ARCHAEOLOGICAL WATCHING BRIEF ALONG THE ROUTE OF THE NORTHFIELD RELIEF ROAD, BIRMINGHAM

Darren Miller

With a contribution by Angus Crawford

Illustrations by Laura Templeton

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Historic Environment and Archaeology Service,
Worcestershire County Council,
Woodbury,
University College Worcester,
Henwick Grove,
Worcester WR2 6AJ

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Archaeological watching brief along the route of the Northfield Relief Road, Birmingham

Darren Miller

With a contribution by Angus Crawford

Part 1: Project summary

This report presents the results of a watching brief on the construction of a relief road at Northfield (NGR 0190 7950). The road was built to the west of the A38, between Bell Lane and Frankley Beeches Road. The fieldwork took place between May 2005 and June 2006. Post-excavation analysis followed, including artefact analysis, radiocarbon dating, and documentary research.

The watching brief recovered important evidence of Bronze Age activity in the form of a pit dated to 1730-1500 BC. The pit included residual material from an earlier phase of activity around 2000 BC. The context of this activity is uncertain, due to a lack of associated remains, but it was contemporary with five burnt mounds nearby, and many more across the Birmingham area.

Evidence of Roman and medieval or post-medieval agriculture was also found in the form of artefacts deposited with farmyard manure. There was also some evidence of a post-medieval pond. However, most of the evidence recovered during the watching brief related to the expansion of Northfield after c1800. The remains of a building in an enclosure laid out behind the street frontage were recorded, and a well was found near the site of a house on the west side of Bell Hill. Other foundations of 19th and 20th century date were also recorded.

Taken together, the results of the project make a useful contribution to the archaeology and history of Northfield.

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Part 2: Detailed report

1. Background

1.1 Planning background

The construction of the relief road was undertaken on behalf of Birmingham City Council by Edmund Nuttall Ltd . As archaeological remains were expected in the area a programme of observation and recording during construction was undertaken.

The watching brief conforms to requirements set by Birmingham City Council Planning Archaeologist (BCC 2004) and to a proposal prepared by the Service (WHEAS 2004). The project also conforms to the Institute of Field Archaeologists' *Standard and guidance for an archaeological watching brief* (IFA 2001).

1.2 **Topographical background**

Northfield is a small town in the Birmingham conurbation, 9km south-west of the city centre (Figure 1). The town lies between two low ridges on the Birmingham plateau and is underlain for the most part by Mercian Mudstone (Triassic Keuper Marl; Geological Survey of Great Britain, 1966). The soils of the area have not been mapped.

The relief road was intended to reduce congestion on the A38 or Bristol Road through Northfield (Figure 2). It was built on the west side of the road A38 between Frankley Beeches Road and Bell Lane.

1.3 Archaeological and historical background

Historical information on Northfield is limited to a few short accounts and scattered references. However, taken together with historic maps, there was enough information to establish the context of the watching brief.

In summary, the name of the town suggests that the original settlement was founded from Bromsgrove in the late Anglo-Saxon period. At the time of the Domesday survey in 1086, Northfield was one of the most populous and agriculturally developed manors on the Birmingham plateau (Stephens 1964, 246-50). Later documents suggest that the population of the manor expanded in the 13th and early 14th century (Stephens 1964, 246-50), while contemporary place-names suggest a settlement pattern of farmsteads and small hamlets (Mawer and Stenton 1928).

The medieval settlement at Northfield lay half a kilometre to the west of the Bristol Road (Figure 1). The earliest detailed map, published in 1832, shows an abandoned moat lying next to the 12th/13th century church of St Lawrence (OS 1832, 115). The land to the north-west and beyond the main road seems to have been farmland between the medieval and modern periods (Hemingway, nd, 17). However, 19th century maps show increasing development on both sides of the road itself (Anon 1845; OS 1832 and 1884). This development is reflected in census returns, which show a rapidly expanding population and a shift from agrarian to industrial occupations (Stephens 1964, 4-25). Later maps and sources show continuing expansion, most notably in the form of large housing estates (OS 1901, 1916, 1936, 1955, and 1974).

For the most part, the land to the west of the Bristol Road remained undeveloped until the 1930s. However, the 1884 map shows several plots and buildings behind those established along the road, and a brick and tile works near the Black Horse Inn. The brick and tile works was abandoned by 1904, and there were few changes between 1914 and 1916, but by 1936 a

cinema and Lockwood Road had been built to the north. Later maps show further development behind the street frontage, including Ulwine Drive by 1974.

Archaeological information on Northfield was very limited before the project began. The Birmingham Sites and Monuments Record contained several records relating to the area, but most were derived from historic maps and standing buildings rather than buried remains. However, there was a context for Bronze Age activity in the area, indicated by burnt mounds and antiquarian finds (Hodder 2004, 28-43). There was also a context for Roman activity, as the Bristol Road is on or close to the line of a Roman road from Droitwich to Metchley (Leather 1998), and Roman settlements have recently been found at nearby Kings Norton (Williams 2003; Mason 2004; Hodder 2002b, 2).

1.4 Aims

The aims of the project were to observe and record archaeological features exposed during the construction of the relief road (BCC 2004). More generally, as with any watching brief, the aim was to establish and make available information about the archaeological resource existing on the site (IFA 2001, 2).

1.5 **Methods**

1.5.1 Cartographic and documentary research

Before the fieldwork, copies of historic maps of Northfield were obtained from Birmingham City Library. Various books and articles relating to Northfield were also collected (eg Campbell-Curtis 1971, Hemingway nd, and Stephens 1964). These sources were consulted before the fieldwork, and afterwards, to help interpret the results.

1.5.2 Fieldwork

Fieldwork was undertaken between 13th April 2005 and 8th June 2006. For the most part, the fieldwork involved observing excavations along the line of the carriageways. The east or southbound carriageway was excavated first, followed by the west or northbound carriageway (Plate 1). Other fieldwork took place during preliminary stripping and trial excavations.

Most excavation was carried out by tracked excavators fitted with large toothed buckets. This produced uneven surfaces and identifying deposits and features was often difficult. Also, as excavation often stopped and started, a few sections of carriageway were not observed either during or after excavation. However, as described below, it was still possible to identify deposits and features in plan, while the sections were relatively clean and provided a continuous record. In general, therefore, the circumstances of the fieldwork are not considered to have caused a significant loss of information.

Throughout the fieldwork, drawn, written, and photographic records were made according to standard Service practice (CAS 1995). All artefacts from stratified deposits were recovered, and bulk soil samples were taken as appropriate. The excavations were located using plans and chainage markers provided by the main contractor.

1.5.3 **Post-fieldwork analysis**

Stratigraphic and cartographic analysis

After the fieldwork, the field drawings were digitised and combined with a scanned copy of the main contractor's general arrangement plan. Modern maps and the historic maps collected before the fieldwork were also scanned and brought to the same scale. It was then possible to examine the stratigraphy in relation to modern and historic features. Further analysis involved integrating the stratigraphic and artefactual evidence. Features were given baseline dates and grouped into phases for description and interpretation.

Artefact analysis, by Angus Crawford

All artefacts were examined and a primary record was made on a Microsoft Access 2000 database. Artefacts were identified, quantified and dated and a *terminus post quem* date produced for each stratified context. The pottery and ceramic building material were examined under x20 magnification and recorded by fabric type and form according to the fabric reference series maintained by the service (Hurst and Rees 1992; Hurst 1994).

Radiocarbon dating

Two bulk samples of charred material (which had first been assessed and considered to contain no potential for plant macrofossil) were sent to Beta Analytic Radiocarbon Laboratory in Miami, Florida, for radiocarbon dating. The method and results of the analysis are summarised in section 2.3 and described more fully in Appendix 2.

2. **Results**

2.1 **Stratigraphy**

The deposits and features described below are illustrated on Figures 3-4 and summarised in Appendix 1.

2.1.1 Natural deposits

Mercian Mudstone was observed along most of the route, at varying depths below the surface (0.30-0.86m). In some areas, and especially between Wyneyard Road and Lockwood Road, the marl had been truncated by previous landscaping.

2.1.2 **Bronze Age pit**

The most significant feature on the site was found on the west section of the west carriageway, at a point opposite Rochester Road. This was a small pit filled with a mixture of redeposited clay, charcoal, and ash (Figure 3, context 166: Plates 2 and 3). Unfortunately, the feature was not observed in plan, and part of it was removed by machine. However, the remainder was excavated by hand, and most of the fill was sampled. No artefacts were recovered, but the two samples of charcoal were radiocarbon dated to a period in the late 3rd or early 2nd millennium BC (see Appendix 2).

2.1.3 Reworked soils

The Bronze Age pit was sealed by orange brown silty clay (contexts 161; Figure 3). This in turn was sealed by olive silty clay with dark grey mottles (context 160). These deposits are likely to represent the lower part of a soil formed since the Bronze Age. As elsewhere, the upper part of the soil had been removed by modern landscaping.

More extensive subsoils survived further to the north, near Bell Lane (contexts 121 and 122). One of these contained a sherd of Roman pottery (context 122), and six more sherds were recovered from later deposits (contexts 116, 117, and 142; Figure 3). Taken together, the evidence suggests a former ploughsoil manured with farmyard waste and domestic refuse. The same practice probably also accounts for the widespread distribution of medieval/post-medieval roof tile and post-medieval pottery.

2.1.4 **Post-medieval features**

Two features found along the route almost certainly existed in the post-medieval period. One of these was a pond near the north end of the route (Figure 4, context 145; Plate 4). The pond appears on the tithe map of 1845, and was represented in the field by deposits of blue/grey silt filling a shallow declivity in the marl (contexts 140, 141, and 145:). The pond had been severely truncated by modern pits, but according to the tithe map and later Ordnance Survey maps it was originally oval, and measured c 33m by 20m.

The second feature was a ditch c 100m to the north of the pond (Figure 4, context 110; Plate 5). This ran parallel to a field boundary mapped in 1845 and was almost certainly a drainage ditch. It had been deliberately backfilled with soils containing modern material (context 108).

2.1.5 Modern features and made ground

Most modern features related to recent landscaping and services. However, several features were earlier and more significant.

The most significant features were the brick foundations found c 50m north of Lockwood Road (Figure 4, contexts 148-153; Plate 6). These defined parts of a sub-divided building with a small extension to the north. The main building appears on the one-inch map of 1832, at the north end of an irregular enclosure. However, the bricks are typically Victorian, suggesting that the building was recent in 1832. No floor surfaces survived to indicate how the building was used, although the subdivisions observed in the field shown on later Ordnance Survey maps suggest an agricultural or industrial function.

Another brick building in the field to the north was represented by a foundation exposed in section (context 147; Figure 4). This lay within a trench, and may represent a cattle trough supplied by piped water. It is unlikely to have been a more substantial or habitable building, as it does not appear on historic maps.

In addition to these remains, a well was found during drainage works on the west side of Bell Hill (Figure 4). This was made substantially of sandstone blocks, but incorporating some courses of lias and handmade brick (context 142). The materials used for the well suggest a post-medieval date of construction, but the well is more likely to have been associated with an building shown on or near the site on the tithe map of 1842. This building does not appear on the one inch map of 1832, and was probably built in the intervening period.

The only other modern features of note were a brick wall and drain relating to demolished properties on the north side of Lockwood Road (contexts 153 and 154; Figure 4), the remains of a brick and concrete cellar to the south (contexts 155), and two gullies near the ditch described above (contexts 114 and 112; Figure 4). Not all of these features correspond to features shown on historic maps. This is surprising, as is the lack of evidence for the mapped cinema and brick and tile works at the south end of the route.

All of these features were sealed by made ground (Appendix 1). The made ground consisted primarily of redposited soils and marl, reflecting the extent of truncation, but it also contained varying proportions of brick rubble, concrete, roadstone, and assorted refuse.

2.2 Artefacts, by Angus Crawford

The assemblage consisted of 78 sherds of pottery, and fragments of tile, brick, clay pipe, slag, glass, iron and copper alloy (Table 1). Levels of preservation were generally fair with the majority of sherds and fragments displaying only moderate levels of abrasion.

Contex t	Material	Туре	Total	Weight (g)
100	Brick	Post-medieval	3	89
100	Ceramic	Drain	2	24
100	Clay pipe	Stem	2	1
100	Pottery	Modern	4	131
100	Pottery	Post-medieval	4	17
100	Tile	Roof	4	47
102	Ceramic building material	Post-medieval	3	15
102	Pottery	Post-medieval -modern	3	3
104	Pottery	Modern	1	29
106	Brick	Post-medieval -modern	1	26
106	Pottery	Modern	4	17
107	Ceramic	Drain	1	33
107	Plastic	Unidentified	1	1
108	Brick	Post-medieval	4	213
108	Clay pipe	Stem	1	1
108	Copper alloy	Disk	1	4
108	Iron	Hook?	1	5
108	Pottery	Modern	2	3
108	Pottery	Post-medieval	4	107
108	Tile	Roof	5	389
111	Pottery	Post-medieval	1	7
111	Tile	Modern	1	20
113	Pottery	Modern	1	1
113	Tile	Roof	1	57
116	Pottery	Roman	2	85
117	Claypipe	Stem	3	2
117	Pottery	Modern	13	154
117	Pottery	Post-medieval	2	7
117	Pottery	Roman	1	2
117	Slag	Blast	1	25
117	Tile	Modern	1	17
117	Claypipe	Stem	6	10
119	Pottery	Post-medieval	2	25
119	Slag	Iron	1	102
119	Tile	Roof	1	15
122	Pottery	Roman	3	3
124	Claypipe	Stem	2	4
124	Glass	Vessel	2	72
124	Pottery	Modern	15	130
124	Pottery	Post-medieval	1	4
124	Slag	Blast	1	20
124	Tile	Wall	10	311
124	Ceramic?	Unidentified	3	8
125	Copper alloy	Mount	1	3
			1	1
126	Slag	Blast furnace	2	
128	Brick	Post-medieval-modern	1	10
128	Slag	Unidentified	10	43
130	Tile	Floor	10	421

Contex t	Material	Туре	Total	Weight (g)
131	Glass	Vessel	3	64
131	Iron	Screw	1	9
131	Pottery	Modern	4	185
131	Pottery	Post-medieval	1	89
133	Brick	Modern	1	402
135	Brick	Post-medieval-modern	2	110
135	Tile	Roof	2	25
136	Ceramic	Drain	2	75
136	Glass	Unidentified	1	67
142	Brick	Post-medieval	1	2440
143	Rooftile	Med/post-medieval	1	114
144	Pottery	Roman	1	11
144	Roof	Tile	1	18
144	Rooftile	Med/post-medieval	3	197
146	Pottery	Post-medieval	1	7
158	Pottery	Med/post-medieval	1	0.5
178	Pottery	Post-medieval	2	45
198	Pottery	Med/post-medieval	5	17
198	Slag	Unidentified	2	10
198	Tile	Roof	4	267

Table 1: Quantification of the assemblage

2.2.1 Pottery

Context	Fabric	Fabric name	Total	Weight (g)
100	101	Miscellaneous modern wares	2	8
100	78	Post-medival red sandy ware	1	11
100	81.4	Miscellaneous late stoneware	2	123
100	81.5	White salt glazed stoneware	2	5
100	82	Tin glazed ware	1	1
102	83	Porcelain	2	2
102	85	Modern stone china	1	1
104	101	Miscellaneous modern wares	1	29
106	83	Porcelain	1	3
106	85	Modern stone china	3	14
108	78	Post-medival red sandy ware	4	107
108	81.4	Miscellaneous late stoneware	1	2
108	85	Modern stone china	1	1
111	78	Post-medival red sandy ware	1	7
113	85	Modern stone china	1	1
116	12.2	Oxidized organically	2	85
		temperered Severn Valley		
		ware		
117	12.2	Oxidized organically	1	2
		temperered Severn Valley		
		ware		
117	78	Post-medival red sandy ware	2	7
117	85	Modern stone china	13	154
119	78	Post-medival red sandy ware	1	22
119	81.5	White salt glazed stoneware	1	3
122	12	Severn Valley ware	2	2
122	98	Miscellaneous Roman wares	1	1
124	78	Post-medival red sandy ware	1	4
124	81.4	Miscellaneous late stoneware	1	19

Context	Fabric	Fabric name	Total	Weight (g)
124	83	Porcelain	4	9
124	85	Modern stone china	10	102
131	78	Post-medival red sandy ware	1	89
131	85	Modern stone china	4	185
144	37	Seven Valley mortarium	1	11
146	78	Post-medival red sandy ware	1	7
158	69?	Oxidized glazed Malvernian	1	0.5
		ware		
178	78	Post-medival red sandy ware	2	45
198	69	Oxidized glazed Malvernian	5	17
		ware		

Table 2: Quantification of the pottery by fabric

Roman pottery

Seven sherds of Roman pottery were present within the assemblage. Of these, five were of Severn Valley wares (fabrics 12 and 12.2) and one was of unidentifiable fabric (fabric 98). Two sherds (fabric 12.2 context 116) joined to form a partial rim of a wide mouthed storage jar dating to the second century (Webster 1976, type 22). A single sherd of Severn Valley mortaria (fabric 37, context 144) could also be dated to the mid 1st to early 2nd century. All the sherds exhibited medium to high levels of abrasion.

Post-medieval and modern pottery

The majority of the assemblage was dateable to this period with the pottery assemblage consisting of household wares. These included post-medieval red sandy wares, post-medieval and modern stonewares, modern stone china and porcelain. Five sherds of Oxidised glazed Malvernian ware (fabric 69, context 198) could only be broadly dated to the late 13th century through to the early 17th century due to their poor level of preservation.

2.2.2 Other artefacts

The remainder of the assemblage consisted of discarded building materials (roof tile, wall tile and brick) and other refuse such as wood screws and sherds of bottle glass.

2.3 Radiocarbon dating

The full report on the radiocarbon dates is reproduced below as Appendix 2. In summary, however, two samples from context 166 were analysed, and four calibrated date-ranges were established (Table 3).

Laboratory number	Material	2 Sigma calibrated result (95% probability)
Beta-223678	Charred material	Cal BC 1750 to 1500 (Cal BP 4070 to 4020)
Beta-223679	Wood	Cal BC 2120 to 2090 (Cal BP 4000 to 3820)
		Cal BC 2050 to 1870 (Cal BP 3780 to 3730)
		Cal BC 1840 to 1780 (Cal BP 1840 to 1780)

Table 3: Summary of radiocarbon dates

As the table shows, that the dates obtained from charred material and wood differ by several centuries. The implications of this discrepancy are considered below.

3. Synthesis

3.1 **Bronze Age activity**

The Bronze Age pit is an important find, but difficult to interpret due to the lack of associated remains and the discrepancy between the radiocarbon dates. On the first point, is uncertain whether the pit was an isolated feature, or whether it existed alongside other features that have been removed by modern landscaping. And on the second point, while the pit appeared to represent a single deposit, the radiocarbon dates suggest material dating to c 2000 BC and a period several centuries later. Assuming the radiocarbon dates are correct, is appears that residual material was included in the fill.

Taken together, the evidence suggests two phases of Bronze Age activity. The nature of activity in both phases is obscure, but it clearly involved fire-setting and, in the later phase, a deliberate and symbolic act of deposition. Such activity could be associated with settlement, but also with pastoral farming, hunting, and travelling.

Whatever the case, the pit adds to the distribution and variety of Bronze Age sites in the Birmingham area. Most of the known sites are mounds of fire-heated stones, found by survey along Birmingham's watercourses (Hodder 2004, 28-33). Seven burnt mounds have been found close to Northfield, as shown on Figure 1. The Northfield pit extends the distribution of known sites onto higher and drier ground, and represents another dimension of Bronze Age activity.

3.2 Roman agriculture

The Roman sherds found in later deposits probably represent agriculture, rather than settlement in this period. However, it is likely that there was at least one Roman settlement within 1-2 kilometres, given the close association between manuring scatters and settlements of all periods, and the density of Roman settlements recorded elsewhere in the region (Hodder 2004, 64). The sherds had a wide distribution, and probably represent several fields and applications of manure. However, there was no evidence for field systems, or for manuring after the 2nd century AD.

3.3 Medieval and post-medieval agriculture

The small assemblage of medieval and post-medieval artefacts also indicates periodic manuring of arable land. For most of this period, the area west of the Bristol Road seems to have been farmed in common, and it is likely that the fields shown on the 1845 tithe map were created in the late 18th or early 19th century. The pond described in section 2 almost certainly existed before the fields, as several boundaries were laid out from it. According to later Ordnance Survey maps, the pond survived into the 1960s, long after the rest of the area had taken on an entirely different character.

3.4 **Modern development**

The modern features described above reflect the transformation of Northfield after 1800. The brick building to the north of Lockwood Road reflects encroachment behind a fully developed street frontage. This development belongs to the period from c1800 to 1832, and was probably associated a rapid growth in population and manufacturing. The other features represent later development of a residential character. The well found on the west side of Bell Hill was probably associated with a short-lived house (built by 1845 but demolished by

1884), while the other features reflect the construction of housing estates and flats (Lockwoood Road and Ulwine Drive).

4. Research frameworks

The project has made a useful contribution to the archaeology and history of Northfield. In particular, it has identified evidence of Bronze Age, Roman and medieval/post-medieval activity. It has also provided new information on the development of Northfield in the 19th and 20th centuries. However, there is still ample scope for future work, and many unanswered questions. For example, the interpretation of the Bronze Age pit is uncertain, given the limited amount of evidence available. The extent and chronology of Roman arable farming is also uncertain, and there was no evidence for associated field systems. Moreover, no evidence was recovered of the nailing industries that characterised Northfield in the 19th century. In view of the severity of modern landscaping, it is likely that most pre-modern deposits on the west side of Bristol Road have been removed. Both street frontages are also likely to have been truncated in the course of development. However, as the project has shown, remains can survive even in heavily truncated areas, and opportunities for investigating these parts of Northfield should therefore be taken whenever they arise.

5. **Publication summary**

The Service has an obligation to publish the results of archaeological projects within a reasonable period of time. To this end, and unless directed otherwise, the Service intends to publish the following summary in appropriate local or regional journals.

Between May 2005 and June 2006, the Worcestershire Historic Environment and Archaeology Service undertook a watching brief on the construction of a relief road at Northfield, 9km south-west of Birmingham (NGR 0190 7950). The road was built to the west of the A38, between Bell Lane and Frankley Beeches Road.

The watching brief recovered important evidence of Bronze Age activity in the form of a pit dated to 1730-1500 BC. The pit included residual material from an earlier phase of activity around 2000 BC. The context of this activity is uncertain, due to a lack of associated remains, but it was contemporary with five burnt mounds nearby, and many more across the Birmingham area.

Evidence of Roman and medieval or post-medieval agriculture was also found in the form of artefacts deposited with farmyard manure. There was also some evidence of a post-medieval pond. However, most of the evidence recovered during the watching brief related to the expansion of Northfield after c1800. The remains of a building in an enclosure laid out behind the street frontage were recorded, and a well was found near the site of a house on the west side of Bell Hill. Other foundations of 19th and 20th century date were also recorded.

6. The archive

The archive consists of:

36	Fieldwork progress sheets AS2
8	Photographic record sheets AS3
2	Drawing number sheets AS4
9	Site drawing sheets AS5
2	Sample number sheets AS18
1	Levels record sheet AS19

4 Annotated plans

20 Copies of maps and plans

Box of finds
 CD-ROM

The project archive is intended to be placed at:

Birmingham City Museum

Chamberlain Square

Birmingham

B3 3DH

7. Acknowledgements

The Service is grateful to Myles Carton, Martin Phillips, Guy Richard and Rob Yates (Edmund Nuttall Ltd) and to Mike Hodder (Birmingham City Council) for their kind assistance.

8 Personnel

The fieldwork was led by Simon Sworn. Fieldwork was also undertaken by Elizabeth Pearson, Darren Miller, Tom Rogers, Tom Vaughan, and Simon Woodiwiss. The artefacts were analysed and reported on by Angus Crawford. The plant remains were analysed by Elizabeth Pearson. The radiocarbon dates were determined by Beta Analytic Radiocarbon Dating Laboratory. The report was written by Darren Miller. The illustrations were drawn by Laura Templeton. The project manager was Simon Woodiwiss

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Ordnance Survey, 1884 Worcestershire Eastern Division, sheet XII (1:2500)

Ordnance Survey, 1904 Worcestershire, sheet X.7 (1:2500)

Ordnance Survey, 1904 Worcestershire, sheet XII (1:2500)

Ordnance Survey, 1916 Warwickshire, sheet XIX^A (1:2500)

Ordnance Survey, 1917, Warwickshire, sheet XIX^AII (1:2500)

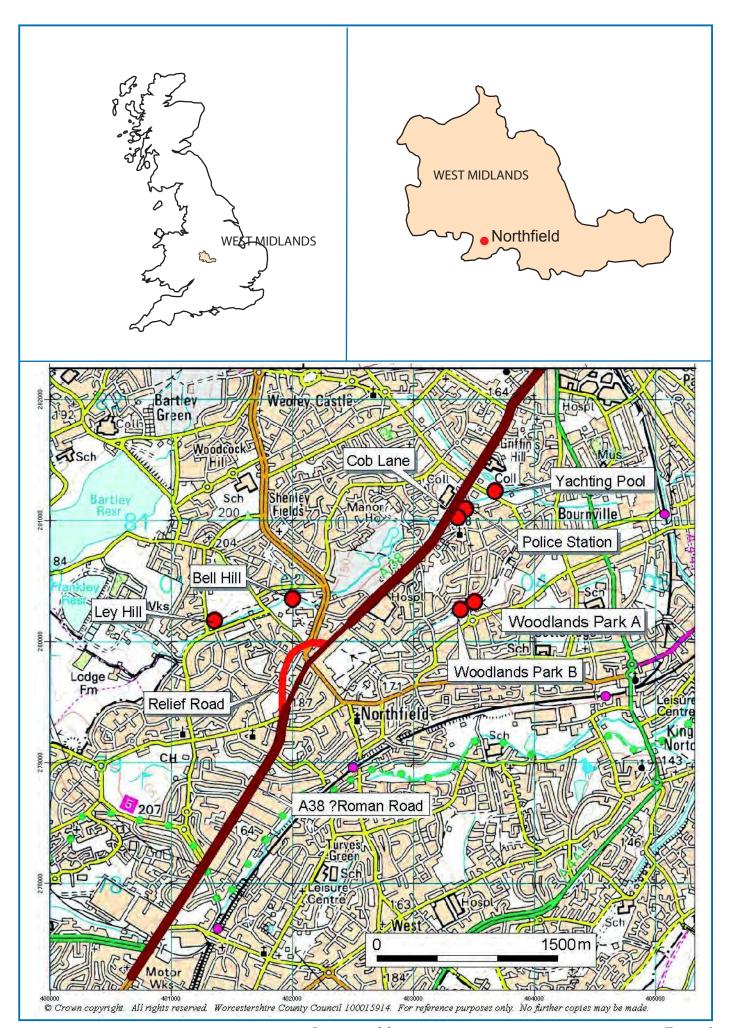
Ordnance Survey, 1936 Warwickshire sheet XIX^AII (1:2500)

Ordnance Survey, 1937 Warwickshire, sheet XIX^A7 (1:2500)

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Williams, J, 2003, Birmingham, Kings Norton, Londales Road, in *West Midlands Archaeology*, no. 46 (2003), 154-5.



Location of the site.



Figure 2 Areas observed ©crown copyright

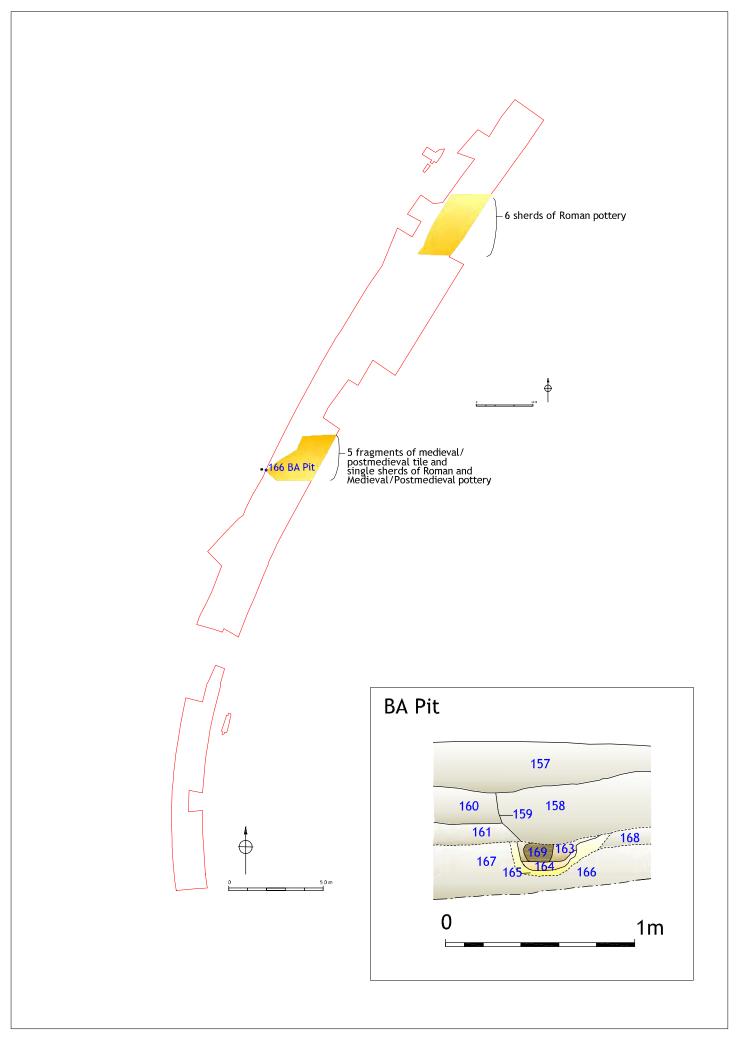


Figure 3 Prehistoric and Roman features

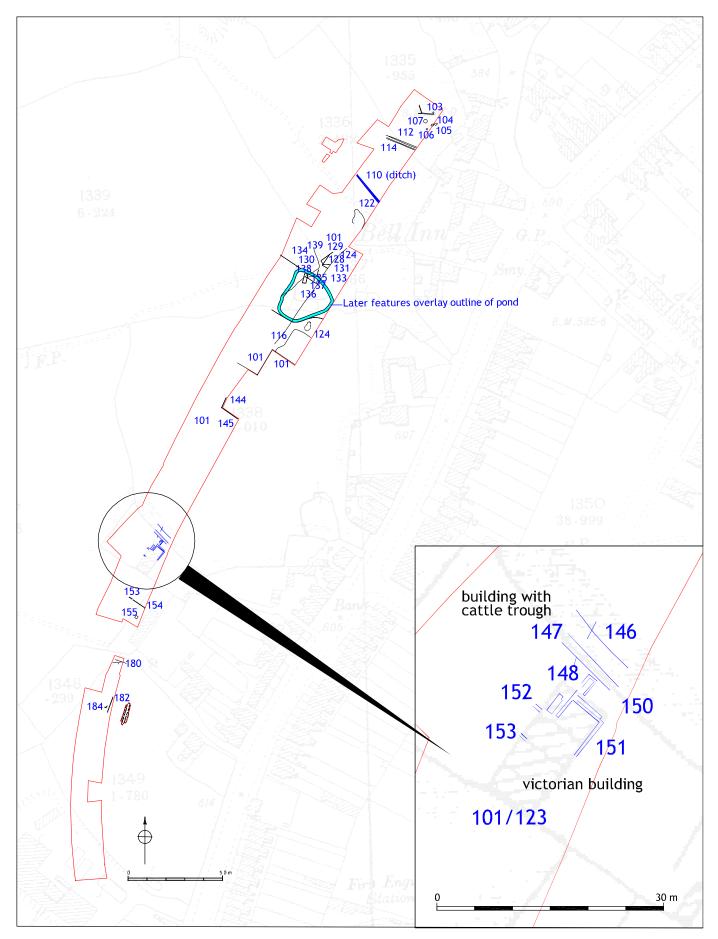


Figure 4 Post medieval features overlaid onto 1937 OS mapping ©crown copyright



Plate 1: General view of excavations, 8th August 2005



Plate 2: Bronze Age pit (context 166)



Plate 3: Detail of Bronze Age pit



Plate 4: Pond deposits exposed in excavations for east carriageway (contexts 140 and 141)



Plate 5: Post-medieval drainage ditch (context 110)



Plate 6: Foundations of early 19th century building (contexts 148-154)

Appendix 1: Context descriptions

Topsoil with common modern refuse including metal, brick, plastic, and wood.	Context	Description
Marl: compact light brown stony, silty clay with occasional sand with common sub rounded stones.		
rounded stones. Fill of 104. Black friable clinker and charcoal with some dark brown silty clay. Circular pit with concave sides and rounded base. Square machine cut pit filled with clinker and some wood. Square machine cut pit, clinker with clinker and some wood. Square machine cut pit, clinker with clinker and some wood. Circular pit filled with clinker and other modern refuse. Fill of 110: finable black silt loam with common fragments of brick/tile and charcoal, fragments. Ditch on east-west alignment. Concave sides and rounded base. 1.2m wide and 0.5m deep. Recorded for a length of 20m. Lili Fill of 112: finable silty black loam with common fragments of stone, tile and charcoal. Gully on east-west alignment. Concave sides and rounded base. 0.6m wide and 0.16m deep. Recorded for a length of 20m. Jii Fill of 112: finable silty black loam with common fragments of stone, tile, and charcoal. The pith of the stable black silty loam with common fragments of stone, tile, and charcoal. The pith of 114: finable black silty loam with common fragments of stone, tile, and charcoal. The pith of 114: finable black silty loam with common fragments of stone, tile, and charcoal. The pith of 114: finable black silty loam with common fragments of stone, tile, and charcoal. The pith of 114: finable black silty loam with common fragments of stone, tile, and charcoal. The waster of on orthern car park comprising bricks (220mm x 111mm x 70mm), brick fragments, roadstone, gravel, and sand. Dark grey/black silty clay with common fragments of charcoal/clinker and few small sub rounded stones. Mid brown silty clay with common fragments of charcoal, clinker and sub rounded stones. Mid brown silty clay with common fragments of charcoal, clinker and sub rounded stones. Susoil: fraible mid brown silty clay with common sub rounded stones and few charcoal fragments. Layer of greyish blue silty clay layer with common sub rounded stones and few charcoal fragments. Layer of greyish blue silty clay with common modern refu	101	
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Circular pit with concave sides and rounded base.	102	Fill of 104. Black friable clinker and charcoal with some dark brown silty clay.
Square machine cut pit, clinker with clinker and some wood.	103	
105 Square machine cut pit, clinker with clinker and some wood.	104	
Square machine cut pit, clinker with clinker and some wood.	105	
107 Circular pit filled with clinker and other modern refuse.		
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Primary fill of 110: soft mid brown silty sand with few subangular stones and charcoal fragments.	108	
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	136	

Context	Description
137	Large sub circular pit with a sharp breaks of slope at top and base and vertical sides. Only
	partially excavated by machine due to localised flooding.
138	Modern pit filled with 135. At least 7m long and 3.5m wide. Not fully excavated.
139	Modern pit filled by 130. Not fully excavated.
140	Alluvial/organic fill of 145. Soft black silty clay.
141	Alluvial/organic fill of 145.Soft blueish-grey silty clay.
142	Well made of large squared sandstone blocks built to courses. Some course made up with
	fragments of grey lias and thin handmade bricks. Internal diameter of 0.90m. Not
	excavated.
143	Fill of 145. Mid brown silty clay with common pebbles, and fragments of brick, charcoal
	mortar.
144	Fill of 145. Mid grey clay with, common pebbles and few fragments of brick/tile and
	coal/charcoal.
145	Cut of large shallow feature or natural declivity.
146	Mixed modern refuse and mid/dark greenish grey clayey silt.
147	Brick foundation aligned NW-SE. Unfrogged, highly fired bricks made in hard sandy
	fabric. Dimensions 8 ³ / ₄ "×4"×2 ¹ / ₂ ". Bonded with friable pinkish brown sandy mortar.
148	Brick wall foundation, as 147. 2.75m wide.
149	Brick wall foundation aligned SW-NE and NW-SE in association with 147 and 148. Three
	courses wide. Bricks as 147.
150	Brick wall foundation aligned SW-NE One course wide. Bricks and mortar as 148
151	Brick wall aligned NW-SE. Two 2 courses wide and 2 courses high. Highly fired bricks,
	measuring 9"×4½"×3". Bonded with light brown Portland cement with white chalk and
	occasional black charcoal flecks. Abuts 149.
152	Brick wall foundation aligned NW-SE. Six courses, four offset and two flush. Bricks and
	mortar as 148.
153	Brick wall foundation aligned NW-SE. Four courses, two offset and two flush. Aso one
	slate damp course. Unfrogged highly fired bricks measuring 9"×4½"×3". Bonded with
	light yellowish/reddish brown Portland cement.
154	Brick wall aligned NW-SE. Two bricks wide. Bricks and mortar as 153.
155	Fill of 156: firm mid brownish clay silt with few fragments of brick, tile, and wood and
	one large rounded stone.
156	Large pit exposed in section. Sharp break of slope at top (truncated), concave sides,
	gradual break of slope at base and irregular base. Filled with 155.
157	Friable silty sand and clinker with common brick fragments.
158	Stiff light olive silty clay with common dark grey mottles in upper 0.10m
159	Cut, probably of modern down pipe exposed in section
160	As 158 with fewer mottles.
161	Subsoil? Firm light brown-orange silty clay.
162	Fill of 166: dark greyish brown silty clay with abundant charcoal fragments.
163	Upper fill of 166. Redeposited light olive silty clay with common charcoal fragments
164	Fill of 166. Dark greyish brown silty clay with common charcoal fragments.
165	Stiff light blueish white silty clay with few charcoal fragments.
166	Pit exposed in east facing section of north carriageway. Sharp break of slope at top,
1.65	steeply sloping to concave sides, gradual break of slope at base, flat base.
167	Marl: stiff light reddish-yellowish brown silty clay.
168	Subsoil: stiff light blueish white silty clay.
169	Composite sample of fills 162-4.
170	Made fround comprising redeposited, greyish clay and common sub-rounded stones.
171	Modern pit
172	Fill of 171
173	Modern sandstone deposit.
174	Modern cut
175	Concrete post
176	Fill of 177: dark greyish brown organic clay with frequent large rounded pebbles

Context	Description
177=145	Cut of large shallow feature or natural declivity.
178	Made ground, east carriageway south of Lockwood Road.
179	Fill of 180: mixture of linker, brick, ash, and metalwork.
180	Cut for 182, 183, 190, and 193
181	Marl: stiff reddish brown silty clay with common sandstone fragment and few rounded
	stones.
182	Brick foundation on concrete footing. Unfrogged, over-fired purple-grey bricks measuring
	9"×4½"×3".
183	Concrete floor.
184	Brick foundation set into concrete floor. Six courses visible in section.
185	Brick rubble.
186	Burnt clay and wood fragments overlying 185.
187	Redeposited marl over 186.
188	Layer of clinker overlying truncated marl.
189	Brick foundation exposed in section. Five courses of unfrogged machine-made bricks
	measuring 9"×4½"×3".
190	Brick foundation 12 courses high and 3 courses thick. Same structure as 182 and 184.
191	Redeposited marl and hardcore partially filling 180.
192	Black silt filling 180.
193	Concrete slab within 180.
194	Concrete foundation of small rectangular building. 1.90m long and 1m wide.
195	Mid brown clay and redeposited marl.
196	Brick foundation observed in section. Over-fired bricks measuring 9½"×4½"×3½".
197	Cut for 194.
198	Made ground, east carriageway, north of Lockwood Road.

Historic	Environment	and	Archaeology	Service

A	pper	ıdix	2:	Radiocarbon	dating	results
			-			

Dr. Katie Head Report Date: 12/22/2006

Material Received: 11/21/2006

Worcestershire County Council

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 223678 SAMPLE : P2646/NFRR05/169 ANALYSIS : AMS-Standard delive	•	-22.4 o/oo	3330 +/- 50 BP
	(charred material): acid/alkali/acid Cal BC 1730 to 1500 (Cal BP 3680 to	o 3460)	
Beta - 223679	3640 +/- 50 BP	-27.6 0/00	3600 +/- 50 BP

SAMPLE: P2902/1/29-30cm ANALYSIS: AMS-Standard delivery

MATERIAL/PRETREATMENT: (wood): acid/alkali/acid

2 SIGMA CALIBRATION : Cal BC 2120 to 2090 (Cal BP 4070 to 4040) AND Cal BC 2050 to 1870 (Cal BP 4000 to 3820)

Cal BC 1840 to 1780 (Cal BP 3780 to 3730)

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-22.4:lab. mult=1)

Laboratory number: Beta-223678

Conventional radio carbon age: 3330±50 BP

2 Sigma calibrated result: Cal BC 1730 to 1500 (Cal BP 3680 to 3460)

(95% probability)

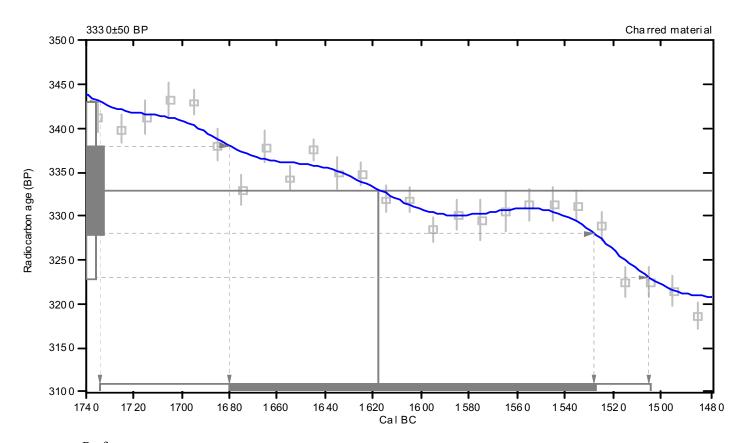
Intercept data

Intercept of radio carbon age

with calibration curve: Cal BC 1620 (Cal BP 3570)

1 Sigma calibrated result: Cal BC 1680 to 1530 (Cal BP 3630 to 3480)

(68% probability)



References:

Databaseused

INT CAL98

Ca lib ra tio n D a ta ba se

Ed ito rial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii

INTCAL98 Radiocarb on Age Calibration

Stuiver, M., et. al., 1998, Radiocarbon 40 (3), p1 041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35 (2), p317-322

Beta Analytic Radiocarbon Dating Laboratory

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.6:lab.mult=1)

Laboratory number: Beta-223679

Conventional radio carbon age: 3600±50 BP

2 Sigma calibrated results: Cal BC 2120 to 2090 (Cal BP 4070 to 4040) and

(95% probability) Cal BC 2050 to 1870 (Cal BP 4000 to 3820) and

Cal BC 1840 to 1780 (Cal BP 3780 to 3730)

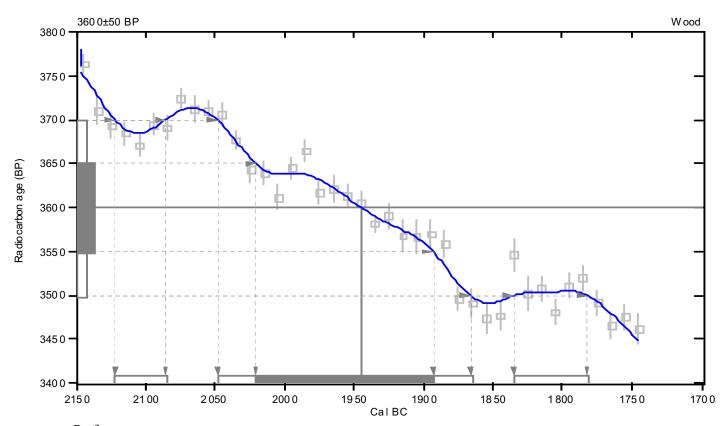
Intercept data

Intercept of radio carbon age

with calibration curve: Cal BC 1940 (Cal BP 3900)

1 Sigma calibrated result: Cal BC 2020 to 1890 (Cal BP 3970 to 3840)

(68% probability)



References:

Datab as e u s ed

INT CAL98

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M ath em atics

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