

MILLER BRIDGE, KENDAL, CUMBRIA

Watching Brief



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SUMMARY

Following a proposal by Balfour Beatty to undertake exploratory roadworks for the laying of a service pipe across Miller Bridge, Kendal, Cumbria (SD51759269) (Fig 1), Cumbria County Council Historic Environment Services (CCCHES) recommended an archaeological presence should be maintained for the duration of the project. The bridge is a Scheduled Monument (443) and is also included within the County Sites and Monuments Record for Cumbria (5454), and dates to the early nineteenth century. Subsequently, CCCHES recommended that rapid historical research be undertaken in advance of the watching brief element of the project.

The planning, financing, and personnel involved in the construction of the bridge are all well documented, and this research revealed that the predecessors of the present bridge were numerous, due to their timber construction and the periodic flooding of the River Kent. From at least the early seventeenth century, successive timber bridges were built, until a stone replacement was constructed in the mid eighteenth century. However, the burgeoning industrialisation of Kendal, including the building of paper and gunpowder operations, several woollen mills, and the construction of the new Lancaster and Kendal Canal meant that a new replacement was required by the early eighteenth century.

Subsequently, Kendal Corporation invited Francis Webster, the local architect and alderman of Kendal, to submit plans and find contractors capable of building the bridge within a narrow time-frame. In local stonemasons, Edward Gibson and James Harrison, Webster found such men, and within only seven months of being proposed, the *Kent Bridge* was designed, built and opened to traffic. It was only later that the bridge became referred to as *Mill Bridge* and later still, the now familiar *Miller Bridge*.

The watching brief on Miller Bridge was maintained during the night of 9th July 2008. Initially, a test pit was excavated in the centre of the pavement on the eastern side of the bridge, which revealed three existing services and part of the stone construction of the bridge. In light of the presence of these services, further interventions were made at the northern and southern extents of the east side of the bridge, in order to ascertain the presence, or lack thereof, of these pipes. In each case, these existing services meant that the stone construction was damaged or partially-damaged, thus revealing the underlying large, roughly-hewn slabs of limestone with no identifiable bonding material. Subsequently, it was agreed that the service trench will be repositioned on the road surface itself, and this is likely to take place during proposed Council works for extending the width of the pavement on the bridge.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Balfour Beatty for commissioning and supporting the project. Additional thanks are also due to the staff of the County Record Office in Kendal.

The report was compiled by Chris Ridings, who undertook the rapid historical research, and Pascal Eloy, who conducted the watching brief. Chris Ridings and Mark Tidmarsh produced the drawings. Alison Plummer managed the project and also edited the report.

1. CIRCUMSTANCES OF THE PROJECT

1.1 INTRODUCTION

- 1.1.1 Balfour Beatty have proposed undertaking road works, in order to lay a service pipe across Miller Bridge, which is located in the centre of Kendal, Cumbria (SD51759269) (Fig 1). The bridge, which dates to the early nineteenth century, is a Scheduled Monument (443) and is also included within the County Sites and Monuments Record for Cumbria (5454). In light of its significant historical and social interest, Cumbria County Council Historic Environment Services (CCCHES) have requested a programme rapid historical research and that an archaeological presence should be maintained during the course of the road works.

2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 The rapid historical research was carried out in accordance with the relevant IFA and English Heritage guidelines (Institute of Field Archaeologists 1999, *Standard and guidance for archaeological Desk-based Assessments*; English Heritage 2006, *Management of Research Projects in the Historic Environment* (MoRPHE)).

2.2 RAPID HISTORICAL RESEARCH

2.2.1 The study area was examined in order to gain an understanding of the historical and archaeological background, and to assess the potential impact of the proposed work on the bridge. This background includes local topography and geology in Kendal, a general archaeological and historical background of the area, and finally a physical description and brief history of the bridge itself.

2.2.2 Two sources of information were consulted as part of the research, and these have provided a good understanding of the developmental history of the study area. This includes:

2.2.3 **County Record Office (LRO), Kendal:** the record office holds cartographic and documentary sources relating to the study area;

2.2.4 **Oxford Archaeology North:** OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

2.3 WATCHING BRIEF

2.3.1 The observation of test pits across Miller Bridge was undertaken at night, and produced some insight into its construction. Three test pits were excavated at intervals along the northeastern side of the bridge, using a pneumatic hammer to remove the tarmac from the pavement. The resulting test pits revealed the location of three existing services and some of the original stonework of the bridge. Subsequently, all three pits were photographed and recorded with sketched (with dimensions) drawings.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines. The paper and digital archive will be deposited in County Record Office (Kendal) on completion of the project.

3. BACKGROUND

3.1 INTRODUCTION

- 3.1.1 The subject of the watching brief, Miller Bridge (SD 51759269) (Figs 1 and 2), is one of five road crossings over the river Kent in Kendal. Three of these (Miller Bridge, Stramongate and Nether Bridge) are constructed from stone and constitute the oldest structures, whilst a fourth (Victoria Bridge) is an iron bridge, which, as the name suggests, was constructed for the Jubilee of Queen Victoria in 1887. The fifth and final bridge is a modern structure from the twentieth century.
- 3.1.2 While not the oldest of the three stone bridges, Miller Bridge dates in some form to at least the early seventeenth century and, as such, is of significant local historical and social interest. In order to highlight this significance, what follows is a brief discussion of local topography and geology in Kendal, a general archaeological and historical background of the area, and finally a physical description and brief history of the bridge itself.

3.2 TOPOGRAPHY AND GEOLOGY

- 3.2.1 Kendal is situated in the valley floor to the west of the River Kent within the old county of Westmoreland, now part of modern day Cumbria. The bridge lies in the centre of medieval Kendal, approximately 0.1km to the east of Stricklandgate and 0.5km to the north-west of Kendal Castle. This part of Kendal is at the base of the fells and is on a slight crest of land, which drops away to the south and east down Highgate, and north and west down Stricklandgate.
- 3.2.2 The solid geology comprises Silurian Slates and Kirby Moor Flags with overlying drift deposits of glacial material, such as gravel and boulder clay, which is known to be varied and convoluted in nature and to contain peat in post-glacial hollows (Countryside Commission 1998).

3.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.3.1 The development of Kendal through the medieval period can be seen through fragmentary documentary records and small-scale archaeological interventions. The settlement of Kirkland, at the southern end of the medieval town, is recorded in Domesday (*Chechebi*, 1086 - Faull and Stinson 1986), from which it may be inferred that the mother church of the area had developed here. The settlement became the centre of a Norman barony in the later eleventh century, although there is evidence in Domesday Book of an earlier estate centred further north (probably on either Strickland Ketel or Strickland Roger; Winchester 1979). Richard I granted a Saturday market in 1189, and at some time between 1222 and 1246 William of Lancaster III, the lord of the manor, confirmed borough status on a settlement which seems to have been encouraged to the north of Kirkland (Munby 1985). The document implies that it was simply confirming an existing situation and that, by the date

of the charter, the inhabitants of Kendal considered themselves burgesses of a fully functioning urban centre.

- 3.3.2 The morphology of the settlement as seen in early maps (Speed, 1611) suggests that there was a considerable element of deliberate planning of the streets of the medieval town. The contrast between the winding course of Kirkland, round the church (and the presumed site of the pre-Norman settlement), and the long straight streets of Highgate, Stricklandgate and Stramongate, on the northern side of the Blind Beck, is striking. These streets demonstrate all the attributes of deliberate urban planning, with narrow burgage plots extending back from the street frontage, and all three converge on the market place. This would appear to have once been much larger than today, incorporating Finkle Street, but whether it extended across Highgate to the west is more debatable.
- 3.3.3 Archaeological interventions have been for the most part very small-scale, but have nevertheless produced a wealth of information about the development of the medieval town. Excavations in Highgate have demonstrated that the land behind the street frontage remained open until the impact of the population explosion documented in the later seventeenth and eighteenth centuries, and that even potentially medieval thoroughfares, such as Collin Croft, were not developed until the post-medieval period. In contrast, excavations on the site of the Westmorland Shopping Centre (*ibid*) demonstrated an unbroken sequence of occupation from at least the fourteenth century onwards, some 13m from the street frontage. In contrast again, work on the site of 65 Stricklandgate (*ibid*) identified medieval stratigraphy immediately below the suspended floor of the modern building, which would have been destroyed completely if the building had been demolished in an unsympathetic manner. Recent more extensive work at Elephant Yard, less than 80m south of the proposed development area, identified clay floors, hearths and pits associated with a medieval tenement (LUAU 1997; 1998a; 1998b).
- 3.3.4 Archaeological excavations at 110 Stricklandgate (LUAU 2001) revealed several phases of twelfth to fourteenth century pitting activity, possibly for gravel extraction and rubbish disposal, as well as two stone-lined latrines. Although no formal boundaries were revealed in the excavations, the features comprise three groups which reflect three individual medieval burgage plots behind the street frontage. Similar features were uncovered during excavations at the Westmorland Gazette (OA North 2003a) site at Stricklandgate, whilst further watching briefs were also carried out at 124 Highgate and 141 Highgate (OA North 2003b; 2004a).
- 3.3.5 In addition, evaluation trenches at K Village (OA North 2004b), and 9-11 The Old Shambles (OA North 2005) revealed mixed results. The former found evidence of several phases of development at the site, back to 1873, whilst the latter encountered little archaeological material, as the ground was heavily disturbed from modern service pipes and the insertion of a tank. Nevertheless, the site is believed to have significant archaeological potential (*ibid*).

3.4 MILLER BRIDGE

- 3.4.1 The bridge, which is a Scheduled Monument (443) and which is included within the Cumbrian Sites and Monuments Record (SMR 5454), is constructed using grey limestone with three basket voussoir arches, and sturdy piers featuring rounded cutwaters (Plate 1). Its chamfered string course and parapet have voussoirs with V joints, whilst a date stone on the centre of the south side records a date of construction as 1818 (MDCCCXVIII) (Plate 2). It is now an integral part of Kendal's one-way system, and provides access over the River Kent to the southbound carriageway of the A65.
- 3.4.2 Although this version of the bridge was built in 1818, it is known to have had several predecessors, as cartographic sources attest to (Speed, 1611). All three of Kendal's stone bridges, including Miller Bridge as well as Stramongate and Nether Bridge are all featured on this seminal mapping, but there are no earlier references to Miller Bridge, suggesting that the latter pair served as the town's only medieval bridging points. The earlier wooden versions of the Miller Bridge were probably numerous as a plaque laid by the Kendal Civic Society suggests (Plate 3). It records that severe floods repeatedly destroyed these earlier wooden structures, until a stone replacement was constructed in 1743. Certainly, several nineteenth century authors suggest similar events. Britton *et al* (1813, 197) includes a passage, which states that the *Mill Bridge* was built of wood before 1688, and this is corroborated by Mannex (1849; 282), who claims that *Mill Bridge* was built in stone in 1668 and subsequently, rebuilt in 1818 when Kent Lane was widened. However, this is misleading as two stone bridges stood during this period (Nicholson 1861: 148, 294). Nicholson (*ibid*) asserts that the second stone bridge was indeed built in 1743, but it

was very narrow , and ill adapted to the general medium of intercourse with the canal.

- 3.4.3 During the early nineteenth century as the burgeoning industrialisation in Kendal reflected wider national trends, new woollen factories were opened at Dockray Hall, Castle and Low Mills. These, along with the paper mills at Burneside and the Gunpowder Mills at Sedgwick, were all powered by water. As the area became the locus for heavy industry, the need for better communications became more pressing, and subsequently, the Lancaster to Kendal Canal was built. By 1818 the Kendal Corporation decided to place canal warehouses at the canal's terminus in the Aynam area of Kendal, thus engendering the need for a new bridge to provide access to Bridge Street and the wharves further east. This goods terminus would remain an integral part of the transportation of goods in Kendal, until the arrival of the local railway line in 1846.
- 3.4.4 Subsequently, on the 13th of April, 1818, Kendal Corporation approached local architect, Francis Webster and invited him to not only to submit plans for a replacement bridge, but also to advertise for contractors who could begin work on the building project within one month (by May 4th 1818) (www.waymarking.com/waymarks/WM32DB) Following this, Webster prepared plans for a three-arch, dressed stone bridge with a total span of 130 feet, in under three weeks. During the same period, several contractors quoted

prices ranging from £797 to £1500, but it was the stonemasons, Edward Gibson and James Harrison, who were awarded the building project with a moderate bid of £888 (Nicholson 1861, 294).

- 3.4.5 Francis Webster laid the foundation stone on May 20th, 1818, in his capacity as both the bridge designer and as Alderman of Kendal (Nicholson 1861, 294). Thus, within only seven months, the bridge had been designed, built, and was opened to traffic. There does, however, appear to be some confusion over its original name. Apparently the bridge was initially called *Kent Bridge*, became known as *Mill Bridge* by 1833 (www.waymarking.com/waymarks/WM32DB), when John Wood produced his map of the town. This does seem at variance with nineteenth century writers (Britton *et al* 1813; Mannex 1849), who refer to the bridge and its predecessors as *Mill Bridge*, or, as in the case of Nicholson (1861, 148), as *Miller's Close Bridge*. It may be that *Kent Bridge* reflects a local colloquial name for the bridge. Within forty years, the name had been altered again to *Miller Bridge*, which has been retained ever since (www.waymarking.com/waymarks/WM32DB).

4. WATCHING BRIEF RESULTS

4.1 INTRODUCTION

- 4.1.1 A programme of permanent presence monitoring, in the form of a watching brief, was conducted on the 9th of July 2008. This monitoring involved observing the excavation of a trench traversing Miller Bridge, prior to the laying of a service pipe. This work was conducted at night, in order to keep traffic disruption to a minimum.

4.2 RESULTS

- 4.2.1 A test pit was excavated at the centre of the eastern side of the bridge using a pneumatic hammer to remove the tarmac, and this revealed modern construction gravel overlying three service pipes. The contractor was unaware of the depth of existing services and hence decided that there was not sufficient room to accommodate an additional service pipe. Subsequently, it was agreed that another two trial holes would be excavated, in order to establish the location of these services at either end of the bridge. Therefore, a second test pit was excavated at the southern end of east side of the bridge, approximately 8m from the first, which was followed by a third test pit at the north end, approximately 9.8m from the first test pit.
- 4.2.2 Test Pit One (Figs 2 and 3) (Plate 4) revealed that the base of the bridge wall was stepped and projected by 0.23m, tapering towards the west to 0.17m, but little else was revealed, as the remaining stonework was obscured by services.
- 4.2.3 Test Pit Two (Figs 2 and 3) (Plate 5) also revealed the base of the bridge wall, showing a similar step to Test Pit One, but this stonework appeared damaged, presumably a result of the insertion of the existing services. The damage did, however, expose some of the lower stone construction, which comprised roughly-hewn limestone but no identifiable bonding material.
- 4.2.4 Test Pit Three (Figs 2 and 3) (Plate 6) at the northwestern end of the bridge exposed the same services as Test Pit One and Two, and similarly, the base of the bridge wall was again uncovered, showing the same stepped construction with underlying limestone blocks.
- 4.2.5 As a result of these test pits, it was agreed that the service trench would be repositioned somewhere on the road surface itself. This is likely to take place during proposed Council works to extend the width of the pavement.

4.3 RECOMMENDATIONS

- 4.3.1 Further trenching is proposed on Miller Bridge, and it is recommended that a watching brief should again be maintained during these road works.

5. BIBLIOGRAPHY

5.1 PRIMARY SOURCES

John Speed, 1611, *Plan of Kendal*

5.2 SECONDARY SOURCES

Britton, J, *et al.* 1813 *The Beauties of England and Wales, Or, Delineations, Topographical, Historical and Descriptive of Each County*, Thomas Maiden

Countryside Commission, 1998 *Countryside Character, Volume 2: North West*, Cheltenham

English Heritage, 2006 *Management of Research Projects in the Historic Environment* (MoRPHE)

Faull, M L, and Stinson, M (eds), 1986 Yorkshire, in J Morris (ed), *Domesday Book*, **30**, Chichester Faull and Stinson 1986

Institute of Field Archaeologists, 1999 *Standard and guidance for archaeological Desk-Based Assessments*

LUAU, 1997 *Elephant Yard, Kendal: stage 1 archaeological excavation*, unpubl rep

LUAU, 1998a *Elephant Yard, Kendal: stage 2 archaeological evaluation and excavation*, unpubl rep

LUAU, 1998b *Elephant Yard, Kendal: watching brief*, unpubl rep

LUAU, 2001 *Yard 110 Stricklandgate, Kendal: Archaeological Evaluation*, unpubl rep

Mannex, P J, 1849 *History, Topography, and directory of Westmorland; and Lonsdale north of the sands, in Lancashire; together with a descriptive and geological view of the whole of the Lake District*, Simpkin

Munby, J, 1985 Medieval Kendal: the First Borough Charter and its Connexions, *Trans Cumberland Westmorland Antiq Archaeol Soc*, n ser, **85**, 95-114

Nicholson, C, 1861 *The Annals of Kendal*, Whittaker and Co.

OA North, 2003a Westmorland Gazette/Booths Supermarket Site, Kendal, Cumbria: Archaeological Post-Excavation Assessment

OA North, 2003b *124 Highgate, Kendal, Cumbria: Archaeological Desk-Based Assessment and Watching Brief*, unpubl rep

OA North, 2004a *147 Highgate, Kendal, Cumbria: Archaeological Desk-Based Assessment and Watching Brief*, unpubl rep

OA North, 2004b *K Village, Kendal, Cumbria: Archaeological Evaluation Report*, unpubl rep

OA North 2005 9-11 *The Old Shambles, Kendal, Cumbria: Archaeological Desk-Based Assessment and Evaluation*, unpubl rep

Winchester, A J L, 1979, *Cumbrian Historic Towns Survey: 1978-1979*, unpubl rep

www.waymarking.com/waymarks/WM32DB

6. ILLUSTRATIONS

6.1 LIST OF FIGURES

Figure 1: Site Location

Figure 2: Plan of Miller Bridge featuring the location of the three test pits

Figure 3: Plan of the test pits

6.2 LIST OF PLATES

Plate 1: General view of the north side of Miller Bridge

Plate 2: Detail of the date stone

Plate 3: The commemorative plaque recording the building of the bridge

Plate 4: East-facing view of Test Pit One

Plate 5: East-facing view of Test Pit Two

Plate 6: East-facing view of Test Pit Three

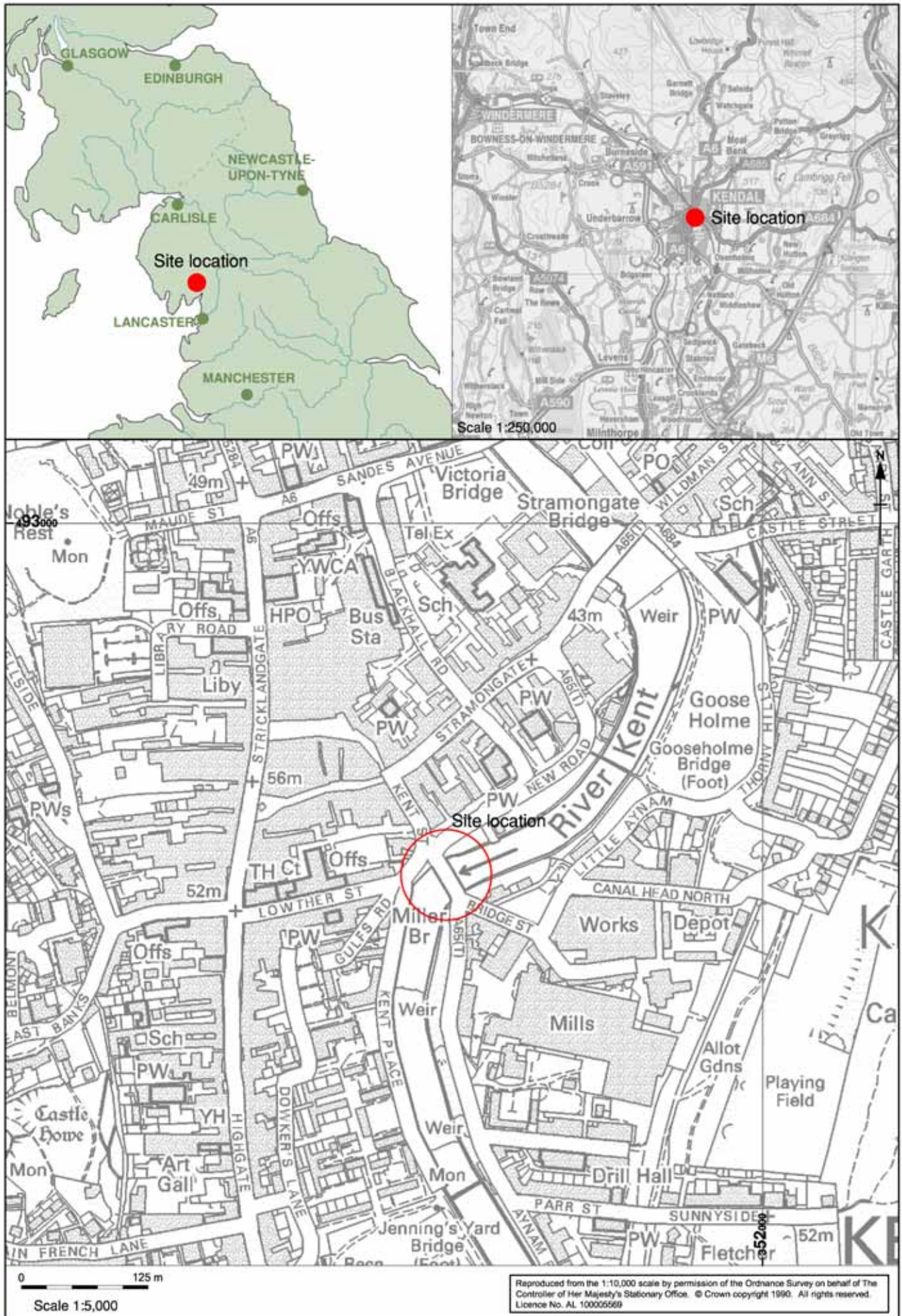
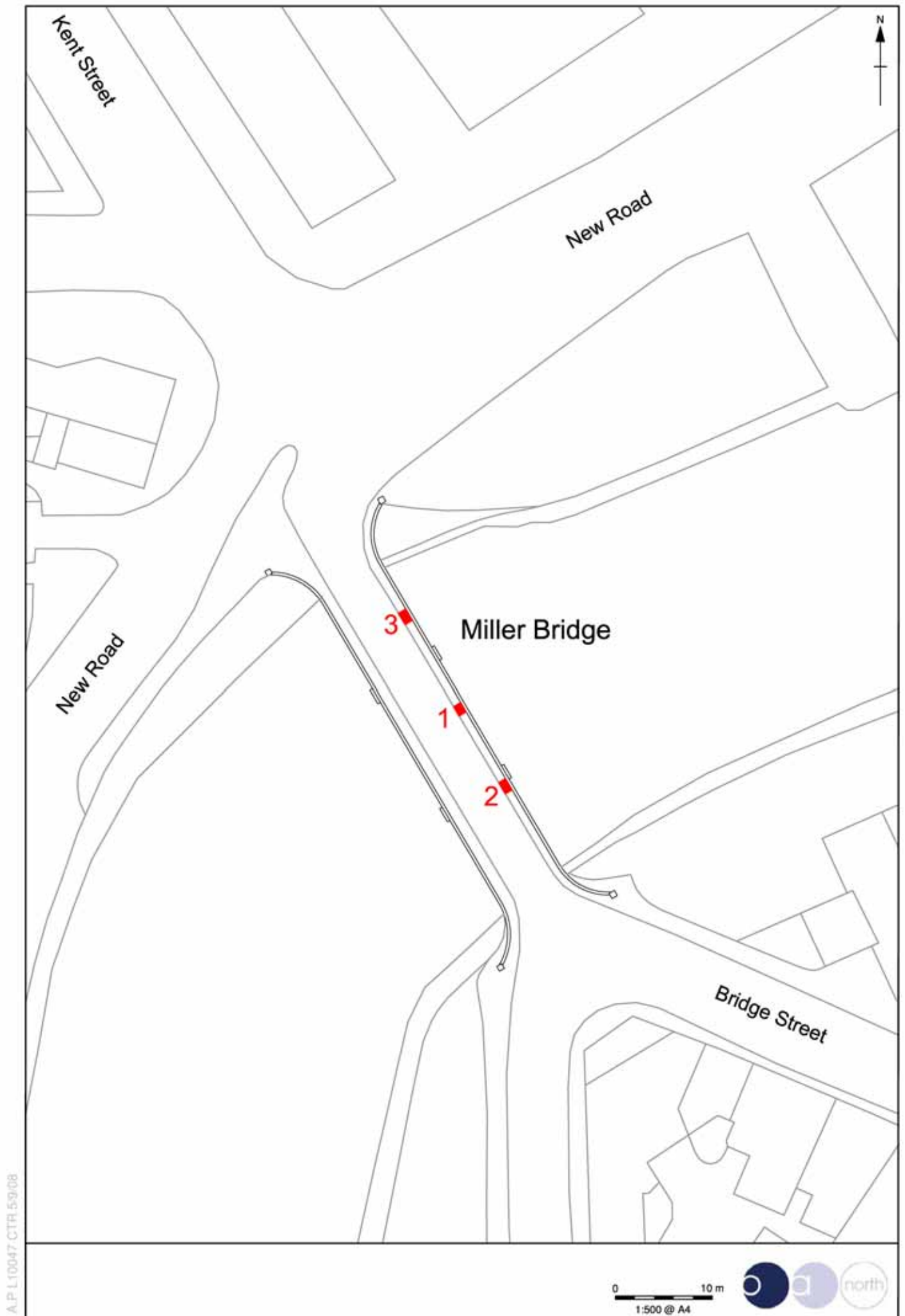
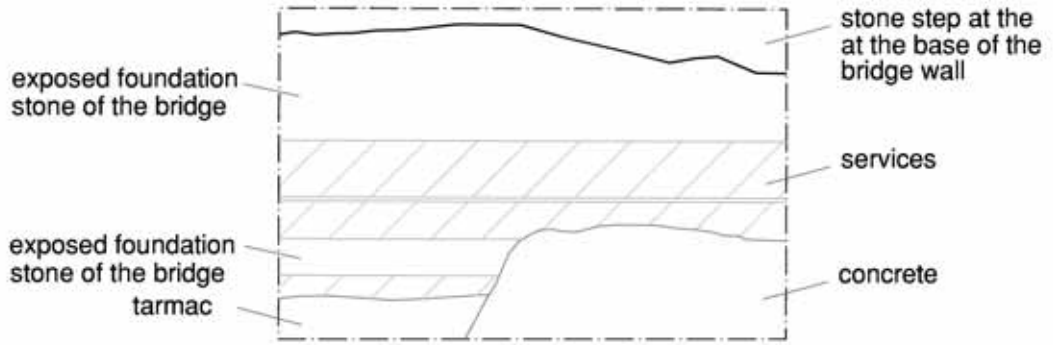


Figure 1: Site Location

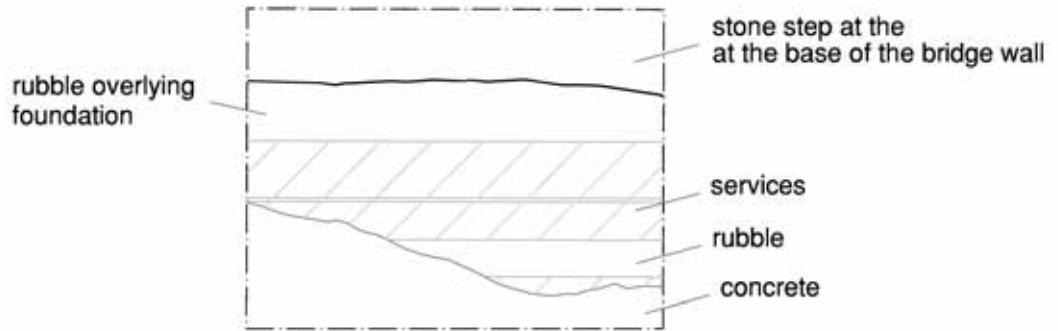


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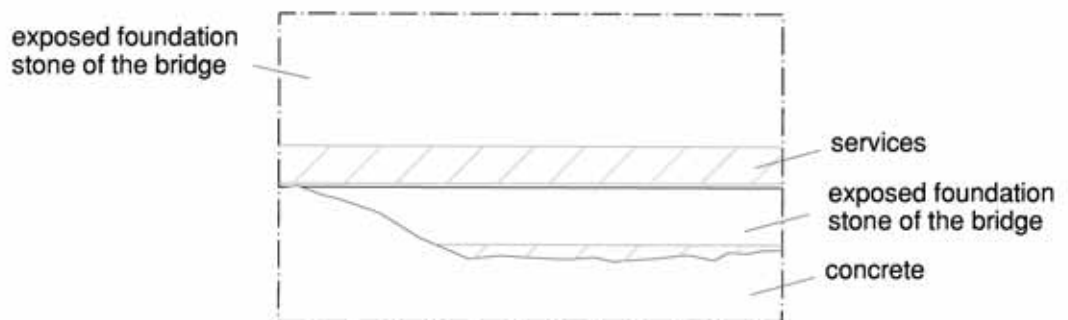
Figure 2: Plan of Miller Bridge featuring the location of the three test pits



Test Pit 3



Test Pit 1



Test Pit 2

Figure 3: Plan of test pits



Plate 1: General view of the north side of Miller Bridge



Plate 2: Detail of the date stone

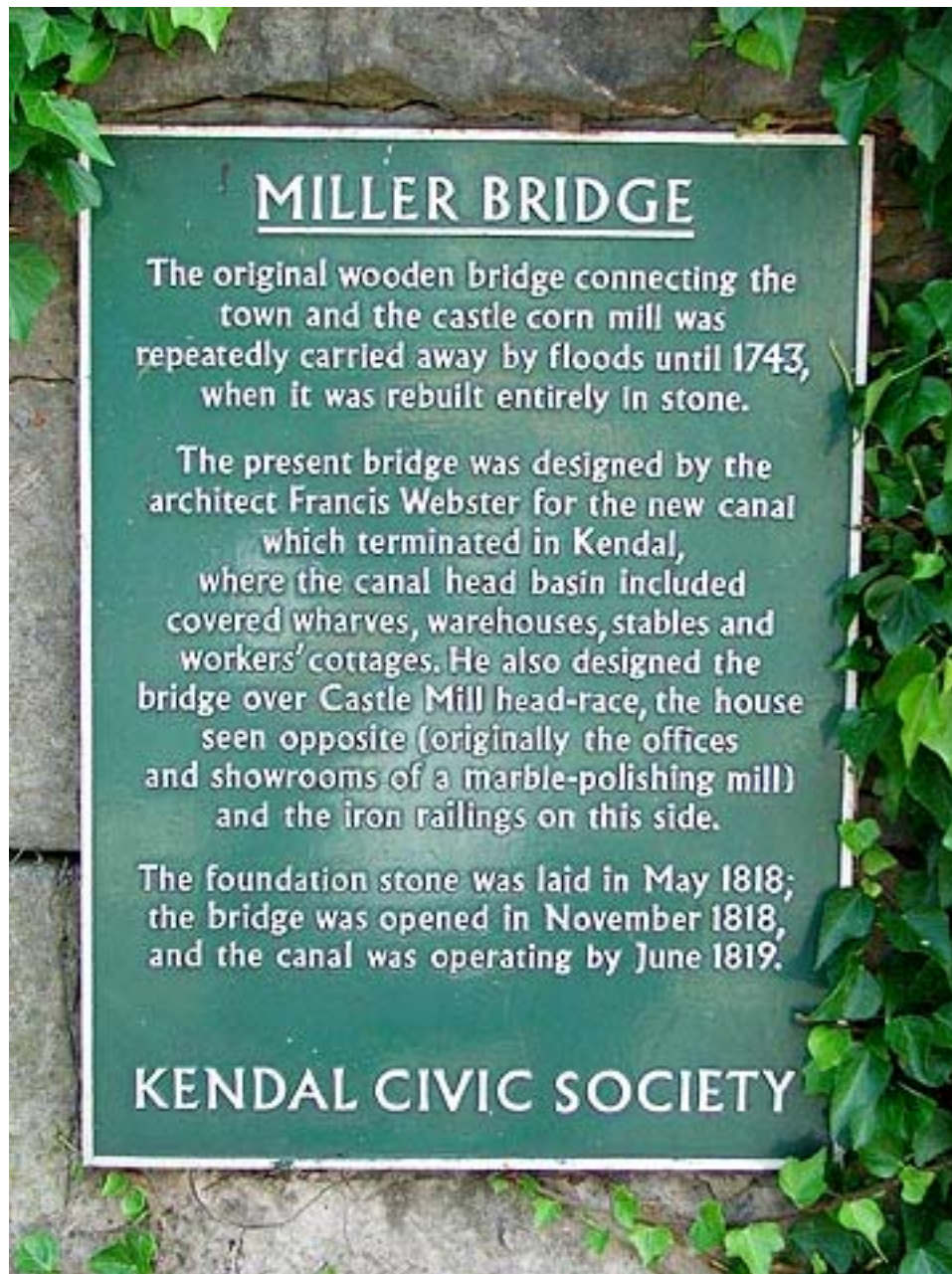


Plate 3: The commemorative plaque recording the building of the bridge



Plate 4: East-facing view of Test Pit One



Plate 5: East-facing view of Test Pit Two



Plate 6: East-facing view of Test Pit Three