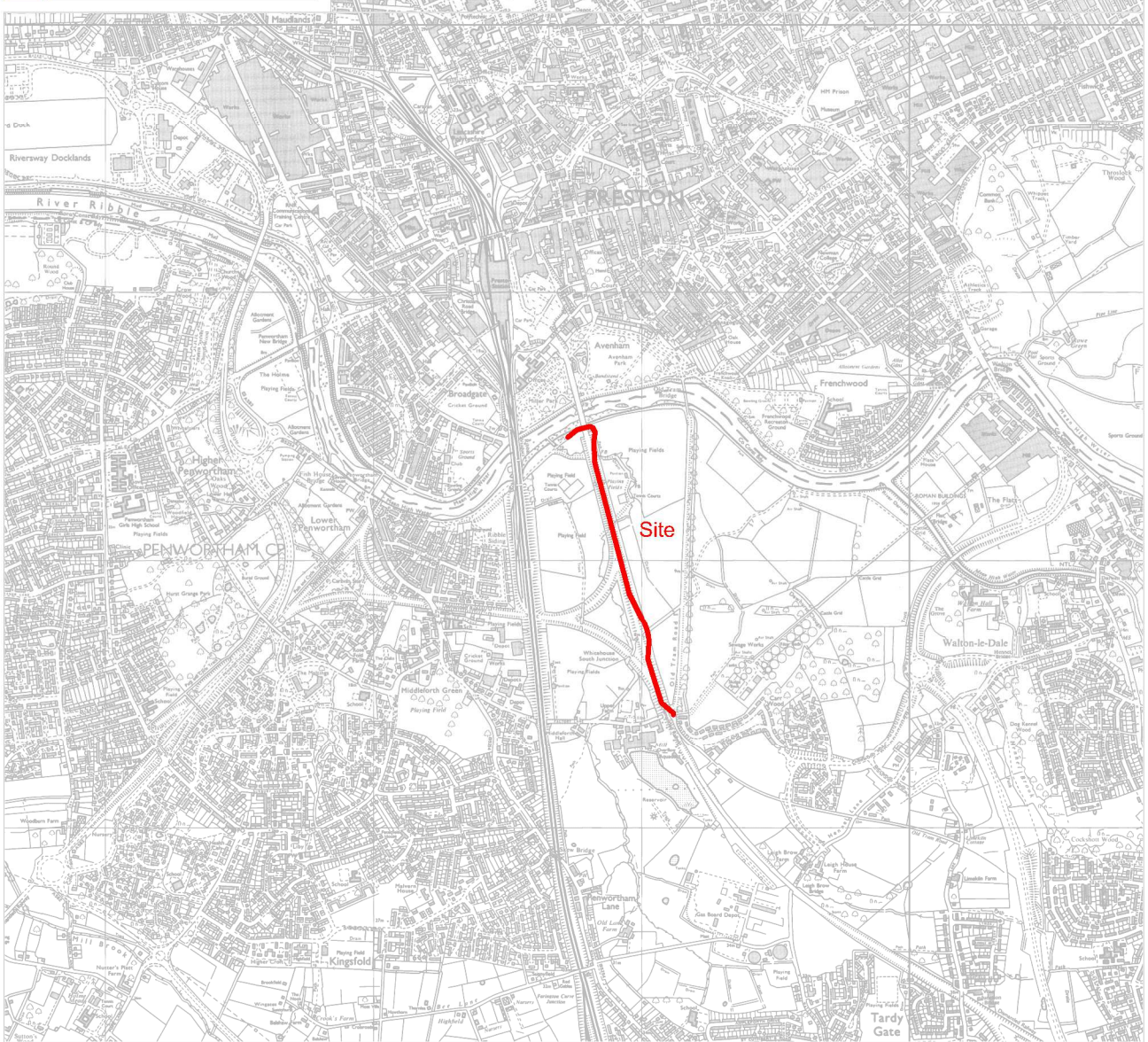
Figure 2: Ordnance Survey 1st Edition, 1849

Figure 3: Test Pit Location Plan

PLATES

Plate 1: Cycleway, looking north

Plate 2: Test Pit **04**, looking west



based upon the Ordnance Survey 1:10000
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0 500m



Figure 1: Location Map

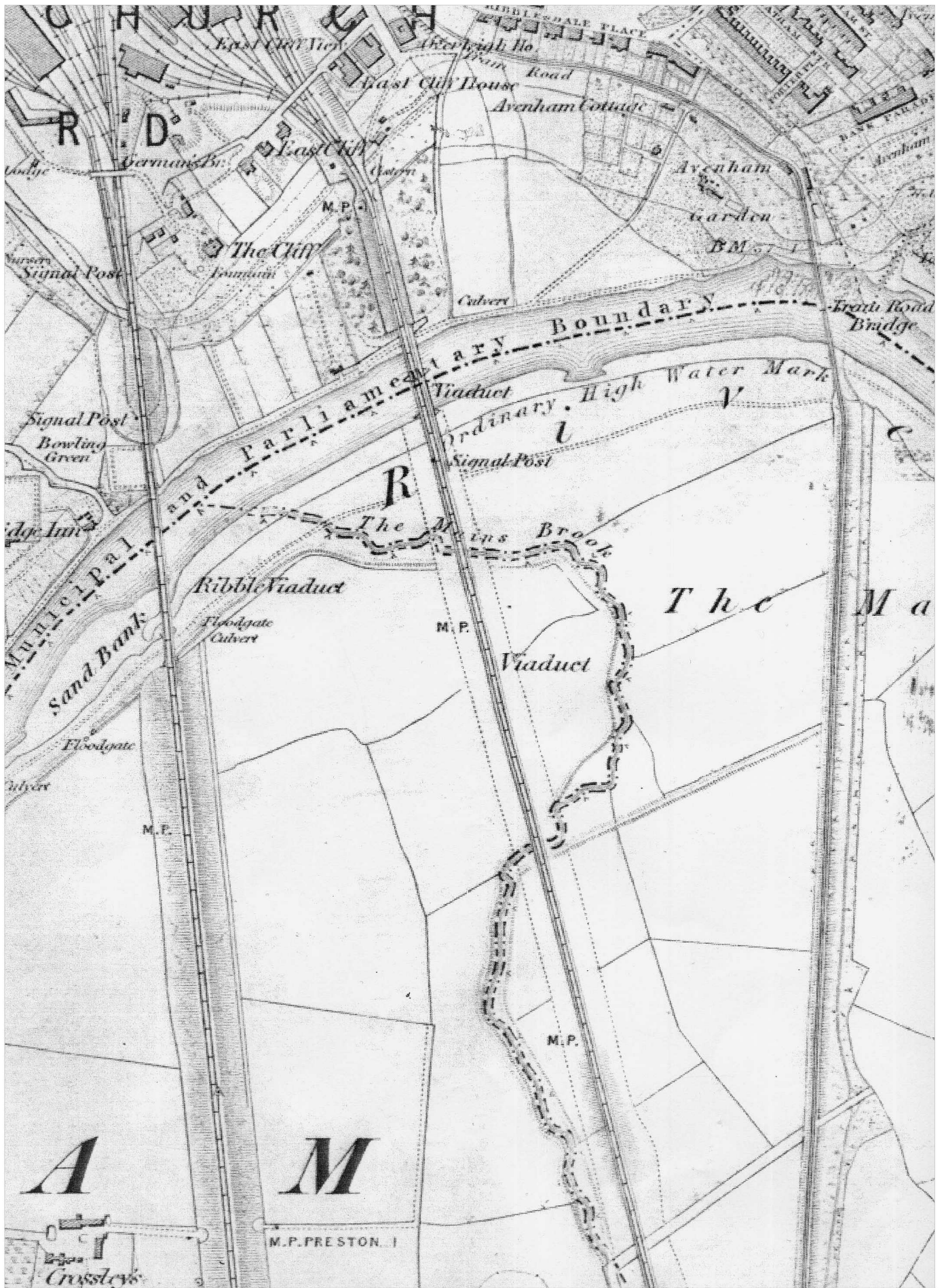


Figure 2 : Ordnance Survey 1st Edition 1849

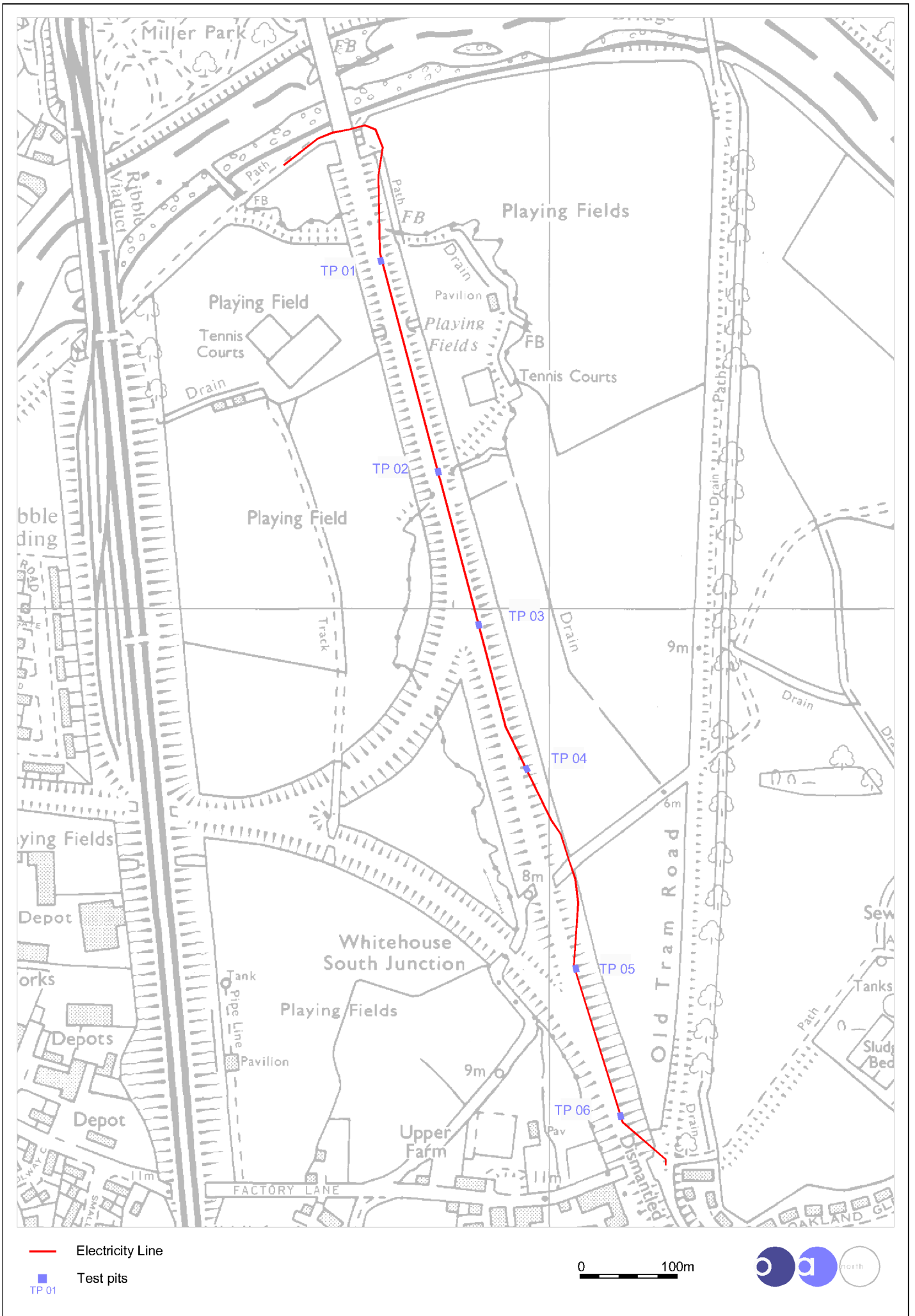


Figure 3 : Test Pit location plan



Plate 1: Cycleway, looking north



Plate 2: Test Pit **04**, looking west